Danmarks Nationalbank

Financial stability 2nd half

2008

DANMARKS
NATIONAL
BANK 2008

FINANCIAL STABILITY 2008, 2nd half

The small picture on the cover shows a characteristic section of Danmarks Nationalbank's building, Havnegade 5 in Copenhagen. The building, which was constructed in 1965-78, was designed by the architect Arne Jacobsen (1902-71).

Financial stability 2008, 2nd half is available on Danmarks Nationalbank's website: www.nationalbanken.dk under publications.

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Explanation of symbols:
- \- Magnitude nil
- 0 Less than one half of unit employed
- • Category not applicable
- na. Numbers not available

Details may not add due to rounding.

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Contents

Summary

The international financial crisis has affected the Danish banks. Several of them are faced with the challenge of reducing their balance sheets after a number of years of extremely strong lending growth. Under the current market conditions, negative financial results may on its own critically influence the banks' ability to obtain financing. This applies especially to banks with relatively large deposit deficits. So far, the government guarantee for the banks' unsecured claims has facilitated the banks' access to liquidity. Stress tests nevertheless show that the banks may encounter problems if the financial turmoil markedly affects the real economy. Against this background, the assessment is that, like many other countries, Denmark must implement a scheme for temporary capital injection to sound, well-managed Danish banking institutions on terms that are as close to market terms as possible.

The international financial crisis has set the agenda

The main drivers of the development in the global financial markets have been the international financial crisis and the measures implemented by governments and central banks worldwide to stem the crisis.

During the summer of 2008 it became clear that the turmoil which had reigned in the financial markets for more than a year had not yet peaked. The problems in the US housing market turned out to be worse than initially assumed, reaching beyond the subprime segment.

The crisis escalated in September and October when the agenda in the global financial markets was set by a shower of bad news, including bank failures and private and public acquisitions of banks. It was clear that quite extraordinary measures were warranted in order to restore stability and confidence, and the USA and the EU member states introduced bank rescue packages. This seemed to have halted the rapid aggravation of the crisis, although the financial markets are still characterised by considerable nervousness.

The Danish banks have also been hit by the crisis. They have seen a notable drop in earnings, and the future prospects are now gloomier. Lower earnings and tight liquidity conditions, among other factors, have caused some banks to let themselves be taken over or to be wound up.

The banks continue to post high lending growth, although it is declining. The decline was driven mainly by the considerable dampening of the lending growth of medium-sized banks. Banks with large deposit deficits have reduced lending growth to a relatively high degree, which probably reflects difficulties in financing the deposit deficit. Lending growth continues to exceed deposit growth, and the deposit deficit is on the increase.

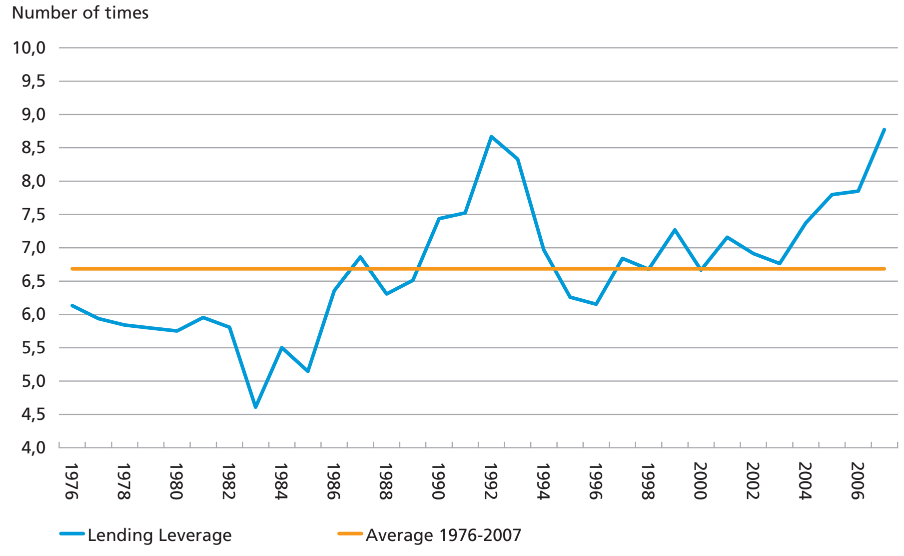
The risk outlook

Difficult liquidity and financing conditions have characterised the financial sector both globally and in Denmark since the crisis set in. The rescue packages have improved the conditions in the global money markets, but normalisation is far from being reached. In this environment, banks with large deposit deficits and without good credit ratings are particularly exposed.

Banks in Denmark have, on average, lent their equity capital almost 9 times, compared with a historical average of almost 7 times for the last 30 years. All other things being equal, this could indicate a need for adjustment of the banks' balance sheets, cf. Chart 1.

Combined with falling housing prices and equity prices – eroding the wealth of households and companies – this gives the banks an incentive

LENDING LEVERAGE OF DANISH BANKS, 1976-2007 Chart 1



Note: Lending leverage is total lending as a ratio of equity in the sector. The sector is expressed as banking institutions in groups 1-3 as classified by the Danish Financial Supervisory Authority.
Source: Financial statements.

to tighten their lending policies. There is thus a risk of a credit crunch that could have considerable macroeconomic consequences.

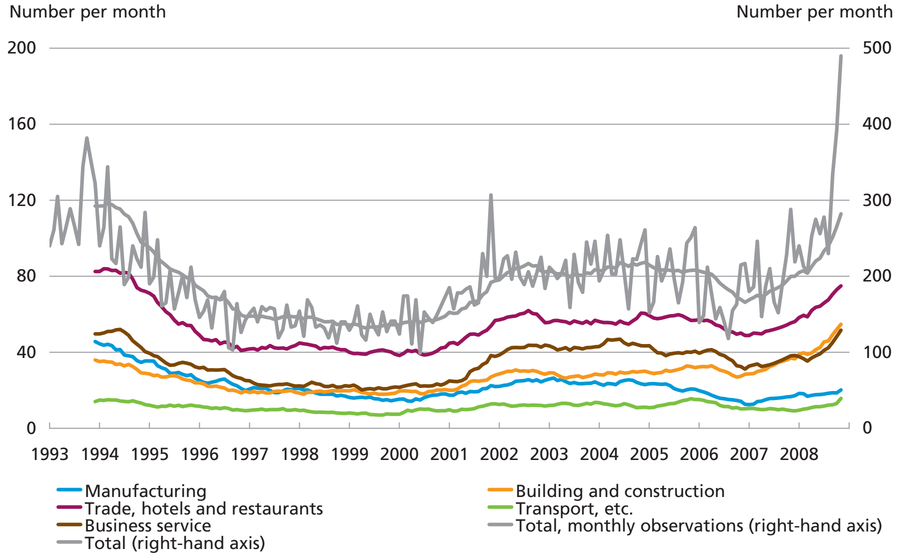
The banks' credit losses are still relatively low, but are expected to rise in 2009. Calculations based on Danmarks Nationalbank's failure-rate model, KIM, show higher estimated failure rates for Danish companies in all sectors. The higher estimated failure rates have already been reflected in actual failures, cf. Chart 2.

Weaker economic development will further reduce the ability of companies and households to service their bank debt, and the interaction between the financial sector and the macroeconomy could potentially develop into a negative spiral, which constitutes a risk.

The global economy, and especially the US economy, is already adversely affected by the crisis, and there is a risk of a stronger-than-expected economic downturn in the USA and the rest of the world. In this scenario, Danish exports, too, would be affected by lower demand.

In addition, the development in Danish housing prices entails a certain risk. Further plummeting of prices could be in store, particularly in the event of significant rises in unemployment or interest rates, or strong reductions in the banks' lending.

COMPULSORY LIQUIDATIONS IN THE NON-FINANCIAL SECTOR Chart 2



Note: The Chart shows monthly data for the number of compulsory liquidations in the various sectors, calculated as 12-month moving averages. The total for all sectors is shown both as a moving average and as the number of actual compulsory liquidations.

Source: Statistics Denmark.

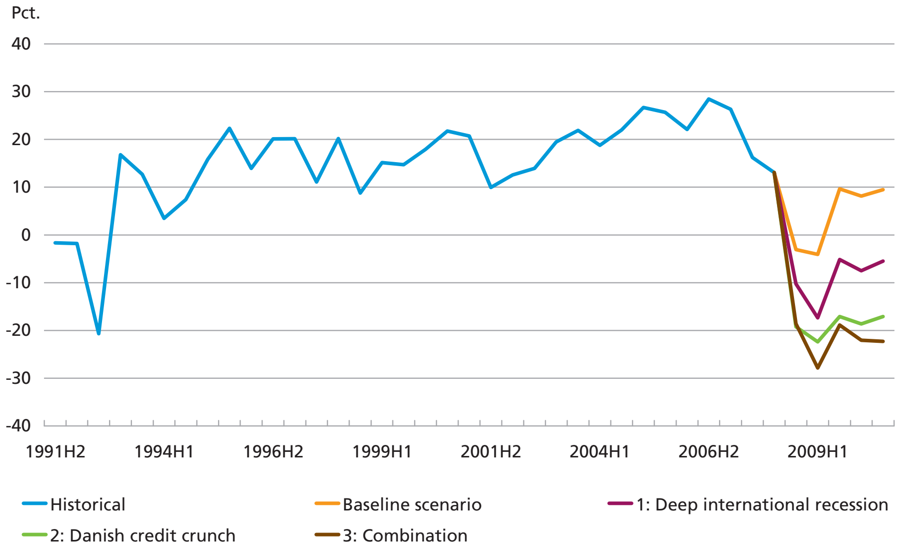
The Danish banks are under pressure

The risk outlook described above is translated into the following three stress tests of the resilience of the Danish financial system:

- *Scenario 1:* The financial crisis leads to a deep international recession, entailing lower demand for Danish products. Central banks around the world adopt a more expansionary monetary-policy stance, and interest rates fall, if it is possible.
- *Scenario 2:* The financial crisis has prompted the Danish banks to significantly reduce their lending. The Danish economy experiences a credit crunch in that creditworthy borrowers are unable to obtain bank loans. Housing prices plummet.
- *Scenario 3* combines scenarios 1 and 2. A deep international recession is assumed to coincide with a credit crunch in Denmark. The scenario envisages a historical decline in economic activity.

The stress test scenarios are compared with a baseline scenario that is considered to be the most likely development in the Danish economy and the financial sector. At the beginning of the baseline scenario, the banks' return on equity is generally negative, but it subsequently increases, cf. Chart 3. In the baseline scenario, the banks' capital adequacy declines, but most banks are able to observe their individual capital needs.

RETURN ON EQUITY, 1991-2010 Chart 3



Note: The Chart shows the annual median return on equity before tax for the banks. The most recent actual observation is 1st half of 2008.
Source: The Danish Financial Supervisory Authority, banks' financial statements and own calculations.

The three stress scenarios assume a significant fall in the banks' return on equity, which remains negative throughout the period. The sharp drop at the beginning of the period can be attributed mainly to large losses on the banks' portfolios of stocks and bonds. The stress scenarios also envisage a significant increase in loan losses.

The baseline scenario operates with a gradual decline in the banks' capital adequacy. Most banks are able to observe their individual capital needs, but a few banks may be struggling to do so towards the end of the period. The stress scenarios envisage a marked decline in the capital adequacy of the banking sector, and many banks may encounter solvency problems.

A capital injection of approximately kr. 70 billion to the banking sector will enable the financial institutions to withstand severe economic shocks.

The deteriorating bank finances are also reflected in the development of the banks' price/book value. The Nordic and Danish banks have seen a strong drop in price/book value over the past year, and the banks' shares are now trading at levels far below a price/book value of 1. One indication of this is that the market expects more write-downs and losses in the coming years, and that the earnings basis will generally come under pressure.

Financial Institutions and Financial and Economic Developments

The main drivers of the development in the global financial markets have been the international financial crisis and the measures implemented by governments and central banks worldwide to stem the crisis. The financial markets are still characterised by considerable nervousness, but the rapid aggravation of the crisis seems to have been halted.

The Danish banks have also been hit by the crisis. They have seen a notable drop in earnings, and the future prospects are now gloomier. Lower earnings and tight liquidity conditions, among other factors, have caused some banks to let themselves be taken over or to be wound up.

A further decline in the banks' lending growth was seen in the 3rd quarter of 2008, driven mainly by the considerable dampening of the lending growth of medium-sized banks. Banks with large deposit deficits have reduced lending growth to a relatively high degree, which probably reflects difficulties in financing the deposit deficit. Lending growth continues to exceed deposit growth, and the deposit deficit is on the increase.

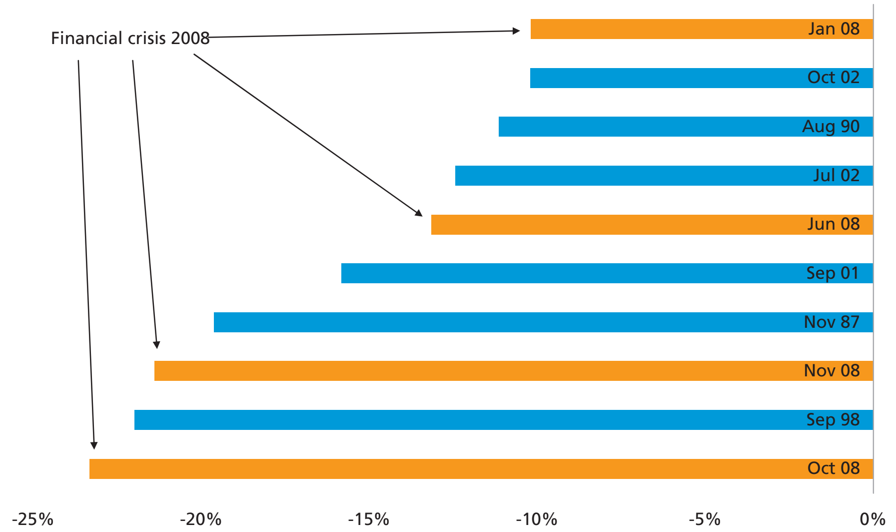
Life insurance and pension companies are also severely affected by the negative market conditions, and their bonus reserves have decreased significantly.

CRISIS SENTIMENT IN THE FINANCIAL MARKETS

During the summer of 2008 it became clear that, like a hurricane, the financial turmoil which had characterised the financial markets for more than a year was gathering strength rather than abating. The problems in the US housing market turned out to be more serious than first expected, reaching beyond the subprime segment. At the same time there was increasing awareness that the problems in the banking sector were more profound than previously assumed. The years preceding the international financial crisis were characterised by ample liquidity, low risk premiums and positive macroeconomic development. These circumstances, coupled with financial innovation, contributed to the banks' significant expansion and to liquidity and credit risks generally being priced at a low – retrospectively too low – level. Looking ahead, the banks will presumably have to reduce their gearing.

THE 10 LARGEST MONTHLY DIVES IN EUROPEAN BANK EQUITIES SINCE 1987

Chart 4

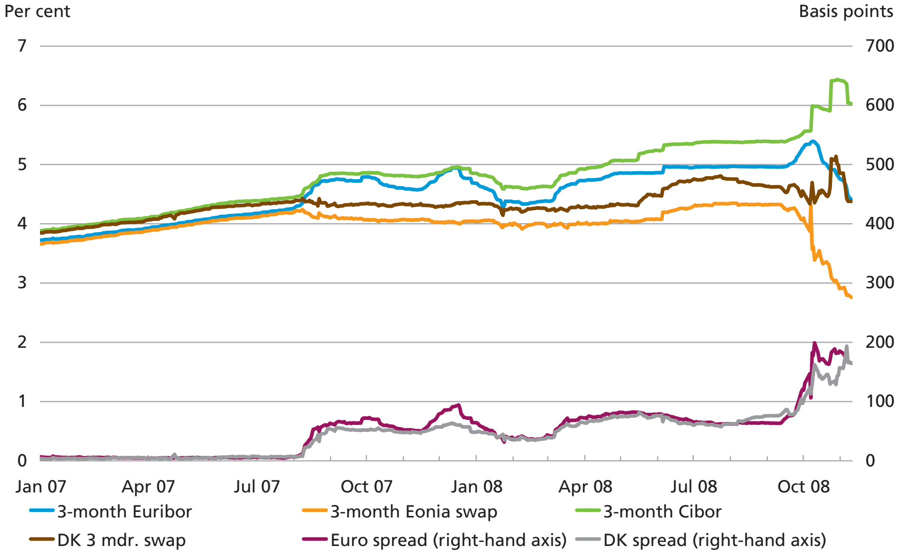


Source: Bloomberg.

The negative sentiment since the summer of 2008 is reflected in developments in the global stock markets where prices have plummeted. For European bank shares this meant that 4 out of the 10 largest monthly dives observed since 1987 occurred during 2008, cf. Chart 4.

The negative market trends escalated in September when a series of bad news releases, including bank liquidations, private and public acquisitions of banks, set the agenda in the global financial markets, cf. the Appendix. The events really took off when the US government took control of Freddie Mac and Fannie Mae, which account for just under half of all mortgage lending and guarantees in the US market. The problems of Freddie Mac and Fannie Mae brought other banks into focus, particularly large investment banks exposed to distressed assets and with a high degree of dependence on financing via the financial markets. The pressure on the investment bank Lehman Brothers was particularly severe, and in mid-September the US government refrained from rescuing Lehman Brothers, which had to file for bankruptcy (Chapter 11). This sent shockwaves through the financial markets as they had expected a bailout as the Bear Stearns case in the spring of 2008. As a result of the complexity of Lehman Brothers and its cross-border structure, its failure had a severe adverse impact on the financial markets.

COLLATERALISED AND UNCOLLATERALISED MONEY-MARKET INTEREST RATES IN THE EURO AREA AND DENMARK, 2007-08 Chart 5



Source: Bloomberg.

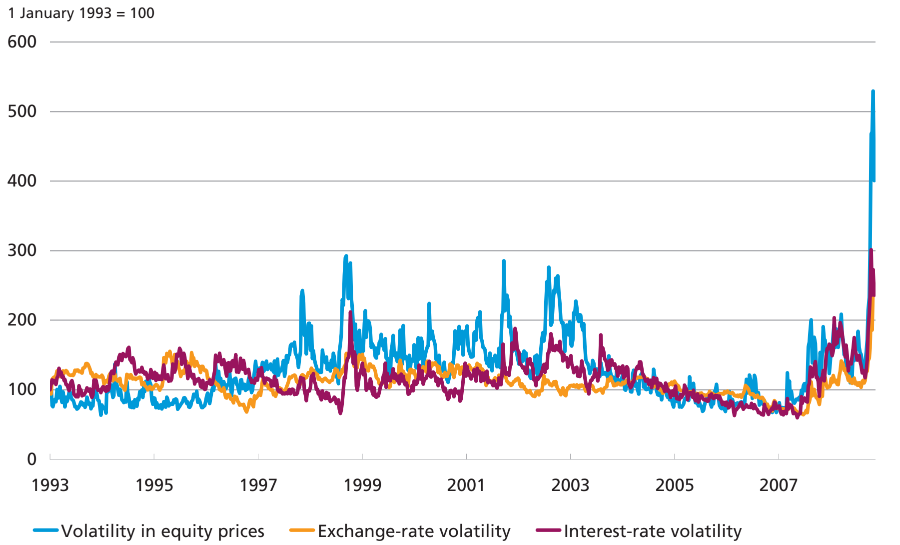
Europe was also affected by the mounting pressures. By the end of September, several European banks had thus received emergency capital injections, mainly from the respective governments. Iceland was hit the worst, in that the entire financial system collapsed and the three major Icelandic banks[1] were nationalised.

Each of these events increased the vulnerability of other institutions due to the highly interdependent nature of the financial system, and to the diminishing confidence in other institutions. The banks tried to reduce their exposures to other financial institutions, and the maturities of interbank loans shortened. As a result, global money markets froze, and the spread between collateralised and uncollateralised money-market interest rates widened to almost 200 basis points, cf. Chart 5.

Banks and other financial institutions held fire sales of assets to obtain liquidity, which caused asset prices to fall even more. The extremely volatile markets, cf. Chart 6, spurred speculation in further price drops, which aggravated the panic mood. During September, several countries, including the USA and the UK, temporarily banned short selling[2] of financial stocks in an attempt to halt the plummeting prices and dampen market volatility.[3] On 13 October, Denmark followed suit with a general ban on short selling stocks in Danish banks.

1 Kaupthing, Glitnir and Landsbanki.
2 Short selling means that an investor sells stock he does not own and buys it back later. The investor profits if the fall in the value of the stock exceeds the price of borrowing it.
3 The US ban on short selling expired on 17 October 2008.

IMPLIED VOLATILITY INDICES FOR EQUITIES, EXCHANGE RATES AND INTEREST RATES, 2007-08 Chart 6



Note: Volatility in equity prices is volatility in US equities, CBOE, VIX. Exchange-rate volatility is volatility in the JP Morgan Chase World index, VXY. Interest-rate volatility is the Merril Lynch Option Volatility Index, MOVE.
Source: Bloomberg.

At the end of September it was clear that the financial crisis was a real threat to global financial stability. At the same time, it had moved beyond a liquidity crisis that central banks could alleviate by providing liquidity to the markets. The crisis had deeper roots, and quite extraordinary measures were needed in order to restore stability and confidence in the financial markets.

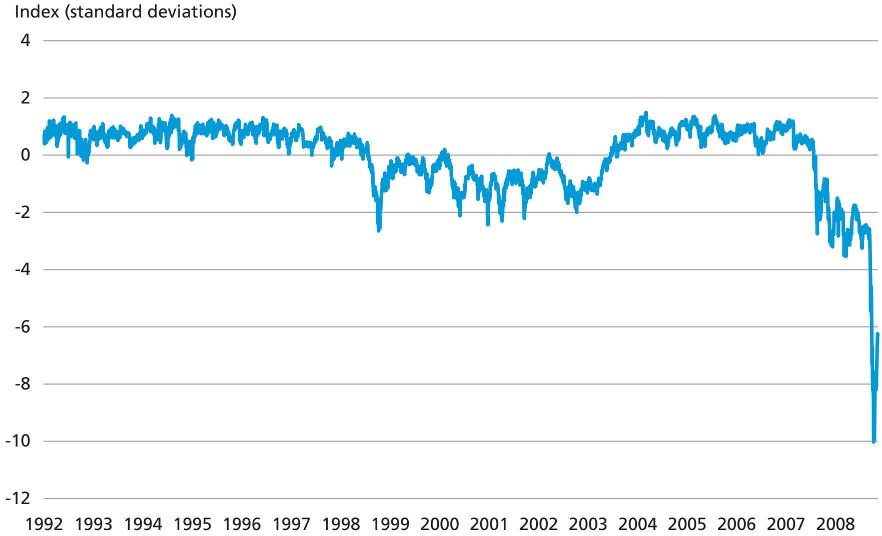
Bloomberg's Financial Conditions Index[1], which summarises developments in the money, bond and stock markets, gives an overall picture of the extremely difficult conditions characterising the financial markets in the USA, cf. Chart 7. The very low values of up to 10 standard deviations under the long-term average provides firm evidence that the situation in the markets differs fundamentally from that seen in previous periods of turmoil.

On 20 September, US Secretary of the Treasury Paulson announced a 700 billion dollar plan that included acquisition of troubled assets from banks[2]. In Europe, Ireland was the first country to provide a government guarantee for the banking sector. It was announced on 30 September and comprised six named Irish banks. The Irish government guarantee

1 Summarises 10 financial indicators and gives an overall picture of access to and pricing of credit in the US financial markets. The index is normalised over the period January 1992 to June 2008, whereby deviations from zero reflect the distance to the average measured in standard deviations. See *Bloomberg - Financial Conditions Watch,* 14 August 2008 and 18 September 2008.

2 The programme was adopted on 3 October 2008.

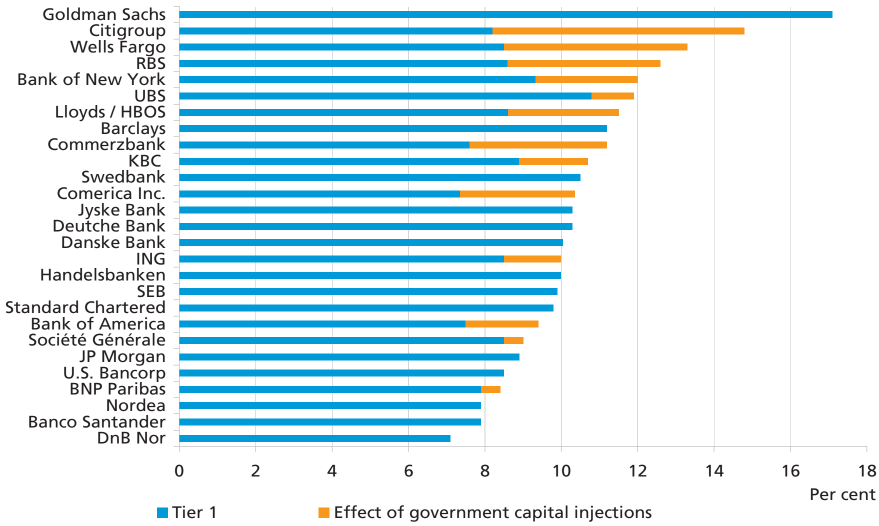
BLOOMBERG'S FINANCIAL CONDITIONS INDEX Chart 7



Source: Bloomberg.

created a snowball effect throughout Europe, and subseqently, most EU member states, including Denmark, have issued guarantees for their banking sectors – wholly or partially. The government guarantees vary considerably in terms of duration as well as institutions and claims covered. The rescue packages generally include the option of recapitalising banks. As seen in Chart 8, several international banks have

EFFECT ON TIER 1 CAPITAL OF GOVERNMENT CAPITAL INJECTIONS, SELECTED BANKS Chart 8



Note: Tier 1 capital is the banks' core capital.
Source: Standard & Poor's, Fitch and bank financial statements.

THE DANISH BANK RESCUE PACKAGE Box 1

On 5 October, the Danish government concluded an agreement with the Danish People's Party, the Social Democrats and the Social-Liberal Party and with the financial sector in order to safeguard continued financial stability in Denmark. The agreement became law on 10 October and de facto constitutes a safety net – provided by the central government and the financial sector – so that all claims of depositors and other unsecured creditors in banking institutions in the Kingdom of Denmark are fully covered under the government guarantee. The scheme expires on 30 September 2010.

The financial sector (the Danish Contingency Association) is to contribute up to kr. 35 billion, equivalent to 2 per cent of GDP. The Danish Contingency Association will provide a contingency fund of kr. 10 billion (own risk) and in addition pay market-related guarantee commission of kr. 7.5 billion annually.

The Danish government has established a company with the purpose of facilitating the winding-up of insolvent banks. For banks that do not meet the statutory solvency requirement, if no private-sector solution can be found, this company will inject capital into a subsidiary, which will take over and wind up the bank in question. If the estimated losses, including the return on injected capital in the winding-up company, exceed the guarantee provided and the paid-up guarantee commission, the Danish Contingency Association will cover losses to the amount of a further kr. 10 billion via increased guarantee commission.

Furthermore, the agreement on financial stability emphasises that, in return for the safety net, the financial sector must show restraint and consolidate over the next two years. The agreement thus includes a ban on dividend payments from banks and puts a stop to new buy-back programmes of own stocks. No new stock option programmes may be established, and existing programmes may not be extended.

To prevent misuse of the goverment guarantee, a number of limitations have been imposed on the banks in terms of lending growth and risk assumed.

already chosen this option and thus received substantial government capital injections. The Danish package is described in Box 1.

The rescue packages have reduced the nervousness about imminent bank failures, and they have had a certain positive effect on the money markets.

THE GLOBAL ECONOMY UNDER PRESSURE

The crisis has already had global macroeconomic repercussions. In the USA, the housing market has been the epicentre of the current crisis. Unemployment is increasing rapidly, and the US economy is in a recession. The question is how severe it will be. On the other side of the Atlantic, Europe is following suit with negative growth in the euro area in the 3rd quarter of 2008 and downward adjustments of the growth prospects for all EU member states. Finally, a number of emerging market economies have lately been severely affected by the crisis. The

IMF estimates that global growth will be 2.2 per cent in 2009, compared with 3.7 per cent in 2008 and 5.0 per cent in 2007.

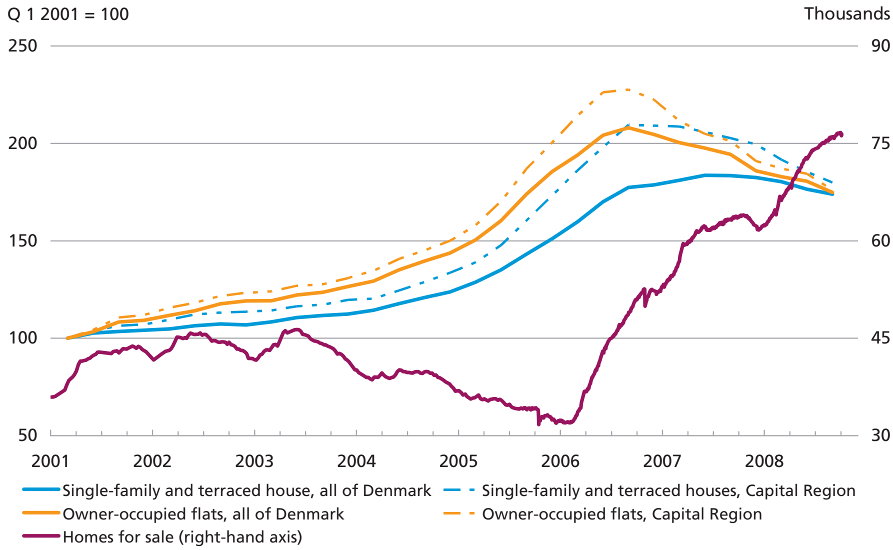
SLOWER GROWTH IN THE DANISH ECONOMY

The turmoil in the financial markets has made growth in the Danish economy slow down faster than expected. The outlook for the export markets is less favourable, and private consumption is dampened by tightened credit terms, weaker development in the housing and stock markets and deteriorating consumer confidence.

On the other hand, factors such as oil prices and tax cuts have a positive impact on the level of activity. Oil prices have been falling since the mid-summer of 2008, and in mid-December it was around 45 dollars per barrel, which is the lowest level since the beginning of 2005. Further tax cuts in 2009, as well as a sound increase in real wages, are expected to boost the households' disposable incomes.

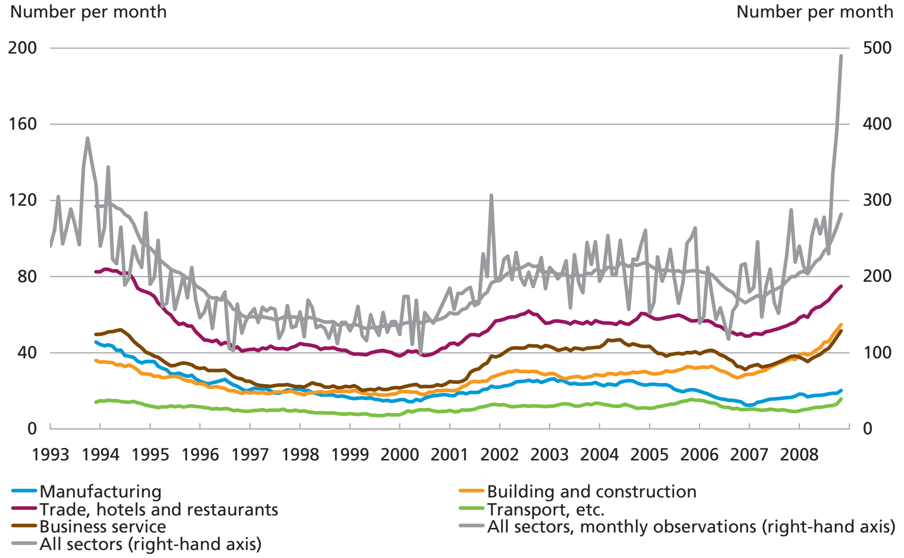
Housing prices continue to fall. At national level, the prices of single-family and terraced houses fell by approximately 5 per cent in the 3rd quarter, and the prices of flats fell by approximately 10 per cent compared with the same period of 2007. The national average masks large regional differences. Housing prices have declined most in Greater Copenhagen, cf. Chart 9. The number of homes sold also continued to drop and reached the lowest level since 1995 when the compilation of

HOUSING PRICES AND HOMES FOR SALE, 2001-08 Chart 9



Source: Association of Danish Mortgage Banks and Danish Association of Chartered Estate Agents, www.boligsiden.dk.

COMPULSORY LIQUIDATIONS IN THE NON-FINANCIAL SECTOR, 1993-2008 Chart 10

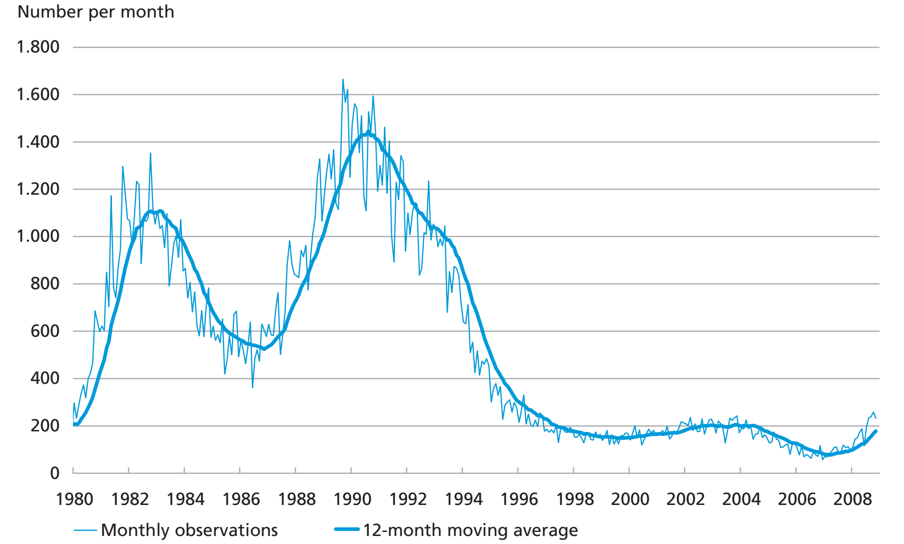


Note: The Chart shows monthly observations for the number of bankruptcies in the individual sectors, calculated as 12-month moving averages. The aggregate total is shown both as a moving average and as the actual number of bankruptcies.
Source: Statistics Denmark.

these statistics commenced. At the same time, the number of homes for sale remains very high.

The lower housing prices have influenced developments in the construction sector, where activity and employment are declining. The

ENFORCED SALES OF OWNER-OCCUPIED HOMES, 1980-2008 Chart 11



Note: Sum of announced enforced sales of single-family houses, owner-occupied flats, leisure homes and multiple-family houses.
Source: Danmarks Statistik.

trade, hotels and restaurants sector is also affected by the reduced demand, and retail sales are falling. As a result, there has been a substantial rise in the number of failing companies, and in October 2004 the monthly total reached 1994 levels, cf. Chart 10.

Falling housing and stock prices have reduced household wealth. First-time buyers in areas that have seen substantial price drops are most vulnerable, and several homeowners have become technically insolvent.

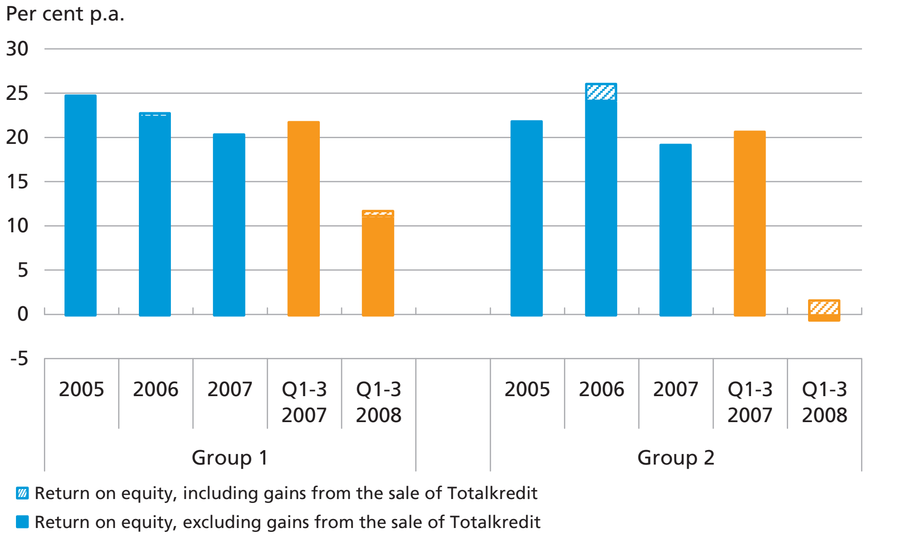
The negative trend in the housing market is also reflected in the number of enforced sales, which is increasing, but remains low, cf. Chart 11. This should be viewed in the light of a sustained low rate of unemployment. Unemployment is expected to rise in the coming year.

DANISH BANKS AFFECTED BY THE CRISIS

Danish banks' earnings are declining strongly

Since the beginning of the financial crisis, there has been a strong decline in bank earnings, cf. Chart 12, which, with certain exceptions, comprises the banks in groups 1 and 2, cf. Box 2. The incipient economic slowdown in Denmark and the development in housing prices contribute to lower earnings, and banks in group 2 are under particular pressure in terms of earnings. The return on equity in group 2 in the first three quarters of 2008 was approximately 1 per cent compared to 12 per cent in group 1. In the same period of 2007, the return on equity was approximately 20 per cent for both groups.

DANISH BANKS' RETURN ON EQUITY BEFORE TAX, 2005-08 — Chart 12



Note: Return on equity calculated on the basis of an average of equity and the beginning and end of the period.
Source: Annual and quarterly reports.

REPORTING POPULATION AND ACCOUNTING CAVEATS Box 2

This report focuses primarily on the most recently published financial statements for the 3rd quarter at group level, as quarterly reports are often published at group level only.

Publication of quarterly reports is not mandatory, and some banks publish only full-year and half-year reports. Among them are Nordea Bank Danmark and Arbejdernes Landsbank. Consequently, the analysis of data for the 3rd quarter comprises the following banking groups:

- Large banks (Danish FSA's group 1): Danske Bank, FIH Erhvervsbank, Jyske Bank and Sydbank.
- Medium-sized banks (Danish FSA's group 2): Alm. Brand Bank, Amagerbanken, Fionia Bank, Forstædernes Bank, Nykredit Bank, Ringkjøbing Landbobank, Spar Nord Bank, Sparbank and Vestjysk Bank.

A few Charts are based on MFI statistics calculated at institution level; this is indicated in the notes to the Charts. These Charts include all banks in groups 1 and 2, i.e. also Nordea Bank Danmark and Arbejdernes Landsbank.

The banks' quarterly accounts are not audited, and where the relevant data is not available estimates have been made.

Three life insurance companies included in the above groups are comprised by the analysis:

- Danica, Nordea Liv & Pension and Alm. Brand Liv og Pension

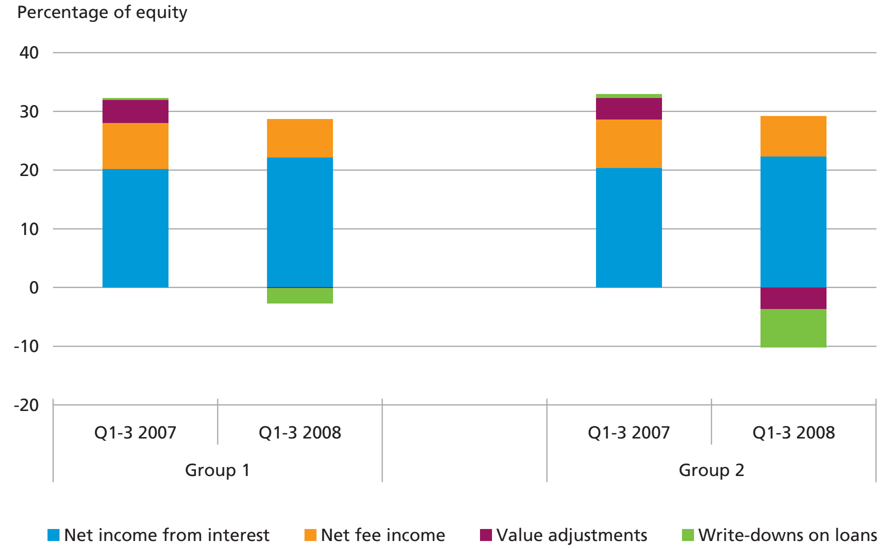
The analysis includes four Nordic groups besides Danske Bank and Nordea, so that the population in this group comprises:

- Danske Bank, DnB NOR, Nordea, SEB, Svenska Handelsbanken and Swedbank.

The decline in earnings can primarily be attributed to negative value adjustments and increased write-downs on loans, cf. Chart 13. As a consequence of the financial crisis, the prices of bonds and shares have gone down, and banks have suffered considerable capital losses, especially on mortgage-credit bonds. The onset of an economic slowdown and falling housing prices are reflected in increased write-downs on loans and guarantees, which nevertheless remain at a low level. In group 1 the write-down ratio ranges from 0.1 to 0.2 per cent, while the accumulated write-down ratio is 0.3 to 0.9 per cent. In group 2 the spread is greater, at 0.1 to 2.1 per cent for write-downs during the period and 0.2 to 3.1 per cent for accumulated write-downs. The decline in net fee and commission income also has a negative impact on earnings because of the decrease in income from securities trading and asset management due to lower activity in the financial markets.

For both groups 1 and 2, net income from interest is rising and increased by about 18 per cent in the first three quarters of 2008 compared with the same period of 2007. The banks' interest income from customer-related activities increased, partly because of expanding business volumes (lending growth), partly because of increasing interest

BANK EARNINGS, SELECTED ITEMS | Chart 13



Source: Annual and quarterly reports.

margins. Rising lending rates have more than offset the pressure on deposit rates.

Virtually all banks in groups 1 and 2 have adjusted their profits for the year downwards. Expectations of basic earnings (earnings exclusive of value adjustments and write-downs on loans) have generally been maintained, however.

The recent decline in earnings, less favourable prospects, tight liquidity conditions, etc. have contributed to a growing number of banks being subject to winding-up, mergers or acquisitions, cf. Chart 3. Strong lending growth and considerable exposure to the property sector are among the characteristics of the banks that have experienced difficulties.

Lending growth is declining, but the deposit deficit continues to rise

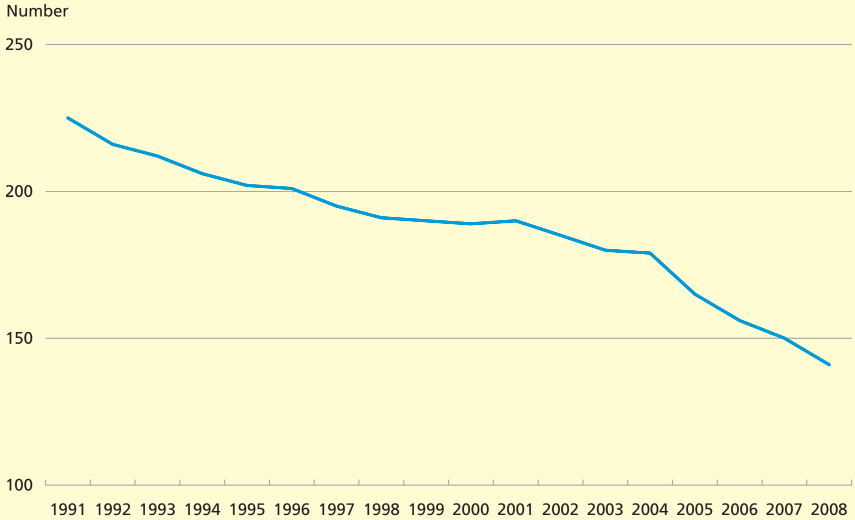
Danish banks' lending growth declined further in the 3rd quarter of 2008, cf. Chart 16. The lending growth of medium-sized banks in particular declined compared to 2007, but nevertheless continues to exceed that of the large banks.

There are also major differences between individual banks. Two of the group 2 banks experienced negative growth, while for a few banks lending grew by more than 30 per cent, cf. Chart 17. Part of this growth is attributable to repo lending, i.e. loans based on collateral.

MERGERS AND ACQUISITIONS IN THE DANISH BANKING SECTOR IN 2008 Box 3

The financial turmoil has led to further consolidation of the Danish banking sector, cf. Chart 14. In the period January-November 2008, nine Danish banks have been subject to winding-up, have merged with or have been acquired by other banks. The banks acquired had assets of more than kr. 100 billion, equivalent to approximately 2.5 per cent of the Danish banking sector's aggregate balance-sheet total.

CONSOLIDATION OF THE BANKING SECTOR Chart 14



Note: The Chart shows the development in the number of Danish banks in groups 1-4, including cooperative banks, as well as banks in Greenland and the Faroe Islands. The 2008 figure is from end-November.
Source: Danish Financial Supervisory Authority and own calculations.

The discontinued banks differ from the sector as a whole in terms of key accounting parameters, cf. Chart 15. The Chart also shows that for the Danish sector as a whole 2007 figures on four of the five prameters, notably lending growth, were outliers compared to the historical average for the period 1991-2007.

Discontinued banks in chronological order:
bankTrelleborg (balance sheet kr. 8 billion): In January 2008 financial problems in bankTrelleborg led to merger with Sydbank.
Haarslev Sparekasse (balance sheet kr. 200 million): In March 2008 the customers and activities of Haarslev Sparekasse were transferred to Sparekassen Sjælland with immediate effect.
Roskilde Bank (balance sheet kr. 37 billion): In August 2008 Roskilde Bank was taken over by Danmarks Nationalbank and put up for sale. At the end of September 2008 Nordea, Spar Nord Bank and Arbejdernes Landsbank bought 9, 7 and 5 branches, respectively, of Roskilde Bank for a total sum of kr. 550 million. The remainder of Roskilde Bank, primarily corporate customers, is being wound up.
Bonusbanken (balance sheet kr. 2 billion) and **Ringkjøbing Bank** (balance sheet kr. 10 billion): In September 2008 Vestjysk Bank acquired Bonusbanken and merged with Ringkjøbing Bank, making Vestjysk Bank the 9th largest banking institution in Denmark.

CONTINUED | Box 3

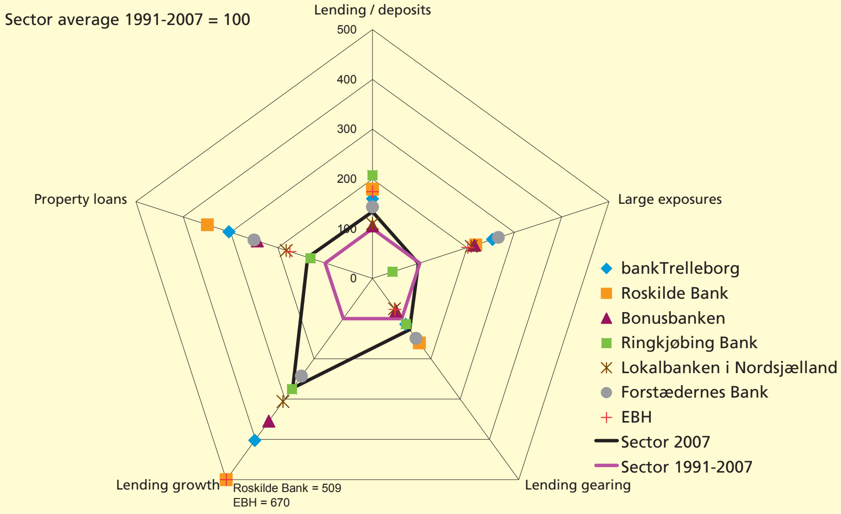
Lokalbanken i Nordsjælland (balance sheet kr. 6 billion): In October 2008 Svenska Handelsbanken acquired Lokalbanken i Nordsjælland.

Forstædernes Bank (balance sheet kr. 32 billion): In October 2008 Nykredit acquired Forstædernes Bank. Forstædernes Bank will continue as a separate brand and company within the Nykredit group with the present management.

Sparekassen Spar Mors (balance sheet almost kr. 700 million): In November 2008 Morsø Bank acquired the activities of Sparekassen Spar Mors.

EBH Bank (balance sheet kr. 10 billion): On 13 November 2008 EBH Bank announced that its solvency was below the statutory minimum. The bank will thus be wound up.

DISCONTINUED BANKS COMPARED WITH THE SECTOR OVERALL, SELECTED KEY PARAMETERS | Chart 15



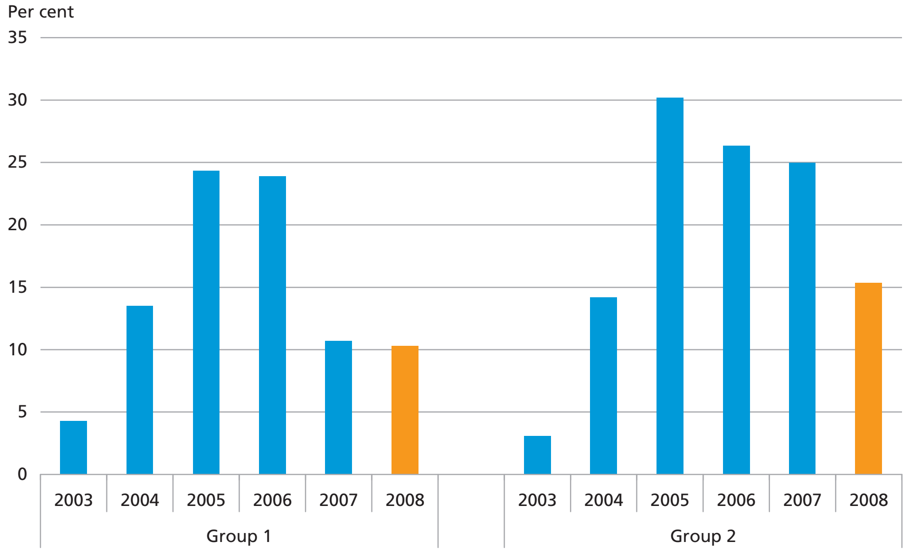
Note: Property loans: loans and guarantees to the building and construction and property sectors; large exposures: the Danish Financial Supervisory Authority's key ratio "large exposures"; lending growth: the average annual percentage growth in lending in 2005 to 2007; lending gearing: lending in relation to equity capital. The sector comprises 52 banks in groups 1-3. The sector average for large exposures is calculated for the period 2003-07.

Source: Annual financial statements, Danish Financial Supervisory Authority and own calculations.

Banks with high deposit deficits have generally seen slightly lower lending growth in the 3rd quarter of 2008 than banks with low deposit deficits, cf. Chart 17. This could imply difficulties in financing the deposit deficit, and the banks' awareness that they have expanded too heavily in recent years. Other conditions such as the banks' credit ratings and thus access to financing, earnings, exposure to the property market, etc. also influence the development in lending.

Lending growth still exceeds deposit growth, which increased by approximately 6 per cent in the 3rd quarter of 2008 compared with the

GROWTH IN LENDING BY DANISH BANKS, 2003-08 Chart 16

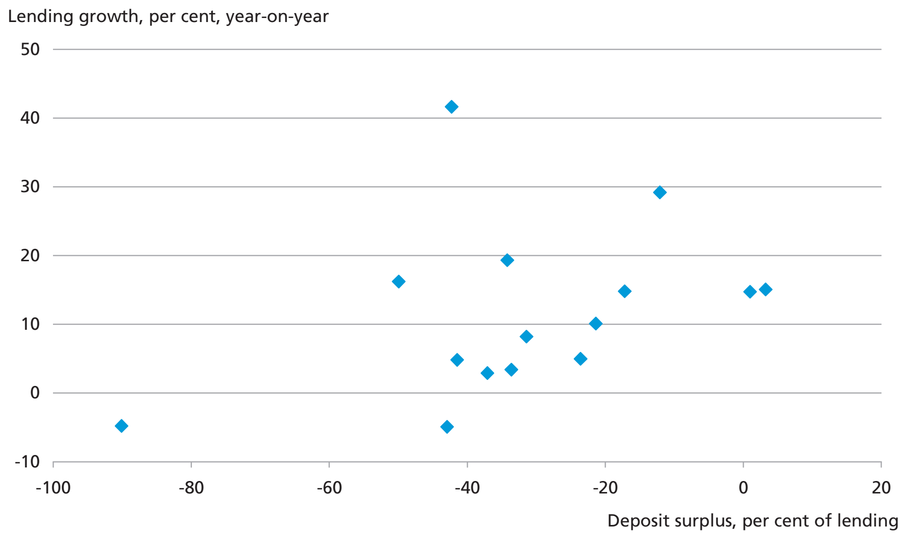


Note: Annual lending growth at institution level. 2008 observations are growth in lending in the 3rd quarter of 2008 compared with the 3rd quarter of 2007. Annual observations are based on annual financial statements and quarterly observations on MFI data.
Source: Danmarks Nationalbank and the banks' annual reports.

3rd quarter of 2007. This means that the deposit deficit continues to increase, cf. Chart 18.

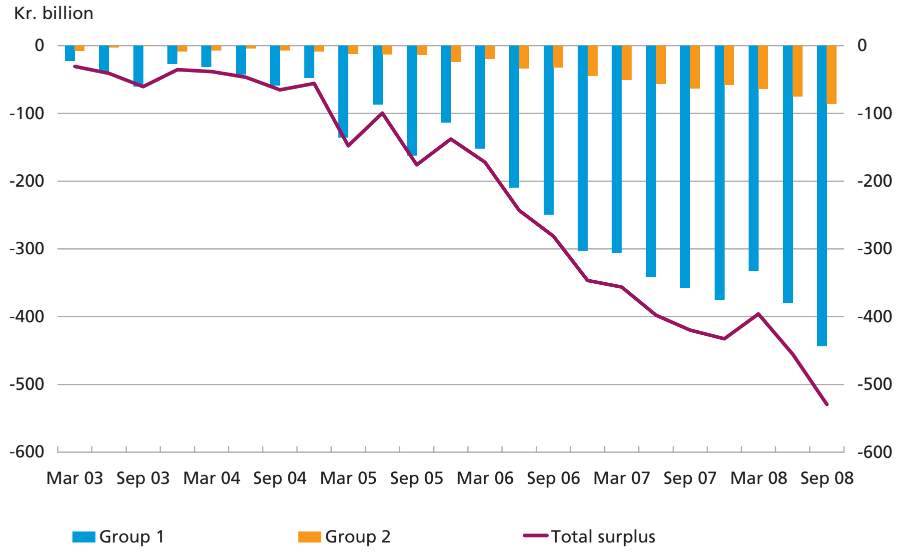
Issuance of debt securities with a maturity of more than one year is the primary source of financing for the large banking institutions, cf.

LENDING GROWTH AND DEPOSIT SURPLUSES, 3RD QUARTER 2008 Chart 17



Source: Danmarks Nationalbank and quarterly reports.

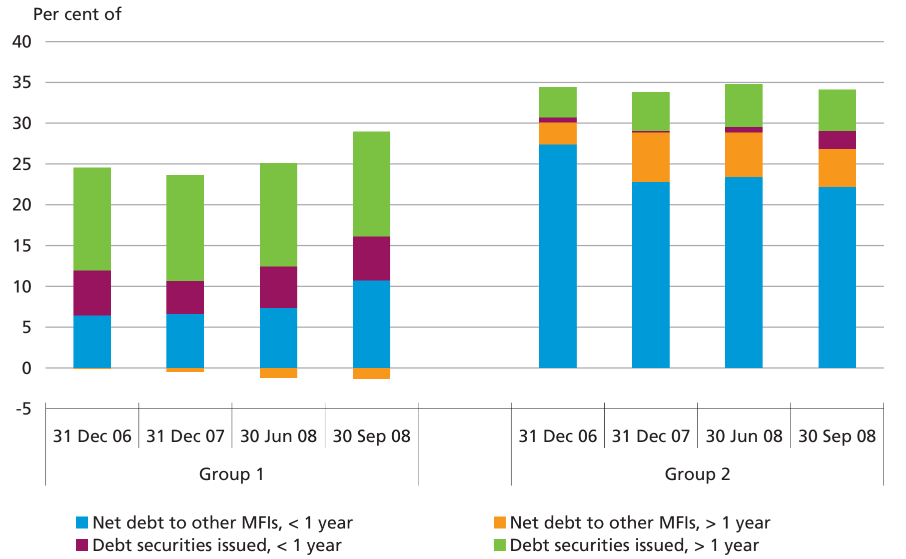
DEPOSIT SURPLUSES, 2003-08 Chart 18



Note: Deposit surpluses calculated at institution level.
Source: Danmarks Nationalbank.

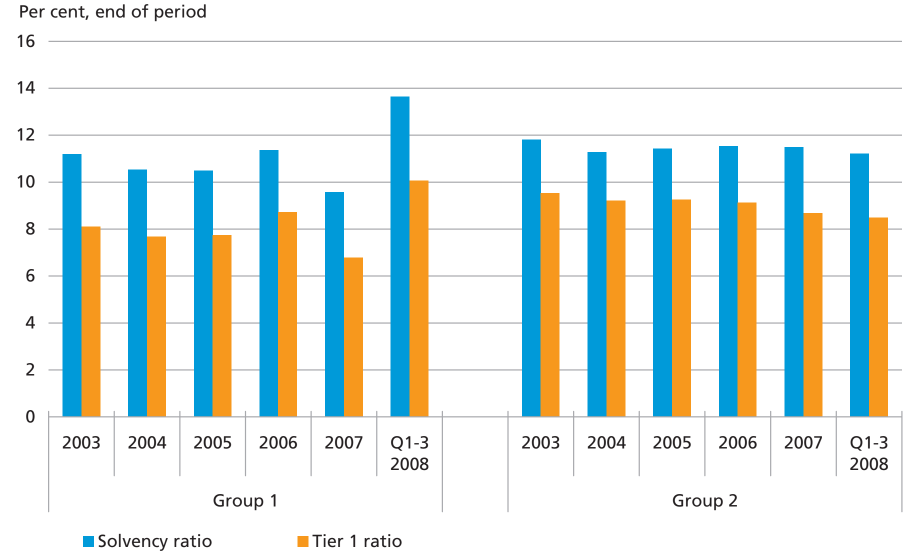
Chart 19. Lately these institutions have increased their net short-term debt to other institutions. The group 2 institutions primarily rely on short-term debt to other credit institutions for financing, but the ratio

NET DEBT TO OTHER CREDIT INSTITUTIONS AND DEBT SECURITIES ISSUED, 2006-08 Chart 19



Note: Excluding foreign branches and subsidiaries.
Source: Danmarks Nationalbank.

SOLVENCY AND TIER 1 RATIOS, 2003-08 Chart 20



Note: Data at group level. Nordea Bank Danmark (group 1) and Arbejdernes Landsbank (group 2) are not included in the populations.
Source: Annual and quarterly reports.

has been reduced since the end of 2006. The medium-sized banking institutions are increasingly financing lending by issuing debt securities, most of which have maturities of more than one year.

The transition to Basel II has increased the banks' solvency ratio

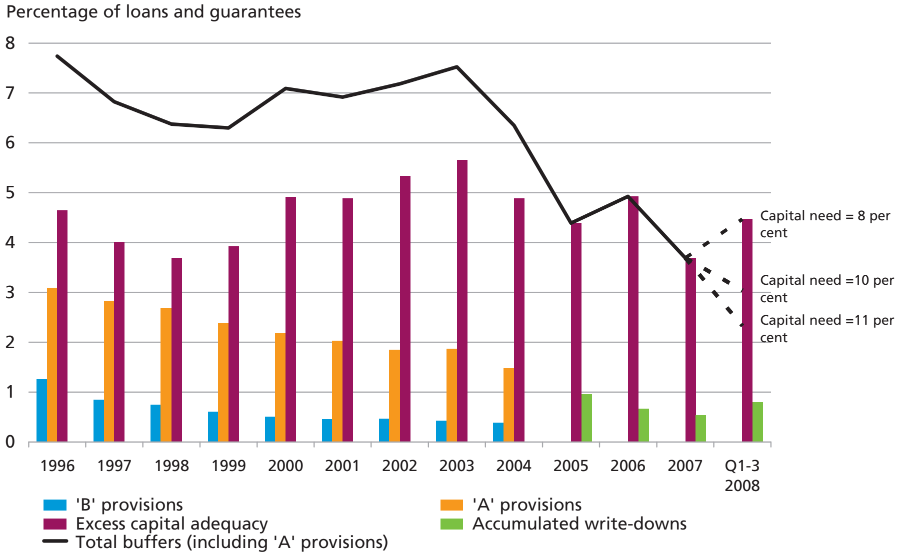
The development in the banks' solvency and Tier I ratios should be viewed in the light of the transition to the Basel II rules at the beginning of 2008. For most of the Danish banking institutions, this meant a reduced capital requirement in Danish kroner as a result of the lower risk weights for exposures to retail customers and small and medium-sized enterprises. Institutions using the IRB (Internal Ratings-Based) approach to calculating credit risks experienced the largest reduction.[1] The vast majority of these institutions belong to group 1. To avoid a large one-off reduction of the banks' capital requirement, a transitional arrangement has been introduced for institutions applying the IRB approach. It will run up to and including 2009 and limits the reduction of the capital requirement as a result of the implementation of the new rules.

The transition to Basel II is the primary cause of the substantial increase in the group 1 institutions' solvency and Tier 1 ratios, cf. Chart

[1] The IRB approach is applied by Danske Bank, Nordea, Jyske Bank, Sydbank, Nykredit Bank and Lån & Spar Bank.

DEVELOPMENT IN BANK BUFFERS, PERCENTAGES OF LOANS AND GUARANTEES

Chart 21



Note: The Chart is based on all banks in the Danish Financial Supervisory Authority's groups 1-3. Provisions were applied up to and including 2004, and were split into 'A' and 'B' provisions, the former being assumed to have a certain buffer effect. This buffer effect does not exist in write-downs under IFRS. The profit for the period is included in the base capital for most banks. Data at insitution level.

Source: Danish Financial Supervisory Authority and annual reports.

20. In group 2 the solvency and Tier 1 ratios were slightly reduced compared to end-2007 due to a negative financial result in the first three quarters for a number of banks in this group.

The banks' buffers

Under Basel I, all banks were to comply with a statutory capital requirement of 8 per cent of risk-weighted assets. Any capital beyond this requirement, i.e. the excess capital adequacy, could thus be regarded as a buffer to resist losses that were not matched by earnings. Basel II introduced the new concept of capital need. Banks must review the total risks and assess how much capital they need. Among other things, this individually calculated capital need should take into account any deterioration in the credit quality of exposures, to the extent the write-downs did not take this into account. The individual capital need may be above or below the statutory minimum of 8 per cent. The difference between a bank's solvency ratio and its individual capital need constitutes the buffer available to cover losses that exceed earnings.

The banks' excess capital adequacy, measured as the actual solvency ratio less the statutory minimum of 8 per cent, has increased. Whether the actual excess capital adequacy has risen or fallen depends on the banks' capital need which, in respect of a number of banks, must be assumed to exceed 8 per cent, and any transitional arrangements. Chart 21 illustrates the banks' buffers at the end of the 3rd quarter for three alternative assumptions regarding capital need, one being the statutory minimum of 8 per cent.

Accumulated write-downs increased in the first three quarters of the year, amounting to 0.8 per cent of total loans and guarantees end-September 2008. The write-downs continue to be at a low level, however.

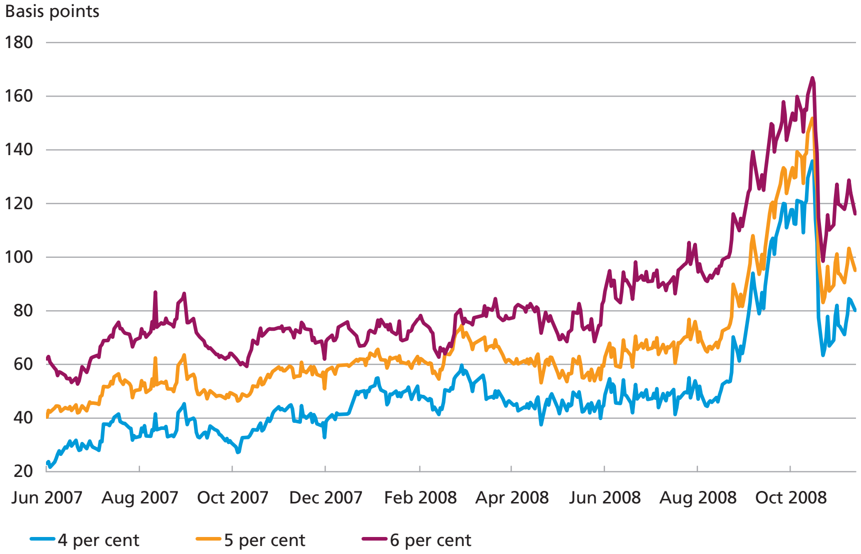
MAJOR LOSSES IN LIFE INSURANCE COMPANIES

Overall, 2008 was a year of losses for life insurance companies and pension funds (hereinafter pension companies). The financial crisis and the resultant negative market trends in the stock and bond markets made heavy inroads into the companies' reserves. On aggregate, the pension companies lost kr. 48.9 billion on their investments in the 1st half of 2008 compared to a similar positive return of kr. 4.1 billion in the 1st half of 2007. In the light of the escalating financial crisis in September and October further losses must be expected by year-end.

Financial stability agreement for the pension sector

During September Danish mortgage-credit bonds were hit by a wave of unrest, and the spread to government bonds widened considerably, cf.

OAS TO GOVERNMENT BONDS FOR NYKREDIT CALLABLE 30-YEAR MORTGAGE-CREDIT BONDS WITH DIFFERENT COUPONS — Chart 22



Note: OAS is the option-adjusted spread to the swap yield curve in basis points.
Source: Nordea Analytics.

Chart 22. This widening affected pension companies the more, because the value of their mortgage-credit bonds (assets) fell while the value of their life insurance provisions (liabilities) did not change, as the discount rate remained largely unchanged.

As a result of the abnormal market conditions, several pension companies had to divest Danish mortgage-credit bonds from their portfolios. Major divestment of Danish mortgage-credit bonds could have serious implications for pension savers and homeowners in the form of falling prices and rising interest rates. Against this background, on 31 October the Ministry of Economic and Business Affairs and the Danish Insurance Association decided to launch a number of initiatives to ensure market stability and prevent systematic divestment of Danish mortgage-credit bonds.

The agreement has significantly enhanced the pricing of mortgage-credit bonds, and the widening of the spread had to a large extent reversed, cf. Chart 22.

Bonus reserves heavily reduced

The financial groups' life insurance companies are also affected by the financial crisis as the negative market conditions have made heavy inroads into the pension companies' bonus reserves, cf. Table 1. As a result, both Danica and Alm. Brand Liv & Pension activated a protection system charging customers an additional fee if they want to leave the company. Customers thus have to pay a percentage of the value of the account if they want to change pension companies. None of the companies concerned have chosen to reduce the rate of interest on policyholders' savings.

If the negative market trend continues, the probability of the financial groups having to inject new capital into the life insurance companies increases.

THE NORDIC GROUPS

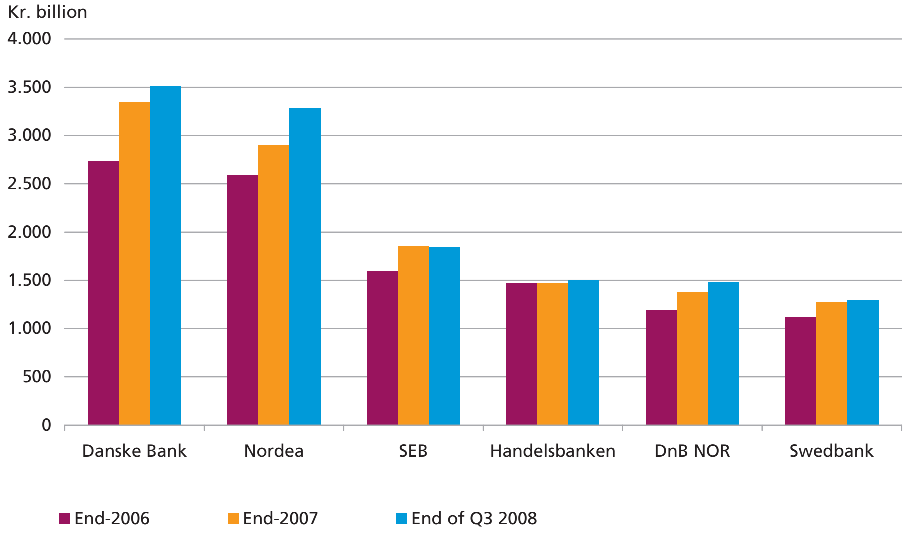
Danske Bank and Nordea remain the largest banking groups in the Nordic Region in terms of balance-sheet total, cf. Chart 23. Measured by

BONUS RATIO IN SELECTED PENSION COMPANIES — Table 1

Per cent	Q1-3 2008	Q1-3 2007
Danica	1.6	9.1
Nordea Liv & Pension	5.1	14.0
Alm. Brand Liv og Pension	0.0	4.2

Note: Bonus ratio is the collective bonus potential measured in relation to the sum of retrospective provisions.
Source: Quarterly reports.

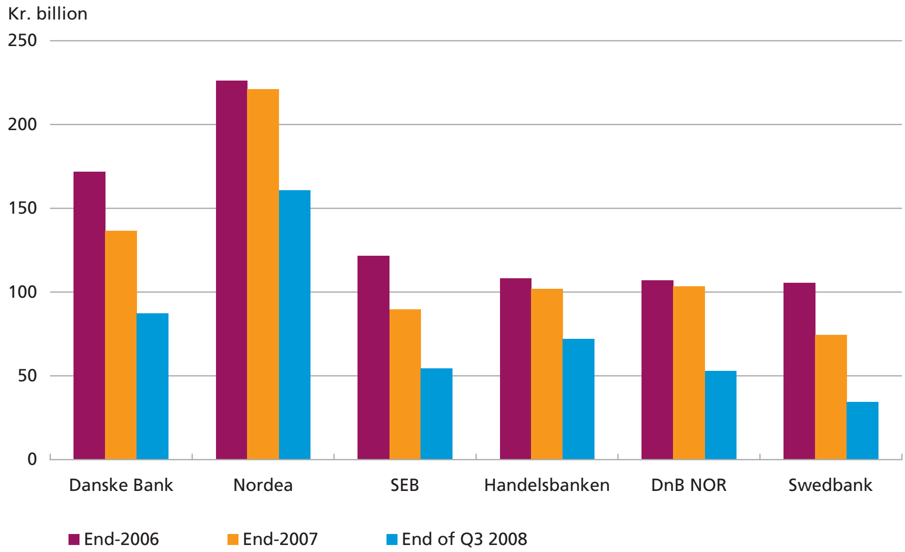
BALANCE-SHEET TOTAL, NORDIC GROUPS Chart 23



Note: Converted at the exchange rates applying at the end of the periods.
Source: Quarterly reports.

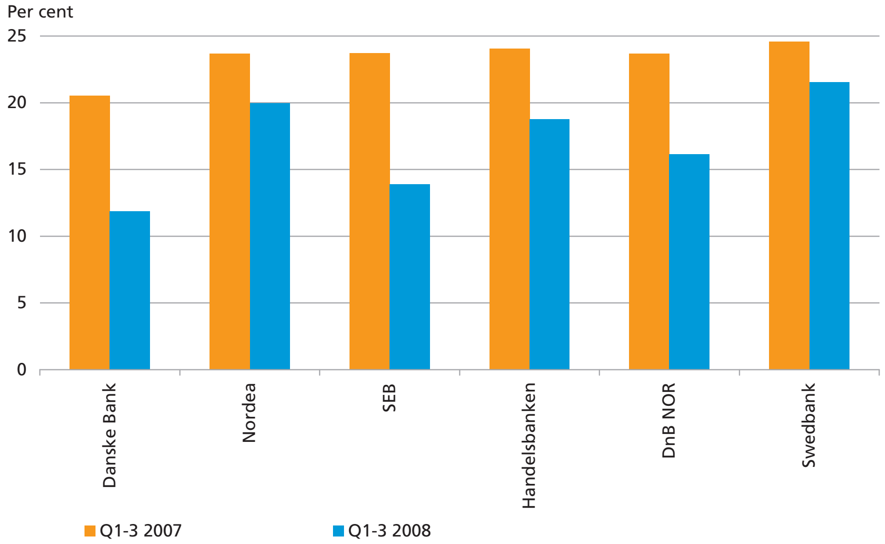
market capitalisation, Nordea is the largest group with a market value of kr. 161 billion at the end of the 3rd quarter of 2008, cf. Chart 24. In relative terms, Nordea's market value fell less than that of the other groups in 2008. In contrast, the market value of Swedbank more than halved in the first three quarters of the year.

MARKET CAPITALISATION Chart 24



Source: Bloomberg.

RETURN ON EQUITY BEFORE TAX, NORDIC GROUPS Chart 25



Note: Return on equity is calculated on the basis of an average of equity at the beginning and end of the period. Earnings have been annualised. No adjustment has been made for reclassification of financial assets or value adjustments that have been entered directly to equity.
Source: Quarterly reports.

The Nordic groups' earnings declined in the first three quarters of 2008. The overall profit was kr. 61 billion, compared with kr. 76 billion in the same period of 2007, i.e. the return on equity fell from 23 per cent to 17 per cent p.a. The lowest return on equity was seen in Danske Bank, cf. Chart 25.

The drop in earnings among the Nordic groups is attributable to lower fee income, capital losses and higher write-downs on loans, while net income from interest has been rising. Write-downs on loans and guarantees in the first three quarters of 2008 amounted to kr. 8.2 billion, equivalent to a write-down ratio of 0.10 per cent (0.01 per cent in the same period of 2007). Accumulated write-downs rose from kr. 22 billion to kr. 26 billion, corresponding to 0.32 per cent of loans and guarantees. The groups' income from investments, primarily related to insurance activities, was severely affected by a negative return on investments.

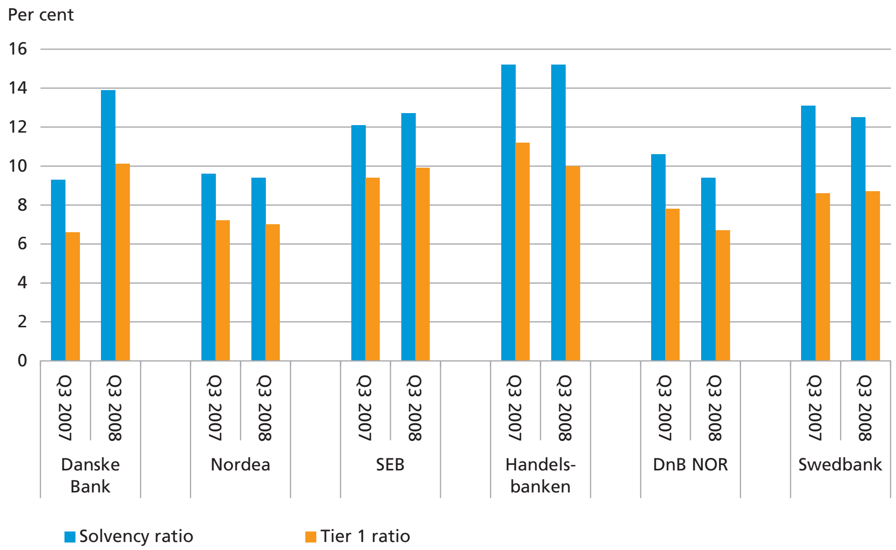
The groups' profits and return on equity are influenced by the treatment for accounting purposes of financial assets. Such assets are placed in different categories subject to different treatment of unrealised capital adjustments. For example, unrealised capital losses on the trading portfolio are expensed to the income statement, while value adjustments in other categories either affect equity only or neither affect equity nor profits. The various groups' application of different accounting principles and reclassifications of assets make it difficult to compare returns on equity.

Due to considerable price falls in 2008, the International Financial Reporting Standards (IFRS) in the autumn enabled retrospective reclassification of assets with effect from 1 July 2008, cf. Box 4. Now it is easier than previously for the banks to avoid a negative impact from unrealised capital gains on the income statement. The Nordic groups have to varying degrees made use of the new rules.

The geographical distribution of asssets varies among the Nordic groups. Unlike the others, Swedbank and SEB have considerable activities in the Baltic states, which are characterised by a rapid slowdown in growth.

Danske Bank increased its solvency and Tier 1 ratios in 2008 compared with 2007, cf. Chart 26. The major reason is that the group adopted the Basel II rules as of 1 January 2008; this reduced its risk-weighted items substantially. The other Nordic countries had already begun to implement Basel II in 2007. For all groups it should be taken into account that the reported capital must cover transitional arrangements in connection with the implementation of Basel II. Consequently, the capital requirement will typically exceed 8 per cent in both 2008 and 2009. In addition, the groups' individual capital needs may exceed 8 per cent. It is not a requirement that this figure be disclosed, but it is

SOLVENCY AND TIER 1 RATIOS, END OF 3RD QUARTER — Chart 26



Note: The key ratios have been calculated without taking into account the transitional arrangement applying to IRB groups, cf. Basel II.
Source: Quarterly financial statements.

relevant in connection with the assessment of the groups' buffers, particularly if detailed information is provided about the circumstances taken into account when calculating the capital need.

RECLASSIFICATION OF ASSETS	Box 4

The recent turmoil in the financial markets has led to falls in stock and bond prices. Due to the use of the "fair value" principle, under which the values of assets and liabilities are stated at current market prices,[1] the banks have had to enter these losses. Critics of "fair value" have pointed out that these losses are solely attributable to an overreaction in the financial markets and that they force banks to hold fire sales of assets to reduce their capital requirements. This has exacerbated the price falls, thus leading to further losses.

Against this background, and to bring IFRS rules in line with the US rules[2], thereby ensuring a level playing field, the International Accounting Standards Board (IASB) in mid-October implemented changes to the accounting standards. The IASB has thus permitted reclassification in rare circumstances of non-derivative financial assets categorised as assets held for trading or available for sale (both categories valued at "fair value"). Assets held for trading may be reclassified to one of the following:

- Available for sale (AFS). Such reclassification means that unrealised value adjustments of the assets in question will no longer affect the group's profit, but only its equity.
- Held to maturity (HTM). HTM assets are also valued at amortised cost. Value adjustments affect neither profit nor equity.

Assets in the "available for sale" category can be reclassified as "held to maturity".

In addition, lending of assets held for trading or assets in other categories can be reclassified as "loans and receivables" if the bank intends and is able to hold the assets to maturity or for the foreseeable future.

The amended IASB rules were adopted by the Commisison on 15 October 2008.

Reclassification is only possible when warranted by individual rare circumstances and when the assets meet the requirements for valuation at cost price. This means that the company must have an intention to hold the assets to maturity. The new cost price will be "fair value" at the time of reclassification, and losses and gains already entered will not be reversed. The rules were introduced with retrospective effect from 1 July 2008 so that losses on reclassified assets in the period since July 2008 could be reversed.

Nordea is the only Nordic group that has not exercised the reclassification option, while the other Nordic groups have, to varying degrees, made use of the amended rules. The table below shows times, amounts (portfolio sizes) and reclassification methods.

Danske Bank has introduced reclassifications as from 1 October 2008, and the financial statements for the 3rd quarter of 2008 are therefore not affected.

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1 On 1 January 2005 it became mandatory for listed companies, including European banks, to present their consolidated financial statements in accordance with the international accounting/financial reporting standards (IAS/IFRS). See Danmarks Nationalbank, *Financial stability 2005, pp. 63-64.* This meant that European banks were primarily to apply "fair value", rather than historical cost, when stating the value of assets and liabilities. Under the "fair value" principle, assets and liabilities are stated at current market prices or, if such prices are not available, at modelled prices.

2 FASB (Financial Accounting Standards Board) develops accounting standards that are generally accepted in the USA.

CONTINUED Box 4

Reclassifications as from 1 July 2008 have had a positive impact on the 3rd-quarter profits of the respective groups as unrealised capital losses during the period have not been expensed. Moreover, SEB, Handelsbanken and DnBNOR already had portfolios in the AFS category and have therefore avoided expensing unrealised capital losses on these securities too. The profit before tax for SEB for the 1st to 3rd quarters would have been SEK 3.7 billion, i.e. less than half of the reported profit of SEK 7.9 billion. Likewise, Handelsbanken's profit would have been a good 35 per cent lower, and DnBNOR's approximately 16 per cent lower.

The very considerable impact on the income statement of the choice of accounting standards in the 3rd quarter of 2008 shows that it is difficult to compare group earnings and returns on equity without performing various adjustments. The recent reclassifications have boosted the financial assets in the AFS and HTM categories and the unrealised capital losses not expensed will therefore increase.

RECLASSIFICATION OF ASSETS IN THE NORDIC GROUPS

	Time of reclassification	Portfolio size	Reclassified as
Danske Bank	1 October 2008	DKK 134 billion	AFS
Nordea	No reclassification		
SEB	1 July 2008 (not included in official report)	SEK 99 billion	L&R
Handelsbanken	1 July 2008	SEK 2.6 billion SEK 24.5 billion SEK 1.3 billion	AFS L&R HTM
DnBNOR	1 July 2008	n.a.	HTM
Swedbank	1 July 2008	SEK 7.7 billion	HTM

Note: AFS: available for sale; L&R: loans and receivables"; and HTM "held to maturity".
Source: Preliminary announcement of financial statements and stock-exchange announcements.

APPENDIX: SELECTED EVENTS UP TO AND DURING THE FINANCIAL CRISIS

2 April 2007 New Century Financial, subprime mortgage lender, files for bankruptcy (Chapter 11).

22 June 2007 Bear Stearns announces that it has provided a facility of up to 3.2 billion dollars to the High-Grade Structured Credit Fund, while the High-Grade Structured Credit Enhanced Leverage Fund will be deleveraged in the marketplace without financial assistance from Bear Stearns.

30 July 2007 IKB Deutsche Industriebank (IKB) announces that it is hit by the subprime crisis. Rhineland Funding (conduit), with a credit facility with IKB, and to a lesser extent IKB itself, have invested in structured credit products related to US subprime mortgages. IKB's principal shareholder, KfW Banking Group, and three German bank funds had, together with the government, provided a rescue package in the days up to 30 July.

9 August 2007 BNP Paribas suspends the calculation of mark-to-market for three money market funds that are subprime-exposed, and puts a stop to amortisations.

9 August 2007 The European Central Bank, ECB, provides 95 billion euro to the money market with overnight maturity. Three more operations are carried out in the following days, totalling almost 117 billion euro.

26 August 2007 Landesbank Baden-Württemberg announces that as of 1 January 2008 it will take over Sachsen LB, which had suffered large losses on subprime investments.

14 September 2007 The Bank of England announces that it is ready to provide liquidity support to Northern Rock. This leads to an actual run on Northern Rock, followed by a government guarantee, on 17 September, for Northern Rock's existing deposits.

11 January 2008 Bank of America announces its acquisition of Countrywide Financial.

21 January 2008 Sydbank acquires bankTrelleborg, which was in financial jeopardy.

13 February 2008 IKB announces that the losses on its portfolio are of a magnitude that requires yet another bailout operation.

17 February 2008 The UK government announces the temporary nationalisation of Northern Rock.

14 March 2008 The Federal Reserve and JPMorgan Chase provide liquidity to Bear Stearns. Two days later, JPMorgan Chase announces that it will take over Bear Stearns.

10 July 2008 Danmarks Nationalbank provides a liquidity guarantee to Roskilde Bank, and Roskilde Bank is put up for sale.

11 July 2008 IndyMac Bank, with focus on mortgages, is taken over by the Federal Deposit Insurance Corporation (FDIC). IndyMac Bank is located in California. It had suffered substantial losses before the takeover and had also been subject to an actual run on the bank.

13 July 2008 The Federal Reserve provides a credit facility to the mortgage companies Fannie Mae and Freddie Mac.

24 August 2008 Danmarks Nationalbank and the Danish Contingency Association take over the assets and liabilities of Roskilde Bank except subordinated loan capital and hybrid core capital.

7 September 2008 The Federal Housing Finance Agency (FHFA) takes control of Fannie Mae and Freddie Mac.

15 September 2008 Nykredit Realkredit submits a recommended tender offer for the total outstanding share capital of Forstædernes Bank. The offer is completed in October.

15 September 2008 Lehman Brothers Holding files for bankruptcy (Chapter 11).

15 September 2008 Bank of America announces its acquisition of Merrill Lynch.

16 September 2008 The Federal Reserve provides an 85 billion dollar credit facility to AIG, and in return, the US government acquires an ownership share of 79.9 per cent of AIG. The government is given the right of veto concerning disbursement of dividends to owners of ordinary shares and preference shares.

18 September 2008 Lloyds TSB announces its intention to acquire HBOS.

20 September 2008 The US Department of the Treasury announces a support package that includes the government's purchase of "troubled assets" for up to 700 billion dollars. The plan is called TARP (Troubled Asset Relief Program), and is passed by the House of Representatives on 3 October, following the rejection of a previous version of TARP on 29 September.

21 September 2008 Goldman Sachs and Morgan Stanley relinquish their status as investment banks and become subject to the same regulatory requirements as ordinary commercial banks.

22 September 2008 Danmarks Nationalbank and a number of private banks provide liquidity support to ebh bank to enable it to continue its daily operations.

25 September 2008 The Office of Thrift Supervision under the US Department of the Treasury takes over control of Washington Mutual Bank, which is acquired by JPMorgan Chase on the same day.

29 September 2008 Roskilde Bank's branch network is sold to Nordea (9 branches), Spar Nord Bank (7 branches) and Arbejdernes Landsbank (5 branches).

29 September 2008 vestjyskBANK acquires Bonusbanken, whose equity capital is regarded as lost. vestjyskBANK merges with Ringkjøbing Bank on the same day.

29 September 2008 Fortis announces that the governments of Belgium, Luxembourg and the Netherlands will invest 11.2 billion euro in Fortis in their respective countries. This brings the governments' ownership share to 49 per cent. In addition, Fortis must sell its share of ABN Amro.

29 September 2008 Bradford & Bingley is nationalised. The portfolio of retail deposits and the branch network are taken over by Abbey National.

29 September 2008 The Icelandic central bank, Seðlabanki Íslands, announces that the government will, through the central bank, contribute equity capital equivalent to 600 million euro to Glitnir, bringing the government's ownership share in Glitnir to 75 per cent.

29 September 2008 Hypo Real Estate announces that a consortium from the German financial sector has extended short-term and medium-term credit facilities to it. The private banks renege on the agreement a few days later and the attempted rescue is unsuccessful.

29 September 2008 The FDIC announces that Citigroup will take over the bank activities of Wachovia in an FDIC-supported transaction. The transaction is, however, never realised.

30 September 2008 Dexia announces that it has received 6.4 billion euro from the governments of Belgium, France and Luxembourg and its current shareholders.

30 September 2008 The Irish government announces an unlimited deposit guarantee, including banks' debt, covered bonds, senior debt and dated subordinated debt. It is estimated that the banks covered by the guarantee will have to pay 1 billion euro in total over two years.

3 October 2008 Wells Fargo and Wachovia announce their merger without any financial support from public authorities.

5 October 2008 The Danish government announces a rescue package for banks in Denmark. The package includes an unlimited government guarantee of deposits and the banks' debt except covered bonds (SDOs), share capital, hybrid core capital and supplementary capital. The participating banks, i.e. the members of the Danish Contingency Association, will have to pay up to kr. 35 billion over two years.

6 October 2008 BNP Paribas announces that it has concluded an agreement on the acquisition of the Belgian, Luxembourgian an international parts of Fortis.

6 October 2008 Hypo Real Estate announces that a new agreement has now been concluded whereby the German government and the financial sector together offer a credit facility of 50 billion euro. The government provides a guarantee of 35 billion euro.

7 October 2008 The Icelandic financial supervisory authority announces that it has taken over control of Glitnir and Landsbanki.

8 October 2008 The UK presents a rescue package for the financial sector, which includes an amount of 50 billion pounds sterling for recapitalisation of distressed banks and 250 billion pounds for guarantee of the banks' future short-term and medium-term borrowing (excluding subordinated debt).

8 October 2008 Coordinated reduction of interest rates by a number of central banks, including the ECB, the Federal Reserve, the Bank of England and Sveriges Riksbank.

9 October 2008 The financial supervisory authority of Iceland announces that it has taken over control of Kaupthing.

12 October 2008 The euro area member states launch a set of common bank rescue principles including e.g. the possibility of recapitalisation of banks and a temporary government guarantee of future issuance of senior bank debt with a maturity of up to 5 years. More countries follow suit and launch rescue packages, and the 27 EU member states endorse the principles at a summit on 15 October.

14 October 2008 The US Department of the Treasury states that nine major US banks have sold senior preference shares to the government – on a voluntary basis and in order to strengthen the capital base. This includes just over 125 billion dollars of TARP funds, while 21 financial institutions will sell shares for just over 30 billion dollars in November.

19 October 2008 ING announces that it will receive 10 billion euro from the Dutch government to strengthen its core capital.

30 October 2008 As of 3 November, Morsø Bank will take over the activities, excluding the guarantee capital, of Sparekassen Spar Mors, since the latter does not meet the statutory capital requirement due to substantial write-downs on loans and a high individual capital need.

10 November 2008 The Swedish government takes over the investment bank Carnegie.

13 November 2008 ebh bank announces that its solvency is below the statutory requirement. On 21 November, assets and liabilities (except share capital and other subordinated debt) are transferred to Afviklingsselskabet til Sikring af Finansiel Stabilitet A/S.

23 November 2008 In a joint statement from the US Department of the Treasury, the FDIC and the Federal Reserve, the authorities provide a guarantee of 306 billion dollars to Citigroup. Citigroup assumes all losses up to 29 billion dollars and 10 per cent of losses exceeding this limit. The government also provides a further 20 billion dollars of TARP funds.

25 November 2008 The Federal Reserve announces the purchase of mortgage-credit bonds and MBS (mortgage-backed securities) for up to 600 billion dollars. In addition, the Federal Reserve launches a new facility called TALF (Term Asset-Backed Securities Loan Facility) to support loans to small business enterprises, student loans, car loans and credit card loans. The facility amounts to up to 200 billion dollars.

The Risk Outlook

The risk outlook is dominated by the financial crisis. Liquidity is very tight and markets are extremely volatile. Considerable uncertainty prevails, e.g. in terms of the banks' response to the tight financing conditions and reduced earnings opportunities. The risk of a credit crunch is significant and, if it materialises, the real economic implications will be considerable. Moreover, the estimated failure rates for Danish companies are very high and the banks' credit risk is increasing.

OVERVIEW OF SIGNIFICANT RISKS TO FINANCIAL STABILITY

This chapter describes significant risks to financial stability, i.e. risks associated with financial market developments, macroeconomic risks of both international and Danish origin, and vulnerabilities in the Danish financial sector, cf. Table 2.

In the next chapter, risks to financial stability are translated into three hypothetical scenarios which form the basis for stress tests of the Danish financial sector in comparison with the expected development, or the baseline scenario.

THE INTERNATIONAL FINANCIAL CRISIS AND THE GLOBAL ECONOMY

Since the summer of 2007, the international financial crisis has been spreading to more and more areas. National rescue packages have helped to stabilise global financial conditions somewhat, but it is too

OVERVIEW OF RISKS TO FINANCIAL STABILITY IN DENMARK — Table 2

Risk	**Origin**
Turmoil in the financial markets flares up again	International
Deep global recession	International
Liquidity risk – including financing of deposit deficit	International/Denmark
Severe credit crunch	Denmark
Substantial property price drop	Denmark

early to call off the crisis. Uncertainty and loss of confidence among the banks remain high and many banks still face liquidity problems. In general, the banks' earnings have been weakened by substantial losses on securities portfolios. So far, credit losses have been low, but the outlook is for higher losses, especially in case of a severe deterioration in the real economy. These factors make the banks vulnerable and it will not take much for the financial crisis to flare up again. Due to the significant uncertainty and nervousness, even small incidents could have major implications and systemic consequences.

Recessionary fears and the interaction between the real economy and the financial sector have been some of the driving forces behind recent developments in the financial markets. The crisis has adversely affected the global real economy, and uncertainty prevails as to what lies on the horizon. Significant balance-sheet deleveraging in western banking sectors is required to bring the risk profile back to the historical average. In other words, there is a risk of a substantial reduction in lending, which will dampen private consumption and investment. In a worst-case scenario, this could send the global economy into a deep and prolonged recession, with a marked rise in credit risks. If the banks respond by further tightening credit conditions, the global economy could be caught in a negative spiral of intensifying turmoil and weakening real economic development.

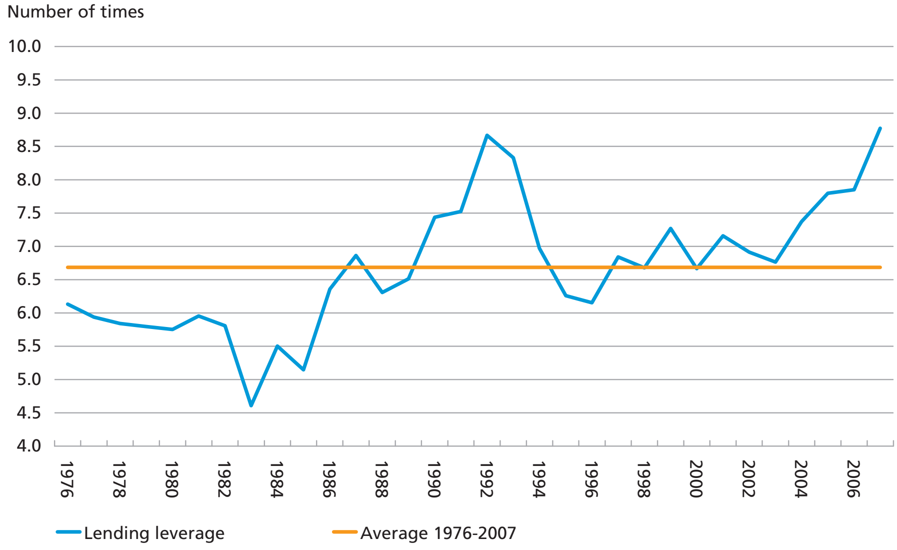
RISKS TO THE DANISH ECONOMY

Credit crunch

Risks to the Danish economy, like risks to the global economy, should be seen in the context of the current financial crisis. Banks with financing problems and a need for balance-sheet adjustment could be forced to reduce lending. Banks in Denmark, on average, had lent their equity capital almost 9 times at the end of 2007, compared with the historical average (1976-2007) of almost 7 times, cf. Chart 27. A return to the historical average would require either a 24 per cent fall in lending, assuming equity capital remains unchanged, or an increase in equity capital by more than 30 per cent (approximately kr. 75 billion), assuming lending remains unchanged. Moreover, according to the existing practice, part of the banks' subordinated loan capital is to be refinanced in the course of 2009 and 2010 – approximately kr. 10 billion in each of the two years.

Falling housing and equity prices also tend to reduce the wealth of households and companies, giving the banks an incentive to tighten their credit policies.

LENDING LEVERAGE OF DANISH BANKS, 1976-2007 Chart 27



Note: Lending leverage is total lending as a ratio of equity in the sector. The sector is expressed as banking institutions in groups 1-3 as classified by the Danish Financial Supervisory Authority.
Source: Financial statements.

These factors augment the risk of a credit crunch in which creditworthy borrowers will find it difficult to obtain loans from banks, resulting in considerable real economic effects. Lower economic growth and higher unemployment will increase the risk of loan defaults, causing banks to incur credit losses; moreover, lower lending volumes will lead to a contraction in the banks' earnings base.

Other risks to the Danish economy

The economic downturn in the USA and the rest of the world could be more severe than expected. In this scenario, Danish exports will also be affected by weaker demand.

Another risk is associated with housing price developments. Danish housing prices have been falling since the peak in 2006 and some areas have seen housing prices plummet. If unemployment or interest rates rise considerably, there is a risk of steep additional price falls, which will be exacerbated if the banks cut back significantly on lending. In this scenario, the financial position of Danish households will deteriorate. The value of the banks' collateral will be reduced, affecting the banks if an increasing number of homeowners are unable to service their loans.

A continued decline in housing prices will also render a large number of ongoing construction projects unprofitable, meaning that banks exposed to non-residential lending and developers may incur losses.

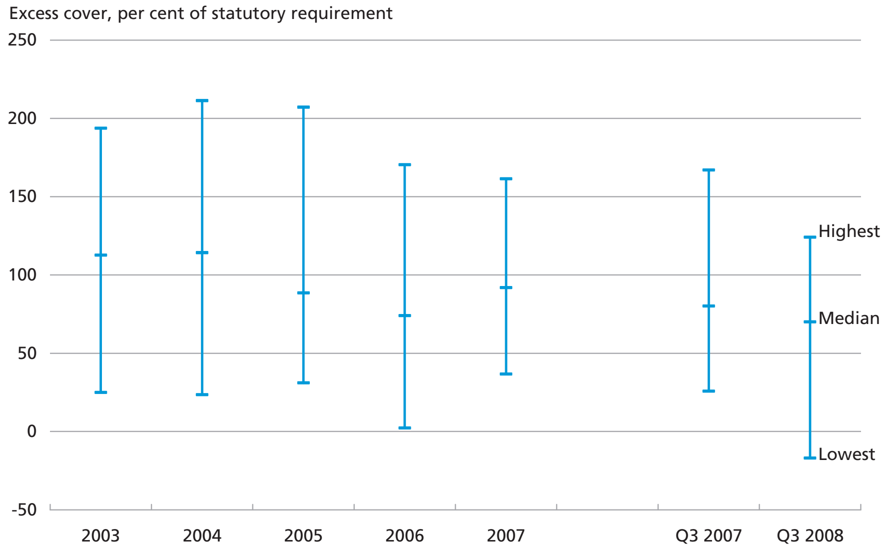
LIQUIDITY RISKS REMAIN HIGH

Liquidity and financing problems have characterised the financial sector since the onset of the crisis. Over the summer of 2008 and until the adoption of the bank rescue packages in early October, these problems were bordering on the extreme. Though the rescue packages have improved the situation in global money markets, the conditions are anything but normal and liquidity risks remain high.

Danish banks will probably have to reduce their deposit deficits over the coming years as a direct fallout of the crisis. If this is to be achieved in a calm and controlled manner, the banks will continue to depend on the capital and money markets for financing of the deficit for some time. This makes the banks vulnerable if the financial crisis flares up again.

The banks' excess liquidity cover relative to the statutory minimum requirement was reduced in the 3rd quarter of 2008 compared with the same period in 2007, cf. Chart 28. One bank failed to meet the minimum liquidity requirement, its excess cover being a negative 17 per cent. This is highly unusual and demonstrates that the liquidity of some banks is under severe pressure as a consequence of the crisis. The bank's quarterly report shows that, at end-October 2008, its excess liquidity cover was again above the statutory minimum requirement, amounting to 61.2 per cent.

EXCESS LIQUIDITY COVER IN DANISH BANKS, 2003-08 — Chart 28



Note: The Chart is based on the Danish Financial Supervisory Authority's key ratio, "cover relative to statutory liquidity requirement", which shows excess liquidity after compliance with the 10-per-cent requirement, cf. section 152 of the Danish Financial Business Act. Liquidity must amount to at least 10 per cent of the total debt and guarantee commitments less subordinated capital investments, which can be included in the calculation of the base capital.

Source: Annual and quarterly reports.

LOWER INTEREST-RATE RISK FOR THE BANKS

The interest-rate risk of Danish banks has been significantly reduced since the turn of the year, cf. Chart 29. The reduction is due to lower interest-rate risk measured in Danish kroner and to higher core capital. The reduction has been achieved in spite of the increase in the bond holdings of group 1 from kr. 474 billion at end-2007 to kr. 534 billion at the end of the 3rd quarter of 2008. The bond holdings of group 2 amount to kr. 78 billion in the 3rd quarter of 2008, relative to kr. 86 billion at end-2007.

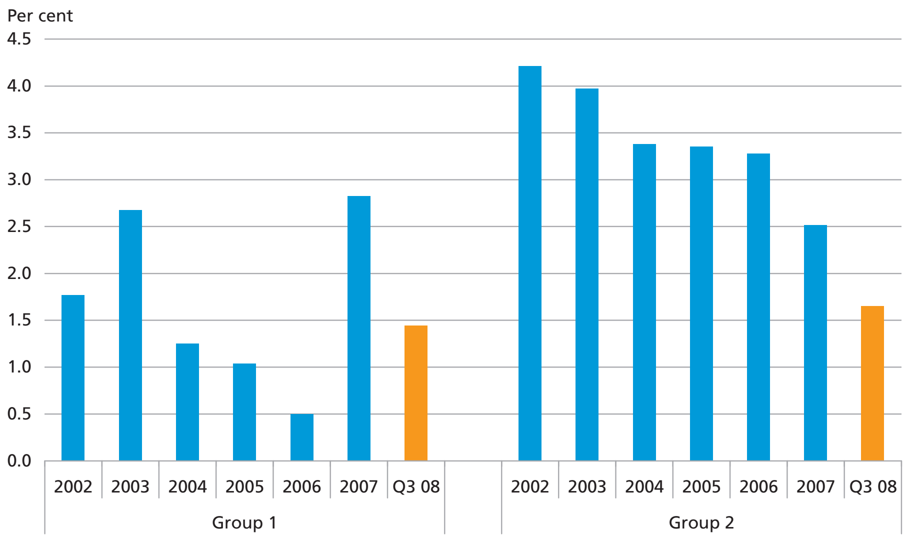
The financial markets have been highly volatile over the last few months and the reduction in the interest-rate risk reflects that the banks have shortened the duration of their bond holdings. In other words, they have shifted from long-term bonds to short-term bonds.

HIGHER CREDIT RISK FOR DANISH BANKS

Higher estimated failure rates and higher expected losses

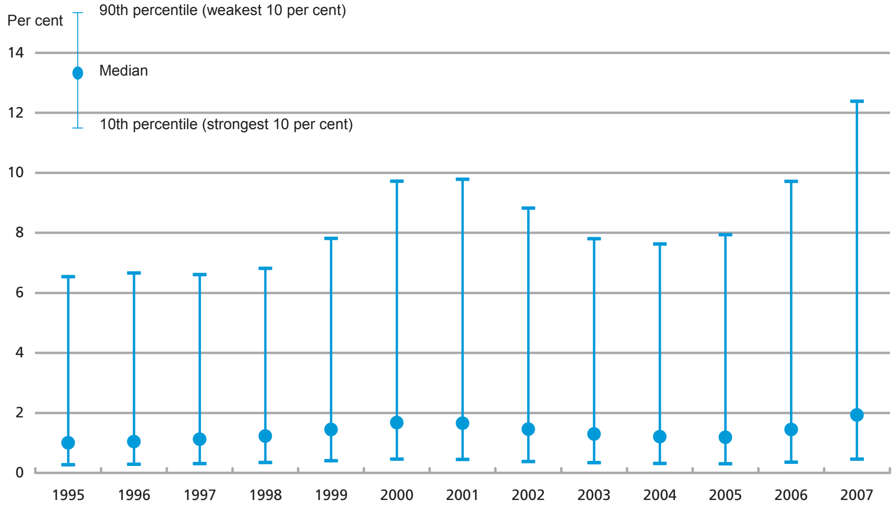
The risk of Danish companies failing has increased significantly over the last few years, cf. Chart 30. This is especially true of the weakest companies, expressed as the 90th percentile. The reasons for the rise are more companies with negative earnings, higher indebtedness, and the establishment of many new companies. Viewed in isolation, the estimated failure rate is higher for new companies than for established ones.

INTEREST-RATE RISK, PER CENT OF CORE CAPITAL, 2002-Q3 2008 Chart 29



Note: Nordea Bank Danmark and Arbejdernes Landsbank have not published quarterly financial statements and are thus not included in the underlying data.
Source: Annual and quarterly reports.

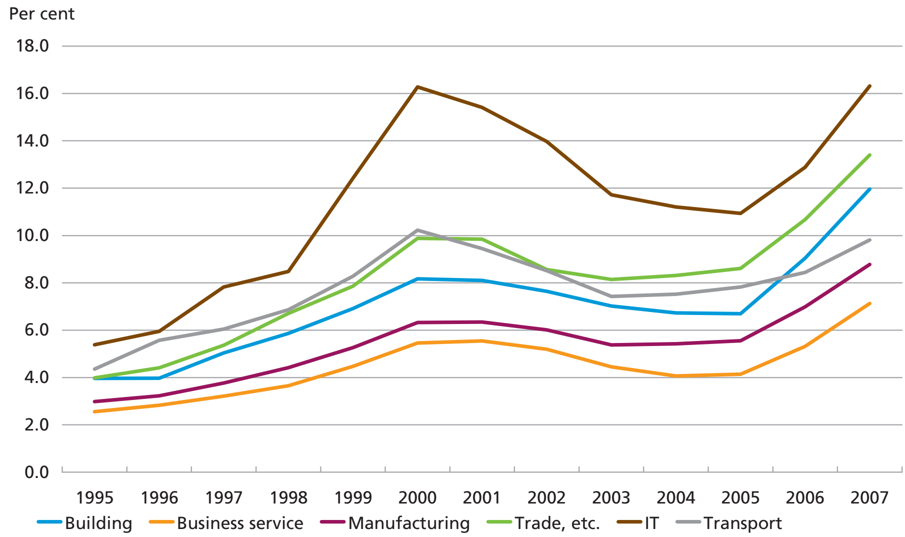
ESTIMATED FAILURE RATES FOR DANISH COMPANIES, 1995-2007 Chart 30



Note: Estimated failure rates for 2006 and 2007 are higher than indicated in *Financial stability 2008,* which should be viewed in light of the fact that more companies have published financial statements and real economic variables have been revised.
Source: Own calculations based on data from Experian A/S.

The rise in estimated failure rates in 2007 is underpinned by the continued increase in actual failures. Prospects for the building and construction as well as business service are especially bleak, cf. Chart 31.

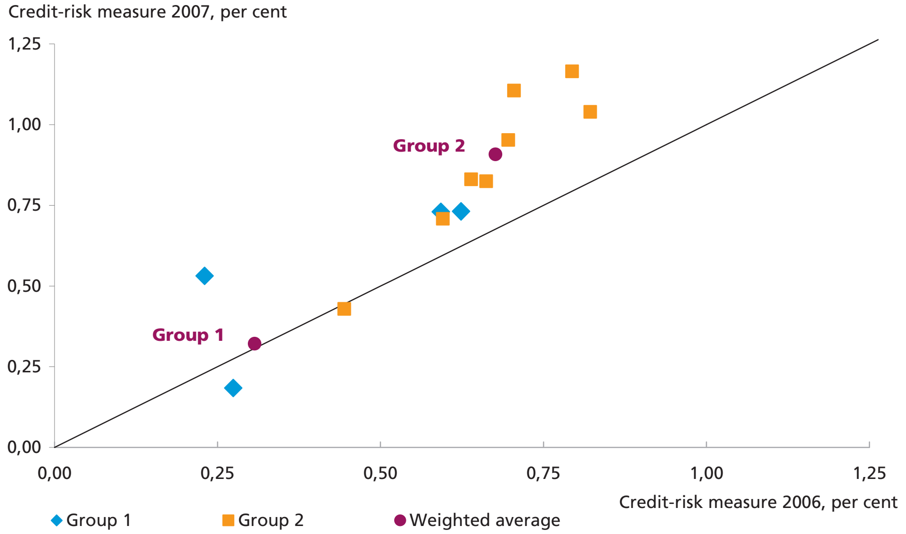
ESTIMATED FAILURE RATES OF WEAKEST COMPANIES, BROKEN DOWN BY SECTOR, 90TH PERCENTILE Chart 31



Source: Own calculations, based on data from Experian A/S.

CREDIT-RISK MEASURES FOR THE BANKS' LENDING PORTFOLIOS IN 2006 AND 2007

Chart 32



Note: The analysis includes only institutions having at least 30 companies as customers. The sum of loans and guarantees is used as weights in the weighted averages. Relative to *Financial stability 2008*, the credit-risk measure for both 2006 and 2007 have risen, primarily as a result of higher estimated failure rates.
Source: Danish Financial Supervisory Authority, financial statements and own calculations.

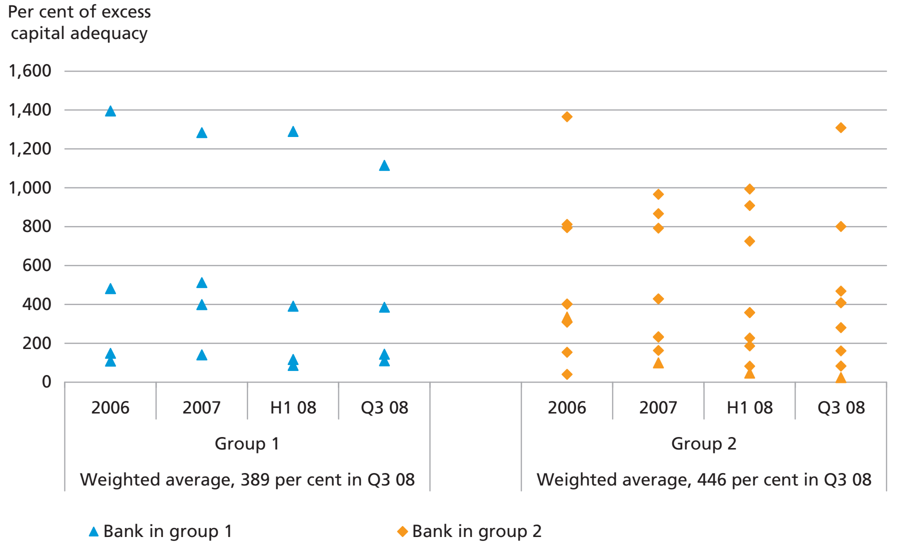
The increase in estimated failure rates for companies in 2007 entails that the banks' expected losses on corporate exposures have increased.

Upward trend in credit-risk measures for the banks

Danmarks Nationalbank uses its failure-rate model, KIM, and assumptions of expected losses on exposures to households and agriculture to calculate a credit-risk measure[1] for each bank. The credit-risk measure expresses the individual bank's expected loss ratio on its entire lending portfolio. In general, the banks' overall credit risk on exposures to households and the corporate sector, including agriculture, increased from 2006 to 2007. This is illustrated by Chart 32, showing a rise in the credit-risk measure, with a few exceptions.

[1] The credit-risk measure calculated as $PD_i^{corporate} \bullet U_i^{corporate} + PD^{households} \bullet U_i^{households} + PD^{agriculture} \bullet U_i^{agriculture}$. $PD_i^{corporate}$ is the debt-weighted estimated failure rate of Danmarks Nationalbank's failure-rate model, KIM, for companies using bank *i*. The year's average loss ratio for each of the two groups is applied as an approximation of the estimated failure rate for households ($PD^{households}$) and agriculture ($PD^{agriculture}$). U_i is the proportion of bank *i*'s lending to the corporate sector, the households and agriculture, respectively. Credit-risk measure is specified in the glossary in *Financial stability 2007*.

LARGE EXPOSURES, PER CENT OF EXCESS CAPITAL ADEQUACY, GROUPS 1 AND 2 Chart 33



Note: As Nordea Bank DK and Arbejdernes Landsbank have not published financial statements for the 3rd quarter of 2008, they are not included in the underlying calculations. Alm. Brand Bank has not published the key ratio for the sum of large exposures at the end of the 3rd quarter of 2008. Instead, the ratio as of 30 June 2008 has been applied.
Source: Annual and quarterly reports.

The banks have reduced large exposures

The concentration risk of Danish banking institutions, measured as the sum of large exposures as a percentage of the base capital, declined in the 3rd quarter of 2008, relative to the 1st half of 2008, cf. Chart 33. For banks in group 1, large exposures totalled 161 per cent of the base capital in the 3rd quarter, compared with 166 per cent at the end of the 1st half, while large exposures for banks in group 2 fell from 142 per cent at the end of the 1st half to 128 per cent at the end of the 3rd quarter of 2008.

At the end of the 3rd quarter, the weighted average of large exposures as a percentage of the banking institutions' excess capital adequacy was 388 per cent for group 1 and 446 per cent for group 2. One banking institution in group 1 had a significantly higher sum of large exposures as a percentage of its excess capital adequacy than the other institutions in the group.

Testing the Banks' Resilience

The financial crisis will continue to exert pressure on Danish banks and the banks' earnings are expected to decline further. Stress tests show that many banks would experience losses and solvency problems if exposed to tough economic scenarios. It is assessed that a capital injection to the banking sector of about kr. 70 billion will enable the financial institutions to withstand very severe economic shocks such as a deep international recession, a severe credit crunch in the Danish economy, and a combination of both scenarios.

Market expectations concerning the banks indicate widespread concern about the banks' capital adequacy and capital base.

MACRO STRESS TEST – DANISH BANKS UNDER PRESSURE

Stress test scenarios

The robustness of the banking sector is tested by means of Danmarks Nationalbank's stress test model, cf. Box 5. Three scenarios have been constructed for testing the robustness of the Danish financial system:

- *Scenario 1:* The financial crisis leads to a deep international recession, entailing lower demand for Danish products. Central banks worldwide adopt a more expansionary monetary-policy stance, and interest rates fall where possible.
- *Scenario 2:* The financial crisis has prompted the Danish banks to significantly reduce their lending. The Danish economy experiences a credit crunch in that creditworthy borrowers are unable to obtain bank loans. Housing prices plummet.
- *Scenario 3* combines scenarios 1 and 2. A deep international recession is assumed to coincide with a credit crunch in Denmark. The scenario envisages a historical decline in economic activity.

The scenarios are described in more detail in Box 6.

The stress test scenarios are compared with a baseline scenario which is in accordance with Danmarks Nationalbank's forecast for the Danish economy, i.e. the scenario among those considered that is believed to be the most likely development in the Danish economy and the financial sector, cf. Box 6. Real economic conditions have deteriorated both in Denmark and internationally since the publication of *Financial stability 2008.*

DANMARKS NATIONALBANK'S MACRO STRESS TEST MODEL Box 5

The macro stress test model is described in *Financial stability 2008*. In order to improve statistical relationships in the stress test model and to better identify changing conditions for the banks, the model is now estimated on the basis of half-year data since 1991 for the 15 largest Danish banks. The model architecture of the semi-annual macro stress test model is unchanged from the model described in *Financial stability 2008*.

The stress test model takes into account that, under the government guarantee issued in October 2008, the banks are not allowed to pay dividends for the next two years and that the government guarantee puts the banks to expense in the form of own contributions to the government guarantee scheme.

The model results should be interpreted with caution. The stress test model e.g. does not take liquidity risk into account, nor the fact that, during some periods, the banks may be barred from raising funds in the capital markets. Another factor not taken into account is that the management of a bank can react and change its strategy – for better or for worse – as the scenarios unfold. Finally, the model considers the impact of economic development on the banks at sector level. This means e.g. that the model cannot take into account differences in the credit quality of different banks.

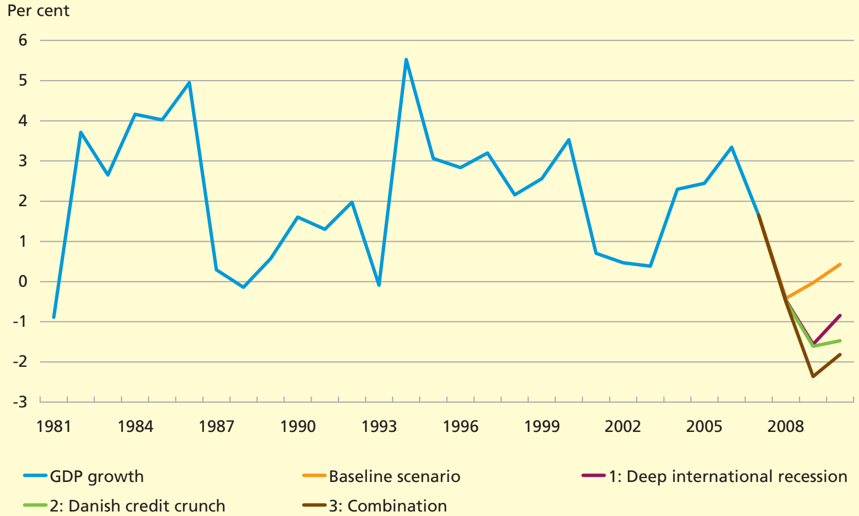
SCENARIOS Box 6

Baseline scenario

The baseline scenario is an updated version of Danmarks Nationalbank's economic forecast from September 2008, which incorporates a number of financial and macroeconomic indicators for the period September-November.

The scenario forecasts zero GDP growth in 2009, followed by slow growth in 2010, cf. Chart 34. The unemployment rate rises for two consecutive years to almost 4 per

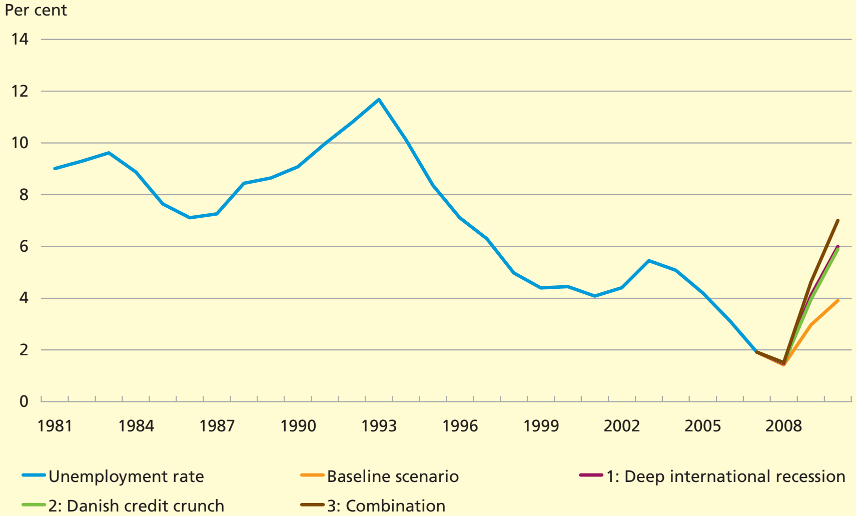
GDP GROWTH Chart 34



Source: Statistics Denmark and own calculations.

CONTINUED Box 6

UNEMPLOYMENT Chart 35



Source: Statistics Denmark and own calculations.

cent, cf. Chart 35. Housing prices and bank lending growth decrease, but significantly less than envisaged by the stress scenarios.

Scenario 1: Deep international recession

The financial crisis leads to a deep international recession, resulting e.g. in lower demand for Danish products. In response to the recession, central banks worldwide adopt a more expansionary monetary-policy stance, and interest rates fall where possible. Housing prices decrease by just over 10 per cent from the 3rd quarter of 2008 until the end of 2010. Danish banks reduce their lending growth, although not by as much as forecast by scenario 2. The scenario leads to a significant downturn in economic activity and unemployment rises to 6 per cent at the end of 2010.

Scenario 2: Credit crunch (marked decline in lending activity)

The financial crisis leads to a significant reduction in lending by Danish banks. The decrease in lending activity produces a credit crunch. Housing prices fall by about one third from the 3rd quarter of 2008 until the end of 2010. The effects are reinforced by widespread pessimism among households and companies. The scenario forecasts a substantial economic slowdown, GDP contracting by 1½ per cent annually for two consecutive years. Unemployment reaches 6 per cent at the end of 2010. The trend of the international economy mirrors the baseline scenario.

Scenario 3: Danish credit crunch and deep international recession (combination)

Scenario 3 combines scenarios 1 and 2. The financial crisis leads to a deep international recession and a severe credit crunch in the Danish economy. As a result,

CONTINUED	Box 6

Denmark enters a deep recession in which economic activity declines significantly more than seen over the last 25 years. Unemployment rises to 7 per cent at the end of 2010 and housing prices fall by just over 25 per cent until the end of 2010. The housing price fall is somewhat lower than forecast by scenario 2, since interest rates decline as a result of the international recession.

Manual adjustments

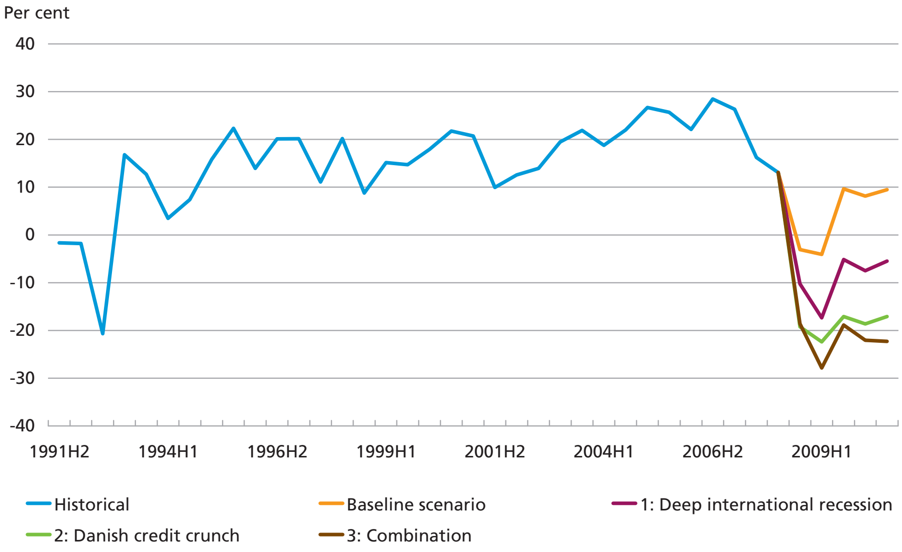
The data basis of the stress test model includes few observations from periods of massive pressure on the Danish banks. Accordingly, it is difficult to recreate by the model the tough economic conditions to which the banks are exposed in the stress scenarios. To allow for this, some model projections have been adjusted manually.

Compared with the baseline scenario in *Financial stability 2008*, the new baseline scenario for the Danish economy operates with a significantly lower forecast of economic growth for the period 2008-10. The economic growth forecasts of the stress scenarios are reminiscent of the most severe economic downturns in the Danish economy in recent decades.

The banks' earnings

In all the scenarios examined, the banks experience a sharp drop in earnings at the beginning of the period and, in general, the return on

RETURN ON EQUITY, 1991-2010 — Chart 36



Note: The Chart indicates the annual median return on the banks' equity before tax. The latest actual observation is from the 1st half of 2008.
Source: Danish Financial Supervisory Authority, banks' financial statements and own calculations.

equity becomes negative, cf. Chart 36. In the three stress scenarios, the banks' return on equity declines to the level seen in the crisis of the early 1990s. In scenarios 2 and 3, the very low level persists more or less throughout the period.

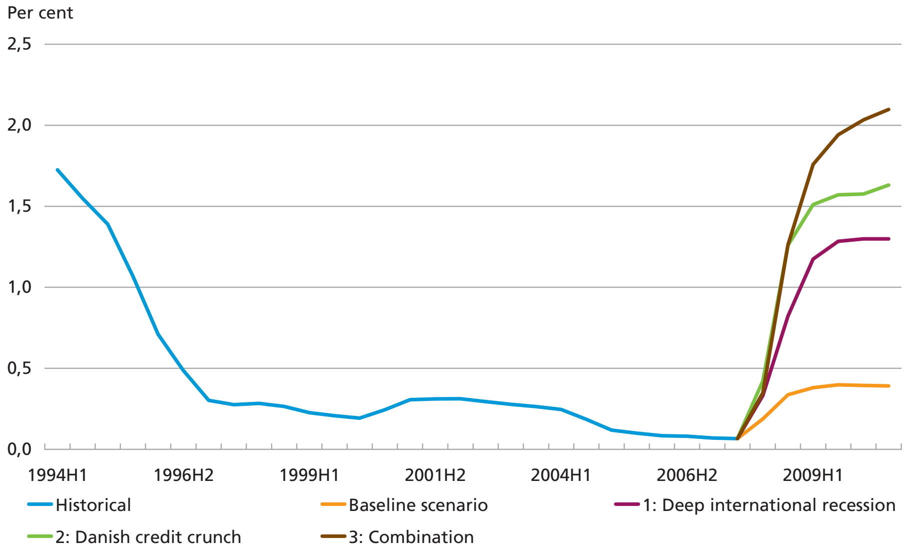
The sharp drop in financial results at the beginning of the period is primarily attributable to market conditions, entailing that the banks suffer large losses on their portfolios of stocks and bonds. Towards the end of the period, the banks again begin to record positive portfolio earnings and developments are driven mainly by fluctuations in losses on loans.

The stress scenarios envisage a significant increase in loan losses. Losses are higher in scenarios 2 and 3 than in scenario 1, which is attributable, among other factors, to a stronger drop in property prices in these two scenarios. In the baseline scenario, the loss ratio increases relatively moderately, cf. Chart 37.

From 2002 to 2006, Danish banks reported steadily increasing earnings and a record-high return on equity, cf. Chart 36. The banks' return on equity was relatively homogeneous between 2001 and 2007, cf. Chart 38, while the 1st half of 2008 saw greater divergence. Banks with a low return on equity, in particular, performed more poorly than in previous years.

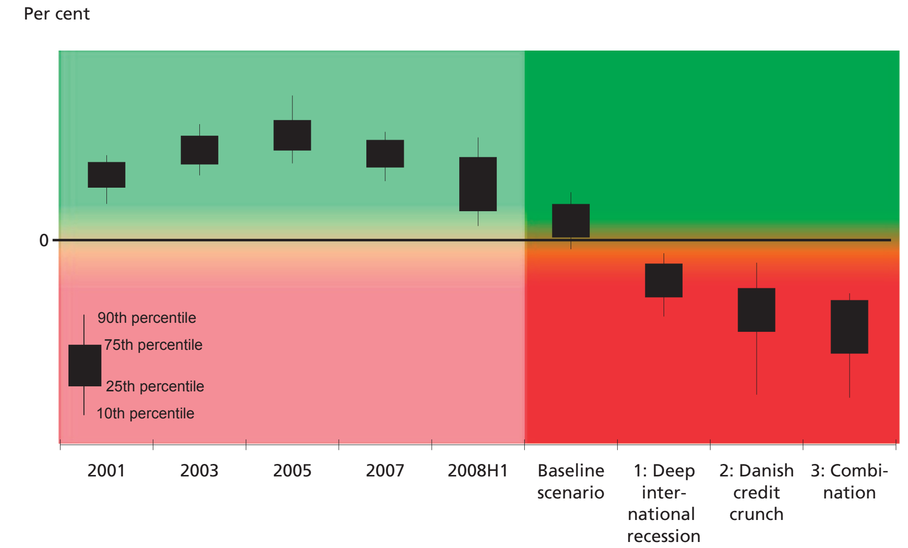
In the baseline scenario, most of the banks achieve a positive return on equity, cf. Chart 38. In the stress scenarios, the banks' earnings are under

BANKING SECTOR LOSS RATIO, 1994-2010 — Chart 37



Note: The latest actual observation is from the end of 2007.
Source: Danish Financial Supervisory Authority, banks' financial statements and own calculations.

THE BANKS' RETURN ON EQUITY | Chart 38



Note: The latest actual observation is from the 1st half of 2008. The scenarios show the distribution of the banks' average annual return on equity during the period from the 2nd half of 2008 until the end of 2010.
Source: Danish Financial Supervisory Authority, banks' financial statements and own calculations.

significant pressure and virtually none of the banks deliver a positive return on equity in the period until end-2010. Scenarios 2 and 3 affect the banks considerably harder than scenario 1, mainly as a result of higher losses on loans.

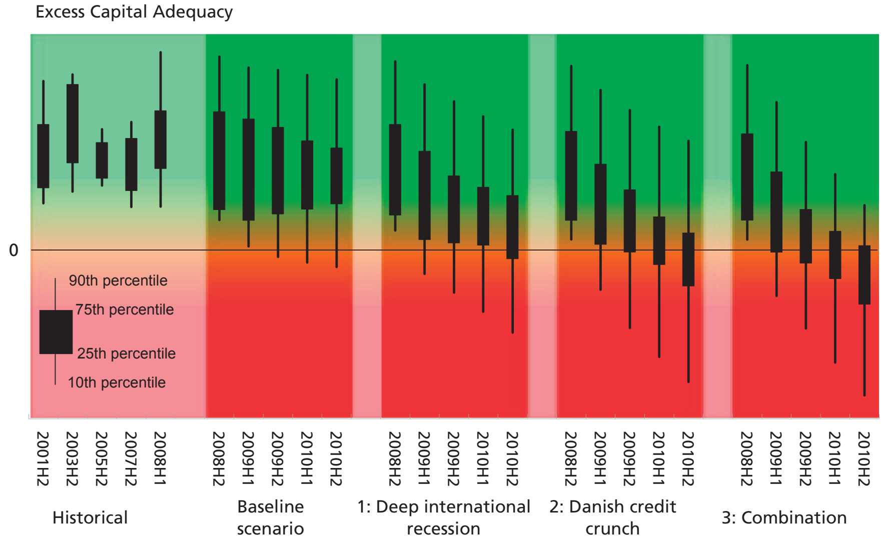
The banks' capital adequacy

Chart 39 illustrates the distribution of excess capital adequacy since 2001 for the 15 banks analysed, and the development in the scenarios. Green indicates that the banks easily meet the statutory requirement. Red indicates that the banks are or may be experiencing difficulties in meeting the statutory requirement.

The banks' excess capital adequacy differs widely, cf. Chart 39. The best cushioned banks had relatively large buffers at the end of the 1st half of 2008, while the least cushioned banks had a relatively small excess capital adequacy.

The baseline scenario operates with a gradual decline in the banks' capital adequacy. Towards the end of the period, only a few banks may be struggling to observe their individually calculated capital needs. The stress scenarios envisage a marked decline in the capital adequacy of the banking sector, and many banks may encounter solvency problems.

BANKING SECTOR'S EXCESS CAPITAL ADEQUACY Chart 39



Note: The latest actual observation is from the 1st half of 2008.
Source: Danish Financial Supervisory Authority, banks' financial statements and own calculations.

Capital injection to the Danish banking sector

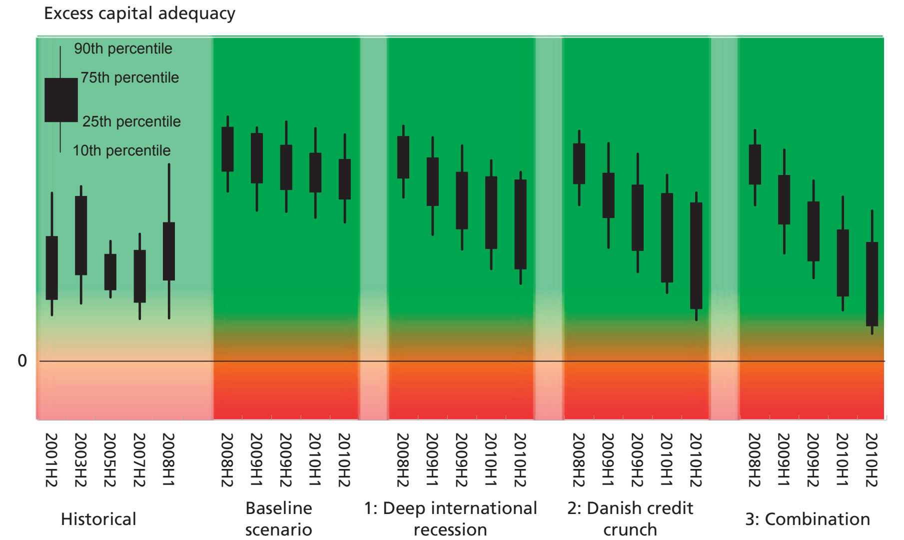
Overall, the analysis above shows that negative economic shocks will exert pressure on the banks' earnings and capital adequacy. Already in the baseline scenario, several banks are likely to have problems meeting their individually calculated capital needs towards the end of the scenario period.

Additional negative factors, which are not included in the calculations above, could put the banks' capital adequacy under pressure, e.g. extra payment to the winding-up company in the form of "own risk" of up to kr. 20 billion, liquidity risks, and the risk that the economy has not normalised by the end of 2010.

In order to ensure that none of the 15 banks analysed have problems meeting their individually calculated capital needs in the three scenarios, a capital injection to the banking sector is required, as illustrated by Chart 40. Results are sensitive to which banks and on what terms the capital is injected.

Overall, it is assessed that a capital injection of about kr. 70 billion to the banking sector will enable the banking institutions to withstand very severe economic shocks. For calculation purposes, the core capital ratio is thus technically increased to 13.5 per cent in the 2nd half of 2008 in all banking institutions with a core capital ratio below 13.5 per cent.

BANKING SECTOR'S EXCESS CAPITAL ADEQUACY IN CASE OF A CAPITAL INJECTION OF KR. 70 BILLION TO THE WHOLE BANKING SECTOR — Chart 40



Note: The latest actual observation is from the 1st half of 2008. For calculation purposes, the capital injection is effected in the 2nd half of 2008.
Source: Danish Financial Supervisory Authority, banks' financial statements and own calculations.

MARKET ASSESSMENT OF THE BANKS

Substantial widening of credit default swap spreads for the banks

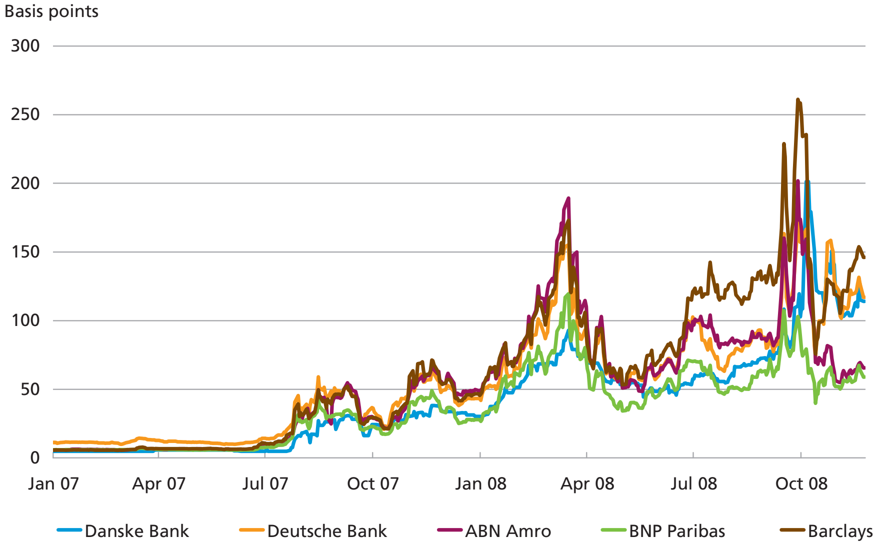
A credit default swap, *CDS,* is a financial instrument that is used e.g. to hedge the credit risk on a bank. The price development, typically measured as interest-rate spreads, of a bank's CDSs thus reflects the market's assessment of the probability that the bank will fail within a given period. All other things being equal, a wider CDS spread indicates market expectations of a higher failure rate for the bank.

CDS spreads for financial companies have been fluctuating widely since the spring, in many ways illustrating how the financial crisis has evolved. A preliminary climax was reached in September when CDS spreads surged to record highs, fuelled by nervousness after the collapse of the US investment bank Lehman Brothers. At the end of September 2008, several banks were thus assessed to be in imminent danger of failure within a 5-year period, cf. Chart 41. Though they have fallen back after the announcement of the bank rescue packages, the spreads remain high, indicating that the market has not called off the financial crisis.

A similarly negative picture presents itself if the key ratio "price/book value" is considered, cf. Chart 42. Overall, the banks have seen a strong

CDS SPREADS FOR SELECTED EUROPEAN BANKING GROUPS, 5-YEAR SENIOR DEBT

Chart 41

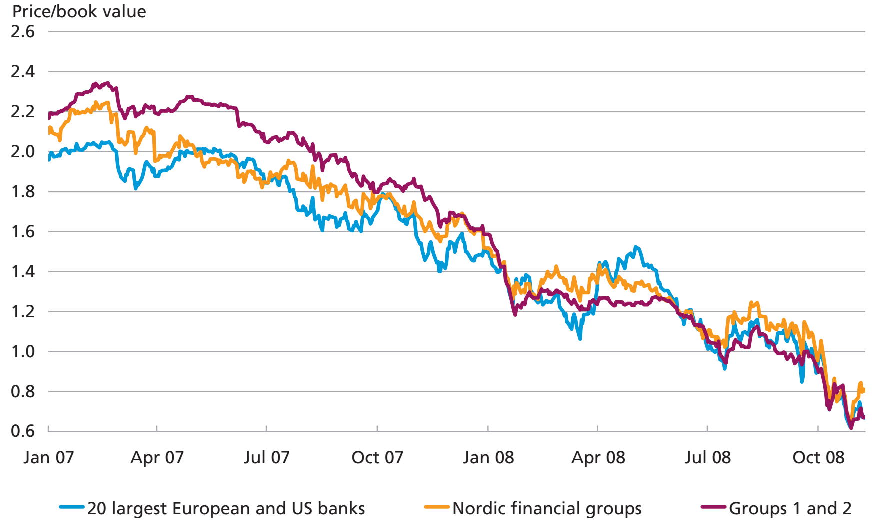


Source: Bloomberg.

drop in "price/book value" over the past year and their equities are now trading at levels far below a price/book value of 1. One indication of this

PRICE/BOOK VALUE FOR GLOBAL, NORDIC AND DANISH BANKS, RESPECTIVELY

Chart 42



Note: The selection of the 20 largest European and US banks complies with Box 2 of *Financial Stability 2008*. Merrill Lynch is removed as at 15 September 2008 following the bank's acquisition by Bank of America. Among listed banks of groups 1 and 2, Roskilde Bank and Forstædernes Bank are removed as of 10 July and 15 September 2008, respectively.

Source: Bloomberg.

is that the market expects more write-downs and losses in the coming years and that the earnings base will generally come under pressure.

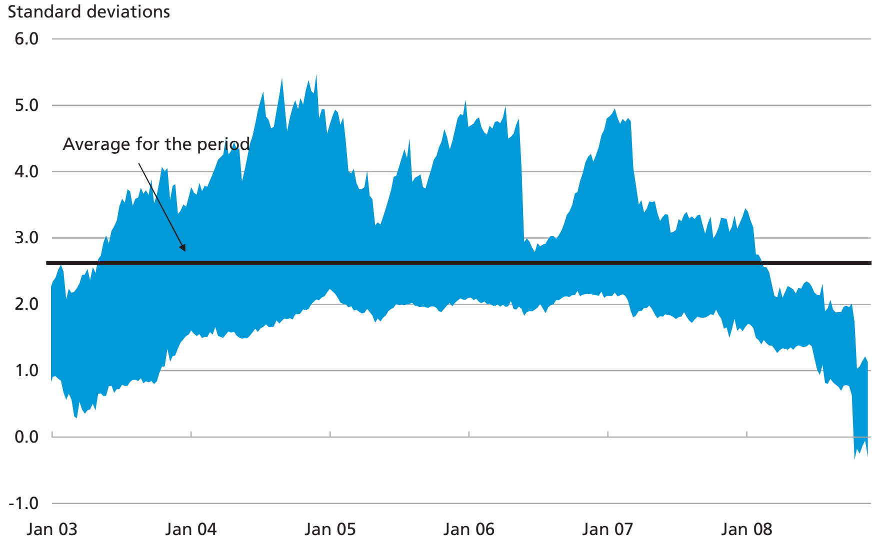
The market assessment is that banking groups are highly exposed

On the basis of equity prices and accounting data, Danmarks Nationalbank has estimated a market-based risk measure, distance to insolvency, for the Nordic groups. The distance to insolvency measures the fluctuations in asset market value that can be accommodated within the banking groups' buffers, while still observing the minimum capital requirement of 8 per cent.

The distance to insolvency is a forward-looking risk measure, assessing the risk of solvency problems over a time horizon of one year. The distance to insolvency is measured by the number of standard deviations for fluctuations in the estimated market value of the banks' assets. The shorter the distance to insolvency, the more exposed the banks are, according to the market assessment.

The estimation of distance to solvency assumes that the groups neither pay dividends nor raise new capital over the coming year. In the current situation, stock markets must be expected to have factored in a high probability that some of the groups will need to raise new capital, thereby diluting the equity interests of existing shareholders. Thus the recent significant reduction of the groups' distance to insolvency, cf. Chart 43, should be interpreted with caution, as the model does not fully capture the current situation.

DISTANCE TO INSOLVENCY FOR NORDIC GROUPS — Chart 43



Sorce: Financial statements, Bloomberg and own calculations.

Payment and Securities Settlement in Denmark in the Wake of the Financial Turmoil

So far, payment and securities settlement in Denmark has not been significantly affected by the financial turmoil. One reason is that, in general, the banking institutions and mortgage-credit institutes participating in the settlement process have substantial holdings of securities and certificates of deposit that can be pledged as collateral for both intraday credit and monetary-policy loans at Danmarks Nationalbank. This also applies to banking institutions and mortgage-credit institutes experiencing a fall in liquidity holdings in 2008.

In addition, the settlement procedure of the Danish financial infrastructure is designed to support efficient use of the participants' liquidity – based on quick and flexible access to credit at Danmarks Nationalbank through pledging of securities under the automatic collateralisation arrangement, cf. Box 7.

Moreover, on busy days for the VP settlement system and the Sumclearing, i.e. the systems in which securities transactions and retail payments are settled, extensive netting takes place between the participants in the course of the settlement procedure. In other words, participants who submit liquidity early on in the day typically receive liquidity at the end of the day, entailing a significant reduction in the liquidity redistribution to be financed by the participants for the day as a whole.

Nevertheless, in the current situation, Danmarks Nationalbank closely monitors that the participants' reservation of liquidity is sufficient to meet their payment obligations, so as to ensure that payment settlement can be effected without delay. In this context, Danmarks Nationalbank has particular focus on days when large-scale liquidity redistribution is known to take place.

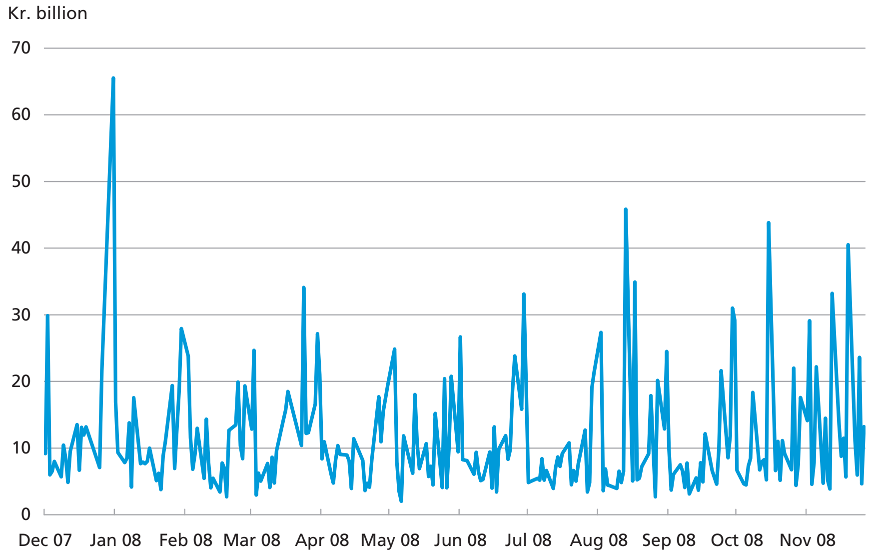
AUTOMATIC COLLATERALISATION ARRANGEMENT Box 7

Automatic collateralisation is a flexible arrangement, allowing account holders at Danmarks Nationalbank to pledge securities deposited in one or several designated securities accounts with VP, typically trading accounts, as collateral. Automatic collateralisation is used for settlement of securities transactions in VP. The arrangement can also be used for settlement of corporate actions in VP, as well as payments in the Sumclearing and CLS systems (the extended automatic collateralisation arrangement).

As opposed to traditional pledging of collateral, the automatic collateralisation arrangement has the advantage that it does not bind securities in a safekeeping account. When account holders pledge securities as collateral under the automatic collateralisation arrangement, they retain the free disposal of the securities in the safekeeping account for as long as the collateral value of the safekeeping account exceeds the total credit under the automatic collateralisation arrangement. Automatic collateralisation allows the use of purchased securities as collateral already in the settlement cycle in which the securities are received, i.e. allows the securities to be pledged as collateral for the purchase sum. Under traditional pledging, securities cannot be pledged as collateral until later settlement cycles. Thus the automatic collateralisation arrangement binds fewer securities in the settlement of securities transactions than traditional pledging.

Settlement procedures designed to ensure efficient use of liquidity
Payment and securities settlement in Denmark entails exchange of liquidity between participants. During the period from December 2007

LIQUIDITY REDISTRIBUTION DERIVED FROM RETAIL PAYMENTS, SECURITIES AND FOREIGN-EXCHANGE SETTLEMENT IN DANMARKS NATIONALBANK Chart 44



Source: Danmarks Nationalbank.

to November 2008, net liquidity of kr. 11 billion on average was exchanged on a daily basis between the participants in the VP settlement system, the Sumclearing and the foreign-exchange settlement system CLS.

The redistribution of liquidity between the participants varies considerably over the year. Things that affect liquidity redistribution between the Danish participants include:

- Payroll expenditure and payment of bills around the turn of the month
- Payments to and from the central government (direct and indirect taxes and various public benefits)
- US public holidays, resulting in a considerable reduction in the number of foreign-exchange transactions, including transactions involving Danish kroner
- Issuance and redemption of securities, especially government and mortgage-credit bonds.

A day when redistribution of liquidity between participants is particularly large is the first banking day in January. This is mainly attributable to the annual refinancing of adjustable-rate mortgage-credit loans, and payment of taxes and mortgages.

However, due to the structure of the settlement procedure, as well as the distribution of payment flows between participants, opposite payments are extensively set off against one another. Similarly, automatic collateralisation entails that the participants may pledge acquired mortgage-credit bonds as collateral for loans from Danmarks Nationalbank already during the night settlement cycle in which they receive the bonds. Thus the participants are able to manage their liquidity requirement over the day e.g. by raising loans from Danmarks Nationalbank to cover payments early in the settlement procedure, and repaying the loans on the same day using funds received later in the settlement procedure.

Payment settlement in the light of Danish bank rescue packages

For the first time in many years, 2008 saw examples of banking institutions that were unable to continue as independent business enterprises. This had only a modest impact on payment settlement.

After the announcement of Sydbank's bid for bankTrelleborg on 21 January 2008 and Danmarks Nationalbank's liquidity support for Roskilde Bank on 10 July, these banks experienced greater withdrawal of deposits than usual. Therefore, just a few days after their problems had become public knowledge, the payment obligations of the banks in question were withdrawn from the Sumclearing during the night settlement. However, the banks could in morning after the withdrawal easily transfer the liquidity necessary to ensure settlement of their payment obligations in the Sumclearing, without any delays for the customers.

Following the central government's decision, on 6 October 2008, to provide a safety net for all unsecured creditors in Danish banks, the risk of extraordinary withdrawals must be deemed to be limited. This was confirmed when no extraordinary withdrawals were observed after EBH Bank's announcement on 14 November that the bank no longer met the statutory solvency requirement.

Lehman Brothers' failure and securities settlement in Denmark

The financial turmoil abroad has not had any significant impact on the payment and securities settlement in the Danish infrastructure either. The greatest settlement risk occurred with the collapse of the US investment bank Lehman Brothers in the weekend of 13-14 September 2008. As a result of the collapse, Lehman Brothers' UK subsidiary, Lehman Brothers International (Europe), a participant in the VP settlement system, was placed under administration by the UK authorities. Under the rules of VP Securities Services, Lehman Brothers International (Europe) was removed from the VP settlement system and unsettled transactions to which the company was a party were not completed.

Though Lehman Brothers International (Europe) was one of the major foreign participants in the VP settlement system, the overall effect of the removal of the company from the system was relatively modest since settlement is based on the "delivery versus payment" principle. Some counterparties may, however, have suffered losses because the company did not complete transactions concluded as agreed.

Participants' handling of the Sumclearing and VP settlement system to be strengthened

For a long time, the key operating problem of the Sumclearing has been that, on some days, it has not been possible to complete settlements in the normal manner at night because certain participants had not reserved sufficient liquidity. Danmarks Nationalbank has monitored this trend, which has been difficult to reverse. Similarly, the Danish Bankers Association has emphasised the rules of participation in the Sumclearing and has raised the fees payable by a participant if too little liquidity is reserved.

SETTLEMENT PROCEDURE AND LIQUIDITY REDISTRIBUTION, 2 JANUARY 2008 Box 8

The liquidity-reducing effects of the structure of the Danish settlement procedure can be illustrated by the liquidity redistribution of Danish kroner on 2 January 2008.

Step 1 of the settlement procedure was the settlement of securities transactions, which was predominately effected in three trading cycles that were executed in the night between 30 and 31 December 2007, with 2 January 2008 as the value date. On a gross basis, transactions for kr. 562 billion were settled in the trading cycles, including a very large portion of the mortgage-credit institutes' sale of new bond issues for refinancing of adjustable-rate loans. Following netting of purchase and sales transactions between participants, trading settlement involved liquidity redistribution of kr. 71 billion, kr. 56 billion of which was financed through loans raised under the automatic collateralisation arrangement.

Step 2 was the settlement of retail payments in the Sumclearing, also in the night between 30 and 31 December. After netting of opposite payments between the participants, liquidity redistribution amounted to kr. 26 billion. Income tax payments, etc., to the central government and mortgage repayments accounted for most of the settlement in the Sumclearing, with 2 January 2008 as the value date.

Step 3 was the settlement of corporate actions on securities on 2 January at 9.15 a.m. On a gross basis, corporate actions amounted to kr. 404 billion, the great majority being interest, repayments and redemptions in respect of mortgage-credit bonds. There was significant netting of payments between participants, as was also the case for the trading settlement, and liquidity redistribution amounted to kr. 72 billion.

Step 4 of the settlement procedure was the exchange of Danish kroner against euro on 2 January at 9.20 a.m., derived from the settlement of VP-registered euro-denominated securities, primarily new adjustable-rate loans in euro. This exchange is due to the fact that the night settlement of euro-denominated securities takes place in Danish kroner, as Danmarks Nationalbank is unable to provide euro for the night settlement. The participants' exchange of Danish kroner against euro totalled kr. 18 billion.

Finally, the settlement of foreign-exchange transactions in the CLS system on 2 January between 7.00 a.m. and 12.00 noon implied redistribution of Danish kroner between the participants of kr. 11 billion.

If all 5 steps of the settlement procedure are considered as one, the liquidity redistribution between the participants of the Sumclearing and VP settlement system and the CLS system on 2 January totalled kr. 66 billion.

The reason why the day's redistribution as a whole was not larger was that considerable netting of opposite payments took place across the systems. For instance, payments to mortgage-credit institutes derived from the sale of new bond issues received in VP's trading settlement were set off against the mortgage-credit institutes' disbursement of interest and redemptions via VP's settlement of corporate actions.

Especially on days of large-scale redistribution of liquidity between the participants, it is vital that the settlement procedure is not disrupted by delays resulting from non-compliance with the rules by one or more participants, as this could unintentionally cause other participants to suffer a shortage of liquidity. In a worst-case scenario, the result could be a chain reaction in which payment settlement is interrupted for a period of time, even though no participants in the infrastructure are facing acute liquidity problems.

The key operating problem of the VP settlement system is that the participants in equity transactions, in particular, do not comply with international best practice for timely settlement of 98 per cent of transactions. This prompted VP Securities Services to adjust its sanctions policy from mid-2008. As a result, more transactions have been settled in a timely manner, but the completion rate is still below international best practice.

These problems do not pose an immediate threat to financial stability, but in the current situation the financial sector should avoid any incidents that could result in unwarranted further intensification of the financial turmoil. Therefore, Danmarks Nationalbank, in cooperation with the sector, has launched a number of initiatives to strengthen settlement, the initial focus being on settlement on the 1st banking day of 2009.