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De Nederlandsche Bank

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Stability in the Netherlands*

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Westeinde 1, 1017 ZN Amsterdam – PO Box 98, 1000 AB Amsterdam, the Netherlands
Telephone (31)20 524 91 11 – Telefax (31)20 524 25 00
Website: www.dnb.nl

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Introduction

Well over a year ago, the world saw the start of a turbulent period for the global financial system, better known as the credit crisis. Initially, it was mainly characterised by the drying-up of market liquidity and by uncertainty about the valuation of structured credit products. Over time, various financial markets were successively hit, including the interbank money market, the markets for securitised paper and the stock market. Meanwhile, banks have had to make substantial write-downs, especially in respect of structured credit products. These include exposures to the subprime segment of the us mortgage market, where the initial problems surfaced last year.

The present situation must still be assessed as vulnerable, as reflected by, among other things, problems at individual institutions. Thus, over the past few months the us authorities have intervened heavily in order to curb grave problems at systemically important institutions – Bear Stearns, Fannie Mae, Freddie Mac. Also, it is becoming increasingly clear that the crisis feeds through to the real economy. This is especially evident for the United States, where house prices continue to decrease and growth estimates for 2008 and 2009 have seen substantial downward adjustments. The consequences for Europe are as yet more limited, although here, too, banks have tightened their lending standards and some countries – notably the United Kingdom, Ireland and Spain – are being faced with a turning point in the housing market. In line with the global trend, the Dutch business cycle is past its peak. Especially in 2009 the Dutch economy will slow down, while consumer confidence has already dropped off substantially.

The cooling-down of the real economy coincides with rising inflationary pressure, limiting central banks' scope for pursuing accommodating policies. Some central banks have taken measures to facilitate banks' access to their credit facilities. In the United States and the United Kingdom in particular, new facilities have been created and the requirements for eligible collateral have been eased. Considering its already broad list of eligible collateral, the Eurosystem has not followed suit, but the European banks have better exploited the available possibilities by posting more collateral.

At the institutional level, major steps are being taken to strengthen the global financial system. A striking achievement is the finalisation of a report by the Financial Stability Forum, containing a large number of policy recommendations. The report provides an overall view of desirable – and often urgent – policy adjustments by national governments and international bodies, such as the Basel Committee. In addition, at the national level, especially in the United States, adjustments to the supervision of the financial sector have been announced. In the time ahead, it is essential that all these initiatives be implemented, a process where ultimately the financial institutions themselves bear a major responsibility.

I Developments in the international environment

Since the publication of the previous issue of the Overview of Financial Stability, a number of risks from the international environment have come to the fore more forcefully and new vulnerabilities have surfaced. Financial market sentiment remains volatile and uncertain, reflecting sustained losses at financial corporations and a worsening economic outlook. Moreover, in the United States house prices continue to decline and in some European countries, too, a correction is evident in the housing market.

Market sentiment remains volatile

Recent developments within the financial system

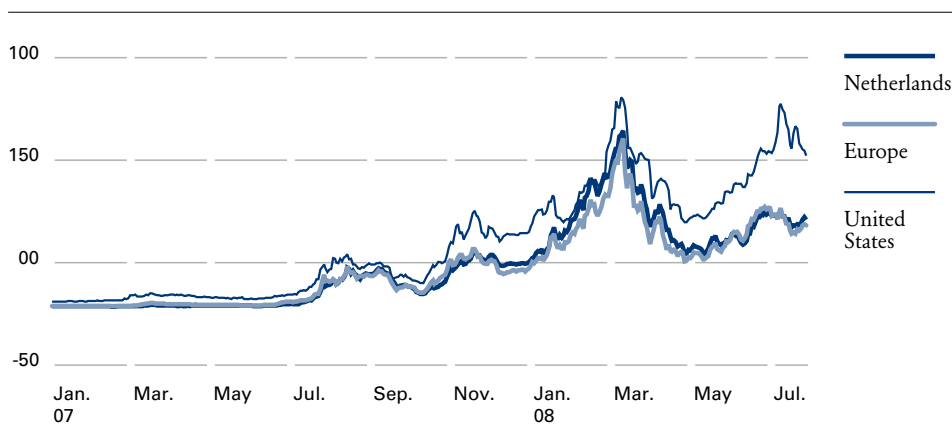
Over the past six months, financial markets were highly volatile, fuelled by persistent uncertainty about losses at financial institutions and a heightened risk of a systemic crisis. Cases in point are the problems earlier this year at credit insurers (known as monoliners), which could easily translate into downgrades of broad ranges of bonds carrying their guarantees. This remains a potential risk, although the downgrades of two monoliners in early June had only a limited effect on market sentiment. Apparently, market participants had anticipated these downgrades, for instance by reducing their exposures to monoliners or by already recognising the related losses. Another source of systemic risk is the possibility that a large financial firm might land in trouble, for instance by a proliferation of losses or a lack of funding access, with spillover effects to other banks and markets.

Against this backdrop, the CDS spreads of financial institutions rose sharply in the first quarter, peaking in mid-March (Chart 1) at the time of the rescue of the investment bank Bear Stearns by the US authorities. This was followed by a temporary revival of financial market sentiment, with stock markets showing a recovery (Chart 2). However, from June onwards tensions mounted again, in the run-up to the release of banks' second-quarter results, with renewed rises in CDS spreads and falling

Rescue action Bear Stearns

Chart 1 CDS spreads of financial institutions

Basis points

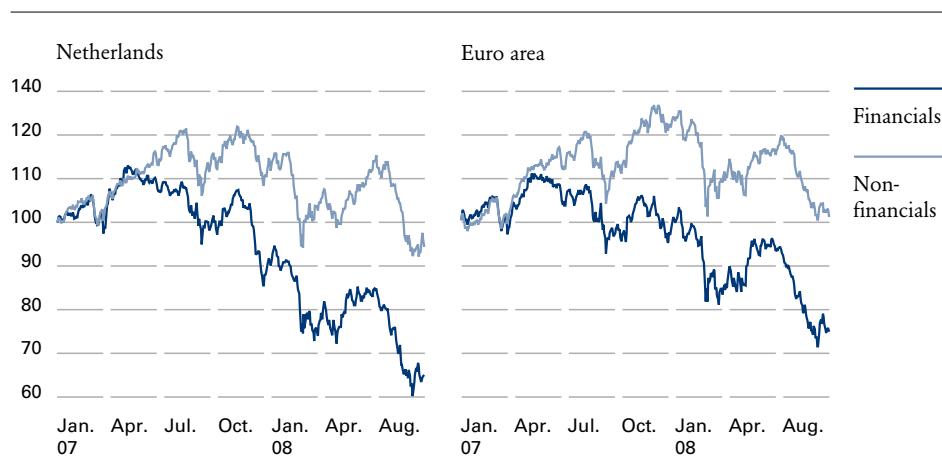


Unweighted average of five-year CDS spreads of a number of major financial institutions in the Netherlands, Europe and the United States.

Source: Bloomberg.

Chart 2 Equity prices

Index (January 2007 = 100)



Source: Datastream.

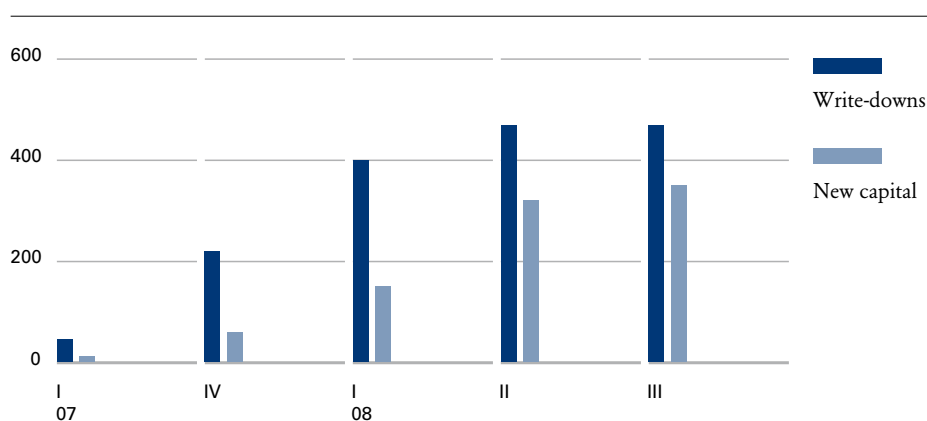
equity prices. In mid-July, the us authorities had to intervene heavily when concerns had arisen in the market about the solvency of the two largest mortgage lenders, Fannie Mae and Freddie Mac. In response, supportive action has been announced, including an extension of the possibilities for the us government to grant credit and capital to these institutions as well as access for Fannie Mae and Freddie Mac to the Fed's credit facilities.

Risk premiums still high

Clearly, financial market conditions have not yet normalised. Risk premiums for complex credit products remain at high levels, while various markets are still confronted with very tight liquidity conditions. This also holds for the interbank money market, which plays a pivotal role within the financial system. Although the volatility of overnight interest rates has declined considerably, the three-month rate in the euro area is still more than 70 basis points above the key policy rate (before the credit crisis this spread averaged less than 20 basis points). Moreover, for its short-term funding, the banking system is still highly dependent on central banks' credit facilities. The securitisation markets, too, continue to dysfunction, as is evident from sharply reduced issuance volumes.

Chart 3 Impact of subprime crisis on banks' balance sheets

USD billion



Global write-downs and capital infusions, quarterly cumulated data; data for third quarter of 2008 as available at mid-August.

Source: Bloomberg.

Chart 3 shows the development of losses incurred in the global banking system as a result of the credit crisis since the third quarter of 2007. These losses mainly concern write-downs of structured credit products, including subprime-related paper. The losses rose most sharply towards the end of 2007 and in the first quarter of this year, but continued to mount further in the second quarter. Owing to these write-downs and other developments, such as re-intermediation of assets, many banks have been forced to take measures aimed at strengthening their balance sheets. Since mid-2007 over USD 350 billion of new capital has been raised. It is noteworthy that initially much capital was obtained by means of private placements from sovereign wealth funds and other institutional investors, whereas more recently capital has been raised in particular through the public capital market. That, too, is incidentally becoming increasingly difficult, witness a few failed rights issues over the past few months. Apart from raising additional capital, banks also seek to strengthen their financial position by selling – often at a considerable discount – assets, lowering dividend payments and undertaking cost-cutting action.

Banks recognise losses ...

... and raise new capital

All in all, the outlook for financial corporations is still uncertain. Losses on structured credit products could mount further; moreover, it is difficult to value these products properly for as long as financial markets do not operate adequately. This reflects a number of underlying dynamics that continue to be unfavourable, such as those in the US mortgage and housing markets (see below). Prospects for other markets, including the commercial real estate market (see Box 1), have also deteriorated. Furthermore, European – including Dutch – banks are facing an adverse term structure of interest rates (Chart 4), causing the profitability of their traditional business to erode as well. In the United States, by contrast, the yield curve recently steepened as a result of monetary policy easing by the Fed, providing relief to banking system. Finally, banks' profitability may be depressed by the economic slowdown, which usually gives rise to lower demand for credit and higher default risks.

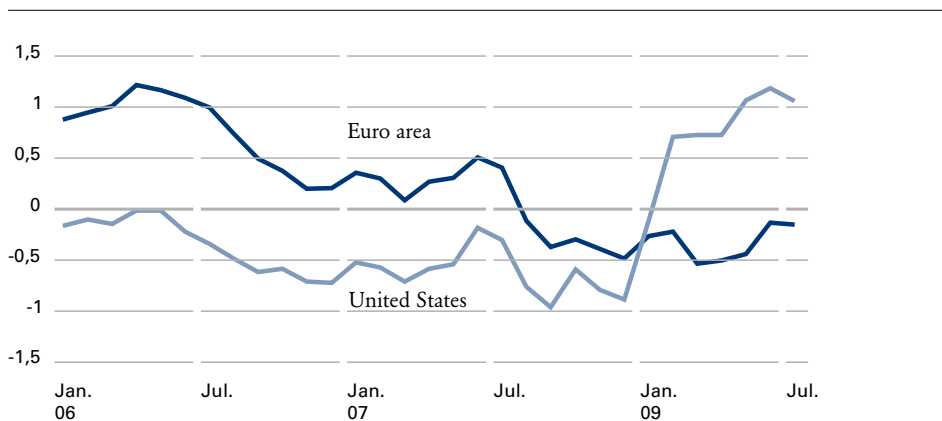
Developments in the real economy

It is becoming increasingly clear that the crisis in the financial system is coinciding with a cyclical slowdown. This is especially evident in the United States (Chart 6), where the housing market is not yet showing signs of bottoming out and where delinquencies are mounting also beyond the subprime segment of the mortgage market. Consequently, various institutions have made downward adjustments to their economic growth projections for 2008 and 2009. Table 1 shows the forecasts recently released by the IMF. Compared to forecasts released in mid-2007 – just

Cyclical slowdown

Chart 4 Term structure of interest rates

Ten-year minus three-month interest rate (per cent)



Source: DNB.

Box 1 - Risks from commercial real estate markets

In a number of countries, conditions in the commercial real estate market have been deteriorating for some time now, with price increases peaking well before the onset of the credit crisis (Chart 5). In some countries, the market experienced a severe slump last year, even witnessing price falls in the United States and the United Kingdom. The Dutch real estate market is cooling off in a more gradual fashion: after the last recession, prices have recovered only slowly and less strongly. Thus, the Dutch real estate cycle appears to be driven to a lesser extent by speculation. Nonetheless, the outlook is becoming less favourable: since this market is dependent on cyclical and financing conditions, demand may be under pressure.

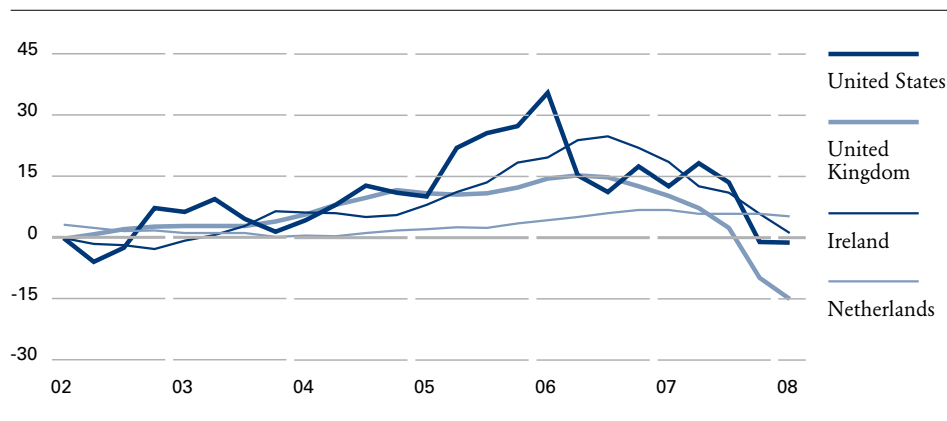
The financial impact of a potential price correction in the real estate markets depends on financial institutions' exposures. Roughly, real estate loans make up some 5% of the total loans portfolio of the Dutch banking system, while its investment exposure accounts for another 2-3% of the investment portfolio. It should be noted that for some individual banks these figures are considerably higher. Institutional investors' exposures are likewise substantial. At the end of 2007, the share of commercial real estate within the overall investment portfolio averaged over 10% for Dutch pension funds and over 4% for Dutch insurers. About one-third of that total concerns real estate located abroad.

The IMF estimates potential losses for the financial sector due to the deteriorating commercial real estate markets globally at USD 240 billion, of which USD 100-115 billion will have to be shouldered by the banks.¹ The lion's share of these potential losses relates to write-downs on CMBS exposures.² This market showed strong growth in recent years, but has nearly come to a halt in 2008 owing to the credit crisis. This is largely a contagion effect from the subprime crisis, but also a reflection of the accumulation of more or less comparable risks in the US commercial real estate market. That market, too, experienced a relaxation of lending standards, fuelling price rises, followed by increasing delinquencies.

before the credit crisis – the economic growth projection for 2008 is now clearly lower, while the inflation forecast is higher. Compared to the United States, the consequences for the euro area are more limited, although here, too, the business cycle appears to have peaked out.

Chart 5 Commercial real estate prices

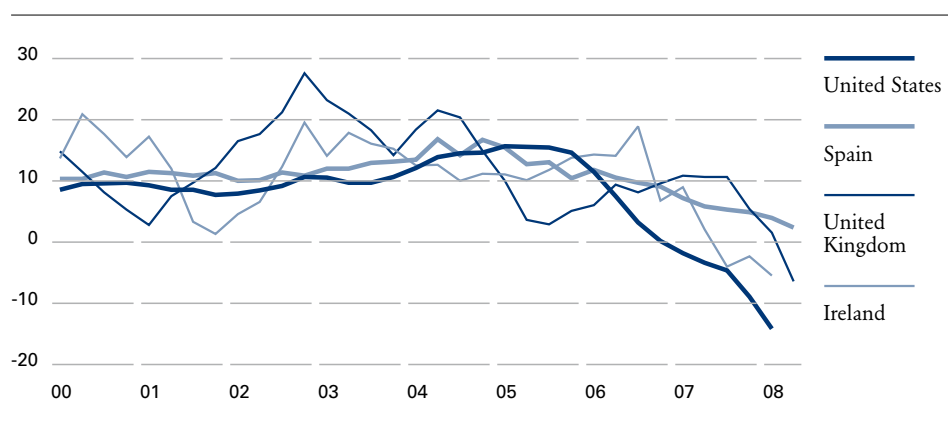
Percentage growth, year-on-year



Sources: Datastream, IPD, ROZ, NCREIF and RREEF Research.

Chart 6 House prices

Percentage growth, year-on-year



Sources: S&P, BIS.

The economy is affected by the market turmoil in various ways. In both the United States and Europe, banks have tightened their lending standards, making borrowing for consumption or investment more expensive. In addition, adverse wealth effects provide an incentive to households to cut back on their expenditure and raise their savings. Declining house prices, in particular, hit broad strata of the population. Within Europe, such a turnaround on the housing market is as yet evident in a few countries – notably the United Kingdom, Ireland and Spain.

When the economy slows down, the risks facing the business sector increase. Noteworthy are the problems of the US car industry, where the three largest manufacturers (General Motors, Ford and Chrysler) are being confronted with heavily slumping sales. Another factor meriting attention concerns corporations with high debt levels as a result of leveraging. Especially mergers and acquisitions involving private equity houses over the past years were largely debt-financed, weighing on the balance sheets of the corporations concerned. Whereas until mid-2007 banks and investors were eager to finance these deals, their readiness to do so has decreased markedly since then. The volume of leveraged buyouts (LBOs) has dropped worldwide from USD 255 billion in the first quarter of 2007 to USD 55 billion in the first quarter of this year (Chart 7). The Committee on the Global Financial System (CGFS), in which the G10 central banks jointly monitor financial stability risks, recently published a study about private equity and leveraged finance.³ The

Business sector facing increasing risks

Tabel 1 IMF-ramingen economische groei en inflatie

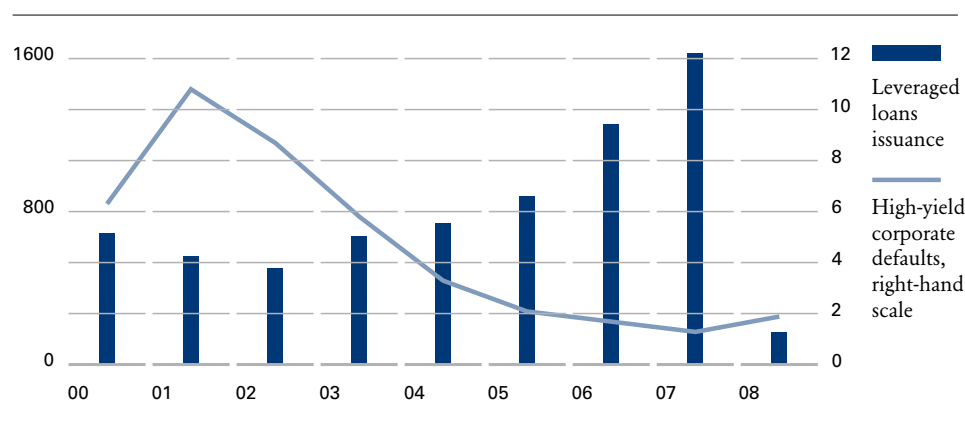
	Economic growth			Inflation		
	2007	2008	2009	2007	2008	2009
Advanced economies	2.7 (2.6)	1.7 (2.8)	1.4	2.2 (2.0)	3.4 (2.1)	2.3
United States	2.2 (2.0)	1.3 (2.8)	0.8	-	-	-
Euro area	2.6 (2.6)	1.7 (2.5)	1.2	-	-	-
Emerging markets	8.0 (8.0)	6.9 (7.6)	6.7	6.4 (5.7)	9.1 (5.0)	7.4

The table shows the projections for growth and inflation as released by the IMF in the World Economic Outlook -

update July 2008. The projections released by the IMF in July 2007 are shown in parentheses.
Source: IMF.

Chart 7 Leveraged loans and corporate defaults

USD billion and percentages per annum



Source: CGFS.

study focuses on the expansion of these activities over the past few years as well as on the risks which have now surfaced as a result of the credit crisis. From last year onwards, banks were no longer able to continue their usual practice of selling their loans on to interested parties and were thus forced to keep them on their balance sheets. Meanwhile, most of these loans have been sold, often at considerable discounts, but the adverse market conditions have limited banks' capacity to finance new transactions. Moreover, with the economy cooling down, the financial risks incurred by the corporations concerned are on the increase. Owing to their high levels of indebtedness, these firms have few buffers to absorb lower-than-expected cash flows and are facing even higher costs if, at some point in time, they are forced to refinance against less favourable terms. The negative impact of this process could well last for some time.

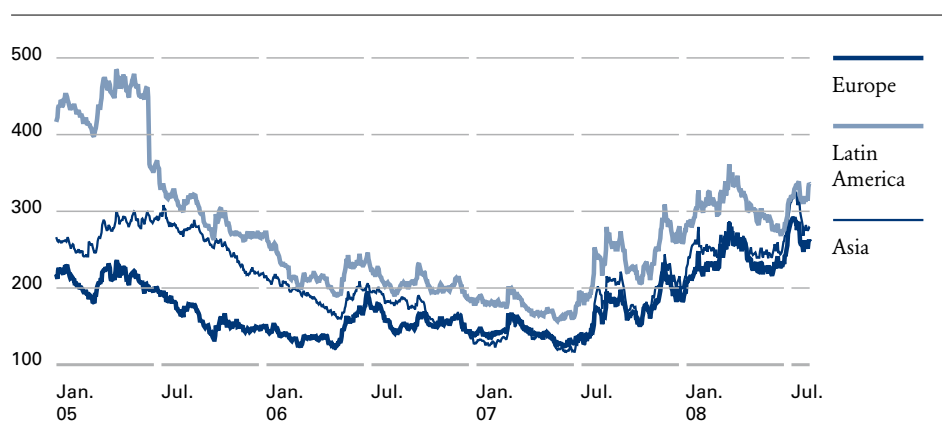
Contrary to the usual pattern, the economic slowdown is attended by rising inflation, driven by soaring commodity and food prices. The price of a barrel of crude oil has doubled in one year's time, peaking in July at a level in excess of USD 140. The anti-cyclical movements of commodity prices may be attributed in large part to the strong increase in demand from emerging markets (especially in Asia) and lower-than-expected output (especially in Africa). The rising food prices are also a consequence of a sharp increase in demand, especially from emerging markets, meeting inelastic supply. Considering the mounting inflationary pressures, a scenario of a continued economic growth deceleration is threatening to unfold, further complicating the pursuit of macroeconomic policies in the face of the persistent financial market turmoil. After all, the policy scope of monetary and fiscal authorities to control the credit crisis is limited. Moreover, especially in the United States, policies are already expansionary as reflected in strong monetary easing and a rapidly growing fiscal deficit. This helps to mitigate recession but also adds to inflationary pressures and, in the longer run, could possibly lead to new imbalances within the financial system.

Emerging markets

Although emerging markets are not immune to the financial market unrest, they are less directly hit than advanced economies on account of their limited exposure to us credit products. Economic growth is slowing down slightly, but remains at a high level this year (see Table 1). External financing conditions, however, are depressed. For instance, risk premiums on central government bonds have more than doubled since last year (Chart 8). Within the European emerging markets, existing vulnera-

Chart 8 Risk premiums emerging markets

Basis points



EMBI spreads for central government paper of emerging markets.
Source: JPMorgan.

bilities are increasing further. High current-account deficits make the Baltic States, Bulgaria, Romania and Turkey heavily dependent on external financing. These countries' external vulnerability is further enhanced because a large part of debt is short-term and denominated in foreign currencies. In addition, strong credit growth – likewise largely denominated in foreign currencies and concentrated at a limited number of creditors – constitutes a source of concern.

2 Dutch corporations and households

Dutch economy also slows down ...

In line with international cyclical conditions, the Dutch economy has peaked. Expectations are that economic growth will still keep up this year, especially as a result of spillover effects from last year, but in 2009 growth will slow down distinctly.⁴ Under these conditions, the uncertainty as a result of the credit crisis constitutes an additional downside risk.

Corporations

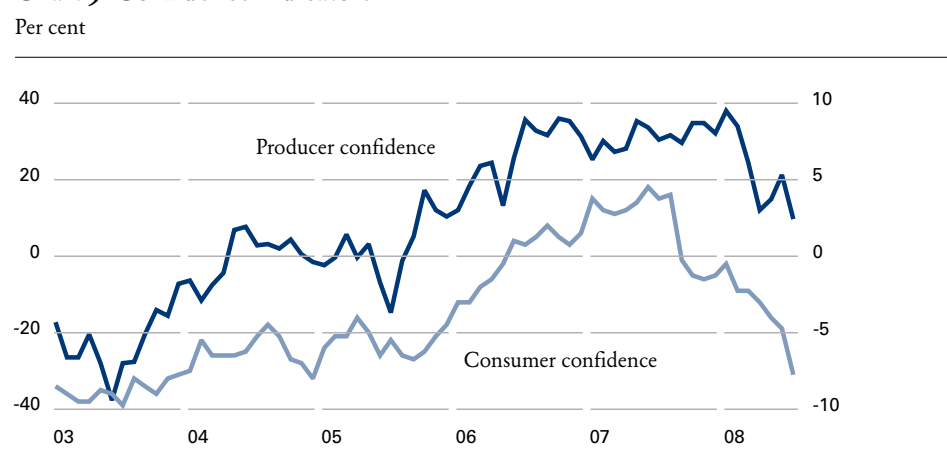
The Dutch business sector looks back on a good year, but is now facing deteriorating conditions. Producer confidence has declined, although it is still positive (Chart 9). Exports are under pressure owing to the previous appreciation of the euro and the decelerating growth of world trade. Despite the slowdown, labour market conditions are expected to remain tight. Owing to structural factors, such as the ageing of the population, labour supply falls short of demand and wage pressures remain high. Moreover, the cost of basic products, such as commodities, has increased. This could erode corporate profits and depress investment.

... but growth of banks' corporate lending accelerates

Against this background, it is noteworthy that the growth of banks' corporate lending has accelerated to over 15% on an annual basis (Chart 10), despite a tightening of lending standards in four successive quarters (Chart 11). Moreover, corporate financing by way of bond issuances and other debt has sustained, so credit growth does not appear to reflect substitution effects. It may well be that some corporations are taking up additional credit in anticipation of a further tightening of banks' lending standards. The Bank Lending Survey indicates that banks do expect to tighten standards further in the third quarter of this year, while also anticipating a declining demand for credit. Thus, the acceleration of credit growth would seem a temporary phenomenon.

Despite the deteriorating outlook, the Dutch business sector is financially sound, especially when compared to the period immediately after the millennium change.

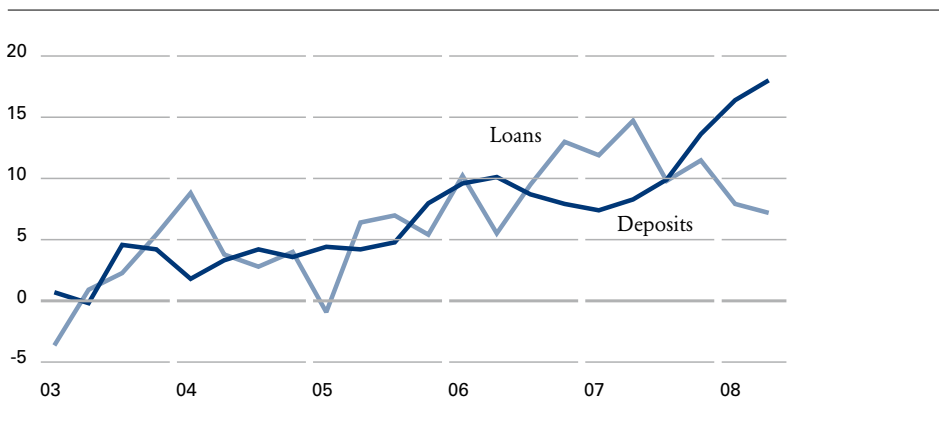
Chart 9 Confidence indicators



Source: Statistics Netherlands.

Chart 10 Corporate loans and deposits

Percentage growth, year-on-year



Bank loans to and bank deposits from non-financial corporations.
Source: DNB.

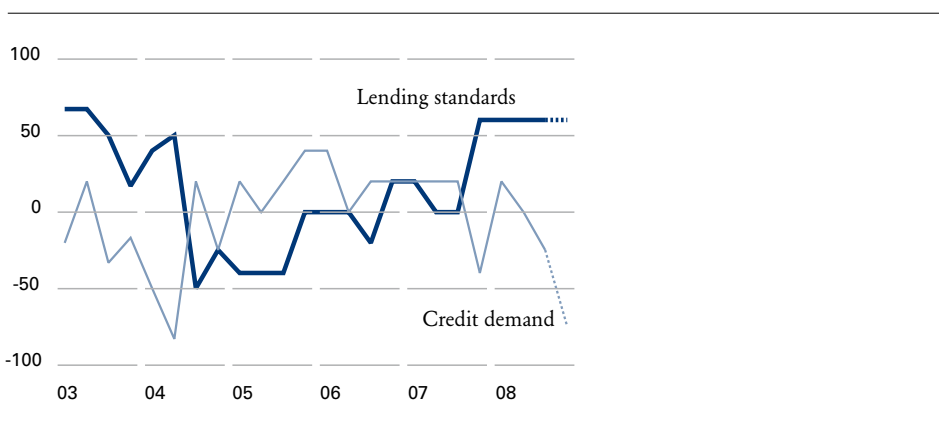
The credit crisis follows on a robust cyclical recovery in 2006 and 2007, and many corporations had restructured their balance sheets in prior years. This does not, however, alter the fact that some corporations are put to the test financially. Cases in point include corporations which – for instance, as part of a private equity deal – are relatively highly leveraged and are, hence, vulnerable when cash flows fall short of expectations.

Households

In line with the less favourable outlook, consumer confidence has turned sharply negative since last year. The data underlying this confidence index show that, apart from a lower propensity to purchase, especially judgements about the financial situation have deteriorated considerably in a short period of time. Also, more funds are being held at fixed rates in time deposits with banks, mainly at the expense of deposits without agreed maturity. One factor in this regard is that interest rates on time deposits have been raised on account of intensified competition in the savings market (see Chapter 3).

Chart 11 Supply of and demand for corporate loans

Net percentage of banks reporting tightening/easing of lending standards

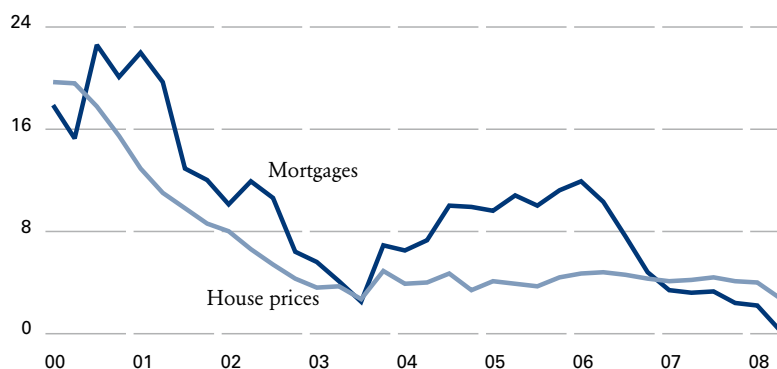


The chart is based on estimates by Dutch banks. A positive sign indicates a tightening of lending standards or firming

demand. The dotted lines represent banks' expectations for the third quarter of 2008.
Source: DNB, Bank Lending Survey.

Chart 12 House prices and growth of mortgage lending

Percentage growth, year-on-year



Sources: Statistics Netherlands, DNB.

Dutch housing market already cooled down for longer period

Over the past few years, the Dutch mortgage and housing markets have cooled down steadily (Chart 12). This contrasts sharply with the situation in some other countries (United States, United Kingdom, Ireland, Spain), which recently witnessed abrupt turnarounds after experiencing exuberant housing market conditions (see Chapter 1). Considering the gradual growth deceleration in the Dutch mortgage and housing markets, a substantial correction may be less likely. Moreover, other factors, such as the scanty supply of dwellings, continue to put upward pressure on prices. In the event that, nonetheless, the improbable scenario of a downward correction would materialise, it would have major implications for the economy. In an attempt to analyse this in more detail, Box 2 presents a stress scenario in which interest rates rise sharply and both the European and the Dutch housing market are subject to a substantial correction. The Box focuses notably on the impact on GDP growth and the vulnerability of Dutch households. The results show that for the vast majority of households the impact is manageable, although considerable problems may arise for a limited group.

Banks more prudent

The latter underlines the importance of prudent lending policies. There are several indications that banks are becoming more prudent in their lending behaviour. For instance, the share of mortgages carrying a National Mortgage Guarantee has increased and banks are less inclined to lend to persons with a negative credit history coding at the National Credit Registration Office. In addition, a number of smaller mortgage lenders which had specialised in lending to less creditworthy households have withdrawn from the Netherlands or have tightened their lending standards. Finally, there is the Code of Conduct for Mortgage Financing, which was introduced last year and helps to ensure that banks pursue prudent policies when granting mortgage loans.

Box 2 - Stress scenario European housing market correction

This Box analyses a stress scenario in which the European housing market is subject to a substantial correction.⁵The principal assumptions underlying the scenario are:

- a prolonged 200 basis points increase in euro area short-term interest rates (for a period of three years);
- a decrease in house prices in Europe by 30% within two years, and in the United States by another 15% within one year;
- a 20% decrease in housing investment within one year;
- a 20% drop in stock market prices in one year.

At the heart of the scenario is a decrease in European house prices, in response to a considerable increase in short-term interest rates reflecting mounting risk premiums in the interbank money market. Subsequently, this feeds through to long-term interest rates, which rise even more sharply (determined endogenously in the model used). Considering the threat of inflation, the monetary authorities have no scope to pursue accommodating policies. Owing to waning confidence, the house price correction turns out to be severe, being 30% in Europe and another 15% in the United States (where house prices had already fallen by 15% in the initial situation).

Model calculations show that the assumed shocks in the United States and Europe are mutually reinforcing, leading to a global drop in economic growth. After three years, Dutch GDP comes out 5.5% lower than in the baseline scenario. House prices recover only gradually and four years after the shock they are still over 13% below the initial level.

Using data from the DNB Household Survey, the consequences for Dutch households have been charted. Two aspects have been considered in particular. First, nearly one-quarter of households are faced with negative home equity, because the value of their property falls below the amount of their mortgage debt. This need not necessarily give rise to problems, since the lower value of the residential property does not directly affect the affordability of the associated mortgage. However, upon sale, forced or otherwise, households may be confronted with residual indebtedness.

Secondly, for a number of households, the increase in interest rates translates into higher monthly mortgage payments. This depends on the remaining period of interest rate fixation of the mortgage concerned. According to the DNB Household Survey, for 42% of households that period comes to an end within three years. However, the increase in mortgage payments (interest and repayment) in an environment of considerably higher interest rates would appear manageable for most households within this group: in almost 87% of all cases these payments remain less than a quarter of income. Nonetheless, the number of households faced with very high monthly payments (35% or more of income) nearly doubles, to some 135,000, all of whom are highly vulnerable to income setbacks, for instance as a result of unemployment.

Mortgage payments in relation to household income

Percentages of home owners with a remaining period of interest rate fixation of three years or less

	≤ 25 ⁰ %	25-35 ⁰ %	35-45 ⁰ %	≥ 45 ⁰ %
Before housing market correction	90.0	4.0	2.0	4.0
After housing market correction	86.7	2.7	4.0	6.7

All in all, for the vast majority of households the risks involved in increasing mortgage payments remain limited. This is also due to the fact that for households with relatively high levels of indebtedness – often first-time home owners – the remaining period of interest rate fixation is usually relatively long. This does not, of course, alter the fact that in a limited number of cases major problems could arise, especially if vulnerable groups were to be confronted with a combination of adverse wealth effects and other setbacks, such as unemployment or forced home sale.⁶

3 Dutch financial corporations

The credit crisis and weakening economic growth have a major impact on the Dutch financial sector. This is most evident within the banking system, which has had to make substantial write-downs on structured credit products and is still operating under turbulent market conditions. However, pension funds and insurers, too, are being faced with worsening conditions, including falling asset prices and an inverse yield curve.

Banks

Mounting losses from credit crisis

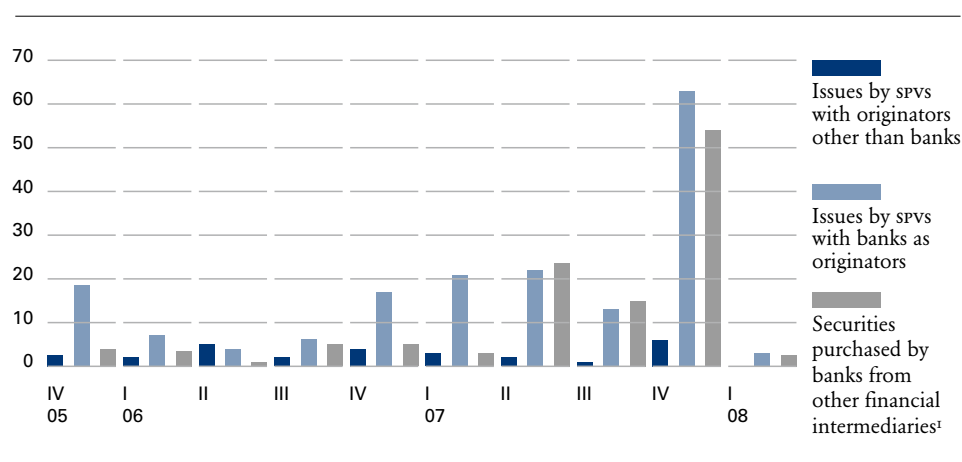
The solvency ratio of the Dutch banking system showed a decline in the first quarter, but, at 11.4%, it is still ample. In 2007, the four major banks made write-downs totalling EUR 10 billion reflecting credit crisis-related losses, more than half of net profits for the year. This figure has gone up further in this year's first quarter in particular, coming out at over EUR 15 billion by mid-year. A relatively large share of the write-downs has been recognised in the balance sheet, contrary to e.g. US banks, which tend to include more in their profit and loss accounts. Both approaches are in conformity with generally accepted accounting standards under the IFRS and reflect, among other things, the fact that Dutch banks largely hold structured credit products as investments, whereas US banks operate primarily as originators and/or traders of the securitised loans.

Fewer securitisations

The securitisation operations of Dutch banks – and related special purpose vehicles (SPVs) – show a striking pattern (Chart 13): a sharp increase towards the end of 2007, followed by a sharp decrease in the first quarter of this year.⁷ The latter may in large part be attributed to factors that recently diminished the attractiveness of securitisations. As already noted, the marketability of such paper has been sharply reduced over the past few quarters. In addition, as a result of the introduction of

Chart 13 Issues by SPVs, by sector of originator

EUR billion



¹ Financial intermediaries other than banks, insurers and pension funds (including SPVs).

Source: DNB.

Basel II, the scope for supervisory arbitrage through off-balance-sheet entities has declined. Finally, banks have anticipated new regulations that have come into force this year in respect of so-called covered bonds, which in many respects constitute an alternative to other securitised paper.⁸

The exceptionally high securitisation volume in the fourth quarter of 2007 was also related to the financial market upheaval. Banks may engage in in-house securitisation of loans and, instead of selling them, use them as collateral when accessing central banks' credit facilities. Although the Eurosystem did not extend its list of eligible collateral – which was already relatively broad – it is evident that banks have better exploited the available opportunities. This constitutes an important stabilising element, enhancing the banking system's ability to control the increased liquidity risk.⁹ This is not, of course, a permanent solution and at some point in time the interbank money market and the securitisation market will again have to start functioning under their own steam. Using a stress test, Box 3 simulates how the liquidity position of Dutch banks will develop under conditions of prolonged market turmoil, without making allowance for possible central bank refinancing.

As described in the previous issue of the Overview of Financial Stability, the drying-up of structured credit markets has sharply reduced banks' possibilities to repackage and sell loans (the originate-to-distribute model).¹¹ More generally, banks' wholesale

Competition in savings market

Box 3 - Banks' liquidity risk under conditions of prolonged market turmoil

The past year has shown how turbulent market conditions translate into liquidity risk for the banking system. This Box presents the simulation results of a macro-economic stress test. The test seeks to ascertain whether, using their liquidity buffers (that is, available cash reserves, eligible collateral and marketable securities), the Dutch banks can cope with a situation in which the tight market and funding liquidity conditions continue for another six months.

The stress test was conducted using a tailor-made model.¹⁰ In the scenario, it is assumed that, owing to the prolonged turmoil in the credit markets, Dutch banks will continue to be confronted with write-downs on their marketable credit portfolios. To the extent that these portfolios are used as collateral in financial transactions, margin calls may become effective. The model assumes that hard-hit banks respond by attempting to safeguard their liquidity position, risking loss of reputation if this were to become known in the market. The banks' reactions may give rise to second-order effects in the form of a further drying-up of market and funding liquidity. It is assumed that the financing of asset backed commercial paper (ABCP) becomes difficult to roll over and that the banks' off-balance sheet liquidity facilities are fully drawn. Under such conditions, banks hold on to liquidity, causing the tensions in the interbank market to continue. Owing to these risks, banks find it harder to obtain finance by means of commercial paper and bond issuance. In addition, stock markets and credit markets remain depressed.

The model results indicate that most banks will be faced with a considerable decrease in their liquidity buffers. Thus, the scenario implies a systemic risk for the Dutch financial sector. In practice, however, the effects will be less pronounced than is suggested by the model, since banks are able to resort to offsetting action, including recourse to central bank facilities. As a result, the second-round effects of the drying-up of market liquidity are limited (whereas in the model these second-round effects impact fully on banks' liquidity).

funding has come under pressure, creating a renewed interest in retail funding. This is reflected in increased competition in the market for savings, notably time deposits. In one year's time, the total amount of time deposits has more than doubled and now accounts for about one-third of households' total savings deposits. A noteworthy feature of this development is the highly active attitude adopted by a few small, foreign players, attracting savings by offering high interest rates and easy conditions. In some cases, this concerns institutions that have been distinctly hit by the credit crisis and thus find it difficult to obtain funding on pre-crisis terms.

Increasing mobility of savings deposits

One relevant question in this context is to what extent retail funding reduces banks' sensitivity to market sentiment. Traditionally, household savings are regarded as a stable source of funding for banks. This stability reflects inertia on the part of retail customers, caused by high costs involved in switching banks (in terms of time and effort) and a less than transparent market. However, this pattern no longer reflects today's conditions, with the emergence of internet banking and comparison sites for financial products. Internet banks usually market simple products, while the comparison sites make for greater market transparency. As a result, retail customers' mobility increases as does their price consciousness.

Insurers and pension funds

Institutional investors hit as well

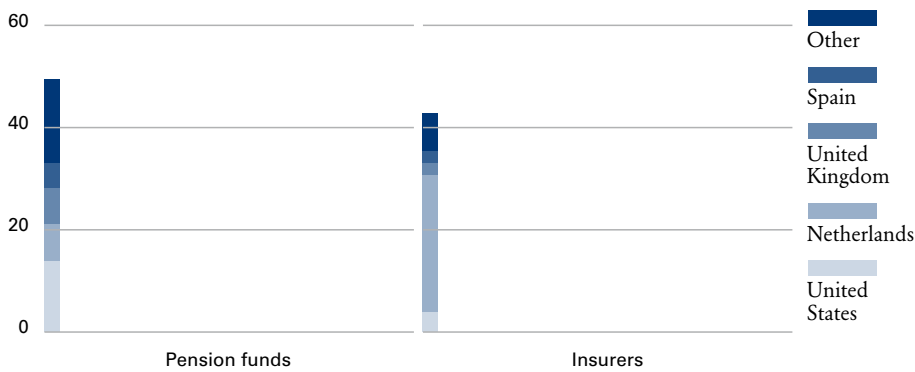
Although public attention focuses on the banking system, other financial institutions are also hit by the market turmoil. For institutional investors, especially the losses on stocks and the changing interest rate pattern bite. For pension funds, a decline in both stock prices and interest rates in the first quarter of 2008 caused the funding ratio to decrease by 12 percentage points in a single quarter. In the second quarter, new price losses were suffered, but at the same time long-term interest rates showed some increase, so that in the end the funding ratio came out at 136%. It should be noted that, thanks to the long-term nature of their liabilities, pension funds are more easily able to spread windfalls and setbacks over longer periods of time. In this respect, the Financial Assessment Framework, introduced last year, plays a major stabilising role. Because pension contributions must be cost-effective at all times, they have remained up to standard over the past few years and, hence, need not be raised abruptly at turbulent times. Also, pension funds are still able – within certain margins – to pursue rebalancing policies. This implies that a pension fund relies on a predefined strategic asset mix, so that, say, a sharp fall in equity prices leads to net purchases. In the first quarter of 2008, this resulted in net equity purchases to an amount of about EUR 9 billion. Thus, the contrary investment policies pursued by pension funds constitute a stabilising factor in the financial markets.

Compared to banks, pension funds and insurers have only limited subprime-related exposures, but they do invest in broader categories of structured credit paper. This is illustrated in Chart 14, which shows the volume of pension funds' and insurers' investments in securities issued by Special Purpose Vehicles (SPVs)¹², by country of origin. At the end of 2007, these securities totalled about 8% of pension funds' aggregate investment portfolios; for insurers the comparable figure was 12%. It is noteworthy that insurers invest notably in Dutch SPVs, whereas pension funds have relatively large exposures to us and UK paper.

Finally, institutional investors are sensitive to the mounting threat of inflation. This is especially of the case for pension funds which – often conditionally – take real pension commitments. To the extent that inflation cannot be offset by investment returns, the real funding of pension schemes is eroded (see Box 4).

Chart 14 Exposure of institutional investors to securities issued by spvs

EUR billion



Source: DNB.

Box 4 - Pension funds' inflation risk

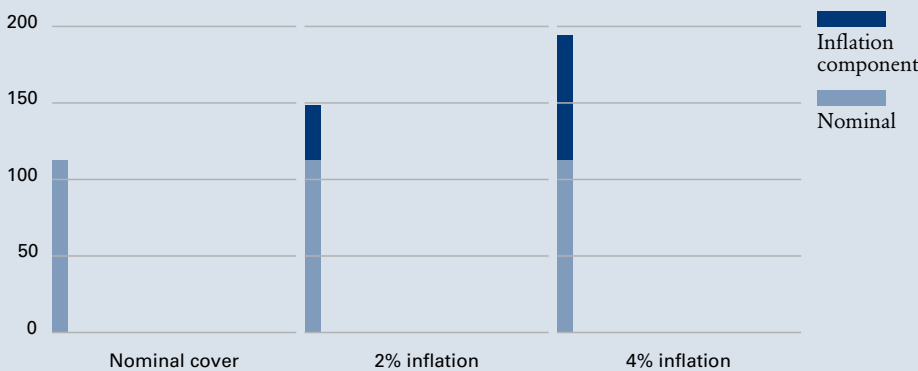
Even a moderate rate of inflation rapidly erodes the real value of nominal pension entitlements. At an inflation rate of 2% per annum, one-quarter of purchasing power is lost after 15 years. Pension funds aim to remedy this by adjusting pension entitlements to inflation or wage growth. Guaranteed indexation gives certainty about the purchasing power of pension scheme members. If indexation is subjected to a maximum or is applied conditionally (that is, made contingent on the pension fund's financial position, as is the case for virtually all Dutch pension schemes), the pension scheme member is exposed to a certain inflation risk.

Inflation also affects pension funds' financial position. In an environment of mounting inflation, as we are witnessing at the present time, indexation gives rise to proportionally higher funding requirements (see Chart 15). In this respect, pension funds run an inflation risk: after all, actual inflation may exceed expected inflation, causing the available capital buffers to be insufficient to apply full indexation.

Hence, it is essential for pension funds to choose their portfolio investments in such a way that sufficient funds are generated to ensure that indexation can be realised on a permanent basis. Optimum protection from inflation is afforded by invest-

Chart 15 Funding requirements with increasing inflation

Required nominal funding ratio, per cent



Source: DNB.

ments which value moves in line with inflation or which generate inflation-related yields. Thus, the inflation risk may be hedged by way of inflation-linked bonds and inflation swaps. However, these markets are still too small, relative to the size of Dutch pension funds. Meanwhile, investments in inflation-linked bonds by Dutch pension funds total about €35 billion or 5% of total investments. Pension funds may also seek to cope with inflation in an indirect manner by actively incurring risks in order to achieve high yields, for instance by investing in stocks, commodities, energy, real estate or emerging markets. Moreover, viewed in the longer run, some of these investments also provide an inflation hedge, because underlying values increase in line with the general level of prices. Given the aim of pension funds to compensate pension scheme members for the cost of inflation, an investment strategy focusing on protection from inflation is indispensable.

4 Institutional developments and infrastructure

Over the past few months, policy-makers worldwide have taken important steps towards strengthening the financial system. The Financial Stability Forum (FSF) has published a report containing a large number of recommendations, while various countries – including the United States – have announced institutional changes. In addition, this Chapter discusses the developments in the financial infrastructure as well as reputation risk incurred by financial corporations in light of consumers' claims behaviour.

Institutional developments

The FSF plays a coordinating role in the international policy response to the credit crisis. At the request of the G7, a working group set up for this purpose has analysed the principal risks and released a report in April containing 67 policy recommendations.¹³ These recommendations relate to five areas: (1) prudential oversight; (2) transparency/valuation; (3) credit rating agencies; (4) strengthening the authorities' responsiveness to risks, and (5) crisis management. At the moment, work is in full progress to implement these proposals, a number of which will be realised before the end of this year. For instance, when releasing their mid-year figures, many banks disclose information about their risk exposure using a template created by the FSF. Furthermore, for the global financial corporations, international supervisory colleges are being set up, in which supervisors will cooperate closely, thus adding flexibility and efficiency to cross-border supervision. In the context of crisis monitoring and management, too, closer co-operation among the authorities is desirable, notably among supervisors and central banks. The importance of this cooperation was clearly brought out in the rescue of the US investment bank Bear Stearns in March, when the Fed, in its capacity as central bank with supervisory responsibilities, was able to act in a forceful manner, in cooperation with foreign authorities, including DNB.

FSF publishes policy recommendations

Acting in part on the FSF recommendations, the Basel Committee has published leading principles for bank's liquidity risk management and has made proposals to adjust the capital requirements for complex credit products. The FSF recommendations are, of course, also relevant for the Netherlands. In this respect, our country is well placed, since important financial stability tasks have already been established in a combined central bank/supervisory authority. DNB has addressed the elements within its jurisdiction and is busy implementing the principal recommendations, where necessary in consultation with the Dutch Authority for Financial Markets and the Dutch Ministry of Finance. In addition, it is essential that financial institutions implement improvements and strengthen their risk management practices in a number of respects.

In the United States, important institutional changes have been announced. In March, the President's Working Group (consisting of the Treasury, the Fed and some supervisory authorities) issued a report containing recommendations. The report pays ample attention to measures to improve the state of the mortgage market, for instance regarding consumer protection. Other proposals overlap in large part

Interest in Twin Peaks model

with the FSF recommendations, including the strengthening of the financial infrastructure, risk management and enhancing transparency. Furthermore, Treasury Secretary Paulson has announced an overhaul of the supervisory framework. This concerns some adjustments in the short run, such as improving the coordination among the authorities and tightening the supervision of mortgage lenders. In the longer run, the aim is to come to a functional model with separate responsibilities for financial stability, prudential supervision and market conduct supervision. This still needs to be worked out in more detail, but the envisaged set-up has similarities with the so-called Twin Peaks model in Australia and the Netherlands, to which Secretary Paulson explicitly referred.

The private sector has also taken initiatives to translate the lessons from the credit crisis into recommendations. The Institute of International Finance (IIF), a global organisation that brings together major financial corporations, released a report in July.¹⁴ The report reviews a large number of issues, including general principles for remuneration structures in the financial sector in order to prevent adverse incentives and recommendations in the areas of risk management and stress testing. Another initiative is the report of the Counterparty Risk Management Policy Group (CRMPG), which was published in early August.¹⁵ This report contains recommendations regarding complex financial products; to be sold only to market participants who themselves have sufficient expertise to fathom the risks. In addition, the report advocates measures to strengthen the credit derivatives market, e.g. by the establishment of a central counterparty for the processing of transactions.

Financial infrastructure

Within the Committee on Payment and Settlement Systems (CPSS), central banks work together to strengthen the financial markets' infrastructure and enhance its efficiency. During the past two months, the CPSS has issued two reports.¹⁶ The report entitled 'Progress in reducing foreign exchange settlement risk' seeks to establish to what extent risks entailed in foreign-exchange transactions have been mitigated over the past few years by such initiatives as CLS bank.¹⁷ The report concludes that the risks have indeed been reduced, but that about one-third of foreign-exchange transactions is still being conducted in the traditional manner through correspondent banks. These transactions sometimes involve substantial exposures relative to a bank's capital, while risk management is not always adequate. The report makes a number of recommendations to improve risk management.

Increased concentration correspondent banks

The report entitled 'The interdependencies of payment and settlement systems' charts a number of interdependencies within the financial system. With increasing consolidation and technological progress, a close-knit web has arisen within the global payments and securities settlement infrastructure. This is reflected in a concentration of corresponding banks and an enhanced role for third-party service providers (such as telecom and ICT corporations). In crisis situations these may constitute important channels of contagion. The report makes a number of recommendations in the areas of risk management and co-operation among the parties involved.

The Basel Committee has undertaken a thorough revision of the 'Principles for Sound Liquidity Risk Management and Supervision' dating from 2000, submitting the new version to market participants for consultation in June. The revised Principles include a separate Principle concerning the management of intraday liquidity. This illustrates the increased importance of adequate management of liquidity with a very short time horizon, not least because transactions are settled real-time on a gross basis. Modern payment systems such as TARGET2 thus offer a

range of possibilities to monitor and manage the liquidity position on an intraday basis. The revised principles provide a stimulus to banks to actually apply them in practice and offer supervisors a tool to urge banks to do so.

Finally, it is important for the financial infrastructure to be tested operationally on a more or less regular basis. Such tests primarily focus on the resilience of critical processes and systems. DNB is currently preparing a market-wide exercise in the area of crisis management and decision-making processes; the scenario for the test has not yet been set. A number of financial corporations will take part. Planning is underway for the test to be conducted next spring.

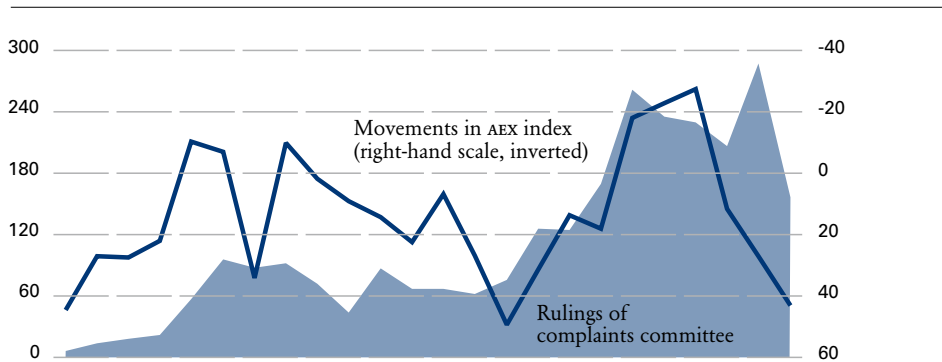
Reputation risk and compensation culture

Owing to the losses suffered over the past few years in respect of various financial products, the issue of misselling and, in its wake, reputation risk is a recurring topic in this Overview of Financial Stability. From a financial stability perspective, it is especially important to what extent large-scale effects could arise, for instance if broad categories of products (and, hence, institutions) were to be hit by claims. Well-known examples are the equity lease affair and the recent issue concerning unit-linked insurance policies.¹⁸ At the structural level, there is also the question to what extent a compensation culture has arisen in the Netherlands. This is difficult to measure, although the number of complaints received by recognised complaints committees such as that of the Dutch Securities Institute (DSI) has gone up distinctly in recent decades (Chart 16).¹⁹ Apart from a possible compensation culture, this increase in the number of complaints also reflects other factors, such as the growing number of Dutch citizens with financial investments and fluctuations in stock market sentiment. As a result of the credit crisis, professional investors have also been confronted with losses on structured products which were considered safe. Especially in the United States, this has recently led to substantial claims, as is evident from, among other things, the growing number of class actions, a large part of which concerns subprime investments. Also, a number of international investment banks have settled for large amounts of money in cases involving the sale of complex investment products.

More claims owing to credit crisis

Chart 16 Complaints and stock market prices

Numbers and percentages



The chart shows the number of rulings per annum of the complaints committee of the Dutch Securities Institute (DSI) and its predecessors.

Source: DNB.

5 Conclusion

Global financial stability conditions are still unfavourable. Market prices continue to be volatile, while key markets such as the interbank money market are still not functioning autonomously in an adequate manner. Since mid-2007, various elements of the financial system have been hit by, successively, the losses in the us subprime mortgage market, valuation problems, the drying-up of market liquidity and corrections in asset markets. In the period ahead, the speed of the economic slowdown will become clear and to what extent this will further aggravate the problems within the financial system.

Although the outlook is still uncertain, it can also be concluded that both the official authorities and the private sector are responding firmly. Thanks to valuation methods based on fair value, there is rapid clarity about the situation within the financial sector and adjustments are made more quickly than in the past. Thus, losses are timely recognised and at the same time banks seek to strengthen their balance sheets. Also, policy recommendations have been formulated to increase the financial system's robustness. A noteworthy factor in this regard is the international coordinating role of the Financial Stability Forum and private sector initiatives (IIF, CPRMG). The challenge facing the financial sector in the coming months is to firmly implement the policy proposals. After all, the prospect of a stronger financial system constitutes a major condition for the recovery of financial market confidence. Hence, DNB addresses the policy recommendations within its jurisdiction with vigour and, where necessary, cooperates with other authorities in the financial sector.

Notes

- 1 IMF, 'Global Financial Stability Report', April 2008.
- 2 CMBS (Commercial Mortgage-Backed Securities) are marketable paper collateralised by commercial real estate.
- 3 CGFS, 'Private equity and leveraged finance markets', CGFS Papers No. 30, July 2008. The report can be downloaded from www.bis.org. The study was conducted under the chairmanship of Henk Brouwer, Executive Director of DNB.
- 4 See the chapter 'Economic developments', and the article 'The Dutch economy in 2008-2010: a forecast using MORKMON', DNB, Quarterly Bulletin, June 2008. According to the estimate published there, Dutch economic growth will slow down to 1.5% in 2009.
- 5 The macro-economic effects of this scenario have been simulated with the aid of NIGEM, the world model of the National Institute of Economic and Social Research. The results are expressed as deviations from a baseline scenario described in the article entitled 'The Dutch economy in 2008-2010: a forecast using MORKMON', DNB, Quarterly Bulletin, June 2008.
- 6 The risk profile of Dutch home owners has been mapped out in previous editions of the Overview of Financial Stability (for instance, the Overview of Financial Stability of September 2007). One of the factors reflected in this risk profile is the skewed distribution of household indebtedness and household assets, both across different income and across different age categories.
- 7 See the article 'Sharp drop in the "repackaging" of mortgages by banks', DNB, Statistical Bulletin, June 2008. Normally, in-house securitisation does not yield commission, which is in line with the decrease in commission income set in earlier.
- 8 Covered bonds are bonds issued by banks affording holders extra certainty by means of a pool of collateral that is in fact segregated from the own funds of the issuing bank. Thus, covered bonds are largely comparable with securitised paper. There is a major difference, however, in that the holder of a covered bond has a claim on two sources of repayment: the cash flows generated by the underlying assets and the issuing institution, affording holders extra certainty. Covered bonds remain on the balance sheet of the issuing bank.
- 9 In addition, central banks, including the Eurosystem, have adjusted their range of money market instruments and have created new facilities. See the chapter 'Financial stability: Action plan to bolster the financial system', DNB, Quarterly Bulletin, June 2008.
- 10 DNB Working Paper No. 175 'Liquidity Stress-Tester: a macro model for stress-testing banks' liquidity risk', May 2008.
- 11 See Overview of Financial Stability in the Netherlands, no. 8, March 2008. Also see the article 'The future of the Originate to Distribute model in banking', DNB, Quarterly Bulletin, June 2008.
- 12 An SPV (Special Purpose Vehicle) is an entity set up for carrying out specific activities or projects of a financial corporation – such as a bank – and for pooling the related assets.
- 13 Financial Stability Forum, 'Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience', April 2008; can be downloaded from www.fsforum.org. Also see the chapter 'Financial stability: Action plan to bolster the financial system', DNB, Quarterly Bulletin, June 2008.
- 14 IIF, 'Final report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations', 17 July 2008; can be downloaded from www.iif.com.
- 15 CRMPG III, 'Containing Systemic Risk: The Road to Reform', 6 August 2008; can be downloaded from www.crmpolicygroup.org.
- 16 See the reports 'Progress in reducing foreign exchange settlement risk', CPSS Publications No. 83, May 2008, and 'The interdependencies of payment and settlement systems', CPSS Publications No. 84, June 2008. Both reports can be downloaded from www.bis.org.
- 17 The CLS (Continuously Linked Settlement) bank has been active for five years now and offers a system in which the settlement of both legs of a foreign exchange transaction is centralised, making for a considerable reduction in the risks involved in such transactions.
- 18 See the article 'The unit-linked insurance policy' in DNB's Quarterly Bulletin, September 2008.
- 19 Last year, the handling of complaints by DSI has been incorporated into the Financial Services Complaints Authority (Kifid).

