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2nd Quarter



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MONETARY REVIEW 2nd QUARTER 2008

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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<p>This Monetary Review includes three articles on various economic consequences of globalisation. The first article, "Globalisation, Labour Market and Inequality", discusses the impact of globalisation on remuneration of labour and on the degree of income inequality in society. The second article, "Globalisation and Danish Direct Investments", analyses the country and industry breakdown of Danish foreign direct investments (FDI), as well as employment effects in Denmark when Danish enterprises increase their activities abroad. The third article, "Foreign-Exchange Reserves and Sovereign Wealth Funds", illustrates how management of such Sovereign Wealth Funds (SWFs) differs from management of traditional foreign-exchange reserves in central banks.</p>	
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<p>Analyses of the development in competitiveness often focus on growth in labour costs per hour or per output unit in Denmark relative to abroad. If this measure is applied, Denmark's competitiveness has deteriorated over a number of years. Lower growth in productivity in Denmark has to a large extent been set off by relatively good sales prices for exports of Danish goods and services.</p>	
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Recent Economic and Monetary Trends

This review covers the period from mid-March to the beginning of June

Global economic growth is declining amidst continued uncertainty in the wake of the financial turmoil. The USA shows weak economic development, while the euro area has performed better than expected at the beginning of the year. Sound output growth is still predicted in the emerging market economies. Overall, the latest international cyclical analyses are less negative than earlier this year.

Despite the slowdown in growth, inflation is high in most of the world since consumer prices have been pushed upwards by rising food and energy prices. Although in the longer term improved supply of especially food can be assumed to stabilise the development in prices, there is a risk of a sustained increase in inflation expectations. This risk limits the scope for economic-policy expansion in the USA and Europe.

Denmark has also seen a slowdown in growth, and this trend will continue in the coming years. Employment remains high and there is a pronounced shortage of labour. The rate of wage increase is significantly higher than that of Denmark's trading partners, and output is high in relation to the capacity of the Danish economy. Lower growth and higher unemployment are prerequisites for sustainable development in wages and prices in the longer term. Weaker export-market growth is a useful contribution to this sustainable development.

The rising food and energy prices have caused consumer prices to soar, also in Denmark. If the current substantial price increases create expectations of continued high inflation, this could trigger a wage and price spiral to the detriment of the already strained wage competitiveness. The strong pressure on the labour market makes it imperative not to ignore the risk of rising inflation expectations. Irrespective of the current dampening, it is important that fiscal policy in 2009 does not stimulate demand.

THE GLOBAL ECONOMY

Global economic growth is declining, although the outlook is a little less negative than earlier this year. The April forecast by the International Monetary Fund, IMF, expected a pronounced slowdown in growth in 2008, but more recent forecasts from the European Commission and the

OECD paint a more positive picture. The relatively robust economic development outside the USA in the first months of the year and a more favourable view of the extent of the financial turmoil have given rise to a less negative growth outlook. The substantial divergence between the forecasts illustrates that great uncertainty prevails concerning the macroeconomic consequences of the financial turmoil and the continued considerable increases in food and commodity prices. The slowdown in growth is most pronounced in the USA and less in other industrialised countries. The emerging market economies, on the other hand, have remained almost unaffected by the turmoil, cf. Table 1.

The turmoil in the financial markets

The turmoil in the financial markets, which began in 2007 in connection with the subprime crisis in the US housing market, peaked in mid-March 2008. The US investment bank Bear Stearns, which had suffered large losses, was affected by confidence problems and was acquired by the major US bank JP Morgan Chase & Co., with support from the Federal Reserve. As a result of this situation, the yield on safe assets such as government bonds was pressed down to a low during the turmoil. The willingness of the US authorities to contribute to the rescue of an investment bank dampened the uncertainty in many financial markets. The yield on US 10-year government bonds has increased by 0.6 percentage point since mid-March, to 3.9 per cent. A similar increase in government-bond yields was observed in Europe.

Uncertainty in the money markets is still notably greater than before the outbreak of the turmoil, cf. Chart 1, and many central banks continue to introduce new, extraordinary measures to improve the functioning of the money markets. In the period since August 2007 the central banks of the USA, the euro area, the UK and Switzerland, among others, have provided extra liquidity and offered special facilities, e.g.

GDP GROWTH FORECASTS FOR SELECTED REGIONS AND COUNTRIES

Table 1

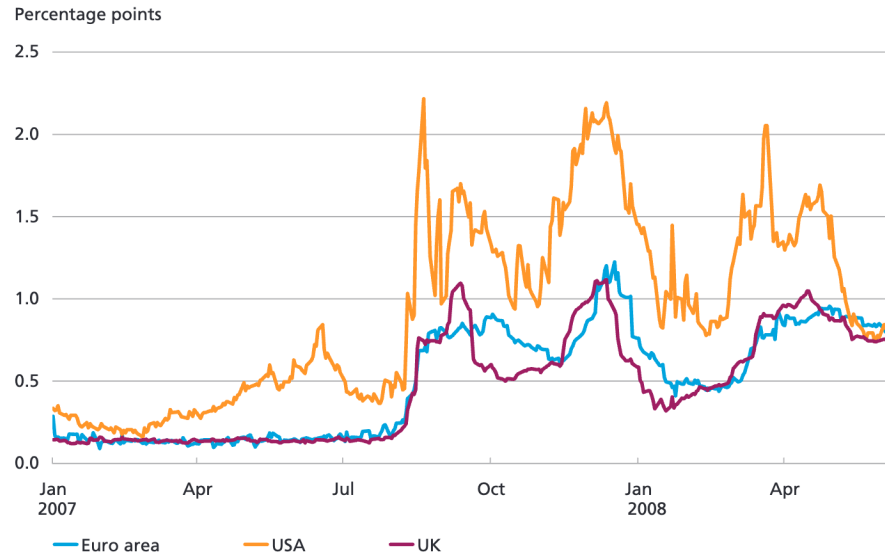
	2008		2009	
	IMF	OECD	IMF	OECD
USA	0.5	1.2	0.6	1.1
Euro area	1.4	1.7	1.2	1.4
Germany	1.4	1.9	1.0	1.1
Japan	1.4	1.7	1.5	1.5
China	9.3	10.0	9.5	9.5
India	7.9	7.8	8.0	8.0
World	3.7	n.a.	3.8	n.a.

Note: The IMF's forecasts are from April 2008, the OECD's from June 2008.

Source: IMF World Economic Outlook, April 2008, and OECD Economic Outlook, No. 83, June 2008.

SPREAD BETWEEN COLLATERALISED AND UNCOLLATERALISED MONEY-MARKET INTEREST RATES

Chart 1



Note: The uncollateralised interest rate is a 3-month Libor money-market interest rate, while the collateralised interest rate is that of a 3-month government security.

Source: EcoWin.

extended access to borrow and easier access to liquidity, in order to compensate for the poor functioning of the money markets.

Since the beginning of March, the Federal Reserve and the Bank of England have made additional facilities available.¹ These measures have mainly been aimed at expanding the collateral base and extending access to loans with longer maturities than normal. In order to facilitate foreign banks' access to dollar funding outside the USA, the Federal Reserve's swap facilities with the European Central Bank, ECB, and the Swiss National Bank from December 2007 have been extended. This agreement has made it easier for banks and other market participants to obtain dollar funding during the financial turmoil.

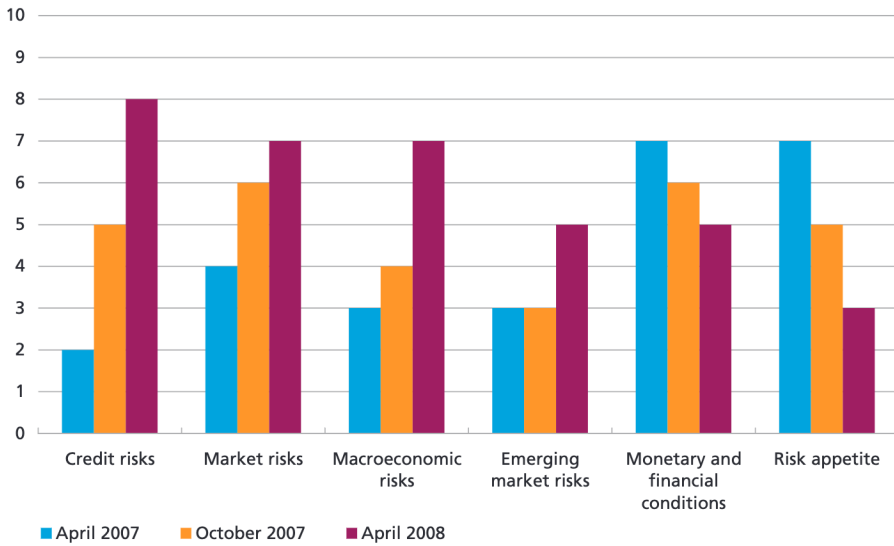
The uncollateralised money-market interest rate is still considerably higher than the collateralised interest rate. The US spread between collateralised and uncollateralised interest rates has fluctuated strongly in recent months, but has narrowed to 0.8 percentage point since the end of April. The interest-rate spreads in the European markets have been relatively stable around this level in the same period, cf. Chart 1.

According to bank lending surveys, credit terms were tightened further in the 1st quarter of 2008 in both the USA and the euro area. This

¹ For a discussion of the central-bank measures from August 2007 to March 2008, see Morten Kjærgaard and Lars Risbjerg, *Financial Turmoil, Liquidity and Central Banks*, Danmarks Nationalbank, *Monetary Review*, 1st Quarter 2008.

FINANCIAL MARKET INDICATORS

Chart 2



Note: The indicators are scaled to an interval between 0 and 10. A lower value reflects a smaller risk as regards risk-based indicators, and tighter market conditions as regards indicators of market conditions. The construction of the indicators is described in more detail in Annex 1.1, p. 40 in the IMF's Global Financial Stability Report, April 2008.

Source: Global Financial Stability Report, April 2008 and October 2007, IMF.

applies to corporate lending as well as lending to households. The tightened credit terms have dampened growth in housing loans in both the USA and the euro area, while growth in bank lending to business enterprises and other lending to households has remained high. The continued growth in corporate lending partly reflects that drawings on bank credit facilities have replaced issuance of corporate bonds.

According to IMF statistics from April 2008, the risk elements in the financial markets are more pronounced and the fundamental monetary and financial market conditions are less positive than in 2007, cf. Chart 2. At the same time, the risk appetite among investors has decreased considerably.

In the autumn of 2007, the G7 countries asked the Financial Stability Forum, FSF¹, to prepare an analysis of the causes and underlying weaknesses in the financial system that have contributed to the turmoil, and to make specific recommendations and proposals for enhancing the resilience of the financial markets and institutions. The FSF published its

¹ The Financial Stability Forum is a committee with representatives from major countries' central banks, finance ministries and financial supervisory authorities as well as international financial institutions. The aim is to promote financial stability. The FSF was established in 1999 at the initiative of the G7 finance ministers and central-bank governors. See the "Report of the Financial Stability Forum on enhancing market and institutional resilience" on the website www.fsforum.org/home/home.html.

report on 11 April. It points to shortcomings in financial enterprises' risk management, poor performance of credit rating agencies in respect of structured credit products and weaknesses in the financial supervision system as some of the factors that have contributed to the turmoil. In five key areas the FSF has made a number of recommendations aimed at financial enterprises, governments, supervisory authorities and central banks. The objective is to prevent a similar situation from occurring in the future. Central banks are encouraged to ensure flexible credit facilities, and the report also emphasises the importance of central banks having a broad collateral base and a large group of counterparties and offering longer-term loans. The conclusions of the report and the FSF's recommendations are summarised in Box 1.

The G7 finance ministers and central-bank governors have committed themselves to implementing the key recommendations. This will be done in two steps, i.e. the most urgent measures are to be implemented by the end of July 2008, while selected other recommendations are to be implemented by the end of 2008.¹

The stock and foreign-exchange markets

The stock markets have been affected by the prospects of lower growth and the financial turmoil, cf. Chart 3. Stock prices plummeted to a low in March when the unrest concerning the Bear Stearns investment bank peaked. Uncertainty has declined since then, and by the beginning of June stock indices in the USA, the euro area, the UK and the emerging market economies had risen by 8-14 per cent from the low in March.

The euro appreciated vis-à-vis a number of currencies in March and early April, cf. Chart 4. It appreciated particularly strongly against the US dollar and the pound sterling, which should be viewed in the light of interest-rate cuts in the USA and the UK. The euro's strength had abated a little at the beginning of June.

Surging commodity prices

Commodity prices, including oil and food prices, have surged and have contributed to high consumer-price increases worldwide in 2008.

At the beginning of June, the oil price was just under 130 dollars per barrel (Brent), cf. Chart 5. This represents an increase by almost 40 per cent since the beginning of the year, which is attributable to several factors. Firstly, high economic growth has led to stronger demand for oil in the emerging market economies. In these economies, oil consumption is often subsidised or subject to price adjustment (e.g. in China), which

¹ Cf. communique of 11 April 2008 "Statement of G-7 Finance Ministers and Central Bank Governors".

CONCLUSIONS AND RECOMMENDATIONS OF THE FINANCIAL STABILITY FORUM¹

Box 1

The report by the Financial Stability Forum, FSF, is a significant contribution to the debate among financial enterprises, governments, supervisory authorities and central banks about how to make the financial market more resilient against turmoil. The G7 acknowledgement of the report's conclusions and support for the implementation of the report's key recommendations make this report a cornerstone in relation to measures in the financial markets in the coming months. According to the FSF, excessive risk appetite and inadequate standards were significant factors contributing to the financial turmoil, and both business enterprises and authorities are held accountable.

The FSF identifies the following weaknesses that have contributed to the financial turmoil:

- Shortcomings in firms' risk management.
- Poor investor due diligence in relation to the quality of credit products.
- Poor performance by credit rating agencies in respect of structured credit products.
- Incentive distortions in the markets due to shortcomings in risk management and underwriting standards.
- Weaknesses in firms' disclosure of losses.
- Feedback effects between valuation and risk-taking.
- Weaknesses in the regulatory framework.

The FSF set out a number of recommendations to address these weaknesses. Some proposals have been tabled in connection with other analyses of the financial turmoil, but in view of the official G7 support the recommendations of the report play a key role in the roadmap for measures to address the financial turmoil.

The FSF presented a total of 67 proposals and recommendations in five key areas. The recommendations are wide-ranging and comprise measures in relation to private firms, supervisory authorities and central banks.

The five key areas are:

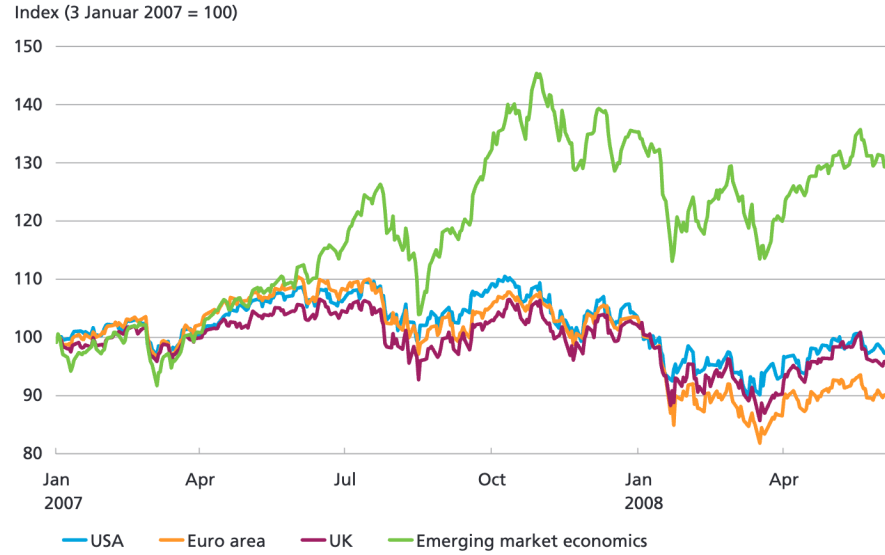
- Strengthened prudential oversight of financial institutions' capital, liquidity and risk management via. e.g. timely implementation of the Basel II regulations.
- Enhancing the transparency of financial institutions' risk profiles and improving tools for valuation of financial assets.
- Changes in the role and uses of credit ratings and revaluation of the use of ratings by supervisory authorities.
- Strengthening authorities' and central banks' responsiveness to potential weaknesses and increased risk in the financial system. This includes establishing a college with representatives from the supervisory authorities at major banks with cross-border operations.
- Robust arrangements at central banks for dealing with stress in the financial system.

¹ The "Report of the Financial Stability Forum on enhancing market and institutional resilience" is available at the website www.fsforum.org/home/home.html.

cushions the spillover effect of higher oil prices on consumer prices. Secondly, there have been indications of limited growth in the supply of oil in the form of both OPEC's reluctance to increase production and geo-

STOCK INDICES

Chart 3

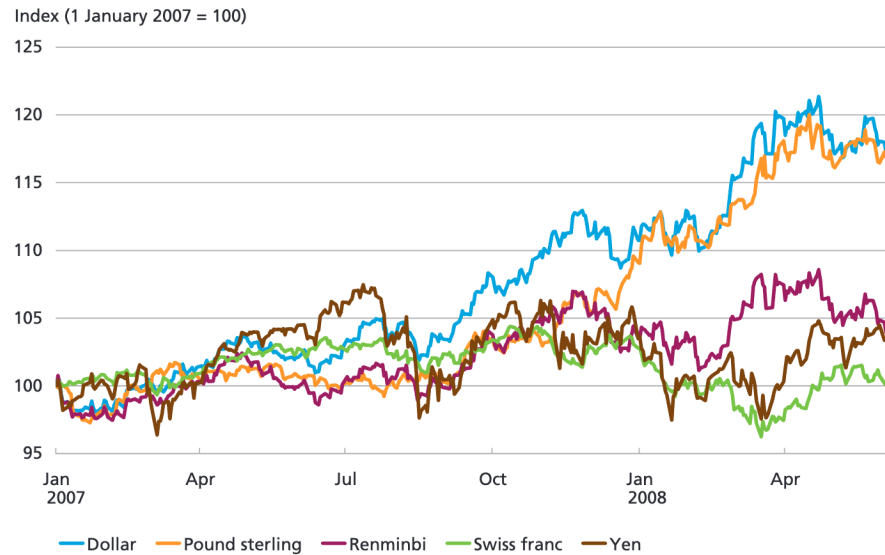


Note: The following stock indices have been used: USA: Standard & Poor's, 500 Composite; Euro area: Standard & Poor's, Euro Composite; UK: FTSE 100; Emerging market economies: MSCI, USD.
 Source: EcoWin.

political tensions. Finally, a part of the oil-price increase represents compensation for the weakness of the dollar. The oil price increases have been considerably lower measured in euro.

EURO VIS-A-VIS SELECTED CURRENCIES

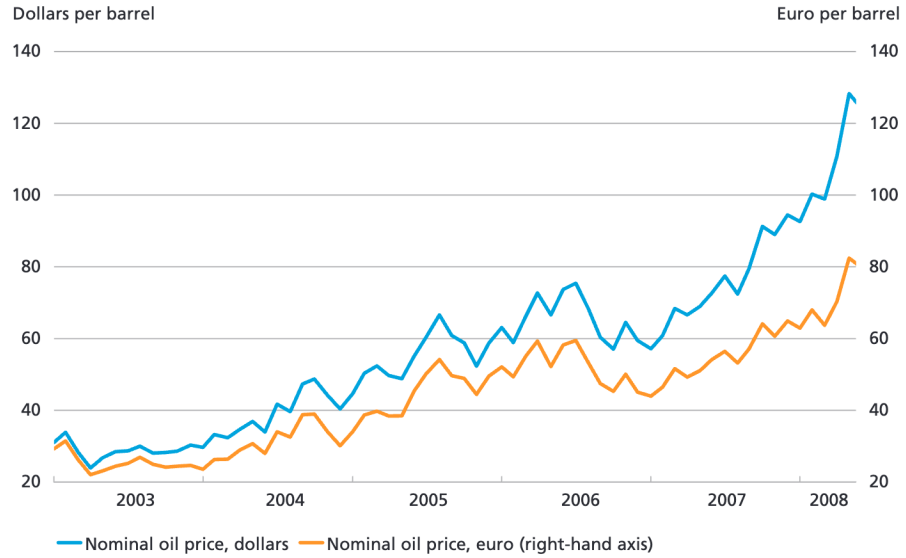
Chart 4



Note: Foreign currency unit per euro. A rising index indicates appreciation of the euro.
 Source: EcoWin.

OIL PRICES IN DOLLARS AND EURO

Chart 5



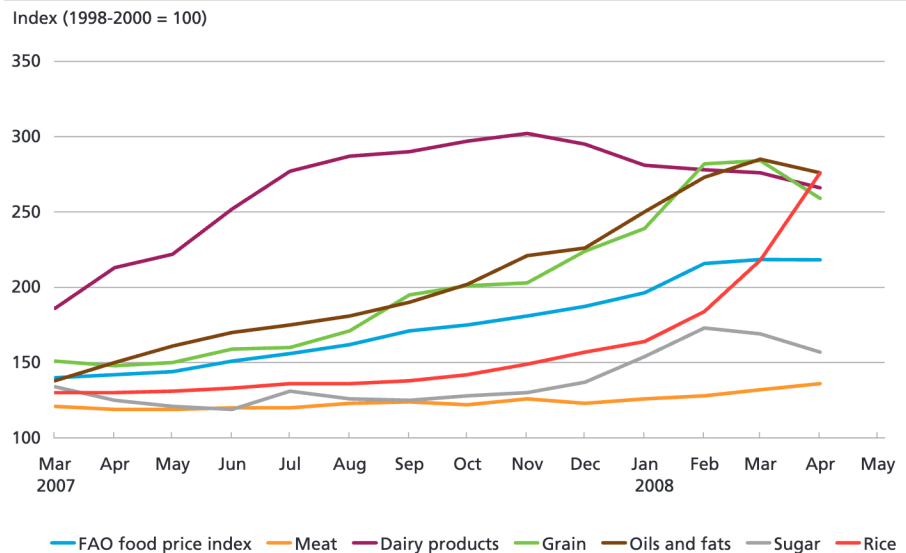
Note: Monthly averages.
Source: EcoWin.

In recent months, the soaring food prices have given rise to social unrest and a pronounced fall in living standards in a number of poor countries where food consumption accounts for a large share of income.

The higher prices were most pronounced in food categories such as grain, oil seeds, dairy products and most recently rice, cf. Chart 6. A com-

PRICE DEVELOPMENTS FOR SELECTED FOODS

Chart 6



Source: Food and Agriculture Organization of the United Nations.

combination of factors has led to higher demand, lower supply and higher production costs. Global demand for food is rising as a result of population growth and increased prosperity. The production of biofuel has also played a role as subsidies have pushed demand for maize, sugar, wheat and oil seeds upwards. According to an estimate from the international think tank, International Food Policy Research Institute¹, greater demand for biofuel in the period 2000-07 has accounted for 30 per cent of the average increase in crop prices. Estimates of the contributions of the individual factors are relatively uncertain, however, and there is great dispersion between the existing estimates. On the supply side, the agricultural land allocated to grain, oil seeds and rice has been reduced by 7.5 per cent since 1997 in the industrialised countries. Poor harvests have resulted in lower yields in 2005 and 2006, leading to a reduction of global stocks. Higher fertiliser and sea freight prices have also contributed to the rise in food prices. On the other hand, several international organisations and public authorities have all denied that speculation has played any considerable role in the price surges. An OECD and FAO report from May on the outlook up to 2017² expects food prices to subside a little from the current record-high levels, but to remain high as a result of the growing demand for biofuel and from emerging market economies such as China. Increase of the food supply in response to the high prices would help to curb the growth in food prices.

Metal prices have also risen steeply since the beginning of 2008. The principal reasons are growing demand from the emerging market economies, notably China, and sluggish expansion of the production capacity.

Consumer surveys show that perceived inflation over the last year and expectations of price increases in the coming year have risen since the summer of 2007 in both the USA and the euro area. The surging energy and food prices have no doubt played an important role in this connection. The development entails a risk of higher inflation expectations and a possible wage and price spiral, which would limit the scope for continued easing of economic policy in the USA and the euro area.

INTERNATIONAL ECONOMIC DEVELOPMENT

USA

According to preliminary data, GDP growth was 0.2 per cent in the 1st quarter of 2008, which was almost unchanged from the 4th quarter of

¹ Cf. speech by Mark W. Rosegrant, Division Director of the International Food Price Policy Research Institute, "Biofuels and Grain Prices: Impacts and Policy Responses" of 7 May 2008.

² OECD-FAO Agricultural Outlook 2008-2017.

2007 when the full effect of the slowdown in the US economy was observed. The low growth reflects slightly rising private consumption and continually falling investments, driven especially by residential investments. Buoyed up by the weaker dollar, net exports made a slightly positive contribution to growth in the quarter. Employment in the non-agricultural sector has declined steadily throughout 2008. Unemployment has risen since the spring of 2007, to 5.5 per cent of the labour force in May 2008.

The housing market is ailing. House prices have dropped further, and residential investments have decreased considerably. The US administration has launched a number of initiatives to help homeowners, and further proposals have been tabled, cf. Box 2. US households receive 100 billion dollars in May and June as an element of the US administration's assistance package totalling 150 billion dollars, corresponding to approximately 1 per cent of GDP. The tax deductions for investments are increased to the extent of 50 billion dollars. Higher disposable incomes are expected to stimulate demand, primarily in the 2nd and 3rd quarters of 2008.

The Federal Reserve has lowered the fed funds target rate by a total of 2.25 percentage points in 2008, most recently on 30 April, when the target rate was reduced by 0.25 percentage point to 2.0 per cent. The interest-rate cuts will stimulate demand.

Annual consumer price inflation decreased to 3.9 per cent in April after having remained at above 4 per cent since November 2007, despite stagnating demand. The strong price inflation is partly attributable to food and energy prices, but also to the weaker dollar via higher import prices.

Europe

The euro area has seen relatively robust growth, i.e. GDP growth of 0.8 per cent in the 1st quarter of 2008. Germany's record-high quarter-on-quarter growth rate of 1.5 per cent boosted overall growth in the euro area. The strong performance in Germany primarily reflects increased investments rather than higher private consumption, while the growth contribution from net exports was slightly negative. There are thus emerging signs that domestic demand is taking over from exports as the main driver of economic growth in Germany. France also showed a sound GDP growth rate in the 1st quarter, whereas the Southern European countries experienced somewhat lower growth rates.

Developments in the labour market continue to be positive, and unemployment remained at 7.1 per cent in the first three months of the year. Looking forward, confidence indicators of both output and household consumption, however, point to a dampening in the euro area.

INITIATIVES TO HELP HOMEOWNERS

Box 2

The US administration has launched a number of initiatives to address falling housing prices and help homeowners in need. The most important initiatives are:

- FHASecure (31 August 2007): The Federal Housing Administration (FHA) offers to help homeowners with significantly higher monthly payments after their rates were reset. Under FHASecure the FHA will underwrite refinancing of the home to reduce the interest rate and thus the overall payments of the affected homeowners. Only homeowners with a good credit history and stable income are eligible. When the initiative was launched, the US administration expected around 240,000 families to benefit from it.
- Hope Now (10 October 2007): The US administration supports the establishment of the private Hope Now group that is composed of e.g. a number of large private banks providing counselling services to homeowners. The aim is to restructure mortgages, linking up with FHASecure, among others.
- Mortgage Forgiveness Debt Relief Act of 2007 (20 December 2007): This Act exempts homeowners from paying tax on mortgage debt forgiveness in certain cases over the next three years (amounts forgiven are normally regarded as taxable income).
- The growth package (13 February 2008): Tax relief for approximately 100 billion dollars. Citizens whose income is less than 75,000 dollars for singles or 150,000 dollars for couples are granted tax relief of at least 300 dollars and up to 600 dollars per person. Old-age pensioners and war veterans are also eligible for this assistance. Further tax relief of 300 dollars per child can be granted. A family with two children can thus obtain tax relief of up to 1,800 dollars. The tax relief is expected to be granted to approximately 130 million households.
- Eased regulation of agencies (13 February 2008 – an element of the growth package): US agencies are financial institutions that are established by a special Act, but are private companies. In the light of the political anchoring of these companies, the US administration is expected to bail them out if they find themselves in dire straits. The two most important agencies are *Federal Home Loan Mortgage Corporation* (Freddie Mac) and *Federal National Mortgage Association* (Fannie Mae). The companies have two business areas: to underwrite mortgage deeds that comply with certain standards; and to invest directly in mortgage deeds and other housing-related loans. The upper limit for the mortgage deeds that Fannie Mae and Freddie Mac may underwrite is raised from 417,000 dollars to 729,750 dollars.
- Reduction of the capital requirements for agencies (19 March 2008): The capital requirements for Fannie Mae and Freddie Mac are eased, which enables them to invest a further 200 billion dollars directly in mortgages or to underwrite mortgages for a further 2,000 billion dollars.

Recent months have seen weak retail sales and continued high industrial production. The influx of new orders in the industrial sector, including export orders, has declined. Although international organisations predict an overall slowdown in growth in the euro area in 2008 and 2009, it is expected to be weaker than in the USA, cf. Table 1. Inflation in the euro area has exceeded 3 per cent since November, primarily

driven by surging food and energy prices. Annual inflation is expected to remain above 3 per cent overall in 2008. The ECB has maintained its key interest rate at 4 per cent since June 2007.

In the *UK*, growth declined to 0.4 per cent quarter-on-quarter in the 1st quarter of 2008, while consumer price inflation rose to 3.0 per cent year-on-year in April. On 10 April, the Bank of England lowered the bank rate, for the second time in 2008, by 0.25 percentage point to 5.0 per cent. The Bank of England's latest inflation report expects inflation to exceed the upper target of 3 per cent in the coming quarters. Should this be the case, the governor must write an open letter to the Chancellor of the Exchequer, describing the excessive inflation and the measures that will be implemented to bring inflation back within the interval. The most recent open letter was written in April 2007 on account of the 3.1 per cent inflation figure compiled in March.

Among the *Nordic countries*, on 23 April Norges Bank raised its key policy rate by 0.25 percentage point to 5.5 per cent, while Sveriges Riksbank has maintained its repo rate unchanged at 4.25 per cent.

The Icelandic krona has depreciated strongly against most currencies, and the effective exchange rate has weakened by more than 20 per cent since the autumn of 2007. The depreciation has led to higher inflation in Iceland, and in March and April Seðlabanki Íslands raised its policy rate by a total of 1.75 percentage points to 15.5 per cent. Iceland is experiencing not only rising inflation, but also an economic downturn after several years of a booming economy with rising housing prices.

The imbalances in the Icelandic economy have been reinforced by the fact that the Icelandic banks' strong expansion abroad has made them dependent on foreign financial markets. The turmoil in the international financial markets has entailed considerably higher financing costs for the banks, and the yield on Icelandic government bonds rose substantially during March.

Against this background, Danmarks Nationalbank, Norges Bank and Sveriges Riksbank concluded bilateral agreements in mid-May for a swap facility with Seðlabanki Íslands, offering the latter a credit facility of up to 1,500 million euro equally distributed among the three central banks, should this be required for financial stability purposes. On the same occasion, the Icelandic government announced its intention to implement structural reforms, present a plan for restructuring and reform of the state-owned mortgage-credit system, maintain a low level of government debt and strengthen the fiscal framework. The Icelandic krona has stabilised after the announcement of the agreement, and the CDS spread (the price of insurance against credit risk in Icelandic banks) has narrowed, but remains high.

Emerging market economies

The emerging market economies are still growing at a robust pace, but high inflation is a key challenge in many countries. In most countries, inflation is driven by food prices due to the larger food component in their price indices. These economies have only to a limited extent been affected by the financial turmoil, but they are facing a number of real economic challenges triggered by the slowdown in the industrialised countries, combined with inflationary pressures and strong domestic demand.

In *China* growth declined a little throughout 2007, but remains high. GDP growth was 10.6 per cent in the 1st quarter of 2008, compared with the same quarter of 2007. The decline is primarily attributable to weaker export dynamics, while growth is buoyed up by strong domestic demand in the form of investments and increasingly by private consumption. Inflation is a mounting concern, having risen from around 3 per cent at the beginning of 2007 to 8.5 per cent in April 2008.

In *India* GDP growth subsided gradually during 2007 in the wake of a number of measures to tighten monetary policy. In the 1st quarter of 2008, GDP grew by 8.8 per cent year-on-year compared with an annual growth rate of 9.2 per cent in 2007. After a downward trend in the 1st half of 2007, recent months have seen a marked increase in inflation measured in terms of wholesale prices.

THE DANISH ECONOMY: MONETARY AND EXCHANGE-RATE CONDITIONS

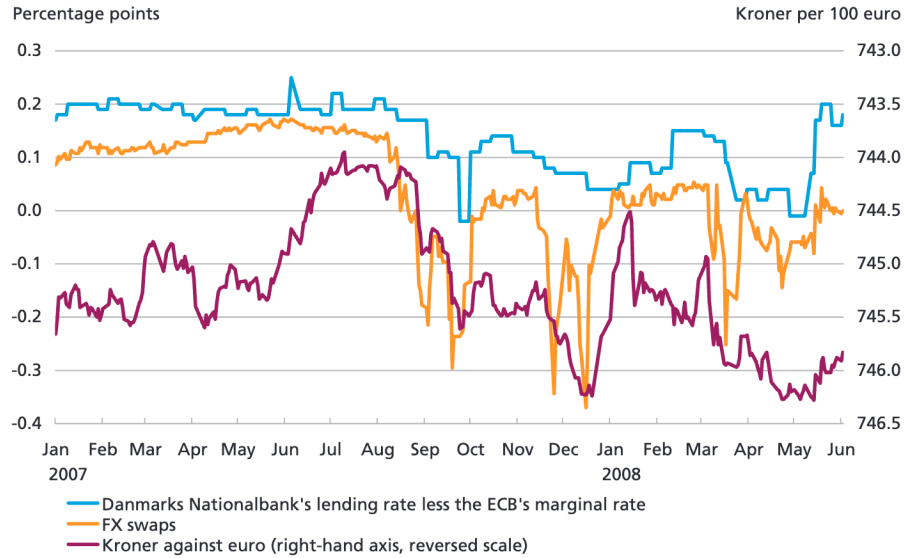
The money and foreign-exchange markets

The Danish krone has been stable around its central rate in ERM II. The krone weakened a little from the middle of January and was slightly weaker than the central rate against the euro at the end of April and the beginning of May. The weakening can be attributed to the narrowing of the short-term yield spread to the euro area in the light of the turbulence in the money markets.

Since the international financial turmoil spilled over into the money market of the euro area, the banks' demand for liquidity in the ECB's weekly tenders has grown. As a result, the ECB's marginal rate has normally been somewhat higher than the minimum bid rate. The spread between Danmarks Nationalbank's lending rate and the ECB's marginal rate narrowed by 0.15-0.2 percentage point from August 2007 until mid-May 2008, and was thus virtually non-existent, cf. Chart 7. It was even negative for short periods. Danmarks Nationalbank intervened in the foreign-exchange market to purchase kroner against foreign exchange

INTEREST-RATE SPREAD AND EXCHANGE RATES BETWEEN DENMARK AND THE EURO AREA

Chart 7

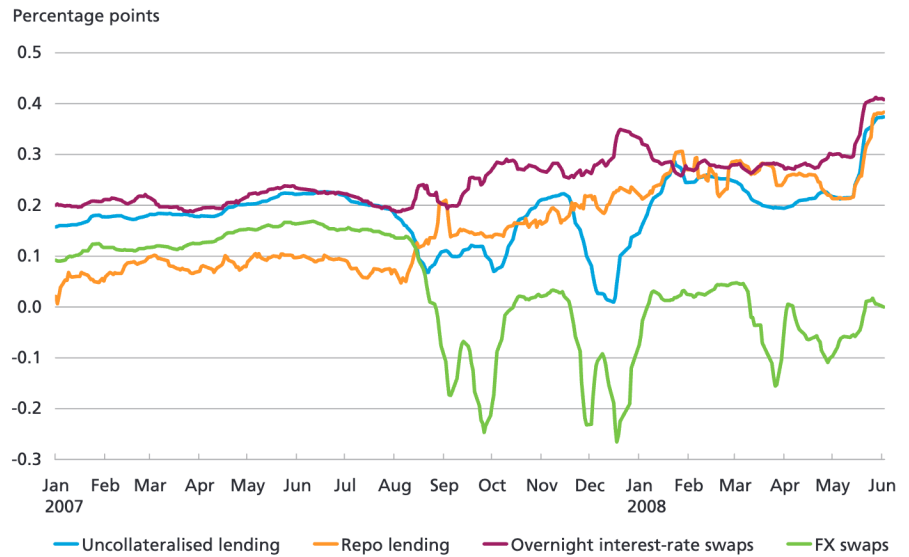


Note: The FX swap spread is determined on the basis of the forward premium for 3-month forward foreign-exchange transactions between kroner and euro.

Source: Danmarks Nationalbank.

3-MONTH INTEREST-RATE SPREAD BETWEEN DENMARK AND THE EURO AREA

Chart 8



Note: 5-day moving averages. The spread for uncollateralised lending is the Cibur-Euribor spread. The FX swap spread is determined on the basis of the forward premium for forward foreign-exchange contracts between kroner and euro.

Source: EcoWin and Danmarks Nationalbank.

for around kr. 20 billion from the beginning of April to mid-May, and the lending rate and the rate of interest for certificates of deposit were raised from 4.25 per cent to 4.35 per cent on 16 May. The discount rate and the current-account rate remained unchanged at 4.0 per cent. The foreign-exchange reserve was kr. 162 billion at end-May. After the interest-rate increase the spread between Danmarks Nationalbank's lending rate and the ECB's marginal rate widened, and the krone strengthened.

As a consequence of the turbulence in the money markets, the euro-kroner interest-rate spreads for different products showed diverging patterns, cf. Chart 8.

Since the beginning of March, a forward discount has predominantly applied to trading euro against kroner, as opposed to the forward premium usually applicable to such trading, cf. Box 3. This has resulted in a negative implied yield spread for FX swaps between kroner and euro. Owing to the forward discount, residents have been less inclined to enter into foreign-exchange transactions to hedge purchases of foreign securities, compared with previously. The narrow yield spreads have thus weakened the krone. Since the outbreak of the financial turmoil in the 2nd half of 2007, the krone rate has tended to mirror the development in the yield spread for actual monetary-policy operations and FX swaps, respectively, cf. Chart 7.

On the other hand, the money-market interest-rate spreads between Denmark and the euro area for uncollateralised lending, repo lending, and overnight interest-rate swaps have been higher than the implied interest-rate spread for FX swaps, by and large remaining at a level corresponding to the spread between Danmarks Nationalbank's lending rate and the ECB's minimum bid rate, cf. Chart 8.

The turbulence in the money markets is also reflected in the persistently high volatility of the spread between uncollateralised and collateralised money-market interest rates since the summer of 2007. After a considerable decrease from the turn of the year, the spread widened again during March and April, cf. Chart 9.

In ERM II the central rate for the Slovak koruna was revalued by 17.6472 per cent against the euro with effect from 29 May 2008. The fluctuation band is still +/- 15 per cent around the central rate. The conditions for the other ERM II currencies, including the Danish krone, are unchanged. The European Commission has proposed that Slovakia should join the euro area as from 1 January 2009. The proposal is expected to be adopted at the meeting of the Ecofin Council on 3 July.

Temporary secured lending facility at Danmarks Nationalbank

In the Danish money market, the impact of the international financial turmoil has almost entirely centred on the longer-term uncollateralised

FX SWAPS AND INTEREST-RATE SPREADS

Box 3

A number of different types of products are traded in the money market where banks lend money to each other at maturities of up to 1 year. Most loans have maturities of less than 7 days. This Box focuses on FX swaps, i.e. loans against foreign exchange as collateral. This is the most traded product in the money market.

FX swaps in the Danish money market are loans in kroner against foreign exchange as collateral. FX swaps can be seen as a simultaneous spot transaction and forward contract in foreign exchange: On settlement of the spot transaction, the borrower receives kroner against foreign exchange at the spot rate, and vice versa on settlement of the forward contract at a forward rate agreed already on execution of the spot transaction. The difference between the forward rate and the spot rate is the forward premium.

The forward premium theoretically reflects the covered interest-rate parity which can be approximated as follows for loans in kroner against euro:

$$(F-S)/S = r_{\text{DKK}} - r_{\text{EUR}}$$

where F is the forward rate and S is the spot rate (kroner per euro). The rates of interest for loans in euro and kroner, respectively, are r_{EUR} and r_{DKK} . The left side of the equation is an expression of the forward premium in per cent. The forward premium thus normally reflects the spread between collateralised money-market interest rates in Denmark and the euro area. This should be viewed in the light of the fact that payment flows in e.g. a 3-month FX swap from euro to kroner correspond to a 3-month placement in kroner and a 3-month loan in euro. The covered interest-rate parity applies under normal circumstances as arbitrage would otherwise be possible. During periods of turmoil in the financial markets, more systematic deviations from the covered interest-rate parity may be observed, e.g. if borrowing and investing freely at market interest rates are not possible. Consequently, the interest-rate spread between Denmark and the euro area that can be calculated implicitly on the basis of a forward premium does not correspond to the interest-rate spreads in the money market. A negative forward premium is called a forward discount, which entails a negative implied spread.

In general, differences in interest rates between the various money-market products reflect differences in credit risk, liquidity risk, supply and demand conditions, etc.¹ The rate of interest for uncollateralised products is typically higher than the rate of interest for collateralised products due to greater credit risk.

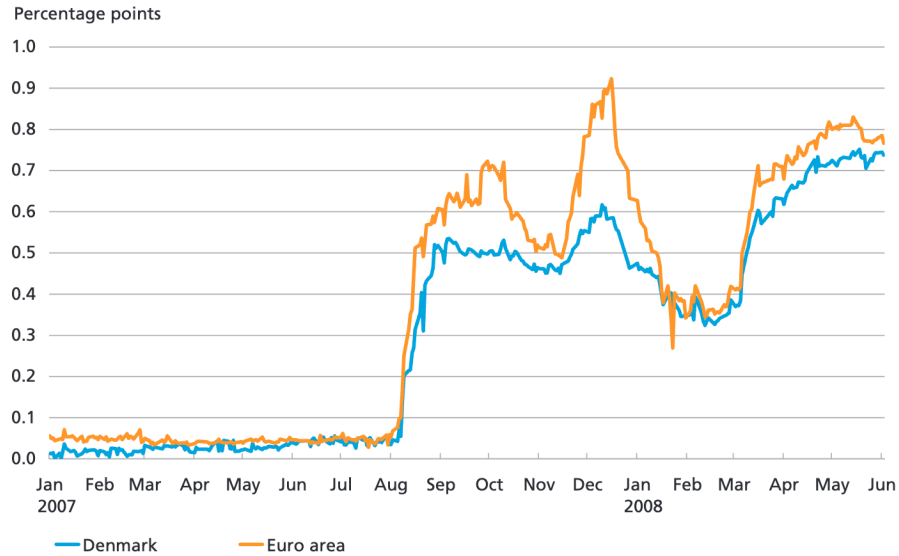
In addition, differences in interest rates may be caused by product-specific factors. For example, the rate of interest for loans with bonds as collateral, repos and FX swaps may be driven by demand for the underlying asset provided as collateral. Strong demand for the underlying asset will, all other things being equal, press down the interest rate in relation to the rate of interest for e.g. uncollateralised loans. As a consequence of the shortage of euro and dollar funding during the financial turmoil, the implied interest-rate spread for FX swaps with euro or dollars as collateral has generally been narrower than other money-market interest-rate spreads for Denmark. A number of other countries have also experienced a narrower implied interest-rate spread in FX swaps with dollars as collateral.²

¹ Cf. Morten Kjærgaard and Katrine Skjærbaek, Cibor, Danmarks Nationalbank, *Monetary Review*, 1st Quarter 2008, as regards calculation of the credit and liquidity premium in the spread between Cibor and overnight interest-rate swaps.

² Cf. Frank Packer and Teppei Nagano, The spillover of money market turbulence to FX swap and cross currency swap markets, *BIS Quarterly Review*, March 2008.

SPREAD BETWEEN UNCOLLATERALISED AND COLLATERALISED 3-MONTH INTEREST RATES

Chart 9



Note: Uncollateralised interest rates are 3-month Cibor and Euribor. Collateralised interest rates are 3-month swap rates in interest-rate swaps with the overnight interest rate as the reference interest rate.

Source: EcoWin.

money-market interest rates. The very short-term money-market interest rates have followed Danmarks Nationalbank's interest rates very closely.¹ There has been no need for extraordinary provision of liquidity to the money market by Danmarks Nationalbank as a consequence of the turmoil.

The turmoil has turned out to be persistent, however, and the banks have been reluctant to grant other banks uncollateralised loans at the longer maturities in the money market. In order to support the exchange of liquidity among Danish banks and mortgage-credit institutes, Danmarks Nationalbank in May opened a temporary 7-day secured lending facility that allows banks and mortgage-credit institutes to borrow against special loan bills issued by banks domiciled in the Kingdom of Denmark on standard terms and conditions set out by Danmarks Nationalbank, cf. Box 4. Danmarks Nationalbank accepts loan bills as eligible collateral from 23 May 2008 to 20 May 2009. This eligibility allows banks to include holdings of loan bills issued by other credit institutions in their liquidity pursuant to the Danish Financial Business Act.

Bank interest rates and credit

The banks' average interest rates in relation to the corporate sector rose by 0.2 per cent for deposits and 0.3 per cent for lending from July 2007

¹ Cf. the more detailed description on pp. 16-19 in Danmarks Nationalbank, *Financial stability*, 2008.

TEMPORARY SECURED LENDING FACILITY AT DANMARKS NATIONALBANK¹

Box 4

A bank wishing to borrow from another bank or mortgage-credit institute through use of loan bills issues a loan bill in its own name on standard terms established by Danmarks Nationalbank. Loan bills are zero-coupon securities, denominated in Danish kroner, registered at time of issue in VP Securities Services with VP as account controller, and with a maximum maturity of one year.

A lending bank or mortgage-credit institute buys loan bills from an issuing bank. Each bank or mortgage-credit institute can borrow at Danmarks Nationalbank against acquired loan bills up to a ceiling of 25 per cent of its end-2007 Tier-1 capital. For foreign banks' branches a calculated Tier-1 capital will apply. Each bank or mortgage-credit institute can pledge loan bills from an individual issuer only up to 75 per cent of the issuing bank's end-2007 Tier-1 capital.

A bank or mortgage-credit institute that wishes to borrow against loan bills at Danmarks Nationalbank must be a money-market counterparty for Danmarks Nationalbank. The issuing bank must be authorised as a bank by the Danish Financial Supervisory Authority (FSA) and be resident in the Kingdom of Denmark.

The bank or mortgage-credit institute that wants to borrow against loan bills at Danmarks Nationalbank and the bank that has issued the loan bills must not be linked as part of the same financial group, cf. the conditions for associates in section 181 of the Financial Business Act.

Banks and mortgage-credit institutes will be able to borrow against acquired loan bills at Danmarks Nationalbank weekly, at 7-day maturity. The facility will be open on the last banking day of the week between 10 am and 11 am.

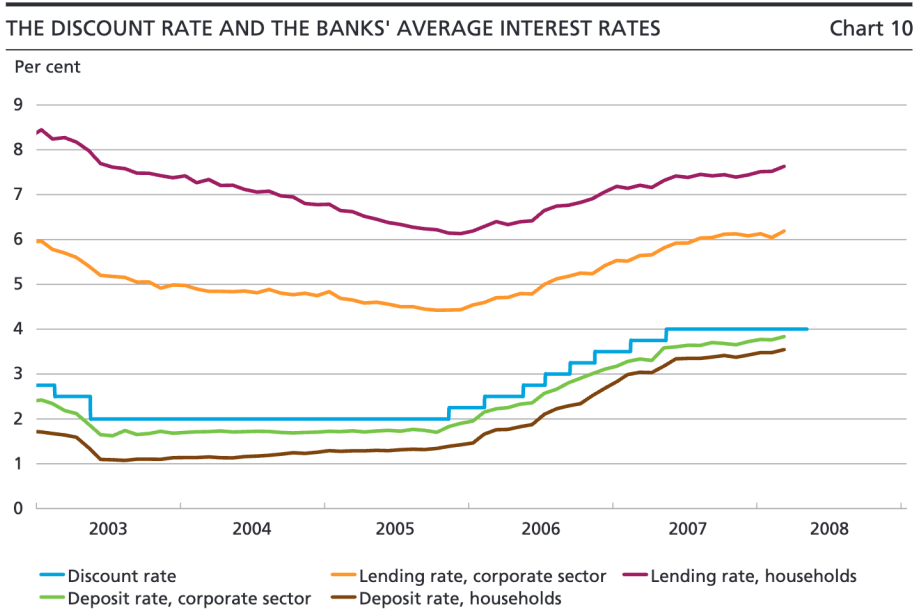
Loan bills to be used as security for borrowing at Danmarks Nationalbank must be transferred to a special custody account for loan bills at VP, which is pledged to Danmarks Nationalbank. The custody account will be established by Danmarks Nationalbank at the request of the bank that wishes to borrow against loan bills. Transfer to the custody account must take place no later than 4:30 pm on the day before the borrowing. Release of unencumbered loan bills from the pledged custody account takes place on request to Danmarks Nationalbank on the last banking day of the week after 12 noon.

When borrowing at Danmarks Nationalbank, a haircut of 10 per cent is applied to the nominal value of loan bills.

The interest rate on lending secured on loan bills will under normal circumstances be Danmarks Nationalbank's lending rate plus 1 percentage point.

The Danish FSA has stated that loan bills which are eligible for secured lending at Danmarks Nationalbank can be included in a bank's liquidity, cf. section 152 of the Financial Business Act, until one month before the expiry of this facility. When reporting its liquidity, the bank can include the nominal value of its eligible holdings of loan bills less the haircut.

¹ See also "Danmarks Nationalbank opens new secured lending facility", press release of 9 May 2008 and the related statements "Temporary Secured Lending Facility at Danmarks Nationalbank", "Terms and Conditions for Temporary Secured Lending Facility at DN" and "Terms and Conditions for Loan Bills" at Danmarks Nationalbank's website.



Note: The discount rate is on a daily basis. The other interest rates are monthly averages of outstanding business.
Source: Danmarks Nationalbank.

to April 2008, cf. Chart 10. The rates of interest in relation to households have risen by 0.2 per cent. Some banks announced further general interest-rate increases of 0.25-0.5 per cent in April and May. The increasing interest rates for corporate lending should be viewed in the light of the high number of loans that are associated with uncollateralised money-market interest rates. In addition, the banks have raised their lending and deposit rates, citing higher financing costs in the money and capital markets in connection with the international financial turmoil. The development has also led to intensified competition for deposits.

Overall growth in lending by banks and mortgage-credit institutes remained high, at 12.3 per cent year-on-year at the end of April, cf. Chart 11. Growth in lending to households has been declining since 2006.

THE DANISH ECONOMY: REAL ECONOMY

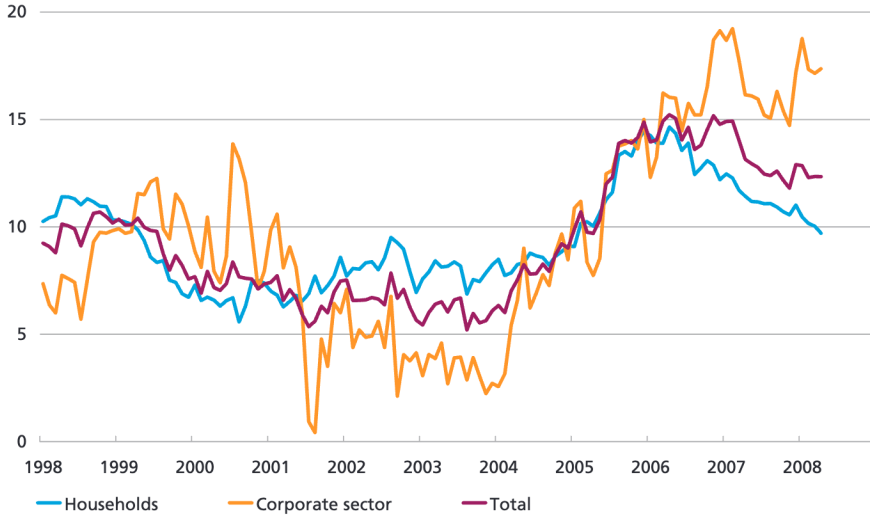
Economic activity, private consumption and the housing market

Growth in the Danish economy declined to 1.8 per cent in 2007 after a strong increase in the preceding years. No official figures are available yet for the development in GDP into 2008, but on the basis of the available data releases, the slowdown is estimated to have continued in 2008. The Danish economy remains close to its capacity limit where labour and capital shortages limit the scope for further growth.

GROWTH IN LENDING BY BANKS AND MORTGAGE-CREDIT INSTITUTES

Chart 11

Per cent, year-on-year



Note: Including lending by foreign units of Danish banks. Adjusted for the inclusion of FIH in the balance-sheet statistics for banks since January 2003. The corporate sector includes financial corporations (except MFIs) The total includes the public sector and lending not broken down by sector.

Source: Danmarks Nationalbank.

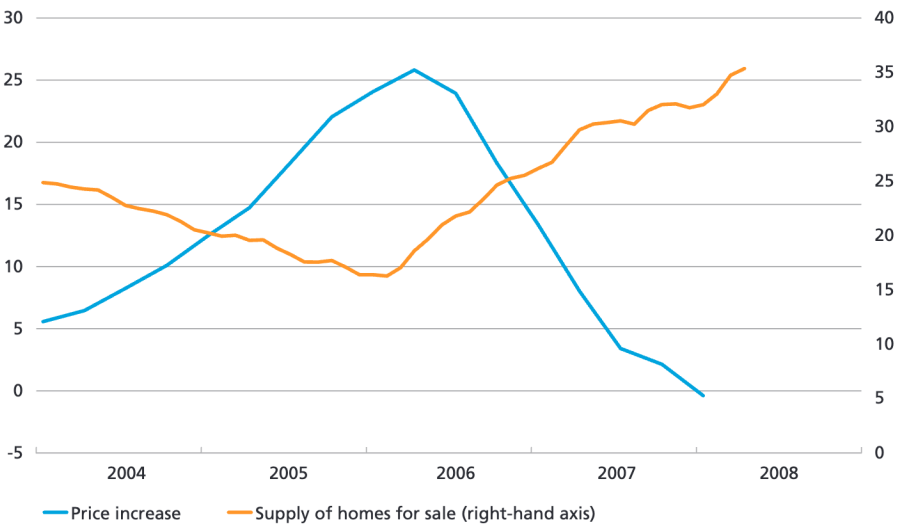
Viewed in isolation, the international financial turmoil and the resultant slowdown in global economic growth are estimated to curb growth in Denmark by around 0.5 percentage point annually in 2008 and 2009, cf. Box 5. Due to the high capacity utilisation under the current cyclical

PRICE INCREASE AND SUPPLY OF SINGLE-FAMILY HOUSES FOR SALE

Chart 13

Per cent, year-on-year

1,000 homes



Source: The property price and housing supply statistics of the Association of Danish Mortgage Banks.

THE REAL-ECONOMIC EFFECT OF THE SUBPRIME TURMOIL ON DENMARK

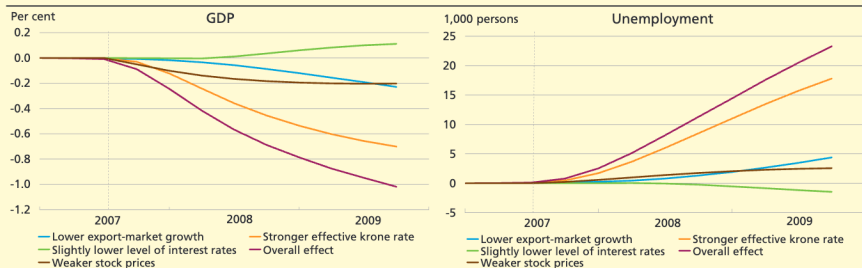
Box 5

The subprime turmoil has impacted on the Danish economy through several channels. Growth in the international economy has slowed down, and stock prices have fallen in many countries, including Denmark.

This Box analyses the effect of the turmoil on the basis of Danmarks Nationalbank's macroeconomic model, MONA. Specifically, Danmarks Nationalbank's latest forecast in Monetary Review, 1st Quarter 2008, is compared with an alternative scenario adjusted for the estimated consequences of the turmoil for export-market growth, interest-rate levels and stock prices as from the 3rd quarter of 2007. The calculation is thus based on a drop in stock prices by approximately 20 per cent in the period under review as a result of the turmoil, and on a slight decrease in bond yields. Since the calculation of the forecast in Monetary Review, 1st Quarter 2008, stock prices have rebounded considerably, and the effect of the subprime turmoil on bond yields has been all but eliminated.

DERIVED EFFECTS OF THE SUBPRIME CRISIS ON DANISH GDP AND UNEMPLOYMENT

Chart 12



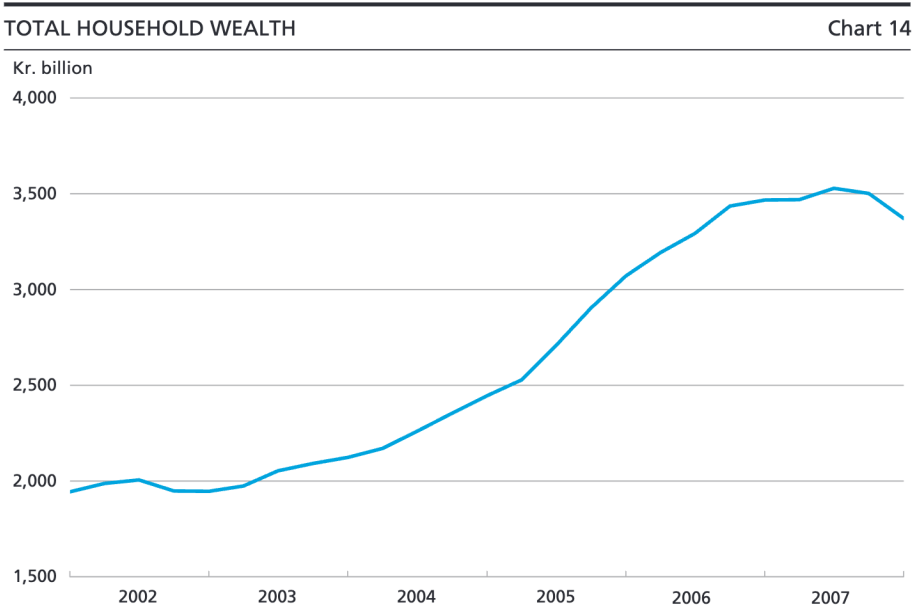
Note: Deviations from the forecast in Monetary Review, 1st Quarter 2008. The vertical, broken line represents the onset of the subprime crisis.

Source: Own calculations on Danmarks Nationalbank's macroeconomic model, MONA.

All derived effects – except the slightly lower level of interest rates – point to a dampening of economic activity. The overall effect on GDP constitutes 1 per cent by end-2009, cf. Chart 12. This corresponds to a reduction in annual economic growth by approximately 0.5 percentage point in both 2008 and 2009. Unemployment increases by almost 25,000 persons over two years.

The drop in stock prices undermines household wealth, which contributes to reducing private consumption and thus GDP, although the effect is relatively modest. This also applies to the weakening of export-market growth. The strongest effect stems from the strengthening of the effective krone rate by more than 2.5 per cent, notably due to the weaker dollar.

The effects are calculated in relation to the empirical correlations in the Danish economy under normal cyclical conditions. The effect of dampened demand on economic activity may be considerably less pronounced in the current situation with high capacity utilisation. The estimated effects should therefore be regarded as on the high side.



Source: Danmarks Nationalbank.

conditions, the actual effect may be somewhat smaller than the calculated effect.

The dampening of the housing market continued, and prices for single-family houses declined a little by 0.4 per cent year-on-year in the 1st quarter. Housing price inflation began to decrease in 2006 when the number of homes for sale rose significantly, cf. Chart 13, and the "for sale" period increased. The higher number of homes for sale reflects recent years' significant residential investments, among other factors. Another consequence of the slowdown is that potential home buyers show more restraint, while the high and stagnant prices have induced homeowners to put their homes on the market.

Overall household wealth has fallen since mid-2007, cf. Chart 14, primarily due to declining stock and housing prices. Nevertheless, total wealth has grown substantially during the sustained upswing, amounting to around kr. 1.3 million per household against just under kr. 0.9 million at end-2003. At the same time, the upswing has allowed the households to considerably expand private consumption without a drain on total wealth, cf. Box 6. Overall, the finances of Danish households are therefore still sound.

Higher employment and rising wages have contributed to increasing disposable real incomes for the households in recent years. In 2007, total employment rose by just over 50,000, and average real wages in the private sector grew by 2.0 per cent. Looking forward, unemployment is

HOUSEHOLD INCOME, CONSUMPTION AND SAVINGS

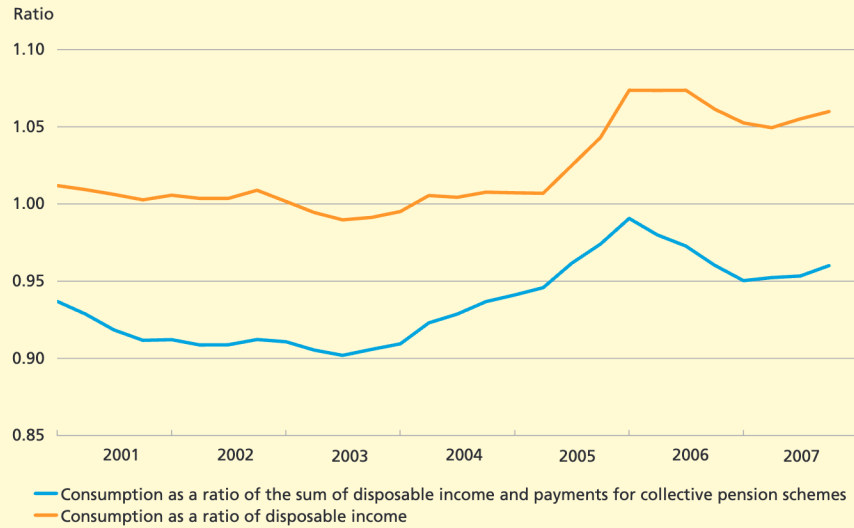
Box 6

The households' current savings are the difference between total income after tax and consumption. In order to obtain a true and fair view of the allocation of household income on consumption and savings, the income expression must necessarily include all savings, whether they are the result of a decision by the individual household or of collective schemes in the labour market. Since the compilation of household disposable income in the national accounts does not include contributions to collective pension schemes, i.e. labour-market pensions and ATP (Labour Market Supplementary Pension Fund), such contributions must be added to the disposable income.¹

Chart 15 shows recent years' development in private consumption in relation to household disposable income, as well as a broader expression of income in which collectively agreed pension contributions have been added to the disposable income. While the consumption ratio has risen during the economic upswing that began in 2003, consumption has not exceeded disposable income plus collective pension contributions. On the basis of the strong income growth in recent years, households have been able to significantly increase consumption without drawing on their wealth.

CONSUMPTION RATIO WITH AND WITHOUT COLLECTIVE PENSION CONTRIBUTIONS

Chart 15

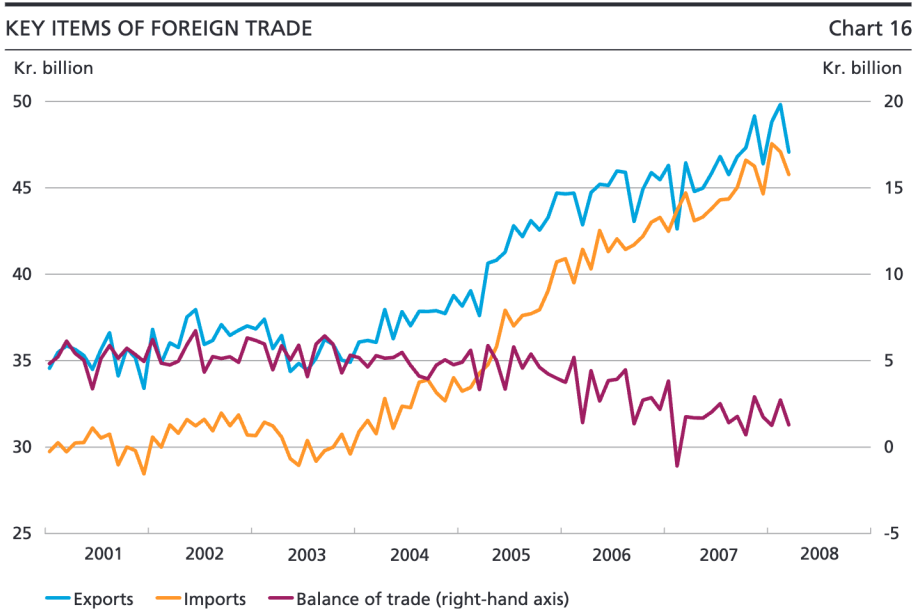


Note: 4-quarter moving averages.
Source: Statistics Denmark.

¹ More specifically, collectively agreed pension contributions include net payments for collective pension schemes plus the increase in pension wealth that can be attributed to investment income in the pension schemes.

expected to rise, but the current high rates of wage increase will prevail for some time to come. In addition, income-tax cuts are envisaged in 2008 and 2009. Overall, the households' real disposable incomes are expected to grow by more than 2 per cent in both 2008 and 2009.

On the basis of the households' sound, albeit slightly declining, net worth and prospects of rising disposable real incomes as well as virtu-



Note: Excluding ships, etc.
Source: Statistics Denmark.

ally unchanged housing prices in the near future, private consumption is expected to rise a little from the current high level.¹

Business investments reached a high level in 2007 and are not expected to contribute to higher demand in the next few years.

Foreign trade and balance of payments

The strong import growth continued into 2008, but at a more subdued pace, cf. Chart 16. Imports of goods to the corporate sector rose considerably, while imports for consumption were virtually unchanged after strong growth in recent years.

Despite the strong domestic demand, solid growth was also observed in exports of goods, and the balance of trade has fluctuated around a monthly surplus of just under kr. 2 billion since the spring of 2007.

Export growth in 2008 is primarily driven by an increase in manufactured exports as a result of sound export-market growth. The expected slowdown in these markets is reflected in declining growth in the export order books of industry.

Oil production in the North Sea is decreasing, but energy exports remain high in value terms due to the high oil prices. Rising oil prices benefit the balance of trade since Denmark is a net exporter of crude

¹ The interaction between consumption, income and wealth is described in further detail in Jan Overgaard Olesen, A Consumption Relation for Households (in Danish only), Danmarks Nationalbank, *Working Papers*, no. 51, April 2008.

oil. As a result of a number of factors, however, oil-price fluctuations have only a minor effect on the current account of the balance of payments, cf. Box 7.

The current account showed a deficit of kr. 6.1 billion in the 1st quarter, i.e. kr. 2.4 billion less than the deficit in the 1st quarter of 2007. Over the last 12 months the current account shows a surplus of almost kr. 25 billion.

Labour market and wages

Unemployment has continued to fall in 2008. The number of unemployed people was 49,100 in April, corresponding to 1.8 per cent of the labour force.

THE IMPLICATIONS OF OIL PRICES FOR THE BALANCE OF PAYMENTS

Box 7

Oil-price fluctuations impact on Denmark's balance of payments through several channels. Since Denmark is a net exporter of crude oil, its terms of trade improve when oil prices rise. This enhances the trade surplus. Conversely, higher oil prices imply higher bunkering costs, i.e. primarily costs for ships' purchases of fuel abroad. Recent years have seen a marked increase in the total volume of bunkering purchased by Danish ships due to the expansion of the merchant fleet. Consequently, oil-price fluctuations impact more strongly on bunkering costs now than previously. If the oil-price increase is passed through to freight rates, however, the higher bunkering costs will not impact on the balance of payments. Proceeds to abroad will increase as approximately 60 per cent of Danish oil extraction is owned by non-residents.

In addition to these price effects there are a number of volume-driven effects on the goods and service items due to the downward effect of the oil-price increase on both export-market growth and domestic demand.

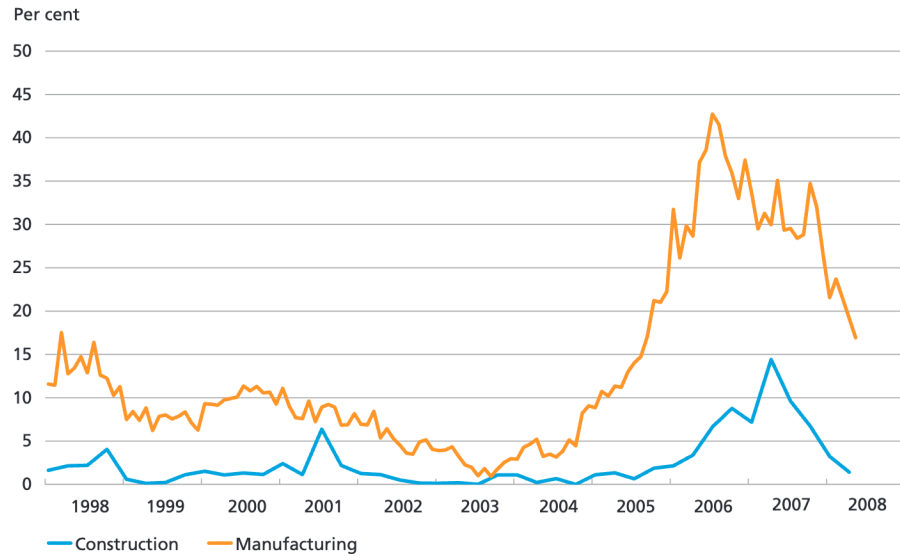
The production value of Denmark's oil extraction is estimated at kr. 68 billion in 2008, while the economic surplus net of costs for materials, investments and labour is estimated at kr. 56 billion, of which kr. 37 billion accrues to the state under the North Sea Oil Agreement of 2003. This leaves kr. 7 billion for the Danish corporate sector and kr. 12 billion for abroad.

Model calculations using Danmarks Nationalbank's econometric model, MONA, show that an oil-price increase by 10 per cent has only a relatively limited impact on the current-account balance. If bunkering costs are added to trade in energy products, Denmark's imports and exports of energy products are roughly the same size, so the effect of oil-price fluctuations on the balance for energy products is limited, assuming that freight rates are not increased due to the rising oil prices.

The erosion of the households' purchasing power dampens the demand for other goods both in Denmark and abroad. The decrease in imports is stronger than that in exports, however, which results in the balance of goods rising by kr. 1.4 billion in the first year after an oil-price increase. This is offset by growth in proceeds for the foreign owners of Danish oil extraction by kr. 1.1 billion. The net result is an almost unchanged balance of payments.

LABOUR SHORTAGES

Chart 17



Note: Labour shortage is an expression of the share of employees in the relevant sector who are employed in enterprises that view labour shortage as a production-restraining factor.

Source: Statistics Denmark and own seasonal adjustment.

The strong growth in output and employment in recent years has exerted massive pressure on the labour market and entailed a pronounced labour shortage. Confidence indicators show that there is hardly any labour shortage left in manufacturing, while it still prevails in the construction sector, cf. Chart 17. The public sector is experiencing considerable labour shortages in a number of professions.

The pressure on the labour market has contributed to high wage demands from the employee side in the spring collective bargaining for the public sector. Bargaining has been concluded for the central government, but is still going on for some employees in local and regional government. The general framework for the collective agreements concluded is around 13 per cent over three years, including the expected outcome of the regulation scheme that will ensure parallel wage development in the private and public sectors. However, several elements of the new collective agreements are kept out of the regulation scheme, which will boost wage growth in the public sector, all other things being equal, over the term of the collective agreement. The agreed wage increases are strongest in 2008, and the annual wage increases in the public sector are expected to reach 5-6 per cent towards the end of the year.

In the private sector, labour shortages have pushed up wage increases to a high level. In the 1st quarter, the overall rate of wage increase for

the area covered by the Confederation of Danish Employers was 4.6 per cent year-on-year, cf. Chart 18. The pace of wage increases has thus reached a level that is unsustainable in the longer term.

For several years, the rate of wage increase has been higher in Denmark than abroad, the countries being weighted according to their importance to Denmark's foreign trade: 1 percentage point higher in the 1st quarter of 2008. Wage competitiveness is also squeezed by the strong depreciation of the dollar, which has brought the krone to the highest level for 25 years. The development in Denmark's wage competitiveness in a longer perspective is described in a separate article on p. 81.

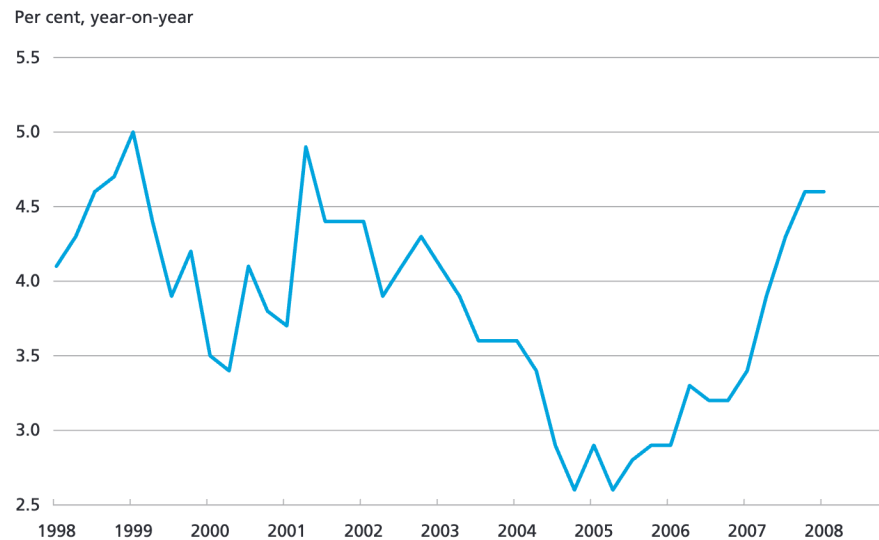
Prices

In April, the Harmonised Index of Consumer Prices, HICP, rose by 3.4 per cent year-on-year. Price inflation has been rising since the 3rd quarter of 2007 and has now reached the highest level ever in the just over 11 years of the HICP series. The higher consumer price inflation is primarily driven by strong increases in energy and food prices. Price inflation for the other goods and services in HICP – core inflation – has been moderate at 1.5 per cent year-on-year in April.

The increases in energy and food prices are mirrored in wholesale commodity prices, including notably fuel and raw materials for agri-

WAGE INCREASES IN THE AREA COVERED BY THE CONFEDERATION OF DANISH EMPLOYERS (DA)

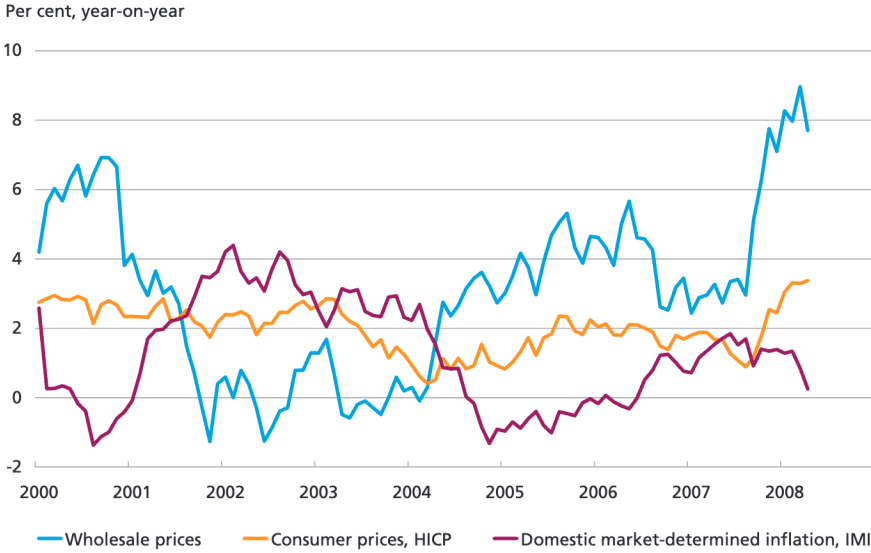
Chart 18



Note: Wage development in the DA area taken as one.
 Source: The Confederation of Danish Employers.

CONSUMER AND WHOLESALE PRICES

Chart 19



Note: Wholesale prices are the overall price index for the domestic supply of goods.
 Source: Statistics Denmark and own calculations.

culture. Wholesale prices have accelerated since September, and the year-on-year increase was 7.7 per cent in April, cf. Chart 19. On the other hand, moderate increases are still observed in the wholesale prices for many other goods that are not directly influenced by commodity prices. This applies to both means of production and non-food consumer goods.

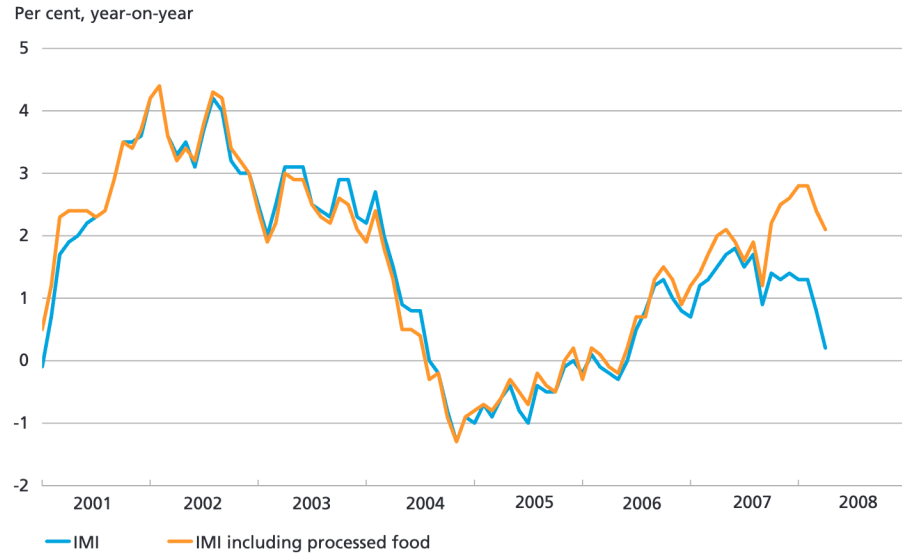
Domestic market-determined inflation, IMI, is an indicator of the price pressures from payroll costs and profits. It has shown a declining trend since mid-2007. In the calculation of IMI, a number of elements are excluded from the consumer price index, e.g. food prices since they are affected by special factors such as harvest and weather. IMI thus fails to capture the latest increase in food prices, which has pushed consumer prices upwards overall.

Despite the significantly higher commodity prices, the increase in consumer prices for food is partly attributable to higher domestic payroll costs and profit margins, including for Danish farmers. If unprocessed foods (meat, fish, fruit and vegetables) only are excluded from consumer prices in the calculation of IMI,¹ the result is a quite different pattern

¹ Neither theory nor practice can determine whether the most accurate IMI calculation is obtained by eliminating all food, beverages and tobacco or unprocessed food only. Eurostat thus calculates two measures of core inflation in the euro area, based on each delineation of excluded food, and the ECB applies both measures in its analyses of inflation in the euro area. The alternative delineations of food in the Danish IMI are described in more detail in Bo William Hansen and Dan Knudsen, *The Cyclicity of Domestic Prices*, Danmarks Nationalbank, *Monetary Review*, 4th Quarter 2006.

IMI WITH AND WITHOUT PROCESSED FOOD AND BEVERAGES AND TOBACCO

Chart 20



Source: Statistics Denmark and own calculations.

since October, cf. Chart 20. IMI including processed food rose to almost 3 per cent year-on-year from October to February, compared with approximately 1.3 per cent year-on-year for the conventional IMI in the same period.

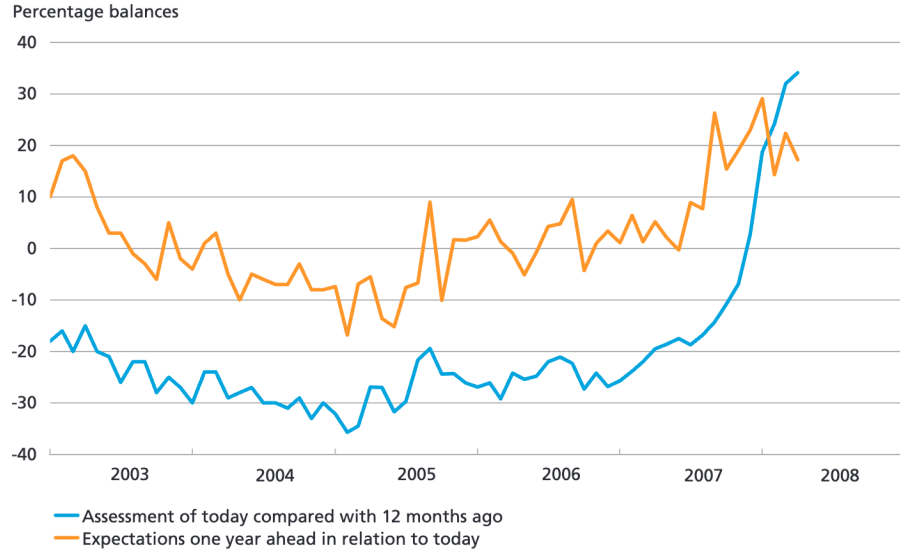
Irrespective of the delineation of food, IMI declined in March and April. This is related to energy and import price inflation as the estimated indirect content of this inflation in consumer prices is eliminated from the calculation of IMI. Experience shows that such imported price increases are passed on to consumers with a certain lag. The imported price increases are initially borne by business enterprises by way of reduced profit margins and thus a lower IMI. The development in recent months thus indicates that consumer prices will rise further in step with the business enterprises' adjustment of their prices as a consequence of higher prices for energy and imported goods. Rising payroll costs for the business enterprises also contribute to higher prices.

Consumers have noticed the higher food and energy prices. According to Statistics Denmark's monthly survey, the share of consumers reporting that prices have risen has grown significantly since the late summer, cf. Chart 21. The share of consumers expecting price increases in the coming year rose in the 2nd half of 2007, and the higher level of expectations of price increases has continued into 2008.

Despite the slowdown in economic growth, the strong pressure on the Danish economy and especially the labour market will continue. This

ASSESSED AND EXPECTED PRICE DEVELOPMENTS

Chart 21



Note: A rising percentage balance indicates that more and more consumers say that the price level has increased over the last year or that they expect further increases within the coming year.

Source: Statistics Denmark.

makes it imperative not to ignore the risk of an unsustainable course of prices and wages and rising inflation expectations. Against this background, it is important that fiscal policy in 2009 does not stimulate demand.

Theme – Aspects of Globalisation

INTRODUCTION AND SUMMARY

There is no single definition of globalisation, but it is often characterised as a dynamic process with an increasing tendency for goods, services, labour and capital to move freely, coupled with global exchange of technology, knowledge and ideas – in other words, development of a kind of single market at the global level.

Globalisation is an expression of growing interdependency in the global economy and thus still keener competition in the international markets, influenced by developments in a number of emerging markets, including China and India. Several factors have contributed strongly to the process, with the development of technology and communication, as well as improved means of transport, as the main drivers. Globalisation enhances international competition while boosting productivity via better and more efficient distribution and application of the factors of production.

The impact of globalisation on inflation is particularly interesting for central banks, whose primary objective is often to ensure price stability. Efficient and reliable monetary policy centred on this objective has been essential to the considerable success of central banks worldwide for almost two decades in terms of curbing inflation and subsequently maintaining price stability. Low inflation was thus achieved before globalisation became a key theme in economic policy debates. It is generally believed that globalisation has both aided and impeded central banks in their efforts to ensure price stability. The negative impact has become more pronounced recently.

Globalisation has led to a fall in the relative prices of imported processed goods against the backdrop of soaring output in a number of emerging markets, including in Asia. At the same time, intensifying global competition and migration of cheap labour have dampened wage developments in the industrialised world. According to calculations by the European Central Bank, ECB, the price of e.g. manufactured goods (such as energy), which cover approximately 30 per cent of private consumption, rose by only around 0.7 per cent p.a., i.e. substantially less than prices overall, in the period 1999-2007.

Recently, focus has been on the surging energy and food prices, which are to a large extent attributable to rapidly growing demand in China

and other emerging markets, although various other factors also play a role, as outlined in the chapter on recent economic and monetary trends. Production in these economies is far more energy intensive than in traditional industrialised countries. Calculations by the International Monetary Fund, IMF, show that the emerging markets and the developing countries jointly account for approximately 95 per cent of the growth in the demand for oil since 2003. Combined with increasing supply-side limitations, this has pushed up real oil prices to the highest level in recent years, somewhat above the 1979 level, while real food prices remain below previous historical peaks.

These developments have brought global inflation to a level of 5½ per cent, up from less than 4 per cent in recent years. Consequently, there have been growing international concerns about inflation risks, including the risk that the temporarily high inflation rates will trigger "second-round" effects in wage and price formation. This risk is monitored closely by central banks in their efforts to anchor inflation expectations at a level that is compatible with price stability.

This Monetary Review includes three articles on issues that are linked to various economic consequences of globalisation – the first two with a specific Danish angle.

The first article, *Globalisation, Labour Market and Inequality*, discusses the impact of globalisation on remuneration of labour and on the degree of income inequality in society. Globalisation and the technological development have contributed to rising real wages in Denmark. Thanks to globalisation, Danish output has moved up the value chain, thus selling at higher prices, while on the other hand consumers benefit from low-cost imports from low-wage countries. This accounts for around 25 per cent of the increase in real wages since 1980. At the same time there has been downward pressure on the share of value creation that accrues to labour, i.e. the wage share has been declining while the profit share has been rising. The same pattern is observed in other industrialised countries. Globalisation and technological advances in general also tend to increase income inequality across individuals. The Danish social model to a large extent counters this underlying trend.

The second article, *Globalisation and Danish Direct Investments*, focuses on the breakdown by country and industry of Danish foreign direct investment (FDI), while also illustrating the employment effects in Denmark when Danish business enterprises increasingly engage in foreign activities. Danish FDI is still mainly concentrated in countries geographically close to Denmark, as is Denmark's trade in goods. The share of Danish FDI that goes to e.g. China has been rising in recent years, but remains low, although China is in the global top five in terms of inward

FDI according to estimates for 2006. On the other hand, investments in Denmark by China and other BRIC countries (Brazil, Russia, India and China) are virtually zero. The analysis points to a continued structural shift from manufacturing to service in the Danish economy. This may influence demand for labour with specific qualifications and within certain professional groups. Consequently, the economy must be adaptable and prepared for change, not least in terms of labour market conditions and education and training.

The third article, *Foreign-Exchange Reserves and Sovereign Wealth Funds*, illustrates how such Sovereign Wealth Funds (SWFs) differ from traditional foreign-exchange reserves in central banks in terms of management and risk profile. Central banks typically incur large risks in relation to exchange-rate fluctuations and gold, which has historically yielded low risk-adjusted returns. The aggregate central-bank risks may thus be perceived as high in relation to net capital. In contrast, investments in SWFs are spread out on other asset types, which – viewed in isolation – ensures better diversification and higher potential returns. SWFs may thus assume risks in the expectation of a higher reward. Central banks also have to take monetary policy into account, whereby they incur considerable exchange-rate risk and costs for financing their foreign-exchange reserves.

SWFs have grown substantially in recent years, particularly against the background of high oil and commodity prices, financial globalisation and major imbalances in the global financial system, which have resulted in strong growth in the accumulation of foreign assets in surplus countries, notably China. SWFs have thus become still more important players in the international monetary and financial system; a trend which is expected to continue. The IMF estimates that the aggregate wealth held by SWFs will increase from 2-3 trillion dollars today to 6-10 trillion dollars within five years. For comparison, total foreign-exchange reserves (excluding gold) were in the range of 5 trillion dollars in 2007.

Globalisation, Labour Market and Inequality

Erik Haller Pedersen, Economics

INTRODUCTION AND SUMMARY

This article¹ describes a number of potential implications of the growing integration of low and medium-income countries into the world economy. It focuses on the effect of globalisation on the remuneration of labour and on the degree of income inequality in society.

Both globalisation and the technological development have contributed to rising real wages in Denmark. Thanks to globalisation, Danish output has moved up the value chain, thus selling at higher prices, while on the other hand consumers benefit from low-cost imports from low-wage countries. This accounts for around 25 per cent of the increase in real wages since 1980. At the same time there has been downward pressure on the share of value creation that accrues to labour, i.e. the wage share has been declining while the profit share has been rising. The same pattern is observed in other industrialised countries.

Globalisation and technological advances in general tend to increase income inequality across individuals. The Danish social model to a large extent counters this underlying trend.

GROWTH IN THE GLOBAL LABOUR FORCE

The global population has grown by 60 per cent or 1.5 billion people over the last 25 years, cf. Table 1. The population growth almost entirely occurred in low and medium-income countries, including China and India. At the same time, technological advances and the removal of barriers to international exchange of capital, goods and services have led to higher output specialisation across countries. This has boosted international trade. Immigration flows have also increased, though far less than trade flows.

¹ The article is based on IMF (2007a), Chapter 5.

POPULATION GROWTH AND OPENNESS

Table 1

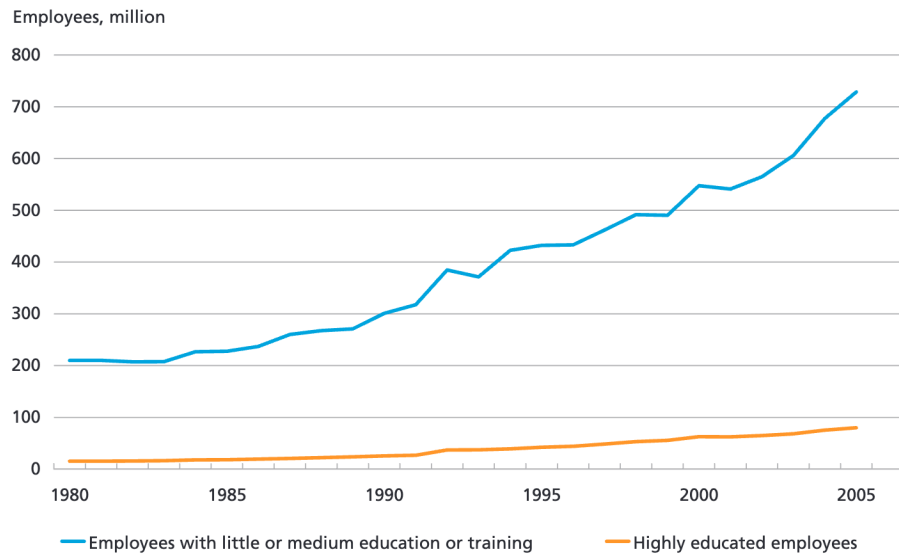
	Population aged 15-59		Change 1980-2005	Openness	
	1980	2005		1980	2005
	Number, million			Per cent of GDP	
World	2,503	3,997	1,494	42.0	58.3
Industrialised countries	672	764	92	44.2	55.6
Non-industrialised countries, excl. China and India	884	1,673	789	40.5	65.7
China	570	885	315	14.3	65.0
India	377	675	298	16.4	37.3

Note: "Openness" shows the sum of exports and imports of goods and services in per cent of GDP.
 Source: IMF World Economic Outlook database 2007 and UNCTAD Handbook of Statistics On-line.

An estimate of the global labour force, measured as the part of the labour force which is competing in the international market, can be obtained by weighting the development of a country's labour force by the degree of openness, i.e. the sum of exports and imports as a ratio of GDP. Applying this measure, the International Monetary Fund, IMF, estimates that the global labour force has quadrupled over the last 25 years, cf. Chart 1. The rapidly increasing degree of openness makes the global labour force grow more than warranted by demographic developments alone. The number of people with little education or training in low and medium-income countries has shown a particularly high

THE GLOBAL WORKFORCE IN COMPETITIVE TRADES

Chart 1



Note: The workforce was estimated by weighting it by the degree of openness across countries.
 "Highly educated employees" shows the number of persons in the workforce who have a university degree.
 Source: IMF (2007a).

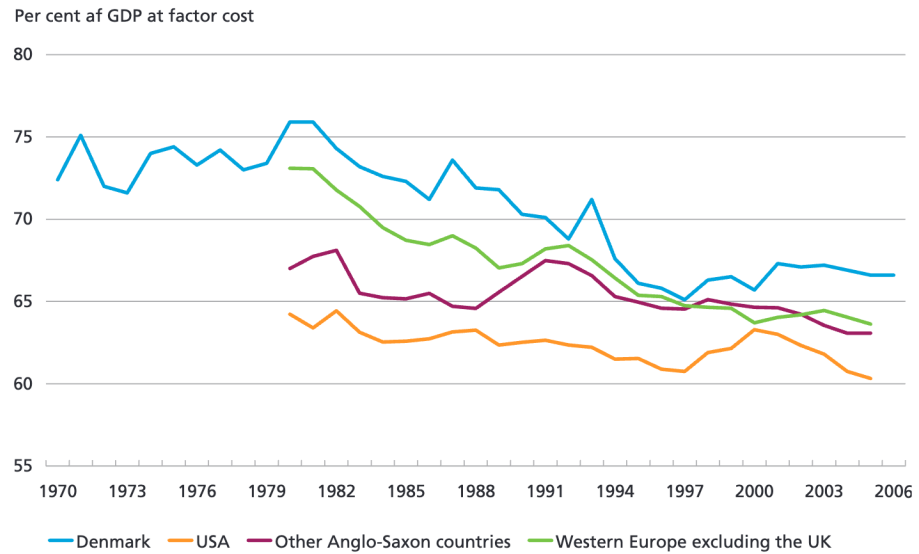
growth rate. Consequently, the labour force in the industrialised countries increasingly competes directly with the labour force in low and medium-income countries where wages are typically considerably lower, the spread between low and high-income groups is wider and working conditions are poorer.

POTENTIAL IMPLICATIONS OF AN INCREASE IN THE GLOBAL LABOUR SUPPLY

Globalisation has many facets, but this article focuses solely on the potential implications of an increase in the global labour supply. Strong growth in global labour makes labour more abundant relative to other production factors, including capital. According to classic economic theory this should lead to a decline in the remuneration of labour (the relatively less scarce production factor) compared with the remuneration of capital (the relatively scarcer production factor). Depending on the substitution ratios between labour and capital, this should result in a declining wage share, defined as remuneration of labour relative to overall income creation in the economy (GDP at factor cost). This is also what the figures show, cf. Chart 2.

WAGE SHARES, WHOLE ECONOMY

Chart 2



Note: The "wage share" measures payroll costs relative to overall value creation in the economy. The calculation of wage shares includes wages for the self-employed. It is assumed that the payroll costs per self-employed person correspond to the payroll costs per employee. The number of self-employed persons has gone down considerably in all countries over the period. "Other Anglo-Saxon countries": Australia, Canada and the UK. "Western Europe, excluding the UK": Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain and Sweden.

Source: IMF (2007a) and Statistics Denmark.

In future, the downward pressure from globalisation on the wage share may subside, as the degree of openness cannot keep rising at the same pace as it has for the past few decades. At the same time the population growth is decreasing. On the other hand, many low and medium-income countries still have large population groups outside the part of the economy that competes internationally.

The increased supply of labour is not the only possible explanation of a declining wage share. Ellis and Smith (2007) point out that the rate of technological progress has accelerated. The higher the level of innovation, the faster the capital stock becomes obsolete and has to be scrapped, which leads to increased depreciation and dismissal of the related labour. This has strengthened the bargaining position of enterprises in relation to their staff, which may shift the distribution of income towards profits at the cost of wages. The more flexible the labour market is, the less plausible this explanation becomes.

The wage share is influenced not only by global conditions. Denmark is an oil and gas producing country and will as such be affected by the level of oil prices. The current high energy prices lead to excessive oil and gas production profits, which, all things being equal, will raise the profit share, calculated as 100 minus the wage share.

Calculating the wage share for the economy as a whole involves several compilation problems. For the public sector, GDP at factor cost is calculated on a cost basis, i.e. without a profit element. The wage share is thus artificially high in this sector. The opposite applies to the owner-occupied housing sector's contribution to GDP at factor cost, which is compiled as an imputed return, reflecting, in principle, what a lessee would have to pay for a similar housing service. However, the imputed contribution to GDP at factor cost is not matched by any enterprise income, as the housing service is consumed by the homeowners themselves and thus cannot be distributed as payroll costs. This implies a very low wage share in the owner-occupied housing sector.

In general, the strongest decline in the wage share has been observed in the sectors most exposed to competition from low and medium-income countries. Thus, the wage share for the economy as a whole is also affected by sector shifts in employment.

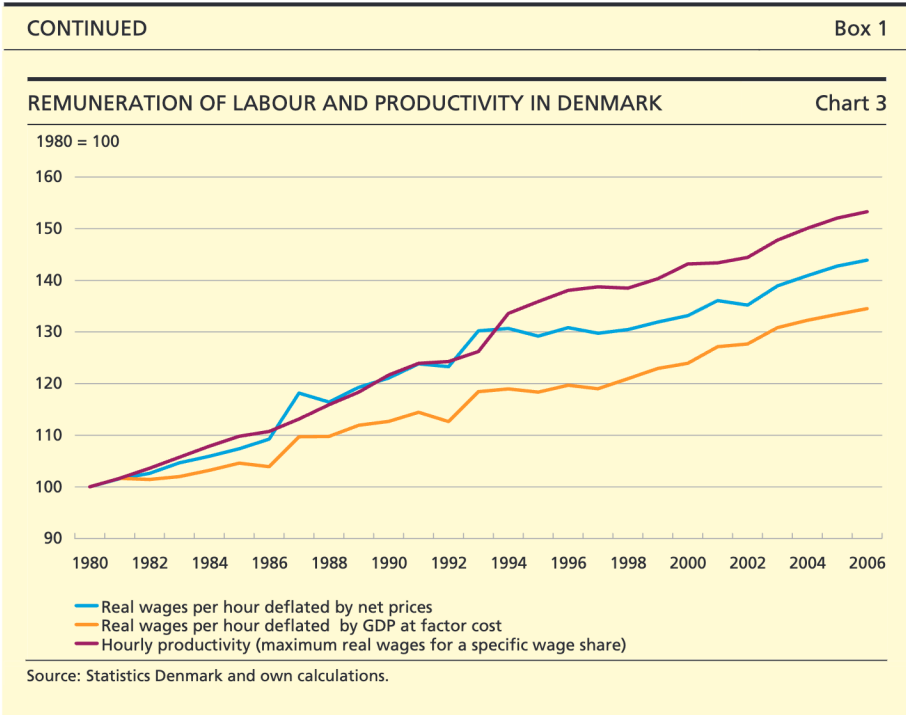
After a considerable period of decline, the wage share in Denmark has increased slightly over the last decade, while continuing to decrease in other European countries. Historically, the wage share in Denmark has been high compared with other countries. One of the reasons is that Denmark's relatively large public sector makes for a high wage share, because it is very "wage intensive" in relation to other sectors, and because the sector's GDP at factor cost is compiled without a profit element.

GLOBALISATION AND CAPITAL REMUNERATION IN DENMARK

A declining... on globalisa... benefited fr... years. The c... trated in Bo

itself an indication of labour losing out... wage earners have to a large extent... international specialisation over the last 25... real wages and the wage share is illus-

CORRELATION	WAGE SHARE AND PRODUCTIVITY	Box 1
<p>The wage share (GDP at factor cost), and productivity</p>	<p>costs relative to total value creation (GDP at factor cost). The correlation between wage share, real wages and productivity is shown in the following conversion:</p>	
<p>Wage share = $\frac{\text{GDP at factor cost}_{\text{constant prices}}}{\text{GDP at factor cost}_{\text{deflator}}}$</p> <p>= $\frac{\text{GDP at factor cost}_{\text{constant prices}}}{\text{hours} \times \text{hourly wages}}$</p>	$\frac{\text{GDP at factor cost}_{\text{constant prices}}}{\text{GDP at factor cost}_{\text{deflator}} \times \text{GDP at factor cost}_{\text{constant prices}}} = \frac{\text{GDP at factor cost}_{\text{constant prices}}}{\text{hours} \times \text{hourly wages}}$ <p style="text-align: center;"><i>productivity</i></p>	
<p>The numerator is measured by the price, excluding the employee's... The denominator... Firstly, the... in that real... deflator) can... Over the last... this way. The... productivity... Secondly, measured by... services produced... Danish output... by importing... on the basis... been weaker... difference is... calculated in... increase in... and the overall... failure of pa</p>	<p>...es the development in real wages per hour before tax by the index of net retail prices, i.e. paid by the consumer. It is an expression of the wages earned¹.</p> <p>...s:</p> <p>...ductivity. Productivity sets limits to real wages deflated by producer price (GDP at factor cost) than productivity only if the wage share rises. ... increased more than real wages calculated in... have not entirely been able to keep up with... share to decline.</p> <p>...ween the price of finished goods/services, deflator, and net prices. The prices of goods and services produced have increased more than net prices. This indicates that... value chain, while net prices are kept down... countries, including China. Thus, when calculated... deflator, the increase in real wages per hour has... net prices as the deflator, cf. Chart 3. The... sumers' direct gain from globalisation. When... accounts for approximately 25 per cent of the... responding to the difference between the blue... t this "terms-of-trade gain" makes up for the... productivity.</p>	



¹ Net prices rather than consumer prices have been used. If hourly wages before tax are deflated by consumer prices, real wages are not affected by an increase in direct taxation. On the other hand, an indirect tax increase would cause a decrease in real wages. As an increase in direct taxation is synonymous with indirect tax increases in this context, this asymmetry is unfavourable. Wages before tax deflated by the index of net retail prices is therefore a better measure. It is a net amount in as much as it is neither affected by direct nor indirect taxation changes.

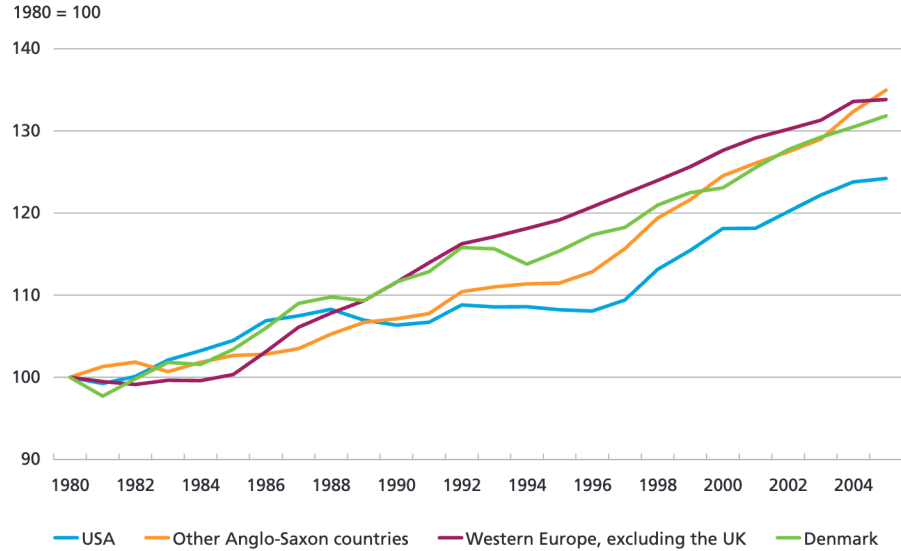
² The calculation used is a pure ex post calculation and makes no attempt to explain wage formation. The wage level may be influenced by both prices and taxes.

Chart 4 shows an international comparison of remuneration in real terms per capita, which has been steadily rising. In the case of Denmark, remuneration in real terms per capita increased slightly less than remuneration in real terms per hour as shown in Chart 3, as hours worked per capita has declined over time.

The profit share is the part of value creation that does not accrue to wages. The profit share can be measured in both gross and net terms. Thus, depreciation on real capital should typically be excluded from the gross profit share to obtain the real remuneration of the capital owners. The proportion of the value added that must be earmarked for depreciation has grown over time, mainly due to a lower average capital life, especially for IT investments. On the other hand, no trend-related increase in the capital intensity of output, measured as the value of the capital stock against GDP at factor cost, has apparently been observed for the economy as a whole. The measurement is subject to considerable uncertainty, however.

REMUNERATION PER CAPITA IN REAL TERMS

Chart 4

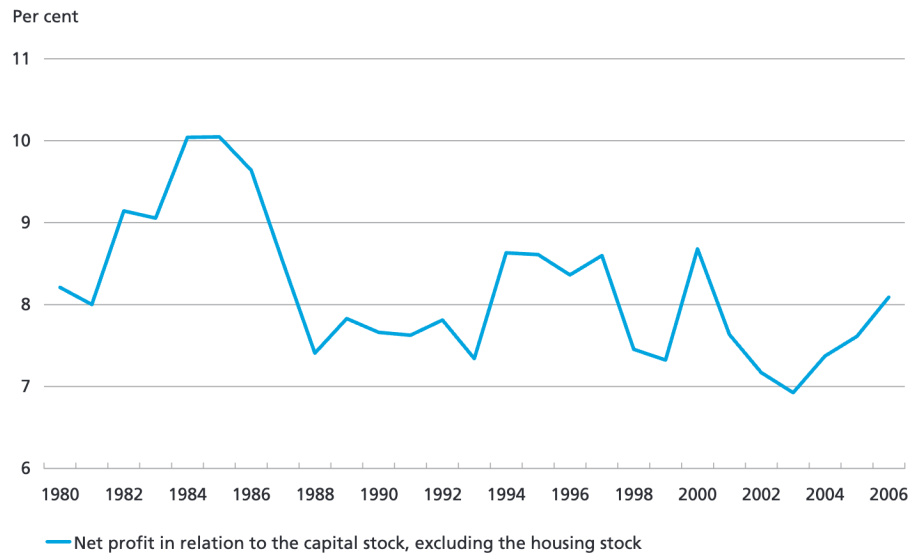


Source: IMF (2007a) and Statistics Denmark.

Excluding the housing stock, the return accruing to capital net of depreciation has been flat since the late 1980s, cf. Chart 5. This is a real rate of return, which may be compared with a risk-free interest rate plus a risk premium. Since there has been no increase in the capital intensity, as

REMUNERATION OF CAPITAL IN DENMARK

Chart 5



Note: The housing stock has been excluded from the capital stock, and net profits have been adjusted correspondingly. Source: ADAM databank and own calculations.

mentioned above, the result is largely the same whether the net profit is compared with GDP at factor cost or the value of the capital stock.

Labour will share the benefits of the profit share through direct or indirect ownership of the capital stock, e.g. in connection with pension savings invested in shares, but the distribution of assets is much more uneven across individuals than the distribution of income, cf. Hornstrup and Madsen (2000).

PAYROLL COSTS FOR HIGHLY EDUCATED EMPLOYEES AND EMPLOYEES WITH LITTLE EDUCATION OR TRAINING – AN INTERNATIONAL COMPARISON

International output specialisation in the countries where production of certain goods or services is most efficient enhances international trade and prosperity¹. The disadvantages of globalisation tend to be concentrated, whereas the benefits are more widespread. While the disadvantages are mainly caused by adjustment costs, e.g. temporary unemployment in the event of outsourcing, the benefits are typically lower price increases as a result of increased imports from low-wage countries.

As illustrated in Chart 1, the share of the global workforce of employees with little education or training has shown particularly strong growth, especially in low and medium-income countries. Due to international specialisation, production requiring this type of labour is outsourced to low and medium-income countries². To a certain extent, labour movement is also caused by people with little education or training migrating to high-income countries. Both situations may put pressure on wages for employees with little education or training compared with highly educated employees in the industrialised countries. A study of Danish data by the Rockwool Foundation indicates that the immigration of people with little education or training to Denmark from less developed countries has put pressure on the wages of Danish employees with little education or training, cf. Malchow-Møller, Munch and Skaksen (2007). Viewed in isolation, this will tend to increase income inequality in society.

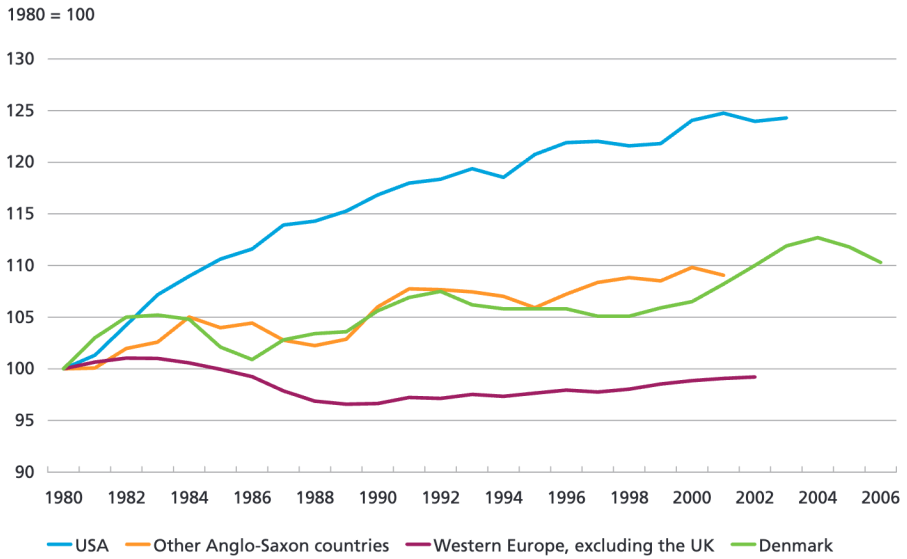
In addition to the effect of increased international specialisation and trade on the distribution of income, there is an equally important technology effect. Technological developments tend to amplify the skill bias. This intensifies the effect of globalisation. The overall implication of globalisation and technological advances is that payroll costs in sectors

¹ The theory of comparative benefits, and thus gains, from international trade is described in more detail in Pedersen (2007).

² This skill-upgrading trend when the industrialised countries trade with low and medium-income countries is also evidenced by Danish data, cf. Rosholm, Scheuer og Sørensen (2007).

REMUNERATION PER EMPLOYEE IN SECTORS WITH MANY HIGHLY EDUCATED EMPLOYEES COMPARED WITH SECTORS WITH MANY EMPLOYEES WITH LITTLE EDUCATION OR TRAINING

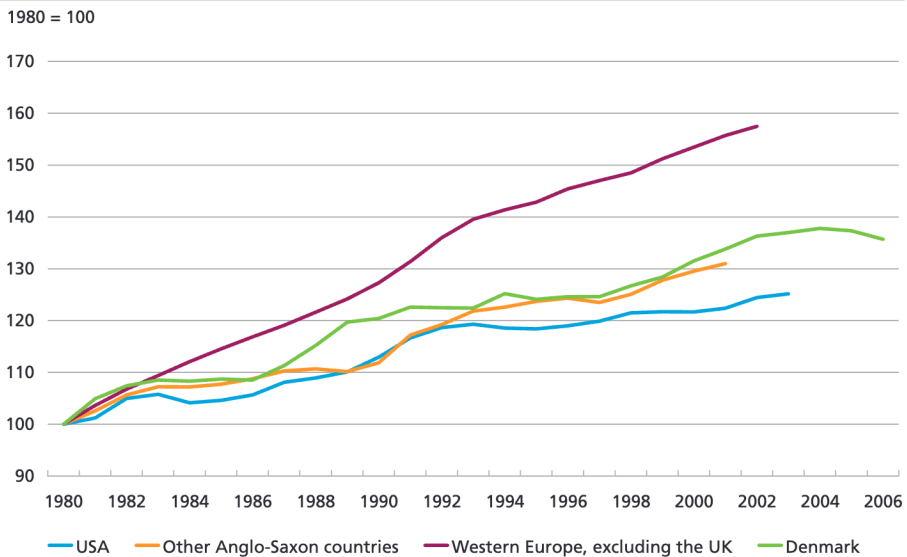
Chart 6



Note: "Other Anglo-Saxon countries": Australia, Canada and the UK. "Western Europe, excluding the UK": Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain and Sweden.
 Source: IMF (2007a), Statistics Denmark and own calculations.

EMPLOYMENT IN SECTORS WITH MANY HIGHLY EDUCATED EMPLOYEES COMPARED WITH EMPLOYMENT IN SECTORS WITH MANY EMPLOYEES WITH LITTLE EDUCATION OR TRAINING

Chart 7



Note: "Other Anglo-Saxon countries": Australia, Canada and the UK. "Western Europe, excluding the UK": Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain and Sweden.
 Source: IMF (2007a), Statistics Denmark and own calculations.

with many highly educated employees increase compared with payroll costs in sectors with many employees with little education or training. To some extent, the tendency towards increased wage variation is also evidenced by data, cf. Chart 6.

The relative development in payroll costs per employee in sectors with a large number of highly educated employees or employees with little education or training, respectively, is mirrored in the employment patterns of the two sector groups, cf. Chart 7 and Box 2 as regards the definition of sectors.

In Denmark, payroll costs per employee in sectors with many highly educated, highly paid employees have risen compared with payroll costs per employee in sectors with many employees with little education or training. At the same time, employment in the highly paid sectors has increased relative to employment in low-wage sectors. This reflects the

DELINEATION OF SECTORS WITH RELATIVELY MANY HIGHLY EDUCATED EMPLOYEES AND SECTORS WITH RELATIVELY MANY EMPLOYEES WITH LITTLE EDUCATION OR TRAINING

Box 2

The break-down is based on an OECD study, Jean and Nicoletti (2002), and is used in IMF (2007a). The same break-down is applied to Danish figures.

Sectors with many highly educated employees

Paper and graphic arts industry
 Chemical industry
 Engineering industry
 Energy and water supply
 Transport, postal services and telecommunications
 Financing and business service
 Education

Sectors with many employees with little education or training

Agriculture
 Wood industry
 Iron and metal industry
 Building and construction industry
 Trade and hotel industry
 Textile industry
 Refuse collection

The public sector is left out, except for "Education".

The composition of highly educated employees versus employees with little education or training may change over time. For example, the textile industry is characterised by many employees with little education or training in many countries. In Denmark, such jobs have been outsourced to low-wage countries, and the sector consequently employs many highly educated people today.

ongoing shift towards production of goods and services with increasing added value.

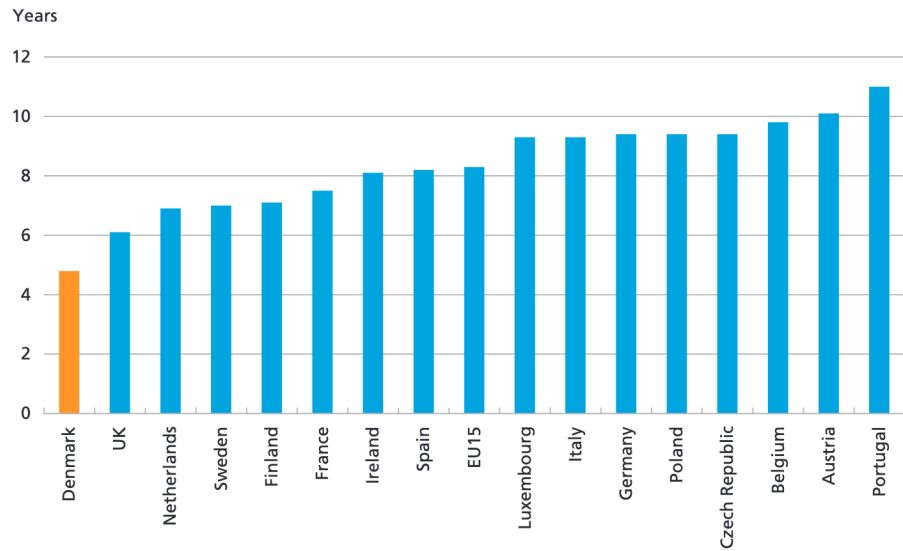
It should be noted that due to data availability the relation between sectors is measured rather than the direct relation between highly educated employees and employees with little education or training. Both sector groups comprise both types of employees, and different compositions in different countries may blur the image in international comparisons, cf. the example from the textile industry in Box 2.

GLOBALISATION AND DISTRIBUTION OF INCOME

Globalisation and technological progress generally entail increased efficiency, i.e. "the pie becomes bigger", but as described above this may be at the expense of the degree of equality in the distribution of income and may, in the short term, cause a rise in unemployment. How much unemployment rises during the adjustment process depends very much on the way the labour market works. The main cause of persistent unemployment is not globalisation. It would be more correct to say that the cause is insufficient flexibility and adaptability in the labour market. The more flexible the labour market, the more easily labour is shifted from declining sectors to growing sectors. The Danish labour market is characterised by a high level of flexibility, which is reflected in high job turnover, among other factors, cf. Chart 8.

AVERAGE JOB SENIORITY

Chart 8



Note: The figures relate to 2005.

Source: Mobility in Europe from the European Foundation for the Improvement of Living and Working Conditions, 2006.

The fairly smooth adjustment process in Denmark so far by no means indicates that globalisation does not involve challenges. Unless productivity can continually benefit from innovation and improvements, real incomes will be put under pressure. So far, Denmark has performed quite well. Resources have been moved up the value chain without any major problems, cf. the discussion in Pedersen (2007). This is illustrated by the employment pattern since 2000, with a fall by 50,000 in manufacturing, but a rise in overall employment by almost 100,000. The service sector has accounted for the strongest employment growth.

Although society as a whole benefits from globalisation and technological development, individual groups may still lose out. Potentially, as described above, employees with little education or training are most exposed to any negative consequences of the development.

IMF (2007b) analyses inequality in a global perspective. It concludes that although real incomes for the lower quartiles of the income distribution have gone up, the degree of inequality has generally increased across countries and regions over the last few decades. This is mainly because the upper quartiles account for a growing income share. Thus, the trend towards a higher degree of income equality seen in the first part of the 20th century has been broken¹.

Different countries have chosen very different approaches to tackling the pressure towards greater inequality. In the US and to some extent in the other Anglo-Saxon countries, wages are allowed a certain, even downward, elasticity. This reduces the negative consequences for employment and unemployment, but at the expense of income equality in society. There is more focus on the distribution of income in Western Europe, and wages are not allowed full downward elasticity. This is apparent e.g. in higher minimum wages, and there is more protection for those already employed. The price is higher unemployment and more people on public benefits financed by a heavier tax burden. There are considerable differences in the degree of inequality across countries, cf. Chart 9.

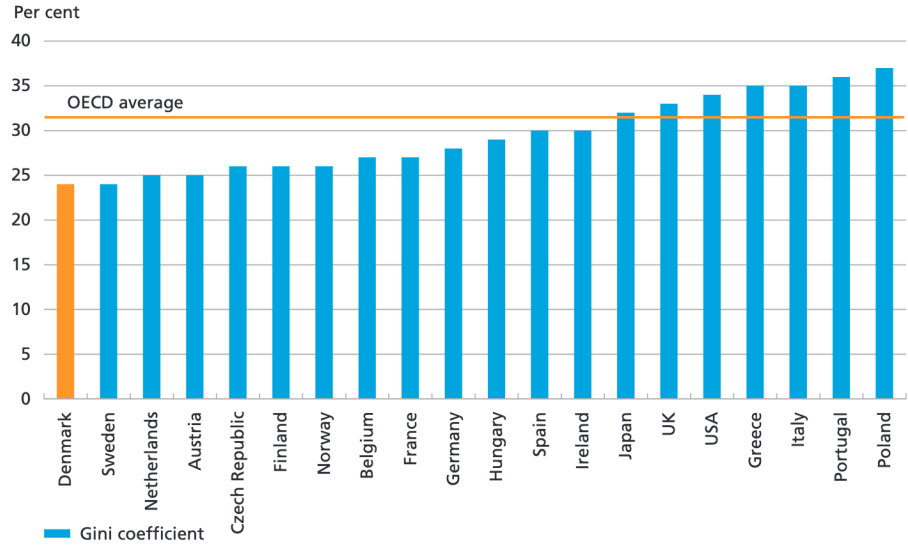
Despite the trend towards greater inequality of income between highly educated employees and employees with little education or training, the distribution of personal income in Denmark has been more or less unchanged over the last 10 years. Denmark seeks to ensure high employment and low unemployment with its flexicurity and welfare model, while a fine-meshed social safety net and extensive income distribution via the public budgets ensure a high degree of income equality². One

¹ Measuring global income equality is subject to considerable uncertainty, however. For an overview, see Anand and Segal (2008).

² The Danish labour-market model is described in more detail in Pedersen and Riishøj (2007).

INCOME INEQUALITY – AN INTERNATIONAL COMPARISON

Chart 9

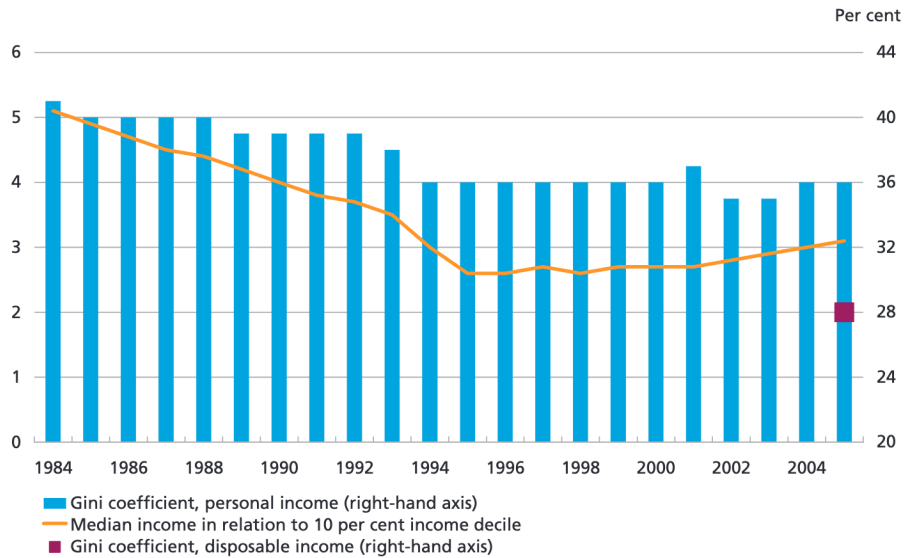


Note: The Gini coefficient measures the proportion of aggregate income to be moved from people with above-average incomes to people with below-average incomes in order to ensure equal income distribution. It is between 0 (completely equal distribution) and 100 (completely unequal distribution). The figures relate to 2000. The Gini coefficients are applied to after-tax incomes.

Source: Förster and d'Ercole (2005).

INEQUALITY IN PERSONAL INCOMES AND DISPOSABLE INCOMES IN DENMARK

Chart 10



Note: See the note to Chart 9. "Median income" is the income level at which half the population has a higher income, and half the population has a lower income. The graph shows how many times the median income is higher than the highest income in the lowest decile. The Gini coefficient is a more general measure of inequality at both the upper and lower ends of the income scale. The disposable-income Gini coefficient was calculated on the basis of individual data.

Source: Statistics Denmark, Statistical 10-year Review and own calculations based on special extracts from Statistics Denmark of after-tax incomes.

indication of this is that the degree of income inequality is considerably lower for disposable incomes than for pre-tax incomes, cf. the last bar in Chart 10.

In conclusion it can be said that globalisation and technological advances tend to increase income inequality across individuals, but that this underlying trend is counteracted by the Danish economic model.

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Globalisation and Danish Direct Investments

Maria Carlsen, Economics and Annett Melgaard Jensen, Statistics

INTRODUCTION AND SUMMARY

Direct investments by business enterprises across national borders are one of many indicators of the degree of globalisation. Foreign direct investment (FDI) creates direct, stable long-term financial links between economies, thereby contributing significantly to economic integration.

As a result of the integration of countries such as China and India into the global economy, globalisation has gathered momentum over the last decade. Danish FDI is, however, still mainly concentrated in countries geographically close to Denmark, as is Denmark's trade in goods. The share of Danish direct investments in China has been increasing in recent years, but remains low.

When Danish business enterprises make FDI, the enterprise they invest in is often one within their own industry. An exception applies to Danish trading enterprises, which place a substantial share of their investments in foreign industrial enterprises. Industrial enterprises account for a larger share of Danish direct investments in Brazil, Russia, India and China (the BRIC countries) than in EU member states. This may be attributable to factors such as lower production costs in the former countries.

Direct investment as such is a pure financial measure, but it may have real economic consequences, e.g. in terms of employment.

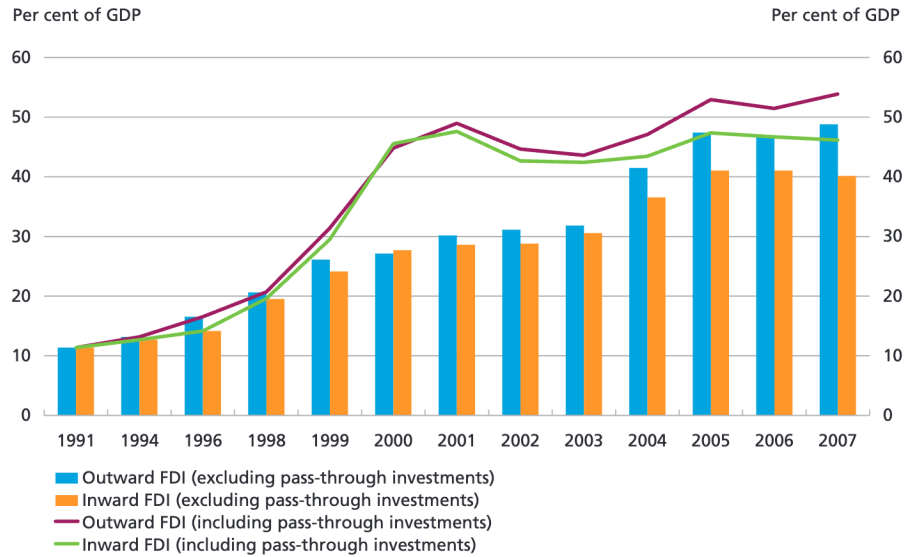
This article focuses on the breakdown by country and industry of outward Danish FDI, while also illustrating the employment effects in Denmark when Danish business enterprises increasingly engage in foreign activities. The analyses are performed on the basis of enterprise-specific reporting to Danmarks Nationalbank's FDI statistics, supplemented with employment data from these enterprises.

GLOBALISATION AND DANISH DIRECT INVESTMENTS

The process of globalisation has been going on for many years. Technological advances have made it easier to set up abroad, as communication and transport have become faster and cheaper. This has contributed to

DANISH DIRECT INVESTMENTS, END-1991 TO 2007

Chart 1



Note: Adjusted for minor data breaks in the years prior to 1998. For 1991, 1994 and 1996 FDI data is only available including pass-through investments, but the latter were insignificant before 1999. Preliminary data for 2007. Source: Statistics Denmark and Danmarks Nationalbank.

the increasing importance of FDI to the global economy. Danish inward and outward FDI as ratios of GDP have increased substantially since the early 1990s, cf. Chart 1. This article mainly focuses on Danish outward FDI stocks, excluding pass-through investments, cf. Box 1.

Danish direct investments are at roughly the same level as those of comparable countries, cf. Chart 2. Conditions for direct investment have generally been favourable in recent years owing to robust macroeconomic growth in many countries, large corporate profits, a low general level of interest rates, etc.

Denmark's inward and outward FDI are of more or less the same size. Since 2004, outward FDI has, however, exceeded inward FDI, although several large Danish enterprises have been targets of acquisitions in recent years.¹

DIRECT INVESTMENTS BROKEN DOWN BY COUNTRY AND INDUSTRY

FDI and trade are often interlinked, although the connection is ambiguous. By making a direct investment in a given country, a business enter-

¹ Not all such acquisitions are registered as direct investment. For example, acquisitions by private equity funds are often financed via foreign bank loans not included under direct investment, cf. Jayaswal, Kornvig and Skjærbæk (2006). Only equity transfers and loans from private equity funds are regarded as direct investments.

INTERNATIONAL STATISTICAL DEFINITION OF FOREIGN DIRECT INVESTMENTS¹

Box 1

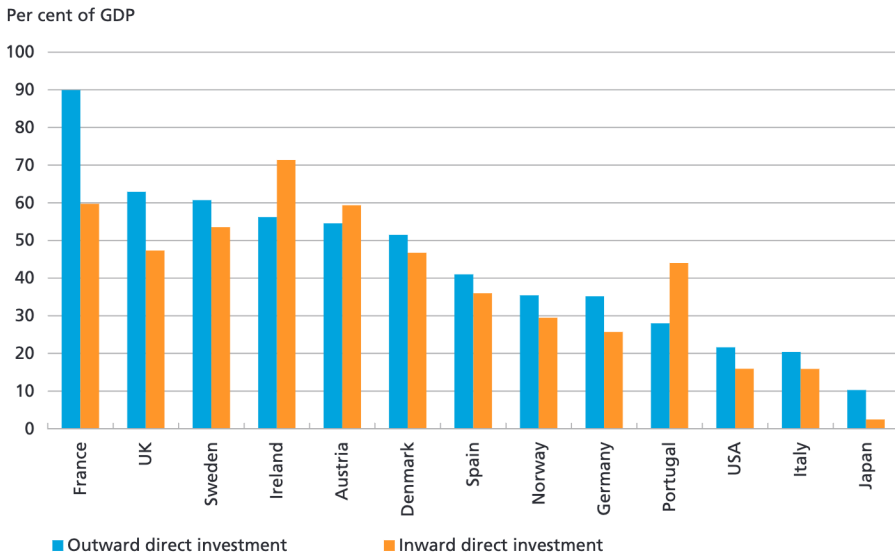
Direct investments comprise the stocks of investment in shares and other equity where an investor holds at least 10 per cent of the equity capital or voting rights in the target enterprise. Investments of this size are assumed to have been made with a view to establishing a long-term financial relationship between the investor and the business enterprise and also to give the investor substantial (but not necessarily controlling) influence on the management of the enterprise. A direct investment may comprise equity capital or intercompany loans, etc. At end-2006, 69 per cent of Danish FDI was equity capital, while 31 per cent was intercompany loans, etc. Direct investment in equity capital can be made by establishing new business enterprises, by increasing the capital of existing units, or via acquisitions. Acquisitions account for a significant proportion of direct investment.

This article analyses the stock of Danish FDI, excluding pass-through investments. The latter are direct investments that "pass through" Denmark, i.e. foreign direct investments in holding companies in Denmark (inward) that re-invest the funds abroad (outward). Such investments do not generate real economic activity in the country they pass through. From 2000 to 2003, pass-through investments accounted for a substantial share of direct investments, cf. Chart 1, but this share has been reduced considerably after the amendment of the tax rules in 2001. International comparisons are difficult since most countries include pass-through investments in their statistics.

¹ See also "Sources and methodologies" in the Appendices of Tables in the statistical publications "Quarterly flow statistics on direct investments" and "Annual statistics on the stock of direct investments" published by Danmarks Nationalbank.

INWARD AND OUTWARD DIRECT INVESTMENT IN SELECTED COUNTRIES, END-2006

Chart 2



Note: Direct investment including pass-through investments for all countries.
 Source: Statistics Sweden, IMF and own calculations.

prise obtains access to a foreign market. If it decides to manufacture and sell its products in the country in question, the investment may be a substitute for trade, entailing lower exports to that country. However, exports will not decline if the business enterprise simply sets up a sales and distribution unit abroad. Direct investments abroad can also be driven by a wish to reduce the business enterprise's costs, e.g. by moving part of its production to countries where wages, etc. are lower.¹

Country breakdown of direct investments and trade

Danish outward FDI is concentrated in the EU member states, Norway and the USA, cf. Chart 3. Around half of the Danish direct investment in EU member states goes to the UK, Sweden and Germany. The country breakdown of trade in goods is, broadly speaking, in line with the distribution of direct investments. However, it is seen that China accounts for a relatively larger share of Danish imports than of inward FDI.

At the global level, industrialised countries have traditionally been the largest FDI investors and targets. Within the last decade the BRIC countries have, however, begun to play a more prominent role in the global economy. Since the mid-1990s, China has become the largest recipient of FDI in the developing world, and in 2006 China was in the global top 5 in terms of inward FDI.² China's outward FDI is showing an upward trend, but nevertheless remains at a very low level. Investments in Denmark by China and other BRIC countries are virtually zero. Denmark's inward and outward FDI more or less balance, reflecting that the Danish economy is at a later and more mature stage in relation to FDI than e.g. the Chinese economy.³

Danish direct investments in China have been increasing since the mid-1990s, albeit from a very low starting point, cf. Chart 4. The same development has been seen in exports to China, which have risen from a share of 0.4 per cent in 1994 to 1.3 per cent in 2006. The share of direct investments flowing to other BRIC countries has been more or less unchanged for a number of years and remains modest, while the share going to Japan has been decreasing.

Part of the explanation to the relatively low volume of investment in Asia could be legal and linguistic barriers, etc. In addition, the country breakdown of FDI does not always give a completely true picture, as business enterprises sometimes operate via a holding company. This means that

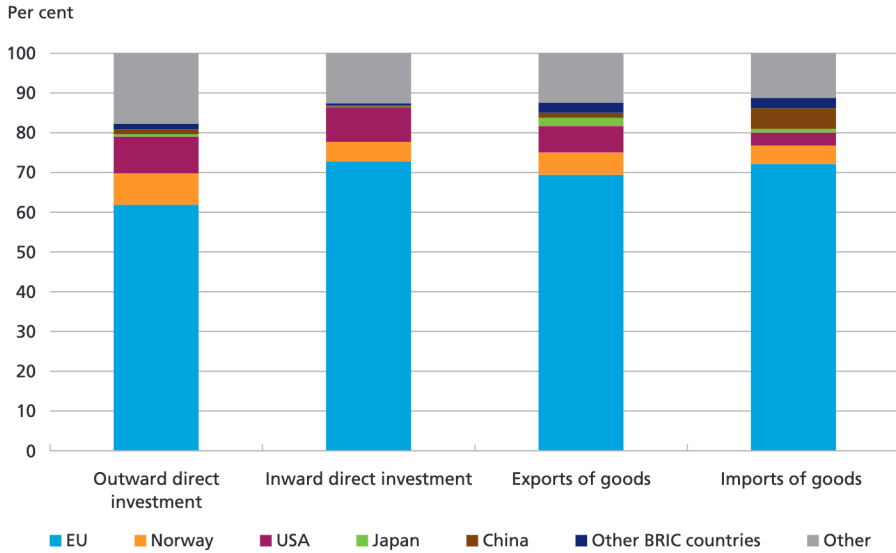
¹ When the motive for FDI is to reduce costs and enhance the competitiveness of the value chain, this is often referred to as vertical FDI. Horizontal FDI is seen when the business enterprise manufactures the same product in different countries. In practice, the distinction between vertical and horizontal FDI is often blurred.

² Cf. UNCTAD (2007a) and UNCTAD (2007b). It should be noted, however, that it can be difficult to compare direct investments across countries, cf. Box 1.

³ See Pedersen, B. T. (2007) for an account of a development model for direct investments.

DANISH DIRECT INVESTMENT (YEAR-END) AND EXPORTS AND IMPORTS OF GOODS, 2006

Chart 3

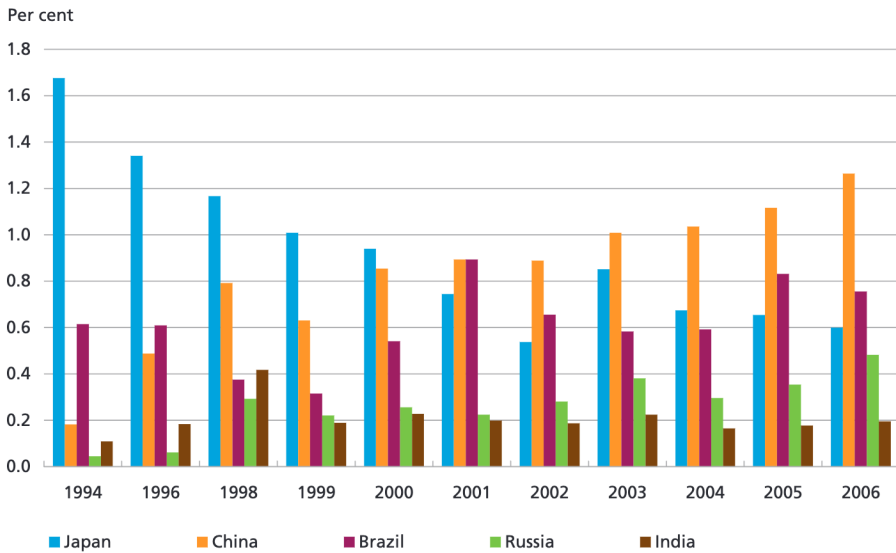


Note: Direct investment excluding pass-through investments. EU is EU25 excluding Denmark. China is exclusive of Hong Kong.

Source: Statistics Denmark and Danmarks Nationalbank.

DIRECT INVESTMENT IN SELECTED COUNTRIES IN PER CENT OF TOTAL DANISH FOREIGN DIRECT INVESTMENT, END-2006

Chart 4



Note: A minor change in the compilation method occurred from 1996 to 1998. China is exclusive of Hong Kong.

Source: Danmarks Nationalbank.

NEW STATISTICS

Box 2

In the coming years, national and international statistics of globalisation and direct investment will be improved considerably. The most significant improvement is Statistics Denmark's extension of the FATS statistics, a compilation of real economic variables, such as employment and turnover, for foreign enterprises in Denmark and Danish enterprises abroad.¹ FATS are prepared in accordance with an EC regulation (no. 716/2007 of 20 June 2007 on Community statistics on the structure and activity of foreign affiliates), which applies from the statistical year 2007. Statistics Denmark plans to extend the data series for foreign enterprises in Denmark to include the years 2004-07, and to publish new data for Danish enterprises abroad for the year 2007. The latter is expected to be published in 2009.

Another improvement is the adoption of new international guidelines for compilation of direct investment statistics. The OECD, actively supported by the IMF, Eurostat, the ECB and member countries, has updated the statistics manual in this area, the *OECD Benchmark Definition of Foreign Direct Investment (4th edition)*. The new guidelines seek to address a number of the drawbacks concerning the breakdown by industry and country outlined in this article. The schedule for implementation of the new guidelines is currently being discussed internationally.

Finally, the IMF has initiated a global Coordinated Direct Investment Survey (CDIS). The survey is voluntary, comprises FDI stocks at end-2009 and is scheduled for publication by the IMF at the end of 2010. Denmark will participate in the survey along with 120 other countries.

¹ Foreign Affiliates Trade Statistics (FATS). The first FATS statistics were published as a pilot project in 2006 with data for 2002-03, cf. Hansen and Mortensen (2006).

the investment is registered in the home country of the holding company, not the company where the actual FDI is made. This statistical drawback will be addressed in the coming years, cf. Box 2.

Motives behind Danish outward FDI

Danish enterprises to a large extent invest in countries that are important trading partners of and geographically close to Denmark. This is in line with the key motives often cited for setting up abroad, i.e. a wish to be closer to the customers.¹ As Chart 5 shows, FDI by Danish business enterprises at end-2006 was to a large extent concentrated on service industry in the recipient country, including trade.²

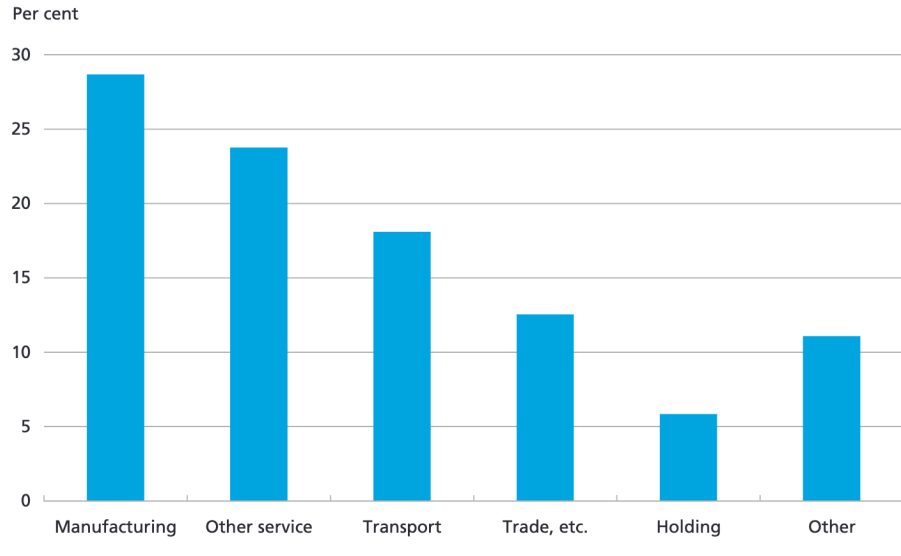
A more detailed analysis of the data shows that around 64 per cent of FDI by Danish industrial enterprises goes to industrial enterprises, while approximately 25 per cent goes to trading enterprises, cf. Table 1. Turning to FDI by Danish trading enterprises, approximately 33 per cent goes to trading enterprises, while 66 per cent goes to industrial enterprises.

¹ See e.g. the Ministry of Economic and Business Affairs (2003).

² This section analyses data based on direct equity investments.

DANISH FOREIGN DIRECT INVESTMENT BROKEN DOWN BY FOREIGN INDUSTRY, END-2006

Chart 5



Note: The sector breakdown is based on Danish direct equity investments, i.e. intercompany loans are not included. "Activity not stated" has been omitted. "Other service" comprises business service and finance activities, etc. "Other" primarily comprises agriculture and energy, etc.

Source: Danmarks Nationalbank.

Danish outward FDI are primarily made by large enterprises. The largest 10 per cent of business enterprises with outward FDI – measured in terms of external assets – account for 75 per cent of Danish FDI. In other words, 77 large enterprises account for the greater part of Danish direct investments abroad.

DANISH DIRECT INVESTMENTS BROKEN DOWN BY FOREIGN INDUSTRY, END-2006

Table 1

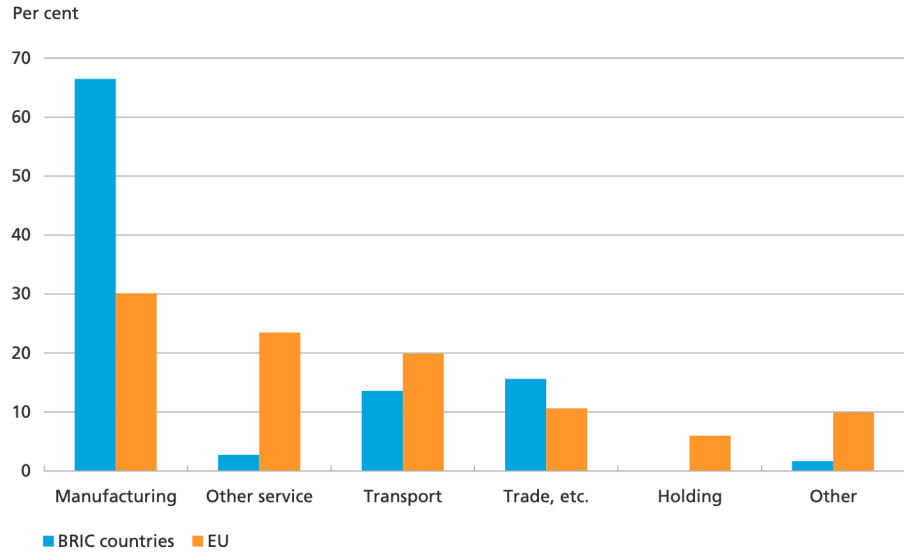
Per cent	Industry of foreign investment recipient					
	Trade	Transport	Other service	Manufacturing	Holding company	Other
<i>Industry of Danish direct investor</i>						
Trade	33	0	0	66	0	0
Transport	0	97	0	0	2	1
Other service	2	2	63	18	12	2
Manufacturing	25	0	8	64	2	1
Holding company	12	14	34	18	12	10
Other	0	0	0	1	1	98

Note: Per cent of total Danish industries. Deviations from 100 in the horizontal sum may occur due to rounding. The industry breakdown is based on direct equity investments, i.e. intercompany loans etc. are not included. "Activity not stated" has been omitted. "Other service" comprises finance and business activities etc. "Other" primarily comprises agriculture and energy, etc.

Source: Danmarks Nationalbank.

DANISH DIRECT INVESTMENT BROKEN DOWN BY FOREIGN INDUSTRY IN THE EU AND THE BRIC COUNTRIES, END-2006

Chart 6



Note: Shares of total. The bars for the BRIC countries and the EU, respectively, add up to 100. EU is EU25 excluding Denmark. The sectors are those of the foreign enterprises. The sector breakdown is based on direct equity investments, i.e. intercompany loans are not included. "Activity not stated" is omitted. "Other service" comprises business service and finance activities, etc. "Other" primarily comprises agriculture and energy, etc.

Source: Danmarks Nationalbank.

There are many potential reasons for investing abroad, depending on the country and the circumstances.¹ Most Danish direct investments in the EU are in service enterprises, while in the BRIC countries investments are primarily made in industrial enterprises, cf. Chart 6. More detailed data shows that Danish enterprises are more likely to concentrate on their own industry when investing in EU member states than when investing in the BRIC countries, cf. Appendix 1. This indicates that Danish business enterprises' direct investments in EU member states are aimed at strengthening their position in the market in question, and at moving closer to their customers. In the BRIC countries, on the other hand, the – modest – Danish investments are in industrial enterprises, indicating that the investors wish to benefit from low costs, or that they invest in order to facilitate access to emerging markets.²

A breakdown of the EU into two groups shows that a slightly larger share of Danish FDI in the new EU member states (EU10) goes to indus-

¹ See also the Confederation of Danish Industry (2003) for a description of the motives for setting up abroad.

² Instead of setting up abroad, business enterprises may outsource production to other countries where e.g. wages are lower. In that case, the business enterprise purchases the product from another manufacturer rather than making the product itself. Outsourcing is not discussed further in this article.

trial enterprises than is the case in the pre-2004 member states (EU15).¹ The reason may be that production costs are lower in EU10 than in EU15. It should, however, be borne in mind that the volume of investment in EU10 is considerably lower than in EU15. In 2006, 58 per cent of total outward Danish FDI went to EU15, while 4 per cent went to EU10 and 3 per cent to the BRIC countries.

For the economy overall, factors such as productivity and payroll costs in relation to the level in other countries play a major role in determining what is manufactured at home and abroad, respectively.² Labour productivity is determined by the size and efficiency of the physical capital stock, the level of education or training, the local infrastructure, the structure of the legal system and good governance in general.³ These conditions are often jointly referred to as the "framework conditions" of the various countries. Complex interaction between many factors thus determines the country distribution of global production and its composition.

ESTABLISHMENT OF DANISH AFFILIATES ABROAD AND EMPLOYMENT IN DENMARK

When Danish enterprises set up abroad, foreign jobs are created – all other things being equal. Likewise, Danish jobs are created when foreign enterprises invest in Denmark.

Nevertheless, positive employment effects may also be seen in Denmark when Danish enterprises expand internationally as this may, for example, generate more export orders for Danish enterprises. On the other hand, inward FDI may mean increased competition and loss of jobs for business enterprises already operating in Denmark.

Some direct investments have no immediate impact on employment, e.g. acquisitions where companies simply change hands. However, the new owner may try to create added value by cutting down or expanding, thereby reducing or increasing the number of employees. Consequently, there is no one-to-one relationship between direct investments and employment. Direct investments are ultimately a financial measure, while employment is a real economic variable. Employment is also affected by factors such as productivity-enhancing technological developments, whereby fewer people are needed to produce a given quantity of goods. Added value can thus be achieved without increasing the

¹ Bulgaria and Romania are not included as they only joined the EU on 1 January 2007. The EU10 and EU15 member states are listed in Tables A3 and A4 in Appendix 1.

² See Pedersen, E. H. (2007) for a more detailed description of comparative advantages.

³ For a more detailed description of Denmark's wage competitiveness, see the article by Pedersen and Riishøj in this publication.

number of employees, and therefore employment figures do not necessarily reflect how business enterprises are faring.

Employment in foreign enterprises in Denmark

In 2003, 228,000 people were employed in 3,066 business enterprises in Denmark with more than 50 per cent foreign ownership.¹ The number of employees in foreign enterprises in Denmark rose from approximately 10 per cent of all private-sector employees in the early 1990s to approximately 16 per cent in 2003.² While foreign enterprises have gained importance in the Danish labour market, Danish enterprises have also become more active abroad. At the beginning of 2008, Danish enterprises had a stake of 10 per cent or more in 4,184 foreign affiliates, while in the early 1990s Danish enterprises owned approximately 2,000 business enterprises abroad.³

Employment in Danish enterprises with direct investments abroad

It is difficult to assess how Danish outward FDI affects employment in Denmark since the impact may be felt not only by the investor enterprises themselves, but also by other Danish enterprises, e.g. their suppliers.

Some of the issues may be examined by looking at the development in the number of employees in Danish enterprises with outward FDI, cf. Tables 2 and 3. The underlying methodology is described in more detail in Appendix 2. It should be emphasised that the calculation is subject to some uncertainty.

Table 2 illustrates the development in employment in Denmark from 1999 to 2007 for Danish business enterprises with outward FDI throughout the period from end-1998 to 2006. Employment in industrial enterprises with FDI more or less matched the general level of employment in manufacturing. This is in line with the observations of the Confederation of Danish Industry (2003), which finds that industrial enterprises with foreign affiliates saw slightly better employment development in Denmark than other industrial enterprises in the period 1996-2002, while also achieving high growth in employment in their foreign affiliates.⁴

According to the calculation in Table 2, however, service enterprises with direct investments abroad experienced employment development below the overall trend in the Danish service industry. One reason is that only few business enterprises in the service segments that have seen the

¹ Cf. Hansen and Mortensen (2006).

² Cf. Business survey 1993 and Hansen and Mortensen (2006).

³ Cf. Bureau Von Dijk's Odin database and Business survey 1993.

⁴ The survey comprised groups that are members of the Confederation of Danish Industry with headquarters in Denmark and affiliates abroad.

EMPLOYMENT IN DENMARK IN DANISH BUSINESS ENTERPRISES WITH FOREIGN DIRECT INVESTMENTS			
	Manufacturing	Service	Other
<i>Danish enterprises with foreign direct investments in both 1998 and 2006</i>			
Employees, total (thousands), 2007	42	68	...
Change in number of employees from 1999 to 2007, per cent	-10	-4	...
<i>Employees in Denmark</i>			
Employees, total (thousands), 2007	366	852	1,085
Change in number of employees from 1999 to 2007, per cent	-11	15	6

Table 2

Note: Employment stated on the basis of ATP statistics. See the description of the methodology in Appendix 2. – The data is based on few observations and is therefore confidential.

Source: Danmarks Nationalbank, Statistics Denmark, Danish Commerce and Companies Agency and own calculations.

highest growth in employment have made direct investments abroad. For example, employment has increased strongly in the "Other business service" sub-segment, comprising e.g. temp agencies, interior decorators and employment agencies.¹ This segment predominantly targets the domestic market and practically no business enterprises had made direct investments abroad.

The number of Danish enterprises with direct investments abroad grew from 1998 to 2006. Table 3 therefore shows the development in employment from 2003 to 2007 for Danish enterprises with direct investments abroad in 2006. The pattern is the same as in Table 2.

Conclusion

The analysis indicates that Danish enterprises aim to expand and strengthen their position when they make direct investments abroad. This is illustrated by the fact that direct investments primarily take place in markets close to Denmark and within the investor's own industry.

On aggregate, Denmark's inward and outward FDI balance. However, direct investments by Danish industrial enterprises abroad exceed foreign investments in Danish industrial enterprises. Overall this points to a continued structural shift from manufacturing to service in the Danish economy. This may influence demand for labour with specific qualifications and within certain professional groups. Consequently, the economy must be adaptable and prepared for change, not least in terms of labour market conditions and education and training.

¹ Employment rose by 62.6 per cent from the 2nd quarter of 2003 to the 3rd quarter of 2007, cf. the Economic Council of the Labour Movement (2008).

**EMPLOYMENT IN DENMARK IN BUSINESS ENTERPRISES WITH FOREIGN
DIRECT INVESTMENTS**

Table 3

	Manufacturing	Service	Other
<i>Danish enterprises with foreign direct investments in 2006</i>			
Employees, total (thousands), 2007	100	160	12
Change in number of employees from 2003 to 2007, per cent	-4	3	-3
<i>Employees in Denmark</i>			
Employees, total (thousands), 2007	366	852	1,085
Change in number of employees from 2003 to 2007, per cent	-4	13	4

Note: Employment stated on the basis of ATP statistics. See the description of the methodology in Appendix 2.

Source: Danmarks Nationalbank, Statistics Denmark, Danish Commerce and Companies Agency and own calculations.

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APPENDIX 1: DETAILED TABLES OF DANISH DIRECT INVESTMENTS ABROAD

DANISH DIRECT INVESTMENTS BROKEN DOWN BY FOREIGN INDUSTRY IN THE EU, END-2006

Table A1

Per cent	Industry of foreign investment recipient					
	Trade	Transport	Other service	Manufacturing	Holding company	Other
<i>Industry of Danish direct investor</i>						
Trade	41	1	0	57	1	0
Transport	0	100	0	0	0	0
Other service	3	1	63	17	15	2
Manufacturing	8	0	1	85	5	2
Holding company	13	11	40	16	7	12
Other	0	0	0	1	3	97

Note: Per cent of total Danish industries. Deviations from 100 in the horizontal sum may occur due to rounding. The industry breakdown is based on direct equity investments, i.e. intercompany loans are not included. "Activity not stated" has been omitted. "Other service" comprises finance and business activities etc. "Other" primarily comprises agriculture and energy, etc. EU is EU25 excluding Denmark.

Source: Danmarks Nationalbank.

DANISH DIRECT INVESTMENTS BROKEN DOWN BY FOREIGN INDUSTRY IN THE BRIC COUNTRIES, END-2006

Table A2

Per cent	Industry of foreign investment recipient					
	Trade	Transport	Other service	Manufacturing	Holding company	Other
<i>Industry of Danish direct investor</i>						
Trade	22	0	0	78	0	0
Transport	0	100	0	0	0	0
Other service	1	0	4	89	0	7
Manufacturing	29	0	0	71	0	0
Holding company	0	11	12	74	0	5
Other	0	0	0	100*	0	0*

Note: Per cent of total Danish industries. Deviations from 100 in the horizontal sum may occur due to rounding. The industry breakdown is based on direct equity investments, i.e. intercompany loans are not included. "Activity not stated" has been omitted. "Other service" comprises finance and business activities, etc. "Other" primarily comprises agriculture and energy, etc. The BRIC countries are Brazil, Russia, India and China.

*Data adjusted for technical reasons.

Source: Danmarks Nationalbank.

DANISH DIRECT INVESTMENTS BROKEN DOWN BY FOREIGN INDUSTRY IN EU15, END-2006

Table A3

Per cent	Industry of foreign investment recipient					
	Trade	Transport	Other service	Manufacturing	Holding company	Other
<i>Industry of Danish direct investor</i>						
Trade	41	1	0	57	1	0
Transport	0	100	0	0	0	0
Other service	3	1	64	16	15	2
Manufacturing	8	0	1	84	5	2
Holding company	14	9	42	14	8	12
Other	0	0	0	0	3	97

Note: Per cent of total Danish industries. Deviations from 100 in the horizontal sum may occur due to rounding. The industry breakdown is based on direct equity investments, i.e. intercompany loans are not included. "Activity not stated" has been omitted. "Other service" comprises finance and business activities, etc. "Other" primarily comprises agriculture and energy, etc. EU15 (excluding Denmark) comprises Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the UK.

Source: Danmarks Nationalbank.

DANISH DIRECT INVESTMENTS BROKEN DOWN BY FOREIGN INDUSTRY IN EU10, END-2006

Table A4

Per cent	Industry of foreign investment recipient					
	Trade	Transport	Other service	Manufacturing	Holding company	Other
<i>Industry of Danish direct investor</i>						
Trade	43	0	2	54	0	0
Transport	0	100	0	0	0	0
Other service	2	3	54	37	3	1
Manufacturing	9	0	0	90	0	0
Holding company	4	38	14	37	0	7
Other	0	0	0	47	0	53

Note: Per cent of total Danish industries. Deviations from 100 in the horizontal sum may occur due to rounding. The industry breakdown is based on direct equity investments, i.e. intercompany loans are not included. "Activity not stated" has been omitted. "Other service" comprises finance and business activities, etc. "Other" primarily comprises agriculture and energy, etc. EU10 comprises Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.

Source: Danmarks Nationalbank.

APPENDIX 2: METHODOLOGY FOR COMPILATION OF EMPLOYMENT IN DENMARK IN DANISH ENTERPRISES WITH FOREIGN DIRECT INVESTMENTS

This Appendix provides a brief description of the methodology for compilation of the number of employees in Denmark in Danish enterprises with foreign direct investments.

A list was generated of the CVR numbers of enterprises reporting to Danmarks Nationalbank that had FDI in 1998 and/or 2006. On the basis of this list, the number of employees was extracted from the data of the Danish Commerce and Companies Agency. The latter data contains the number of employees on the basis of ATP (Labour Market Supplementary Pension) statistics for the period 1999-2007. Employee data has been available for around three quarters of the CVR numbers.

However, using CVR numbers to identify relevant business enterprises entails certain problems. A CVR number may cease to be active, e.g. if the business enterprise merges and continues under another CVR number. Consequently, a given CVR number may comprise business enterprises before and after mergers and demergers.

Furthermore, some business enterprises with FDI may not report to Danmarks Nationalbank and are therefore not included in the list of CVR numbers. The compilation of direct investments is based on a sample with an average coverage ratio of 90-95 per cent.

The compilation of the number of employees in the period 1999-2007 includes business enterprises with FDI in both 1998 and 2006, while the compilation for the period 2003-2007 comprises only enterprises with FDI in 2006. Consequently, there may be business enterprises that did not have FDI throughout the period 2003-2006. It has been sought to adjust for individual large acquisitions, etc. in the two data sets, to the extent that it is possible to find reliable information.

The business enterprises surveyed were broken down by activity on the basis of the 9-standard grouping in Danish Industrial Classification, Statistics Denmark (DB03). The activities have been merged into the three activities in Table 2 and 3 of the main text. *Manufacturing* comprises manufacturing. *Service* comprises trade, etc.; transport, post and telecommunications; and finance and business activities. *Other* comprises construction; agriculture, etc.; electricity, gas and water supply; and public and personal services.

Foreign-Exchange Reserves and Sovereign Wealth Funds

Søren Schrøder and Esben Humble Slotsbjerg, Financial Markets

INTRODUCTION

Over the last 20 years, markets for goods and financial assets have become more globalised and integrated. Purchase and sale of goods and financial assets such as stocks and bonds increasingly take places across national borders, and business enterprises and banks operate internationally. This has led to larger global flows of trade and capital, but has also enabled financial imbalances. The USA, for example, has reported substantial current-account deficits, while a number of Asian and commodity-producing countries have recorded large surpluses, cf. Chart 1. Consequently, the US current-account deficit is to a large extent financed, directly or indirectly, by South East Asian emerging market economies and oil-exporting countries.

This not only shows that capital flows have increased in volume, it also reflects a new pattern with industrialised countries as net capital importers.

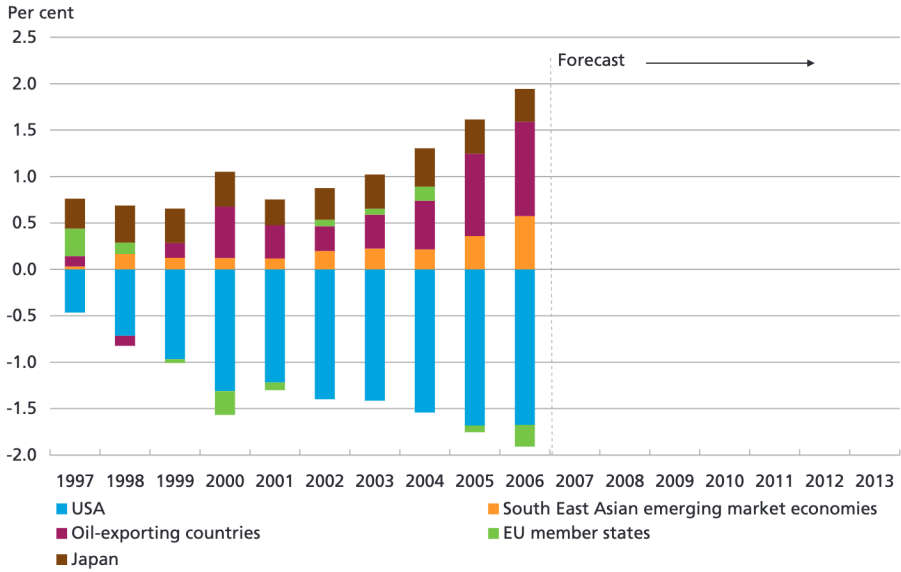
Furthermore, growing current-account and capital-account surpluses have resulted in mounting foreign-exchange reserves in the surplus countries, cf. Chart 2.

As their foreign-exchange reserves have accumulated, a number of countries have transferred "excess" foreign-exchange reserves to sovereign wealth funds (SWFs), separating them from the central banks' traditional foreign-exchange reserves. In a broader context, an SWF can be seen as an alternative investment opportunity for foreign-exchange reserves, but the growth and investment patterns of these funds attract considerable attention in the media, in political institutions and among financial institutions.

SWFs are not a new phenomenon. The first such entities were established in the 1950s, e.g. in Kuwait. The reason why they have now come more into focus is that they have grown dramatically in size, and at the same time new SWFs have been set up in countries such as Russia

DEVELOPMENT IN CURRENT ACCOUNTS OF GLOBAL BALANCES OF PAYMENT, PER CENT OF GLOBAL GDP

Chart 1

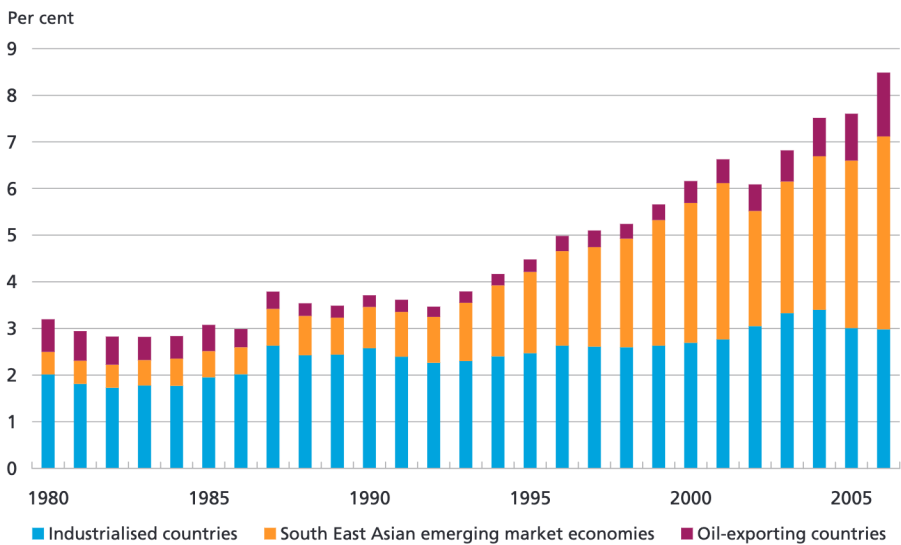


Note: Oil-exporting countries comprise oil exporters according to the IMF (2008a).
Source: IMF (2008a).

and China. Moreover, as the funds build up wealth they have begun to invest in stocks and private equity. Recently, SWFs have been active during the financial crisis.

DEVELOPMENT IN FOREIGN-EXCHANGE RESERVES, PER CENT OF GLOBAL GDP

Chart 2



Source: IMF (2008a) and IMF International Financial Statistics.

SWFs thus differ from traditional foreign-exchange reserves in terms of management and risk profile, resembling other investment institutions such as pension funds.

The primary difference between the investment strategies of central banks and SWFs is that central banks have to take monetary and foreign-exchange policy into account, whereas SWFs typically seek to achieve high returns and therefore have a greater risk appetite.

This article looks at the scope of SWFs and compares their asset management with central banks' management of traditional foreign-exchange reserves.

FOREIGN-EXCHANGE RESERVES

An increasing inflow of foreign exchange can be channelled into foreign-exchange reserves in central banks or into SWFs. This section outlines the reasons for and implications of rising foreign-exchange reserves in central banks, while the subsequent sections discuss the impact of accumulation of foreign-exchange reserves in SWFs.

In countries with current-account surpluses the exchange rate tends to strengthen, as evidenced in China. The same applies to countries with considerable capital inflows, either as direct investments or as foreign portfolio investments, as in India. If such a country wishes to curb the appreciation of its currency, its central bank must intervene in the market to purchase foreign exchange, thereby increasing the foreign-exchange reserve. The alternative is to ease the upward pressure on the exchange rate by lowering the interest rate, but this may be less compatible with domestic stability considerations.

The South East Asian economies pursue an exports-led growth strategy, and in order to remain competitive they do not want their currencies to appreciate too much. Consequently, they have purchased foreign exchange. In connection with crises it has also proven to be valuable to have sufficient foreign-exchange reserves to support the exchange rate as well as the domestic financial sector. Large foreign-exchange reserves can thus be seen as a buffer against sudden capital outflows, as witnessed by several Asian and Latin American economies in 1997-98.¹

Central banks cannot build up foreign-exchange reserves without financing them. If the *central government* accounts for the build-up, it typically deposits the income with the central bank, thereby increasing the balance of its account with the central bank. If the *private sector*

¹ See Niels Peter Hahneemann and Lars Krogh Jessen, The Currency Crisis in Southeast Asia, Danmarks Nationalbank, *Monetary Review*, 4th Quarter 1997, and Leif Lybecker Eskesen, Is Last Autumn's Financial Crisis Over?, Danmarks Nationalbank, *Monetary Review*, 3rd Quarter 1999.

accounts for the build-up, the central bank typically issues domestic debt instruments or sells domestic claims in order to finance purchase of foreign-exchange in the market, cf. Chart 3.

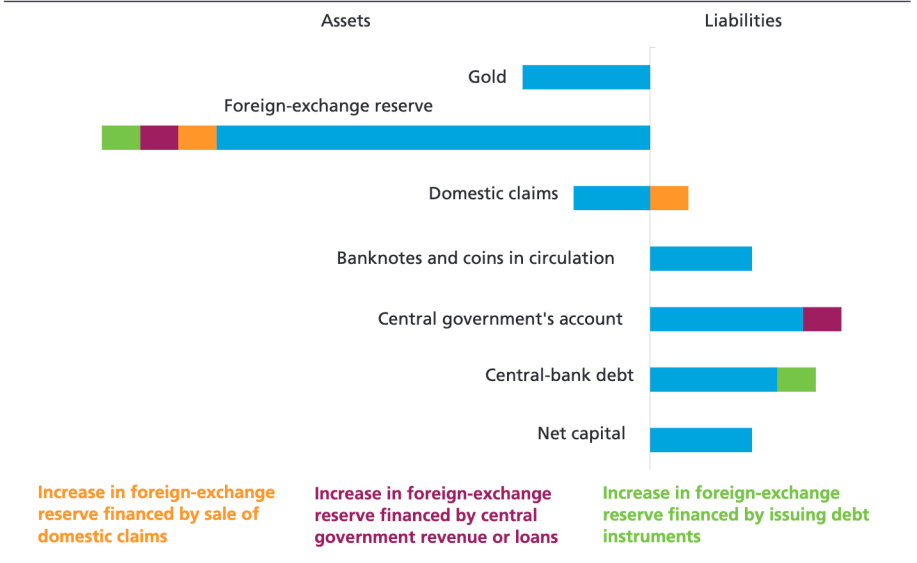
In neither case the foreign-exchange reserve represents wealth for the central bank. However, it may reflect growing central-government wealth or, in a broader sense, growing national wealth.

In oil-exporting countries, mounting foreign-exchange reserves reflect both foreign-exchange revenue and government budget surpluses. Foreign-exchange proceeds from sale of oil, which accrue to the Treasury, either directly via ownership of oil companies or indirectly via taxes, are not exchanged in the market, but are typically deposited with the central bank. This adds to the foreign-exchange reserve, and an equivalent amount is credited to the central government's account at the central bank. As long as the central government does not use its deposit in the central bank, no upward pressure will thus be exerted on the domestic currency and on inflation from this source. Norway is a case in point.

In the South East Asian countries, on the other hand, the foreign-exchange reserves primarily reflect foreign-exchange revenue in the private sector, and the central banks finance the increasing foreign-exchange reserves by selling domestic securities and/or raising loans via issuance of domestic debt instruments.

In many cases, increasing foreign-exchange reserves entail rising costs and risk for central banks. If the reserves have been financed by issuing

ILLUSTRATION OF A CENTRAL BANK'S BALANCE SHEET ON AN INCREASE IN RESERVES Chart 3



Note: A stylised illustration of a central bank's balance sheet.

domestic debt, the rate of interest payable is typically higher than the rate at which the reserves can be placed. This reflects how monetary policy in surplus countries is often aimed at dampening inflation. At the same time, surplus countries typically experience underlying upward pressure on their currencies. In that case, foreign-exchange reserves may also entail large exchange-rate losses for the central bank.

SOVEREIGN WEALTH FUNDS – SWFs

Many countries now transfer their growing foreign-exchange reserves to SWFs. While larger foreign-exchange reserves involve higher financing costs and increased risk for central banks, the establishment of an SWF implies that risk and financing is undertaken by the central government, not the central bank.

Previously the South East Asian emerging market economies and the oil-producing countries primarily invested in US government bonds. As wealth has accumulated, these countries seek higher returns and increasingly invest in stocks, business enterprises and real estate, also outside the USA. SWFs thus differ from traditional foreign-exchange reserves in terms of management and risk profile, resembling other investment institutions such as pension funds.

Size and development

With a few exceptions, SWFs do not publish the size and composition of their foreign assets, which must thus be estimated.¹ The IMF estimates that the global value of SWFs has risen from around 500 billion dollars in 1990 to a current level of somewhere between 2,100 and 3,000 billion dollars, cf. the Appendix.

Compared with other players in the financial markets, these funds still seem modest, cf. Table 1. SWF assets thus correspond to approximately one seventh of pension fund assets, less than 5 per cent of bank assets and around half of the total foreign-exchange reserves of central banks.

SWFs are characterised by a high degree of concentration in that the largest 10 funds hold 80 per cent of the wealth. The largest SWF, Abu Dhabi's ADIA, is the 11th largest institutional investor worldwide.

In the longer term, the value of SWFs may constitute a considerably larger share of the financial markets, particularly in view of the higher commodity prices and the sustained high growth in the South East Asian economies. According to IMF (2008b), the global value of SWFs will grow to somewhere between 6,000 and 10,000 billion dollars in 2013.

¹ For a description of how such wealth is estimated, see Toloui (2007).

MAGNITUDE OF SWFs

Table 1

Billion dollars	Bank assets	Global GDP	Stock markets	Investment funds ¹	Pension funds ¹	Foreign-exchange reserves (excluding gold)	SWFs	Hedge funds
2006	70,861	48,204	50,827	21,000	17,900	5,092	2,100-3,000	1,000-1,500

Source: IMF (2007) and IMF 2008(b).

¹ Data from 2005 and from Deutsche Bank (2007).

Financing and objectives

SWFs differ in terms of their sources of financing and their objectives. Around three quarters of the assets are proceeds from sale of commodities, typically oil.

This applies to e.g. Saudi Arabia and Norway. For both the central government and the nation as such, the assets are genuine wealth without corresponding debt. In these cases, SWFs can be seen as a means of smoothing or redistributing income over time.

Approximately one quarter of the assets relate to current-account surpluses or government budget surpluses. An example is Singapore. In such cases, an SWF can be seen as a vehicle for increasing the expected return. The question is whether the assets in these cases represent genuine wealth since the central bank or the central government has financed them by raising debt. This particularly applies to funds such as those contemplated in India and Brazil; both these countries have posted current-account deficits or only modest surpluses and have considerable foreign debt.

The objectives of SWFs may differ. The IMF operates with five types:

- Stabilisation funds, where the primary objective is to reduce the exposure of government finances to fluctuations in e.g. oil, copper and diamond prices.
- Savings funds for future generations, which aim to convert revenue from commodities into more stable, permanent income from financial assets.
- Reserve investment corporations, which seek to achieve a higher return on the foreign-exchange reserves.
- Development funds, typically aimed at supporting socioeconomic projects or domestic industries.
- Contingent pension reserve funds to save up for general pension liabilities of the central government.

The objectives may be a combination of the above and may change over time.

TRADITIONAL FOREIGN-EXCHANGE RESERVES AND SWFs

Like other financial institutions, central banks and SWFs are exposed to a number of financial risks. The following provides an overview of how SWFs and central banks differ in terms of management and how this is reflected in their return and risk profiles.

Central banks' management and portfolio structure

The primary objectives of a central bank are typically to issue banknotes and coins, to conduct foreign-exchange and monetary policy and to ensure financial stability. As a result of these tasks, central banks have claims in foreign exchange.

Typically, the size of a central bank's assets, including the foreign-exchange reserve and domestic assets, does not reflect the central bank's net capital (wealth). The reason is that the assets of a central bank are offset by liabilities. Purchase of foreign exchange for the foreign-exchange reserve thus entails an equivalent increase in debt to e.g. banks or in central-government deposits with the central bank. Chart 3 shows an illustration of the assets and liabilities of central banks.

In a net perspective, i.e. if both a central bank's assets (the foreign-exchange reserve) and its liabilities (loans) are considered, the central bank's risk may be considerable in relation to its net capital. The risks incurred by a central bank typically reflect the risks arising from its role as monetary policy authority.

If a fixed-exchange-rate policy is pursued, the foreign-exchange reserves may increase in periods with upward pressure on the exchange rate. At the same time, sufficient liquid foreign-exchange reserves must be available if the exchange rate is under downward pressure. Consequently, the central bank may need to release invested assets at short notice. It must be possible to sell, pledge or settle investments abroad quickly and easily without incurring substantial costs. This usually involves large foreign portfolios in short-term securities such as short-term money-market deposits and liquid short-term government bonds.

Foreign-exchange reserves naturally entail a foreign-exchange risk. Evidence shows that exchange-rate fluctuations can impose large losses on central banks. The risk on foreign-exchange positions is often great and the expected return is typically very low in relation to the risk. However, the foreign-exchange risk depends on the exchange-rate policy pursued.

In addition to the foreign-exchange reserve, a central bank often has a stock of gold. The price of gold is characterised by large fluctuations and central-bank gold thus entails considerable risk in relation to the other

investments of a central bank. At the same time, there are current opportunity costs for holding gold, as the rate of interest on gold is close to zero and thus lower than on alternative investments, but rising gold prices act as a safeguard against inflation. In spite of the strong increase in the price of gold in recent years, the risk-adjusted return seems to be relatively low in a historical perspective.

Typically a central bank also assumes interest-rate risk, often relating to a bond portfolio. If the yield on bonds is higher than the rate of interest on a placement in the money market, an excess return ("carry") is obtained. The overall outcome from assuming interest-rate risk also depends on the price of the bond, however. If the price falls (rises) as a result of higher (lower) interest rates, an interest-rate-driven capital loss (gain) is achieved. The overall result thus comprises a "carry" plus any capital loss or gain. Central banks typically seek to achieve an acceptable return on interest-rate risk in order to increase revenue.

As the size of foreign-exchange reserves reflects equivalent financing and not genuine wealth for central banks, the risk of a central bank should not be assessed in relation to the size of the reserve. It is more relevant to relate it to the size of the bank's net capital, possibly supplemented with the value of banknotes and coins in circulation, which is a source of revenue for the central bank.

The aggregate risk incurred by a central bank may thus often be relatively high in relation to its net capital. Furthermore, it is concentrated on a few areas such as exchange rates and gold.

Separation of SWFs from core central-bank tasks

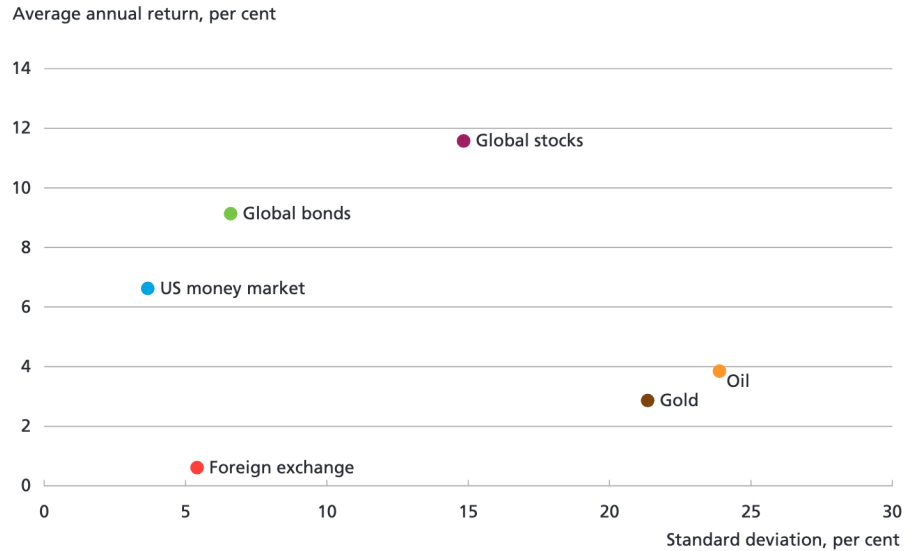
The establishment of an SWF draws a clear line between management of typical central-bank tasks and national asset management.

The separation of SWFs from central banks means that fluctuations in SWF assets do not have any impact on the central bank's risk. In a worst-case scenario this would otherwise potentially entail quite substantial losses and thus affect the solvency and credibility of the central bank. By establishing an SWF, the central government can increase the risk-adjusted return without increasing the central bank's risk of incurring large losses not related to its role as monetary policy authority.

Expected return and risk

The different objectives and liquidity considerations, etc. mean that the asset allocation in an SWF may differ substantially from that of a typical central bank. The reason is that an SWF need not consider financing of the foreign-exchange reserves (liabilities side), and that from a risk-management perspective it might be appropriate for an SWF to diversify in the same way as e.g. pension funds do.

RETURN AND RISK ON SELECTED ASSET TYPES 1980-2007 Chart 4



Note: Return stated in dollars. The index of global bonds is Lehman Brothers, World Aggregate Bond Index, Total Net Return. The stock index is MSCI World Index, Total Return. The exchange rate is measured in relation to USD/SDR. It should be noted that the statement of historical return and risk depends on the period reviewed. In other words, the risk/return ratio may change if another historical period is applied. The standard deviation is applied as an expression of risk. The standard deviation measures the return's average deviation from the mean value.

Source: Reuters EcoWin.

A gain may be achieved by spreading investments on other assets than those which contribute most to central-bank risk: exchange rate, interest rates and gold price. However, it is very difficult to assess future return and risk. Chart 4 provides a historical overview of return and risk for various asset classes.

The asset allocation in both central banks and SWFs is based on a trade-off between risk and expected return. For central banks, high revenue is not in itself the primary objective. In contrast, SWFs can be expected to seek the best possible return on a given risk, without taking any liabilities side into account.¹

Chart 4 shows that US money-market deposits have entailed the lowest risk since 1980, while the risk on bond investments² has been slightly higher, but so has the return. It is also seen that stocks have entailed a lower risk and yielded a higher return than e.g. investments in gold and oil.

¹ It should, however, be noted that SWFs may have payment obligations on certain types of investment, e.g. private equity funds, and to their owners by way of future payments.

² The calculated return on bonds should be seen in the light of a prolonged period from the 1980s onwards with falling interest rates and thus capital gains.

Past developments are not necessarily a good proxy for future risk/return ratios. Nevertheless, it must generally be assumed that investors require a higher return when taking a greater risk. Against that background, SWFs with a long investment horizon have invested large sums in stocks and other, more risky assets in the expectation of achieving a higher return in the long run.

Finally, it should be mentioned that differences in asset allocation between central banks and SWFs may also indicate that the countries in question have become more affluent and feel that they can afford to take a greater risk via an SWF that invests in other assets, such as stocks, thereby also achieving greater diversification. If, for example, SWF wealth is accumulated via income from commodities, this is "genuine" wealth not immediately set off by liabilities that must be financed.

Other issues

The asset allocation and risk tolerance of SWFs can vary considerably, depending on their objectives, and are not necessarily based purely on maximising the expected return.

For example, oil prices have historically fluctuated considerably, and oil reserves are, of course, limited. This means that oil revenue will cease at some point. Via an SWF, the limited resources in the underground can be transformed into more stable and permanent financial revenue.¹ At the same time, this will curb the strengthening of the domestic currency, which might otherwise reduce competitiveness in other industries.

If oil reserves are seen as a financial asset, it might, from a risk perspective, make sense to invest profits in assets with a low or negative correlation with oil prices. This can reduce the aggregate risk on the portfolio, including the oil reserves, while also increasing the expected return.

Investments in SWFs can also be used to counter specific risks that the countries are exposed to. For example, a number of Asian economies are highly dependent on changes in commodity prices. Investments in commodity companies, etc. may therefore be a means of hedging against rising commodity prices.

FINANCIAL MARKETS AND FINANCIAL STABILITY

For several years, countries with current-account surpluses have primarily invested in US government bonds. This has contributed to downward pressure on long-term interest rates, cf. ECB (2006), Warnock and

¹ See e.g. Kjær (2007).

Warnock (2006) and Andersen, Fick and Hansen (2007). Likewise, SWF investments have supported the dollar during periods when the US current-account deficit has put the currency under pressure.

The increasing wealth managed by SWFs can affect the financial markets in two ways: via a savings effect and via a portfolio effect.

Firstly, the high propensity to save in surplus countries will make a positive contribution to global savings and exert downward pressure on interest rates.

Secondly, increasing wealth may also affect the prices of e.g. stocks and bonds, partly because return-risk preferences may be different in surplus and deficit countries, partly because risk aversion usually declines with rising wealth. All other things being equal, this may lead to substitution from e.g. more secure bonds to stocks. This may exert upward pressure on yields and on the price of assets with a higher return-risk profile, such as stocks.

Increasing SWF wealth can be expected to weaken the savings effect and strengthen the portfolio effect. This is in accordance with two tendencies in SWF portfolio restructuring.

The first tendency reflects diversification away from dollars. The second is restructuring from liquid, less risky investments into assets with a higher return-risk profile such as stocks, private equity and real estate.

Although the overall effect on price formation in the financial markets is by no means clear, growth and portfolio restructuring will entail that ownership of financial assets, business enterprises and real estate may change in the coming years.

In a number of countries this has led to concerns that wealth is being used for strategic business acquisitions, notably in France, Germany and the USA. Such concerns are often rooted in national security considerations. At the same time, a number of countries with SWFs are concerned that their investments abroad are subject to a higher degree of restriction and protectionism, which could impede the free flow of capital. It should, however, be noted that a number of countries with SWFs traditionally have various restrictions on foreign investments.

In view of the above and to ensure financial stability, the IMF is preparing a general code of conduct for e.g. the governance and transparency of SWFs. This code of conduct will set targets for best practice in areas such as guidelines for public governance of SWFs, distribution of responsibilities, accounting policies, independent audit and degree of transparency about objectives, risk management and investments.

The code of conduct should help to ensure that SWFs are governed on business terms. In addition, it may contribute to greater transparency concerning the risks and investment patterns of SWFs.

Financial stability

As the SWFs accumulate wealth and diversify into more asset classes, their investment decisions will have a greater impact on financial stability.

Concerns could be that the funds are not governed in an adequate way, that they are not subject to regulatory supervision and that they are rather closed.

These concerns are less pronounced in relation to the global foreign-exchange markets. It should nonetheless be borne in mind that even small portfolio shifts may trigger large changes in the financial markets.

Owing to the increasing importance of SWFs, market participants try to predict their next moves. With a few exceptions, SWFs are characterised by a pronounced lack of transparency, which may give rise to more or less reliable rumours about their investments. Such rumours may, in turn, lead to unnecessary turmoil and herding effects in the financial markets, which is not conducive to financial stability. It should be noted, though, that today there are far more players in the financial markets than previously. This means that an individual player is less able to influence the markets than e.g. during the financial turmoil in 1992 (EMS) and 1998 (Long-Term Capital Management).

On the other hand, SWFs may be a stabilising element in that they operate with a longer investment horizon and are less governed by liquidity considerations. With their deep pockets they thus have resources to withstand the stampede in the market. This is also the case in connection with the subprime crisis. Most recently, two banks, Citigroup and UBS, have received considerable capital injections from Abu Dhabi and Singapore, respectively.

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APPENDIX

MARKET ESTIMATES OF SWF SIZE

Billion dollars	Name	Estimates of size	
		Lower	Upper
<i>Oil and gas-exporting countries</i>		<i>1,565</i>	<i>2,210</i>
United Arab Emirates	Abu Dhabi Investment Authority	250	875
Norway	Government Pension Fund – Global	380	380
Saudi Arabia	Unnamed	289	289
Kuwait	Reserve Fund for the Future Generations/ Government Reserve Fund	213	213
Russia	Reserve Fund	125	125
	National Welfare Fund	32	32
Libya	Libyan Investment Corporation	50	50
Qatar	State Reserve Fund/Stabilization Fund	30	50
Algeria	Reserve Fund/Revenue Regulation Fund	43	43
USA (Alaska)	Alaska Permanent Reserve Fund	40	40
Brunei	Brunei Investment Authority	30	30
Kazakhstan	National Fund	21	21
Malaysia	Khazanah Nasional BHD	19	19
Canada	Alberta Heritage Savings Trust Fund	16	16
Nigeria	Excess Crude Account	11	11
Iran	Oil Stabilization Fund	9	9
Azerbaijan	State Oil Fund	2.5	2.5
Oman	State General Reserve Fund	2.0	2.0
Timor-Leste	Petroleum Fund of Timor-Leste	1.4	1.4
Venezuela	FIEM – Macroeconomic Stabilization Fund	0.8	0.8
Trinidad & Tobago	Revenue Stabilization Fund	0.5	0.5
<i>South East Asian countries</i>		<i>453</i>	<i>683</i>
Singapore	Government Investment Corp.	100	330
China	China Investment Corporation	200	200
Singapore	Temasek Holdings	108	108
Korea	Korea Investment Corp.	30	30
Taiwan	National Stabilisation Fund	15	15
<i>Other countries</i>		<i>75.5</i>	<i>75.5</i>
Australia	Australian Future Fund	54.0	54.0
Chile	Economic and Social Stabilization Fund	14.9	14.9
	Pension Reserve Fund	1.5	1.5
Botswana	Pula Fund	4.7	4.7
Kiribati	Revenue Equalization Fund	0.4	0.4
Total		2,093	2,968

Source: IMF (2008b).

Denmark's Wage Competitiveness

Erik Haller Pedersen and Johanne Dinesen Riishøj, Economics

INTRODUCTION AND SUMMARY

Analyses of the development in competitiveness often focus on growth in labour costs per hour or per output unit (unit labour costs) in Denmark relative to abroad. If this measure is applied, Denmark's competitiveness has deteriorated over a number of years since hourly wages have risen more rapidly, and productivity growth has been lower, in Denmark than in competitor countries.

The underlying assumption in this simple measure of wage competitiveness is that Denmark produces the same types of goods and services as its competitors using the same technology. Over a long period Danish business enterprises have, however, been good at specialising in products that sell at very high prices in the global market. One of the main reasons is that Denmark has succeeded in creating good economic fundamentals for these business enterprises.

The countries that have seen the strongest overall increase in productivity, and thus the most favourable development in competitiveness in a narrow sense, have also experienced the greatest downward pressure on sales prices. This reflects how productivity gains have extensively been passed on to consumers by way of lower prices. Danish consumers and business enterprises benefit from this development to the extent that imported finished and intermediate goods become less expensive. Consequently, Denmark's terms of trade have improved on an ongoing basis.

Income generation in an economy is the product of productivity and terms of trade. The combination of lower productivity growth in Denmark and a higher rate of wage increase than in many other countries has to a large degree been set off by high sales prices for Danish goods and services.

For the individual business enterprise and product, high productivity, and thus the ability to compete with foreign enterprises, is essential. Foreign productivity rates for products not manufactured in Denmark are less relevant.

This line of argumentation does not mean that wage development is of no significance. Naturally there are narrow limits to the price at which

a product will sell and thereby how high the production costs can be if sales volumes and margins are to be maintained. The requirements for the competitiveness of Danish business enterprises in a broad sense have increased recently. The strength of the krone, expressed as the effective krone rate, is at a 25-year peak, and the gap between Danish and foreign wage growth has widened with the latest collective agreements. At the same time, the terms of trade have flattened out in the last couple of years. There is thus a considerable risk that Denmark may be over-reaching itself with the current wage development.

DENMARK'S COMPETITIVENESS

Foreign trade is important to Denmark

Denmark's international competitiveness¹ indicates the ability of Danish business enterprises to sell products and services in the domestic and export markets in competition with foreign enterprises. Competitiveness depends on factors such as the quality and innovative skills of the labour force, economic framework conditions, economic policy, etc. This article focuses narrowly on wage competitiveness, i.e. the relationship between Danish and foreign enterprises' costs, e.g. measured using the real effective exchange rates published by Danmarks Nationalbank. Wage competitiveness is key to the links between demand, employment and balance of payments. Denmark has become an increasingly open economy, cf. Table 1, and therefore wage competitiveness is important.

The share of output that is exported is highest for agricultural and manufactured products, while services are primarily sold in the domestic market. Some services, such as personal care and hairdressing, are difficult to export, but for a number of services the share exported has become considerable.

Development in the strength of the krone

The international strength of the krone can be derived from the effective exchange rate, which is a weighted measure of its strength vis-à-vis the currencies of 27 of Denmark's largest trading partners.

Due to Denmark's fixed-exchange-rate policy, the krone is stable against the euro. The euro area accounts for approximately half of Denmark's foreign trade. Since 2000 the krone has, however, strengthened vis-à-vis a number of non-euro currencies, and in early 2008 it was at its strongest level for more than 25 years, cf. Chart 1. Viewed in isolation,

¹ A more comprehensive description of competitiveness is found in "Denmark in the global markets" (in Danish only), Ministry of Economic and Business Affairs, *Økonomisk Tema* no. 5, 2007.

OPENNESS OF THE ECONOMY

Table 1

Share	1995	2007
Denmark	71	103
Sweden	72	95
Finland	65	86
Netherlands	65	82
Germany	47	87
France	44	55
Japan	17	34
USA	23	30

Note: Exports and imports of goods and services at current prices as a share of GDP at current prices.
 Source: OECD, *Economic Outlook* no. 82.

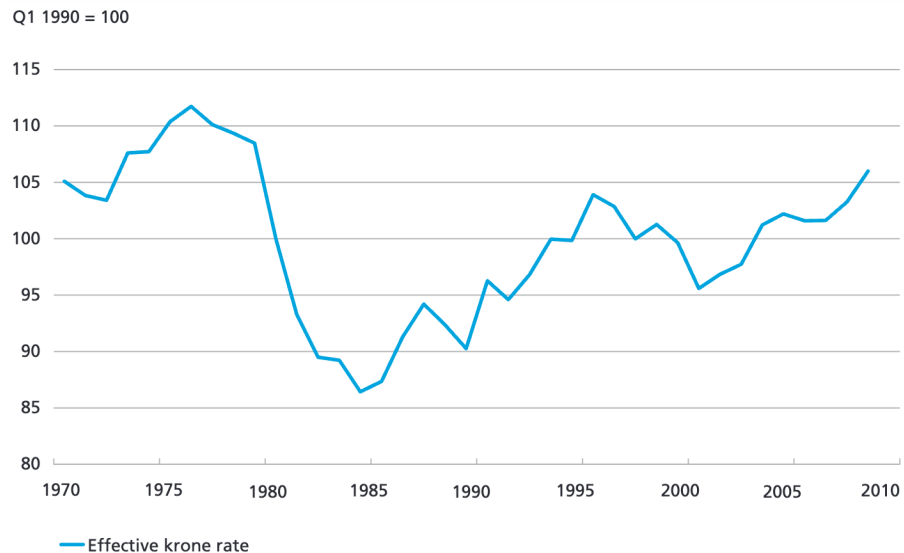
this means that Danish goods and services are more expensive in the export markets and that foreign goods and services are less expensive in the Danish market. At the same time profits margins are squeezed in the short term.

Wage developments in Denmark and in competitor countries

Since the mid-1990s, hourly wages in the manufacturing sector have almost constantly increased more rapidly in Denmark than in competitor countries, cf. Chart 2. In recent years, Danish wages have accelerated.

STRENGTH OF THE KRONE

Chart 1

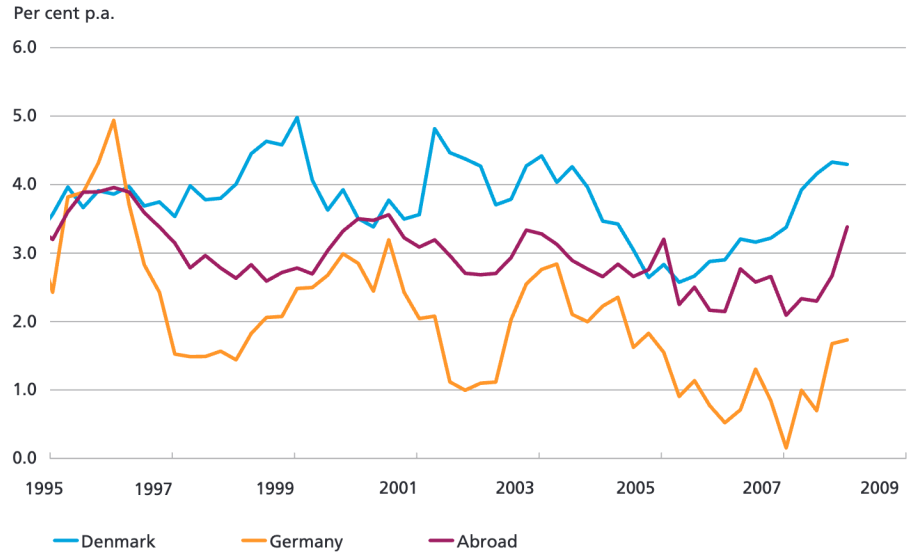


Note: The effective krone rate indicates the strength of the krone vis-à-vis 27 of Denmark's largest trading partners. An increase in the index indicates a strengthening of the Danish krone. The most recent observation is from the 1st quarter of 2008.

Source: Danmarks Nationalbank.

RATE OF WAGE INCREASE

Chart 2



Note: Hourly wages in industry. "Abroad" comprises the 25 countries included in Danmarks Nationalbank's real effective exchange rates. The 1st quarter of 2008 is a partial estimate.

Source: Confederation of Danish Employers and OECD.

With the rate of wage increase agreed in the most recent collective agreements, no significant narrowing of the gap is envisaged in the coming years.

The development in Denmark's wage competitiveness is indicated by the relationship between hourly wages abroad and in Denmark converted into the same currency using the effective exchange rate of the krone. This index of relative hourly wages has declined over the past many years, cf. Chart 3. Denmark has thus lost market shares and wage competitiveness. The correlation between the two is clear in the 1970s and 1980s, while both have shown a downward trend over the past 15 years.

The loss of market shares is attributable not only to the level of costs in Denmark, but also to the increasing integration of large medium-income countries such as China and India into the global economy in this period. Consequently, the "old" industrialised countries must make do with a smaller share of the export markets.

The development in productivity and unit labour costs

The development in wages and productivity in Denmark compared with abroad can be summarised as relative labour costs per unit stated in the same currency, i.e. relative unit labour costs, cf. Box 1. Measured in this way, the decline in competitiveness in recent years is more pronounced

UNIT LABOUR COSTS, PRODUCTIVITY AND COMPETITIVENESS

Box 1

Unit labour costs (ULC) are the labour costs per unit produced in e.g. the manufacturing sector. This corresponds to the relationship between hourly wages and productivity, cf. below:

$$\begin{aligned}
 \text{ulc} &= \frac{\text{Wage sum}}{\text{GVA}_{\text{constant prices}}} \\
 &= \frac{\text{Hourly wages} \times \text{hours}}{\text{GVA}_{\text{constant prices}}} \\
 &= \frac{\text{Hourly wages}}{\left(\frac{\text{GVA}_{\text{constant prices}}}{\text{Hours}} \right)} \\
 &= \frac{\text{Hours wages}}{\text{Productivity}}
 \end{aligned}$$

where GVA is gross value added.

Viewed in isolation, increasing hourly wage costs make ULC rise, while higher productivity on the other hand makes ULC fall. The key issue when assessing the development in competitiveness is whether Denmark's ULC are growing more rapidly than those of its competitors. To allow comparison, they must be converted into the same currency using the effective krone rate:

$$\text{Relative ULC} = \frac{\text{ULC abroad}}{\text{ULC in Denmark} \times \text{effective krone rate}}$$

Competitive development, measured by relative ULC, thus depends on the strength of the krone, relative wages, and relative productivity in Denmark and abroad. A decline in relative ULC indicates a deterioration of competitiveness.

than when measured by relative hourly wages, cf. Chart 3. This is attributable to relatively weak productivity development in Denmark.¹

In relation to individual products productivity is important, but for society overall productivity is not necessarily equal to competitiveness. There are two reasons for this. Firstly, the product composition differs from country to country. Secondly, there is a negative correlation between productivity growth and sales prices, cf. below.

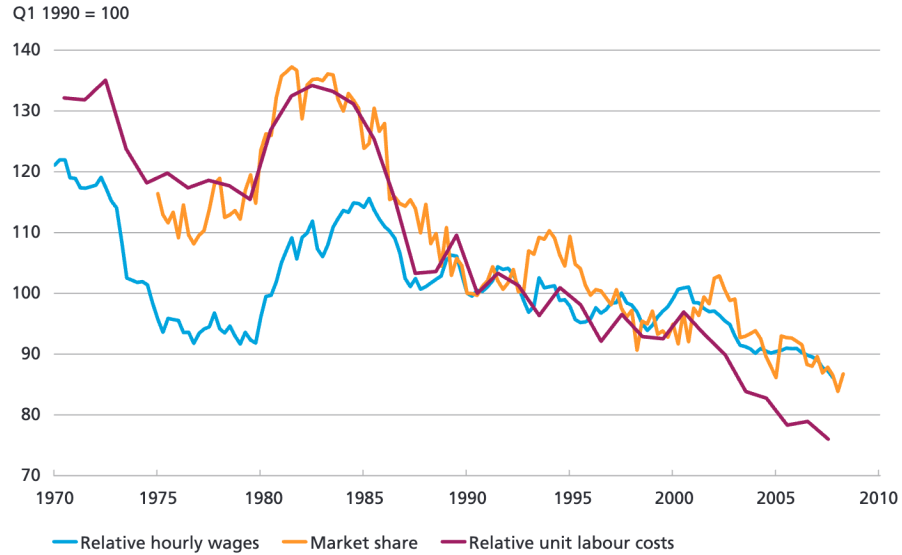
Product composition

Productivity growth varies considerably from sector to sector, cf. Table 2, and is typically below average in sectors that primarily produce services. In contrast, an area such as electronics has seen productivity growth above the average for the economy overall. The same pattern is seen in all countries.

¹ Cf. Per Flink Iversen and Johanne Dinesen Riishøj, Development in Productivity in Denmark, Danmarks Nationalbank, *Monetary Review*, 4th Quarter 2007.

COMPETITIVENESS AND MARKET SHARE

Chart 3



Note: "Relative hourly wages" and "relative unit labour costs" show the foreign index in relation to the Danish index. The market share has been calculated on the basis of volumes. This is relevant when focus is on output and employment, while market shares at current prices are relevant for the balance of payments. Market shares have been calculated for industrial goods. The pattern since 1990 does not change materially if services are included, while the loss of market shares becomes less pronounced in the 1980s.

Source: Statistics Denmark and OECD.

It is important to emphasise that the data (EU-KLEMS) is sometimes revised substantially from one release to the next and that uncertainty is particularly great at subsector level.

A large part of Denmark's output lies within sectors with low productivity growth (such as services), while the share of sectors with high productivity growth (e.g. electronics) is smaller. This means that overall productivity growth tends to be lower in Denmark than in countries with more focus on high-productivity-growth sectors. Achieving the same output with less input is a clear competitive advantage, provided that the goods or services produced are the same. However, it matters less how productive foreign enterprises are when it comes to products not manufactured in Denmark – such as mobile phones.

A standard calculation shows that if Denmark's output structure had been identical to that of Finland, average productivity growth in Denmark would have been 0.1 per cent p.a. higher in the period 1995-2005. Different sector structures can thus by no means explain the entire gap between productivity growth in Denmark and abroad.

Productivity and the economic cycle

The development in productivity in a country depends on many factors. One of the reasons why productivity growth in Denmark has been lower

PRODUCTION STRUCTURE AND PRODUCTIVITY 1995-2005						Table 2
	Denmark	Euro area	Germany	Sweden	Finland	USA
<i>Electronics, incl. telecom</i>						
Share of GVA, per cent	5.7	6.1	7.7	6.7	12.2	7.5
Productivity, per cent p.a.	5.5	6.2	6.0	17.0	14.7	12.6
<i>Manufacturing, excl. electronics</i>						
Share of GVA, per cent	17.8	23.9	27.2	24.7	24.9	19.9
Productivity, per cent p.a.	1.6	2.0	2.4	3.9	2.8	4.1
<i>Services, excl. telecom</i>						
Share of GVA, per cent	57.5	54.8	54.7	55.4	46.9	57.2
Productivity, per cent p.a.	1.2	0.7	0.4	2.6	1.0	2.7
<i>Agriculture, etc.</i>						
Share of GVA, per cent	2.0	2.2	1.2	1.6	4.2	2.8
Productivity, per cent p.a.	3.4	3.0	4.4	4.1	4.5	3.5
<i>Raw materials extraction</i>						
Share of GVA, per cent	5.8	0.6	0.3	0.7	0.4	2.3
Productivity, per cent p.a.	9.5	1.7	-0.2	0.8	-1.1	-1.3
<i>Market sector of the economy</i>						
Share of GVA, per cent	100	100	100	100	100	100
Productivity, per cent p.a.	1.6	1.4	1.6	3.7	3.3	3.0

Note: "Share of GVA" indicates the share of value added in the market sector of the economy in 2005. The shares do not add up to 100, as sectors with a strong domestic orientation have been omitted. These include building and construction. "Productivity" indicates annual growth in productivity in the period 1995-2005. "Services" comprises the service-producing parts of the market sector of the economy, e.g. financing, trade, transport, hotels and restaurants, etc. Agriculture, etc. comprises agriculture, horticulture, forestry and fisheries.

Source: EU-KLEMS database, March 2008.

than in other countries taken as one since the mid-1990s could be that strong growth in employment in Denmark, combined with a widespread shortage of labour in recent years, has brought people into work who, initially at any rate, have been less productive than the average employee. However, the euro area has also seen low productivity growth without equivalently strong growth in employment. As regards Sweden and Finland, where productivity growth has been particularly strong in the last decade, both countries recovered from a deep economic crisis in the mid-1990s. The starting point for output was therefore extraordinarily low.

Over time a global elimination race takes place, in which the business enterprises that can produce goods or services at the lowest cost will out those with higher costs for the same product. A geographical production split will thus be seen as a consequence of globalisation¹.

Productivity growth and more subdued price rises

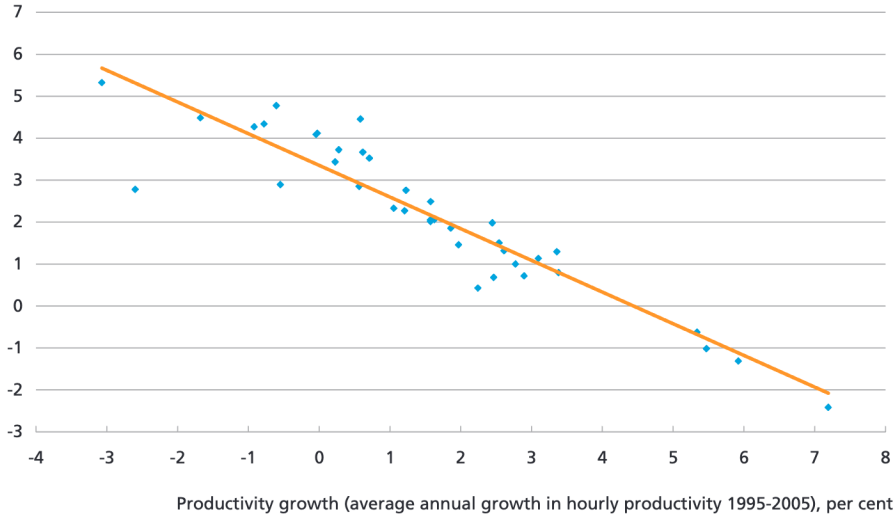
High productivity growth is an advantage for a country if the remuneration of production factors, be it labour or capital, increases. This is by

¹ Cf. Erik Haller Pedersen, Globalisation and the Danish Economy, Danmarks Nationalbank, *Monetary Review*, 1st Quarter 2007.

GROWTH IN PRODUCTIVITY AND PRICES OF FINISHED GOODS BY SECTOR

Chart 4

Prices (average annual growth in GVA deflator 1995-2005), per cent



Note: The Chart illustrates growth in the price of finished goods and in productivity at sector level in Denmark.

Source: EU-KLEMS.

no means always the case, as the gain from higher productivity in a competitive market is to a large extent passed on to consumers by way of lower prices, thereby squeezing profit margins. In areas with lower overall productivity growth, downward pressure on sales prices is less pronounced, cf. Chart 4. The Chart shows the correlation for Denmark, but the same pattern is seen internationally.

Danish business enterprises have been good at specialising in products that sell at high prices in the global market. Good sales prices for Danish products and receding prices for goods and services imported into Denmark are reflected in improved terms of trade for Denmark over time, cf. Chart 5. In contrast, countries with extensive production of e.g. electronics have seen prices fall – to the benefit of Danish consumers and business enterprises.

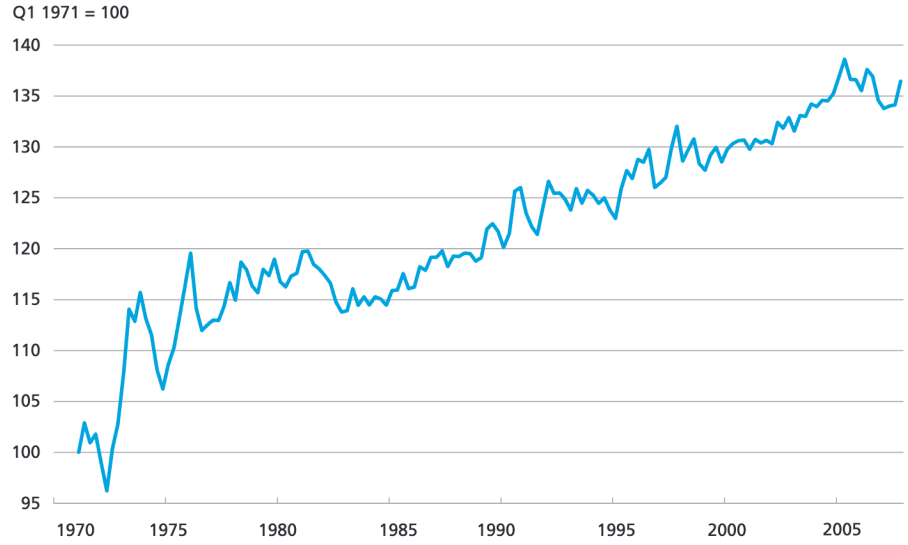
The improved terms of trade over the last decade have boosted GDP in market terms by 0.7 per cent. Over the same period, annual productivity growth in Denmark has been 0.9 per cent below the average for a number of Denmark's major competitors. The improved terms of trade have thus more or less offset the weaker productivity development.

Prices, costs and corporate earnings

Corporate earnings are determined by the development in prices and costs. A downward trend in costs by way of lower unit labour costs does not automatically increase profits if this development goes hand in hand with lower sales prices.

TERMS OF TRADE EXCLUDING ENERGY

Chart 5



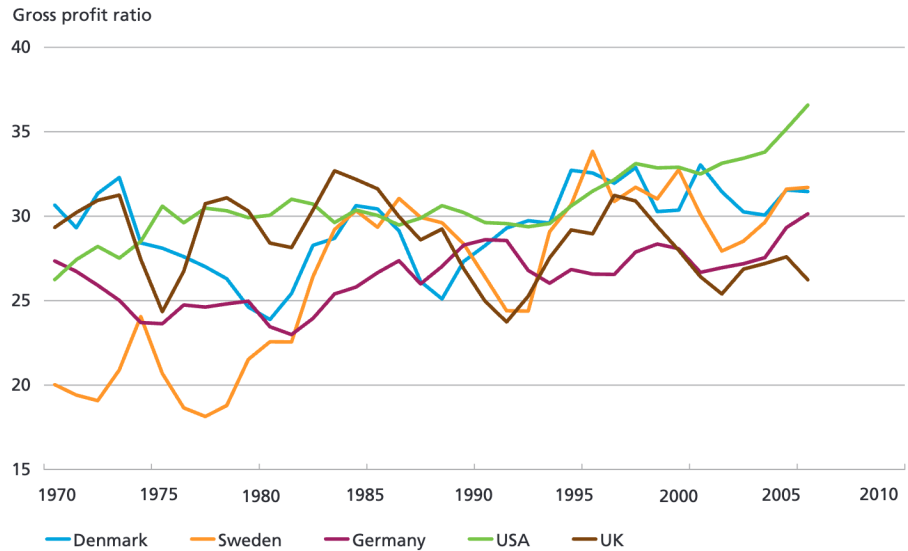
Note: "Terms of trade" shows the development in export prices excluding energy in relation to import prices excluding energy according to the national accounts.

Source: Statistics Denmark.

Danish business enterprises have posted sound earnings in the last ten years without profit ratios being squeezed too much, cf. Chart 6. At the same time, employment has increased. Within their respective niche areas, Danish business enterprises have generally been successful, and

CORPORATE PROFITS

Chart 6



Note: Residual income as a percentage of GVA in the market sector of the economy.

Source: EU-KLEMS.

Danish employees and business enterprises have gained from productivity growth abroad in terms of lower prices for a wide range of finished and intermediate goods. There is thus no direct equation between weaker productivity development and deteriorating competitiveness. Relative unit labour costs for the economy overall tend to overestimate the deterioration of Denmark's competitiveness. In addition to wage and productivity, other relevant factors to be taken into account when assessing overall competitiveness are employment, the government budget balance and the balance of payments.

IS DENMARK SUFFICIENTLY COMPETITIVE?

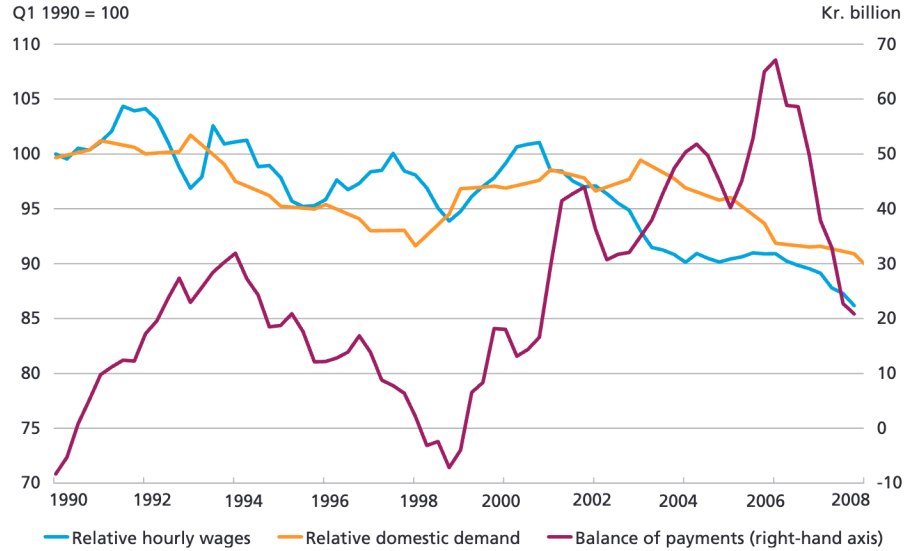
Often competitiveness and balance of payments are correlated. Denmark is competitive if the balance of payments is in equilibrium in a situation with full employment. The equilibrium of the balance of payments gives an indication of whether full employment is sustainable. The explanation why loss of Danish market shares has not exerted greater pressure on the current account of the balance of payments lies in factors such as high growth in Denmark's export markets, a strong increase in the value of North Sea oil and gas production and a considerable expansion of the merchant fleet. Particularly the latter two have improved the balance of payments with little input of domestic production resources.

Since the latest upswing began in 2003, the balance of payments has deteriorated substantially. The reason is that the balance of payments is affected not only by the development in competitiveness, but also by the relationship between demand in Denmark and abroad. Weak demand in Denmark and strong demand abroad is reflected in an improvement of the balance of payments. That was the case in connection with the dampening of the Danish economy in the wake of the fiscal-policy tightening in 1998 (the "Whitsun Package"). Conversely, the strong Danish economy since 2003, coupled with deteriorating wage competitiveness, has reduced the current-account surplus considerably, cf. Chart 7.

In addition to a balance of payments in equilibrium competitiveness requires sustainable fiscal policy in a situation with full employment. In other words, private-sector production must be sufficient to ensure full employment without any kind of "life support" via economic policy.

A single figure cannot provide an exhaustive description of competitiveness, since many factors play a role, each of which can worsen or improve wage competitiveness. The latter is, however, still an important indicator as there are limits to the price at which a product will sell. Furthermore, wage competitiveness affects the rate of manufacturing relocation to low-wage countries.

RELATIVE DOMESTIC DEMAND, COMPETITIVENESS AND FOREIGN TRADE Chart 7



Note: "Relative domestic demand" shows domestic demand abroad in relation to domestic demand in Denmark. Lower relative hourly wages entail a weakening of Denmark's competitiveness. "Balance of payments" is stated as a moving 12-month sum.
 Source: Statistics Denmark and OECD.

Recent developments have made it even more imperative for Danish business enterprises to remain competitive in a broad sense. The terms of trade have been flat for the last couple of years, but it is still too early to say whether this is a temporary or sustained development. Unchanged terms of trade and weak productivity growth combined with relatively high wage increases is a dangerous cocktail, particularly for a very open economy such as the Danish one.

Denmark Migrates to TARGET2

Morten Valentiner, Payment Systems

THE EUROSISTEM'S NEW SINGLE PAYMENT SYSTEM

In connection with the launch of the euro in 1999 the trans-European payment system, TARGET, was introduced in all the then 15 EU member states. The system was intended for settlement of large, time-critical payments in euro. Technically, TARGET was based on links between the national payment systems and the European Central Bank's system. In the period November 2007 to May 2008, member states participating in TARGET migrated to the new trans-European payment system, TARGET2.

TARGET2 replaces the national interbank payment systems in the euro area, whereby special national functionality and provisions are replaced by a harmonised system where costs for system development, reduction of operational risk, etc. are shared by a large number of participants. The Eurosystem's monetary-policy operations are now handled in a uniform manner for all euro area participants via TARGET2. In TARGET2, all participants' accounts are placed on a single shared platform, which makes it considerably easier for participants with cross-border activities to handle liquidity and effect payments, etc. in euro. Moreover, such participants no longer need to participate in different national systems in order to settle payments or participate in securities settlement or retail payment systems in the member states where they operate. For most member states, migration to TARGET2 has meant less expensive settlement of interbank payments in euro, increased functionality for e.g. liquidity management, and enhanced protection against major system failures. For enterprises, etc. doing business in euro, the banks will have easier and more flexible access at lower cost to settlement of payments across national borders, which will mean considerably faster settlement of payments in euro at lower cost. TARGET2 is thus an important element of the infrastructure that supports a single market for financial services in the EU.

Danmarks Nationalbank has decided to participate in TARGET2 as Danish credit institutions conduct considerable business in euro. Moreover, maintenance of the existing Danish retail payment and securities settlement systems in euro requires participation in TARGET2. If Danmarks Nationalbank had decided not to participate in TARGET2, the 30

current participants in the Danish infrastructure for settlement in euro, including VP Securities Services and PBS, would either have had to settle payments in euro via a branch or subsidiary in the euro area or via a correspondent bank with access to TARGET2. The terms and conditions for Danish participants remain unchanged. Denmark must still observe the current restrictions applying to participating non-euro area member states, e.g. non-access to overnight liquidity in euro. Settlement of payments in kroner will still take place via Danmarks Nationalbank's own system, Kronos.

Further information about TARGET2 can be found at Danmarks Nationalbank's website, www.nationalbanken.dk, under Tasks -> Payment systems -> TARGET2.

Speech by Nils Bernstein at the Annual meeting of the Association of Danish Mortgage Banks on 24 April 2008

At last year's meeting of the Association of Danish Mortgage Banks I said the following about the economic situation in the USA: "There is no sign either that the problems faced by companies specialising in mortgage loans to less creditworthy households will spread to other areas of the financial markets". I was not the only person to hold that view.

I have been reminded that economic predictions should always be taken with a grain of salt.

It is no exaggeration to say that things have developed somewhat contrary to the predictions. The economic forecasts for the USA and Europe have gradually been adjusted downwards over the last year or so. What started as problems for companies specialising in subprime mortgages has spread to other parts of the financial sector – also out-side the USA – and is now dampening output and employment. This again has a negative impact on financial enterprises.

The current assessment is that the USA is heading for a recession that will not subside until the 2nd half of 2008 at the earliest. Then the situation – at best – will only slowly improve. It looks as if Europe will avoid actual recession, but must be prepared for modest growth rates of between 1 and 2 per cent in the coming years.

This development has taken most people by surprise, although the boom in the USA had peaked before the subprime crisis. It is positive that developing countries and emerging market economies have so far steered clear of the economic downturn. This has mitigated the slowdown in the global economy. At the same time, inflation has risen worldwide, driven by increasing energy and food prices. The price increases limit the scope for further expansion of economic policy. There is a risk that inflation expectations will be pushed upwards, triggering a wage and price spiral.

Needless to say, the impact of higher food prices is most severe in the poor countries, and the issue is rapidly climbing to the top of the international agenda.

Today, it is estimated that losses in the financial sector could be as high as 1,000 billion dollars, or three times Denmark's domestic product

– without comparison, I should add. Both financial enterprises and others have suffered losses, primarily in the USA, but also in Europe. The greatest losses have been observed in some of the world's largest banks, and one bank has been on the brink of failure. These enterprises have had thousands of highly educated and highly paid employees and managers at their disposal in order to avoid precisely such losses.

The events have led to self-examination among financial enterprises and authorities who were too late to see the problems and take action. How could the situation get so much out of hand, and how can we prevent this from happening again?

Much has already been written about the background to the crisis. And I am sure that the course of events will be the subject of many learned papers in the coming years, relying on the advantages of hindsight.

Basically, financial business is all about forming a link between people who at a given time need to spend more than they own and earn and others who are in the opposite situation. This intermediation enables enterprises to invest in anticipation of future profits. It enables households to buy houses and flats with a down payment of only 20 per cent. And it enables governments to operate with budget deficits from time to time.

Financial intermediation – at its best – ensures that savers receive the optimum return with the chosen risk profile, and that the most profitable investments are sought. Intermediation takes place across national borders, and the financial sector is at the forefront of globalisation. The importance of a well-functioning financial sector to a modern economy cannot be overrated.

However, in recent years financial intermediation has expanded at an excessive pace, combined with sophisticated product development – and risk assessment systems and incentive structures have not been able to keep up in the competition for market shares.

Where this development led to an atmosphere of euphoria, greed and imprudence could prevail.

Some degree of caution is reintroduced when investors get too close to the fire and burn their fingers. However, other action is also required. It is a safe bet today that rules will be tightened.

As the tide is turning, it is a question of striking the right balance between tightening the rules and safeguarding the role of financial intermediation in society.

Last autumn, the G7 countries asked the Financial Stability Forum (FSF) – which includes the ministries of finance, central banks and financial supervisory authorities of major countries, among others – to analyse the factors and weaknesses that led to the crisis and propose solutions

to boost the resilience of the financial markets and institutions. The results are interesting to read and ought to be compulsory for anyone involved in the financial sector.

FSF tabled 67 proposals under 5 main headings:

The first group of proposals concerns tighter requirements for the financial institutions' capital, liquidity and risk management. A larger buffer is required. The obvious obstacle is, of course, how to implement such requirements in a situation where they could make things go from bad to worse.

The second group of proposals aims at increasing transparency in the markets by publishing all relevant risks and ensuring more reliable valuations. Uncertainty has increased because the financial institutions have only partially declared their losses and because it has been difficult to state the value of assets no longer traded.

A third group of proposals addresses the role of rating agencies in financial intermediation. It is necessary to improve the quality of the rating process in order to avoid conflicts of interest, and to improve awareness of the results. Authorities should reconsider their use of rating agency services.

Fourthly, it is suggested that for all large cross-border banks worldwide a group of representatives from the relevant national supervisory authorities should be set up.

This proposal reflects awareness that the authorities are currently inadequately equipped to handle potential crises in banks with subsidiaries and branches operating across national borders.

Finally, central banks are encouraged to be more flexible, including to expand their lending facilities. One of the lessons to be learned from the current crisis is that central banks' lending facilities have been inadequate in relation to banks experiencing a credit crunch.

As you can hear, we must all do our bit: private enterprises, governments, supervisory authorities and central banks. It is recommended that most of the proposals should be implemented this year. The rest in 2009.

And how will all this affect us in Denmark?

It may sound strange, but the international economic slowdown, as it is now predicted, comes at a rather convenient time for Denmark. The economy has been strong for a number of years, underpinned by low interest rates and expansionary fiscal policy.

Employment is record high, and unemployment at the lowest level for a generation.

The current-account surplus has fallen substantially, but fortunately no financial imbalances have accumulated during the upswing. Overall, households are well-consolidated with sound financial buffers, although the housing market has been weak for 18 months.

However, the Danish economy has been close to its capacity limit for some time. The shortage of labour has intensified the pressure for higher wage increases, and the gap between growth in Danish and foreign wages has widened in recent years. Annual consumer price inflation reached 3.1 per cent in March, primarily driven by higher energy and food prices, as was also the case elsewhere. Consumers' expectations of price increases continue to rise.

The shortage of labour curbs economic growth in Denmark. In Danmarks Nationalbank's most recent forecast – from March – the central estimate is that the Danish economy will shift to markedly lower growth in the coming years. However, unemployment will not reach a level that is compatible with sustainable long-term development in wages until 2010.

Previously, financial turmoil usually went hand in hand with currency unrest in Europe. So far, there have only been few indications of this. It would be natural to give the credit to the fewer European currencies, brought about by the euro. It is an advantage to Denmark that the euro exists and has now been adopted by 15 EU member states.

Combined with the European Central Bank's supply of liquidity in response to the financial turmoil, this has mitigated the risk of major negative real-economic impacts.

The financial system in Denmark has not been unaffected by the financial turmoil. But fortunately the effect has been less significant than in several other countries. The reason is that Danish investors have only to a small extent invested in – and thus lost money on – subprime-related assets. We have our own good mortgage-credit products.

However, in Denmark we have also seen how the uncertainty has made banks more reluctant to grant each other uncollateralised loans in the money market, particularly for longer maturities. The result has been shorter maturities and higher financing costs.

This mainly affects the banks that have built up considerable deposit deficits in recent years, based on the assumption that they would be able to raise inexpensive liquidity in the money market or by issuing bonds.

In the current situation, and in accordance with international recommendations, Danmarks Nationalbank, like other central banks, is reviewing its lending facilities. This is an ongoing process. However, we are of the opinion that well-run Danish banks should not find themselves in an unnecessary liquidity squeeze because of the international financial turmoil.

Thank you for your attention. I wish you a successful meeting.

Press releases

16 APRIL 2008: NEW SHIP COIN WITH M/S SELANDIA AS ITS MOTIF

Tomorrow Danmarks Nationalbank issues a new 20-krone coin with M/S Selandia as its motif. This is the third coin in a series with ships as their common motif.

The coin is presented today at the DieselHouse museum in Copenhagen. The DieselHouse is built around a Burmeister & Wain (B&W) diesel engine from 1932, which for many years was the largest diesel engine in the world.

M/S Selandia, which was built by B&W for the East Asiatic Company in 1912, was the world's first ocean-going ship powered by diesel. It marks the transition from steam ships to motor ships and was hailed as a technological wonder in its day. However, it lacked the distinctive architectural feature of the steam ships, the large funnels. After its successful maiden voyage, M/S Selandia was followed by its sister vessels, M/S Fionia and M/S Jutlandia. After M/S Selandia grounded and sank near Japan in 1942, several other ships have borne its name. A model of M/S Selandia can also be seen at the DieselHouse.

The motif for the coin has been designed by the sculptor Torben Ebbesen, who was also the artist behind the Nightingale fairy tale coin. "My tribute to M/S Selandia, the ancestor of all modern ships, gives a dynamic impression of the power of invention ploughing its way through the sky and the sea – without funnels", says Torben Ebbesen.

The Selandia coin is issued as a 20-krone coin in ordinary circulation in an edition of 1.2 million. The face of the coin shows a profile of the Queen.

The Selandia coin will be in circulation via the banks from tomorrow. It can also be ordered from Danmarks Nationalbank (Banking Services) and via the website of The Royal Mint, www.royalmint.dk. Pictures of the coin can be found on the website of The Royal Mint. The next ship coin is expected to be issued in the summer of 2008.

9 MAY 2008: DANMARKS NATIONALBANK OPENS NEW SECURED LENDING FACILITY

On 23 May 2008 Danmarks Nationalbank will open a new secured lending facility to support the exchange of liquidity in the money market.

Until May 2009 banks and mortgage credit institutes can borrow on a weekly basis against a new special type of bills, loan bills.

Governor Nils Bernstein:

"As an outcome of the financial turmoil, we have found it appropriate to expand the set of collateral. Like a can of oil, the facility is intended to lubricate the exchange of liquidity among banks.

Extensive use of the facility is not a criterion of success. Our mere acceptance of loan bills as eligible collateral means that the bills form part of the liquidity reserve of the bank or mortgage credit institution acquiring it. So even if the loan bills are not posted as loan collateral with Nationalbanken, the facility may have a positive impact.

A more detailed description of the facility is available on www.nationalbanken.dk

The other facilities of Danmarks Nationalbank remain unchanged.

16 MAY 2008: INTEREST RATE INCREASE

With effect from 16 May 2008 the lending rate and the interest rate for certificates of deposits are raised from 4.25 per cent to 4.35 per cent. The discount rate and the interest rate on banks' current accounts with Danmarks Nationalbank remain unchanged at 4.0 per cent.

Since August 2007 the spread between Danmarks Nationalbank's lending rate and ECB's marginal rate has been reduced with 15-20 basis points, thus the spread has more or less disappeared. In short periods of time the interest-rate spread has been negative.

The development of the interest-rate spread has led to a weakening of the Danish krone, and in accordance with the fixed-exchange-rate policy Danmarks Nationalbank has intervened to support the krone.

16 MAY 2008: NATIONALBANKEN ENTERS SWAP FACILITY WITH SEÐLABANKI ÍSLANDS

Danmarks Nationalbank and the central banks of Norway and Sweden have entered into bilateral swap facility agreements with the Central Bank of Iceland, Seðlabanki Íslands.

The facility gives Seðlabanki Íslands the right to acquire euro if needed to ensure financial stability.

The agreement with Danmarks Nationalbank enables Seðlabanki Íslands to acquire euro against Icelandic krona for up to an aggregate amount of EUR 500 million.

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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: 4 July 2008.

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 OMX Nordic 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	Danmarks Nationalbank's interest rates		The ECB's minimum bid rate	End of period	Inter-bank interest rate, 3-months uncollat- eralized	Bond yields		Share- price index OMXC20 (prev.KFX) 3.7.89 =100
	Discount rate	Lending and certifi- cates of deposit				10-year central- govern- ment bond	30-year mort- gage- credit bond	
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
2007	4.00	4.25	4.00	2007	4.65	4.48	5.61	464.14
2006 8 Dec ..	3.50	3.75	3.50	Dec 07	4.65	4.48	5.61	464.14
2007 9 Mar ..	3.75	4.00	3.75	Jan 08	4.40	4.08	5.47	407.83
7 Jun ...	4.00	4.25	4.00	Feb 08	4.40	4.06	5.38	431.24
2008 16 May ..	4.00	4.35	4.00	Mar 08	4.50	4.19	5.61	428.10
	|	|	|	Apr 08	4.85	4.39	5.71	427.00
	|	|	|	May 08	4.95	4.67	5.92	460.29
4 Jul	4.25	4.60	4.25	Jun 08	5.08	4.81	6.08	424.30

SELECTED ITEMS FROM DANMARKS NATIONALBANK'S BALANCE SHEET

Table 2

	The foreign-exchange reserve (net)	Notes and coin in circulation	The central government's account with Danmarks Nationalbank	The banks' and the mortgage-credit institutes' net position with Danmarks Nationalbank			
				Certificates of deposit	Deposits (current account)	Loans	Total net position
End of period	Kr. billion						
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
2006	171.7	59.8	73.8	163.2	8.8	153.7	18.2
2007	168.8	61.6	89.9	200.5	9.4	216.8	-6.9
Jan 08	175.8	59.1	91.9	178.0	22.4	203.7	-3.3
Feb 08	180.3	58.8	107.6	190.8	7.4	213.4	-15.2
Mar 08	179.7	60.0	111.7	178.7	22.1	217.6	-16.9
Apr 08	173.6	60.2	102.9	192.0	16.7	223.7	-14.9
May 08	161.9	60.5	110.5	182.1	12.5	229.3	-34.7
Jun 08	164.7	60.8	95.8	181.2	23.1	223.4	-19.1

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

Table 3

	Central-government finance			Net purchase of foreign exchange by Danmarks Nationalbank			Net purchase of bonds by Danmarks Nationalbank	Other factors	The banks' and the mortgage-credit institutes' net position with Danmarks Nationalbank	
	Domestic gross financing requirement	Sales of domestic central-government securities, etc.	Liquidity effect	Interventions to purchase foreign exchange, net	Other	Total			Change in net position	End of period
2003	99.7	94.1	5.6	23.7	7.3	31.0	-1.0	-3.1	32.5	122.2
2004	75.5	92.6	-17.1	-12.5	6.1	-6.4	-2.6	-1.2	-27.3	94.6
2005	39.5	30.9	8.6	-18.4	3.0	-15.4	-2.2	-0.5	-9.5	85.1
2006	-14.5	16.2	-30.6	-34.3	4.3	-30.0	-4.9	-1.2	-66.7	18.2
2007	-26.1	2.9	-29.1	-1.7	7.2	5.5	-0.4	-1.4	-25.3	-6.9
Jan 08	-0.9	3.9	-4.8	7.8	-1.4	6.4	-1.7	3.8	3.7	-3.3
Feb 08	-13.3	2.5	-15.8	0.0	4.5	4.5	0.0	-0.6	-11.9	-15.2
Mar 08	-0.3	3.7	-4.1	0.2	-1.3	-1.1	0.6	2.9	-1.7	-16.9
Apr 08	11.7	3.0	8.8	-7.8	1.8	-6.0	0.7	-1.5	1.9	-14.9
May 08	-5.5	2.1	-7.6	-11.8	-0.5	-12.3	-0.2	0.3	-19.7	-34.7
Jun 08	0.0	-14.7	14.7	0.0	2.8	2.8	-0.1	-1.8	15.6	-19.1

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		Domestic deposits	Bonds, etc. issued	
		Public sector	Private sector	Bonds, etc.	Shares, etc.			
Kr. billion								
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	4,228.2	107.8	2,584.2	75.9	53.5	971.3	1,318.2	-172.9
2006	4,682.1	116.8	2,956.0	51.8	60.3	1,077.0	1,433.7	-222.8
2007	5,497.4	119.9	3,353.7	43.3	63.5	1,219.7	1,505.2	-304.5
Dec 07	5,497.4	119.9	3,353.7	43.3	63.5	1,219.7	1,505.2	-304.5
Jan 08	5,518.6	121.7	3,366.1	43.1	62.5	1,261.2	1,536.6	-357.2
Feb 08	5,603.7	119.4	3,389.3	38.8	62.7	1,283.7	1,508.3	-358.8
Mar 08	5,643.1	120.9	3,440.3	42.4	68.3	1,282.3	1,511.9	-373.3
Apr 08	5,716.0	122.1	3,451.6	47.1	80.1	1,293.7	1,514.3	-399.6
May 08	5,767.8	122.8	3,482.7	47.6	79.6	1,314.8	1,487.9	-400.7
Change compared with previous year, per cent								
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	-24.7	15.4	14.4	7.9	...
2006 .....	...	8.3	14.4	-31.8	12.8	10.9	8.8	...
2007 .....	...	2.7	13.5	-16.4	5.2	13.3	5.0	...
Dec 07 .....	...	2.7	13.5	-16.4	5.2	13.3	5.0	...
Jan 08 .....	...	0.6	13.2	-9.5	0.8	14.7	7.6	...
Feb 08 .....	...	2.2	12.6	-18.2	0.6	17.0	4.4	...
Mar 08 .....	...	4.5	12.5	1.0	3.6	13.4	3.8	...
Apr 08 .....	...	6.3	12.5	12.8	22.5	16.1	3.3	...
May 08 .....	...	6.6	12.7	1.4	20.0	16.4	2.5	...

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 circulation ¹	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 original maturity =< 2 years	M3
	Kr. billion								
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	50.7	648.6	699.3	143.0	17.9	860.2	8.0	21.3	889.5
2007	51.9	703.2	755.1	199.7	18.0	972.8	6.2	61.5	1,040.6
Dec 07	51.9	703.2	755.1	199.7	18.0	972.8	6.2	61.5	1,040.6
Jan 08	49.9	717.2	767.1	212.4	18.9	998.4	17.1	57.7	1,073.3
Feb 08	50.1	720.6	770.7	212.1	20.5	1,003.3	17.0	102.9	1,123.3
Mar 08	50.3	731.0	781.3	203.3	20.2	1,004.8	10.8	99.4	1,115.2
Apr 08	50.6	737.6	788.2	201.1	20.5	1,009.8	16.7	94.4	1,121.0
May 08	51.2	740.5	791.7	215.5	21.0	1,028.2	16.8	93.2	1,138.4
Change compared with previous year, per cent									
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
2007 .....	...	...	8.0	...	...	13.1	...	...	17.0
Dec 07 .....	...	...	8.0	...	...	13.1	...	...	17.0
Jan 08 .....	...	...	8.9	...	...	13.9	...	...	17.3
Feb 08 .....	...	...	10.5	...	...	13.6	...	...	22.1
Mar 08 .....	...	...	8.6	...	...	10.4	...	...	17.5
Apr 08 .....	...	...	8.0	...	...	10.9	...	...	18.7
May 08 .....	...	...	8.7	...	...	11.9	...	...	19.2

¹ Notes and coin in circulation, excluding the banks' holdings.

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								
2003	2,204.4	468.7	662.9	271.5	285.7	764.4	823.8	795.1
2004	2,418.4	495.6	754.8	324.8	309.6	780.3	823.1	908.0
2005	2,867.3	652.0	920.1	396.6	370.0	862.1	975.7	1,065.6
2006	3,242.0	715.0	1,124.3	475.0	458.0	889.6	1,133.8	1,148.3
2007	3,993.4	926.6	1,333.6	557.4	551.8	1,065.8	1,444.1	1,345.6
Dec 07	3,993.4	926.6	1,333.6	557.4	551.8	1,065.8	1,444.1	1,345.6
Jan 08	4,043.9	940.3	1,335.6	547.2	545.7	1,091.3	1,397.9	1,397.6
Feb 08	4,140.7	941.4	1,343.3	547.9	555.6	1,137.8	1,423.6	1,412.3
Mar 08	4,181.6	955.3	1,374.1	563.5	566.3	1,110.8	1,444.9	1,416.6
Apr 08	4,235.6	969.3	1,371.4	560.0	562.0	1,163.1	1,518.1	1,423.9
May 08	4,250.6	917.7	1,386.6	559.7	580.1	1,178.1	1,458.3	1,430.8
Change compared with previous year, per cent								
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 .....	...	31.7	21.9	22.1	19.5	10.5	18.5	17.3
2006 .....	...	9.7	22.2	19.8	23.8	3.2	16.2	7.8
2007 .....	...	29.6	18.6	17.4	20.5	19.8	27.4	17.2
Dec 07 .....	...	29.6	18.6	17.4	20.5	19.8	27.4	17.2
Jan 08 .....	...	25.3	17.8	16.5	19.9	15.8	19.7	20.0
Feb 08 .....	...	33.6	16.3	15.3	18.2	11.6	16.3	22.8
Mar 08 .....	...	25.9	16.3	15.6	16.2	13.7	18.2	18.9
Apr 08 .....	...	26.7	16.4	14.5	15.1	20.5	29.6	18.9
May 08 .....	...	14.1	16.7	13.7	18.5	24.6	20.9	18.7

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	Assets						Liabilities	
	Total balance	Lending to MFIs	Domestic lending			Holdings of securities	Loans from MFIs	Bonds, etc. issued
			Total	of which:				
				Households, etc.	Non-financial companies			
Kr. billion								
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
2007	3,088.2	362.8	2,015.5	1,532.5	420.8	649.2	344.2	2,495.2
Dec 07	3,088.2	362.8	2,015.5	1,532.5	420.8	649.2	344.2	2,495.2
Jan 08	2,661.9	316.3	2,027.7	1,538.7	428.0	268.2	281.7	2,201.4
Feb 08	2,632.1	307.5	2,040.7	1,547.6	431.1	227.7	285.6	2,162.9
Mar 08	2,663.0	337.2	2,058.0	1,553.9	436.6	220.7	290.9	2,150.8
Apr 08	2,660.9	309.0	2,071.1	1,560.5	441.4	223.8	287.2	2,152.3
May 08	2,694.2	317.3	2,086.8	1,571.0	445.1	225.8	293.6	2,147.5
Change compared with previous year, per cent								
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
2007 .....	...	48.0	9.9	8.9	13.5	13.1	52.0	8.6
Dec 07 .....	...	48.0	9.9	8.9	13.5	13.1	52.0	8.6
Jan 08 .....	...	78.8	9.7	8.5	14.7	85.0	65.2	16.8
Feb 08 .....	...	62.3	9.7	8.4	14.5	56.7	59.8	13.5
Mar 08 .....	...	48.2	9.8	8.1	14.6	49.0	52.3	11.4
Apr 08 .....	...	48.3	9.7	7.9	14.7	52.4	50.0	12.0
May 08 .....	...	44.4	9.6	7.7	14.4	48.3	46.0	11.8

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	House-holds, etc.	Business	Total	House-holds, etc.	Business	Total	House-holds, etc.	Business
	Kr. billion								
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	3,000.8	1,882.7	1,015.2	1,166.0	475.0	636.9	1,834.8	1,407.7	378.3
2007	3,387.8	2,090.0	1,189.7	1,372.3	557.4	760.5	2,015.5	1,532.5	429.1
Dec 07	3,387.8	2,090.0	1,189.7	1,372.3	557.4	760.5	2,015.5	1,532.5	429.1
Jan 08	3,405.6	2,085.9	1,210.6	1,377.9	547.2	774.4	2,027.7	1,538.7	436.2
Feb 08	3,426.2	2,095.4	1,223.8	1,385.5	547.9	784.4	2,040.7	1,547.6	439.4
Mar 08	3,474.3	2,117.4	1,248.4	1,416.4	563.5	801.2	2,058.0	1,553.9	447.2
Apr 08	3,484.8	2,120.5	1,252.9	1,413.7	560.0	800.8	2,071.1	1,560.5	452.1
May 08	3,515.7	2,130.7	1,271.9	1,428.9	559.7	816.0	2,086.8	1,571.0	455.9
Change compared with previous year, per cent									
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	24.8	10.2	9.9	10.7
2007	12.9	11.0	17.2	17.7	17.4	19.4	9.9	8.9	13.4
Dec 07	12.9	11.0	17.2	17.7	17.4	19.4	9.9	8.9	13.4
Jan 08	12.9	10.5	18.8	17.8	16.5	21.3	9.7	8.5	14.5
Feb 08	12.3	10.2	17.3	16.3	15.3	19.1	9.7	8.4	14.4
Mar 08	12.3	10.0	17.2	16.3	15.6	18.4	9.8	8.1	15.0
Apr 08	12.3	9.5	17.6	16.5	14.5	19.1	9.7	7.9	15.1
May 08	12.5	9.2	18.4	16.9	13.7	20.4	9.6	7.7	14.9

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		Total	Lending in foreign currency	Instalment-free lending ¹
2003	99.5	795.0	499.0	250.0	1,393.5	85.7	44.4	
2004	94.6	733.9	659.8	382.2	1,488.4	84.9	170.5	
2005	88.6	720.3	853.9	616.0	1,662.8	80.5	315.5	
2006	83.5	797.5	951.7	720.5	1,832.7	85.7	432.2	
2007	77.9	889.2	1,045.6	796.6	2,012.7	123.8	547.0	
Dec 07	77.9	889.2	1,045.6	796.6	2,012.7	123.8	547.0	
Jan 08	78.1	890.3	1,058.3	823.5	2,026.6	126.7	553.8	
Feb 08	78.2	890.2	1,070.1	833.3	2,038.5	129.6	560.9	
Mar 08	78.3	885.8	1,091.5	843.1	2,055.6	134.4	567.3	
Apr 08	78.5	886.1	1,106.0	852.6	2,070.6	136.1	575.6	
May 08	78.1	888.2	1,120.2	875.4	2,086.5	138.6	585.6	

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
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
Q1 07	5.7	7.1	5.5	3.6	3.1	2.8	3.2	3.4
Q2 07	5.9	7.2	5.7	4.0	3.4	3.1	3.4	3.8
Q3 07	6.1	7.4	6.0	4.1	3.6	3.3	3.6	4.0
Q4 07	6.2	7.4	6.1	4.3	3.7	3.4	3.7	4.1
Q1 08	6.2	7.5	6.1	4.5	3.7	3.5	3.8	4.2
Dec 07	6.2	7.4	6.1	4.4	3.7	3.4	3.7	4.1
Jan 08	6.2	7.4	6.1	4.4	3.7	3.4	3.7	4.1
Feb 08	6.3	7.5	6.1	4.4	3.8	3.5	3.8	4.2
Mar 08	6.2	7.5	6.0	4.5	3.8	3.5	3.8	4.2
Apr 08	6.4	7.6	6.2	4.5	3.8	3.5	3.8	4.2
May 08	6.5	7.7	6.3	4.7	3.8	3.6	3.8	4.2

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.	House- holds, etc.	Insurance compa- nies and pension funds	Other residents	Abroad
Kr. billion							
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
2007	1,020.7	477.9	411.6	295.2	336.8	322.1	29.2
Q1 07	952.2	437.2	393.6	297.2	302.6	312.0	29.6
Q2 07	980.2	429.8	426.7	299.4	319.8	321.0	30.0
Q3 07	1,002.2	442.6	428.8	299.8	340.9	322.8	31.1
Q4 07	1,020.7	477.9	411.6	295.2	336.8	322.1	29.2
Q1 08	963.9	466.4	356.2	268.6	329.3	304.0	23.9
Quarterly transactions, kr. billion							
Q1 07 .....	...	7.5	1.3	-0.1	9.9	5.5	0.5
Q2 07 .....	...	5.5	9.2	2.6	12.8	6.8	-3.4
Q3 07 .....	...	17.7	8.4	-0.1	22.5	0.3	0.0
Q4 07 .....	...	40.1	2.8	-0.2	3.7	6.6	-2.7
Q1 08 .....	...	4.0	12.0	-3.8	11.8	2.6	0.4

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		
Market value, kr. billion								
2003	2,143.3	400.0	505.9	191.1	1,525.5	207.2	506.6	209.6
2004	2,379.2	434.4	498.8	213.6	1,768.7	218.4	604.3	245.2
2005	2,559.7	461.2	434.9	205.1	2,002.9	252.5	845.2	300.5
2006	2,548.0	457.9	380.4	172.2	2,041.2	279.5	988.5	361.8
2007	2,709.5	467.5	301.9	176.2	2,255.4	279.4	994.8	445.3
Dec 07	2,709.5	467.5	301.9	176.2	2,255.4	279.4	994.8	445.3
Jan 08	2,321.0	466.9	312.1	177.9	1,866.3	276.0	887.4	397.2
Feb 08	2,346.6	464.4	308.3	184.9	1,889.5	265.5	920.4	393.5
Mar 08	2,347.7	471.8	310.4	184.6	1,890.0	272.0	907.9	381.6
Apr 08	2,335.7	467.8	307.3	178.8	1,876.1	269.6	908.4	390.3
May 08	2,343.4	451.2	299.1	180.7	1,889.9	251.3	949.8	428.7

Note: Comprise quoted and unquoted securities registered with the VP Securities Services (VP).

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
2003	622	166	400	1,262	2,451	1,505	947	2,452
2004	674	174	473	1,403	2,724	1,640	1,085	2,725
2005	755	172	618	1,616	3,161	1,834	1,327	3,161
2006	807	180	715	1,681	3,384	2,050	1,334	3,384
2007	878	197	704	1,697	3,476	2,232	1,245	3,477
Q4 06	807	180	715	1,681	3,384	2,050	1,334	3,384
Q1 07	824	177	733	1,696	3,430	2,112	1,319	3,431
Q2 07	858	180	748	1,687	3,473	2,131	1,342	3,473
Q3 07	865	186	746	1,707	3,505	2,168	1,337	3,505
Q4 07	878	197	704	1,697	3,476	2,232	1,245	3,477

COMPANIES' FINANCIAL ASSETS AND LIABILITIES

Table 14

End of period	Assets				Liabilities				
	Currency, bank deposits and granted credits, etc.	Bonds, etc.	Shares and certificates issued by investment associations, etc.	Total	Debt			Net financial assets	Total
					Loans, etc.	Bonds, etc. issued	Shares, etc. issued		
Kr. billion									
2003	662	121	643	1,426	1,159	109	1,131	-973	1,426
2004	647	164	746	1,557	1,223	142	1,248	-1,056	1,557
2005	739	167	971	1,876	1,358	143	1,488	-1,113	1,876
2006	792	147	1,075	2,016	1,590	140	1,565	-1,280	2,015
2007	913	150	1,117	2,181	1,729	119	1,695	-1,363	2,181
Q4 06	792	147	1,075	2,016	1,590	140	1,565	-1,280	2,015
Q1 07	801	141	1,101	2,043	1,652	139	1,622	-1,370	2,043
Q2 07	886	140	1,153	2,179	1,678	134	1,733	-1,366	2,179
Q3 07	899	136	1,170	2,205	1,681	120	1,793	-1,388	2,205
Q4 07	913	150	1,117	2,181	1,729	119	1,695	-1,363	2,181

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						
2003	65.9	23.2	89.2	-16.8	-24.0	48.3
2004	54.5	19.8	74.4	-2.4	-27.7	44.2
2005	45.1	38.3	83.4	9.9	-25.0	68.3
2006	16.6	42.1	58.6	16.5	-27.4	47.7
2007	-4.8	40.8	36.1	11.4	-27.1	20.4
May 06 - Apr 07	7.7	39.8	47.5	16.8	-29.1	35.3
May 07 - Apr 08	-6.0	43.2	37.2	9.9	-27.6	19.5
Nov 07	1.3	2.7	4.0	0.9	-1.6	3.4
Dec 07	-2.8	3.3	0.5	0.4	-1.3	-0.4
Jan 08	-2.2	2.8	0.6	0.6	-3.3	-2.2
Feb 08	0.7	2.9	3.7	0.0	-4.1	-0.4
Mar 08	-1.9	2.4	0.4	-4.1	-2.9	-6.5
Apr 08	-1.5	4.1	2.7	2.0	-2.4	2.2

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 ²	Denmarks Nationalbank's transactions with abroad ³
		Direct investments		Portfolio investments ¹	Other capital import		
		Danish abroad	Foreign in Denmark				
Kr. billion							
2003	48.3	-8.0	17.8	-98.3	72.5	-1.5	30.8
2004	44.4	62.1	-62.6	-87.1	-22.5	59.4	-6.2
2005	71.2	-97.1	77.3	-67.6	23.7	-19.3	-11.8
2006	47.8	-50.5	21.5	-110.9	82.4	-28.6	-38.3
2007	20.7	-92.5	61.1	-51.5	50.6	10.3	-1.2
May 06 - Apr 07	35.2	-74.8	6.6	46.4	-13.3	-9.9	-9.8
May 07 - Apr 08	20.0	-73.1	65.3	-61.7	78.1	-20.8	7.8
Nov 07	3.4	-4.3	10.3	-7.5	-6.7	3.7	-1.1
Dec 07	-0.4	9.4	0.4	-61.0	59.0	-19.4	-12.0
Jan 08	-2.1	-14.4	13.2	29.3	9.1	-27.3	7.9
Feb 08	-0.3	-18.2	4.4	-2.6	2.9	18.5	4.7
Mar 08	-6.5	-6.8	5.0	30.9	1.7	-23.8	0.6
Apr 08	2.3	-4.1	-0.1	-26.0	18.1	4.9	-4.8

¹ This item may differ from the total of the below Table 17, as portfolio investments are published 1-2 weeks earlier than the rest of the balance of payments.

² Including errors and omissions and until end-December 2004 unrecorded trade credits.

³ As from 2005 transactions on all Denmarks 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		Total ¹
	Krone-denominated bonds, etc.	Foreign Currency denominated bonds, etc.	Shares	Bonds, etc.	Shares	
Kr. billion						
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	20.8	122.5	-19.2	-107.5	-84.3	-67.6
2006	9.4	69.3	-34.6	-21.8	-133.2	-110.9
2007	23.8	65.4	13.8	-103.6	-50.9	-51.5
Dec 07	1.7	-27.0	-0.5	-35.1	-0.1	-61.0
Jan 08	-1.6	15.2	-1.7	12.3	5.0	29.3
Feb 08	-1.8	2.6	2.1	-3.3	-2.3	-2.6
Mar 08	7.8	11.4	-3.0	13.9	0.9	31.0
Apr 08	3.4	-0.7	3.1	-15.8	-15.6	-25.7
May 08	-9.8	16.5	14.9	-18.0	-0.3	3.3

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

¹ This item may differ from "Portfolio investments" in the above Table 16, as the rest of the balance of payments is published 1-2 weeks later.

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										
2003	413	198	309	446	17	57	518	31	230	2,221
2004	471	220	369	547	48	34	584	20	223	2,515
2005	567	253	556	684	85	37	720	19	217	3,136
2006	589	255	739	669	47	41	826	30	178	3,374
2007	627	286	791	734	7	49	1,049	32	176	3,751
Q1 07	624	255	802	653	19	46	881	31	185	3,496
Q2 07	630	279	821	683	-2	49	943	29	181	3,613
Q3 07	628	292	824	664	7	47	1,035	31	191	3,719
Q4 07	627	286	791	734	7	49	1,049	32	176	3,751
Q1 08	641	303	678	691	25	51	1,075	32	185	3,680
Liabilities										
2003	434	162	186	762	...	28	801	13	4	2,391
2004	429	208	241	857	...	20	816	20	2	2,593
2005	503	231	311	1,019	...	27	968	22	3	3,082
2006	496	270	358	1,059	...	32	1,138	34	4	3,391
2007	517	266	428	1,114	...	36	1,413	36	5	3,815
Q1 07	504	277	387	1,125	...	33	1,221	35	1	3,583
Q2 07	514	268	425	1,141	...	34	1,246	34	1	3,663
Q3 07	524	256	440	1,138	...	32	1,309	37	3	3,738
Q4 07	517	266	428	1,114	...	36	1,413	36	5	3,815
Q1 08	522	272	389	1,136	...	36	1,453	36	3	3,846
Net assets										
2003	-21	36	123	-315	17	29	-283	19	226	-170
2004	42	12	128	-310	48	14	-233	0	221	-78
2005	64	22	245	-335	85	10	-248	-3	214	54
2006	93	-15	381	-390	47	9	-312	-4	174	-17
2007	111	20	362	-380	7	13	-364	-5	171	-64
Q1 07	120	-22	415	-472	19	13	-340	-4	184	-87
Q2 07	116	11	396	-459	-2	15	-303	-5	180	-50
Q3 07	104	36	384	-474	7	15	-274	-6	188	-19
Q4 07	111	20	362	-380	7	13	-364	-5	171	-64
Q1 08	119	31	288	-445	25	15	-378	-4	183	-166

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

GDP BY TYPE OF EXPENDITURE

Table 19

	Final domestic demand						Exports of goods and services	Imports of goods and services
	GDP	Private consumption	General-government consumption	Gross fixed capital formation	Change in inventories	Total		
2003	1,400.7	666.9	371.2	271.8	3.2	1,313.1	635.1	547.6
2004	1,466.2	707.2	389.0	285.0	13.5	1,394.8	665.0	593.6
2005	1,548.2	759.8	401.3	306.9	3.8	1,471.8	761.6	685.2
2006	1,641.5	805.2	421.2	357.1	13.0	1,596.5	851.1	806.0
2007	1,696.3	839.8	438.8	388.2	8.2	1,675.0	885.0	863.7
Q1 07	406.4	202.3	106.6	91.8	4.7	405.4	210.5	209.5
Q2 07	421.5	207.6	108.8	95.8	3.2	415.4	216.6	210.5
Q3 07	424.1	205.3	109.1	95.4	3.9	413.7	224.5	214.1
Q4 07	444.2	224.5	114.3	105.2	-3.7	440.4	233.4	229.6
Q1 08	417.4	210.8	110.2	93.3	2.5	416.8	226.2	225.5
Real growth compared with previous year, per cent								
2003	0.4	1.0	0.7	-0.2	...	0.0	-1.0	-1.6
2004	2.3	4.7	1.8	3.9	...	4.4	2.8	7.7
2005	2.5	5.2	0.9	6.1	...	3.5	8.3	11.3
2006	3.9	3.8	2.0	14.0	...	6.1	9.0	14.1
2007	1.7	2.3	1.6	5.9	...	2.6	1.9	3.8
Q1 07	3.7	0.7	1.3	17.3	...	4.8	5.8	7.9
Q2 07	-0.2	0.7	0.8	0.8	...	0.5	-0.3	1.1
Q3 07	1.7	3.4	1.0	2.9	...	2.4	2.2	3.7
Q4 07	1.5	4.5	3.2	4.7	...	2.9	0.2	2.7
Q1 08	-0.7	1.7	0.4	-0.8	...	0.2	1.3	3.0
Real growth compared with previous quarter (seasonally adjusted), per cent								
Q1 07	1.5	1.4	1.3	5.5	...	2.3	-0.1	0.0
Q2 07	-1.5	-0.5	-0.3	-6.3	...	-1.8	-2.2	-1.7
Q3 07	1.7	1.4	0.4	4.0	...	1.7	2.4	2.5
Q4 07	-0.2	2.1	1.8	1.5	...	1.9	0.0	1.8
Q1 08	-0.6	-1.1	-1.4	-0.6	...	-1.1	1.1	0.4

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

Table 20

	HICP							Index of net retail prices ¹		
	Subcomponents:									
	Total	Energy	Food	Core inflation ²	Administered prices		HICP excl. energy, food and administered prices ³	Index of net retail prices excl. energy, food and administered prices ³	Split into ⁴ :	
					Rent	Public services			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										
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
2007	1.7	0.3	3.7	1.3	2.1	0.6	1.2	1.4	1.4	1.4
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
Q1 07	1.9	1.1	4.1	1.3	2.0	0.3	1.3	1.3	1.7	1.1
Q2 07	1.5	-1.7	3.6	1.5	2.1	0.2	1.5	1.4	0.9	1.7
Q3 07	1.0	-1.4	2.0	1.2	2.2	0.8	1.0	1.2	0.9	1.4
Q4 07	2.2	3.3	5.2	1.2	2.0	1.0	1.2	1.6	2.0	1.4
Q1 08	3.2	7.5	6.0	1.7	2.2	2.4	1.6	2.0	3.6	1.2

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 50.7 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 Per cent of labour force	Quantity index		Forced sales of real property	New passen- ger car registra- tions	Con- sumer confi- dence indicator	Composite cyclical indicator for		
		Manu- facturing industry ¹ 2000=100	Retail trade 2000=100				Manu- facturing industry	Building and construc- tion	Service
2003	5.7	102.5	107.8	3,039	96,501	1	-6	-18	-2
2004	5.8	102.1	113.4	2,640	122,543	7	3	-5	13
2005	5.1	103.8	120.1	1,874	148,578	9	1	7	20
2006	3.9	108.0	124.0	1,231	156,719	10	9	21	24
2007	2.8	112.6	125.1	1,392	162,479	7	4	9	20
Seasonally adjusted									
Jan 08	2.1	118.3	125.5	145	15,099	-4	6	0	15
Feb 08	2.0	119.0	128.2	201	14,709	-2	-4	-2	11
Mar 08	1.9	108.7	124.7	162	12,625	0	-2	-4	11
Apr 08	1.8	121.3	126.9	189	14,703	-3	-2	-6	9
May 08	1.7	116.6	126.2	193	13,614	-4	-1	-10	9
Jun 08 .....	...	...	...	157	...	-5	-4	-13	9

¹ Excluding shipbuilding.

SELECTED QUARTERLY ECONOMIC INDICATORS

Table 22

	Employment		Hourly earnings			Property prices (purchase sum, one-family dwellings) As a percentage of property value 2006
	Total	Private	All sectors in Denmark, total	Manufacturing industry in Denmark	Manufacturing industry abroad	
	1,000 persons		1996=100			
2003	2,756	1,914	133.3	133.8	124.1	64.4
2004	2,739	1,898	137.4	138.0	127.5	70.1
2005	2,763	1,919	141.4	141.8	130.7	82.5
2006	2,808	1,965	145.8	146.2	134.0	100.3
2007	2,854	2,010	151.3	152.0	137.1	104.6
Seasonally adjusted						
Q1 07	2,846	2,002	148.9	149.3	135.7	104.2
Q2 07	2,844	2,000	150.2	151.2	136.7	105.5
Q3 07	2,857	2,012	152.3	152.8	137.5	105.7
Q4 07	2,867	2,023	153.7	154.3	138.7	103.0
Q1 08	2,889	2,045	155.4	155.7	140.3	...
Change compared with previous year, per cent						
2003	-1.1	-1.2	3.7	4.2	3.0	3.2
2004	-0.6	-0.8	3.1	3.1	2.7	8.9
2005	0.9	1.1	2.9	2.7	2.5	17.6
2006	1.6	2.4	3.1	3.1	2.5	21.6
2007	1.6	2.3	3.8	3.9	2.3	4.3
Q1 07	2.0	2.7	3.3	3.4	2.1	10.0
Q2 07	1.4	2.0	3.7	3.9	2.3	4.9
Q3 07	1.8	2.4	4.0	4.2	2.3	2.6
Q4 07	1.3	2.0	4.3	4.3	2.7	0.3
Q1 08	1.5	2.1	4.4	4.3	3.4	...

EXCHANGE RATES

Table 23

	EUR	USD	GBP	SEK	NOK	CHF	JPY
Kroner per 100 units							
Average							
2003	743.07	658.99	1,074.99	81.45	93.03	488.88	5.6840
2004	743.98	598.93	1,096.69	81.54	88.90	481.96	5.5366
2005	745.19	600.34	1,090.02	80.29	93.11	481.30	5.4473
2006	745.91	594.70	1,094.32	80.62	92.71	474.22	5.1123
2007	745.06	544.56	1,089.81	80.57	92.99	453.66	4.6247
Jan 08	745.05	506.24	997.10	79.00	93.65	459.86	4.6967
Feb 08	745.40	505.49	992.68	79.61	93.79	463.56	4.7191
Mar 08	745.59	480.12	962.55	79.31	93.63	474.15	4.7560
Apr 08	746.03	473.73	938.40	79.63	93.69	467.61	4.6216
May 08	746.09	479.42	941.78	80.12	94.85	459.18	4.5943
Jun 08	745.86	479.36	942.21	79.54	93.32	462.16	4.4828

EFFECTIVE KRONE RATE

Table 24

	Nominal effective krone rate	Consumer-price indices		Real effective krone rate based on consumer prices	Real effective krone rate based on hourly earnings	Consumer-price index in the euro area
		Denmark	Abroad			
Average	1980=100					2005=100
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	107.7	109.4	100.0
2006	101.6	246.2	232.5	107.7	110.2	102.2
2007	103.2	250.5	237.7	108.7	113.5	104.4
Jan 08	105.1	253.7	241.2	110.4	...	105.8
Feb 08	105.0	256.8	242.2	111.1	...	106.2
Mar 08	106.1	257.8	243.7	112.0	115.9	107.2
Apr 08	106.6	258.7	244.4	112.5	...	107.6
May 08	106.3	259.6	245.7	112.0	...	108.2
Jun 08	106.5	...	...	...	...	...
Change compared with previous year, per cent						
2003	3.6	2.1	1.7	3.9	4.7	2.1
2004	1.0	1.2	1.7	0.4	1.3	2.1
2005	-0.6	1.8	1.8	-0.6	-0.3	2.2
2006	0.0	1.9	1.9	0.1	0.7	2.2
2007	1.6	1.7	2.2	0.9	3.0	2.1
Jan 08	3.0	2.9	3.1	2.6	...	3.2
Feb 08	2.6	3.1	3.1	2.4	...	3.3
Mar 08	3.2	3.1	3.3	2.7	3.6	3.6
Apr 08	3.5	3.2	3.1	3.4	...	3.3
May 08	3.1	3.4	3.4	2.9	...	3.7
Jun 08	3.3	...	...	...	...	...

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.

Danmarks Nationalbank's Statistical Publications

Periodical electronic publications

Danmarks Nationalbank releases new financial statistics to the public in electronic publications composed of 2 elements:

- **"Nyt" (News)** describing the key development trends.
- **Tabeltillæg (Tables Supplement)** containing tables with as detailed specifications as possible.

"Nyt" is available in Danish only, whereas the tables supplement and the corresponding sources and methodologies also are available in English.

Statistics databank

The above publications are supplemented by a statistics database comprising all time series which are updated concurrent with a release. The time series include data as far back in time as possible. The statistical data from Danmarks Nationalbank are published through Statistics Denmark's "StatBank Denmark". Danmarks Nationalbank's part of the "StatBank Denmark" is available directly via:
nationalbanken.statbank.dk

Special Reports

Special Reports deal with statistics of a thematic character and are not prepared on a regular basis.

Release calendar

A release calendar for the statistical publications, covering the current month and the following quarter, is available on:
www.nationalbanken.dk (see Statistics > Release calendar).