Danmarks Nationalbank

Monetary Review 1st Quarter 2007

DANMARKS NATIONAL BANK 2007

MONETARY REVIEW 1st QUARTER 2007

The small picture on the front cover shows the "Bankers" clock, which was designed by Arne Jacobsen for the Danmarks Nationalbank building.

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Recent Economic and Monetary Trends

This review covers the period from late November 2006 to the middle of February 2007

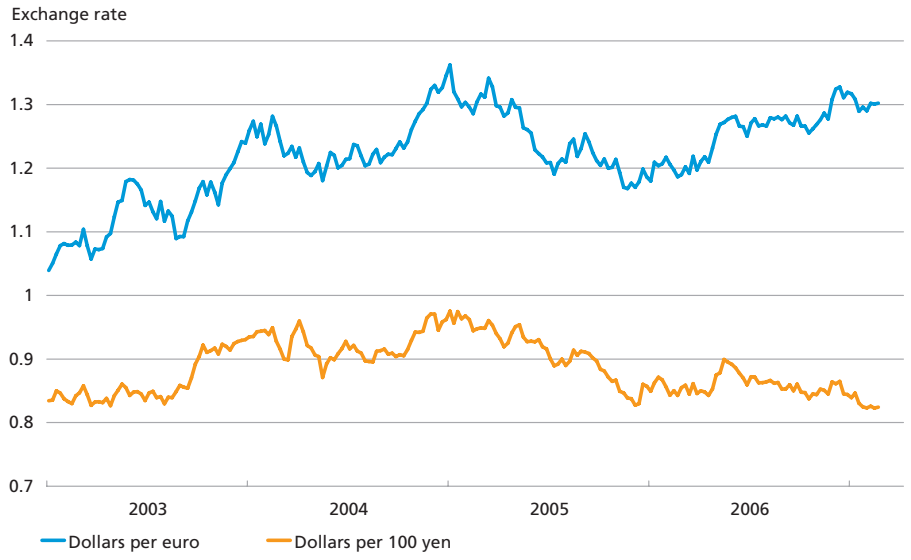
THE INTERNATIONAL FINANCIAL MARKETS

The global economy is still performing well, with sound growth in both the USA and the euro area. Many Asian economies, particularly China, are expanding strongly. The upswing in Japan is also sound. The market expects growth to continue more or less unabated throughout the year.

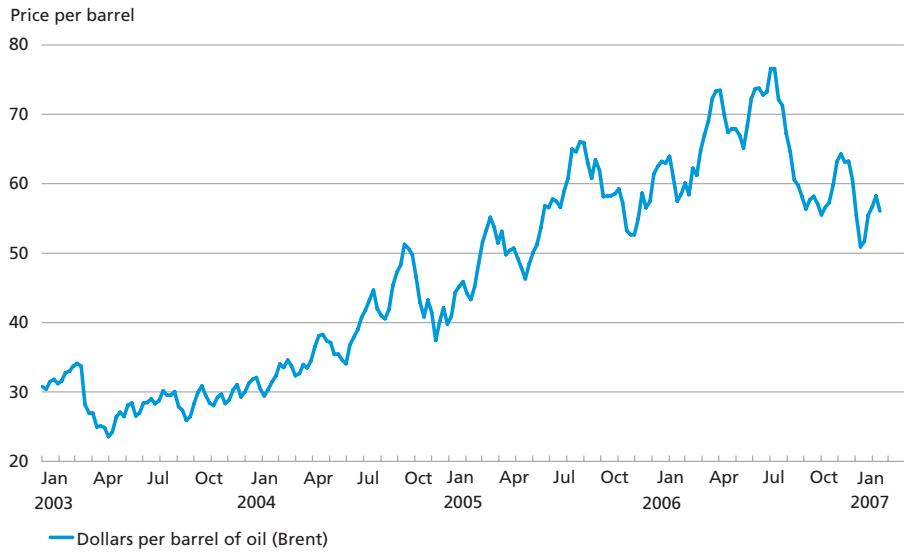
The US dollar weakened against the euro up to the turn of the year, cf. Chart 1. In mid-February, the exchange rate was 1.30 dollars per euro, which is a weakening of 10 per cent from the level one year before. The yield spread between short-term interest rates in the USA and the euro area has narrowed in the period under review as the European Central Bank, ECB, has raised its interest rates, while the Federal Reserve has held the fed funds target rate unchanged since May 2006. In addition, the growth differential between the two areas has narrowed.

The 10-year US government bond yield has declined from the level in the summer and has been just over 4.5 per cent since the autumn, but

EXCHANGE RATE OF THE DOLLAR VIS-À-VIS THE EURO AND THE YEN Chart 1



OIL PRICE Chart 2



with a rising tendency since the turn of the year, reflecting positive economic indicators for the USA. With the fed funds target rate unchanged at 5.25 per cent, the US yield curve is still falling. This indicates dampened medium-term inflation expectations in the markets. The yield on the 10-year German government bond has generally mirrored the development in the long-term US yield, but at an approximately 0.75 percentage point lower level.

The oil price peaked last summer at more than 75 dollars per barrel (Brent). Since then, the price has dropped to around 55 dollars per barrel in mid-February, cf. Chart 2. The price drop reflects lower demand as a consequence of a relatively mild winter, combined with sustained high output. Moreover, there are ample oil stocks. The price dive dampens global inflation and probably also inflation expectations, and improves the international growth prospects.

With the exception of oil and copper, commodity prices are still rising. The positive growth prospects have contributed to a sustained upward trend in the benchmark stock indices.

INTERNATIONAL ECONOMIC BACKGROUND

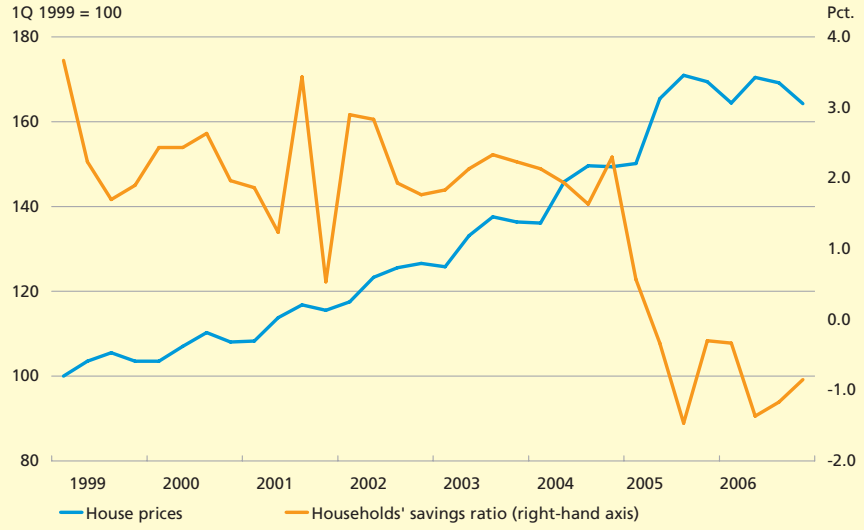
USA

In the USA, 4th quarter growth exceeded expectations, with GDP at constant prices rising by 0.9 per cent quarter-on-quarter. Growth was driven by higher private consumption, while residential investments fell

DAMPENING OF THE US HOUSING MARKET Box 1

House prices in the USA, as in many other OECD countries, have risen substantially since the mid-1990s, but now there are clear indications of a slowdown in the US housing market. Most recently the price index has flattened out, cf. Chart 3, while residential investments and the more long-term expectation indicators have fallen significantly. Many recent indicators point to stabilisation of the housing market.

HOUSE PRICES AND THE HOUSEHOLDS' SAVINGS RATIO IN THE USA Chart 3



Note: "House prices" is the median price of existing housing.
Source: EcoWin.

The rising house prices have been a key driver of the US upswing and have contributed to the decline in the household's savings ratio, which is now negative. With large capital gains on homes and stocks, a given level of wealth can be achieved with lower savings from income. The question is whether the slowdown in the housing market is temporary or more permanent, and the extent to which the slowdown will spread to the rest of the economy.

So far, the flattening of house prices has not been reflected in private consumption, partly because homeowners still have large home equity portfolios that can be mortgaged, but in the most recent quarters residential investments have declined. In all probability there will be a "soft landing" for the US economy, with continuing dampened growth. The Federal Reserve has not changed the fed funds target rate since May 2006, partly in view of the sluggish housing market.

The slowdown in the US housing market reduces capital gains on the housing stock, which may increase the households' savings ratio. This will temporarily dampen economic growth in the USA. The direct effect from one country's housing market to other countries' housing markets is limited. In this respect the housing market differs from e.g. the stock and bond markets. The effect of a subdued US housing market on the global economy is transmitted via lower domestic demand in the USA and via interest rates.

sharply, as in the preceding quarters. This reflects the general slowdown in the US housing market, cf. Box 1.

Many new jobs continued to be created in the USA, mainly in the service sector, while employment in the construction sector remained unchanged. Since the labour force expanded more than employment, unemployment rose a little to 4.6 per cent in January. Due to the tight labour market, wage increases were higher at 3.5-4.0 per cent.

Inflation, measured as the increase in the index of consumer prices, fell considerably in the autumn, mainly as a result of lower energy prices. Core inflation, which excludes energy and food, has also fallen in recent months, to 2.6 per cent in December.

The fed funds target rate has been unchanged for the last nine months. According to the press release from the FOMC meeting on 31 January, there is assessed to be some inflationary pressure in the economy, but whether a monetary-policy tightening is required will depend on the economic indicators released in the near future. The markets expect the fed funds target rate to remain unchanged throughout 2007.

Japan and China

The upswing in Japan has proved to be robust. Growth has mainly been driven by exports. Especially exports of cars and IT have developed positively. Employment has risen in most recent quarters.

It remains uncertain whether Japan has left falling prices behind it. Consumer price inflation has been marginally positive for the last year or so, but core inflation remains negative. The Bank of Japan abandoned its zero-interest-rate policy in July 2006, raising its official interest rate by 0.25 per cent, but the low inflation makes it difficult to normalise monetary policy, and the interest rate has not been raised further.

The Chinese economy continued its strong expansion throughout the year, with growth exceeding 10 per cent p.a. The growth in investments has receded, however, which may indicate that the political measures such as higher interest rates, higher reserve requirements for banks and further control of investment projects, have begun to make an impact. The investment ratio remains very high at approximately 40 per cent of GDP, according to the official data. However, some analysts assess the real figure to be considerably lower, so that the risk of a substantial decline in investments has also diminished.

The Chinese currency, the renminbi, has appreciated by just over 6 per cent against the dollar since the summer of 2005. The renminbi is managed in relation to a basket of currencies that includes the euro and the Korean won, both of which have appreciated against the dollar. The basket also includes the Japanese yen.

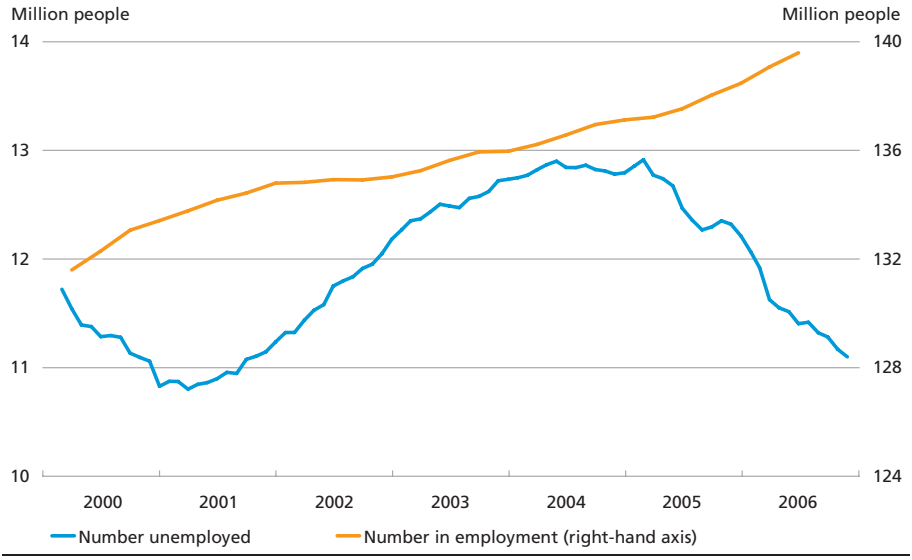
In December, China lifted the last restrictions on foreign banks' entry into the Chinese market, in accordance with its WTO (World Trade Organization) obligations. Considerable foreign investments have already been made in the Chinese banking sector.

Europe

Following a subdued 3rd quarter, GDP growth in the euro area picked up again in the 4th quarter, to 0.9 per cent against the preceding quarter. Growth is increasingly driven by private consumption and is thus more broadly based than at the start of the upswing. On average, the forecasts indicate that growth is expected to continue in 2007 at a level around or slightly above the potential of approximately 2 per cent p.a. Neither the strengthening of the euro against the dollar nor the German VAT increase from the turn of the year are thus expected to brake the upswing, but at most to dampen growth.

The euro area labour markets continue to improve, cf. Chart 4. Employment and employment expectations are rising in both the manufacturing and service sectors, and unemployment has been declining steadily for the last few years, to 7.5 per cent in December 2006. Unemployment in Germany was 9.5 per cent in January, which is the lowest level for five years. To drive unemployment even further down on a more permanent basis additional labour-market reforms to introduce greater flexibility are required.

THE EURO AREA LABOUR MARKET — Chart 4



Source: EcoWin.

GERMAN VAT INCREASE Box 2

As announced in the autumn of 2005 after the formation of the coalition government, the German VAT rate was raised from 16 per cent to 19 per cent as of 1 January 2007, while the reduced VAT rate on e.g. food remained unchanged. Approximately one third of the proceeds from the VAT increase are to be devoted to lowering social contributions, while the rest is to contribute to reducing the government deficit.

The VAT increase will be reflected in consumer prices. If it is fully passed through, the effect on prices will be 2.6 per cent (3/116). Since a number of goods are exempt from VAT, and others are subject to a reduced VAT rate, the VAT increase will only affect approximately 60 per cent of goods and services in the consumer's basket. A one-off increase in consumer prices by 1.4 per cent can thus be expected.

Germany is included in euro area HICP with a weighting of 29 per cent. Assuming a full and immediate impact, HICP will increase by 0.45 per cent as a result of the German VAT increase. In practice, some of the price adjustment may already have taken place up to the turn of the year, while in the short term profit margins may also absorb some of the adjustment, so that the impact on consumer prices will be lower. In the long term, the crucial factor is whether there is a spill-over effect on price and wage formation.

The prospect of higher VAT may have brought consumption forward to the 2nd half of 2006, thereby contributing to higher growth. The fiscal-policy tightening resulting from the VAT increase will furthermore reduce the immediate growth prospects for the German economy in 2007. The current upswing must, however, be assessed to be so strong that the negative impact on growth in Germany, and thereby in the euro area, will be limited.

The cyclical upswing has improved government finances in the euro area where all the large member states except Italy are expected to fulfil the requirement of a deficit not exceeding 3 per cent of GDP in 2007. Contrary to expectations, Germany already met this requirement in 2006.

The drop in the oil price from the summer of 2006 ensured that consumer price inflation in the euro area fell below 2 per cent in the 2nd half of 2006. In January, the rate of price increase was 1.9 per cent. Initially the German VAT increase at the turn of the year, cf. Box 2, has thus only partly been reflected in prices. Data for core inflation in the euro area in January is not yet available, but in Germany core inflation was 1.5 per cent in January 2007, compared to 1.1 per cent in December 2006.

On 7 December, the ECB raised its minimum bid rate by 0.25 per cent to 3.5 per cent. The underlying considerations were that the higher growth and improved labour-market conditions may lead to a higher wage-increase rate, which augments the risk of higher inflation in the medium term. In addition, the growth in the money stock is high. In the

assessment of the Governing Council, monetary policy remains expansionary after the increase, and the market expects a further interest-rate increase in March.

The UK economy is still performing well, growing by 3.0 per cent in the 4th quarter relative to the year before. Consumer prices rose by 2.7 per cent p.a. in January. During the last year inflation has exceeded the government's target of 2 per cent p.a. At the same time, housing prices have accelerated, rising by an annual rate of almost 10 per cent towards the end of 2006, which is twice the rate at the beginning of the year. Against this background, the Bank of England raised the official bank rate at the beginning of November and again in mid-January, to 5.25 per cent. The market expects further interest-rate increases during 2007. In the past year sterling has weakened by nearly 4 per cent against the euro.

The Norwegian and Swedish economies are both expanding strongly. In both countries inflationary pressure is rising moderately, albeit from a low level. The prospect of a medium-term price-increase rate that exceeds the inflation target has led the central banks to continue to tighten monetary policy. Sveriges Riksbank raised the repo rate by 0.25 per cent in mid-December and again in February, to 3.25 per cent. Norges Bank increased the sight deposit rate by 0.25 per cent in mid-December and again at the end of January 2006, to 3.75 per cent.

The new Swedish government plans a major restructuring of Sweden's economic policy. It envisages tax cuts via an employment allowance and a tighter labour-market policy, with a view to increased incentives to seek employment. Other plans include compulsory membership of an unemployment fund, a gradual reduction of the degree of compensation as the period of unemployment lengthens, and a higher share of own financing. Furthermore, the number of people on activation schemes is to be reduced.

At the turn of the year Slovenia adopted the euro and thus became the 13th euro area member state. Within a few days after New Year the national banknotes and coins had been replaced by euro banknotes and coins, and after only a few weeks virtually all transactions in Slovenia were in euro.

Over the past six months, the Slovakian currency, the koruna, has appreciated by almost 10 per cent against the euro and the exchange rate has approached its upper limit in ERM II. Interest-rate increases have amplified the increase in the exchange rate. This development reflects a monetary-policy dilemma for Slovakia, since both an exchange-rate target and an inflation target are pursued. Slovakia plans to adopt the euro on 1 January 2009, and by then it must fulfil the requirements of

the Maastricht Treaty in respect of e.g. exchange-rate stability and inflation. The average annual increase in Slovakian HICP over the last 12 months has been 4.3 per cent, which is considerably above the present criterion value of 2.9 per cent.

DANISH MONETARY AND FOREIGN-EXCHANGE CONDITIONS

Since November the Danish krone has been stable vis-à-vis the euro at a level close to its central rate in ERM II of 7.46038 kroner per euro. In the last three months Danmarks Nationalbank has not intervened in the foreign-exchange market. At the end of January, the foreign-exchange reserve was kr. 173.7 billion.

In response to the ECB's interest-rate increase, Danmarks Nationalbank raised the discount rate and the current-account rate by 0.25 per cent to 3.5 per cent with effect from 8 December 2006. Danmarks Nationalbank's lending rate and the rate of interest on certificates of deposit were also raised by 0.25 per cent to 3.75 per cent.

In May 2007, the maturity of Danmarks Nationalbank's monetary-policy loans and certificates of deposit will be reduced from 14 to 7 days. The change is intended to curb the large fluctuations in the day-to-day interest rate that can occur in periods when changes in interest rates are expected, cf. the description on p. 23.

The long-term yield spread to Germany has narrowed since the autumn, and in recent months the Danish 10-year government bond yield has mostly been slightly below the equivalent German yield.

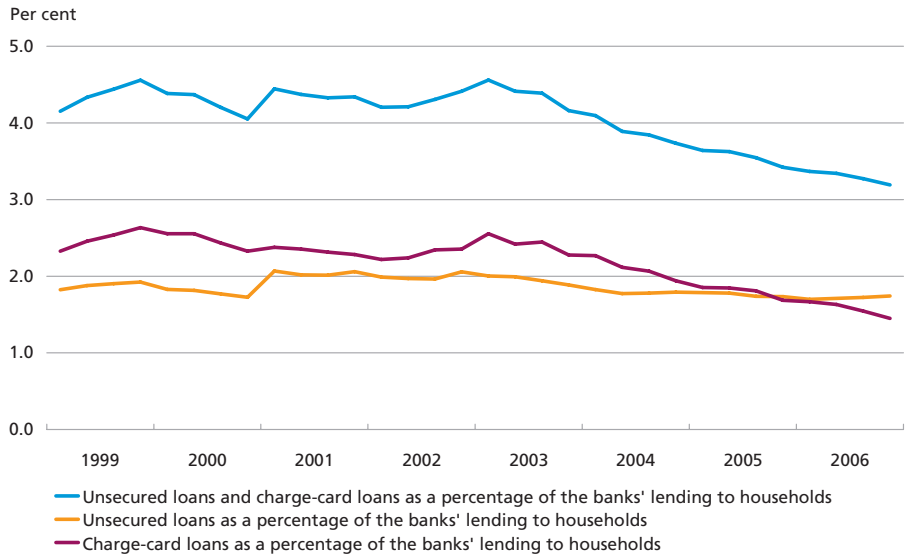
The development in the financial balances reflects the sustained high level of activity in the Danish economy. Growth in lending by banks and mortgage-credit institutes to households has receded a little in recent months, but remains high, with growth in December of around 12 per cent against the preceding year.

The narrowing of the spread between short-term and long-term interest rates means that adjustable-rate loans make up a decreasing share of new lending by mortgage-credit institutes. These loans now constitute less than half of all new loans. In stock terms, adjustable-rate loans accounted for around half of the outstanding mortgage-credit loans at year-end. Deferred-amortisation loans continue to gain ground and now constitute more than one third of the outstanding mortgage-credit loans.

Besides banks and mortgage-credit institutes, the households borrow from consumer-credit and charge-card companies. Statistics Denmark compiles statistics for lending via charge accounts and charge cards, as well as unsecured cash loans not linked to charge accounts or charge

UNSECURED CONSUMER CREDIT RELATIVE TO THE BANKS' LENDING TO HOUSEHOLDS

Chart 5



Note: "Unsecured loans" are unsecured cash loans that are not linked to charge cards.
Source: Statistics Denmark and Danmarks Nationalbank.

cards. Both types of lending have been increasing over time, but the overall growth in recent years has fallen below the growth in the banks' lending. Unsecured cash loans and loans from consumer-credit and charge-card companies total approximately kr. 15 billion and thus constitute only a small, and declining, share of the banks' lending to households, cf. Chart 5. No current statistics are available for the lending rates on unsecured consumer credit, but surveys show that the interest rates vary considerably. Interest rates exceeding 20 per cent p.a. are not uncommon.

Covered bonds

On 6 December 2006, the Minister for Economic and Business Affairs submitted the draft bill on covered bonds for consultation. The purpose of this legal amendment is to make it possible for banks to issue covered bonds, and to allow mortgage-credit institutes and Danish Ship Finance to continue to issue covered bonds. The act is expected to come into force on 1 July 2007.[1]

The bill is based on the new capital-adequacy rules, known as Basel II, that have been implemented in the EU as amendments to the Capital

[1] On 5 January 2007, Danmarks Nationalbank submitted its consultation response, which is available (in Danish only) at Danmarks Nationalbank's website.

Adequacy Directive[1] and Credit Institutions Directive[2]. The provisions of the Directives specify the types of assets that are eligible as collateral and the LTV (loan-to-value) limits to be observed if a bond issuer is to be authorised to issue covered bonds. For housing loans, an LTV limit of 80 per cent must be observed on an ongoing basis. This is in contrast to the current rules for Danish mortgage-credit bonds, where the limit must only be observed at the time that the loan is granted. If, for example, house prices fall so that the LTV limit of 80 per cent is no longer observed, the bond issuer must immediately supplement the assets pledged as collateral for the covered bonds issued, e.g. with government bonds.

For credit institutions subject to capital requirements, there is an incentive to invest in covered bonds rather than other bonds issued by credit institutions since the capital requirements for covered bonds are lower. The price of covered bonds can therefore be expected to be slightly higher than for equivalent bonds that are not covered bonds.

If passed, the act will put the banks on an equal footing with the mortgage-credit institutes in terms of issuing covered bonds against mortgage-credit loans as collateral. The aim is to give Danish banks the same opportunities to use this type of financing as their foreign competitors. There is no direct link between the bank's costs of financing the issue of covered bonds and the terms and conditions for the underlying mortgage-credit loans granted to the bank's customers. The interest-rate margin will depend on the competition in the market.

Covered bonds can underpin financial stability as a stable means of financing for loans against real property as collateral, thereby more appropriately covering the banks' large deposit shortfall.

In future, mortgage-credit institutes will be able to issue covered bonds, covered bonds that are also mortgage-credit bonds, and conventional mortgage-credit bonds, i.e. bonds that are not covered bonds. The bill thus promotes enhanced competition between Danish financial institutions.

The bill proposes to allow credit institutions to issue covered bonds using two different models. Under the first model, the existing limitations apply, i.e. a maximum term of 30 years and a maximum of 10 years' deferred amortisation. In this case, LTV at the time of granting the loan and for the loan's duration must not exceed 80 per cent for loans for residential properties, which account for the largest share of loans against real estate as collateral. The second model imposes no limitations on terms and redemption profiles, and for residential properties the upper limit is reduced to 70 per cent at the time that the loan is

[1] Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006.
[2] Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006.

granted. From 1 July 2009, this limit will be raised to 75 per cent. For these loans too, the maximum current LTV will be 80 per cent.

The ongoing observance of an LTV of maximum 80 per cent will help to ensure that covered bonds are extremely secure bonds with a very low credit risk and thus a low interest rate compared with other bonds. However, if house prices fall abruptly on a downturn in the economy, considerable additional collateral may be required, which the credit institution will have to transfer from its other assets or buy for borrowed funds in order to maintain its status of issuer of covered bonds. This may undermine the general strength of the credit institution in a situation where the economy is already declining and earnings are squeezed, which in turn may weaken financial stability. Lowering the limit to below 80 per cent when the loan is granted will thus make it easier for credit institutions to observe the Directive's requirement of a current maximum LTV of 80 per cent.

Previous amendments to the framework conditions for home financing have affected owner-occupied housing prices. It is for example assessed that the introduction of deferred-amortisation loans in the autumn of 2003 contributed to strengthening an already buoyant market. The present bill is not expected to have any significant impact on housing demand among households. A reduction of the LTV limit from the current 80 per cent for loans financed by covered bonds to, initially, 70 per cent for residential properties will entail a need for a larger share of secondary financing when a home is purchased than is the case today, presumably at a higher rate of interest. On the other hand, the possibility to extend the term of the loan for homeowners who do not require deferred amortisation would help to reduce the monthly payment on a housing loan.[1]

THE DANISH ECONOMY

The strong upswing has continued unabated. Not only government finances, but also the balance of payments, show a large surplus, so that the current upswing rests on a sound structural foundation, even though the pressure on the labour market is mounting. Via excessive wage increases and a loss of competitiveness, this may in the long term undermine the sound basis for the boom in the economy. At the same time, fiscal policy is marginally expansionary and thus does not contribute to dampening overall demand in the economy.

[1] The Ministry of Economic and Business Affairs and Danmarks Nationalbank have jointly analysed the consequences. The results of this analysis are published in the report "Analysis concerning covered bonds" (in Danish only), which is available at the websites of the Ministry and Danmarks Nationalbank.

With quarterly real GDP growth of 0.7 per cent, there was still sound growth in the 3rd quarter, even though it fell short of the two preceding quarters. Growth was driven by investments, including stockbuilding, while private consumption receded a little. The indicators point to sustained sound growth again in the 4th quarter.

In 2007, a shortage of labour and the resulting capacity pressure will put a damper on growth. This dampening is reinforced by Danmarks Nationalbank's interest-rate increases by a total of 1.6 per cent since 2005, as well as the slowdown in the housing market. Long-term interest rates have also risen. On the other hand, continued high growth in disposable incomes can be expected, and the level of activity among Denmark's trading partners is high, which benefits exports.

Balance of payments, foreign trade and government finances

In the last quarter of 2006 the current-account surplus was just over kr. 6 billion, which is less than half the surplus in the same period of 2005. For the full year, the current-account surplus was kr. 40 billion, compared with kr. 59 billion the year before.

The decline is predominantly attributable to a reduction of the trade surplus. Net revenue from marine freight was just over kr. 1 billion lower than one year before, while expenses for bunkering, most of which relate to marine freight, rose by kr. 1.5 billion. The elimination of the external debt means that Denmark has positive wage and investment income from abroad, and the surplus on this item is increasing.

Manufactured exports rose throughout the year. The sustained growth in manufactured exports shows that the increased pressure on domestic capacity has not yet squeezed exports to any significant degree. The growth in manufactured exports was, however, lower than the growth in imports in the recipient countries, so Denmark's market shares were receding. Agricultural exports were also high. On the other hand, imports for consumption continued to expand, and after a period of stagnation imports by the business sector began to rise.

The government's net cash surplus was kr. 93 billion in 2006, equivalent to around 5.7 per cent of GDP, compared with almost kr. 80 billion in 2005. The large surpluses are to a certain extent cyclically determined, and also result from revenue that is predicted to lapse in the long term. This e.g. applies to the revenue from taxation of North Sea oil and gas production, which is at its peak in current years, also boosted by high oil prices.

To ensure the stability of the Danish economy, the medium-term expenditure strategy should be maintained so that extraordinary government surpluses are not used for permanent service improvements

ASSESSMENT OF THE ECONOMIC CONSEQUENCES OF THE WELFARE REFORM Box 3

In June 2006, a broad majority of the Folketing (Parliament) agreed on a welfare reform in order to prepare Denmark for the demographic challenges lying ahead as the population ages over the next decades. The core elements of the reform are a gradual raising of the eligible ages for the early retirement benefit and state retirement pension as from 2019, as well as the possibility of further upward regulation of the retirement age as from 2025 as life expectancy increases. The reform also includes a number of other measures, e.g. in the labour market.

In November, the independent DREAM Group presented an assessment of the reform calculated using the DREAM model. The Economic Council and the Ministry of Finance have also calculated the consequences of the reform. The basis for the DREAM Group's calculation includes a new population projection, cf. Table 1, with a stronger increase in life expectancy in Denmark than previously assumed.

The challenge is to ensure the sustainability of fiscal policy, with 600,000 more recipients of the state retirement pension up to 2040, as the labour force declines. However, calculations based on the DREAM model show that the welfare reform has solved a very large proportion of the fiscal-policy sustainability problem related to the ageing of the population.

According to the calculations, fiscal policy is broadly sustainable up to 2040 if the growth in government expenditure on services, including healthcare services, does not exceed GDP growth. Healthcare spending is a key factor in this context. If the longer life expectancy also means that people stay healthy for equivalently longer and therefore do not require treatment or care, i.e. "healthy ageing", and the growth in healthcare expenditure per capita does not exceed the general level of economic growth, the fiscal policy is sustainable, according to DREAM. Otherwise, there is an uncovered financing requirement.

The adoption of the welfare reform leaves Denmark far better prepared to meet the demographic challenges of the coming decades than most other OECD countries, many of which will face even larger ageing problems than Denmark in view of their lower birth rates. In the long term, the reform counters the underlying tendency for the labour force to contract, but up to 2020 the effect of the reform is very limited. Consequently, it does not address the current shortage of labour.

POPULATION PROJECTION, 2006-2040 Table 1

Thousands	2006	2020	2040
Total population	5,435	5,586	5,738
Labour force	2,718	2,662	2,503
Recipients of state retirement pension	818	1,124	1,421
Recipients of early retirement benefit	145	145	133
Others not part of the labour force	1,754	1,655	1,681

Note: Based on the DREAM Group's population projection 2004.
Source: DREAM, long-term economic projection 2006 – with an assessment of the welfare reform (in Danish), November 2006.

or tax cuts, but solely to reduce debt. In the medium term the ageing of the population means that the demand for services produced by the public sector will grow substantially, thereby putting government

finances under pressure. The recently adopted welfare reform, cf. Box 3, combined with further reduction of the debt and the resulting interest savings, will make Denmark well-prepared for the demographic changes. The key challenge will still be to ensure a sufficiently large labour force.

Housing market

The housing market slowed down towards the end of 2006. The annual growth in cash prices remains high, but in the 4th quarter prices were flat, the number of sales declined, and the number of homes on the market rose significantly. In more and more cases, the price had to be reduced before a sale could be effected. According to the statistics from the Association of Danish Mortgage Banks, cash prices for single-family and terraced houses in the 4th quarter were 18.5 per cent above the level one year before, but there were considerable regional differences. Prices in the areas that previously saw the largest increases have reacted most strongly to the slowdown. In Greater Copenhagen cash prices for both single-family and terraced houses, as well as owner-occupied flats, fell from the 3rd to the 4th quarter.

It is still uncertain whether there is an actual downturn in the housing market or whether the price-increase rate has merely dampened. In view of the currently very strong Danish economy the latter is more likely to be the case for the housing market overall. In certain regions, downward price correction cannot be ruled out, however.

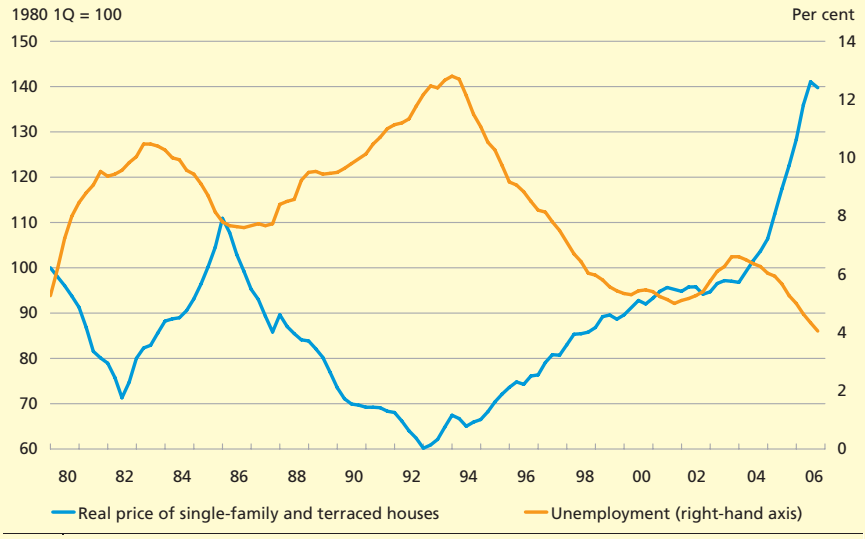
The slowdown in the housing market is attributable among other things to higher interest rates, mainly at the short end of the yield curve. Particularly in the Greater Copenhagen area there also seems to be a shift in expectations concerning the future development in housing prices. In recent years a buoyant market has been underpinned by expectations of further increases, so that the purchase of a home has also been seen as an opportunity for a, usually untaxed, capital gain. This meant that some existing homeowners purchased a new home before the old one had been sold and therefore for a period had two or more homes. To some extent the mood seems to have changed over the past six months, so that many people now expect prices to fall. Consequently, an increasing number of homes are being put up for sale, while some potential buyers are hesitant since they believe that they may be able to buy at a lower price in e.g. six months' time. An equivalent, and even more pronounced, change of mood appears to have taken place in the market for summer cottages. In an interim period these shifts in expectations may have considerable consequences for the housing market and amplify the effects of changes in interest

DO LARGE FLUCTUATIONS IN HOUSE PRICES CONSTITUTE A PROBLEM? Box 4

After a prolonged downward trend, cash prices have been rising constantly since 1993, but a slowdown has set in during the last six months. Viewed over the last 25 years, the prices of owner-occupied homes have fluctuated considerably. The fluctuations in house prices and unemployment have been mirror reflections of each other, cf. Chart 6. This Box analyses the extent to which the large fluctuations in house prices constitute a problem both for the individual and for society at large. The conclusion is that large fluctuations do present problems, but can be difficult to avoid.

A unique characteristic of the housing market is that the supply of homes is constant in the short term. Therefore price fluctuations on a given change in demand are particularly pronounced in this market compared with the market for consumer goods, where supply can be adjusted to match demand relatively easily. Large fluctuations in house prices are thus inherent, as in housing markets worldwide.

HOUSING PRICES AND UNEMPLOYMENT Chart 6



Source: Statistics Denmark and the Association of Danish Mortgage Banks.

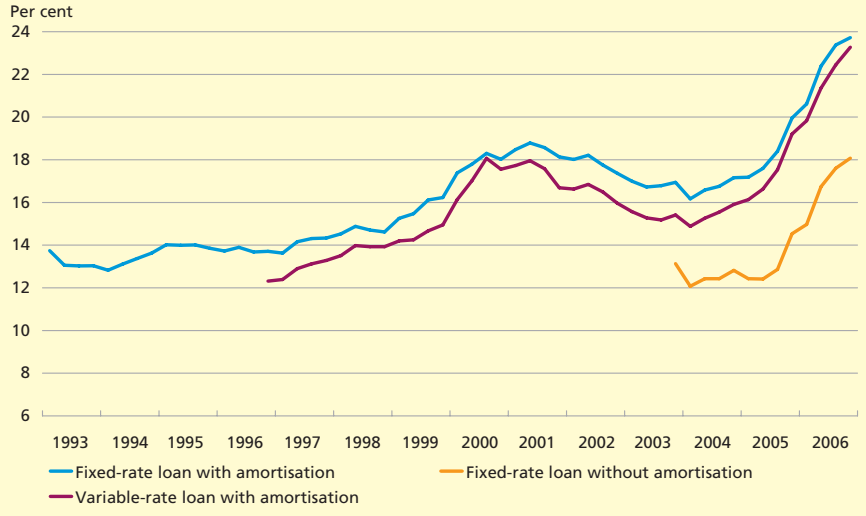
Fluctuations in house prices are a greater problem for the households than fluctuations in e.g. stock prices, since a home is not only an investment, but also a consumer good. Factors such as age, childbirth, divorce, death of a spouse and other social events, rather than actual investment strategies, often spur the decision to buy or sell a home. People can choose to stay out of the stock market, but not the housing market. Since the letting market in many cases functions poorly, resulting in long waiting lists, the purchase of a home may be the only option, even if the price is considered to be unattractive at the time of purchase. Large fluctuations in housing prices thus not only present problems in relation to the cyclical position and the stability of the economy, cf. below, but also with regard to the distribution of wealth across regions and generations, and between owners and tenants. Purchasing a home when prices were high or low can have a decisive impact on the private finances and wealth of the individual.

CONTINUED Box 4

For existing homeowners, rising house prices primarily imply a capital gain, which gives them an opportunity to increase consumption. The costs of entering the housing market for 1st time buyers can be calculated in several ways. Often, 1st-year payments after tax as a percentage of disposable income are used since this illustrates the fixed amount payable to service the loan, property tax, etc. on purchase of a fully-mortgaged home when all tax aspects are taken into consideration. The 1st-year payments after tax therefore also include repayments on the loans. Repayments are not a cost for living in the house in an economic sense, but rather a savings amount, i.e. home equity, built up as the debt is paid off. 1st-year payments after tax are affected by the current economic policy.

1st-year payments after tax as a ratio of disposable income have been increasing since 1993, as a result of rising housing prices, cf. Chart 7. However, the increase is far smaller than the increase in cash prices, since both the interest-rate level and the effective taxation of real estate have fallen in this period. Higher prices per square metre have thus to some extent been set off by lower loan costs and taxes. Especially in recent years, the increase in housing prices has, however, dominated, leading to a substantial increase in 1st-year payments. This nationwide average conceals considerable regional differences in 1st-year payments as a ratio of disposable income, in terms of both the level and the development over time.

1ST-YEAR PAYMENTS AFTER TAX AS A RATIO OF DISPOSABLE INCOME Chart 7



Note: "1st-year payments after tax" are calculated for an average home with a bond loan covering 80 per cent of the property value, while secondary financing is a mortgage loan at a rate of interest that is 2 per cent higher than the rate payable on the bond loan. In 2006 the average home value was kr. 1.6 million. Property tax has been taken into account. In the Chart, the 1st-year payments after tax are stated in relation to the disposable income of a homeowner. The disposable income is calculated on the basis of the most recent consumption survey (level) and distributed over time via an index of the development in disposable income for a wage earner in industry (own calculation).

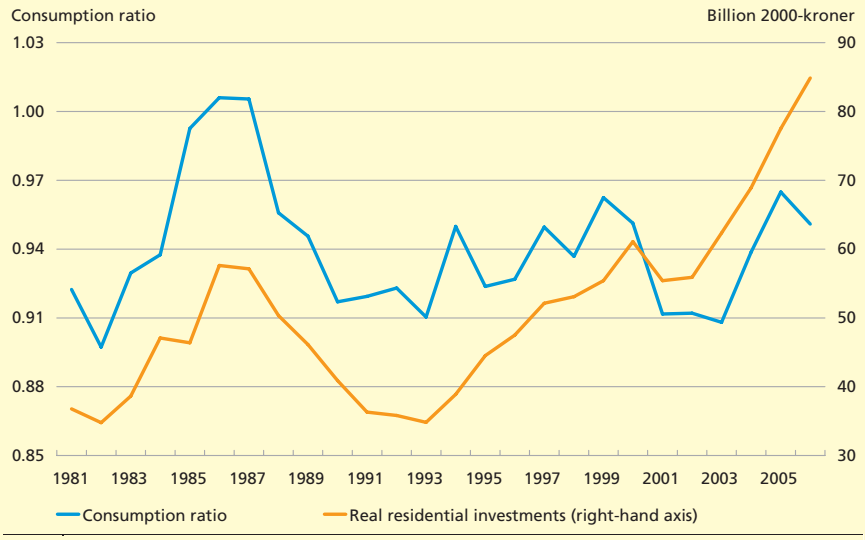
Source: Statistics Denmark and own calculations.

Changes in the framework for home financing have led to the introduction of new types of mortgage-credit loans over the last 10 years, i.e. variable-rate loans in 1996

CONTINUED Box 4

and deferred-amortisation loans from the autumn of 2003. The latter is a natural addition to the product range, but this type of loan can present some problems for 1st time buyers. Some households have appeared to perceive the lower 1st-year payments after tax on deferred-amortisation loans as an actual cost reduction. An analysis of explanatory factors behind the increases in housing prices in recent years indicates that the introduction of deferred-amortisation loans has contributed to inflating housing prices, but there are also other explanations. To the extent that lower repayments have augmented housing prices, these loans have actually made it more difficult to get onto the owner-occupied housing ladder and have thus primarily benefited existing homeowners. Deferred-amortisation loans will often entail a smaller home-equity buffer in the event that the market reverses or major repairs to the property are required.

CONSUMPTION RATIO AND REAL INVESTMENTS Chart 8



Note: The "consumption ratio" is private consumption as a ratio of the households' disposable income, with the addition of net pension contributions. Partial estimates for 2006.
Source: Statistics Denmark.

From an economic point of view, it is an advantage if house prices develop at a fairly steady rate, typically in step with the development in construction costs, since excessive fluctuations in house prices can be detrimental to the economy. Large price increases may exert inappropriate pressure on the economy, thereby leading to general inflation, while diving prices can lead to unemployment and low capacity utilisation, as in the late 1980s. House prices mainly influence the economy via construction activity and private consumption.

Residential investments, cf. Chart 8, follow the development in the real cash price closely and are among the most cyclically-sensitive demand components in the economy. If price increases are moderate, the construction sector usually has the capacity to ensure the required expansion and maintenance of the housing stock, but

CONTINUED Box 4

large increases in house prices may lead to bottlenecks. This exerts upward pressure on wages and the price of construction materials, with a risk of further inflation, as well as a shortage of construction materials. The rest of the economy is affected, for example because during an upswing labour is attracted to the construction sector from other, lower-paid sectors. In a recession, on the other hand, the construction sector may almost come to a standstill. This also applies to related sectors such as suppliers of home fittings and furnishings, kitchens, domestic appliances, etc.

House prices are procyclical. When house prices rise during an upswing, housing wealth increases. Homeowners can convert this price increase into consumption, either by selling the home or by mortgaging the home equity, thereby stimulating the economy further. The result will be an increase in the consumption ratio since capital gains on real estate allow higher consumption for a given income. This link was evident in the 1980s and early 1990s, while the rising house prices since 1993 have only led to a minor increase in the consumption ratio, cf. Chart 8.

Taxation rules and the framework for home financing have had a significant impact on the development in housing prices. In the 1980s a large reduction of the tax value of the mortgage interest deduction, combined with the "mixed loan" requirement, contributed strongly to the fall in real housing prices from 1986 to 1993. On the other hand, the tax freeze and the introduction of deferred-amortisation loans have contributed to upward pressure on housing prices in recent years.

rates. In most of Denmark, housing prices have developed at a more measured pace and there is equivalently less concern about an adjustment.

The strong increase in cash prices over a number of years has primarily stimulated housing investments. The consumption ratio, i.e. consumption as a ratio of income, has also increased, cf. Box 4, but probably by less than expected beforehand, so that home equity has grown substantially – by an estimated kr. 560 billion in total for 2005 and 2006. This shows that in general households have only converted a small part of the capital gains achieved in recent years to consumption. This leaves them with a sound buffer against a slowdown in housing prices. For homeowners that purchased when prices peaked, a potential drop in prices would be a setback, but is hardly likely to threaten the economy or financial stability.

Labour market, wages and prices

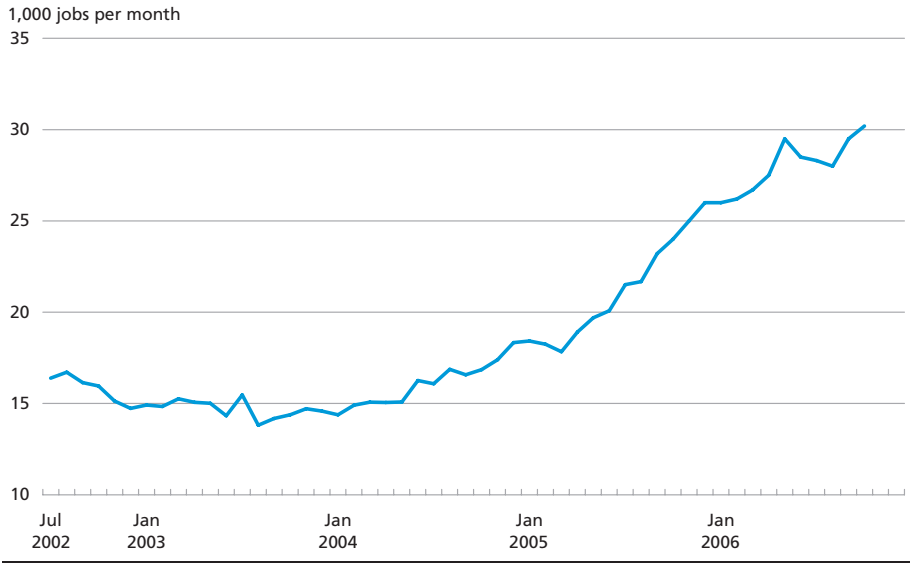
The labour market has tightened further since the summer. Unemployment fell at a surprisingly strong rate in the 2nd half of 2006, reaching seasonally adjusted unemployment of 107,300, equivalent to 3.9 per cent of the labour force, in December. This is a decline by

approximately 15,000 in six months. In addition, the number of people on activation schemes, adjusted for seasonal fluctuations, fell by almost 6,000 in the same period. According to the regional labour market councils, the shortage of labour intensified in all sectors in 2006, particularly in the cyclically sensitive building and construction sector. The number of vacancies, measured as the number of jobs advertised, is also very high, cf. Chart 9, so there is no imminent indication that the labour market is cooling down.

Unemployment declined because employment grew more than the labour force expanded. The larger labour force reflects a rising participation rate. Commuting from especially Sweden and Germany is on the increase, and these commuters are included in the labour-force statistics in the national accounts. Net payroll costs to abroad display a clear rising trend as unemployment in Denmark declines, cf. Chart 10.

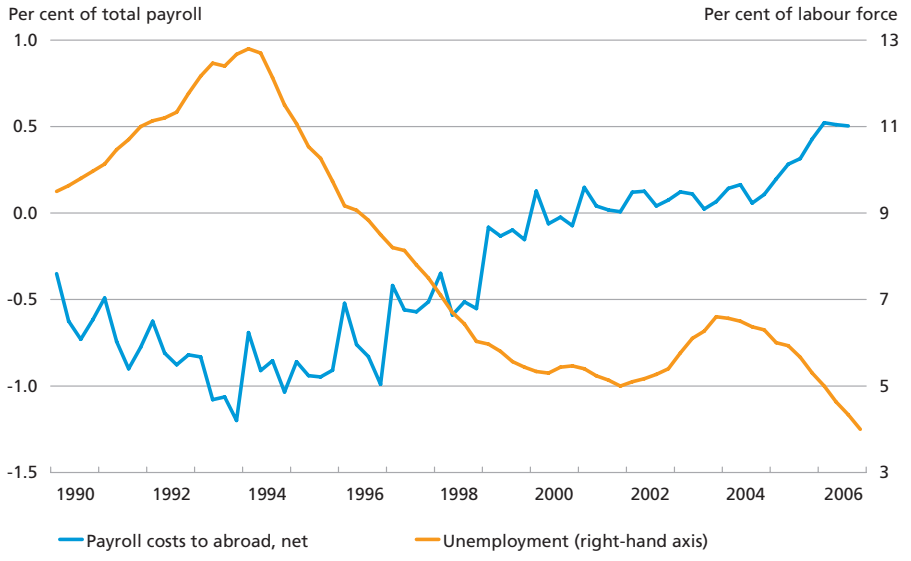
The current shortage of labour is primarily of a cyclical nature, but all other things being equal, the demographic changes whereby the age groups from which the labour force is predominantly recruited are becoming relatively smaller, will accentuate the problem in the future. The recruitment problem will be particularly pronounced in the public sector in the coming years, cf. Box 5.

NUMBER OF ADVERTISED JOBS — Chart 9



Note: The Chart shows the number of new jobs advertised on the Internet. The most recent observation is from October 2006.
Source: Jobindex.dk and Danske Bank.

PAYROLL COSTS FOR CROSS-BORDER COMMUTERS Chart 10



Note: "Payroll costs to abroad, net" comprises wages and salaries paid to people who are resident abroad, but work in Denmark, less wages and salaries paid to people who are resident in Denmark, but work abroad.
Source: Statistics Denmark.

Inflation measured by HICP declined in the autumn and stood at 1.8 per cent in January 2007, compared to 2.0 per cent in January 2006. The lower rate of price increase is primarily a result of the falling energy prices in the autumn, so that the price of oil at the beginning of 2007 was at the same level as one year earlier.

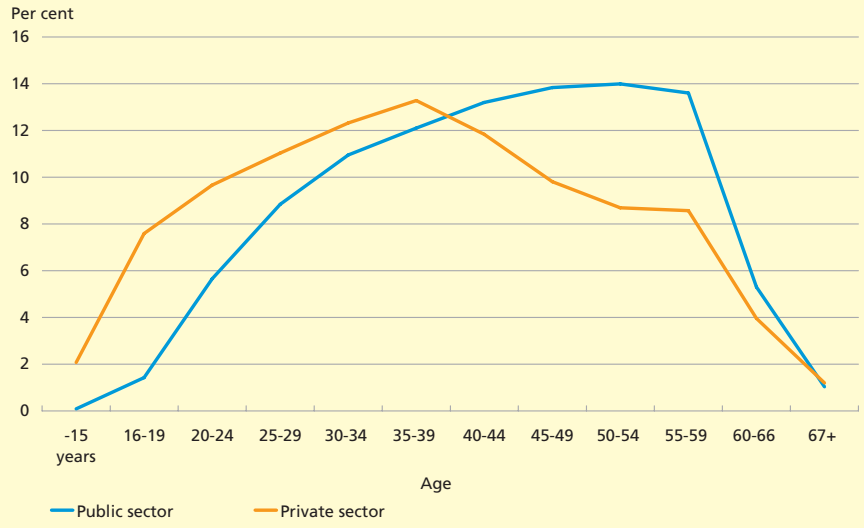
Even though inflation is moderate, the underlying pressure on prices seems to be increasing. The high level of activity in the building sector has thus exerted strong upward pressure on building materials prices, which were 5.7 per cent higher in the 3rd quarter of 2006 than one year before. This is the highest rate of increase in 16 years.

The tighter labour market and greater capacity utilisation have led to mounting domestic price pressure since the beginning of 2005, with a rising trend for domestic market-determined inflation (IMI). The underlying factors include a higher rate of wage increase, at 3.2 per cent in the 4th quarter, according to figures from the Confederation of Danish Employers. This means that Danish wages are still rising at a faster rate than among Denmark's competitors. In addition, a lower rate of increase in prices of imported energy may be reflected in rising profit margins, since the latter have for some time been squeezed by high energy and import prices.

AGE DISTRIBUTION OF THE LABOUR FORCE BY SECTOR Box 5

The age groups with the highest participation rates will account for a diminishing ratio of the total population in the coming years as the demographic structure changes. The exit from the labour force is likely to be particularly pronounced in the public sector, where the average age of employees is higher than in the private sector, cf. Chart 11. Especially the education sector has a relatively high number of public-sector employees who are approaching retirement age.

DISTRIBUTION OF EMPLOYEES BY AGE GROUP Chart 11



Source: Statistics Denmark and own calculations.

The number retiring from employment in the next five years can be estimated at 300,000, of whom public-sector employees constitute 113,000, equivalent to 38 per cent, provided that the retirement patterns are the same in the public and private sectors. Today, public-sector employees constitute 30 per cent of those in employment, and are thus overrepresented in the age groups on the verge of retirement. The outflow means that one in seven public-sector employees can retire within the next five years, and one in four within the next 10 years. The participation rate among the 60-64-year-olds has been rising, but is still below the level in countries such as Sweden and Norway.

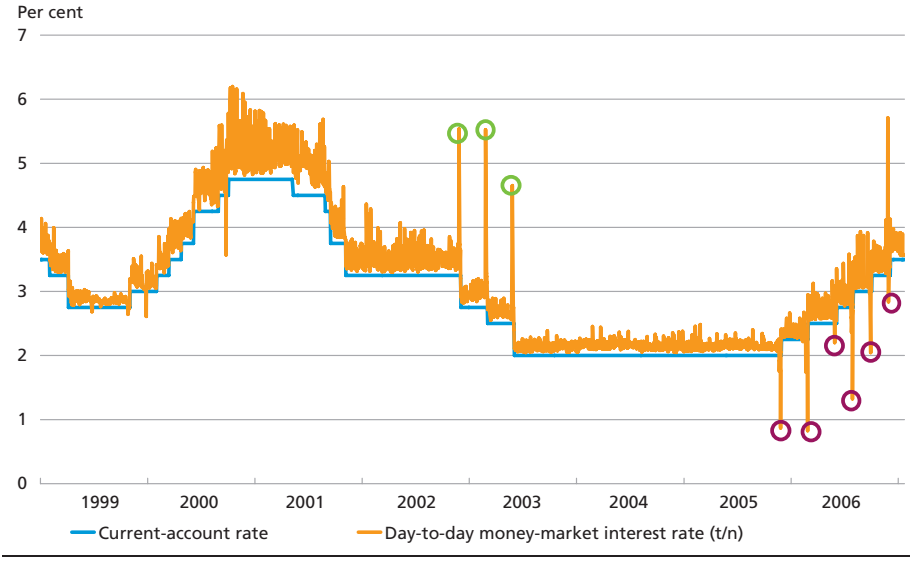
The ageing of the population increases the demand for labour-intensive core public services such as healthcare and care for the elderly, so that competition for labour between the public and private sectors can be expected to intensify in the future.

Change to 7-Day Maturity for Monetary-Policy Loans and Certificates of Deposit

In periods when interest rates in the euro area – and thus also in Denmark – are expected to increase there have in recent years been some cases of strong fluctuation in the day-to-day money-market interest rate. The banks and mortgage-credit institutes are reluctant to tie up liquidity for a 14-day period by purchasing certificates of deposit if interest rates are expected to be raised before the certificates mature. In this situation there will be ample liquidity in the money market and very low day-to-day interest rates. Since current-account deposits are subject to limits, the day-to-day interest rate can even fall below the level of the current-account rate, cf. the red circles in Chart 1.

On the other hand, in periods when interest rates in the euro area and Denmark are expected to be lowered there will be considerable interest in buying 14-day certificates of deposit that mature after interest rates

DANMARKS NATIONALBANK'S CURRENT-ACCOUNT INTEREST RATE AND THE DAY-TO-DAY MONEY-MARKET INTEREST RATE — Chart 1



Note: The day-to-day interest rate is the tomorrow-next rate.
Source: Danmarks Nationalbank.

are lowered. This can lead to a shortfall of liquidity in the money market and large increases in the day-to-day interest rate, cf. the green circles in Chart 1.[1]

In order to reduce these fluctuations, with effect from 3 May 2007 Danmarks Nationalbank will normally set a 7-day maturity for monetary-policy loans and certificates of deposit. By changing from 14-day to 7-day maturities both loans and certificates of deposit will normally mature on the day that any interest-rate change takes effect and will therefore not overrun an interest-rate adjustment. The maturity of loans to monetary-policy counterparties in the euro area is likewise normally 7 days.

On the buy-back of certificates of deposit in extraordinary market operations Danmarks Nationalbank adds a premium to the interest rate on certificates of deposit. This is to give the monetary-policy counterparties an incentive to hold sufficient liquidity on current accounts at the pre-announced market operations. In principle, the premium will continue to be 0.05 per cent p.a.

[1] The large increase in the day-to-day interest rate at the end of November 2006 should be viewed in the light of Danmarks Nationalbank's extraordinary sale of certificates of deposit at short maturities. The certificates matured at the end of the 1st week of December 2006, when an increase in interest rates in the euro area was expected. This led to high demand for certificates of deposit at the end of November and thereby tight liquidity and high interest rates in the money market.

Globalisation and the Danish Economy

Erik Haller Pedersen, Economics

INTRODUCTION AND CONCLUSIONS

Globalisation, measured as the ever-increasing international exchange of goods, services, investments, information, people, cuisine, culture, etc., is not a new phenomenon. The development of means of transport and communication thus led to significant upheavals from the mid-19th century until World War I. In recent years a special focus area has been the growing integration into the world economy of some of the world's most populous nations such as China and India, and this process has only just begun. Another central issue is the technological progress within telecommunications and IT, which has made it possible to exchange services and information in ways that before were either not possible, or arduous and cost-intensive.

This article outlines some of the main findings from the classical theory of trade. A key point is that differences in relative levels of productivity and wages determine the advantages of the international division of labour and thereby of international trade. It is concluded that unemployment is first and foremost attributable to inflexible labour markets, rather than globalisation.

In contrast to a number of other industrialised countries, Denmark has enjoyed double globalisation gains: from substantial growth driven by increased external trade, and from improved terms of trade, since many Danish business enterprises have succeeded in selling their products at increasing prices, while import prices have stagnated. This performance can among other things be attributed to the absence of political measures to artificially keep struggling sectors and individual business enterprises alive. Furthermore, Denmark's flexible labour market and opportunities for supplementary training, and its social security legislation, have alleviated potential disproportionally severe consequences for certain groups in society. Greater obstacles may lie ahead as low-cost countries like China and India increasingly challenge Denmark's core production areas. A sustained capacity for innovation and readiness for change can ensure that Denmark continues to benefit from an expansion of its international trade.

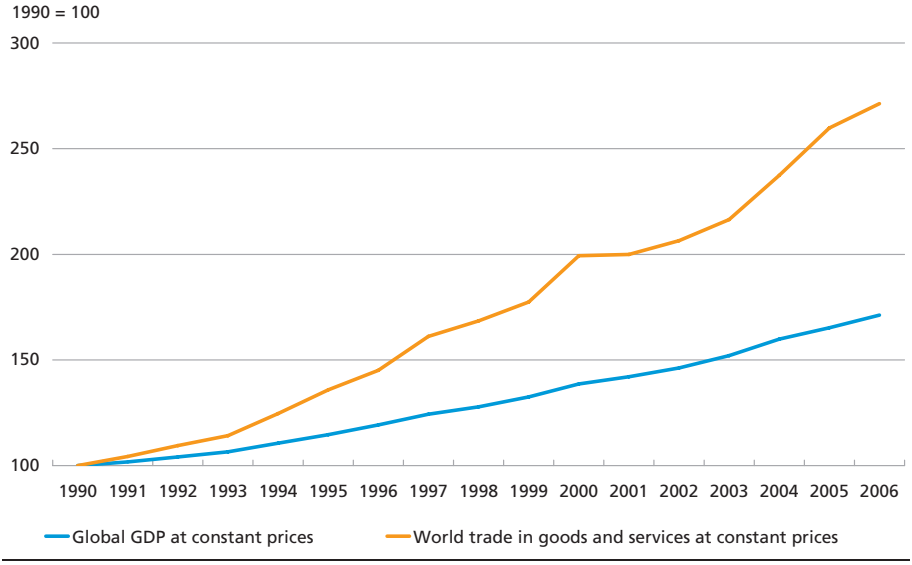
Viewed in isolation, a shift in goods imports from high-cost to low-cost countries has reduced consumer price inflation in Denmark. However, in the longer term globalisation cannot generally be assumed to lead to lower inflation, but possibly to a lower price level.

GLOBALISATION INDICATORS

Globalisation is a phenomenon that can be difficult to identify precisely. One indicator of the growing integration of the world's economies is that since 1990 the expansion of world trade has exceeded the growth in global output as a ratio of GDP, cf. Chart 1. This has been the case ever since the end of World War II. Cross-border trade in services, currently accounting for 20 per cent of world trade, has increased particularly strongly in the last 15 years. The boundaries to what is tradable have shifted in step with the progress in telecommunications and IT. Intermediate goods account for a growing share of world trade, as a result of an increased fragmentation of the international production process, due to outsourcing.

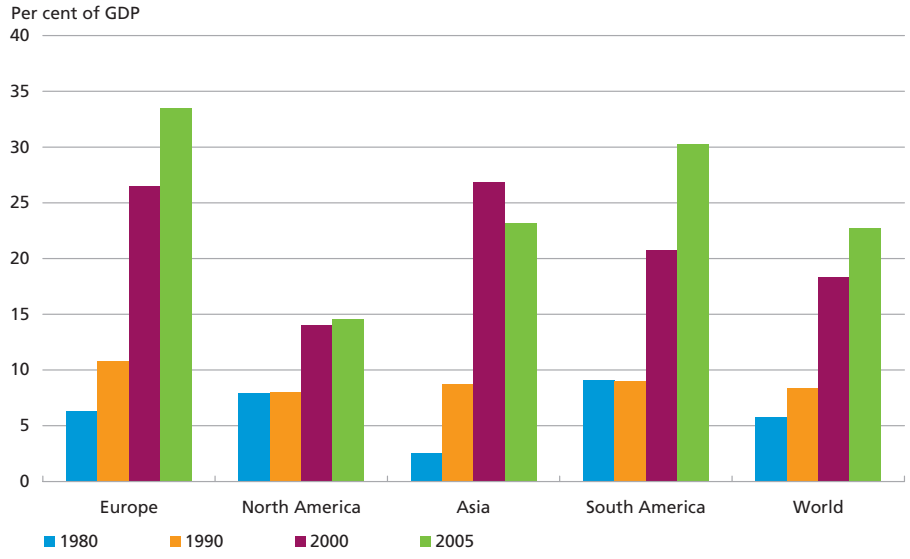
The gradual liberalisation of capital flows over the last 40 years has supported and reinforced global economic integration. Direct investments play a central role in this context as they often besides investment in new capital stock also entail the transfer of technology. This is important to enhancing the opportunities for low-income and

DEVELOPMENT IN GLOBAL GDP AND WORLD TRADE — Chart 1



Note: Purchasing-power-adjusted GDP.
Source: IMF, *World Economic Outlook* database.

INWARD DIRECT INVESTMENTS Chart 2



Note: Stock data for inward direct investments.
Source: UNCTAD FDI database.

medium-income countries to share the benefits of global growth. It is also important for the industrialised countries, since direct investments promote specialisation. Direct investments have risen significantly since 1990, cf. Chart 2.

Another key trend besides the liberalisation of capital flows has been the reduction of various trade restrictions. This is naturally a vital precondition for the expansion of international trade, and there is still quite a long way to go in this area.

The considerable wage differences among the world economies are an important force behind the increased specialisation of the production process and thereby the expansion of international trade, cf. Table 1. Today, a Danish factory worker earns 15 times as much as his Chinese counterpart, while the annual salary of a Danish engineer is almost 10 times higher. The difference is even greater for hourly than for annual wages since in China working hours are typically longer than in Denmark. According to the classical theory of trade on "comparative advantages", cf. below, the key factor determining which jobs are outsourced is the *relative* wage differences rather than differences in the wage *level*.

Since low-wage jobs account for the largest wage differences between e.g. China and Denmark, these jobs are outsourced first. However, as a result of growing trade in services, outsourcing certain high-wage jobs is

WAGES IN SELECTED COUNTRIES Table 1

	Average hourly wage[1]	Female factory worker	Skilled industrial worker	Industrial engineer	Middle manager
	Kroner per hour	Kroner per year			
Low-income countries					
India (Mumbai)	9.70	11,200	39,500	46,300	138,700
China (Shanghai)	16.40	16,400	41,800	50,000	157,000
Brazil (Rio de Janeiro)	26.10	24,600	76,100	140,200	183,500
Poland (Warsaw)	26.90	33,600	53,000	75,300	176,800
Medium-income countries					
Hong Kong	38.80	43,300	73,800	239,500	317,100
Taiwan (Taipei)	50.00	95,500	123,100	201,400	383,400
South Korea (Seoul)	61.90	54,500	241,700	255,100	343,900
High-income countries					
Japan (Tokyo)	109.70	161,900	324,500	371,500	514,700
Germany (Munich)	119.40	…	272,300	353,600	526,700
USA (New York)	140.20	188,700	404,300	526,700	552,040
Denmark (Copenhagen)	166.40	234,244	325,300	444,600	537,866

Note: Data collected in the 1st half of 2006.
Source: Union Bank of Switzerland, 2006.
[1] Average hourly wages in 14 selected occupations in industrial and service trades.

now also advantageous. It is relevant to distinguish between personal and non-personal services. Non-personal services such as IT services, consultant engineering, financial services, etc., are all high-wage areas that more and more resemble industrial goods that are traded internationally. Personal services, e.g. care of the elderly, cleaning and to some extent teaching, i.e. low-wage jobs, are less exposed to international competition.

Falling transport costs have traditionally been another force driving globalisation. Even though the reduction of goods transport costs has been less pronounced over the last decades than 50-150 years ago, when steam trains and later automobiles and motor vessels gained ground, transport costs as a ratio of the value of the goods continue to decrease. Over the last 15 years, new opportunities for trade in services have arisen as a result of developments in telecommunications, IT, etc., at considerably lower costs.

THE CLASSICAL CASE FOR FREE TRADE

The Appendix presents a highly simplified model of the classical case for free trade, based on Samuelson (2004). The point of departure is two "countries", e.g. the EU and China, that each manufactures only two products: a high-tech product, e.g. pharmaceuticals, and a low-tech

product, e.g. clothing. It is assumed, not unrealistically, that the EU has the highest productivity for both products, but that the advantage is relatively greatest for the high-tech product. This gives the EU a comparative advantage as a producer of pharmaceuticals.

An example shows that a shift from a hypothetical situation without trade relations between the EU and China to a trade scenario results in an increase in real incomes in both countries when each specialises in manufacturing the product that gives it a comparative advantage. The perhaps not quite obvious conclusion is that this still applies when absolute productivity is higher in the EU than in China for both products. This is the classic Ricardian result and the argument at the root of many economists' automatic response that international trade is an undisputed advantage.

The case for the advantages of international trade is deeply rooted and not just the result of a simplified model. It is important to understand that *relative* productivities drive the case for free trade. The underlying reason is that labour – and more generally also capital and land – as a factor of production is limited. Labour should therefore be utilised where the largest output can be achieved, which is determined by relative productivity showing how much of one product a country must refrain from manufacturing in order to manufacture one unit more of the other product. It is therefore most appropriate for the EU to use its labour force to manufacture the product for which its productivity is relatively high, and leave the manufacturing of clothing to China.

In reality, the market naturally encompasses many goods and services, and typically many different market segments, in each of which comparative advantages can be achieved. In practice, the individual countries will not opt for such extreme specialisation as assumed in the simple model. For example, the EU still has considerable production of clothing, while China has a certain production of pharmaceuticals. This does not change the overall principle, however.

In a market economy in equilibrium, relative productivities can be translated directly into relative wages since productivity determines the wage that can be paid if output is to remain competitive. The key conclusion from the preceding section and Table 1 that relative wages rather than wage levels are the central determinant again applies here. It will never be expedient to relocate all output to one country, not even when the absolute labour costs for all goods and services are lowest in that country.

Wage levels are not static, but in themselves respond to international trade. According to the factor price equalisation theorem, free trade entails harmonisation of the wage levels in countries that trade with

each other. In practice, large wage differences persist for protracted periods, and even if harmonisation does occur, the actual level is still an open question. History shows that the integration of low- and medium-income countries into the world economy often brings wage levels in these countries closer to the wage levels of the high-income countries, rather than vice versa. This has been corroborated many times. A historical example is that wage levels in Europe and Japan after World War II approached those in the USA, and not the other way around, as a consequence of technology transfer, among other factors. A more recent example is the integration of many Asian economies into the global economy. The concern that free trade would generally start a race for the poorest wage and working conditions thus seems to be exaggerated, although some groups may be affected.

The classical explanation for comparative advantages is that they reflect differences in the countries' natural endowment of the production factor. For example, China and many other low-income countries often have very large populations, which give them a comparative advantage in labour-intensive production, e.g. textile manufacture. In general, however, comparative advantages and international competitiveness are increasingly created by education, creativity and innovation, and hereby the quality rather than the quantity of the labour force. The availability of natural resources also plays a role, cf. the example of Norway below.

The classical case for free trade assumes a world with a perfect market, but in practice, the market may not always operate perfectly. For example, it may be subject to price and wage rigidities. However, such problems are not likely to be solved by establishing barriers to international trade. A more viable strategy should be to improve the framework and structure of the market, which requires suitable institutions and legislation, cf. e.g. Stiglitz[1]. The expansion of international trade as a consequence of international specialisation has been a key driver of the global increase in prosperity since World War II.

GLOBALISATION AND TERMS OF TRADE

Returning to the theory of trade, it is possible to analyse different shocks. It can, for example, very realistically be assumed that China's productivity for the low-tech product in which it specialises will increase over time. This may be the result of new inventions, improved production methods or transfer of technology as a result of direct investments.

[1] Joseph E. Stiglitz (2002), *Globalisation and its Discontents* and Joseph E. Stiglitz and Andrew Charlton (2006), *Making Globalisation Work*.

As shown in Appendix Table 3, not only China, but also the EU, will gain from an increase in productivity in China, although not necessarily to the same extent. The gain to the EU results from a decrease in the import price relative to the price of the EU's export product, i.e. pharmaceuticals, as a consequence of an increase in the supply of the product, clothing, manufactured in China, i.e. the EU sees an improvement in terms of trade. This gives higher real income from a given output in the EU. Conversely, China's terms of trade deteriorate, but the increase in productivity – i.e. more output for a given input of work – will probably dominate.

An alternative scenario is that China embarks on substantial production of pharmaceuticals, i.e. the high-tech product, so that the price of this product decreases relative to the low-tech product, and the EU's terms of trade deteriorate. In the example in the Appendix, the productivity increase in China is strong enough to cancel the EU's comparative advantage, and the EU suffers a direct, permanent loss of real income.

The conclusion is that globalisation is not necessarily always a win-win situation. In countries with weak development in productivity and innovation, real incomes may be subject to permanent downward pressure. Specifically, the development in China and the EU has so far mostly resembled the scenario with increasing Chinese competitiveness in the production of the low-tech product, which is also an undisputed advantage to the EU via lower import prices. The question is whether this will last, or whether the growing strength of China and other low-wage countries, such as India, will to a higher degree also challenge the West in terms of goods or services such as pharmaceuticals, software development, etc., for which the EU, or the USA, has so far held the competitive advantage. It is important to realise that the EU cannot prevent this downward pressure on income by introducing trade barriers or similar measures. The only way forward is to improve productivity.

The model in the Appendix describes a world with complete price and wage flexibility and thereby permanent full employment, so that shifts in productivity between countries impact the terms of trade and real income. This must also be assumed to apply in the real world in the longer term. However, when the consequences of globalisation are assessed, the focus tends to be on the situation in the adjustment period, when unemployment may be rising. As a result, trade restrictions against the competitor country(ies) are sometimes called for. However, there is no shortcut to prosperity. If the country artificially raises the price of imported goods, it misses out on low-cost imports and maintains "expensive" domestic production of e.g. clothes or shoes. In the short

term, this may increase employment, but to the detriment of real income in general terms. In most cases, it would be more beneficial to the economy to let the competition from abroad make its mark. Trade restrictions tend to preserve the production structure, thereby preventing the restructuring of the labour force to production with higher added value, and the country in question can easily fall into a low-wage trap. Restructuring production to new products may entail higher unemployment in the short term, but will contribute to increasing real incomes in the longer term.

The duration of the adjustment period and the magnitude of the adverse effect on employment are directly proportional to the flexibility of the labour market, i.e. how flexibly the labour force can be moved from declining to advancing sectors. All in all, the policy recommendation is to create the framework for a flexible labour market and readiness for change, rather than to introduce short-term measures such as trade barriers and restriction of business enterprises' opportunities to match the labour force to the demand for their products, etc. The Danish labour market has come far in meeting this challenge.

Liberalising capital flows makes it possible to postpone the adjustment to new terms of productivity by borrowing to finance consumption and investments for a period, but this does not in principle affect the above arguments.

SIMULATIONS ON THE MONA MODEL

A number of simulations have been made on the macroeconomic model for Denmark, Mona, to illustrate the effects of globalisation in the short and long term. The effects of shocks to export and import prices are calculated. Globalisation input to the model calculation is via (exogenous) assumptions regarding foreign markets and prices.

Import prices are assumed to decrease by 2 per cent as a result of the arrival of China and other low-cost countries in the world market (i.e. a one-off shock). The consequence for Denmark in the short term is weaker consumer price inflation and slightly higher private consumption, cf. column 1 in Table 2. A neutral fiscal-policy stance is assumed for the long term.

The lower import prices will increase the market share of imported goods, thereby pressing Danish products out of the market, with the transitional effect of lower employment. However, in the long term there is no negative effect on employment, but a positive effect on private consumption, reflecting higher real incomes in Denmark. This is fully consistent with the results of the Samuelson model where

CONSEQUENCES OF GLOBALISATION SHOCKS TO THE DANISH ECONOMY Table 2

Percentage deviation from basic scenario	Import price: -2 per cent	Export price: -2 per cent	Import price: -2 per cent Export price: -2 per cent
Short term (year 3)			
Consumer prices	-0.3	-0.2	-0.5
Employment	-0.1	-0.4	-0.5
Consumption	0.3	-0.4	-0.2
Budget balance	0.0	-0.4	-0.3
Long term			
Consumer prices	-0.8	-1.1	-1.8
Employment	0.0	0.0	0.0
Consumption	0.9	-1.0	0.0
Budget balance	0.0	0.0	0.0

Note: One-off shock of 2 per cent to import and export prices. The model then finds a new long-term equilibrium with full employment. A neutral fiscal-policy stance is maintained in the long term by adjusting specific excise duties.
Source: Own calculations on the Mona model.

opportunities for consumption expand in step with the division of work.

The second column in the Table illustrates a scenario where competition from low-cost countries relates more to Denmark's core products, which exerts pressure on Denmark's export prices, whereas import prices are unaffected. This scenario implies a permanent decrease in opportunities to consume in Denmark, while employment again is unaffected in the long term. This corresponds to the result in Appendix Table 4.

If not only Denmark's import prices, but all foreign prices, fall by 2 per cent, the long-term result corresponds to the sum of columns 1 and 2. Employment falls in the first years, when consumption is dampened by the adverse cyclical effect. In the longer term, there is no change in terms of trade and consumption effect as in columns 1 and 2. We merely adjust to a situation where consumption is unchanged at a lower nominal price and wage level. This again emphasises that the advantages of globalisation are driven by relative prices and changes therein. When changes in import and export prices are identical there is no change in relative prices, and the question is thus whether China and other low-cost countries are adapting to our wage level, as historical experience indicates, or whether we are adapting to their wage level.

This scenario, with no real impact on Denmark in the long term, implies that the low-cost countries end up manufacturing the same products as the high-cost countries, so that the latter do not benefit from the increased division of work, while the low-cost countries naturally benefit from the boost to their productivity.

The Danish labour market is characterised by high job turnover. Up to 250,000 jobs disappear each year, but a corresponding number of new jobs are created. Surveys show that approximately 5,000 of the lost jobs, or 2 per cent, can be attributed to the relocation of Danish business enterprises to abroad[1]. However, this figure by no means reflects the magnitude of the challenge to the Danish economy from globalisation when measured as the number of jobs that have to be reallocated each year as a consequence of external competition.

GLOBALISATION AND INEQUALITY

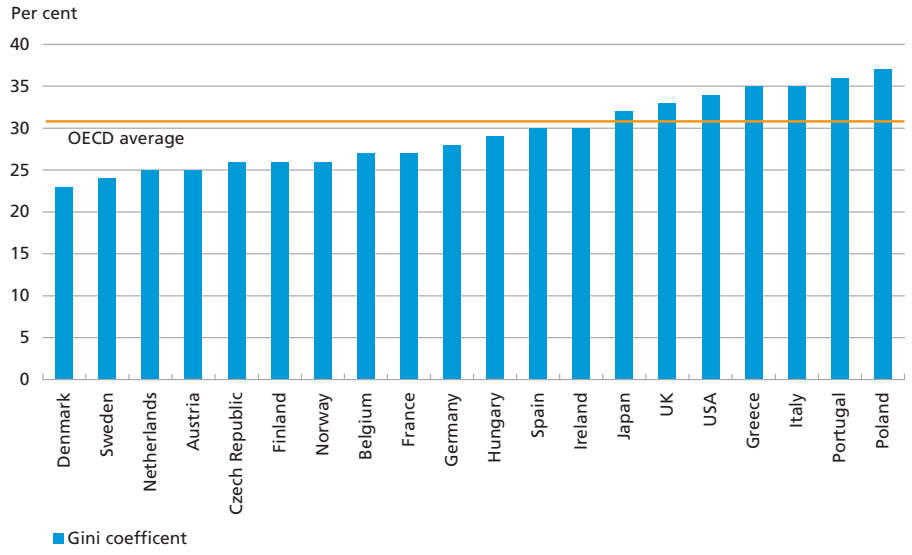
Labour is by no means a homogeneous commodity. In practice, there are differences not only between countries, but also within countries between the segments of the labour force involved in producing respectively high-tech and low-tech products. Even though the globalisation process overall entails advantages, some groups may lose from it, as shown by the Samuelson model. This can contribute to widening internal divides within, for example, the EU between the various labour groups, since the immediate consequences of globalisation may vary considerably for each of these groups.

However, all other things being equal, it is possible for countries to compensate those who stand to lose from globalisation in the short term, e.g. via government budgets, and to prepare them for the more competitive environment by upgrading their qualifications, retraining, supplementary training and education, or similar measures. The effectiveness of the individual OECD countries in this respect varies strongly.

As a consequence of significant reallocation via government budgets, Denmark is among the countries in the world with the lowest degree of inequality of disposable incomes and in consumption opportunities for its citizens, cf. Chart 3. In combination with an active labour-market and education policy, this has to a high degree shielded the groups that would otherwise lose from globalisation. Inequality, measured by the Gini coefficient, has increased only marginally in Denmark over the last 10 years, while several other countries have seen rather strong increases. This applies to e.g. Sweden and Finland that are also characterised by a low degree of inequality in international terms. Other factors besides globalisation also determine inequality.

[1] See also *The Danish Economy*, autumn 2004 (in Danish) from the Danish Economic Council, Chapter 2.

INEQUALITY IN DISPOSABLE INCOME Chart 3



Note: The Gini coefficient is a measure of the degree of inequality of the income distribution and shows the percentage income shares to be moved from the highest income brackets to the lowest in order to achieve perfect equality. The Gini coefficient is between 0 and 100. The lower the value, the more equal the income distribution. The figures are for 2000. For figures for Denmark up to 2004, see Statistisk Tiårsoversigt (Statistical Ten-Year Review) 2006 from Statistics Denmark, p. 68.

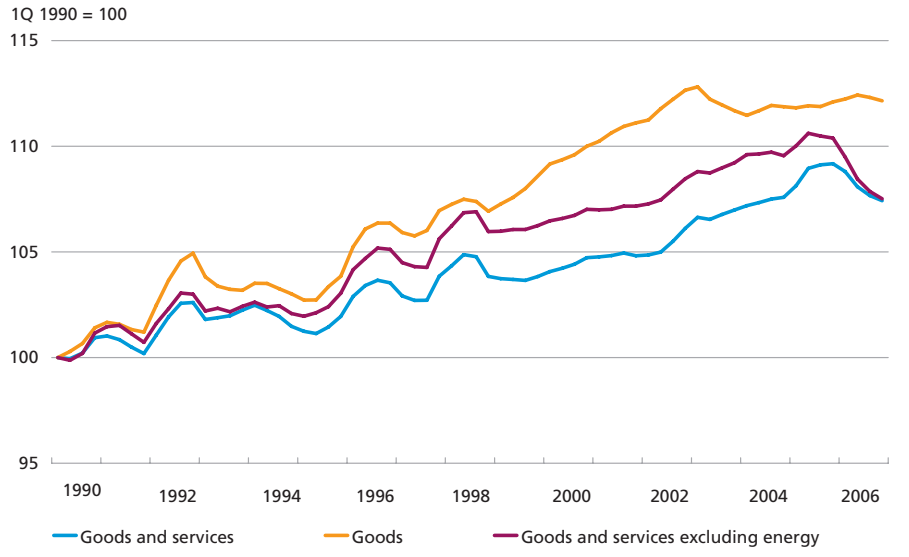
Source: Michael Förster and Marco Mira d'Ercole (2005), Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s, in *OECD Social, Employment and Migration Working Paper no 22*.

TERMS OF TRADE – EMPIRICAL EVIDENCE

In the case of both high- and low-income countries the consequences of globalisation for prosperity, measured as the development in opportunities to consume, are determined by factors such as the development in terms of trade. Denmark's terms of trade have been increasing for the last 15 years, also when energy is excluded, cf. Chart 4. The clearest trend has been observed for goods, while terms of trade for services have increased more moderately. In recent years this has even been reversed to a decrease as a result of such factors as declining freight rates for container shipping, which is a major Danish export.

These patterns reflect that while import prices are kept down by e.g. cheap products from China and other low-wage countries, Danish business enterprises have been able to sell their products at rising prices in the world market. Relocation of production to low-wage countries has contributed to this development by making it possible to transfer labour to the production of "up-market" products with higher added value. There has been no impact on employment, which confirms the flexibility of the labour market.

TERMS OF TRADE FOR DENMARK Chart 4



Note: Terms of trade defined as the export price index divided by the import price index according to the national accounts.
Source: Statistics Denmark.

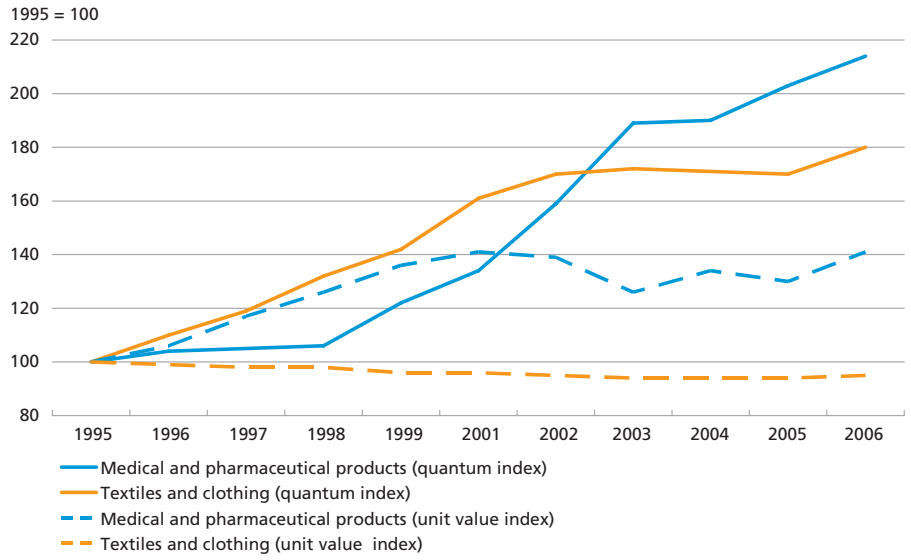
The improvement in Denmark's terms of trade is relatively broadly based and does not hinge solely on a few sectors. In many areas, the ever-increasing knowledge content of the products has enabled business enterprises to sell more at rising prices. A case in point is the pharmaceutical industry, which has seen significant growth in both prices and sales volumes over the last 10 years, cf. Chart 5. In the textile industry, prices have on the other hand receded, but an increasing share of processing has taken place in low-wage countries, so that the activity in Denmark has been up the value chain.

This favourable development is not shared by all high-income countries. The terms of trade for the EU taken as one have been unchanged since 1990, cf. Chart 6, and the adjustment process has resulted in significantly higher unemployment than in Denmark.

In Sweden and Finland, the terms of trade deteriorated during the same period, when the two countries achieved high economic growth. One contributing factor is a strong productivity improvement for some of the products for which these countries hold a comparative advantage, e.g. telecommunication products. In view of the effective competition, the productivity gains have been passed through to consumers as lower prices, including lower export prices. However, this does not change the fact that in overall terms globalisation has been an advantage to Sweden and Finland.

DEVELOPMENT IN PHARMACEUTICAL AND TEXTILE EXPORT PRICES AND VOLUMES

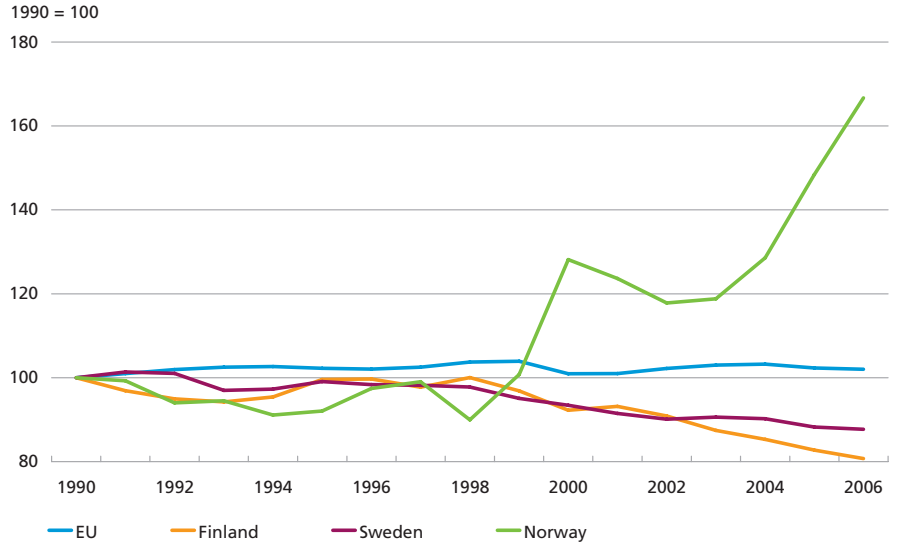
Chart 5



Note: "Quantum index" measures export volume, while "unit value index" shows the product price over time.
Source: Statistics Denmark.

TERMS OF TRADE

Chart 6



Note: Terms of trade defined as an export price index for goods and services divided by the import price index for goods and services according to the national accounts.
Source: OECD, *Economic Outlook* bank no. 79.

ADJUSTMENT OF GDP GROWTH RATES FOR TERMS OF TRADE Box 1

There is no unequivocal answer to the question of the extent to which growth in GDP at constant prices is eroded by e.g. deteriorating terms of trade. The terms of trade reflect some price effects that GDP at constant prices does not take into account.

It is possible to estimate the significance of changes in terms of trade by calculating the development in GDP if export prices had developed in parallel with import prices. This calculation is made by deflating the value of exports by the import price index instead of the export price index[1].

Instead of measuring the consequences for GDP of changes in the terms of trade, the effect on public and private consumption can be measured, cf. Chart 7.

[1] Cf. Christian Ølgaard (2006), The Relevance of GDP Growth Rates, Danmarks Nationalbank, *Monetary Review,* 4th Quarter.

Norway's terms of trade have improved strongly in step with rising prices for oil and natural gas. Norway is a special case since its comparative advantage stems from a natural resource. This is only true of a few other high-income countries.

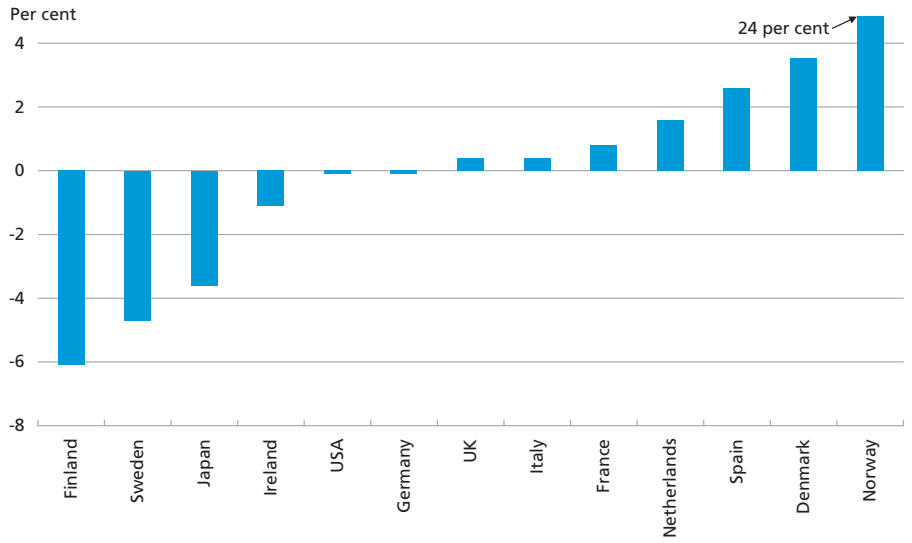
The model in the Appendix is static. In practice, economic growth will typically be positive. On comparing countries' relative economic performance, it should be borne in mind that the traditional GDP growth rates based on the national accounts do not capture the consequences of shifts in terms of trade. All other things being equal, an increase in a country's GDP at constant prices increases its real incomes and thereby its opportunities for consumption. An improvement in the terms of trade will underpin this development, while deteriorating terms of trade will curtail the underlying opportunities for consumption, cf. Box 1.

The development in public- and private-sector consumption is relevant to prosperity. Chart 7 shows the consequences of the terms of trade for consumption in the period from 1993 to 2005. While the underlying opportunities for consumption in Sweden and Finland must be adjusted downwards on correction for changes in terms of trade, the opposite applies to Denmark. Globalisation has resulted in double gains for Denmark, since it has enhanced economic growth and improved its terms of trade.

GLOBALISATION AND IMPORT AND CONSUMER PRICES

In an assessment of the price consequences of globalisation it is important to distinguish between prices of finished goods and prices of commodities, since the respective effects have diverged considerably. The strong global economic growth stemming from globalisation has thus exerted upward pressure on commodity prices in the world market,

CONSUMPTION EFFECT OF A CHANGE IN TERMS OF TRADE FROM 1993 TO 2005 Chart 7



Note: The consumption effect of a change in terms of trade from 1993 to 2005. Share of public and private consumption in 2005.
Source: OECD, *Economic Outlook* bank no. 79 and own calculations, cf. Box 1.

while increased imports from low-cost countries have, all other things being equal, exerted downward pressure on prices for finished goods.

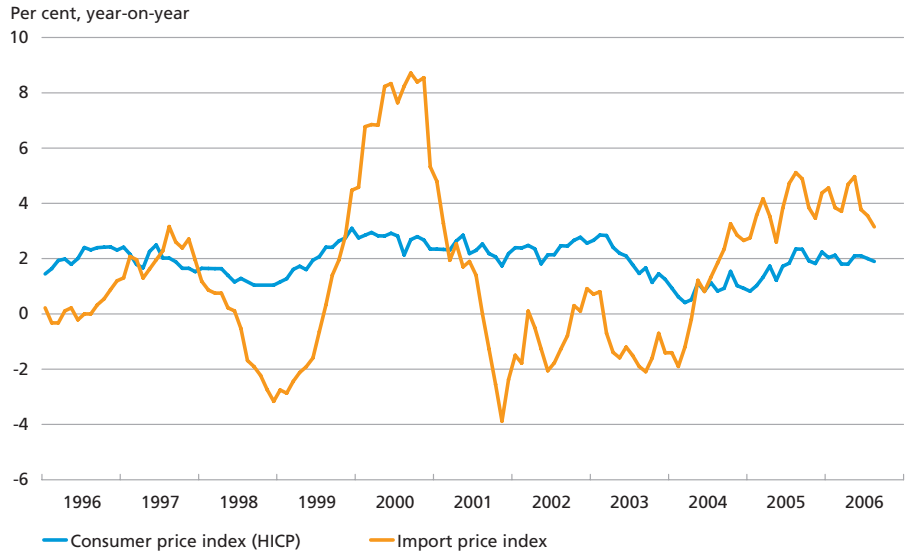
The development in a broad import price index, such as the index of the domestic supply of goods, has been volatile as a result of fluctuations in commodity prices. The weighting of commodities in the index is more than 50 per cent. In recent years, price increases for imported goods have generally exceeded consumer price inflation, but there were some periods during the last 10 years when price increases for imported goods were lower, cf. Chart 8.

Since the mid-1990s, price increases for imported finished goods have been modest due to such factors as higher imports from low-cost countries such as China and the new EU member states. For finished goods, an import shift from high-cost to low-cost countries entails lower import prices[1] that are passed through as lower consumer price inflation. On the basis of the Mona simulation in Table 2, a sustained decline in import prices by 1 per cent p.a. pushes down consumer price inflation[2] by 0.3-0.4 per cent p.a.

[1] According to the ECB's estimate, import price inflation in the euro area was reduced by up to 2 percentage points p.a. on average in the period from 1996 to 2005. See ECB *Monthly Bulletin*, August 2006, pp. 56-57.

[2] OECD calculations show that globalisation has reduced consumer price inflation in Denmark by between 0.2 and 0.5 per cent p.a. since 2000, cf. OECD (2006), Globalisation and Inflation in the OECD Economies, *Economics Department Working Papers* no. 524.

CONSUMER AND IMPORT PRICES Chart 8



Note: Import price index from domestic supply of goods (previously wholesale price index). Alternative import price indices are the unit value index for foreign trade, or the implied import deflator from the national accounts. The patterns are different, but do not change the overall conclusion.
HICP is the EU's Harmonised Index of Consumer Prices.
Source: Statistics Denmark.

However, the direct price effect of importing from low-cost instead of high-cost countries is a one-off effect that can be attributed to lower price *levels* in the low-cost countries. The import share must therefore increase on an ongoing basis for the effect to be permanent. Only persistently lower price *increases* for imports from low-cost countries can lead more permanently to lower import price increases and thereby lower consumer price inflation in the high-cost countries.

Increased openness and international trade increase exposure to competition and exert downward pressure on prices for the traded goods. This applies especially to low-tech products, while increasing productivity is vital to the development in prices for high-tech goods. It has been pointed out from several sides, including the IMF[1], that the shifts relate primarily to relative prices. In the long term, the general price level is in principle determined by monetary policy, and thereby by the central banks. For as long as there are no changes in the monetary-policy objectives as inflation targets, or in Denmark's case exchange-rate targets, there is no reason to assume that globalisation will more permanently lead to lower inflation. The lower rate of increase in imported goods solely allows for higher price increases for other goods.

[1] Cf. World Economic Outlook, April 2006.

APPENDIX – KEY POINTS FROM THE INTERNATIONAL THEORY OF TRADE

This Appendix presents a brief overview of some principal findings from the classical theory of trade which are key to an assessment of the consequences of globalisation. The review is based on a very simplified model of the type that has been used in the literature since the time of the British economist Ricardo in the early 19th century. This review is based on Paul Samuelson's article from 2004[1]. Samuelson was one of the first recipients of the Nobel Prize for economics, in 1970.

The point of departure is two "countries", e.g. the EU and China, which are both self-sufficient to begin with, i.e. they have no trade relations. China's labour force is assumed to be 1,000, and that of the EU is assumed to be 100. This assumption is not decisive to the qualitative results, but probably to the quantitative results such as a breakdown of the gains from international trade between the countries.

Each country manufactures two products: one high-tech product (product 1) and one low-tech product (product 2). There is equal demand for the two products, at identical levels in both countries. This means that half of the labour force in each country manufactures product 1, and the other half manufactures product 2. Only one factor of production is applied, i.e. labour, and a Ricardian assumption of constant full employment is made.

A key assumption is that productivity (unit of GDP per unit of labour) in the EU is on average 10 times the level in China, but the difference is less than factor 10 for product 2, and more than factor 10 for product 1. This gives the EU a comparative advantage in manufacturing product 1 (high-tech), and China a comparative advantage in manufacturing product 2 (low-tech). A numerical example is shown in Table 1.

As appears, real income per employee is 10 times higher in the EU than in China. If the two countries are opened up to international trade, they can both increase their real incomes by specialising, and thus solely manufacturing the product that gives the country a comparative advantage. The key point, which goes back to Ricardo, is that this will be the case even though the EU in absolute terms accounts for the highest productivity for both products. In our stylised example, free trade doubles employees' real income in each country relative to a situation with self-sufficiency, cf. Table 2.

In our example, the prosperity gains from free trade are distributed equally between the EU and China. This need not necessarily be the

[1] Paul A. Samuelson (2004), Where Ricardo and Mill Rebut and Confirm Arguments of Mainstream Economists Supporting Globalization, *Journal of Economic Perspectives*, Volume 18, Number 3.

SELF-SUFFICIENCY, I.E. NO INTERNATIONAL TRADE — Table 1

	EU	China
Labour force, total	100	1,000
Labour force manufacturing product 1	50	500
Labour force manufacturing product 2	50	500
Labour productivity		
Product 1	40/20	1/20
Product 2	10/20	4/20
Average	10/8	1/8
Output = consumption = GDP		
Product 1	100	25
Product 2	25	100
Real income	50	50
Real income per employee	0.5	0.05

Note: "Productivity" is the number of real GDP units (output) per unit of labour (input), and total productivity is a simple average of the productivities for product 1 and product 2 since exactly half of the labour force per assumption produces each of the two products. For the EU: 0.5*40/20+0.5*10/20 = 10/8.
"Output" is the result of productivity multiplied by work effort. For the EU : 50*40/20 = 100 of product 1.
Real income in each country is the geometrical average of consumption of the two products, cf. Samuelson (2004) Appendix. For the EU: $100^{½}*25^{½} = 50$.

case. For example, an interesting aspect is that an increase in China's population relative to the EU reduces China's real income per employee in relation to the EU when there is a shift from self-sufficiency to free trade. The larger the population of a country entering the world market, the greater the advantage to the high-cost countries in terms of an increase in terms-of-trade gains. This is probably the opposite of the popular view.

Tables 1 and 2 illustrate the key point of the international theory of trade, which is the basis for most economists' recommendation that free trade is an advantage for all parties. The following Tables serve to qualify this view.

FREE TRADE — Table 2

	EU	China
Output = GDP		
Product 1	200	0
Product 2	0	200
Consumption		
Product 1	100	100
Product 2	100	100
Real income	100	100
Real income per employee	1	0.1
Terms of trade, product 2 at product-1 prices	200/200 = 1	

INCREASE IN CHINA'S PRODUCTIVITY FOR PRODUCT 2 (LOW-TECH) Table 3

	EU	China
Productivity		
Product 1	40/20	1/20
Product 2	10/20	16/20
Output = GDP		
Product 1	200	0
Product 2	0	800
Consumption		
Product 1	100	100
Product 2	400	400
Real income	200	200
Real income per employee	2	0,2
Terms of trade, product 2 at product-1 prices	200/800 = 1/4	

Table 3 illustrates a situation with an exogenous increase in China's productivity (from 4/20 to 16/20) for product 2, i.e. the low-tech product, that gives China a comparative advantage. As the Table shows, this increases real incomes further in both China and the EU.

Table 3 shows a terms-of-trade loss for China as a consequence of the increased productivity for product 2, which the country manufactures. This means that part of the advantage falls to the EU since imports from China become cheaper measured in product-1 prices. In the example, the productivity increase in China offsets the terms-of-trade loss, so real income also rises in China. However, situations can be envisaged[1] where the loss on terms of trade is so great that China's position is less favourable than before the productivity increase. This phenomenon is called "immiserizing growth" in economic literature.

The last scenario, Table 4, illustrates a situation with an exogenous increase in China's productivity (from 1/20 to 16/20) for product 1, i.e. the product that so far has given the EU a comparative advantage. In order to make the point clear, the productivity increase is assumed to be of a magnitude that erodes the EU's entire comparative advantage, so there is no longer a basis for international trade. This brings the EU back to the same situation as when it was self-sufficient, while real incomes in China rise.

A more realistic model than the simplified Samuelson model would include a smooth transition whereby increasing productivity for the high-tech product in China will increase the country's real income per

[1] The key aspect here is demand conditions. The more inelastic the demand for product 2, the greater the terms-of-trade loss for China.

INCREASE IN CHINA'S PRODUCTIVITY FOR PRODUCT 1 (HIGH-TECH) Table 4

	EU	China
Productivity		
Product 1	40/20	16/20
Product 2	10/20	4/20
Output = consumption = GDP		
Product 1	100	400
Product 2	25	100
Real income	50	200
Real income per employee	0.5	0.2

employee as a result of both the increasing productivity and improved terms of trade. All other things being equal, the consequence for the EU will be a terms-of-trade loss and thereby downward pressure on real incomes.

The model reviewed is as stylised as possible in order to make the points clear, but it is also relevant in more general and thus more realistic situations with more products, including non-traded goods, more countries, and an expansion of the production function to include capital. The assumption of full employment entails that the consequences of productivity changes in the model impact on terms of trade and real incomes, rather than unemployment. This disregards the adjustment process that the economies normally have to undergo in the event of productivity changes. The model thus focuses on the long term.

From Debtor to Creditor Country – An Analysis of Investment Income

Jannick Damgaard, Statistics

INTRODUCTION AND SUMMARY

At the end of 2005, Denmark's external assets exceeded its external liabilities for the first time since WW II. Concurrently with its transition from debtor to creditor country, for the first time in more than 40 years Denmark registered higher investment income receipts from than expenditure to abroad. This broke a prolonged pattern of net external debt and an equivalent interest burden. The question now is whether Denmark will in future continue to hold net external assets and register positive investment income, with a beneficial impact on its balance of payments.

This article reviews the factors that have been decisive to the development in Denmark's external assets and liabilities during the past 45 years. Over time, the balance of the current account of the balance of payments is the determining factor. Nevertheless, in individual years valuation adjustments as a result of changes in exchange rates and prices can lead to strong fluctuation in Denmark's external financial assets and liabilities (the international investment position). Valuation adjustments have a tendency to cancel each other out over time, however.

The article then focuses on the interrelation between Denmark's international investment position and investment income. For a long period, Denmark's net external debt has been substantial, resulting in considerable investment income expenditure. However, the international investment position and investment income are not perfectly correlated, since assets and liabilities yield different returns and moreover can vary over time and between instruments. This has inter alia been the case in the UK and USA, where there has been positive net investment income despite large net debt positions.

With 2005 as the starting point, a sensitivity analysis is performed to show the impact on investment income in various scenarios. The analysis reveals that even minor changes in the level of interest rates and in share yields will have a significant influence on whether investment income is positive or negative.

It can be concluded that even if the current account of its balance of payments continues to show a surplus, Denmark cannot be sure of maintaining its position as a creditor country in the short term, due to the significant role played by valuation adjustments. In addition, the volatility of the rates of return on external assets and liabilities entails that Denmark cannot be certain of positive investment income in the immediate future, even if its international investment position is positive. In particular, asymmetrical changes in returns on direct investment can lead to significant fluctuation in investment income. If the trend of substantial current-account surpluses continues in the years to come, it will in time be reflected in Denmark's international investment position and cement its status as a creditor country with positive investment income, which will benefit the balance of payments.

FROM DEBTOR TO CREDITOR COUNTRY

In 1988, Denmark's external financial liabilities exceeded its external financial assets by an amount equivalent to 47 per cent of GDP for that year, cf. Chart 1.[1] This was the result of a long period of sustained current-account deficits, which gained momentum in the years after 1960 when there was more or less equilibrium between residents' foreign assets and non-residents' assets in Denmark. In the period after 1988, the situation reversed, and at the end of 2005 Denmark's international investment position was positive for the first time since WW II.

By definition, the numerical development in a country's net assets can be explained by the current and capital accounts balance[2] and by valuation adjustments, etc.[3]

$\text{Net assets}_t = \text{Net assets}_{t-1} + \text{current and capital accounts balance}_t + \text{valuation adjustments, etc.}_t$

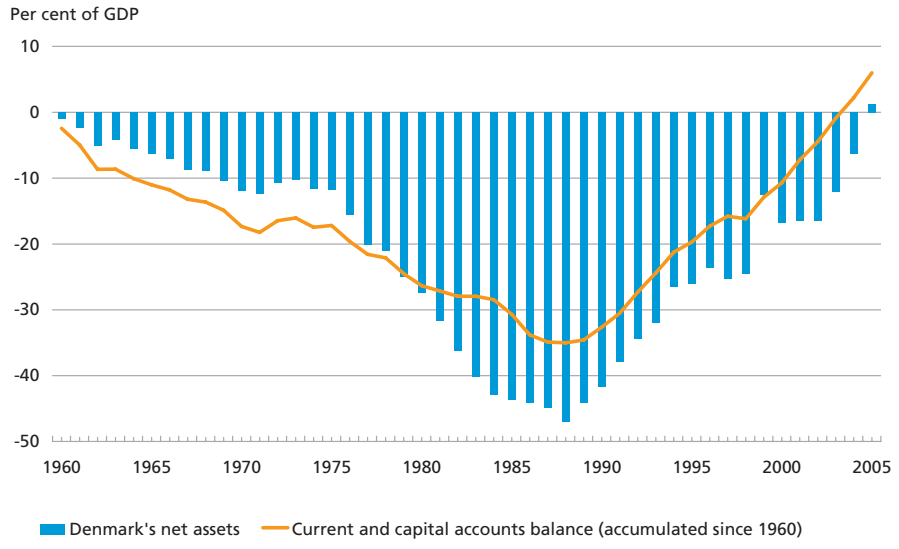
Over time, the development in Denmark's net assets could primarily be explained by the current account of the balance of payments. For every year of the period 1960-89, Denmark had a current-account deficit,

[1] Constructing longer time series is not unproblematic as new compilation principles and sources will lead to breaks in data series. All time series in this article are based on official figures from Statistics Denmark and Danmarks Nationalbank, and it is sought to interlink the figures while taking the greatest possible account of the consistency of the series.

[2] The sum of the current account and the capital account of the balance of payments comprises transactions of goods, services, compensation of employees, investment income, current transfers, capital transfers such as debt forgiveness and purchase/sale of goodwill and patents.

[3] Valuation adjustments, etc. comprise exchange-rate changes, price changes (typically changes in the market price of shares and bonds) and other adjustments (e.g. the banks' loan losses and the allocation of SDR). Errors and omissions that occur when the sum of the current, capital, and financial accounts of the balance of payments is not zero were previously stated under valuation adjustments, etc.

DEVELOPMENT IN DENMARK'S NET EXTERNAL ASSETS Chart 1



Source: Official statistics from Statistics Denmark and Danmarks Nationalbank. The figures for Denmark's net external assets in the period 1976-90 are based on calculations by Christensen and Hald (2000).

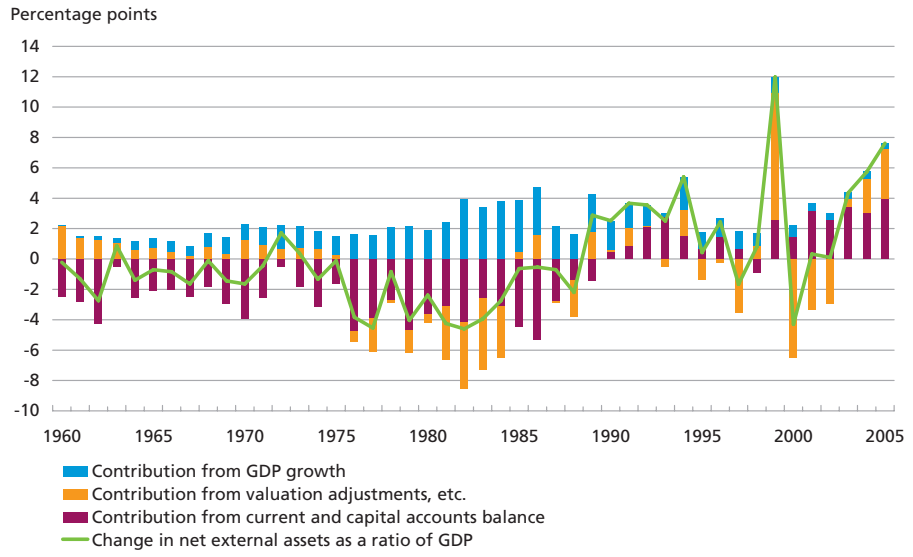
while for every year of the period 1990-2005, except 1998, it had a current-account surplus.

In 1960, Denmark's net external liabilities amounted to kr. 0.4 billion, and by 1988 the amount had increased to kr. 359 billion. Of this increase, kr. 257 billion can be attributed to current-account deficits, kr. 9 billion to deficits on the capital account of the balance of payments, and kr. 92 billion to losses as a result of valuation adjustments, etc. In the same way, most of the development from net liabilities of kr. 359 billion in 1988 to net assets of kr. 20 billion in 2005 can be attributed to an aggregate current-account surplus of kr. 347 billion. The surplus on the capital account contributes kr. 13 billion, and valuation adjustment gains contribute kr. 19 billion. The figures illustrate that the development in Denmark's net external assets in the long run is determined primarily by the current account of the balance of payments.

Development in Denmark's net assets as a ratio of GDP

The development in Denmark's net assets as a ratio of GDP cannot be explained solely by the current and capital accounts balance and valuation adjustments, etc. since GDP growth in nominal terms also plays a role. Chart 2 shows the individual contributions of these three factors to the change in Denmark's net assets as a ratio of GDP, and hereby explains the development in Chart 1. In other words, a point on the curve

CHANGE IN DENMARK'S NET EXTERNAL ASSETS AS A RATIO OF GDP Chart 2



Source: Own calculations based on official statistics from Statistics Denmark and Danmarks Nationalbank. The figures for Denmark's net external assets in the period 1976-90 are based on calculations by Christensen and Hald (2000).

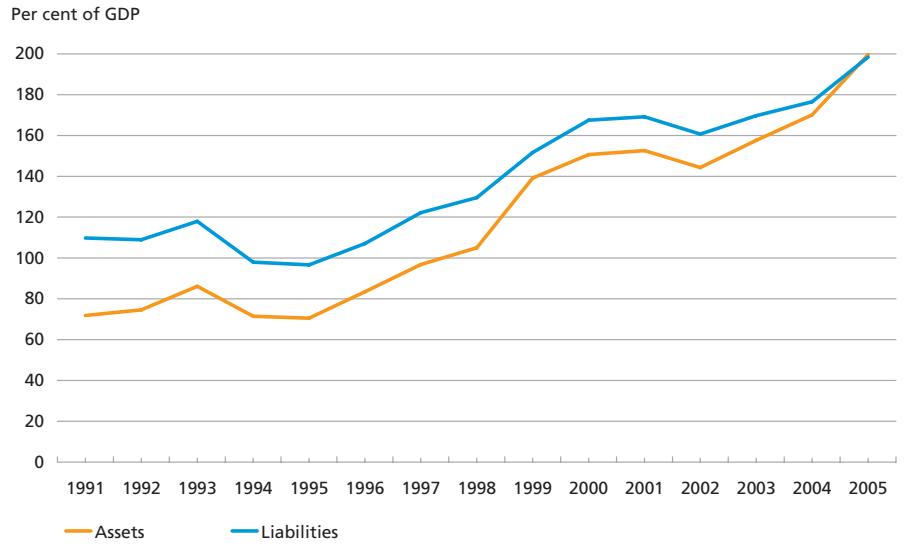
in Chart 2 for a given year corresponds to the difference between the column in the reference year and the preceding year in Chart 1.

It can be seen that each year GDP growth has made a positive contribution. This is because GDP in current prices has risen every year, and since Denmark has held net external liabilities throughout the period up to 2005, all other things being equal, the rising level of GDP brings the negative level of net assets as a ratio of GDP closer to zero. Naturally, this effect is greatest in the years of high GDP growth in nominal terms and substantial net liabilities. There are thus large contributions from GDP to the reduction of the net debt in the 1970s, when inflation was high, and in the 1980s, when the net liabilities peaked.

As previously stated, the current and capital accounts balance drives the development in the net assets in the longer term. Chart 2 shows that the net assets have fallen in most years when the balance was negative. On the other hand, they have generally increased in the years when the balance was positive.

The contribution to the development in net assets from valuation adjustments, etc. was positive in the period 1960-75. At that time, the liabilities were mainly denominated in foreign currency, and most of the valuation adjustments could be attributed to exchange-rate changes, while price changes played only a minor role, cf. Christensen and Hald (2000). In the period 1976-84, there were substantial negative valuation adjustments, primarily attributable to krone devaluations and the ap-

DENMARK'S EXTERNAL ASSETS AND LIABILITIES IN THE PERIOD 1991-2005 Chart 3



Source: Official statistics from Statistics Denmark and Danmarks Nationalbank.

preciation of the dollar. These negative valuation adjustments significantly increased non-residents' assets in Denmark compiled in Danish kroner. Since 1985, the valuation adjustments have fluctuated, and the preceding sign has changed several times. Over time, changes in share and bond prices have gained in significance, and exchange-rate changes no longer account for the dominant share of the valuation adjustments. In addition, the aggregate valuation adjustments can affect the development in the net external assets in individual years to a greater extent than before, due to the large increase in the gross positions, cf. Chart 3. This is seen inter alia in the years around the millennium rollover, when there were very substantial valuation adjustments in view of the large share price increases and decreases resulting from the dotcom bubble.

SUSTAINABILITY OF THE CREDITOR POSITION

The question is whether Denmark in the coming years will be able to maintain its position as a creditor country. Valuation adjustments, etc. play a greater role than before and in some years can far exceed the current account of the balance of payments. This is especially true in the case of Finland, where there is very close correlation between the development in its net external liabilities and the Finnish equity market, due to substantial non-resident holdings of Finnish shares, in particular the Nokia share. A strong increase in the Nokia share price in 1999-2000,

DENMARK'S EXTERNAL ASSETS AND LIABILITIES Table 1

Kr. billion (year-end)	1999	2000	2001	2002	2003	2004	2005
Assets							
Direct investment	226	238	273	287	307	406	483
SPE[1]	60	198	247	178	106	53	77
Intercompany debt, etc. ...	93	150	138	148	198	214	244
Portfolio shares	387	454	403	254	310	370	557
Bonds, etc.	151	229	317	359	446	548	684
Derivatives (net)	4	2	3	14	17	48	70
Other assets	766	679	656	740	836	857	989
Total	1,688	1,950	2,038	1,980	2,221	2,497	3,103
Liabilities							
Direct investment	193	248	241	259	284	332	413
SPE[1]	50	139	152	134	150	95	93
Intercompany debt, etc. ...	110	203	242	194	162	202	225
Portfolio shares	160	218	201	146	186	238	307
Bonds, etc.	610	645	745	756	762	857	1,020
Other liabilities	717	714	679	717	846	864	1,025
Total	1,840	2,167	2,259	2,205	2,391	2,589	3,083
Net assets	-152	-218	-221	-225	-170	-93	20

Source: Danmarks Nationalbank's official statements of *Denmark's external assets and liabilities*.

[1] Comprises SPEs' equity capital. SPE is an abbreviation of *Special Purpose Entities,* and the figure is for pass-through enterprises that have no real economic activity in Denmark, but were originally established for the sole purpose of ownership of equity in foreign subsidiaries.

followed by a substantial drop in 2000-02, thus brought a large increase in Finland's net external liabilities, followed by an extraordinary improvement when share prices fell.

The scale of valuation adjustments is naturally related to price fluctuations and the structure of Denmark's external assets and liabilities, cf. Table 1. The exposure in shares is seen to be large, especially on the asset side.[1] This means that stock market fluctuations will affect the size of Denmark's net assets, even if the movements in the Danish and foreign markets are symmetrical. In terms of bonds, the exposure is greatest for liabilities, so that bond price changes will likewise have an immediate impact on Denmark's net assets.

In normal circumstances, a global drop in interest rates will have counterbalancing effects on residents' net foreign assets. Bond prices will increase and, all other things being equal, the share markets will also show a rising trend, since the falling interest rates increase the dis-

[1] The following disregards the hedging of various risks such as price fluctuations and interest-rate changes. This hedging can entail that Denmark's real exposure differs somewhat from that presented in Table 1. There is no data to show which risks are hedged on an aggregate basis.

counted value of the future dividend payments. As Denmark holds long positions in shares (net assets) and short positions in bonds (net liabilities), rising prices in the share markets will increase Denmark's net assets, while rising prices in the bond markets will reduce the net assets.

Hansen (2005) shows a tendency for counterbalancing movements in share and bond prices in recent years. This phenomenon can arise when there is a change in investors' evaluation of and willingness to accept risk. If investors e.g. assess the risk in the financial markets to be rising, they will reduce their demand for shares and increase their demand for bonds, which are considered to be a safer investment. This will lead to upward pressure on bond prices and downward pressure on share prices, until a new equilibrium is found. In this situation, both the decrease in share prices and the increase in bond prices will reduce Denmark's net external assets.

Sensitivity analysis of Denmark's net assets

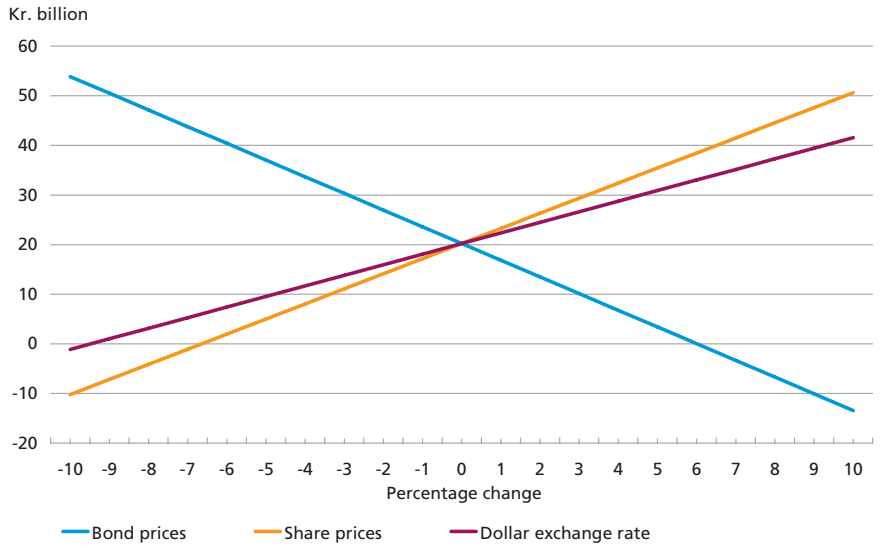
Based on the statistics as of end-2005, a static sensitivity analysis can be constructed to show the influence of various factors on the net assets when all other factors are held constant. This analysis can be taken as a rule of thumb to predict the immediate effect on Denmark's net assets. Chart 4 shows the impact on Denmark's net assets of changes in share and bond prices and in the dollar exchange rate. The steeper the curve, the more sensitive the net assets are to changes in the variable.

Chart 4 shows that a general drop in share prices by 5 per cent that is assumed to affect direct investment, SPE[1] and portfolio shares symmetrically on both the assets and liabilities sides will reduce Denmark's net assets by kr. 15 billion. In the same way, a general increase in bond prices by 5 per cent will reduce the net assets by kr. 17 billion. A fall in the dollar by 5 per cent against all other currencies will reduce residents' net external assets by kr. 11 billion. If all three scenarios occur simultaneously, the total impact will be kr. 43 billion. On the other hand, share price increases, bond price decreases and dollar rate increases will have a positive impact on Denmark's international investment position.

It should be noted that the sensitivity analysis can only be used to calculate the immediate effects because the analysis is partial. Many investors hedge their investments, and in Denmark this applies particularly to pension funds' hedging of interest-rate risks. When interest rates fall, bond prices rise, but the value of guaranteed returns to policyholders also rises. To counter this risk, the pension companies enter into interest-rate swap

[1] SPE is an abbreviation of *Special Purpose Entities* and in the statistics comprises pass-through enterprises that have no real-economic activity in Denmark, but were originally established for the sole purpose of owning equity in foreign subsidiaries.

DENMARK'S NET EXTERNAL ASSETS ON CHANGES IN BOND AND SHARE PRICES AND THE DOLLAR EXCHANGE RATE — Chart 4



Note: The calculations are based on Denmark's external assets and liabilities at end-2005, which in net terms amounted to kr. 20 billion. No account is taken of counterbalancing effects as a consequence of financial hedging.
Source: Own calculations based on Danmarks Nationalbank's official compilation of *Denmark's external assets and liabilities.*

contracts, typically with non-resident counterparties, whereby they pay interest at a floating rate and receive interest at a fixed rate. When interest rates fell in 2005, the gains on the pension funds' derivatives clearly exceeded the total price increases on Danish bonds held by non-residents. As a result, Denmark's total net assets increased, rather than decreasing. Share and bond prices and exchange-rate risks can also be hedged directly, and all other things being equal, the result will be that the overall effect on Denmark's net assets is not as great as shown in Chart 4.

Despite the reservations made, the above examples illustrate that even minor price fluctuations can have a great impact on Denmark's net assets. Therefore, Denmark will not necessarily be able to maintain its creditor status in the short term, notwithstanding the sound current-account surpluses. For example, in the first three quarters of 2006, there were negative valuation adjustments amounting to kr. 42 billion, mainly attributable to the falling share prices and dollar rate.[1] This means that at the end of the 3rd quarter, Denmark's external liabilities again exceeded its external assets. The largest valuation adjustments so far on an annual basis were seen in connection with the dotcom bubble, when

[1] Bie and Hansen (2002) calculate on the basis of *Denmark's external assets and liabilities* in the 2nd quarter of 2002 that valuation adjustments with a probability of 95 per cent increase the net liabilities by a maximum of kr. 50 billion in one quarter. The figure must be expected to have risen since then in view of the significant increase in Denmark's gross external positions, cf. Table 1 and Chart 3.

valuation gains totalled kr. 102 billion in 1999 and valuation losses amounted to kr. 84 billion in 2000.

RETURNS ON DENMARK'S ASSETS AND LIABILITIES

The investment income in the current account of the balance of payments is closely related to movements in Denmark's external assets and liabilities, cf. Box 1 and Chart 5. In general, Denmark's interest burden increased in the period when the net external debt was accumulated, but since then the investment income has improved as the net external liabilities have been settled. In 2005, Denmark recorded positive net investment income from abroad for the first time since 1963.

Despite the clear long-term relation between the development in Denmark's international investment position and investment income, the correlation is not perfect. In the period 1985-88, Denmark increased its external debt as a ratio of GDP, but nonetheless its investment income improved. In contrast, the investment income deteriorated in the following three years, even though Denmark's net external liabilities

COMPILATION OF INVESTMENT INCOME IN THE BALANCE OF PAYMENTS Box 1

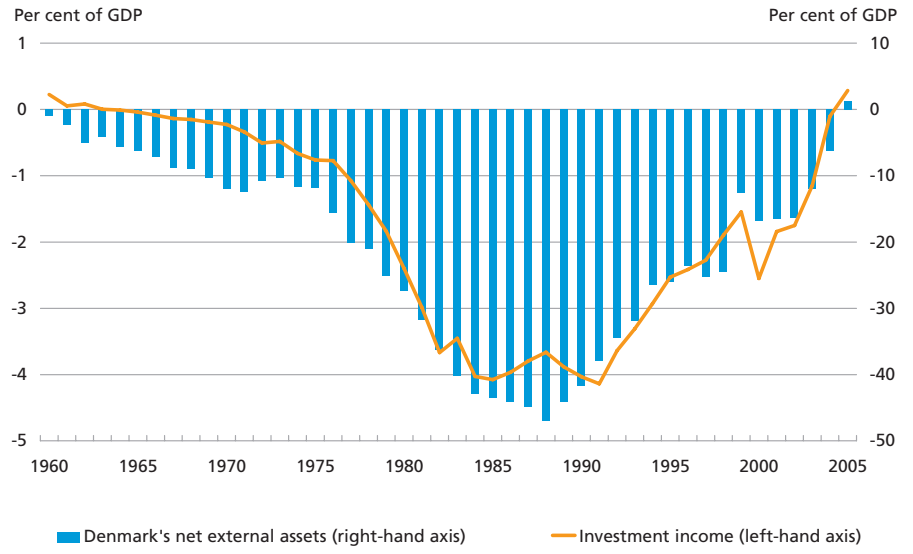
The return on Denmark's external assets and liabilities consists of interest, dividend, and reinvested earnings on direct investment and is stated as a sub-item of the current account of the balance of payments. By definition, there is no investment income on financial derivatives as all gains and losses on such instruments are booked under valuation adjustments, which are not part of the balance of payments. This also applies to the situation where an investor achieves a capital gain on a financial derivative designed to hedge the risk of a falling level of interest rates.

The compilation of the investment income on shares is asymmetrical since in accordance with the international statistics manuals, reinvested earnings on direct investment (ownership of 10 per cent or more) are calculated, while this is not the case for portfolio shares (ownership of less than 10 per cent). Reinvested earnings are defined as the share of an enterprise's profits that is not distributed as dividend to the owners. This entails a tendency for underestimation of the real investment income on portfolio shares. The reinvested earnings on portfolio shares will instead be stated as a valuation adjustment, like real capital gains and losses. In contrast to corporate accounts, in which capital gains and losses are recorded in the income statement, these are *not* included in the investment income in the balance of payments for either direct investment, portfolio shares or other instruments.

The present system of compilation from 2005 is based on the accrual principle, whereby the investment income is recorded in the period in which it is earned, in contrast to the previous payments principle, which solely records payments. In addition to smoother distribution of interest over the year, the accrual principle ensures inter alia that for zero coupon and other discounted bonds, the difference between the discounted issue price and the value at maturity is treated as interest.

DEVELOPMENT IN DENMARK'S NET EXTERNAL ASSETS AND INVESTMENT INCOME

Chart 5

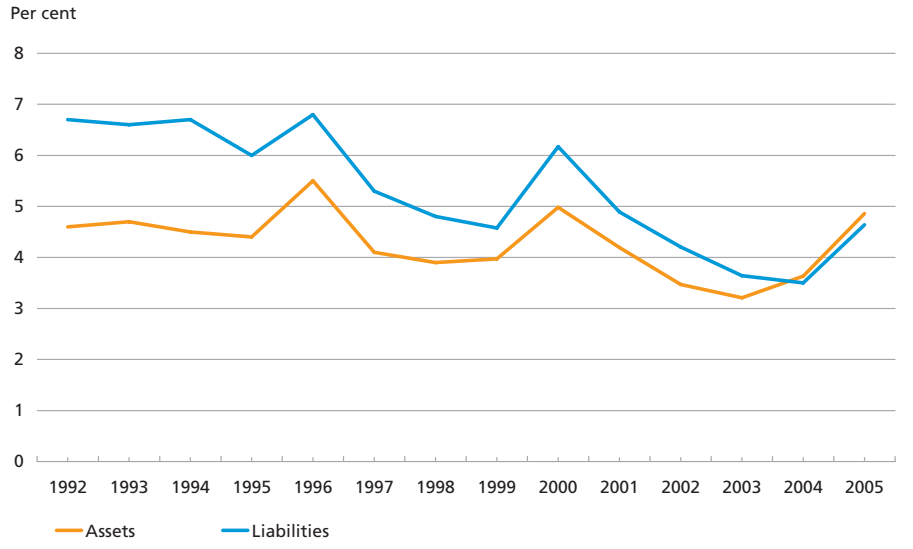


Source: Official statistics from Statistics Denmark and Danmarks Nationalbank. The figures for Denmark's net assets in the period 1976-90 are based on calculations by Christensen and Hald (2000).

were diminishing. This shows that changes in the returns on Denmark's assets and liabilities can be asymmetrical.

RETURNS ON DENMARKS EXTERNAL ASSETS AND LIABILITIES IN THE PERIOD 1992-2005

Chart 6



Note: Reinvested earnings on direct investment are not included in the figures for the period 1992-98.

Source: Figures for the period 1992-98 are from calculations by Hansen and Hansen (2000) while figures for 1999-2005 are based on own calculations on the basis of official statistics from Statistics Denmark and Danmarks Nationalbank.

Chart 6 shows the returns on Denmark's assets and liabilities in the period 1992-2005. It is seen that the return on liabilities exceeds the return on assets throughout the period up to 2003. The spread between the returns narrows gradually, however, and in 2004 and 2005, the return on assets exceeded the return on liabilities. Asymmetrical changes in returns on assets and liabilities can be due to several factors such as changes in the breakdown of assets and liabilities by instrument, and changes in credit standing, interest-rate spread, maturity and currency structure.

Returns at instrument level

The returns on Denmark's external assets and liabilities have fluctuated considerably in recent years, cf. Table 2. Especially returns on SPE vary strongly from year to year. However, this is a special group of enterprises that is currently being wound down and is dominated by individual enterprises' large transactions. Moreover, the general reservation should be made that the return is calculated as the investment income divided by the average of the holdings at the beginning and end of the year. If there is very strong fluctuation in the holdings during the year, the results from this calculation method can vary.

RETURNS ON DENMARK'S EXTERNAL ASSETS AND LIABILITIES — Table 2

Per cent	1999	2000	2001	2002	2003	2004	2005	Av.[1]
Assets								
Direct investment	8.3	8.2	1.7	4.3	7.2	9.5	10.0	7.0
SPE[2]	0.0	16.0	12.5	3.9	4.4	5.9	29.5	10.3
Intercompany debt, etc. ...	0.9	1.2	1.5	1.2	1.4	1.0	4.4	1.6
Portfolio shares	1.2	1.4	1.5	1.8	1.5	2.2	2.2	1.7
Bonds, etc.	10.0	7.1	5.0	4.9	4.2	4.7	4.8	5.8
Other assets	3.3	4.2	4.4	3.6	2.1	1.7	2.5	3.1
Total[3]	4.0	5.0	4.2	3.5	3.2	3.6	4.9	4.0
Liabilities								
Direct investment	8.1	12.7	2.5	8.1	7.4	8.5	10.3	8.2
SPE[2]	0.0	21.2	15.7	3.9	4.9	3.8	20.9	10.1
Intercompany debt, etc. ...	1.4	3.1	2.8	2.4	1.1	1.4	3.8	2.3
Portfolio shares	1.7	1.7	1.4	1.8	1.9	1.8	2.5	1.8
Bonds, etc.	4.7	4.9	4.7	3.8	3.6	3.3	3.7	4.1
Other liabilities	4.9	5.1	5.3	4.4	3.0	2.7	2.6	4.0
Total	4.6	6.2	4.9	4.2	3.6	3.5	4.6	4.5

Source: Own calculations based on official statistics from Statistics Denmark and Danmarks Nationalbank.

[1] Calculated as an arithmetic average of the returns in the period 1999-2005.

[2] See note 2 to Table 1.

[3] Calculated as the total yield divided by the average holding excluding derivatives, which by definition do not yield any investment income in the balance of payments, cf. Box 1.

The profit on direct investment has also proved to be volatile, which is attributable to cyclical fluctuations, among other factors. Even though the changes in both assets and liabilities have been in the same direction to a certain degree, in several years there are significant differences in the extent of the changes. The arithmetic average return on Danish outward direct investment was 7.0 per cent in the period 1999-2005, while inward direct investment yielded an average return of 8.2 per cent. With regard to portfolio shares, the equivalent returns are 1.7 and 1.8 per cent. Returns on direct investment may be overestimated since unlisted shares are included in the holdings at book value rather than estimated market value, which can generally be expected to exceed the book value. Nonetheless, the differing rates of return illustrate that the non-recording of reinvested earnings on portfolio shares clearly distorts the compilation of investment income, cf. Box 1.

The average bond yields in the period were 5.8 and 4.1 per cent for respectively assets and liabilities. The return appears to be high compared to the return on shares. Basic financing theory prescribes a significantly higher return on shares than on bonds over a long period since share yields are more volatile, and therefore investors require a higher risk premium on these assets.[1] It is important to note that, in contrast to enterprises' financial statements, reinvested earnings and revaluations are not included as investment income on portfolio shares in the balance of payments. In addition, Table 2 relates to a brief period of dampened global economic growth at the start of the new millennium.

The return on intercompany debt, etc. is low throughout the period, but increases sharply in 2005. This is related among other things to many enterprises' reporting of netted interest in the payments-based system used to compile the balance of payments up to and including 2004. The low returns on other assets and liabilities should be viewed in the light of the large proportion of bank deposits and other liquid, short-term outstandings for which interest rates are normally low.

In overall terms, as previously stated, returns on Denmark's liabilities exceeded the returns on its assets in the period 1992-2003, while the situation reversed in 2004 and 2005. Countries such as the USA and the UK have for a number of years seen how returns on assets have clearly exceeded returns on liabilities, resulting in positive investment income, notwithstanding their considerable external debt, cf. Box 2.

[1] According to Brealey, Myers and Allen (2005), the annual yield on listed shares has been 6.5 percentage points higher than yields on long-term government bonds in the USA in the period 1900-2003.

THE MYSTERY OF INVESTMENT INCOME IN THE USA AND THE UK Box 2

For some time, the USA and the UK have recorded positive investment income on the balance of payments even though their net external liabilities are considerable. Part of the explanation can be found in the breakdown on external assets and liabilities. Both countries have net assets in shares and net liabilities in interest-rate exposed instruments such as loans and bonds, and since the international level of interest rates has been low in recent years, this partly explains the higher returns on assets than on liabilities.

However, each year, both the USA and the UK achieve significantly higher returns on outward direct investment than non-residents achieve on their direct investment in the two countries. Many researchers have studied this phenomenon more closely on the basis of the US balance of payments and international investment position, and several believe that in reality, there is no difference between the returns on respectively assets and liabilities.[1] Hausmann and Sturzenegger (2006) argue that it is the market value of the USA's outward direct investment that is underestimated due to the non-recording of *dark matter* that among other things comprises knowledge and technology. If these factors were included, the returns on direct investment would be the same for assets and liabilities, and the USA would have the status of creditor country. Buiter (2006), on the other hand, believes that the profit on direct investment in the USA is underestimated. This is because the multinational companies via *transfer pricing* seek to reduce profits in US corporations in order to avoid tax, and instead direct profits to countries with more lenient tax rules. There is also the risk that these corporations, also for tax reasons, underestimate the value of reinvested earnings in their reports filed with the US authorities.

If a systematically higher profit on direct investment on either the asset or liability side is a sign of systematically asymmetrical distortion of the statistics, Table 2 shows that this does not seem to be a problem in the Danish statistics. In some years, direct investment on the asset side yields the highest return, while the direct investment on the liability side yields the highest return in other years. In this connection, it should be noted that unlisted shares are included in the statistics at book value, which can deviate significantly from the market value. Therefore, the value of direct investment must be considered to be a low estimate, but the problem is relevant for both assets and liabilities, and does not have an asymmetrical effect on the statistics.

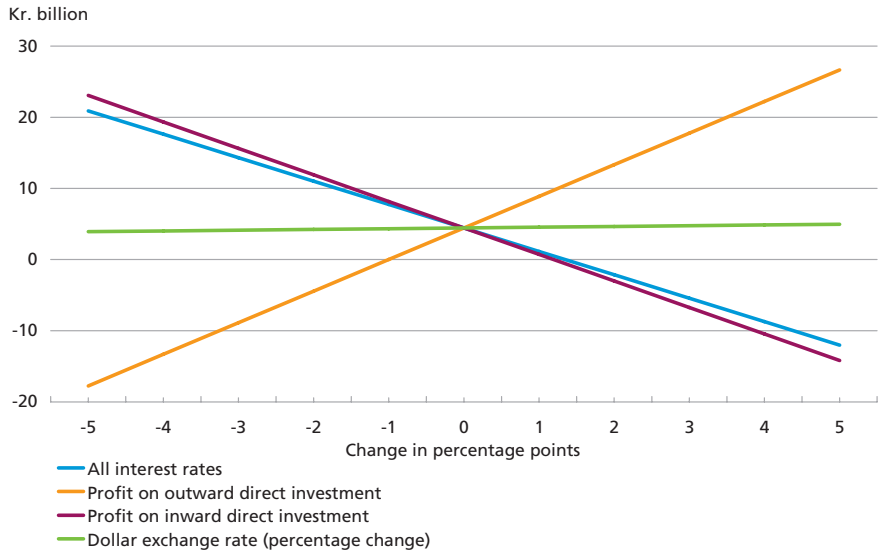
[1] See Iversen (2006) for more a more detailed presentation of this problem.

SENSITIVITY ANALYSIS OF INVESTMENT INCOME

Denmark's investment income for 2005 was kr. 4.4 billion, a positive figure for the first time since 1963. It is relevant to investigate the robustness of the switch from negative to positive investment income. In this section, static analyses are constructed to show the significance of various scenarios to investment income, given the average holdings of assets and liabilities in 2005.[1]

[1] The holdings will naturally change in step with the development in the current and capital accounts and valuation adjustments, etc., just as the breakdown on assets and liabilities changes over time. Even though the analysis does not take this into account, it will still be a good tool to illustrate the exposure of the investment income and can thus be used as a rule of thumb.

INVESTMENT INCOME ON CHANGES IN THE LEVEL OF INTEREST RATES, THE PROFIT ON DIRECT INVESTMENT AND THE DOLLAR EXCHANGE RATE Chart 7



Note: The calculations are based on Denmark's investment income and international investment position in 2005.
Source: Own calculations on the basis of official statistics from Statistics Denmark and Danmarks Nationalbank.

Chart 7 illustrates the impact on investment income in the event of changes in the level of interest rates, the profit on direct investment and the dollar exchange rate. The steeper the curve, the greater the effect of any change. It is seen that a rising level of interest rates will result in lower investment income. This is because Denmark's liabilities that are exposed to fluctuations in interest rates, defined as intercompany debt, bonds and other liabilities, exceed its equivalently exposed assets. Given the assumptions on which the analysis is based, an increase in interest rates by 1 percentage point will reduce Denmark's investment income by kr. 3.3 billion.[1]

Chart 7 also shows that an increase of 1 percentage point in the profit on inward direct investment in Denmark will negatively affect investment income by kr. 3.7 billion. On a decrease of 1 percentage point in the profit on Denmark's outward direct investment, the investment income decreases by kr. 4.4 billion and is thus zero. If the return on direct investment falls by 1 percentage point for both assets and liabilities, the investment income will decrease by kr. 0.7 billion, and a symmetrical change in the return will have only a minor net effect.

[1] It is assumed in the analysis that the change in interest rates uniformly affects all interest rates irrespective of instrument, asset/liability, currency and maturity, and also has an immediate impact on all instruments that are exposed to changes in interest rates. In reality, it will take longer for the full effect to be achieved since the interest rates on many bonds and time deposits are fixed. However, in step with refinancing and restructuring, the effect will gradually emerge.

Often the return on direct investment fluctuates in the same direction for both assets and liabilities, but in 2000, the profit on outward direct investment fell against 1999, while the profit on inward direct investment rose. Based on the 2005 figures, a repetition of this scenario would lead to an overall decrease in investment income of kr. 17.2 billion. In other words, this would result in investment income of kr. -12.8 billion, instead of kr. 4.4 billion. If the scenario from 2003 is repeated, with increasing returns on outward direct investment and falling returns on inward direct investment, Denmark's investment income would, on the other hand, improve by kr. 15.2 billion to kr. 19.6 billion. Asymmetrical changes in the profit on direct investment, which have previously occurred, will thus have a strong impact on the investment income and can change the preceding sign.

In contrast to the effect on Denmark's net assets, changes in the dollar exchange rate will have only a limited effect on the investment income. In 2005, Denmark's investment income receipts in dollars were equivalent to kr. 18.2 billion, compared to expenditure equivalent to kr. 7.8 billion. A decline in the dollar exchange rate by 1 per cent will therefore have an immediate downward impact of only kr. 0.1 billion on the investment income.

CALCULATION OF REINVESTED EARNINGS ON PORTFOLIO SHARES Box 3

In accordance with the international statistics manuals, reinvested earnings, which are the share of an enterprise's profits that is not distributed as dividend, are not calculated for portfolio shares, cf. Box 1. This means that the return on portfolio shares is underestimated compared to direct investment, for which reinvested earnings are included as part of the profits. If the investment income on shares were to be treated symmetrically, and reinvested earnings on portfolio shares thus also calculated, Denmark's investment income would be revised upwards. This is because residents' holdings of foreign portfolio shares clearly exceed non-residents' holdings of Danish portfolio shares.

If the profit on portfolio shares is equivalent to the profit on direct investment in 2005, the investment income on portfolio shares would have to be revised upwards by kr. 35.8 billion on the revenue side and by kr. 21.3 billion on the expenditure side, and as a consequence, the total investment income would have to be revised upwards from kr. 4.4 billion to kr. 19.0 billion.

It can thus be of key significance to the compilation of investment income whether investments in non-resident enterprises account for 10 per cent or more of the share capital and are thereby classified as direct investment. The overall investment income on portfolio shares will be underestimated due to the non-recording of reinvested earnings, but the asymmetrical nature of the compilation does not affect the holdings since the reinvested earnings will be included as part of the valuation adjustments for portfolio shares.

The overall conclusion to the sensitivity analysis is thus that asymmetrical changes in the profit on direct investment, and general changes in the level of interest rates, will have a significant impact on the investment income. If the compilation principle for investment income on portfolio shares were to be harmonised with the principle for compilation of direct investment, the effect on the overall investment income would likewise be assumed to be significant, cf. Box 3. Investment income is not particularly sensitive to changes in the dollar exchange rate.

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EU Enlargements – Status and Future

Borka Babic, International Relations

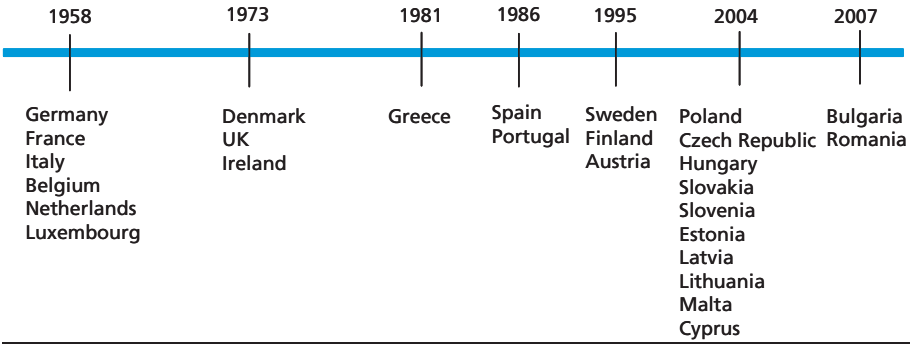
INTRODUCTION

On 1 January 2007, the EU was enlarged to include Bulgaria and Romania, bringing the number of member states to 27. This enlargement is the 6th in the 50-year history of the EU. It is also the 2nd enlargement of the EU to include eastern European member states. In 2004 the EU was enlarged to include 10 predominantly central and eastern European member states, cf. Chart 1.

With the enlargement to include Bulgaria and Romania, as well as the accession negotiations with Turkey and Croatia, enlargement of the EU is back in focus. EU enlargements were discussed by the heads of state or government on two occasions during 2006. The EU's future enlargement strategy is generally unchanged, but the requirements for compliance with existing conditions during the accession process have been tightened.

This article describes recent years' economic development in Bulgaria and Romania. There has been high growth and inflation, and current-account deficits have increased. The two member states are compared particularly with the central and eastern European member states that joined the EU in 2004. Then an account is given of experience so far from the 2004 enlargement, which is assessed to be positive. The article

EU ENLARGEMENTS Chart 1



Note: In 1958 the European Economic Community (EEC) was established.

THE EUROPEAN COMMISSION'S REPORT ON BULGARIA AND ROMANIA Box 1

In September 2006, the European Commission assessed that Bulgaria and Romania were ready to join the EU in January 2007, even though progress in a number of areas was still assessed to be incomplete.

The legal system and measures to combat corruption and organised crime were some of the areas in which the Commission considered the progress to be insufficient. In addition, the system for administration of agricultural subsidies was not in place, and food safety was inadequate. The Commission has therefore set out how it will ensure compliance with the remaining requirements, including the sanction mechanisms that can be used if the outstanding issues are not settled. It may, for example, be necessary to withhold around 1/5 of the agricultural subsidies if the requirements concerning their administration are not fulfilled.

The economic factors were not in focus when the Commission assessed whether Bulgaria and Romania were ready to join the EU in 2007. In previous assessments the countries have been characterised as well-functioning market economies.

Bulgaria and Romania are poorer than the poorest of the EU's new member states in 2004, and are perhaps also less ready for EU membership than the member states of the 2004 enlargement. In many EU10 member states there were, however, also problems with for example the administration of EU funds, without the same weight being given to a possible reduction of EU subsidies.

concludes with a description of the EU's future enlargement strategy and the countries that are engaged in the accession process.

BULGARIA AND ROMANIA: NEW EU MEMBER STATES

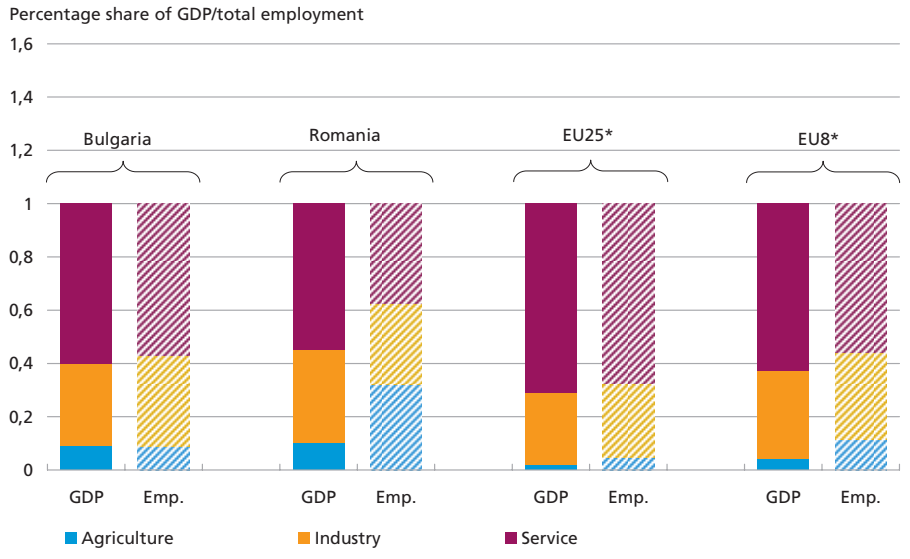
The decision that Bulgaria and Romania would join the EU in 2007 was taken by the EU's heads of state or government in December 2004. The execution of this decision was, however, conditional on a positive assessment from the European Commission concerning the fulfilment of the conditions for EU membership. This positive assessment was presented in a report from the Commission in the autumn of 2006, cf. Box 1.[1] On 1 January 2007 the population of the EU was thus increased by approximately 30 million – 8 million in Bulgaria and 22 million in Romania. This represents an addition by approximately 6 per cent, and the population of the EU now totals approximately 490 million.[2]

In economic terms, the two new member states have a very small impact on the EU as their total output is only approximately 0.5 per cent of the total GDP of the EU. In structural terms, especially Romania differs

[1] According to the accession treaties for the member states, which were signed in April 2005, Bulgaria and Romania were to join the EU in 2007. Had the European Commission assessed that they were not ready to accede in 2007, accession could be postponed until 2008, but no later.

[2] For comparison, in 2004 the EU's population was increased by approximately 75 million.

GDP AND EMPLOYMENT COMPOSITION BY SECTOR IN 2005 Chart 2



Note: *See footnote 1 below. Emp. = Employment.
Source: Economist Intelligence Unit and Eurostat.

from other EU member states[1] in that its agricultural sector's share of total output, and especially employment, is very large, cf. Chart 2.[2] This indicates especially low productivity for agriculture, and also that unemployment probably exceeds the official unemployment figure of approximately 8 per cent of the labour force at the end of 2006.

High growth from a low level

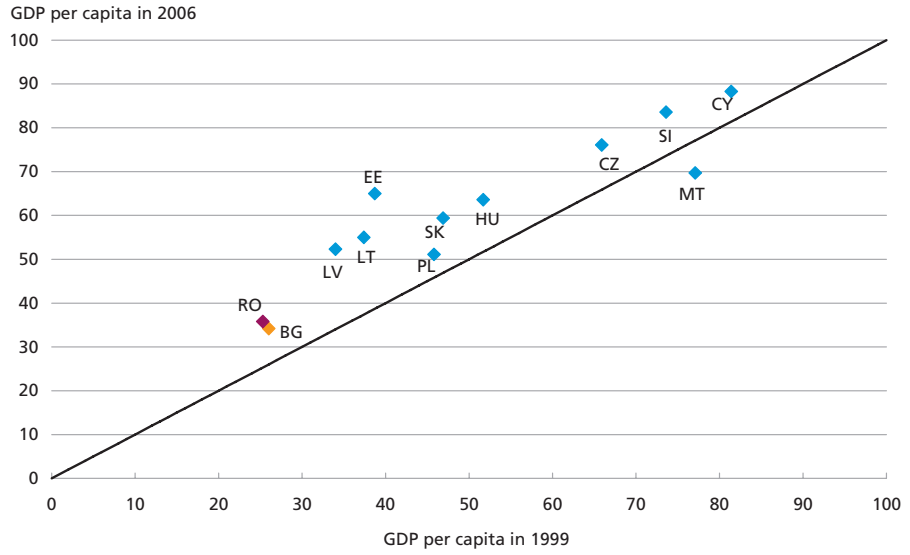
The level of income and prosperity is low, and GDP per capita in both Romania and Bulgaria is not just far below the EU average, but also considerably lower than in all the new member states from the 2004 enlargement, cf. Chart 3. Since the millennium rollover, however, the gap from the EU average has narrowed, in view of the high growth in Bulgaria and Romania in recent years, cf. Chart 4.

In 2006, GDP growth in both Bulgaria and Romania – as in most of the EU10 member states – was higher than in the preceding period. Year-on-

[1] The article refers to the following groups of EU member states: EU25 is the EU member states prior to the accession of Bulgaria and Romania. The old EU member states, or EU15, are: Germany, France, Italy, the Netherlands, Belgium, Luxembourg, Denmark, the UK, Ireland, Greece, Spain, Portugal, Sweden, Austria and Finland. The term "new EU member states" or EU10 refers to the member states that acceded in 2004, i.e. Poland, the Czech Republic, Hungary, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Malta and Cyprus. EU8 is EU10 excluding Cyprus and Malta.

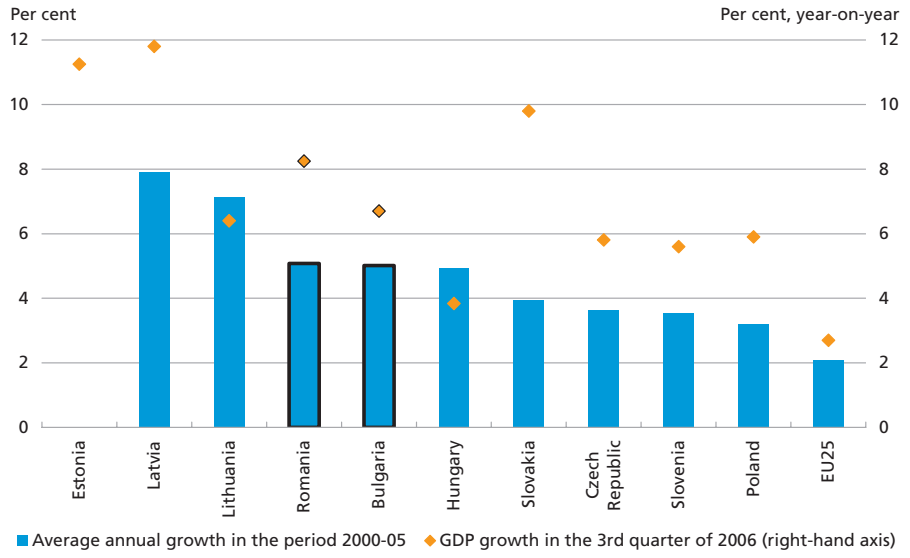
[2] According to Eurostat, approximately 9 per cent of the Bulgarian workforce are employed in the agricultural sector, which by and large corresponds to the EU8 average. However, Eurostat states that many of those who stated other employment as their main employment in the Labour Force Survey also work in the agricultural sector. The statistics therefore strongly underestimate employment in the agricultural sector.

GDP PER CAPITA AS A PERCENTAGE OF THE EU AVERAGE — Chart 3



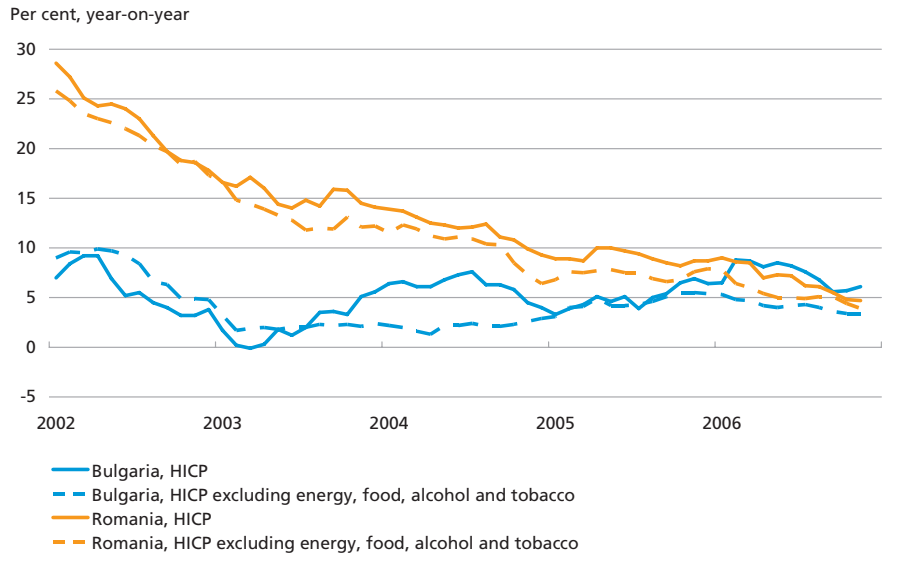
Note: Purchasing-power-adjusted GDP per capita.
Source: EcoWin.

REAL GDP GROWTH — Chart 4



Source: EcoWin, Eurostat and Economist Intelligence Unit.

INFLATION Chart 5



Source: EcoWin.

year growth in the 3rd quarter was respectively 6.7 per cent and 8.3 per cent, cf. Chart 4. As in the preceding years, private consumption and investments were the principal factors driving growth in the two member states.

Macroeconomic stability

Bulgaria and Romania have both enjoyed macroeconomic stability in recent years. However, inflation is high and the deficit on the current account of the balance of payments has been rising. In December 2006, inflation in Bulgaria and Romania was respectively 6.5 per cent and 4.9 per cent on a year-on-year basis, cf. Chart 5. These are among the highest inflation rates in the EU. In Bulgaria especially, the high inflation is partly attributable to temporary factors such as indirect tax increases, cf. Chart 5. The strong growth, together with the Balassa-Samuelson effect,[1] has also contributed to high inflation in the two member states. In the coming years the tendency for lower growth in productivity in the service sectors than in the economy as a whole is expected to continue

[1] According to Balassa-Samuelson, countries with low income and a low level of productivity will experience higher productivity increases in the traded-goods sector and in that way catch up with the more affluent countries. The productivity increases in the traded-goods sector not only lead to higher wages in this sector, but also affect the non-traded-goods sector. The result is higher prices for non-traded goods and thereby higher inflation, which in this case does not reflect deterioration in competitiveness.

PLANS FOR ERM II PARTICIPATION AND ADOPTION OF THE EURO Box 2

The *Bulgarian* authorities began to plan the introduction of the euro several years ago. In November 2004 the Bulgarian government and Bulgarian National Bank thus signed an agreement on policies and obligations to be fulfilled in the process up to the adoption of the euro. This strategy indicates an objective of participation in ERM II from as early and for as short a time as possible.[1] Bulgaria does not intend to change its exchange-rate regime (currency board) prior to the introduction of the euro. This corresponds to the strategy of Estonia and Lithuania. In order to support this strategy, the Bulgarian government has committed itself to maintaining the government budget balance.

In February 2007 it was announced that Bulgaria intends to apply for inclusion in ERM II in the immediate future. There are no formal requirements for ERM II participation. The applicant country, the ECB, and the ERM II participants must, however, be in agreement on the central rate vis-à-vis the euro. To be able to adopt the euro, besides ERM II participation for two years without severe tensions, the member states must be in compliance with the criteria concerning inflation, the long-term interest rate and government finances.

In contrast to Bulgaria, the *Romanian* authorities have indicated that they do not have plans for ERM II participation before around 2012. Unlike Bulgaria, Romania's participation in ERM II will entail a change of exchange-rate regime since Romania has a managed float regime.

[1] ERM II entails that the exchange rate must be held within the margins of a fluctuation band around a central rate against the euro. The standard fluctuation bank is +/-15 pct. In relation to the central rate.

to exert upward pressure on prices and thereby impede compliance with the nominal convergence criteria, cf. Box 2.[1]

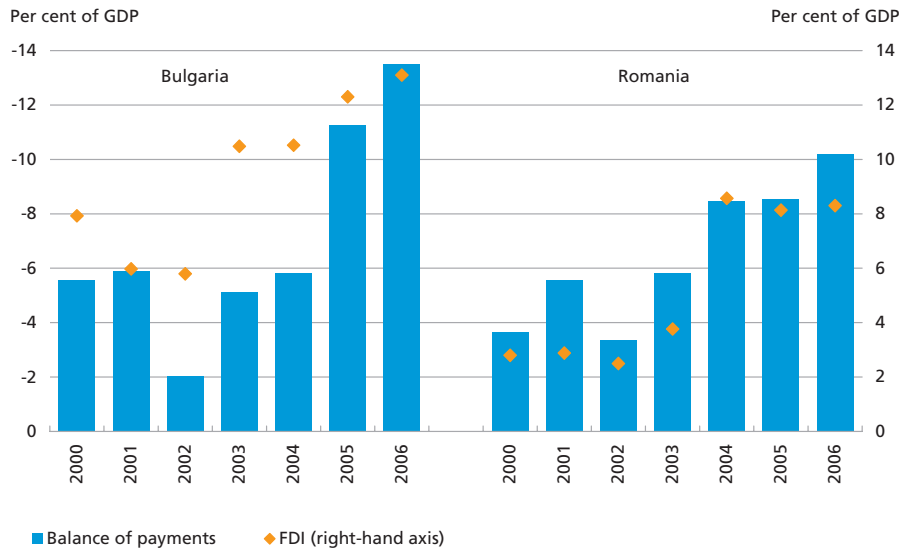
During the period 2002-05 the banks' lending to the private sector in Bulgaria and Romania on average expanded by respectively 22 per cent and 28 per cent p.a. The two member states share the high growth in lending with other transition economies, and it should be viewed against the low starting level. The two member states' banking sectors are considered to be sound, and the growth in lending currently presents only a small risk to financial stability.[2] However, the high growth rates are not sustainable in the longer term. The strong growth in lending can be assumed to stimulate demand, thereby contributing to the large current-account deficit, cf. Chart 6. In both member states the authorities have in recent years therefore sought to curtail the growth in lending.

Both Bulgaria and Romania have a high current-account deficit, which is not unusual for a country that is undergoing a catching-up process, cf.

[1] According to the IMF the Balassa-Samuelson effect and administrative price changes will contribute 1.5 per cent to Bulgaria's inflation in the medium term. IMF: *Bulgaria: 2006 Article IV Consultation*.

[2] In 2004, foreign banks' share of the total bank assets in both Bulgaria and Romania was around 50 per cent.

BALANCE OF PAYMENTS AND FDI Chart 6



Note: Estimate for 2006.
Source: Economist Intelligence Unit.

Chart 6. Among other things, a high current-account deficit reflects the need to build up the production capacity and the high expected returns on business investments. Especially in Bulgaria there is strong growth in investment, with Bulgaria's investment ratio rising from approximately 16 per cent of GDP in 2000 to 25 per cent in 2006. The development in both member states' government finances has partly offset the development in the private sector's savings deficit. Bulgaria thus has a budget surplus, while Romania has a moderate government deficit.[1]

The course of the balance of payments should be viewed in the context of the development in foreign direct investment, FDI, which has both contributed to expanded demand for foreign goods and financed the deficits, cf. Chart 6. Like macroeconomic stability and sound growth prospects, the expectations of EU membership and privatisations have contributed to the very large inflow of FDI. Some of the contributing factors, especially privatisations, are temporary, and the high level of FDI can hardly be maintained in the long term.

The exchange-rate regime in Romania is a managed float. So far, the exchange rate has not been affected by the development in the current-account deficit. Bulgaria's fixed-exchange-rate regime has not been

[1] The European Commission's estimates for Bulgaria's budget surplus and government debt in 2006 are respectively 3.3 per cent and 26 per cent of GDP. In Romania's case the budget deficit is estimated at 1.4 per cent and the debt at 14 per cent of GDP. European Commission: *Economic forecasts autumn 2006*.

under pressure either. Bulgaria has a currency board[1] that was introduced in 1997 when the country faced hyperinflation and was in the throes of a financial crisis. The change of regime in 1997, underpinned by a tight fiscal and income policy as well as structural reforms, has been of great importance to the stabilisation of the economy.

Catching-up to the EU level

EU membership is expected to have positive consequences for economic activity in Bulgaria and Romania. The scale of the effect is difficult to estimate since it is uncertain how far the stimulation from expanded trade and higher investments from the EU has already exerted an influence in the accession process. The two member states' trade with the EU has increased since the 1990s, and at respectively 65 per cent and 51 per cent of the two member states' total trade the EU is the most important trading partner of both Bulgaria and Romania.[2] Financial support from the EU budget will also contribute positively to activity in both Bulgaria and Romania.

The growth prospects will also be dependent on whether the member states succeed in conducting a stability-oriented economic policy, ensuring a sound climate for investment and generally adapting to the developments in a globalised world. Growth is also determined by how effectively subsidies from the EU structural funds are used, as shown by the positive experience with Ireland in the 1990s.[3] Ireland has also succeeded in maintaining high growth rates after its GDP per capita exceeded the EU average.[4] Among the new EU member states, especially the Baltic states have succeeded in creating favourable conditions for growth, cf. the next section.

GDP per capita in Bulgaria and Romania is very low – also lower than in EU10 in 2004 – which indicates a long real convergence process even if the conditions for growth are favourable. A simple projection, in which it is assumed that the growth gap of approximately 4 per cent from the EU in the period 2000-05 is maintained, indicates that it will take around

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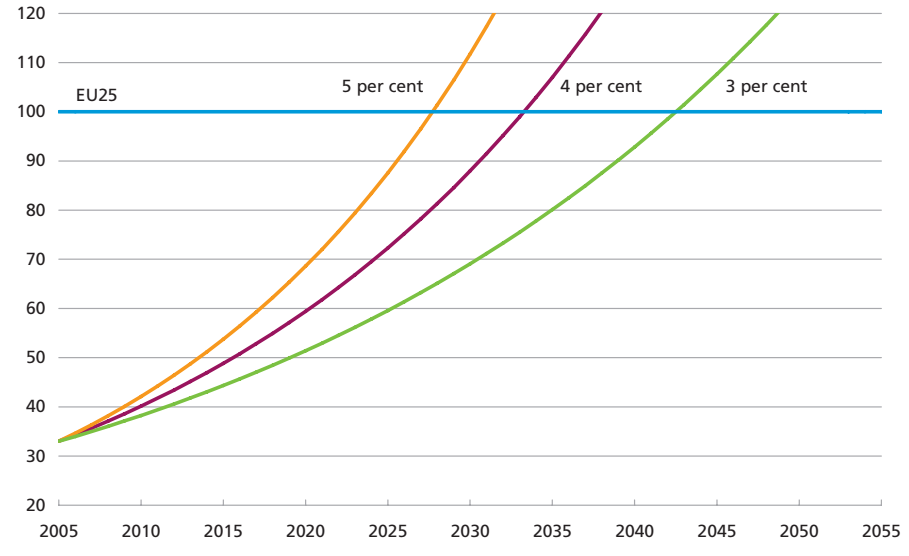
1 Currency board is the most inclusive type of fixed-exchange-rate policy whereby anybody can exchange the national currency to and from an anchor currency at a fixed exchange rate freely and without being subject to any limitation.

2 Both member states, but especially Bulgaria, are open economies. In 2005 foreign trade accounted for 138 per cent of GDP in Bulgaria and approximately 78 per cent of GDP in Romania. Trade is the sum of exports and imports of goods and services.

3 However, the EU structural fund subsidies received by Ireland and some of the old EU member states significantly exceed the subsidies received by the new EU member states, including Bulgaria and Romania.

4 Cf. Jens Thomsen, The 2004 Enlargement of the EU, Danmarks Nationalbank, *Monetary Review*, 2nd Quarter 2004.

GDP PER CAPITA SUBJECT TO VARIOUS ASSUMPTIONS OF DIFFERENCES IN GROWTH COMPARED TO EU25 Chart 7



Note: Three scenarios are shown in which respectively 3 per cent, 4 per cent and 5 per cent express the assumptions of annual added growth in GDP per capita (purchasing-power adjusted) compared to EU25. Added growth of approximately 4 per cent is equivalent to the development in 2000-05.
Source: Own calculations.

30 years for the member states to achieve the EU's level of prosperity, cf. Chart 7.[1]

EXPERIENCE SO FAR FROM THE EU ENLARGEMENT IN 2004

The 2004 enlargement with 10 central and eastern European member states had a special significance. The enlargement symbolised reunification between east and west, and its political importance is indisputable. Prior to the enlargement, academic studies pointed to an increase in growth by between 1 and 2 percentage points p.a. in the new member states.[2] There was also scepticism from several quarters as to the success in enlarging the EU with so many countries with a relatively low level of prosperity, including whether the enlargement would lead to large-scale migration of labour from east to west, and the re-allocation of production from west to east, hereby pushing down western European wages.

[1] The article *Globalisation and the Danish Economy*, on p. 25 ff. gives a more general description of some of the mechanisms in the opportunities of low-income countries to catch up with high-income countries in terms of prosperity.

[2] The European Advisory Group, 2004, The 2004 Enlargement: Key Economic Issues, *Report on the European Economy 2004*.

Trade, investments and labour mobility

The period since the enlargement is too short to draw any firm conclusions regarding the economic consequences. In addition, it would also in many respects be misleading to consider only the past three years since the countries' integration into the EU in reality began in the 1990s. The free trade zone established at the start of the 1990s covered approximately 85 per cent of bilateral trade. Barriers to foreign direct investments and the free movement of capital were also lifted before the member states' accession to the EU.

In accordance with the above, EU10's trade with EU15 had been rising since the early 1990s, and in 2004 accounted for approximately 62 per cent of EU10's total foreign trade, compared to 56 per cent in 1993. Since 2004 this share has by and large remained unchanged. The direct investments from EU15 to EU10 have also increased in a more long-term perspective, and have been of great significance to the EU10 member states. However, the increase in EU15's investments in the new member states is not only related to EU integration, but should also be viewed in the context of the general tendency to relocate production in countries where production costs are low. In 2004, investments to EU10 after all accounted for only around 4 per cent of EU15's total foreign direct investment.[1]

Surveys show that investments in EU10 member states have had only a moderate effect on employment in the EU15 member states. During the last 15 years the aggregate negative impact on job creation in Germany and Austria, which are among the largest investors in EU10, has been around 0.3-0.7 per cent.[2] At the same time, competition from the new member states has given incentives for efficiency increases in the old EU member states' business sectors, and cheaper goods for consumers.

The enlargement has not been of any great significance to labour mobility either. Migration from east to west rose after May 2004, but on a considerably smaller scale than expected, probably because the restrictions in most of the old EU member states were maintained for a transition period.[3] In 2004 only the UK, Ireland and Sweden had removed the barriers to the free mobility of labour, and Ireland has seen the relatively largest inflow of job-seekers. According to the European Commis-

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1 53 per cent of the investments were to other EU15 member states and 12 per cent to the USA.

2 European Commission: Enlargement, two years after: an economic evaluation, *European Economy*, Occasional Papers, May 2006.

3 A transition period of 7 years was allowed. Besides the UK, Ireland and Sweden, which from the start opened their borders to labour from eastern Europe, Greece, Portugal, Finland and Spain lifted their restrictions as of 1 May 2006, while Belgium, Denmark, France, Italy, the Netherlands and Luxembourg eased the restrictions to a greater or lesser extent. It is also possible to apply these restrictions in Bulgaria and Romania for the first 7 years after the member states' accession. Among the old EU member states only Sweden and Finland have opened their borders completely to workers from these countries.

sion the influx of labour to the old EU member states has been limited to the sectors in which there was a shortage of labour. The migration has thus contributed to solving the labour shortage problems and to achieving better economic results in Europe.[1]

Real and nominal convergence

The EU10 member states have been able to maintain high growth after their accession to the EU in 2004. The differences in GDP per capita in relation to the old EU member states have therefore narrowed. This is especially the case in the Baltic states, cf. Chart 3. In 2003 Slovenia's GDP per capita already exceeded Portugal's GDP, and in 2005 the prosperity of the Czech Republic exceeded that of the poorest of the old EU member states.[2] Poland is at the other end of the scale and is relatively slow to catch up.

The member states with lower GDP per capita at the outset have generally achieved higher growth, cf. Charts 3 and 4. However, the economic-policy stance has also been significant to the narrowing of the growth gaps. The Baltic states, especially Estonia and Lithuania, have the most stable political conditions, a favourable business climate, exchange rates pegged to the euro and well-ordered government finances. These factors appeal to both domestic and foreign investors, and Estonia has the highest FDI per capita of all European countries.

The Baltic states' high GDP growth also has a less advantageous side, however. There are clear signs that the economies are overheating. Both the current-account deficit and inflation are very high, and due to their high inflation neither Estonia nor Lithuania comply with the convergence criteria and have therefore been obliged to postpone the adoption of the euro that was originally planned for January 2007. Several other new EU member states also face both high current-account deficits and high inflation. The oil price increases in recent years have been of relatively great significance to many eastern European countries due to their comparatively energy-intensive production set-ups. The harmonisation of indirect taxes to the EU level has likewise contributed to high inflation. Besides these temporary factors, the high growth in demand and the Balassa-Samuelson effect have also contributed to high inflation.

To be eligible to adopt the euro, the member states must, in addition to the criteria for inflation, interest rates and government finances pre-

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1 European Commission: *"Report on the Functioning of the Transitional Arrangements set up in the 2003 Accession Treaty"*, 2006.

2 Cf. Jens Thomsen, The 2004 Enlargement of the EU, Danmarks Nationalbank, *Monetary Review*, 2nd Quarter 2004.

COMPLIANCE WITH THE CONVERGENCE CRITERIA IN 2006 Table 1

	Inflation	Government balance as a percentage of GDP	Government debt as a percentage of GDP	Long-term interest rate
Lithuania	2.7	-0.5	18.7	3.7
Slovenia	2.3	-1.8	29.1	3.8
Convergence criterion, May report	2.6	-3.0	60.0	5.9
Cyprus	2.3	-1.9	64.8	4.1
Estonia	4.3	2.5	4.0	-
Latvia	6.7	-1.0	11.1	3.9
Malta	3.2	-2.9	69.6	4.3
Poland	1.2	-2.2	42.4	5.2
Slovakia	4.3	-3.4	33.0	4.3
Czech Republic	2.2	-3.5	30.9	3.8
Hungary	3.5	-10.1	67.6	7.1
Convergence criterion, December report	2.8	-3.0	60.0	6.2

Note: The convergence of Lithuania and Slovenia was assessed in May 2006, while other member states were assessed in December 2006. The marked fields indicate that the criterion value is exceeded. The inflation criterion entails that inflation may not exceed by more than 1.5 percentage points that of, at most, the three best-performing member states in terms of price stability. Compliance with the interest-rate criterion requires that the member state's average nominal long-term interest rate may not exceed by more than 2 percentage points that of, at most, the three best-performing member states in terms of price stability.

Source: ECB convergence reports, May and December 2006.

sented in Table 1, also participate in ERM II for at least two years without severe tensions.[1] Seven of the new member states participated in ERM II in 2006, and only Poland, Hungary and the Czech Republic have not yet joined ERM II. These member states especially are not likely to adopt the euro for some time. Hungary has a very large government deficit, amounting to 10 per cent of GDP in 2006. Since their budget deficits exceed the 3-per-cent limit, Poland, the Czech Republic and Slovakia are also subject to the excessive deficit procedure.[2]

Comparison of the ECB's convergence reports from December 2006 and 2004 shows that fewer member states exceeded the convergence criteria in 2006. Furthermore, they generally exceeded the criteria by less than in 2004. In 2006, Slovenia was the first of the new EU member states to comply with all convergence criteria, and in January 2007 Slovenia became the 13th member state to adopt the euro.[3]

1 In accordance with their accession treaties, the member states are subject to an obligation to adopt the euro when they fulfil the conditions.

2 Poland's budget deficit is only below the 3-per-cent limit because *funded* pension schemes are not yet included in the compilation of the deficit, and Poland is therefore also subject to the excessive deficit procedure. According to Eurostat's decisions from 2 March and 23 September 2004 this inclusion must take place by the spring of 2007.

3 Cf. Niels-Peter Hahnemann, Slovenia: An Economic Portrait of the New Euro Area Member, Danmarks Nationalbank, *Monetary Review,* 4th Quarter 2006.

COMING EU ENLARGEMENTS

The next enlargements of the EU and its enlargement strategy were discussed by the heads of state or government at the meetings of the European Council in both June and December 2006. The discussion in December was based on a report from the European Commission on the EU's enlargement strategy and the progress in recent years in the individual candidate and potential candidate countries.[1]

EU enlargement strategy

A revision of the EU's enlargement strategy was adopted at the end of 2006.[2] The heads of state or government emphasised that the pace of the EU accession process must depend on the results of the reforms in the individual countries, and the EU will refrain from setting target dates for accession until the negotiations are close to completion. The difficult issues such as administrative reforms, judicial reforms and the fight against corruption must in future be addressed at an early stage of the accession process. The pace of enlargement must also take into account the capacity of the EU to absorb new members while also continuing and deepening its own development.[3]

Candidate countries and potential candidate countries

The three candidate countries Croatia, Turkey and the Former Yugoslav Republic of Macedonia (FYROM) are at various stages of the accession process. The accession negotiations with Croatia and Turkey were opened in October 2005, while the date for the opening of accession negotiations with Macedonia, which achieved the status of candidate country in December 2005, has not yet been fixed.[4] In view of the progress of its negotiations Croatia is expected to become the 28th EU member state, but this is not likely to occur before the EU's institutional reforms are in place, i.e. in 2009.[5] In terms of prosperity the countries are also at different levels, and their macroeconomic situations vary considerably, cf. Table 2.

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1 Communication from the Commission to the European Parliament and the Council: Enlargement Strategy and Main Challenges 2006-2007 including annexed special report on the EU's capacity to integrate new members, November 2006.

2 The European Council in Brussels on 14-15 December 2006: Presidency conclusions.

3 This is in accordance with the European Council's conclusions from Copenhagen in 1993: "The Union's capacity to absorb new members, while maintaining the momentum of European integration, is also an important consideration in the general interest of both the Union and the candidate countries."

4 According to the conclusions from the meeting of the European Council in December 2006 further reforms are necessary before Macedonia can continue the accession process.

5 With the accession of Bulgaria and Romania the number of EU commissioners is 27. According to the Nice Treaty this means that the number of commissioners in the European Commission must be reduced before further EU enlargements, so that there are fewer commissioners than member states. The Nice Treaty does not specify the method to be applied, and this must be agreed by the member states before 2009 when the next European Commission will take office.

POPULATION AND ECONOMIC INDICATORS, 2005 Table 2

	Population (million)	GDP per capita PPP (EU25=100)	Trade (per cent of GDP)	Real GDP Growth (per cent)	Inflation (per cent)	Government budget (per cent of GDP)	Unemployment (per cent)
Candidate countries:							
Croatia	4.4	45.9	99.0	4.3	3.3	-4.1	18.0
Macedonia	2.0	26.6	104.3	3.8	0.0	0.3	37.3
Turkey	71.6	31.6	61.4	7.4	8.2	-2.0	10.2
Potential candidate countries:							
Albania	3.1	20.4	67.4	5.5	2.4	-3.7	14.2
Bosnia-Herzegovina	3.9	22.8	87.0	5.0	3.7	0.9	44.6
Montenegro	0.6	…	…	4.1	1.8	-2.6	18.5
Serbia	7.4	24.2	71.2	6.2	17.3	1.8	20.1
Memo:							
EU25	461.5	100.0	74.2	1.7	2.2	-2.3	9.2

Note: Trade is the sum of exports and imports of goods and services. The population figure for Montenegro is from 2003, and unemployment from 2004.
Source: Economist Intelligence Unit, Eurostat and the EU's website on EU enlargements.

The accession negotiations with Turkey have received a lot of attention, most recently due to Turkey's failure to meet its obligations in accordance with the Ankara protocol.[1] According to the protocol, Turkey is obliged to eliminate the barriers to the free movement of goods vis-à-vis the EU member states, including restrictions to means of transport. Nonetheless, Turkey refuses to give the Cypriots access to Turkish ports and airports. The EU has therefore decided not to open eight out of 35 chapters in the accession negotiations before Turkey has met its obligations.[2] In addition, negotiations in other areas cannot be concluded until Turkey fulfils the requirements.

Turkey's condition for its compliance with the protocol is the EU's discontinuation of the economic isolation of the Turkish section of Cyprus. When the UN plan for the reunification of the island was accepted by Turkish Cypriots and rejected by Greek Cypriots the EU undertook to lift the embargo on the Turkish section of Cyprus. However, since Cyprus has a right of veto, the embargo has not yet been lifted.

The western Balkan countries, Albania, Bosnia-Herzegovina, Montenegro and Serbia are the potential candidate countries.[3] They are in the stabilisation and association process that the EU commenced with these countries in 2000 in order to promote peace, stability and

[1] Additional Protocol to the Association Agreement.
[2] This relates to the following areas: free movement of goods, the right of establishment and freedom to provide services, financial services, agriculture and rural development, fisheries, transport policy, customs union and external relations.
[3] Kosovo is also mentioned in the Commission's report. Kosovo is part of Serbia, but also under UN control.

economic development.[1] The EU heads of state or government emphasised once again at their meeting in December 2006 that the future of these countries lies in the EU.

SUMMARY AND CONCLUSION

The EU was enlarged for the 6th time on 1 January 2007, on this occasion by two relatively poor Balkan countries, Bulgaria and Romania. Both economies are growing rapidly. This is also reflected in their high inflation rates and substantial current-account deficits, which they have in common with many of the central and eastern European member states that joined the EU in 2004. GDP per capita in Bulgaria and Romania is very low, and is also lower than for EU10 in 2004, which indicates that it can take several decades for the new member states to reach the EU's level of prosperity, even if conditions for growth are favourable.

Experience so far from the 2004 enlargement is positive. Viewed over a longer period foreign trade and investments have increased significantly and experience with the mobility of labour is generally also positive. However, in many of the member states the nominal convergence is slower than expected, and several of the member states have had to postpone the planned date of introduction of the euro.

In 2006 the European heads of state or government decided to tighten the conditions for compliance with the requirements during the accession process and also emphasised that account would be taken of the EU's capacity to integrate new member states. The future of the Balkan countries within the EU has been confirmed, but there are currently no concrete plans to enlarge the EU with other countries than Croatia, Turkey and the Former Yugoslav Republic of Macedonia (FYROM).

[1] The agreements include trade concessions intended to establish a free trade area, economic and financial assistance, assistance with the democratisation process, and humanitarian assistance, as well as cooperation on legal and other affairs. So far a stabilisation and association agreement has only been signed with Albania. Serbia's EU association negotiations have been suspended due to insufficient cooperation with the International Criminal Tribunal for the former Yugoslavia in The Hague.

The EU Legislative Process: From Directive Proposal to Consistent Application of the Regulatory Regime

Birgitte Bundgaard Madsen, Financial Markets

INTRODUCTION AND SUMMARY

The economic advantages of a single financial market in the EU have made financial integration a priority area. Initiatives to complete the single financial market have typically come in waves. At the end of the 1980s, the foundations for financial integration were laid by the liberalisation of capital movements and the second-generation directives that enabled financial enterprises to conduct cross-border activities on the basis of home-country supervision. The introduction of the euro accelerated the integration process and sharpened the focus on removing the remaining barriers. In 1999, the European Commission launched the Financial Services Action Plan (FSAP) that set out priorities for the work to complete the single financial market, particularly in the securities field[1], and was aimed at eliminating regulatory barriers.

The work on FSAP revealed that the EU's general legislative process lagged behind the rapid pace of change in the financial sector. Furthermore, the work did not necessarily result in the degree of regulatory harmonisation which is a precondition for the single financial market. Against this background, in 2001 a new EU procedure, the Lamfalussy procedure, was established to speed up and enhance the flexibility of the legislative process. Since a single financial market in the EU not only requires a single regulatory regime, but also its consistent application, the Lamfalussy procedure also creates the framework for increased supervisory cooperation.

This article reviews how directives in the financial area are adopted under the new procedure. The adoption of the new capital-adequacy rules (Basel II) serves as an example. The article also reviews the devel-

[1] Cf. Jesper Ulriksen Thuesen, New Regulatory Regime for European Securities Markets, p. 89 ff.

opment in supervisory cooperation within the EU, as well as the consistent application of the regulatory regime.

The Lamfalussy procedure has several advantages, especially the relatively speedy process of adoption of new legal acts. However, the resource-consuming procedure makes great demands of small member states, and there may also be a tendency for very intensive regulation.

NEW MODEL FOR ADOPTION OF FINANCIAL SERVICES LEGISLATION IN THE EU

The EU's legislative procedure is stipulated in the Treaty. The normal legislative procedure for financial regulation is that the Council, i.e. the Ecofin Council in respect of the financial area, and the European Parliament adopt directives under the co-decision procedure. In practice, the Commission's proposal is first considered by a working group under the auspices of the Council, in which all member states are represented. At the same time, the European Parliament is consulted. Once the Council's working group has completed its reading of the proposal, and political agreement has been reached in the Council, the proposal is submitted to the European Parliament. The European Parliament then submits its position with proposed amendments to be considered by the Council. After possible reconsideration by the Council working group and agreement in the Council, the proposal is re-submitted to the European Parliament for a second reading. Final adoption of the directive requires agreement on the text between the European Parliament and the Council. If agreement cannot be reached, a committee with representatives from both institutions can be established. If agreement still cannot be reached, the legal act is not adopted.

This process takes three to four years on average, sometimes longer. There are examples of directives that have been in the pipeline for more than 10 years, e.g. the UCITS Directive[1]. Additional to this is the period of national implementation, which is rarely less than 18 months.

The co-decision procedure applies not only to the adoption of directives, but also to their amendment, including amendments of a purely technical nature. In view of the rapid pace of change in the financial area, regulation has tended to lag behind this progress.

In 2001, the Lamfalussy procedure[2] was introduced to enhance the efficiency of the legislative process in the securities field within the framework of the Treaty. In 2002, the procedure was extended to the

[1] Directive 2001/107/EC of the European Parliament and of the Council of 21 January 2002.
[2] Committee of Wise Men, Final report of the Committee of wise men on the regulation of European Securities Markets, Brussels, 15 February 2001.

entire financial area. The legal basis for the Lamfalussy procedure is an interim agreement between the European Commission, the Council and the European Parliament. The rationale is that only the most important general framework principles should be adopted by the Council and the European Parliament under the co-decision procedure (level 1). The adopted framework principles should comprise implementing powers to issue more technical legal acts and amendments thereof, which are adopted by the Commission after consultation of the member states at official level in a number of committees (level 2). This division of the legislative process is also found in Denmark, where acts are adopted by the Folketing (Parliament) and executive orders are issued by ministries and agencies as empowered by the acts. In the EU, a number of supervisory committees are also established (level 3), comprising representatives of the national supervisory authorities, to advise the Commission on the preparation of proposed financial services directives. The supervisory committees also prepare proposals for level 2 regulation and contribute to consistent implementation of the rules in the member states. In addition to the legislative process, the Lamfalussy procedure also comprises recommendations for expanded cooperation and coordination among the national supervisory authorities at level 3, so as to enhance convergence in the supervisory approach. The Lamfalussy procedure is described in more detail in Boxes 1 and 2.

Chart 1 illustrates the timeline from the submission of proposals to the adoption of directives under the Lamfalussy procedure. The timeline shows the customary schedule for the process concerning a number of directives, e.g. the Prospectus Directive[1] and MiFID[2]. As the timeline in Chart 1 shows, several phases of the legislative process overlap. On the one hand, this ensures the required speed, but on the other it makes the model vulnerable to delays at the individual levels. The process to adopt the Prospectus Directive and especially MiFID illustrates how it can be necessary to extend the deadlines during the process.

[1] Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading.

[2] Directive 2004/39/EC of the European Parliament and of the Council of 27 April 2004 on markets in financial instruments.

THE LAMFALUSSY PROCEDURE Box 1

The Lamfalussy procedure was adopted by the Ecofin Council in March 2001, based on the preparatory work of the Committee of Wise Men, with Alexandre Lamfalussy as chairman. The purpose was to enhance the efficiency and efficacy of the securities regulation process. In 2002, the procedure was extended to cover all financial areas, i.e. credit institutions, insurance and pension. There are four levels in the procedure:

- Level 1: The European Commission submits proposals for legal acts on the basis of advice from a number of committees, cf. below. The proposals comprise the central framework principles that are adopted by the Council and the European Parliament under the co-decision procedure. A special "fast track" procedure can be applied, according to which the European Parliament is only consulted once. To further speed up the process, the Committee of Wise Men proposed that a larger part of the legislation should be implemented as regulations rather than via directives since, in contrast to directives, regulations are directly applicable and therefore need not be implemented into national legislation. The implementation process alone often takes 18 months or more.

- Level 2: The technical details within the framework set out at level 1 are subject to the comitology procedure. Under this procedure, the Council and the European Parliament have delegated special powers to the Commission, which is assisted by level 2 committees with representatives from the member states. In these committees, the member states vote on the Commission's proposals. Unless there is a majority against the Commission's proposals, the Commission has regulatory powers to issue directives or regulations. The choice is up to the Commission. The level 2 committees are: the European Banking Committee, EBC; the European Securities Committee, ESC; the European Insurance and Occupational Pensions Committee, EIOPC; and the European Financial Conglomerates Committee, EFCC.

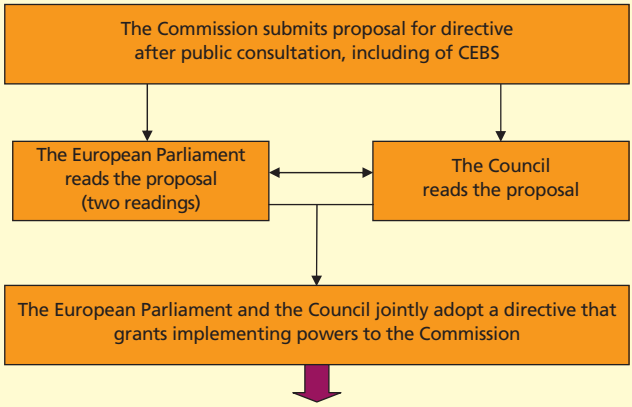
- Level 3: The purpose of level 3 is to ensure consistent implementation of the rules. This is achieved via close cooperation among the supervisory authorities. The mandate of most level 3 committees is therefore to prepare common standards and guidelines. The committees have no regulatory powers, but advise the Commission and the level 2 committees on the preparation of level 2 regulation. The level 3 committees are: the Committee of European Banking Supervisors, CEBS; the Committee of European Securities Regulators, CESR; and the Committee of European Insurance and Occupational Pensions Supervisors, CEIOPS. The committees are also forums for supervisory cooperation within the EU.

- Level 4. According to the Treaty, it is the responsibility of the Commission to enforce EU legislation. However, under the Lamfalussy procedure the member states are expected to expand their cooperation in this area too. If necessary, the Commission may bring the member states before the Court of Justice in the event of untimely or incorrect implementation of the EU legislation.

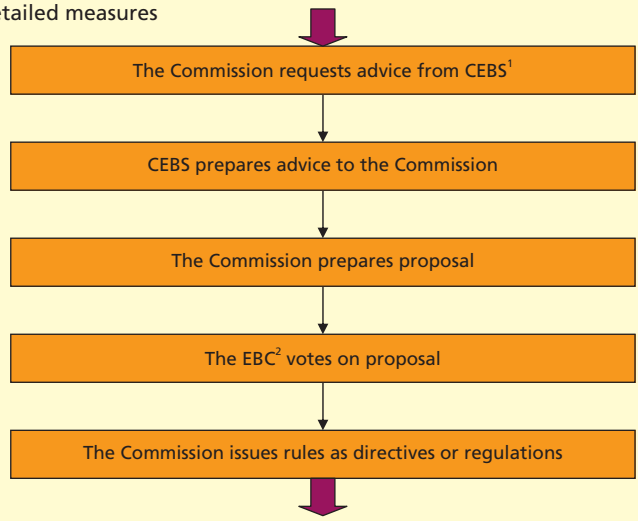
OVERVIEW OF LEVELS 1-3 OF THE LAMFALUSSY PROCEDURE IN THE BANKING AREA

Box 2

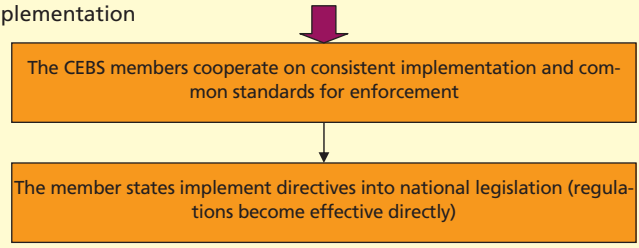
Level 1: Adoption of directive



Level 2: Detailed measures



Level 3: Implementation

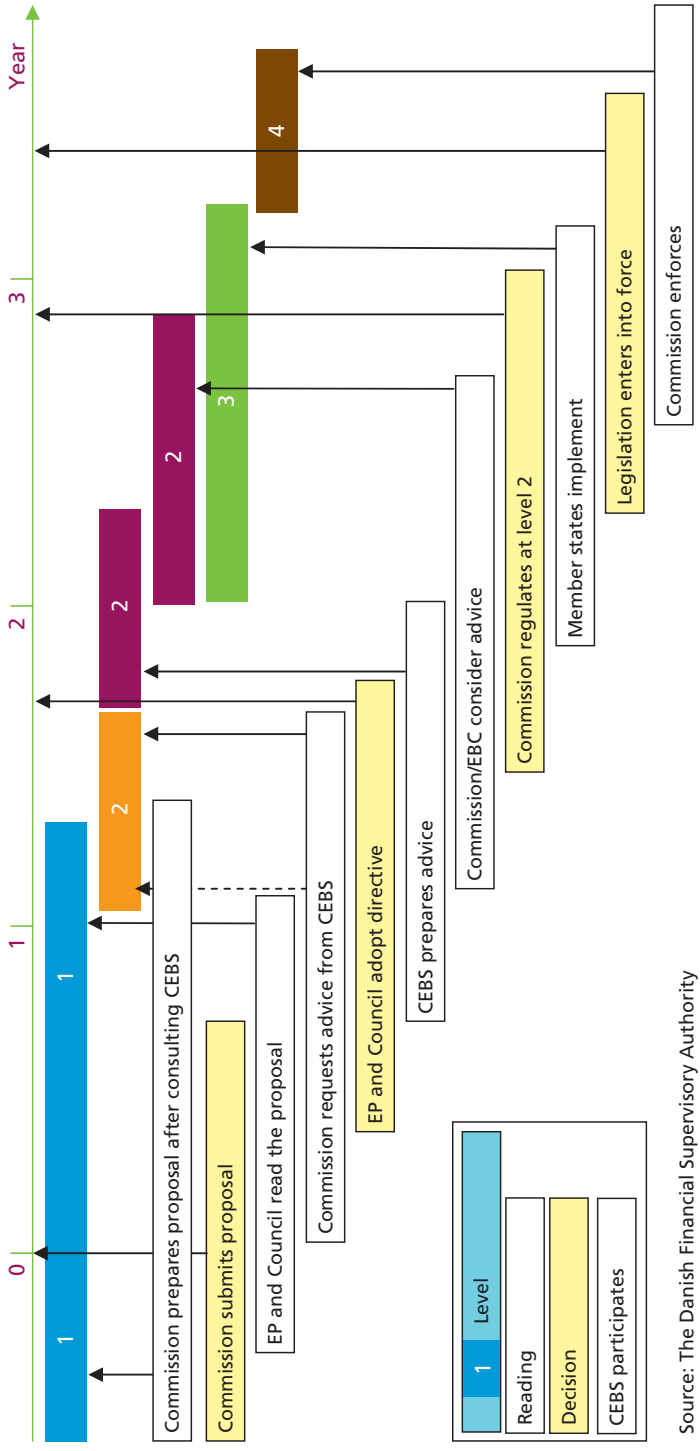


Source: The Danish Financial Supervisory Authority.

[1] CEBS: Committee of European Banking Supervisors.

[2] EBC: The European Banking Committee.

EXAMPLE OF TIMING OF THE LAMFALUSSY PROCEDURES Chart 1



Source: The Danish Financial Supervisory Authority

NEW CAPITAL-ADEQUACY RULES FOR CREDIT INSTITUTIONS

One example of the new legislative procedure is the adoption of the new capital-adequacy rules, called Basel II[1]. The work on the rules was initiated in 1999 under the auspices of the European Commission and proceeded concurrently with the preparation of the recommendations of the Basel Committee[2].

On 14 July 2004, the Commission submitted a proposal for new capital-adequacy rules. In technical terms, the new rules were implemented in the EU regulatory regime via revision of the two existing directives in the area: the Banking Directive (2000/12) and the Capital Adequacy Directive (93/6). The amendments to the directives were subject to adoption under the co-decision procedure. To speed up the process, the European Parliament and the Council read the proposals simultaneously. In the Council, the proposals were considered by a working group with representatives from the member states. In the European Parliament, political agreement on the directive proposals was reached on 28 September 2005, while the Council reached agreement on 11 October 2005. The directives were formally adopted by the Council in June 2006.

The new directives set out the framework for the new capital-adequacy rules. According to the Lamfalussy procedure, the more technical provisions, primarily described in the annexes to the directives, may be amended by the Commission after consultation of the European Banking Committee (EBC), which is a level 2 committee.

Concurrently with the adoption process, the Committee of European Banking Supervisors (CEBS), which is a level 3 committee, was preparing common guidelines, standards and recommendations with a view to achieving convergence in the supervisory authorities' enforcement of the new rules in practice. This extensive work, which is still in progress, is undertaken by a large number of working groups.

In order to meet the deadline of 1 January 2007 for entry into force in the member states, the work on implementation of the new rules in Denmark was initiated concurrently with the adoption of the directives and the preparation of recommendations by CEBS. The Bill was submitted to the Folketing (Parliament) prior to the formal adoption of the directives.

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1 The rules are described in more detail in Lisbeth Borup and Dorte Kurek, Proposal for a Directive on New Capital-Adequacy Rules (Basel II), Danmarks Nationalbank, *Monetary Review,* 1st Quarter 2005.

2 The Basel Committee, whose secretariat is at the Bank for International Settlements, BIS, was set up in 1975 with the purpose of strengthening the stability of the international financial system. The following countries are represented on the Committee: Belgium, Canada, France, Netherlands, Italy, Japan, Luxembourg, Switzerland, Spain, UK, Sweden, Germany and the USA.

The preparatory work for the directives under the special process has taken several years, but the actual adoption procedure has only taken approximately 2.5 years from the Commission's submission of the proposals to the entry into force. Compared to the adoption process for the previous capital-adequacy requirements, which took around 5 years, the process has been rapid.

Furthermore, the adoption of the capital-adequacy rules was characterised by a high degree of transparency in relation to the stakeholder organisations. During the preparatory work under the auspices of the Basel Committee and the Commission, and during the adoption process, consultation rounds were held on an ongoing basis. Five rounds of Quantitative Impact Study (QIS) were conducted among credit institutions, including a number from Denmark. CEBS has conducted ongoing consultation rounds on the preparation of the supplementary rules.[1]

INCREASED SUPERVISORY COOPERATION

The new legislative process, the Lamfalussy procedure, is accompanied by extended cooperation and coordination among national supervisory authorities in the financial field in order to enhance convergence in supervisory methods. The impact of the legislation depends on how the rules are implemented, but to an equal degree also on how the supervisory authorities apply the legislation in practice. The 27 EU member states together have more than 60 supervisory authorities for credit institutions and markets. These national supervisory authorities have different objectives, mandates and supervisory powers. Under the Lamfalussy procedure, the supervisory structure in the EU is being changed via the introduction of supervisory committees (level 3) for the purpose of achieving convergence in regulation and supervision. The committees issue rules without a formal mandate to regulate. Instead, decisions are based on agreement, and compliance and cooperation are primarily voluntary for the authorities of the member states.

EXPERIENCE WITH THE LAMFALUSSY MODEL FOR ADOPTION OF LEGAL ACTS AND SUPERVISORY COOPERATION

There is a tendency for the duration of the process for the adoption of directives to be reduced. This is particularly apparent in the securities field, where the process of e.g. the Prospectus Directive took just over 16 months from submission of the proposal to adoption, compared to ap-

[1] See www.c-ebs.org for consultation rounds.

proximately 9 years for the previous directive. The Lamfalussy procedure has thus already proved its ability to speed up the legislative process concerning financial services, to the benefit of financial integration.

Chart 1 illustrates that as a consequence of the very tight deadlines for preparation of legislation, a number of level 2 and 3 processes must take place concurrently with the actual directive negotiations at level 1. With regard to the capital-adequacy rules, CEBS began its work on recommendations, etc. concurrently with the directive negotiations. In the securities area, the tight deadlines have led to several cases of level 2 regulation that is based on drafts of level 1 directives. For the member states, the technical level 2 regulation has sometimes been adopted very late in relation to their deadline for final implementation. As a result, the member states were obliged to initiate the national implementation process before the final rules were known. This applied especially to the MiFID process.

In connection with the adoption of the new capital-adequacy rules a large body of work was initiated in various sub-groups under CEBS. Much of this work took place simultaneously due to the very tight deadlines. This is extremely resource-consuming, especially for the supervisory authorities of the member states, and may be difficult for the small member states to honour. Denmark participates in a small number of working groups in this area.

The basis for the Lamfalussy procedure is that the Council and the European Parliament should solely adopt framework principles for legislation and empower level 2 to adopt regulations of a technical nature. It has proved difficult in practice to distinguish between framework principles and technical regulations. MiFID is an example of how regulation has on the one hand become more detailed, but at the same time has not resolved politically controversial issues, which instead were passed on to level 2 regulation. In addition, there is a tendency to add a large number of further rules at level 3, since the supervisory authorities in 27 member states also have to reach compromises on principles and rules for supervisory methods.

The continued success of the Lamfalussy procedure depends on rapid, accurate and consistent implementation of the regulatory regime.

New Regulatory Framework for European Securities Markets

Jesper Ulriksen Thuesen, Financial Markets

INTRODUCTION AND SUMMARY

In recent years a new EU regime for regulation of the European securities markets has been developed. The new directives and implementing measures entail very extensive changes that will affect the development in the capital markets. The work is currently being finalised. This article gives an overview of the most important changes, focusing on their impact on the various participants in the European securities markets.

In some areas, the new EU regulatory regime introduces completely new opportunities, while in others the focus is first and foremost on greater harmonisation of national legislation, so that EU regulation supports the continued progress towards a fully integrated securities market in the EU. The new regulatory regime is expected to augment competition among the various trading platforms in Europe, strengthen cross-border competition among securities dealers, and further harmonise the approach to investor protection.

Some aspects of the European financial markets and some market players are still not covered by EU regulation.

THE AMBITION OF A FULLY INTEGRATED SECURITIES MARKET

The free movement of capital and services is one of the cornerstones of the EU and the internal market. Business enterprises must have unrestricted access to raise capital throughout the EU, and investors must equivalently be able to invest across national borders. Securities dealers and providers of trading platforms and other infrastructures must be able to operate at the EU level just as they hitherto have operated in the individual member states.

In 1999 the ambition of a fully integrated financial market was expressed in the EU's Financial Services Action Plan[1], which stated an ambitious timetable up to 2005 for the revision of the EU regulatory

[1] *Implementing the framework for financial markets: action plan*, communication from the Commission, 11 May 1999.

regime in the financial area, including the directives concerning the securities markets. The changes concerning the regulation of securities relate especially to the following directives[1]:

- The Markets in Financial Instruments Directive, MiFID, (previously the Investment Services Directive).[2]
- The Prospectus Directive.[3]
- The Market Abuse Directive.[4]
- The Transparency Directive.[5]
- The Takeover Directive.[6]

An important element of the overall initiative has been to strengthen the cooperation among the national supervisory authorities in the securities markets area in order to create a level playing field throughout the EU for markets and market players. This work is especially performed under the auspices of the Committee of European Securities Regulators, CESR[7], with the participation of the Danish Financial Supervisory Authority.

SIGNIFICANCE TO MARKET PLAYERS

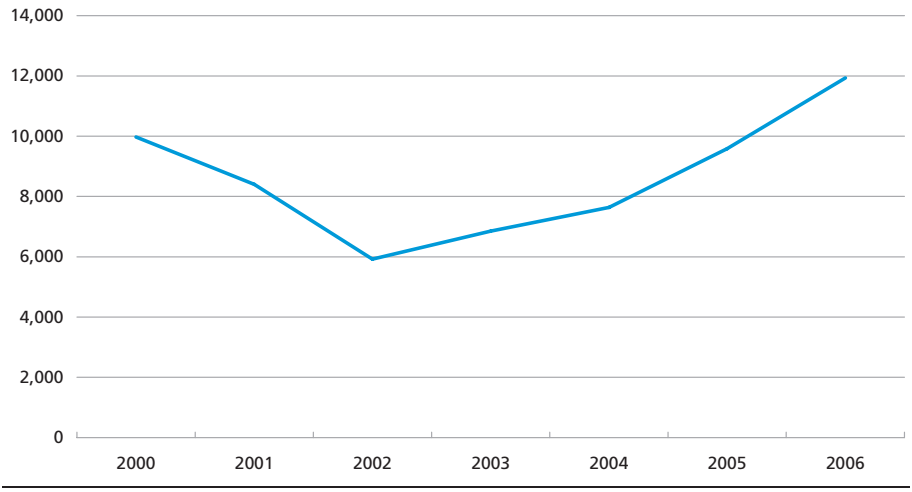
The two-fold objective of the revision of the EU regulatory regime for securities has been to ensure the framework for an efficient and well-functioning internal securities market, as well as a high degree of investor protection in connection with securities transactions at national and cross-border level within the EU. Completely new opportunities are introduced in some areas, e.g. new types of trading platform or new securities trading methods. In other areas, the focus of revision has been on harmonisation of national legislation. This e.g. applies to prospectuses, investor protection and best execution. These areas required harmonisation in order to support the progress towards an actual single securities market.

There is some variation in the adjustments required of market participants in the different member states as a consequence of the new regulatory regime. For most market participants, however, the adjustments are considerable. This applies especially to securities dealers. In the

1 Most of these directives have been implemented in Danish legislation, in particular by amendment of the Danish Securities Trading Act and appurtenant Executive Orders.
2 Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004.
3 Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003.
4 Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003.
5 Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004.
6 Directive 2004/25/EC of the European Parliament and of the Council of 21 April 2004.
7 CESR and its work are described in more detail on www.cesr-eu.org. The supervisory cooperation is not otherwise described in this article.

MARKET CAPITALISATION ON EUROPEAN STOCK EXCHANGES, BILLION EURO, YEAR-END

Chart 1



Note: The value for 2006 is estimated on the basis of the development up to and including November 2006. The data comprises the following stock exchanges: Athens Exchange, Borsa Italiana, Bratislava Stock Exchange, Budapest Stock Exchange, Cyprus Stock Exchange, Deutsche Börse, Euronext, Iceland Stock Exchange, Irish Stock Exchange, Ljubljana Stock Exchange, London Stock Exchange, Luxembourg Stock Exchange, Malta Stock Exchange, OMX, Oslo Børs, Prague Stock Exchange, Spanish Exchanges (BME), SWX Swiss Exchange, Virt-X, Warsaw Stock Exchange and Wiener Börse.

Source: FESE.

slightly longer term, the altered terms of competition will affect all market participants.

Trading platforms and methods

The new regulatory regime distinguishes between three principal types of securities trading:

- Regulated markets.
- Multilateral trading facilities, or MTFs.
- Systematic internalisation.

Securities can still be traded outside trading platforms as before, for example in the OTC market. Chart 1 shows the total market capitalisation on the European stock exchanges.

Regulated markets are securities trading platforms, in Denmark the stock exchanges and authorised marketplaces, e.g. the Copenhagen Stock Exchange, which is now owned by OMX, and Dansk AMP. In addition to requirements of corporate structure, initial capital endowment, etc., there are also requirements of the personal integrity and competence of the persons responsible for operating the regulated markets. Regulated markets are also subject to new EU rules to prevent market abuse, i.e. insider dealing and market manipulation.

The new regulatory regime does not entail an actual European passport for operators of regulated markets. Regulated markets thus cannot be operated across national borders on the basis of home-state authorisation and supervision. However, in practice the general right to operate and establish business activities across national borders within the EU will make it relatively easy to operate regulated markets on a cross-border basis.

In a regulation context*, multilateral trading facility,* MTF, is a new type of trading platform that is introduced with MiFID. As a trading platform that brings buyers and sellers of securities together, an MTF can be exactly like a regulated market. Establishment and operation of an MTF are, however, subject to slightly more lenient requirements, and first and foremost, different requirements are made of issuers and investors on the two types of trading platform. The new revised rules on market abuse, takeover bids and disclosure obligations, cf. below, do not apply to MTF activities. Securities admitted to trading on regulated markets, and other securities, i.e. unlisted securities, can both be traded on MTFs.

Examples of MTFs are various versions of MTS trading platforms on which much of the wholesale trading in European government securities takes place today. MTS platforms are currently regulated under different national legislation.

MTFs can be operated by investment firms, credit institutions or operators of regulated markets. Operation of an MTF is regarded as an investment service activity, which implies that, in contrast to operation of regulated markets, MTF operators are subject to an actual European passport. A foreign enterprise that is authorised to operate an MTF in another EU member state may therefore also operate an MTF via a branch in Denmark, on the basis of its home-state authorisation and subject to home-state supervision.

The purpose of introducing MTFs was to strengthen competition among trading platforms and to attract some of the trading that currently takes place outside the established exchanges and authorised marketplaces, due to such factors as the costs of admitting securities to trading and the ongoing disclosure requirements for business enterprises traded on regulated markets.

Systematic internalisation is a new term introduced with the new regulatory regime. In some respects it is equivalent to the current Danish concept of real-time transactions, since the securities dealer executes client orders by dealing against his own portfolio on the basis of prices quoted by the securities dealer. Securities dealers that systematically execute client orders in this way outside regulated markets and MTFs are subject to a number of requirements, including procedures for handling

conflicts of interest, transparency in quotes, and the information to be made available to clients.

Transparency in regulated markets and MTFs

The new regulatory regime introduces a clear distinction between the trading information to be published with a view to appropriate transparency in the securities markets, and the trading information required for market oversight, including monitoring of compliance with the rules on insider dealing and market manipulation. In principle, the transparency rules apply only to transactions in shares admitted to trading on regulated markets, but the member states may introduce national rules for other types of securities.

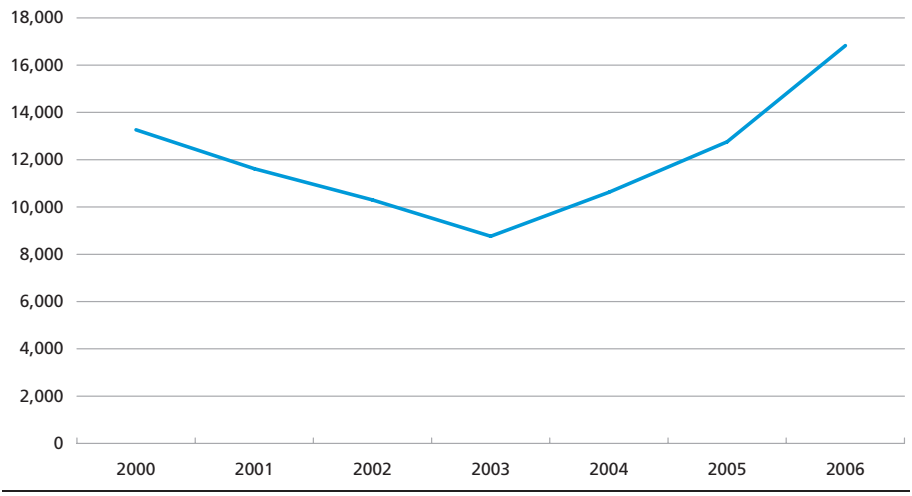
"On a reasonable commercial basis" regulated markets and MTFs are subject to pre-trade disclosure of bid and offer quotes and the volumes that can be traded at these prices (market depth). However, these provisions do not apply to particularly large-value transactions.

Likewise "on a reasonable commercial basis", regulated markets and MTFs are subject to post-trade disclosure of prices, volumes and the times of execution of transactions.

For both pre-trade and post-trade disclosure, the markets may be exempted from their transaction disclosure obligations on the grounds of

ANNUAL TURNOVER ON THE EUROPEAN STOCK EXCHANGES, BILLION EURO

Chart 2



Note: Turnover compiled on a single counted basis. The value for 2006 is estimated on the basis of the development up to and including November 2006. The data comprises the following stock exchanges: Athens Exchange, Borsa Italiana, Bratislava Stock Exchange, Budapest Stock Exchange, Cyprus Stock Exchange, Deutsche Börse, Euronext, Iceland Stock Exchange, Irish Stock Exchange, Ljubljana Stock Exchange, London Stock Exchange, Luxembourg Stock Exchange, Malta Stock Exchange, OMX, Oslo Børs, Prague Stock Exchange, Spanish Exchanges (BME), SWX Swiss Exchange, Virt-X, Warsaw Stock Exchange and Wiener Börse.

Source: FESE.

the nature or size of the transactions. The markets own their information and may therefore offer it for sale.

Chart 2 shows the development in annual turnover on the European stock exchanges.

Business enterprises – borrowers in the securities markets

The new regulatory regime is intended to enable securities issuers to raise capital in a single European capital market, i.e. across national borders and securities trading platforms.

Harmonised rules are therefore introduced for the contents of prospectuses for securities issues, as well as a European passport for prospectuses. This means that a prospectus approved by the competent authorities in one member state can be applied to issues anywhere in the EU. The harmonised prospectus rules apply to securities offered to the general public, including securities to be traded on a regulated market within the EU. The harmonisation comprises requirements of format, content and language. In order to support the uniform assessment of prospectuses in the various member states, after a transition period it will no longer be possible for the member states' authorities to delegate the work of approving prospectuses. In Denmark, this work was previously delegated to the Copenhagen Stock Exchange and Dansk AMP.

The new rules comprise harmonised requirements of the information that issuers of securities in regulated markets must disclose to the market on an ongoing basis. This includes an obligation to publish, without delay, all relevant internal knowledge of the enterprise, and to publish the board and management's personal transactions in the enterprise's shares and related securities. Furthermore, the harmonised rules specify which methods and media are acceptable for publication of relevant information, so as to ensure uniform treatment of investors.

Harmonised rules are also introduced concerning the obligations of issuers to publish accurate and timely information on annual and interim reports, purchase or sale of major shareholdings with appurtenant voting rights, the issuer's holdings of own shares in the enterprise, and other relevant information related to the securities in question. These rules apply to issues traded on regulated markets.

Investors and investor protection rules – lenders in the securities markets

Investor protection is a key aspect of the new regulatory regime for the securities market. To support confidence in the European securities markets, investors must be ensured an extensive harmonised degree of protection for securities transactions both within and across national

borders in the EU, and irrespective of the nationality of the securities dealer who receives the order. These rules first and foremost entail a number of requirements to be met by the securities dealers so as to ensure that investors can place their funds on a fully informed basis, and subsequently receive documentation of execution of their orders on the agreed terms.

The securities dealers must take into account that not all types of client have the same securities trading expertise. Three types of client are described: retail clients, including some business enterprises, that will be subject to the most extensive investor protection rules; professional clients that will be subject to moderate investor protection; and eligible counterparties, including other securities dealers and others with special expertise in securities markets, to which no investor protection rules will apply. A securities dealer will have to classify all clients into these categories and inform each client of its category.

The obligations of the securities dealers to ensure protection of investors can be divided into three main groups: information to the client, knowledge of the client and best execution.

Information to the client entails that prior to the investment the client must receive adequate information about both the securities dealer itself and the products offered. This includes information to the client concerning any potential conflicts of interest, and concerning the efficient systems and control procedures that a securities dealer must have in place in order to prevent conflicts of interest.

Knowledge of the client means that the securities dealer must assess whether a given investment is profitable for the client on the basis of information from the client itself about its securities trading expertise, financial situation, etc. If the investment is not profitable, the client must be warned, but can naturally still choose to go through with the transaction. Transactions on behalf of the client can still be executed without this assessment, however, in which case they must take place at the client's initiative, and furthermore must not concern complex securities, and the client must be fully informed of the situation.

Best execution means that the securities dealer must take all reasonable measures to achieve the best possible result for the client on the execution of the transaction. This relates not only to the price and costs of the transaction, but also to other factors such as the speed and safety of execution and settlement. However, the securities dealer is always obliged to follow any specific instructions from the client.

The new regulatory regime also includes special rules for the protection of minority shareholders in companies whose securities are traded on regulated markets. These provisions are aimed at ensuring that all

shareholders are given sufficient time and information to make investment decisions, and that the board and management act in the interests of the shareholders.

Securities dealers – intermediaries in the securities markets

The new regulatory regime further harmonises the requirements of European securities dealers and entails considerable adjustments. As described above, the investor protection provisions alone make high demands of how securities dealers conduct their operations.

Securities dealers are comprised by the European passport. This entails that they can offer services directly across national borders, or via branches in other member states on the basis of their home-state authorisation. It also entails access, on non-discriminatory terms, to regulated markets in other member states either directly via a branch, or as remote members. Furthermore, they are entitled to access to post-trade infrastructures in other member states, including clearing and settlement systems.

In addition to harmonised requirements of initial capital endowment, fit-and-proper provisions for owners and management, organisational structure, membership of an approved investor guarantee scheme, auditing requirements, etc., a number of completely new requirements are introduced, especially for how securities dealers must contribute to ensuring transparency in securities transactions.

Securities dealers performing systematic internalisation must publish pre-trade information as firm bid and offer prices, and post-trade information as the price, volume and time of the transaction. The transparency rules apply solely to liquid shares that are admitted to trading on a regulated market, and only to trades up to "normal market size".

The securities dealers must ensure that relevant information on all securities transactions that they have undertaken for own account or for the account of a client is available for at least five years, with a view to inspection by the supervisory authorities.

AREAS REMAINING OUTSIDE THE COMMON REGULATORY REGIME

Self-regulation and market structure

The new directives for the securities area still to a large extent leave it up to each marketplace to define its own concrete trading infrastructure by means of locally determined regulations on e.g. enhanced pre-trade and post-trade transparency, market-maker schemes, matching systems and choice of electronic trading platforms. The individual marketplace can therefore still be adapted to the type of trading it seeks to attract.

This is an important element of the competition among the different marketplaces.

Products and market participants outside the common regulatory regime

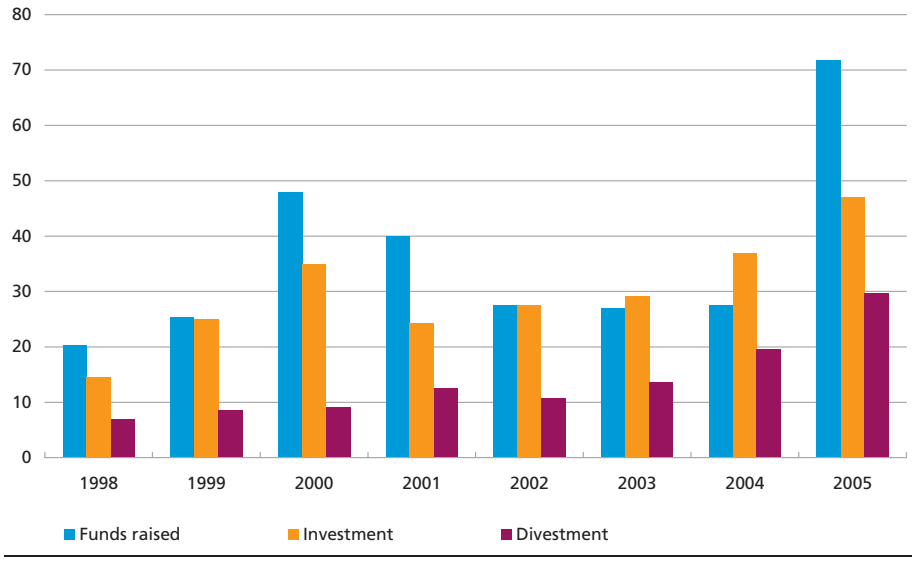
Large parts of the securities markets are still not covered by EU regulation. This applies to both products and market participants.

As described above, the new rules for market transparency in principle apply only to trading in shares that have been admitted to trading on a regulated market. This allows the member states and the individual marketplaces to draw up their own transparency rules for trading in other securities, i.e. both simple products such as bonds, and more complex financial instruments such as credit derivatives.

A large number of shares have not been admitted to trading on a regulated market, and are thus to a great extent still not covered by the common regulatory regime. This applies to shares and other equity held by venture companies and private equity funds that have played a larger role in the European securities markets in recent years. Chart 3 shows the development in European private equity.

Hedge funds have accounted for a rapidly increasing share of trading activity in the European and international securities markets. Many hedge funds restructure their positions relatively frequently, and on a global basis the assets administered by hedge funds are estimated to have

DEVELOPMENT IN EUROPEAN PRIVATE EQUITY, BILLION EURO — Chart 3



Source: Report of the Alternative Investment Expert Group, (European Private Equity Survey. Thompson Financial and PwC), the European Commission, July 2006.

reached more than 1,300 billion dollars. Hedge funds are not subject to EU regulation as either investment firms or as investors.

FUTURE WORK ON THE FRAMEWORK FOR EUROPEAN SECURITIES MARKETS

It is a fundamental EU principle that Community regulation should only be introduced when necessary to meet the ultimate objective of a fully integrated European securities market. Currently several areas are being investigated to identify the possible need for further Community regulation.

The progress of financial integration in Europe is generally more advanced on the wholesale than on the retail side. This also applies to the European securities markets, where a large part of the new regulatory regime focuses on the wholesale side. The European Commission has presented a White Paper[1] that sets out the general policies for the work of the EU up to 2010. After the implementation of the many directives under the first Financial Services Action Plan, the focus has now turned to evaluation and adjustment, described by the Commission as better rather than more regulation. Furthermore, the retail side is now also in focus. This is for example illustrated by the designation of investment funds and mortgage credit as priority areas, and this work is in progress.

CESR has initiated the first stage of the gathering of experience as the subsequent basis for evaluation of the new regulation of the securities area. In the first stage, this gathering of experience relates to the Prospectus Directive.

Furthermore, the Commission has initiated the collection of information from markets and market participants regarding the possible need to expand the new transparency rules for shares to include bonds, or to establish common transparency rules for bonds at Community level by other means.

One of the largest remaining obstacles to a fully integrated securities market in Europe is the lack of integration of post-trade infrastructures, i.e. regarding clearing and settlement. The Giovannini reports[2] identified the largest obstacles in this area, as well as a way to overcome them. Against this background, the European Commission has launched a wide

1 *White Paper on Financial Services Policy 2005-2010*, European Commission, December 2005.
2 *Cross-Border Clearing and Settlement Arrangements in the European Union*, The Giovannini Group, Brussels, November 2001. *Second Report on EU Clearing and Settlement Arrangements,* The Giovannini Group, Brussels, April 2003. For an overview of the European Commission's initiatives in the wake of the two reports, see the Commission's website:
http://ec.europa.eu/internal_market/financial-markets/clearing/index_en.htm#com

range of initiatives to resolve the legal, technical and political issues related to ensuring that cross-border clearing and settlement take place on conditions equivalent to the national conditions, including the identification of the possible need for EU regulation. The latest information from the Commission is a statement by Commissioner McCreevy[1] that proposes that the Commission should refrain from taking regulatory initiatives for the time being. Instead, the sector should create its own solutions based on a Code of Conduct[2] published in November 2006 that among other things sets deadlines for specific measures towards closer integration.

The Commission has launched initiatives to map the significance of private equity and of hedge funds to the European financial sector and the European securities markets. In both areas, this has so far resulted in reports from expert groups, and the Commission will continue this work inter alia on the basis of the recommendations of these reports.

Work at Community level is also taking place in other areas, e.g. corporate governance, subject to the fundamental principle that Community regulation does not necessarily have to be introduced.

1 Press release of 7 November 2006 by Commissioner McCreevy.
2 *European Code of Conduct for Clearing and Settlement*, 7 November 2006. This Code of Conduct is signed by the European infrastructure, i.e. stock exchanges, central counterparties and central securities depositories, including OMX Exchanges and VP Securities Services.

SEPA – Single Euro Payments Area

Elin Amundsen, Payment Systems

INTRODUCTION

The European banking sector is currently in the process of establishing a Single Euro Payments Area, SEPA, where citizens and business enterprises can use a single set of European payment instruments for payments in euro all over Europe. It is planned that the banks will begin to offer their customers the new instruments in 2008.

The Danish banks have participated in the development of SEPA via the Danish Bankers Association and also plan to offer the new payment instruments. Danish citizens and business enterprises will thus be able to use SEPA instruments for payments in euro. Since SEPA comprises payments in euro only, the project will not influence Danish payments in kroner.

Today, settlement of payments by citizens and business enterprises in Europe is characterised by a high degree of national fragmentation, despite the introduction of the euro. SEPA will make it simpler and less expensive to make cross-border payments in euro, which will support the single market for goods and services in the EU. In addition, SEPA offers a number of other potential efficiency gains and economies of scale for the European banks and their customers.

Within SEPA, there will be no distinction between domestic and cross-border payments in euro. Consumers will be able to make euro payments throughout Europe from one single bank account using a single set of payment instruments as simply and securely as they currently make domestic payments. Business enterprises will also benefit from the uniform handling of payments in euro and will no longer have to hold accounts in several countries in order to remit and receive such payments.

This article first describes the background to SEPA. Then follows a summary of the key elements of SEPA, including the new payment instruments, as well as the project structure and timeline. Some of the key issues pointed out by the European Central Bank, ECB, and the

European Commission are also described. Finally, the plans to develop additional optional services, AOS, for the SEPA payment instruments are outlined, as well as the Danish banks' work to introduce these instruments in Denmark.

BACKGROUND TO SEPA

Payments involving citizens and business enterprises are known as retail payments.[1] They can e.g. be consumers' payments for goods purchased in shops or via the Internet. Such payments may be effected in cash or electronically using various types of payment instrument. Examples of electronic payments include credit transfers, direct debit (such as Betalingsservice in Denmark), and card payments, cf. Box 1.

The introduction of the single currency, the euro – initially as a unit of account on 1 January 1999 and subsequently as banknotes and coins on 1 January 2002 – was in principle a major step towards the realisation of a single payments area in Europe. Within this area no distinction is made between the processing of domestic and cross-border payments, i.e. national borders are of no significance to the settlement of payments. This applies to both payers (debtors) and payees (creditors).

The transition to the euro was, however, not immediately followed by greater integration of the settlement of retail payments in Europe. This lack of integration was e.g. reflected in continued high costs for transaction of cross-border payments. A survey by the Commission showed that in 2001 the average cost of settling a cross-border credit transfer of 100 euro in the EU was approximately 24 euro, cf. Chart 1. Moreover, there were no indications that such costs had fallen in the preceding years.[2]

Political attempts had previously been made to increase the efficiency of cross-border retail payments in Europe. In 1997 the Council and the European Parliament adopted a Directive on cross-border credit transfers in the EU, cf. Box 2. The Directive laid down a number of requirements for information on such transfers and their execution. In addition, it contained details of the complaint and redress procedures available to customers in the event that the banks did not meet their obligations.

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[1] In contrast, payments between banks are known as interbank payments. Such payments are usually considerably larger than retail payments and are normally settled via the central banks' real-time gross settlement (RTGS) systems. Cross-border interbank payments in euro are typically settled in the European central banks' common payment system, Target, cf. Chapter 8 of *Payment Systems in Denmark*, Danmarks Nationalbank (2005).

[2] In similar surveys in 1993 and 1994, the average costs of a cross-border credit transfer in the EU were calculated at, respectively, just under 24 and 25-26 euro, cf. Retail Banking Research (2001).

ELECTRONIC RETAIL PAYMENTS Box 1

When consumers buy goods and services on a day-to-day basis, money is transferred from the buyer to the seller. Such payments are known as retail payments. Cash is still in widespread use for retail payments, but many such payments are now effected as electronic transfers, i.e. card payments, credit transfers or direct debit.

In connection with electronic retail payments, the consumer's (debtor's) account is debited, while the shop's (creditor's) account is credited. The overall process from the purchase to the crediting of customer accounts is known as settlement and requires a well-functioning payments infrastructure with firm agreements between all parties involved. The payments infrastructure is a collective term for the accounts, payment systems and networks involved when money is transferred from the payer's to the payee's account.

First, a *payment card* must be issued. The issuer is usually the bank where the consumer holds an account. When the card is subsequently used for a purchase, money must be transferred from the consumer's to the shop's account. Crediting of the card payment to the shop's account is known as acquiring and is usually also undertaken by a bank.

There are various types of payment cards, of which the best known are debit and credit cards. A debit card is linked directly to the cardholder's bank account. When the card is used, the money is typically withdrawn from the account on the following banking day. The Dankort is an example of a debit card. A credit card, on the other hand, gives the cardholder access to credit. The credit limit and credit period are subject to agreement between the cardholder and the issuer.

With a *credit transfer* the consumer, via a payment order, transfers money from his own bank account to the payee's account. This can be done via the consumer's web bank or at a branch of a bank and requires the payee's account number to be known. When the transaction has taken place, the consumer's account is debited, and the payee's account is credited. If the two parties do not use the same bank, the respective banks exchange payment data and amounts via the payments infrastructure.

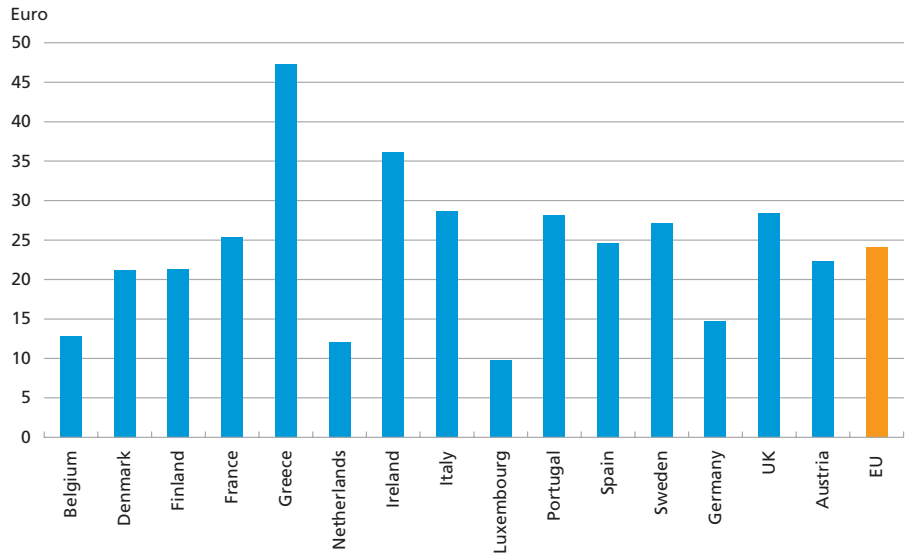
In connection with *direct debit* the payment transfer is instead initiated by the payee on the basis of permission from the consumer. Direct debit is typically used for recurring payments such as rent, telephone and newspaper subscriptions, etc.

In Denmark, Betalingsservice is an example of direct debit. By registering a bill with Betalingsservice, a consumer permits the payee to withdraw an amount from the consumer's account. Prior to the payment date, the payee submits data to PBS, which forwards the reconciliation data to the consumer's and payee's banks. Until the 7th calendar day of the month, the consumer may reject a payment.

At present national rules and procedures for settlement of payments using the above payment instruments differ considerably. One of the key objectives of the SEPA project is to harmonise these rules and procedures, thereby eliminating the distinction between domestic and cross-border payments in euro.

As a consequence of the lack of progress, the European Parliament and the Council in 2001 adopted a Regulation on cross-border payments in euro, cf. Box 2. The Regulation stipulates that charges levied by banks

TOTAL COSTS TO THE PAYER AND PAYEE OF A CROSS-BORDER EURO PAYMENT IN THE EU, 2001 Chart 1



Note: The data is sourced from a survey in which a total of 1,480 cross-border credit transfers of 100 euro each were sent from various bank accounts in the 15 EU member states at that time.
Source: Retail Banking Research (2001).

for cross-border payments in euro must not be higher than the charges for equivalent domestic payments. The provisions of the Regulation apply to card transactions, including via ATMs, and credit transfers.[1]

For the European banks, the Regulation meant that in many cases it became unprofitable to execute cross-border payments on behalf of customers since the banks were no longer able to charge a fee that was sufficient to cover the actual costs of such payments.[2] The Regulation gave the banks a strong incentive to build up the payments infrastructure required to reduce the costs of cross-border payments.

In May 2002, the European banking sector agreed on the strategy for a project aimed at creating a Single Euro Payments Area – known as SEPA. The strategy was described in a white paper entitled "Euroland: Our Single Payments Area"[3]. In the summer of the same year, the banks defined the project management structure and set up the European Payments Council, EPC, to undertake the task of establishing SEPA.

1 The Commission has recently documented that the costs of cross-border euro payments within Europe have fallen significantly. According to the Commission's own calculations, the average costs of a cross-border euro credit transfer in the euro area were only approximately 2.5 euro in 2005 (European Commission (2007)).

2 In principle, the banks could choose to met the requirements of the Regulation by increasing charges for their domestic payments in euro. According to a survey by Retail Banking Research from 2005 there are, however, no indications that this has been the case, cf. the European Commission (2007).

3 See the website of the European Payments Council (www.europeanpaymentscouncil.eu) under "EPC Documents".

EU LEGISLATION ON RETAIL PAYMENTS Box 2

Directive on cross-border credit transfers (97/5/EC)

There has been political focus on the significance of secure and inexpensive cross-border payments to the EU's single market for many years. In 1990 the European Commission published a report, European Commission (1990), emphasising the need to improve settlement of such payments. In the same year, the Commission adopted a recommendation to the member states on the transparency of banking conditions relating to cross-border financial transactions in the EU.

In 1993 and 1994, at the initiative of the Commission two surveys of cross-border payments in the EU were undertaken. They showed that little progress had been made. In the light of these findings, the Commission in 1994 tabled a proposal for a directive on cross-border credit transfers. Following a number of minor amendments, the proposal was adopted by the European Parliament and the Council in January 1997 as Directive 97/5/EC on cross-border credit transfers.

The Directive was aimed at ensuring that cross-border credit transfers in the EU were secure, inexpensive and fast. Among other things, the Directive set minimum requirements for the data supplied with and the execution of cross-border credit transfers in the EU. In addition, the Directive included details of the complaint and redress procedures available to the customer in the event that the bank did not meet its obligations. The Directive had to be transposed into national law by August 1999 at the latest.

In 2001, a survey showed that there was a lack of compliance with the Directive in practice, cf. Retail Banking Research (2001) and the European Commission (2002). The provisions on a maximum settlement time of six days were by and large observed, but this did not apply to the requirements concerning information to customers, distribution of charges, and the customer's right to compensation for interest on delayed transfers and refund of unlawful charges. In addition, the survey showed that there were no indications that the costs of cross-border payments had fallen, despite the Directive and the introduction of the euro.

Regulation on cross-border payments in euro (2560/2001/EC)

In December 2001, the European Parliament and the Council adopted a Regulation on cross-border payments in euro (2560/2001/EC). Under the Regulation, banks were not allowed to charge higher fees for cross-border payments in euro than for similar domestic payments. The objective was to reduce the cost of cross-border payments to customers and to strengthen the incentive for banks to establish an infrastructure for such payments.

The Regulation covered payments of up to 12,500 euro (50,000 euro as from 1 January 2006) as credit transfers, card payments and cash withdrawals. In addition to the above provisions, the Regulation set out requirements for information about charges and use of the International Bank Account Number, IBAN, and Bank Identifier Code, BIC. Moreover, the Regulation stipulated that in future EU member states may not require reporting to balance-of-payments statistics of payments below 12,500 euro. The Regulation entered into force on 1 July 2002. However, for credit transfers the date is 1 July 2003.

The Regulation contained a provision enabling non-euro area member states to apply the Regulation to their national currencies. The Swedish government has chosen to do so in respect of the Swedish krona.

The Commission plans to publish an evaluation of the Regulation and any proposed amendments in mid-2007, cf. the European Commission (2007).

In the first few years the SEPA project made only little progress. Both the ECB and the Commission on several occasions expressed their concern about the project and emphasised the possibility that they could take on a more active role if the process was not speeded up.[1] In the last few years, SEPA has, however, progressed according to plan, and the European banks' support for and commitment to the project has been increasing.

THE SEPA PROJECT

The objective of SEPA is not only to resolve the issue of cross-border payments, but in a wider perspective also to establish a single retail payments area where no distinction is made between domestic and cross-border payments in euro. To put it simply, it should be of no consequence to a Frenchman in Lyon whether he is making a payment in euro to a fellow Frenchman in Nice or to a German in Hamburg, regardless of the type of payment (credit transfer, direct debit or card payment).

As stated, the SEPA project is managed by the EPC, whose 66 members are European banks and banking associations. The Danish Bankers Association is a member of the EPC on behalf on the Danish banks. The EPC's supreme, decision-making body is the "Plenary", a Board that meets on a quarterly basis. In addition, the EPC comprises a number of working groups that undertake the technical aspects of the project, and a small secretariat.

In order to create a single retail payments area, the national procedures must be harmonised so that payments are settled according to the same principles. The EPC has so far focused on establishing the framework for three payment instruments – payment cards, credit transfers and direct debit – which are the cornerstones of SEPA, cf. Box 3. Within this framework it is up to the banks to develop payment products that customers may use for euro payments.

In connection with the development of the single set of payment instruments the technical standards for payment messages have also been laid down. It is necessary to have uniform standards in order to ensure a high degree of automated processing of interbank messages and customer payment messages. The EPC has decided that payment messages in SEPA must be based on international standards.[2] This will be a mandatory requirement when banks transmit messages to each other.

1 Cf. e.g. Tumpel-Gugerell (2005).
2 The UNIFI (ISO 20022) messaging standards.

PAYMENT INSTRUMENTS IN SEPA Box 3

SEPA credit transfers

The EPC has defined a scheme for credit transfers in euro. In order to comply with the scheme, a credit transfer must as a minimum (i) be settled within three banking days, (ii) include the International Bank Account Numbers (IBAN) of both the payer and the payee, as well as the Bank Identifier Codes (BIC) of both banks, (iii) be able to reach all payees in Europe, and (iv) not entail that the payee is charged a fee. It may be necessary to amend the provisions concerning the number of settlement days if the forthcoming Payment Services Directive stipulates a shorter deadline for settlement, cf. Box 4.

SEPA direct debit

In Europe there are currently two models for direct debit: (a) a model whereby the debtor gives the creditor a direct mandate to withdraw money from his account without the involvement of the debtor's bank; and (b) a model whereby the debtor gives the mandate to his own bank. The latter model is the one most frequently used in Denmark.

The EPC has prepared rule sets for both models in euro, but at present only the first model, the creditor model, has been adopted by the Board of the EPC. In order to comply with the EPC rules, a direct debit transaction must as a minimum (i) be settled within five banking days for the first payment and within two days for subsequent payments, (ii) include the International Bank Account Numbers (IBAN) of both the payer and the payee, as well as the Bank Identifier Codes (BIC) of both banks, and (iii) be able to reach all creditors in Europe.

In addition to the two models aimed at consumers as debtors, the EPC is also working on a business-to-business model for direct debit, corresponding to Leverandørservice in Denmark.

SEPA card payments

Finally, the EPC has also laid down the overall principles for card payments in euro. These principles must be observed by all issuers and acquirers of payment cards and card operators in SEPA. The EPC's principles for payments using "SEPA cards" will entail, among other things, (i) that the cardholder can use one payment card throughout the euro area, provided that the shop accepts the card in question, (ii) that for cardholders and shops there will, in principle, be no difference in how a SEPA card is handled in practice, irrespective of where it is used within the euro area, and (iii) that card operators will be able to offer their services to and compete for customers throughout the euro area.

The single set of payment instruments in SEPA also requires a degree of alignment of retail payments legislation in the individual member states, especially in respect of direct debit. In order to support SEPA and the development of the single market for payment services in general, in December 2005 the Commission tabled a proposal for a Directive on payment services in the EU, cf. Box 4. In 2006, the proposal was considered by the Council and the European Parliament, where the debate has continued in 2007.

THE PAYMENT SERVICES DIRECTIVE Box 4

In December 2005 the European Commission tabled a proposal for a directive on payment services in the EU. One of the main purposes of the directive is to support SEPA by harmonising the EU member states' legislation on retail payments. However, the directive not only addresses euro payments, but also payment services in other EU currencies, e.g. payments in Danish kroner in Denmark.

The Commission proposes a full harmonisation directive, which eliminates divergent legislation in member states. The proposed directive is subdivided into four main sections: (i) scope of the directive, (ii) access to the provision of payment services, (iii) information requirements, and (iv) general terms and conditions for execution of payments.

As regards the *scope*, the directive will regulate various types of retail payments, including credit transfers, direct debit and card payments. In addition, payments using more modern means of payment, e.g. e-money products[1] and mobile phones, will be included. The scope of the directive has been the subject of intense discussion in connection with the member states' consideration of the Commission's proposal and has not yet been fully agreed.

In the section on *access to the provision of payment services*, the Commission envisages the introduction of a new type of payment intermediary in EU legislation, known as payment institutions. On the basis of approval by the supervisory authorities of their home countries, such institutions will be able to offer payment services throughout the EU, i.e. to acquire a "European passport". Examples of payments institutions could be issuers and acquirers of payment cards that are broadly used, such as PBS in Denmark, or enterprises that transmit money, e.g. Western Union and Moneygram and mobile phone companies.

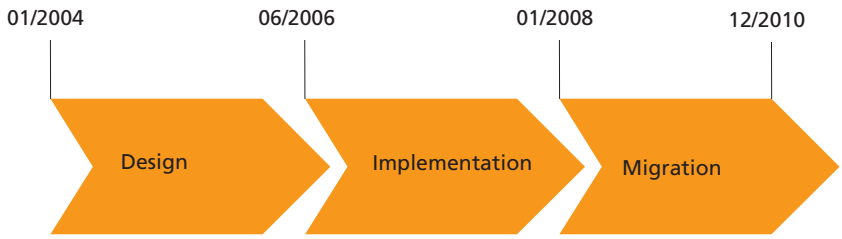
The proposed *information requirements* and *general terms and conditions* will apply to all types of payment intermediaries, i.e. not only payment institutions, but also banks (credit institutions) and e-money institutions[1]. Among the terms and conditions proposed are rules for amendment and termination of payment contracts, e.g. an agreement on the use of a payment card, the distribution of losses on misuse of a payment instrument, cancellation of payment orders, number of settlement days, value days, charges and responsibility for transaction of the payment.

The Commission's proposal was discussed by the European Parliament and the Council in 2006, and the debate has continued into 2007. In relation to payment instruments in SEPA, the provisions of the directive primarily affect direct debit. In view of the SEPA timeline, it is essential that the Payment Services Directive – or at any rate the relevant sections – is adopted as soon as possible. At the meeting of the Ecofin Council on 10 October 2006, the ministers emphasised the importance of a speedy adoption of the Payment Services Directive, in view of SEPA.

[1] E-money – or electronic money – is funds stored on an electronic medium, e.g. a chip card or a computer. Issuance of e-money in the EU is regulated by Directive 2000/46/EC on the taking up, pursuit of and prudential supervision of the business of electronic money institutions (the E-Money Directive). The Directive introduced a new type of financial institution in the EU, viz. e-money institutions, which is subject to more restrictive limitations on activities and other supervisory requirements than a traditional credit institution.

Most European countries today have their own systems for settlement of retail payments. With the introduction of the single set of payment instruments in SEPA, it will be possible to harmonise settlement of pay-

TIMELINE FOR SEPA Chart 2



Design phase: the three payment instruments are developed and standards prepared.

Implementation phase: the banks develop the products and services they wish to offer their customers.

Migration phase: national payment products are gradually replaced by SEPA products. By 2011, legacy products are expected to have been phased out.

Source: ECB (2006a).

ments across national borders. This creates the basis for integration, and to some extent consolidation, of the retail payments infrastructure in Europe. The EPC has chosen only to define the overall framework for this infrastructure and to leave it to the market forces to chart the course. The European settlement industry is currently working on various plans for the future settlement of payments in SEPA.[1]

The SEPA project is broken down into a number of steps, cf. Chart 2. The Design phase, which focused on laying down the principles for the three payment instruments in SEPA, was completed in 2006. The project is now at the Implementation phase in which the banks are developing new products that meet the requirements for the SEPA payment instruments. According to the timeline, the Migration phase will commence at the beginning of 2008 when the national payment products are gradually replaced by the new products. By 2011 the legacy payment products are expected to have been more or less phased out.

Issues

In 2005 and 2006 the ECB and the Commission expressed concern about the progress of the project. The reason is that focus has mainly been on cross-border payments. The ECB and the Commission therefore fear that

[1] For example, the European Automated Clearing House Association (EACHA), which is the European association for clearing houses settling retail payments (such as PBS in Denmark), has defined procedures to ensure that clearing houses can transmit messages to each other (i.e. interoperability). Likewise, the Euro Banking Association (EBA) has developed the first European payment system that can reach all payees in Europe, called STEP2, cf. Danmarks Nationalbank (2005).

the project may result in a "mini SEPA", in which only cross-border payments are harmonised, while domestic payments maintain the status quo.

Moreover, both the ECB and the Commission find that the development within payment cards is going in the wrong direction. The previous vision was that Europeans would have one single debit card that could be used all over Europe. This has proved to be a complex matter, and the ECB and the Commission now fear that the well-functioning national payment cards will disappear, only to be replaced by the international payment cards from VISA and MasterCard, which will thus control the market.[1]

The reason for this development is that high costs are involved if the national payment cards are to comply with the principles for payment cards in SEPA, as defined by the EPC, cf. Box 3. Since the payments infrastructure for settlement of domestic card payments is often more efficient than the infrastructure for settlement of international card payments, a transition to the international cards can entail that in future it will be more expensive for shops to accept card payments. In many cases this expense will be borne by the consumers, since the shops will often either pass on the cost to their retail prices, or cease to accept card payments.

Direct debit is also the subject of debate since all participating countries do not prefer the same model. The model adopted by EPC is the creditor model whereby the debtor's bank is not directly involved in the mandate processing, cf. Box 3. In countries such as Denmark where the mandate is currently given to the debtor's own bank, there has been a wish to continue this practice in SEPA. The ECB has therefore asked the EPC to develop schemes for both direct debit models.

It is still undecided which model will be applied, or whether it will be mandatory for banks to offer both direct debit models. Moreover, the uncertainty relating to direct debit in SEPA is increased by the fact that the Payments Services Directive has not been adopted. Consequently, the banks are currently hesitant to implement this instrument, and it is doubtful whether the time schedule for direct debit can be observed.[2]

The Commission and the ECB have also argued that users have not been sufficiently involved in the process and therefore the new payment instruments may possibly not comply with user requirements. Ultimately, this may affect the prevalence of these instruments. Transparency and

[1] Cf. ECB (2006b). In Belgium and Finland the banks have thus chosen to phase out their national payment cards and instead use the MasterCard debit card, Maestro.

[2] Cf. the interview with Gerard Hartsink, Chairman of EPC, in the periodical SPEED, Vol. 1, No. 3, Winter 2006/07.

E-INVOICING AND E-RECONCILIATION Box 5

E-invoicing is currently available to many business enterprises, particularly in the Nordic and Baltic states. Instead of receiving hardcopy invoices, the customer receives an electronic invoice in his web bank. When the customer accepts the invoice, a payment instruction is automatically generated with all the required creditor and debtor data. When combined with credit transfers, e-invoicing can in principle replace direct debit.

Another value-added service is e-reconciliation of paid invoices. This service is also available to enterprises today. When the debtor has paid the invoice, the data on the invoice is compared with the payment received, and the enterprise bookkeeping systems are updated automatically.

ongoing development of the SEPA products have been pointed out as important factors for the success of the project.[1]

VALUE-ADDED SERVICES IN SEPA

The SEPA project can be broken down into two main stages. The first stage has been to lay the foundations for SEPA – payment instruments, infrastructure, standards and legal framework. The second stage is to ensure that the payment instruments become fully electronic[2] and to combine payments with value-added services.

In many cases the banks offer customers value-added services besides the payment instruments themselves. Value-added services comprise a broad range of services and can in principle be supplied by either banks or providers of payment services, e.g. PBS in Denmark. The value-added services are aimed at simplifying the process before and after payment for the customer. The best known services are e-invoicing and e-reconciliation, cf. Box 5.

Value-added services are handled by the EPC as part of its work with additional optional services, AOS. Besides value-added services, AOS includes improvements to the schemes for the payment instruments, e.g. shorter settlement time for credit transfers. The Euro Banking Association, EBA, has developed a "priority payments" product that allows customers to settle credit transfers within the same banking day.

On developing the SEPA payment instruments, the EPC has focused on bank-to-bank relations with a view to ensuring straight-through processing of interbank payments in euro. Value-added services concern the relationship between bank and customer and, when combined with

[1] Cf. ECB (2006c) and the European Commission (2006).
[2] Fully electronic payments are payments that do not involve any paper in the process, e.g. card payments using a chip and a PIN.

electronic payments, will eliminate paper and cash in the processing of payments. This can led to considerable economic gains.

SEPA IN DENMARK

The EPC delimits SEPA to payments in euro in the EEA countries[1] and Switzerland. For the Danish banks, all cross-border payments in euro using SEPA products must comply with the standards defined by EPC. The Danish Bankers Association coordinates the Danish SEPA implementation.

The Danish Bankers Association has set up a working group to investigate how the Danish euro payment instruments can meet the SEPA requirements, and how settlement is to take place in order to reach all potential payees. On the basis of this work, the Danish Bankers Association plans to issue guidelines for the Danish banks in the spring of 2007. Among other things, the guidelines will specify the common sector initiatives as well as the areas where it will be up to the individual bank to take decisions in relation to SEPA.

One of the common sector decisions is that, unlike in SEPA, cf. Box 3, use of the International Bank Account Number, IBAN, will not be compulsory for domestic payments. Some Danish banks are contemplating offering their customers the option to use the IBAN on payment orders. The banks will then translate the IBAN into the Danish account number that is used for domestic payments.

Today euro retail payments in Denmark are part of the electronic clearing that is settled via the Sumclearing in euro.[2] As stated, one of the requirements in SEPA is the use of special standards for transmitting messages between banks. These standards are not currently used in the electronic clearing, and the Danish banks have decided that payments using SEPA instruments will not be forwarded via the domestic payments infrastructure.

Fundamentally, it will be up to the individual bank to decide how it wishes to settle euro payments effected using SEPA payment instruments. At present only the EBA has announced that it will offer a payment system that can reach all payees in Europe, called STEP2. Danish banks can connect to STEP2 as either direct or indirect members. Alternatively, the banks may opt to assign settlement of their payments in euro to another bank that is connected to STEP2.

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1 The EEA comprises the EU, Iceland, Liechtenstein and Norway.

2 For a description of the electronic clearing and the Sumclearing, see *Payment Systems in Denmark*, Danmarks Nationalbank (2005), Chapter 6.

Viewed in isolation, SEPA will not have any impact on Danish krone payments, and therefore consumers will not notice any difference on a day-to-day basis. For consumers and enterprises transacting cross-border payments in euro, SEPA will, however, ensure easier and faster settlement than is the case today.

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Speech by Governor Nils Bernstein at the Annual Meeting of the Danish Bankers Association on 6 December 2006

Thank you for inviting me to speak here at the annual meeting of the Danish Bankers Association.

The Danish economy is still booming, and there is no sign of any slowdown in the near future.

The upswing started in mid-2003 and has gained momentum since then. Originally underpinned by income-tax cuts, the upswing has been gradually reinforced by the remarkable growth in the international economy. In this picture, Europe has generally lagged behind the rest of the world, but now that economic growth seems to be receding in the USA, activity is on the increase among our most important trading partners in Europe. The Danish upswing has brought unemployment down to the lowest level since the oil crisis in the 1970s.

In contrast to previous upswings, the balance of payments is still strong and the government surplus rests on a sound structural foundation.

However, a complete picture of the Danish economy also includes risks. The global imbalances are still significant, with the enormous US current-account deficit as the dominant feature. Overall, the imbalances are still generally expected to be redressed over time. The US economy is slowing down due to the receding housing market. The risk of more abrupt adjustment cannot be ruled out, though.

However, the danger signals regarding the Danish economy come from within. The future course will depend on Denmark's ability to tackle the situation. For a long time low inflation and moderate wage increases have been the order of the day in Denmark, just like in many other countries. This phenomenon is among other things the result of growing recognition of the favourable economic effects of low inflation.

Low unemployment combined with continued robust growth in the demand for Danish goods entails a risk of the pressure on the labour market leading to higher inflation. It is well-known that this can cause unemployment to rise at a later stage. Although this is not considered to be the most likely course of events, the risk of detrimental overheating

of the economy is growing. Against this background Danmarks Nationalbank has recommended – and continues to recommend – measures to dampen the overall increase in demand in order to ensure sustained favourable economic development in Denmark.

Danmarks Nationalbank has noted that the government has adopted a wait-and-see approach.

As stated, the labour market will be the pivotal issue in the years to come. The number of people in the groups with the highest participation rates is declining, which sets limits to labour-force growth. All indicators point to by and large unchanged employment, in contrast to the preceding years' increases by 70,000 since 2003 when the upswing began.

The labour shortage will dampen the continued upswing.

In 2006, wage increases have been gaining momentum, and domestic price pressure has been building up gradually. It is uncertain how much this adjustment process will ultimately impact on inflation.

The housing market attracts high attention, and rightly so. We have witnessed very strong increases in real property prices, especially in the Greater Copenhagen area. The most recent indicators point to continued, but more moderate, price increases. Some of the most expensive areas show signs of slightly receding prices, and in more and more cases the price when the property was first put up for sale is later reduced.

The low interest rates have been a principal driver of the growth in housing prices.

In 1998 fixed-rate loans accounted for 80 per cent of the households' total borrowing from banks and mortgage-credit institutes. This share has now shrunk to 40 per cent. So more than half of the outstanding loans are adjustable-rate or outright variable-rate loans, and it is expected to be more expensive for borrowers to service their loans in 2007 due to the increases in short-term interest rates over the last year.

Taking into account that the households also have interest income, their net interest expenses after tax will increase by just over kr. 2 billion, or 0.3 per cent of consumption.

Interest rates have the strongest impact on activity via their effect on the timing of decisions regarding consumption and investment. Despite the higher interest rates, real interest rates after tax are still very low – barely over 1 per cent in most cases. The level of interest rates therefore still has an expansionary effect on the Danish economy.

The economic upswing is also reflected in the financial system. The banks' balance sheets are growing strongly. At the same time, profits are record-high, labour is in short supply, wages are on the increase and there have been cases of large bonus payments.

The banks' lending is growing by more than 20 per cent year-on-year. The breakdown on business lending and lending to households follows a familiar pattern. Lending to households enters the stage first in a consumption-driven upswing, and has shown double-digit growth rates since 2004. The banks have strongly penetrated the market for home financing with their mortgage loans. In addition, the risk appetite of many households has increased – supported by the marketing efforts of a number of banks. Business lending gathers steam later in an upswing when business enterprises invest more than their internal sources of financing can support. Business lending reached double-digit growth rates at the end of 2004, and growth has now reached 20 per cent year-on-year.

The high rate of growth in lending is an average for all banks. There is considerable dispersion. For some banks lending increases by more than 50 per cent year-on-year.

The strong growth in lending is clearly reflected in the composition of the banks' balance sheets. The difference between banks' lending and deposits has increased considerably in recent years. Total lending now exceeds total deposits by a three-digit billion kroner amount. So the banks have become increasingly dependent on financial markets to raise money-market loans from other banks and to issue securities both nationally and internationally. The individual bank will also find it important to maintain access to these sources of financing. These sources are more sensitive than traditional deposits to changes in market conditions and the assessment of the individual bank's financial performance. This could make the banks more vulnerable.

The Minster of Economic and Business Affairs is finalising a bill which will enable banks to issue covered bonds on an equal footing with the mortgage credit institutes. You may ask why it is necessary to change the Danish system of financing real property via the mortgage-credit institutes. The Danish mortgage credit system is a well-functioning and stable system, which has given owners of real property access to financing on capital-market terms, with a transparent cost structure.

Let me be blunt. This change has been imposed on us, and it does have its positive elements. It increases competition between Danish financial institutions, and gives them access to operate on the same terms and conditions as foreign credit institutions. It should also be born in mind that the amendment will not entail radical changes in Danish home financing overnight. Many adjustments have already taken place in the last couple of years. Here, I have in mind the "mortgage loans" launched by the banks with great success. Seen in this perspective, covered bonds issued by banks can promote financial stability as a stable source of

financing mortgage loans, thereby covering the large deposit deficit in a more satisfactory manner.

When the covered bond legislation is amended, Danmarks Nationalbank prefers a simple, robust model. The banks have called for abolition of the current restrictions on redemption profiles and maturities. We support this wish, and at the same propose that the threshold for housing loans be reduced to 70 per cent of the property value. This would also make it easier for the institutes to comply with the requirement that a loan based on covered bonds must never exceed 80 per cent of the collateral value for the entire duration of the loan. If this entails some degree of tightening, that is not entirely unintentional.

In connection with the work on covered bonds, two committees have been set up to deal with the balance principle and "joint funding", respectively. Danmarks Nationalbank's position is that the Danish balance principle could be adapted and made more flexible to bring it more in line with modern risk-management principles. In that connection it is important that a new balance principle provides the same degree of security as the existing system.

Joint funding is an important issue to many of you who are present here. Market conditions dictate that issuance of bonds at favourable prices requires large volumes. At the same time, it is the wish of the Danish Bankers Association "that throughout the customer relationship the customer perceives the bank as the creditor for the loan and thereby the customer's banker, even though the bank in fact just administers the loan on behalf of the funding company".

I understand that it is important for the individual bank that decisions can be made locally at the counter. However, I am not quite sure to which extent this would require changes to fundamental legal principles. Banks already act as intermediaries on behalf of other legal entities such as investment associations, insurance companies, etc. Ultimately it is up to the Ministry of Justice to assess whether this request can be met.

It is Danmarks Nationalbank's assessment that the Danish banking system is currently robust . Profits are extremely good, and buffers are large, albeit declining. For the banks overall, the buffers in relation to the statutory minimum capital requirement have over the last three years fallen from 7.5 to 4 per cent of lending and guarantees.

The regulation of the Danish banking sector is undergoing major changes in current years. The accounting rules have been changed so that loans can only be written down on the basis of an objective value assessment. Provisions can no longer be made on the basis of the prudent accounting principle. In 2007, the new capital-adequacy rules

will come into force, so that the solvency ratio of a credit institution will be calculated on the basis of risk weights that better match the actual risk on the portfolio. The statutory capital requirement will be lower in actual terms, but will fluctuate more.

I would like to emphasise that the amendments to the accounting rules and to the capital-adequacy rules mean that legislation does not to the same degree as previously provide for reserves in credit institutions. This responsibility has to a large extent been transferred to the boards and managements, and it is very important that they establish an adequate buffer when determining the solvency ratio of the individual credit institution.

Finally, I would like to say that Danmarks Nationalbank is pleased to note the good performance of the financial sector, which reflects the sound Danish economy. On behalf of Danmarks Nationalbank, I would like to thank you for our fine cooperation.

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Press releases

7 DECEMBER 2006: INTEREST RATE INCREASE

The discount rate and the interest rate on the banks' current accounts with Danmarks Nationalbank are raised by 0.25 per cent to 3.50 per cent. Danmarks Nationalbank's lending rate and the rate of interest on certificates of deposit are raised by 0.25 per cent to 3.75 per cent. The increase will have effect as from 8 December 2006.

The interest rate increase is a consequence of the raising by the European Central Bank of the minimum bid rate on the main refinancing operations by 0.25 per cent to 3.50 per cent.

30 JANUARY 2007: TWO ARTISTS CHOSEN FOR BANKNOTE DESIGN

Danmarks Nationalbank has asked the artists Kaspar Bonnén and Karin Birgitte Lund to elaborate on their respective draft proposals for the design of a new Danish banknote series. They have been chosen among the eight draft proposals published by Danmarks Nationalbank on 11 January. On the basis of the detailed proposals, Danmarks Nationalbank will take the final decision on which of the two proposals is most appropriate for a new Danish banknote series.

The draft proposals from Kaspar Bonnén and Karin Birgitte Lund both have great potential, but neither can be used as it stands. In the period until 1 May 2007, the two artists will therefore elaborate on their proposed designs.

Shortly afterwards, Danmarks Nationalbank will announce which of the two artists it has chosen to design the new Danish banknote series.

The eight draft proposals are exhibited in Danmarks Nationalbank's lobby on weekdays between 9.00 a.m. and 4.00 p.m. until 2 February.

Tables

Symbols and Sources

0 Magnitude nil or less than one half of unit employed.

… Data not available or of negligible interest.

Some of the most recent statistics may be provisional. Due to rounding-off there may be small differences between the sum of the individual figures and the totals stated.

Date of going to press: 16 March 2007.

The Tables section of this publication is thus based on more recent information than the equivalent section of the Danish edition.

Danmarks Nationalbank is the source for Tables 1-14, 16-18 and 23-24, while the Copenhagen Stock Exchange is the source for series of bond yields and the share-price index in Table 1. Statistics Denmark is the source for Tables 15 and 19-22. The calculations in Tables 20 and 24 have been made by Danmarks Nationalbank on the basis of data from Statistics Denmark and OECD.

INTEREST RATES AND SHARE-PRICE INDEX Table 1

Effective end-of-year/ from	The Nationalbank's interest rates			End of period	Inter-bank interest rate, 3-months uncollat-eralized	Bond yields		Share-price index OMXC20 (prev.KFX)
	Discount rate	Lending and certifi-cates of deposit	The ECB's minimum bid rate			10-year central-govern-ment bond	30-year mort-gage-credit bond	
	Per cent per annum				Per cent per annum			3.7.89 =100
2002	2.75	2.95	2.75	2002	3.00	4.45	5.47	199.49
2003	2.00	2.15	2.00	2003	2.16	4.46	5.45	244.35
2004	2.00	2.15	2.00	2004	2.16	3.87	5.07	286.66
2005	2.25	2.40	2.25	2005	2.46	3.30	4.39	393.52
2006	3.50	3.75	3.50	2006	3.81	3.95	5.24	441.48
2006 6 Oct....	3.25	3.50	3.25	Aug 06	3.33	3.83	5.27	390.57
8 Dec ...	3.50	3.75	3.50	Sep 06	3.46	3.67	5.18	403.39
2007 9 Mar...	3.75	4.00	3.75	Oct 06	3.61	3.86	5.22	418.92
				Nov 06	3.71	3.74	5.19	424.33
				Dec 06	3.81	3.95	5.24	441.48
				Jan 07	3.90	4.06	5.28	462.84
16 Mar...	3.75	4.00	3.75	Feb 07	3.98	3.96	5.23	455.44

SELECTED ITEMS FROM THE NATIONALBANK'S BALANCE SHEET — Table 2

End of period	The foreign-exchange reserve (net)	Notes and coin in circulation	The central government's account with the Nationalbank	The banks' and the mortgage-credit institutes' net position with the Nationalbank			
				Certificates of deposit	Deposits (current account)	Loans	Total net position
	Kr. billion						
2001	148.4	47.3	43.5	113.6	3.7	63.4	53.9
2002	193.2	47.7	50.3	160.7	10.1	81.2	89.6
2003	224.2	49.7	44.0	157.3	12.9	48.0	122.2
2004	217.6	52.0	60.8	160.4	6.9	72.6	94.6
2005	212.3	56.2	56.4	207.6	12.8	135.3	85.1
Sep 06	180.2	56.4	66.6	157.5	14.2	130.7	41.0
Oct 06	179.5	56.8	64.8	153.8	19.9	131.2	42.5
Nov 06	180.2	57.8	83.9	147.4	3.7	131.1	20.1
Dec 06	171.8	59.8	71.5	163.2	9.0	153.7	18.4
Jan 07	173.7	57.6	69.7	167.5	21.0	160.4	28.1
Feb 07	178.1	57.2	62.6	179.4	13.5	153.3	39.5

FACTORS AFFECTING THE BANKS' AND THE MORTGAGE-CREDIT INSTITUTES' NET POSITION WITH THE NATIONALBANK

Table 3

	Central-government finance			Net purchase of foreign exchange by the National-bank	The National-bank's net bond purchases	Other factors	The banks' and the mortgage-credit institutes' net position with the Nationalbank	
	Domestic gross financing require-ment	Sales of domestic central-govern-ment securities	Liquidity effect				Change in net position	End of period
	Kr. billion							
2002	115.5	121.9	-6.4	45.4	-0.9	-2.4	35.7	89.6
2003	99.7	94.1	5.6	31.0	-1.0	-3.1	32.5	122.2
2004	75.5	92.6	-17.1	-6.4	-2.6	-1.2	-27.3	94.6
2005	39.5	30.9	8.6	-15.4	-2.2	-0.5	-9.5	85.1
2006	-14.5	16.2	-30.6	-30.0	-4.9	-1.2	-66.7	...
Sep 06	-6.2	5.3	-11.5	0.1	1.5	0.0	-9.8	41.0
Oct 06	5.8	4.6	1.1	0.0	0.7	-0.4	1.5	42.5
Nov 06	-20.5	-1.1	-19.4	0.3	-1.7	-1.6	-22.4	20.1
Dec 06	-1.9	-5.9	4.0	0.1	-5.2	-0.6	-1.7	18.4
Jan 07	5.5	3.1	2.4	...	...	...	...	28.1
Feb 07	-5.9	-13.8	7.9	...	...	...	...	39.5

SELECTED ITEMS FROM THE CONSOLIDATED BALANCE SHEET OF THE MFI SECTOR

Table 4

End of period	Total balance	Assets				Liabilities		Foreign assets, net[1]
		Domestic lending		Domestic securities				
		Public sector	Private sector	Bonds, etc.	Shares, etc.	Domestic deposits	Bonds, etc. issued	
	Kr. billion							
2002	3,198.5	79.9	1,944.6	142.8	36.5	723.3	1,125.9	-66.8
2003	3,359.0	89.6	2,062.0	123.3	43.3	754.7	1,157.9	-70.7
2004	3,684.5	97.5	2,246.2	100.8	46.3	848.9	1,222.1	-65.7
2005	4,227.5	107.8	2,584.2	75.3	53.4	971.3	1,321.3	-172.9
2006	4,681.8	116.8	2,953.9	51.1	60.2	1,076.8	1,437.4	-223.1
Aug 06	4,421.4	111.7	2,819.2	54.9	55.6	1,048.1	1,362.7	-228.5
Sep 06	4,506.0	111.7	2,854.1	61.1	56.8	1,051.1	1,385.5	-227.9
Oct 06	4,507.1	113.1	2,874.5	58.7	58.6	1,074.8	1,381.4	-225.0
Nov 06	4,642.4	115.8	2,921.0	40.7	58.5	1,095.4	1,388.2	-226.0
Dec 06	4,681.8	116.8	2,953.9	51.1	60.2	1,076.8	1,437.4	-223.1
Jan 07	4,739.3	121.0	2,973.2	47.6	62.0	1,099.7	1,428.8	-240.1
	Change compared with previous year, per cent							
2002	...	6.6	5.1	7.3	-1.4	5.4	7.4	...
2003	...	12.1	6.0	-13.7	18.6	4.3	2.8	...
2004	...	8.8	8.9	-18.2	7.0	12.5	5.5	...
2005	...	10.6	15.0	-25.3	15.3	14.4	8.1	...
2006	...	8.3	14.3	-32.1	12.6	10.9	8.8	...
Aug 06	...	10.1	13.4	-37.1	12.1	10.3	7.2	...
Sep 06	...	9.1	13.6	-25.2	9.9	12.2	8.3	...
Oct 06	...	9.4	14.1	-24.1	13.3	13.2	11.6	...
Nov 06	...	12.5	14.5	-29.5	13.0	14.7	12.0	...
Dec 06	...	8.3	14.3	-32.1	12.6	10.9	8.8	...
Jan 07	...	10.1	14.6	-40.9	14.7	3.5	10.2	...

Note: The MFI sector includes Danish monetary financial institutions, i.e. banks and mortgage-credit institutes, other credit institutions, money-market funds and Danmarks Nationalbank.

[1] The net foreign assets of the MFI sector has been compiled as the difference between all assets and liabilities vis-a-vis non-residents.

MONEY STOCK Table 5

End of period	Bank-notes and coin in circula-tion	Deposits on demand	M1	Time deposits with original maturity =<2 years	Deposits at notice with original maturity =< 3 months	M2	Repur-chase agree-ments	Bonds, etc. issued with orginal maturity =< 2 years	M3
	Kr. billion								
2002	39.0	399.1	438.1	102.7	18.5	559.3	6.6	45.2	611.2
2003	41.0	428.1	469.1	112.2	19.2	600.5	2.7	77.3	680.5
2004	43.7	492.8	536.5	119.2	21.0	676.7	2.0	20.2	699.0
2005	47.3	596.3	643.5	114.1	18.4	776.0	14.2	8.4	798.7
2006	50.8	648.5	699.3	143.0	17.9	860.1	8.0	21.3	889.5
Aug 06	48.1	629.6	677.7	155.5	17.6	850.8	13.8	8.1	872.8
Sep 06	48.6	625.6	674.3	150.3	17.4	842.0	13.9	10.1	866.0
Oct 06	48.6	632.9	681.5	163.9	17.5	862.9	17.0	10.1	890.1
Nov 06	49.5	634.8	684.3	162.0	18.9	865.3	16.6	7.1	889.1
Dec 06	50.8	648.5	699.3	143.0	17.9	860.1	8.0	21.3	889.5
Jan 07	49.2	655.0	704.1	155.7	16.8	876.6	9.8	28.1	914.7
	Change compared with previous year, per cent								
2002	...	...	3.9	...	...	4.6	...	...	11.8
2003	...	...	8.8	...	...	8.8	...	...	11.3
2004	...	...	14.4	...	...	12.7	...	...	2.7
2005	...	...	19.9	...	...	14.7	...	...	14.3
2006	...	...	8.7	...	...	10.8	...	...	11.4
Aug 06	...	...	8.2	...	...	7.4	...	...	9.2
Sep 06	...	...	8.4	...	...	8.0	...	...	10.6
Oct 06	...	...	8.3	...	...	9.2	...	...	12.0
Nov 06	...	...	6.4	...	...	9.2	...	...	11.3
Dec 06	...	...	8.7	...	...	10.8	...	...	11.4
Jan 07	...	...	0.0	...	...	0.8	...	...	4.4

SELECTED ITEMS FROM THE BALANCE SHEET OF THE BANKS Table 6

End of period	Total balance	Assets					Liabilities	
		Lending to MFIs	Domestic lending			Holdings of securities	Loans from MFIs	Deposits
			Total	of which:				
				Households, etc.	Non-financial companies			
	Kr. billion							
2002	2,040.1	419.8	599.2	253.5	231.3	620.9	685.6	764.7
2003	2,204.4	468.7	662.9	271.5	285.7	764.4	823.8	795.1
2004	2,418.3	495.6	754.8	324.8	309.6	780.3	823.1	908.0
2005	2,862.9	651.6	920.1	396.6	370.0	858.3	972.0	1,065.6
2006	3,244.4	715.0	1,124.0	474.9	457.8	889.6	1,133.6	1,148.2
Aug 06	3,000.0	656.9	1,032.9	434.9	417.8	867.2	997.0	1,108.3
Sep 06	3,128.9	726.9	1,055.8	448.1	430.5	901.6	1,118.1	1,105.9
Oct 06	3,096.9	679.9	1,061.6	449.2	428.6	916.5	1,057.6	1,125.2
Nov 06	3,226.8	700.2	1,097.5	454.8	443.8	934.9	1,101.1	1,138.2
Dec 06	3,244.4	715.0	1,124.0	474.9	457.8	889.6	1,133.6	1,148.2
Jan 07	3,323.1	750.5	1,134.0	469.9	455.2	942.3	1,170.0	1,164.3
	Change compared with previous year, per cent							
2002	...	18.9	1.9	0.1	1.1	7.2	9.3	6.5
2003	...	10.7	2.5	7.1	3.1	21.8	18.8	3.9
2004	...	5.6	13.8	19.6	8.4	2.1	-0.1	14.2
2005	...	31.6	21.9	22.1	19.5	10.0	18.1	17.3
2006	...	9.7	22.2	19.8	23.7	3.6	16.6	7.8
Aug 06	...	26.0	20.6	21.6	24.2	-12.9	0.0	5.6
Sep 06	...	31.9	20.2	20.3	26.4	-11.1	3.3	8.4
Oct 06	...	22.1	20.5	20.6	24.3	-3.6	9.8	8.4
Nov 06	...	16.1	22.8	21.0	23.6	-0.5	8.8	10.0
Dec 06	...	9.7	22.2	19.8	23.7	3.6	16.6	7.8
Jan 07	...	25.5	23.3	20.8	22.1	3.9	25.7	5.5

Note: Excluding Danish banks' units abroad. As from 2003 the lending is affected by an addition to the group of banks. The calculation of the rate of increase has been amended accordingly.

SELECTED ITEMS FROM THE BALANCE SHEET OF THE MORTGAGE-CREDIT INSTITUTES

Table 7

End of period	Total balance	Assets					Liabilities	
		Lending to MFIs	Domestic lending			Holdings of securities	Loans from MFIs	Bonds, etc. issued
			Total	of which:				
				Households, etc.	Non-financial companies			
	Kr. billion							
2002	1,721.8	77.3	1,285.1	988.0	259.2	338.5	58.9	1,584.2
2003	1,863.8	100.9	1,394.6	1,072.1	284.4	342.6	32.6	1,729.0
2004	2,097.4	91.2	1,489.9	1,141.3	307.9	481.2	26.1	1,952.5
2005	2,519.9	101.4	1,664.4	1,281.5	334.2	645.0	151.7	2,237.0
2006	2,699.9	245.1	1,834.8	1,407.7	370.8	574.1	226.5	2,297.9
Aug 06	2,142.4	154.4	1,786.7	1,371.1	362.0	159.1	134.6	1,846.0
Sep 06	2,175.6	176.3	1,799.2	1,380.1	364.2	163.9	138.1	1,875.9
Oct 06	2,186.0	167.8	1,813.3	1,390.4	367.5	164.9	143.7	1,880.9
Nov 06	2,244.4	182.1	1,828.2	1,402.7	370.3	186.9	167.3	1,917.2
Dec 06	2,699.9	245.1	1,834.8	1,407.7	370.8	574.1	226.5	2,297.9
Jan 07	2,205.4	176.9	1,847.6	1,418.3	373.3	144.5	170.6	1,884.0
	Change compared with previous year, per cent							
2002	...	-12.5	7.8	8.9	5.0	20.6	6.7	11.5
2003	...	30.6	8.5	8.5	9.7	1.2	-44.8	9.1
2004	...	-9.6	6.8	6.5	8.3	40.4	-19.9	12.9
2005	...	11.1	11.7	12.3	8.5	34.0	481.5	14.6
2006	...	141.7	10.2	9.9	10.9	-11.0	49.3	2.7
Aug 06	...	49.1	10.0	9.8	10.3	6.6	639.9	2.5
Sep 06	...	23.5	10.4	10.5	9.7	-5.2	383.9	1.7
Oct 06	...	189.7	10.9	10.8	10.2	-3.1	378.2	6.5
Nov 06	...	168.7	10.6	10.5	10.5	-15.3	132.3	6.1
Dec 06	...	141.7	10.2	9.9	10.9	-11.0	49.3	2.7
Jan 07	...	58.5	10.2	9.9	10.6	7.4	69.7	7.3

LENDING TO RESIDENTS BY THE BANKS AND THE MORTGAGE-CREDIT INSTITUTES Table 8

End of period	Total lending			The banks' lending			The mortgage-credit institutes' lending		
	Total	Households, etc.	Business	Total	Households, etc.	Business	Total	Households, etc.	Business
	Kr. billion								
2002	1,917.0	1,241.6	619.2	631.8	253.5	353.0	1,285.1	988.0	266.2
2003	2,087.7	1,343.6	683.1	693.2	271.5	392.3	1,394.6	1,072.1	290.9
2004	2,276.0	1,466.1	741.0	786.0	324.8	426.8	1,489.9	1,141.3	314.2
2005	2,614.5	1,678.0	852.2	950.2	396.6	510.4	1,664.4	1,281.5	341.7
2006	3,000.4	1,882.6	1,014.9	1,165.7	474.9	636.6	1,834.8	1,407.7	378.3
Aug 06	2,853.1	1,805.9	952.9	1,066.4	434.9	583.3	1,786.7	1,371.1	369.6
Sep 06	2,888.5	1,828.1	963.8	1,089.3	448.1	592.3	1,799.2	1,380.1	371.5
Oct 06	2,916.7	1,839.6	979.1	1,103.3	449.2	604.1	1,813.3	1,390.4	375.0
Nov 06	2,967.4	1,857.4	1,009.7	1,139.2	454.8	632.1	1,828.2	1,402.7	377.7
Dec 06	3,000.4	1,882.6	1,014.9	1,165.7	474.9	636.6	1,834.8	1,407.7	378.3
Jan 07	3,023.4	1,888.2	1,025.0	1,175.7	469.9	644.1	1,847.6	1,418.3	380.9
	Change compared with previous year, per cent								
2002	5.7	6.9	4.1	1.5	0.1	3.1	7.8	8.9	5.5
2003	6.1	8.2	2.7	1.5	7.1	-1.7	8.5	8.5	9.3
2004	9.0	9.1	8.5	13.4	19.6	8.8	6.8	6.5	8.0
2005	14.9	14.5	15.0	20.9	22.1	19.6	11.7	12.3	8.8
2006	14.8	12.2	19.1	22.7	19.8	24.7	10.2	9.9	10.7
Aug 06	13.6	12.4	15.2	20.3	21.6	18.7	10.0	9.8	10.1
Sep 06	13.8	12.7	15.2	19.9	20.3	19.2	10.4	10.5	9.4
Oct 06	14.5	13.1	16.5	21.1	20.6	21.0	10.9	10.8	10.0
Nov 06	15.2	12.9	18.7	23.4	21.0	24.4	10.6	10.5	10.2
Dec 06	14.8	12.2	19.1	22.7	19.8	24.7	10.2	9.9	10.7
Jan 07	15.1	12.5	19.3	23.9	20.8	25.3	10.2	9.9	10.4

Note: Including lending in Danish banks' units abroad. As from 2003 the banks' lending is affected by an addition to the group of banks. The calculation of the rate of increase has been amended accordingly.

THE MORTGAGE-CREDIT INSTITUTES' LENDING BROKEN DOWN BY TYPE Table 9

End of period	Index-linked lending	Fixed-rate lending	Adjustable-rate lending		Total	of which:	
			Total	of which =<1 year		Lending in foreign currency	Instalment-free lending [1]
	Kr. billion						
2002	103.6	816.0	365.0	200.4	1,284.6	82.5	...
2003	99.5	795.0	499.0	250.0	1,393.5	85.7	44.4
2004	94.6	737.6	656.1	378.4	1,488.4	84.9	170.5
2005	88.6	760.1	814.1	576.2	1,662.8	80.5	315.5
2006	83.5	878.4	870.7	639.5	1,832.7	85.7	432.2
Aug 06	86.9	826.1	872.6	655.3	1,785.5	84.5	394.5
Sep 06	86.6	834.0	877.1	658.7	1,797.8	85.7	403.3
Oct 06	86.6	843.2	882.1	661.0	1,811.9	86.8	412.3
Nov 06	86.2	855.2	885.4	653.4	1,826.8	87.8	422.3
Dec 06	83.5	878.4	870.7	639.5	1,832.7	85.7	432.2
Jan 07	83.7	887.5	874.9	646.0	1,846.1	87.0	438.6

Note: The Table includes the mortgage-credit lending to residents only, whereas Tables 7 and 8 include the institutes' total lending to residents.

[1] The mortgage-credit institutes' instalment-free lending to owner-occupied dwellings.

THE BANKS' EFFECTIVE INTEREST RATES Table 10

	Lending				Deposits			
	All sectors	Households, etc.	Non-financial companies	Financial companies	All sectors	Households, etc.	Non-financial companies	Financial companies
	Per cent, per annum							
Q3 04	5.2	7.1	4.8	2.9	1.6	1.2	1.7	2.1
Q4 04	5.1	6.9	4.8	2.8	1.6	1.2	1.7	2.1
Q1 05	5.1	6.7	4.8	2.8	1.7	1.3	1.7	2.1
Q2 05	4.9	6.5	4.6	2.7	1.7	1.3	1.7	2.1
Q3 05	4.8	6.3	4.5	2.6	1.7	1.3	1.7	2.2
Q4 05	4.7	6.2	4.4	2.6	1.7	1.3	1.8	2.2
Q1 06	4.8	6.2	4.5	2.8	1.9	1.5	2.0	2.4
Q2 06	5.0	6.4	4.7	3.1	2.1	1.8	2.3	2.6
Q3 06	5.2	6.6	5.0	3.3	2.4	2.1	2.5	2.8
Q4 06	5.4	6.8	5.2	3.5	2.7	2.4	2.9	3.2
Aug 06	5.3	6.6	5.0	3.4	2.4	2.1	2.6	2.7
Sep 06	5.4	6.7	5.1	3.4	2.5	2.2	2.7	2.9
Oct 06	5.4	6.8	5.2	3.4	2.6	2.3	2.8	3.1
Nov 06	5.5	6.8	5.3	3.5	2.7	2.3	2.9	3.1
Dec 06	5.5	6.9	5.2	3.6	2.9	2.5	3.0	3.3
Jan 07	5.6	7.1	5.4	3.6	3.0	2.7	3.1	3.3

SELECTED ITEMS FROM THE BALANCE SHEET OF THE INVESTMENT ASSOCIATIONS

Table 11

End of period	Total balance	Assets		Liabilities			
		Holdings of securities		Certificates issued by investment associations by owner			
		Bonds, etc.	Shares, etc.	Households, etc.	Insurance companies and pension funds	Other residents	Abroad
	Kr. billion						
2002	288.9	180.8	89.5	153.6	68.9	52.7	8.9
2003	367.1	237.2	108.7	188.2	103.2	60.4	12.3
2004	574.2	326.5	164.6	213.1	163.4	180.1	15.3
2005	794.7	412.1	286.4	265.7	236.5	263.0	24.4
2006	924.7	431.8	385.4	294.3	289.4	305.3	28.8
Q4 05	794,7	412,1	286,4	265.7	236.5	263.0	24.4
Q1 06	843.9	409.2	330.1	281.1	248.6	281.2	27.8
Q2 06	835.0	404.0	327.8	269.6	259.1	277.0	24.6
Q3 06	879.0	424.7	351.6	282.4	272.6	292.6	25.9
Q4 06	924.7	431.8	385.4	294.3	289.4	305.3	28.8
	Quarterly transactions, kr. billion						
Q4 05	...	5.0	12.6	11.5	3.6	4.5	2.9
Q1 06	...	4.8	21.4	9.7	5.0	8.9	3.1
Q2 06	...	5.0	14.6	3.4	11.7	4.7	-1.8
Q3 06	...	9.7	5.8	4.6	1.0	3.8	0.2
Q4 06	...	9.2	5.3	1.7	3.3	0.0	1.2

SECURITIES ISSUED BY RESIDENTS BY OWNER'S HOME COUNTRY — Table 12

End of period	Bonds, etc.						Shares	
	Total		of which:					
			Central-government securities		Mortgage-credit bonds			
	Denmark	Abroad	Denmark	Abroad	Denmark	Abroad	Denmark	Abroad
	Market value, kr. billion							
2002	1.999,8	414,7	479,8	222,9	1.411,6	189,6	384,3	162,3
2003	2.124,2	419,6	488,2	210,0	1.523,9	207,9	488,1	208,6
2004	2.393,0	429,7	493,1	228,3	1.785,9	198,6	592,1	244,5
2005	2.560,1	461,2	435,2	205,1	2.002,9	252,5	827,1	298,2
2006	2.555,2	457,9	387,6	172,2	2.041,2	279,5	950,9	352,5
Sep 06	2.142,9	448,6	417,6	176,3	1.594,9	266,3	868,2	286,4
Oct 06	2.141,8	455,1	416,2	178,6	1.594,8	270,5	901,3	306,5
Nov 06	2.161,2	441,2	399,0	169,9	1.636,9	265,3	928,8	330,0
Dec 06	2.555,2	457,9	387,6	172,2	2.041,2	279,5	950,9	352,5
Jan 07	2.095,9	453,0	377,8	178,3	1.598,8	268,2	992,4	362,4
Feb 07	2.102,7	451,0	367,2	170,8	1.614,1	272,6	968,5	361,8

HOUSEHOLDS' FINANCIAL ASSETS AND LIABILITIES — Table 13

End of period	Assets					Liabilities		
	Currency and bank deposits, etc.	Bonds, etc.	Shares and certificates issued by investment associations, etc.	Life-insurance and pension-scheme savings, etc.	Total	Loans, etc.	Net financial assets	Total
	Kr. billion							
2001	556	195	334	1,135	2,220	1,322	898	2,220
2002	583	188	320	1,171	2,262	1,431	830	2,261
2003	620	166	399	1,262	2,449	1,509	940	2,449
2004	668	174	472	1,397	2,712	1,639	1,073	2,712
2005	768	172	612	1,609	3,161	1,839	1,322	3,161
Q3 05	768	166	559	1,585	3,078	1,798	1,281	3,079
Q4 05	768	172	612	1,609	3,161	1,839	1,322	3,161
Q1 06	770	166	643	1,594	3,173	1,865	1,309	3,174
Q2 06	794	169	628	1,551	3,142	1,905	1,237	3,142
Q3 06	823	178	666	1,625	3,292	1,990	1,302	3,292

COMPANIES' FINANCIAL ASSETS AND LIABILITIES — Table 14

End of period	Assets				Liabilities				
					Debt				
	Currency, bank deposits and granted credits, etc.	Bonds, etc.	Shares and certificates issued by investment associations, etc.	Total	Loans, etc.	Bonds, etc. issued	Shares, etc. issued	Net financial assets	Total
	Kr. billion								
2001	547	128	716	1,390	1,154	91	1,052	-906	1,390
2002	533	117	639	1,290	1,130	96	937	-872	1,290
2003	661	121	642	1,424	1,152	109	1,123	-961	1,423
2004	639	162	736	1,537	1,204	144	1,238	-1,049	1,537
2005	723	163	965	1,851	1,346	148	1,514	-1,157	1,851
Q3 05	717	170	895	1,782	1,306	148	1,468	-1,141	1,782
Q4 05	723	163	965	1,851	1,346	148	1,514	-1,157	1,851
Q1 06	747	150	1,042	1,939	1,461	131	1,532	-1,184	1,940
Q2 06	747	144	992	1,883	1,473	149	1,455	-1,194	1,883
Q3 06	764	154	1,051	1,968	1,546	145	1,531	-1,254	1,968

Note: Companies are defined as non-financial companies.

CURRENT ACCOUNT OF THE BALANCE OF PAYMENTS (NET REVENUES) Table 15

	Goods (fob)	Services	Goods and services	Wages and property income	Current transfers	Total current account
	Kr. billion					
2002	64.3	17.8	82.1	-24.7	-23.3	34.1
2003	65.9	23.2	89.2	-16.8	-24.0	48.3
2004	55.1	19.8	74.9	-2.4	-27.7	44.7
2005	44.4	38.3	82.7	0.7	-24.7	58.7
2006	17.3	39.4	56.7	8.1	-26.2	38.7
Feb 05 - Jan 06	41.9	38.6	80.5	1.8	-24.7	57.6
Feb 06 - Jan 07	15.8	37.7	53.5	8.6	-24.8	37.3
Aug 06	1.5	6.8	8.3	1.1	-2.1	7.2
Sep 06	1.6	3.7	5.3	0.9	-2.1	4.1
Oct 06	0.0	2.2	2.2	1.6	-2.0	1.9
Nov 06	1.8	2.4	4.3	1.0	-2.0	3.2
Dec 06	0.8	1.1	1.9	0.4	-2.0	0.3
Jan 07	-1.4	0.5	-0.9	1.5	-1.7	-1.1

Note: As of 2005 the compilation is based on new sources and methodologies resulting in breaks in data.

FINANCIAL ACCOUNT OF THE BALANCE OF PAYMENTS
(NET PAYMENTS FROM ABROAD) Table 16

	Current account and capital account, etc., total	Capital import				Other [1]	Danmarks Nationalbank's transactions with abroad [2]
		Direct investments		Portfolio investments	Other capital import		
		Danish abroad	Foreign in Denmark				
	Kr. billion						
2002	35.3	-44.9	52.3	1.2	21.3	-19.8	45.4
2003	48.3	-8.0	17.8	-98.3	72.5	-1.5	30.8
2004	44.9	62.1	-62.6	-87.1	-22.5	59.0	-6.2
2005	60.4	-90.1	78.6	-66.9	23.9	-17.7	-11.8
2006	38.5	-48.6	41.8	-104.4	79.6	-44.8	-37.9
Feb 05 - Jan 06	56.7	-96.5	109.2	-71.9	25.5	16.9	-16.8
Feb 06 - Jan 07	37.1	-39.5	14.6	-80.1	73.5	-43.0	-37.4
Aug 06	7.2	-8.6	3.5	35.1	-35.8	-3.4	-2.0
Sep 06	4.1	-17.6	29.0	-44.3	6.2	22.4	-0.2
Oct 06	1.9	2.3	-8.9	11.6	10.1	-17.9	-0.9
Nov 06	3.2	1.2	4.0	-29.9	28.5	-5.8	1.2
Dec 06	0.0	35.8	-33.7	3.1	-20.2	6.8	-8.2
Jan 07	-1.1	-1.9	3.7	-3.7	8.8	-4.2	1.6

[1] Including errors and omissions and until end-December 2004 unrecorded trade credits.

[2] As from 2005 transactions on *all* Danmarks Nationalbank's accounts with abroad. Until end-2004 only transactions on accounts included by compilation of the foreign-exchange reserve, published by press release on the 2nd banking day of each month and included in Table 2 of this section.

PORTFOLIO INVESTMENTS OF THE BALANCE OF PAYMENTS
(NET PAYMENTS FROM ABROAD) Table 17

	Danish securities			Foreign securities		
	Krone-denominated bonds, etc.	Foreign currency denominated bonds, etc.	Shares	Bonds, etc.	Shares	Total
	Kr. billion					
2002	8.5	24.0	4.9	-34.8	-1.4	1.2
2003	-30.3	66.3	9.1	-121.5	-21.9	-98.3
2004	-6.2	56.9	9.7	-104.4	-43.0	-87.1
2005	20.9	123.4	-19.5	-108.2	-83.5	-66.9
2006	10.4	66.4	-28.1	-21.1	-131.9	-104.4
Aug 06	8.7	20.3	-0.2	12.9	-6.6	35.1
Sep 06	0.2	2.2	-10.1	-31.5	-5.0	-44.3
Oct 06	9.3	3.3	11.7	-8.7	-3.9	11.6
Nov 06	-20.2	13.2	11.7	-29.4	-5.1	-29.9
Dec 06	16.6	-5.1	1.3	5.4	-15.1	3.1
Jan 07	1.1	23.1	2.6	-13.8	-16.6	-3.7

Note: A negative sign (-) indicates residents' net purchase of foreign securities, or non-residents' net sale of Danish securities.

DENMARK'S EXTERNAL ASSETS AND LIABILITIES — Table 18

End of period	Direct investments		Portfolio investments		Financial derivatives, net	Other investments			Danmarks Nationalbank	Total
	Equity	Inter-company debt, etc.	Shares, etc.	Bonds, etc.		Trade credits	Loans and deposits	Other		
	Kr. billion									
Assets										
2001	520	138	403	317	3	57	417	30	152	2,037
2002	465	148	253	359	14	57	451	34	198	1,979
2003	413	198	309	446	17	57	518	31	229	2,220
2004	459	214	369	548	48	31	584	20	221	2,495
2005	560	244	555	684	70	34	720	19	215	3,103
Q3 05	530	245	503	712	57	34	684	21	231	3,018
Q4 05	560	244	555	684	70	34	720	19	215	3,101
Q1 06	578	256	674	633	62	36	730	24	184	3,176
Q2 06	577	264	639	607	42	39	743	26	185	3,121
Q3 06	607	279	676	642	68	36	811	27	184	3,331
Liabilities										
2001	393	242	201	745	...	30	630	15	5	2,258
2002	393	194	146	756	...	30	669	13	4	2,206
2003	434	162	186	762	...	28	801	13	4	2,391
2004	427	202	238	857	...	17	819	27	2	2,589
2005	506	225	307	1.020	...	23	970	29	3	3,083
Q3 05	481	217	303	985	...	21	998	29	2	3,036
Q4 05	506	225	307	1.020	...	23	970	29	3	3,083
Q1 06	535	240	289	1.008	...	24	1.036	33	1	3,166
Q2 06	537	242	269	1.010	...	25	1.066	34	1	3,186
Q3 06	546	271	292	1.056	...	26	1.111	42	3	3,348
Net assets										
2001	127	-104	202	-428	3	27	-213	16	149	-220
2002	73	-45	106	-397	14	27	-218	20	195	-225
2003	-21	36	123	-315	17	29	-283	19	226	-170
2004	32	12	131	-309	48	14	-234	-7	221	-92
2005	54	19	249	-336	70	11	-250	-10	214	20
Q3 05	50	29	200	-273	57	13	-313	-8	230	-16
Q4 05	54	19	249	-336	70	11	-250	-10	214	20
Q1 06	43	17	385	-376	62	12	-306	-9	185	12
Q2 06	39	22	369	-404	42	14	-323	-7	185	-64
Q3 06	61	7	384	-414	68	10	-301	-15	182	-17

Note: As a key principle, the market value has been used for the compilation.

GDP BY TYPE OF EXPENDITURE Table 19

	GDP	Final domestic demand					Exports of goods and services	Imports of goods and services
		Private consumption	General-government consumption	Gross fixed capital formation	Change in inventories	Total		
	Kr. billion							
2002	1,372.7	652.3	360.2	270.8	9.3	1,292.6	648.3	568.2
2003	1,400.7	666.9	371.2	271.8	3.2	1,313.1	635.1	547.6
2004	1,459.4	708.5	388.5	285.5	4.9	1,387.4	666.8	594.8
2005	1,552.0	754.1	401.4	319.2	3.9	1,478.6	757.1	683.8
2006	1,636.9	793.2	416.2	367.3	11.1	1,587.9	850.2	801.2
Q4 05	404.9	199.4	103.7	89.2	-1.1	391.3	202.6	188.9
Q1 06	387.9	192.4	100.6	82.5	2.0	377.4	199.5	189.0
Q2 06	414.0	199.8	103.6	94.1	3.6	401.1	212.6	199.7
Q3 06	411.2	194.0	104.0	89.7	4.6	392.2	218.5	199.5
Q4 06	423.8	207.0	108.0	101.0	1.0	417.1	219.7	213.0
	Real growth compared with previous year, per cent							
2002	0.5	1.5	2.1	0.1	...	1.7	4.1	7.5
2003	0.4	1.0	0.7	-0.2	...	0.0	-1.0	-1.6
2004	2.1	4.7	1.6	5.6	...	4.1	2.2	7.0
2005	3.1	4.2	1.1	9.6	...	4.4	7.3	10.8
2006	3.2	3.0	0.6	11.9	...	4.7	9.9	13.8
Q4 05	2.4	1.9	1.7	10.5	...	3.9	10.3	14.2
Q1 06	4.5	5.1	0.6	14.9	...	5.6	14.4	17.4
Q2 06	2.2	3.3	0.3	11.7	...	4.1	8.4	13.4
Q3 06	3.2	1.6	0.5	11.2	...	4.9	8.9	13.1
Q4 06	2.9	2.2	1.0	10.5	...	4.4	8.3	11.7
	Real growth compared with previous quarter (seasonally adjusted), per cent							
Q4 05	0.1	-0.4	0.2	2.3	...	0.4	1.0	3.8
Q1 06	1.1	1.8	-0.4	2.6	...	1.4	3.7	3.9
Q2 06	1.2	1.4	0.2	4.9	...	1.9	3.1	4.0
Q3 06	0.6	-1.2	0.5	0.7	...	-0.3	0.7	0.8
Q4 06	0.1	0.3	0.6	2.1	...	0.8	0.7	2.7

EU-HARMONIZED INDEX OF CONSUMER PRICES (HICP) AND UNDERLYING INFLATION (IMI)

Table 20

	HICP							Index of net retail prices[1]		
		Subcomponents:								
					Administered prices				Split into[4]:	
	Total	Energy	Food	Core inflation[2]	Rent	Public services	HICP excl. energy, food and administered prices[3]	Index of net retail prices excl. energy, food and administered prices[3]	Import content[5]	IMI[6]
	Weights, per cent									
	100	10.8	19.6	69.6	7.7	4.5	57.4	50.7	16.2	34.5
	Year-on-year growth, per cent									
2002	2.4	2.1	1.8	2.6	2.6	5.0	2.5	2.5	0.1	3.6
2003	2.0	0.9	0.7	2.6	2.7	8.1	2.1	1.9	0.4	2.6
2004	0.9	2.6	-2.1	1.5	2.8	4.8	1.1	0.8	1.1	0.6
2005	1.7	7.6	1.0	1.0	2.4	3.2	0.6	0.7	3.4	-0.6
2006	1.9	5.3	2.2	1.2	2.1	0.9	1.1	1.3	3.1	0.4
Q1 04	0.7	-3.2	-2.0	2.1	2.8	4.9	1.7	1.4	-0.6	2.3
Q2 04	0.8	2.6	-2.5	1.6	2.8	4.9	1.1	0.8	0.3	1.1
Q3 04	1.0	4.8	-2.6	1.5	2.7	4.7	1.0	0.7	1.7	0.2
Q4 04	1.2	6.4	-1.1	1.0	2.7	4.9	0.5	0.3	3.2	-1.0
Q1 05	1.1	4.6	0.3	0.7	2.4	4.0	0.2	0.3	2.8	-0.9
Q2 05	1.6	6.7	0.6	1.0	2.3	3.2	0.7	0.7	3.5	-0.6
Q3 05	2.2	10.1	1.5	1.1	2.3	3.0	0.8	0.8	3.9	-0.6
Q4 05	2.0	8.9	1.5	1.0	2.3	2.6	0.7	0.9	3.3	-0.2
Q1 06	2.0	8.9	0.9	1.2	2.2	2.6	1.0	1.1	3.7	-0.1
Q2 06	2.0	8.3	1.9	1.0	2.0	0.4	1.0	1.1	3.8	-0.2
Q3 06	1.8	3.9	2.6	1.3	2.0	0.2	1.2	1.6	3.2	0.8
Q4 06	1.6	0.4	3.5	1.3	2.0	0.4	1.3	1.3	1.9	1.0

Note: The weights reflect the weighting basis as of January 2006.

[1] Prices in the index of net retail prices are compiled excluding indirect taxes and subsidies.

[2] Core inflation is defined as the increase in HICP excluding energy and food.

[3] Goods and services excluding energy, food and administered prices constitute 57.4 per cent of HICP's weight basis and 51.7 per cent of the index of net retail prices. The difference reflects that the same goods and services do not count equally in the two indices, and does not express the indirect taxation content of the consumer prices.

[4] The division of the index of net retail prices into import and IMI is based on Statistics Denmark's input-output table.

[5] The indirect energy content is included in the import content.

[6] IMI expresses the domestic market-determined inflation. For a detailed presentation of IMI, see Bo William Hansen and Dan Knudsen, Domestic Market-Determined Inflation, Danmarks Nationalbank, *Monetary Review*, 4th Quarter 2005.

SELECTED MONTHLY ECONOMIC INDICATORS Table 21

	Unemployment	Quantity index		Forced sales of real property	New passenger car registrations	Consumer confidence indicator	Composite cyclical indicator for		
		Manufacturing industry[1]	Retail trade				Manufacturing industry	Building and construction	Service
	Per cent of labour force	2000=100	2000=100	Number		Balance per cent			
2002	5.2	102.9	103.6	3,041	111,598	1	-4	-14	5
2003	6.2	102.5	107.8	3,039	96,501	1	-6	-18	-2
2004	6.4	102.1	113.4	2,640	122,543	7	3	-5	13
2005	5.7	103.8	120.1	1,874	148,578	9	1	7	20
2006	4.5	108.1	124.0	1,231	156,708	10	9	21	24
				Seasonally adjusted					
Sep 06	4.2	108.3	123.5	94	13,004	10	14	22	20
Oct 06	4.1	111.0	124.4	97	13,157	10	11	23	25
Nov 06	4.0	111.6	125.5	135	12,855	11	10	23	24
Dec 06	3.9	109.5	129.0	76	12,841	9	11	21	23
Jan 07	3.8	109.1	123.9	92	13,087	9	14	21	23
Feb 07	...	...	...	82	...	9	9	14	26

[1] Excluding shipbuilding.

SELECTED QUARTERLY ECONOMIC INDICATORS Table 22

	Employment		Hourly earnings			Property prices (purchase sum, one-family dwellings)
	Total	Private	All sectors in Denmark, total	Manufacturing industry in Denmark	Manufacturing industry abroad	As a percentage of property value 1995
	1,000 persons		1996=100			
2002	2,784	1,932	128.5	128.5	120.4	168.0
2003	2,748	1,909	133.3	133.8	124.1	173.2
2004	2,748	1,908	137.4	138.0	127.5	188.6
2005	2,767	1,930	141.4	141.8	130.8	221.9
2006	2,816	1,981	145.8	146.2	134.1	...
			Seasonally adjusted			
Q4 05	2,784	1,949	143.0	143.2	131.8	240.3
Q1 06	2,797	1,961	144.2	144.4	133.0	254.9
Q2 06	2,806	1,970	144.9	145.6	133.7	268.6
Q3 06	2,823	1,988	146.5	146.7	134.5	271.7
Q4 06	2,838	2,003	147.4	147.8	135.0	...
			Change compared with previous year, per cent			
2002	-0.1	-0.4	3.9	4.0	2.9	3.7
2003	-1.3	-1.2	3.7	4.2	3.0	3.1
2004	0.0	0.0	3.1	3.1	2.7	8.9
2005	0.7	1.2	2.9	2.7	2.6	17.6
2006	1.8	2.6	3.1	3.1	2.5	...
Q4 05	1.4	2.3	2.9	2.9	2.4	22.8
Q1 06	1.6	2.5	2.9	2.9	2.2	25.1
Q2 06	1.7	2.4	3.2	3.2	2.8	24.6
Q3 06	1.8	2.7	3.1	3.2	2.6	19.2
Q4 06	1.9	2.8	3.1	3.2	2.5	...

EXCHANGE RATES — Table 23

	EUR	GBP	SEK	NOK	USD	JPY	CHF
	Kroner per 100 units						
	Average						
2002	743.04	1,182.10	81.12	99.03	788.12	6.2969	506.47
2003	743.07	1,074.99	81.45	93.03	658.99	5.6840	488.88
2004	743.98	1,096.69	81.54	88.90	598.93	5.5366	481.96
2005	745.19	1,090.02	80.29	93.11	600.34	5.4473	481.30
2006	745.91	1,094.32	80.62	92.71	594.70	5.1123	474.22
Sep 06	746.01	1,105.05	80.51	90.35	586.16	5.0071	470.95
Oct 06	745.55	1,108.58	80.57	88.80	591.21	4.9820	468.96
Nov 06	745.64	1,106.37	81.93	90.44	578.93	4.9348	468.30
Dec 06	745.49	1,107.96	82.49	91.39	564.24	4.8154	466.84
Jan 07	745.39	1,123.70	82.10	90.05	573.47	4.7613	461.42
Feb 07	745.41	1,115.95	81.12	92.17	570.16	4.7299	459.80

EFFECTIVE KRONE RATE — Table 24

Average	Nominal effective krone rate	Consumer-price indices: Denmark	Consumer-price indices: Abroad	Real effective krone rate based on consumer prices	Real effective krone rate based on hourly earnings	Consumer-price index in the euro area
	1980=100					2005=100
2002	97.7	229.9	216.5	103.8	103.5	93.8
2003	101.2	234.7	220.3	107.9	108.4	95.8
2004	102.2	237.4	224.0	108.3	109.8	97.9
2005	101.6	241.7	228.2	107.6	109.3	100.0
2006	101.6	246.2	232.7	107.7	110.1	102.2
Sep 06	102.0	247.5	233.8	108.0	110.4	102.5
Oct 06	101.9	247.3	233.7	107.9	...	102.6
Nov 06	101.9	247.1	233.8	107.8	...	102.6
Dec 06	102.3	247.3	234.4	107.8	110.9	103.0
Jan 07	102.1	246.4	234.1	107.5	...	102.5
Feb 07	102.3	249.1	...	...	...	...
	Change compared with previous year, per cent					
2002	0.9	2.4	1.7	1.6	2.0	2.2
2003	3.6	2.1	1.7	3.9	4.7	2.1
2004	1.0	1.2	1.7	0.4	1.3	2.2
2005	-0.6	1.8	1.9	-0.6	-0.5	2.2
2006	0.0	1.9	2.0	0.0	0.7	2.2
Sep 06	1.0	1.5	1.7	0.7	1.3	1.7
Oct 06	1.0	1.5	1.6	0.8	...	1.6
Nov 06	1.2	1.7	1.8	0.8	...	1.9
Dec 06	1.5	1.8	1.9	1.0	1.7	1.9
Jan 07	1.2	1.8	1.9	0.8	...	1.8
Feb 07	1.6	1.9	...	...	...	...

Note: The nominal effective krone rate index is a geometric weighting of the development in the Danish krone rate against currencies of Denmark's 27 most important trading partners. However, only 25 countries are included in the calculation of consumer prices abroad and the real effective krone rate based on consumer prices and hourly earnings, respectively.
The weights are based on trade in manufactured goods in 2002.
An increase in the index reflects a nominal or a real appreciation of the krone.

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