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Recent developments

Financial Stability

This chapter contains an overview of financial stability in the Netherlands, analysing the main developments and risks for the financial system. It is the first reflection of the more systematic manner in which De Nederlandsche Bank (DNB) has started monitoring financial stability as from this year. The analysis confirms the stability of the Dutch financial system, even when downside risks are taken into account. In the base scenario, of a gradual interest rate rise, these risks remain limited, because debt ratios remain manageable. Thanks to a sound solvency position, the banks can withstand a stress scenario of rapid interest rate rises or sharp falls in asset prices. The recovery of their financial position notwithstanding, the institutional investors remain vulnerable to new shocks; life insurers are affected by the continuous decline of policy sales and non-life insurers by the increased insurance for own account. The adjustments at the pension funds do not present contagion risks for other financial institutions; they do, however, affect the economy and potentially bond yield volatility.

Developments in the macro-financial environment

Internationally, the Dutch financial system is influenced by the sustained low interest rate level. The historically low level of bond yields is contributing to the favourable financing conditions for companies and households worldwide. In combination with rapid growth in emerging Asia, this has translated into an expansion of the global economy in 2004, from which the Netherlands is benefiting thanks to strong export growth. Nevertheless, Dutch economic growth lags behind that in the euro area because the recovery of corporate investment remains weak and private consumption is stagnant (see the chapter The Netherlands in the euro area, elsewhere in this Quarterly Bulletin). In addition, consumer confidence remains relatively low under the influence of uncertainty about pensions and employment.

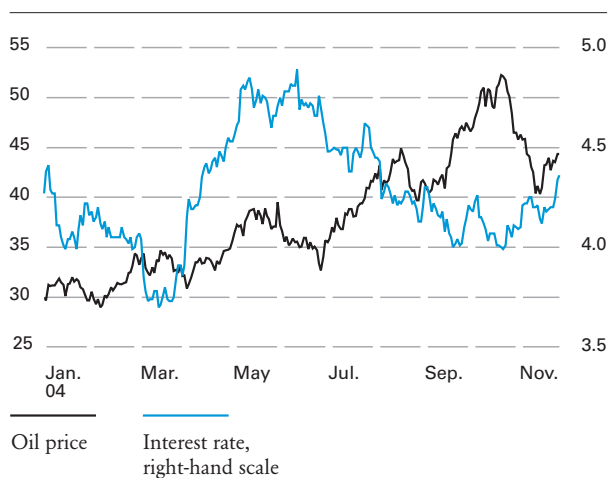
In the most dynamic world regions, growth seems to weaken in 2005. The economies of the us and China are expected to slow down, as a result of monetary tightening and the higher oil price. In October, the price of crude (Brent) oil rose to above the psychologically important level of USD 50. A scenario of sustained high oil prices (not improbable given the capacity limits on the supply side of the oil market) could lead to a significant deceleration of growth (see the article The Dutch economy in 2004-2006: a forecast using MOR-MON, elsewhere in this Quarterly Bulletin). The high oil

price could affect financial stability via the impact on the creditworthiness of companies, households and emerging economies. The financial position of companies, notably in energy-intensive sectors such as transportation and chemicals, will deteriorate if the higher production costs cannot be passed on or if demand were to fall. Households will see their real disposable income decline, especially if the oil price shock were to cause a further spread of unemployment. Next to these direct effects, expensive oil may have indirect effects on consumer and producer confidence. The creditworthiness of emerging markets with a relatively energy-intensive production, such as in emerging Asia, could decrease if the high oil price causes a deterioration of their terms of trade. Finally, oil price shocks often lead to higher risk premiums and equity price adjustments. The sluggish equity prices in the second half of this year suggest that investors have already priced in slower growth of the economy and corporate profits.

Most market participants expect the high oil price to cause lower economic growth; as yet they do not anticipate a rise in inflation. This has had a downward effect on bond yields since the summer (Chart 1), although the us federal funds rate has been raised four times since June. Against the background of the high oil price, markets expect the federal funds rate to rise only gradually. The low interest rates may also be explained by the weak demand for credit (notably by the corporate sector, which has ample liquidity), at a time when there is a large global supply of savings (reflecting the

Chart 1 Oil prices and us interest rate

Oil price (Brent) per barrel in USD and interest rate 10-year government bonds (per cent), respectively



Source: Datastream.

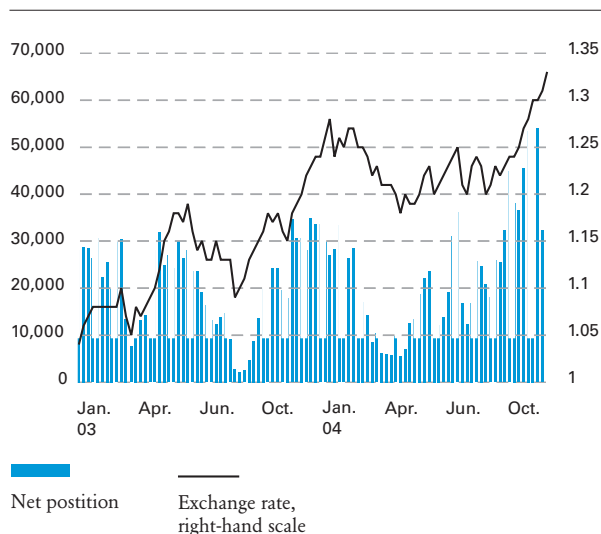
uncertainty among households, and the foreign exchange interventions of Asian central banks).

The abundant liquidity, the low interest rate level and the steep yield curve in the euro area and the us have a significant influence on the positions of financial intermediaries and the recipients of capital, and hence on the conditions for financial stability. Since 2003, the low interest rates have led to a worldwide search for yield, still ongoing, among institutional investors, and others, which are finding it hard to adjust to the low interest rate level. As a result of this search for yield and the accompanying high risk tolerance, some asset prices may no longer be commensurate with the underlying risks. For example, the low (expected) volatility in the stock markets could indicate an overly optimistic appraisal of future risks. The same goes for the bond markets, where risk premiums for corporate and emerging market debt are at historically low levels. In addition, leverage is high in the bond markets. This is due to large-scale carry trades (where funds borrowed at short-term rates are invested in long-term, and sometimes high-risk, bonds), stimulated by the steep yield curve.

Financial stability in the Netherlands is influenced not just by oil price and interest rate developments, but also by the exchange rate of the dollar. Because Dutch financial institutions and businesses have large-scale foreign activities, their profits and balance sheet positions are highly affected by exchange rate movements. Although the downward pressure on the dollar declined in the first half of 2004, as a result of rising bond yields in the us and the consequent closure of short positions, the dollar again weakened in the fourth quarter, dropping to a new low against the euro (Chart 2). The doubts about the financing of the large us current-account deficit (over 5% of GDP) increased further during the year, affecting the exchange rate. Since 2003, the net capital flow to the us consists entirely of bond investments; the net capital inflow from direct and portfolio investment has turned into an outflow. About half the government bonds were purchased by Asian central banks, pursuant to their fixed exchange rate policies. In the longer term, this policy is unsustainable, because it is conducive to monetary and financial imbalances in Asian countries. Purchasing dollars in exchange for their own currencies causes these countries' domestic money supply to grow and results in an expansion of lending. This could lead to asset price inflation and increasing risks in the banking sector. The large supply of liquidity stimulates investment in unprofitable projects. A possible ceasing of Asia's financing of the us public and current-account deficits

Chart 2 Eurodollar exchange rate

Net position (number of contracts) and exchange rate, respectively



Source: Bloomberg.

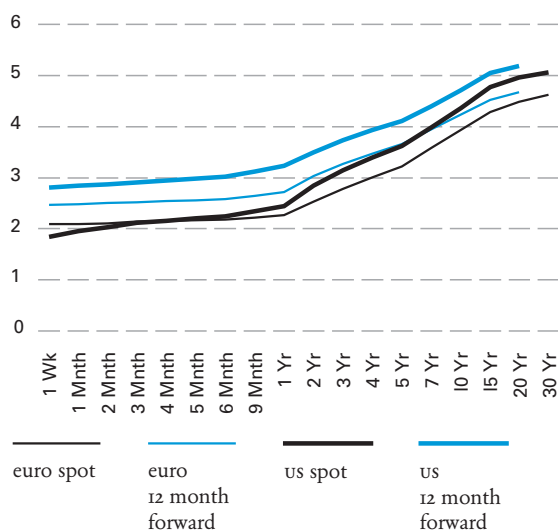
presents a downward risk to the dollar's stability, given the diminished financing by private foreign parties.

Limited downward risks in base scenario

The (most probable) base scenario for financial stability is a cautious recovery of growth in the Netherlands and moderate inflation (see the article *The Dutch economy in 2004-2006: a forecast using MORKMON*, elsewhere in this Quarterly Bulletin). In this scenario, international interest rates are expected to rise gradually, in accordance with market expectations (Chart 3). Market participants expect short-term rates to rise slightly more over the next twelve months than long-term rates, indicating a flattening yield curve. Thanks to the rise in short-term rates in the second half of 2004, and a slight decline in bond yields, the us yield curve has already flattened, to the level of the second quarter of 2003, after which the search for yield intensified. In the base scenario, the risks for financial stability are limited, because market parties are able to gradually adjust their leverage. Investors are stimulated to do so because carry trades in the bond market lose some of their attraction as the yield curve flattens. When interest rates go up gradually, companies and households can anticipate higher borrowing rates in their financing behaviour. Given the high level of private sector indebtedness in the Netherlands, this is important from the point of view of financial stability.

Chart 3 Market expectations on yield curve

Per cent



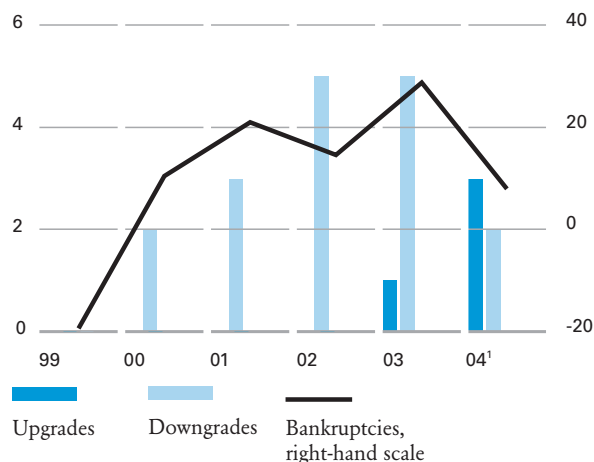
Source: Bloomberg.

Vulnerability corporate and household sectors

The financial institutions are sensitive to developments in the corporate and household sectors because they supply financial services to these sectors. Where companies are concerned, the link exists mainly through bank loans. The financial position of companies is characterised by their high debt level. According to the latest data, relating to 2003, the debts of Dutch non-financial companies are considerable (also internationally), at nearly 35% of assets. This makes them vulnerable to financial headwind. Thanks to the recovery of profits in nearly all sectors, this vulnerability has declined since 2002, however. The recovery of profitability, in combination with the corporate sector's sustained preference for liquid assets, has led to ample cash positions. There are also indications (such as the limited recovery of investment) that the process of balance sheet restructuring has continued, with companies capitalising on the favourable financing climate. Thanks to this and other factors, the deterioration of corporate credit risks seems to have come to an end, as is evidenced by the development of corporate failures and credit ratings (Chart 4). The additional provisioning at Dutch banks has consequently decreased in the third quarter (see the chapter Latest developments in banking supervision, elsewhere in this Quarterly Bulletin), and the ESCB Bank Lending Survey shows they have relaxed their lending conditions for companies. Nevertheless, corporate demand for short-term

Chart 4 Creditworthiness non-financial corporations

Number of changes of credit ratings per annum and change in number of bankruptcies per annum (per cent), respectively

¹ Up to and including the third quarter.

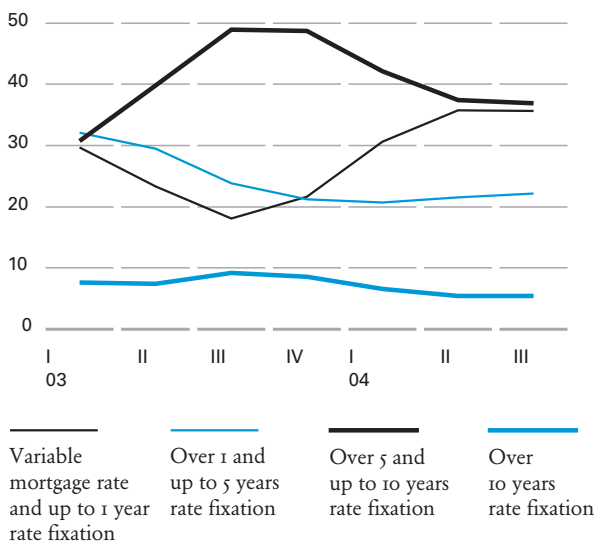
Sources: Moodys, CBS.

credit remains limited as a result of the continuing restructuring of debt, the slack propensity to invest and the ample availability of internal finance.

The indebtedness of Dutch households relative to disposable income has doubled over the past decade to over 200%, due to the marked expansion of mortgage debts. The increase in household indebtedness is offset by a substantial increase in the value of owner-occupied homes. Yet the financial vulnerability of the household sector has increased because the amount of debt is a given, while the value of houses and other assets may fluctuate. The most vulnerable group consists of first-time home buyers, whose mortgage debts are much higher relative to the value of their houses than those of average home-owners (see the article Financial behaviour of households, in the Quarterly Bulletin of September 2004). Households are especially sensitive to interest rate rises if their mortgage rate is variable or the interest rate period short. In the first half of the year, a growing number of mortgage loans were granted on such conditions (Chart 5). As a result of the moderate economic growth in the Netherlands and the rising rate of unemployment, more households have experienced financial difficulties. The number of households with payment difficulties on mortgage loans remains small, though. In the first three quarters of 2004, 235 households with a National Mortgage Guarantee were forced to sell their homes at a loss, as compared to nearly 180 for the whole of 2003. The existing vulnerabilities in the household sector could be gradually phased out if in-

Chart 5 Interest rate period of mortgages

Per cent of total new mortgage loans issued by banks



Source: DNB.

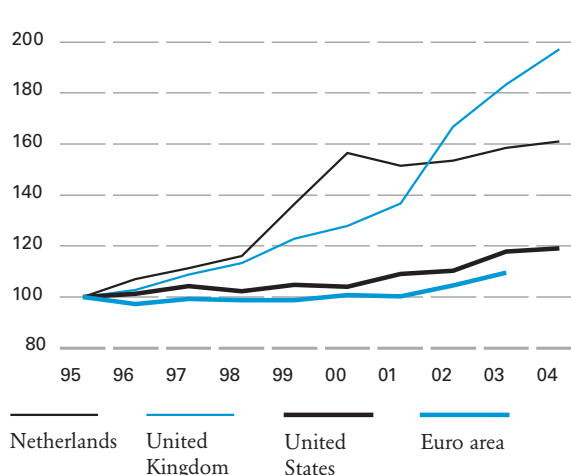
Interest rates rise slowly and incomes continue to grow. Under these conditions, the possible overvaluation of houses could diminish. In recent years, the ratio of Dutch house prices to disposable income, a measure for valuing the housing market, has stabilised at a – historically and internationally – high level (Chart 6).

Risks at financial institutions

Changes in the interest rate level are important to banks because they convert short-term funds (such as deposits and savings) into long-term loans and investments, so that their balance sheets are by nature characterised by interest rate mismatches. The substantial growth of (mortgage) lending and the steep yield curve have vigorously supported banks' profitability in the recent past. The recent flattening of the yield curve may, however, result in contracting interest rate margins. Owing to the relatively strong flattening of the yield curve in the US, notably banks with activities in dollar areas are sensitive to such a development. The upward interest rate risk of the banks may have increased in the past period of exceptionally low interest rates and rapid credit growth, with institutions accumulating large loan portfolios at low interest rates. It may be noted that interest rate risk is continuously being managed, although banks will never hedge their entire interest rate positions, because it is their main source of profit. Banks' risks are furthermore dependent on the underlying cause of a possible turnaround in the inter-

Chart 6 Valuation of housing market

House prices as a percentage of disposable income, base year 1995 = 100



Sources: OESO, ECB.

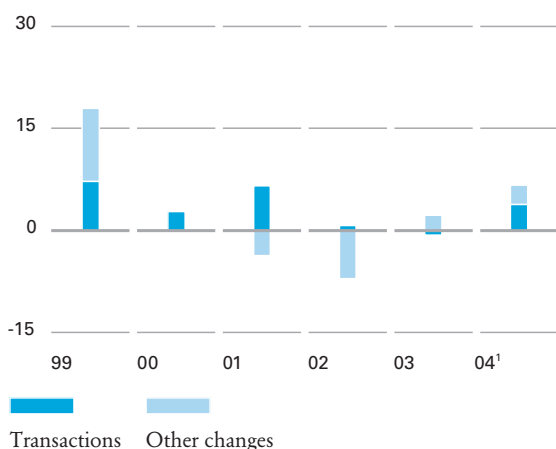
est rate cycle. The risks of an interest rate rise consequent on an economic upturn may be compensated for by the positive effects of such an upturn on credit risk and credit demand.

The still low bond yields, in combination with sluggish stock prices in 2004, hamper a further recovery of the solvency of pension funds and insurance corporations. As they are sensitive to interest rates because the maturities of their liabilities are longer than those of their investments, their 'marked-to-market' balance sheet position deteriorates when interest rates decrease and improves when interest rates rise (see the chapter Latest developments in banking supervision, elsewhere in this Quarterly Bulletin). These institutions furthermore remain vulnerable to new equity price corrections because they are dependent on equity returns (if equity price falls are attended by an interest rate rise, the latter will incidentally have a compensating effect). As pension funds invest more in shares than life insurance corporations, their financial position is generally more volatile (Charts 7a and 7b). This does not constitute a contagion risk for the other financial institutions, because their financial relations with the pension funds are limited; it does, however, impact the economy (see below). Developments within the insurance sector may affect the banks through, for instance, reputation risk, because some large Dutch insurers are closely linked to banks in conglomerates.

The recovery of life insurers' financial position is not only hampered by the developments in financial

Chart 7a Change in investment portfolios insurers

Per cent change per annum



Source: Statistics Netherlands.

¹ Growth based on first half of 2004.

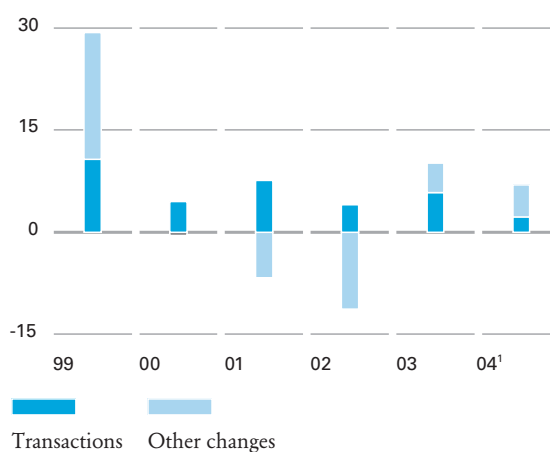
markets, but also by the continuous decline of policy sales, which relates to the recent changes in the fiscal regime (see the chapter Latest developments in banking supervision, elsewhere in this Quarterly Bulletin). The vulnerability of non-life insurers has been potentially augmented by the increase in insurance for own account since 2001. This can be risk-neutral provided the increased risk is compensated for by a risk-based capital surcharge. The expansion of insurance for own account reflects the strong rise in re-insurance premiums in past years, consequent on the disappointing results of re-insurers ensuing from meagre investment results and unexpected catastrophes. More in general, re-insurance institutions should be monitored in the context of financial stability, because it is not always clear who ultimately shoulders the burden of the re-insured risks. In recent years, the IMF and the Financial Stability Forum have expressed their concern about the lack of transparency of re-insurers. New statistics on the re-insurance sector to be published by the International Association of Insurance Supervisors (IAIS) will constitute an improvement on this point.

Potential risks in stress scenarios

The base scenario described above is the most probable one, but less probable stress scenarios with unforeseen shocks cannot be ruled out. Confidence in the financial markets and within the corporate and household sectors could consequently decline. A stress scenario

Chart 7b Changes in investment portfolios pension funds

Per cent change per annum



Source: Statistics Netherlands.

¹ Growth based on first half of 2004.

could emerge if bond yields rise faster than anticipated because inflationary expectations change as a result of the second-round effects of the high oil prices. Furthermore, a disorderly depreciation of the dollar could take place if investors lost confidence in the sustainability of the US current-account deficit. Such a confidence crisis could be accompanied by a strong interest rate rise in the US. Given the traditional international spill-over effects, such a scenario may well result in an increase in European bond yields. With euro area growth lagging behind, this would be undesirable. A confidence crisis with major adjustments of exchange rates and interest rates could depress equity and property prices worldwide. Negative wealth effects and declining confidence could then slow down economic growth. The consequences for financial stability depend on how the risk factors are linked and on how the shocks and the existing vulnerabilities in the financial system interact. Because shocks may reinforce each other, the risks could manifest themselves cumulatively.

Financial market risks

Given the high leverage of investors, a sharp interest rate rise could generate unstable market conditions, for instance, if carry trades were unwound rapidly. This would cause bond prices to fall. In less deep (such as the high-yield bond market) and strongly concentrated markets, liquidity could furthermore dry up and volatility could increase. High volatility in one market

could then spread to other asset markets. The financial markets could also be destabilised by the collective investment behaviour of hedge funds. Such systemic risks have increased because the hedge-fund industry has grown explosively in recent years, both in terms of their number and the quantity of assets they manage. There are indications that the hedge funds have taken similar positions (herding). The question is how the volume of these positions relates to the liquidity of the various segments of the market, which may already be under pressure, certainly in crisis situations. Estimation of such risks is hampered by the hedge funds' low transparency. Although the average performance of hedge funds has deteriorated this year, the sector has not been confronted with major problems so far. Finally, the financial stability risks inherent in hedge-fund activities are correlated with the degree of involvement of financial institutions, through their exposures on hedge funds. It is not entirely clear to what extent this applies to the Dutch financial sector because the information supplied by hedge funds is scarce. DNB is currently looking into this matter.

Major recipients of capital, such as emerging markets, are by nature sensitive to strong interest rate increases. Most countries have reduced their vulnerability by improving their economic fundamentals. They have made use of the favourable financing conditions and phased out their foreign exchange and interest rate risks. This may explain why the financial crisis in Russia earlier this year has had barely any contagion effects, other than an upward effect on the oil price. The dynamism of the Chinese economy is attended by important risks. If the measures taken to gradually cool down China's growth prove unsuccessful, a hard landing could damage the global economy in general and regional Asian growth in particular. Given the large capital flows to and from the Asian region, the global financial markets could also be affected materially. The Dutch financial system could be influenced directly by a hard landing in China, via the banks' exposures to the emerging markets. These exposures have diminished in the recent past, however (from over 80% in 1997 to about 60% of regulatory capital in mid-2004), which means that the Dutch banks have become less sensitive to country-risk-related payment problems. The transfer risk has also declined, thanks in part to the marked expansion of foreign exchange reserves, in Asia in particular.

Potential influence stress scenarios on financial institutions

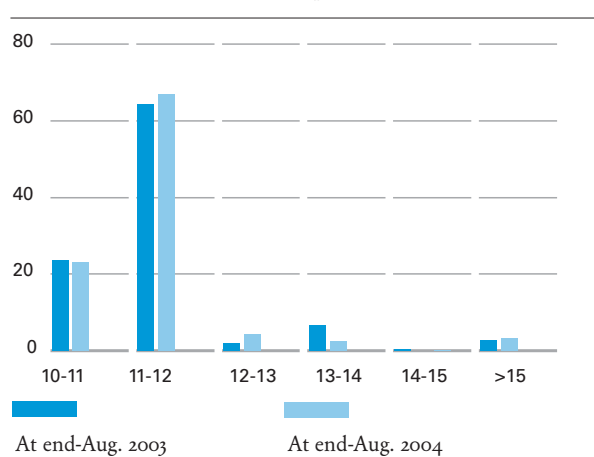
Major and abrupt interest rate increases could imply ris-

ing credit risks on bank loans to companies and households, especially if they were attended by falling asset prices and a further rise in unemployment. An increasing interest rate burden and a loss of income both lower the borrowing capacity of households. This could reduce the demand for houses, which might lead to declining house prices. A stress scenario could also depress the housing market through the negative effects on consumer confidence. Thanks to their strong profit and solvency position, the Dutch banks are well positioned to withstand such shocks (Chart 8). This is confirmed by stress tests performed in 2004 year by the institutions in the context of the IMF Financial Sector Assessment Program (see the article Stress testing the Dutch financial sector, in the Quarterly Bulletin of September 2004). Individual institutions could, nevertheless, come under pressure if they have a credit portfolio which is skewed to mortgages with high loan-to-value ratios. The credit quality of these loans decreases when house prices fall, since borrowers might be confronted with negative net worth. Sudden and unforeseen interest rate movements could also cause losses on the banks' interest rate positions. Banks may deliberately take open interest rate positions in their trading book in order to benefit from the steep yield curve. In a stress situation, adjustment or hedging of such positions may prove difficult because other market parties have also taken such positions on a large scale, and may wish to adjust them.

Pension funds and insurance corporations are more sensitive than banks to a stress scenario with falling equity and property prices, because they have invested a large proportion of their capital in shares and real

Chart 8 Banks' solvency ratio

Distribution among Dutch banks, per cent



Source: DNB.

estate. On average, pension funds' and insurers' real estate investments make up 10-15% of their total investments. It is worth noting in this context, that following a major downturn in recent years, the commercial real estate market still shows hardly any signs of recovering. There are still major excess supplies of office premises, which means that further price adjustments cannot be ruled out.

Importance of infrastructure and crisis management

The influence of a stress scenario on financial stability is highly dependent on the quality of the infrastructure of payments and securities transactions, notably because of the contagion risk inherent in payment and securities settlement systems. Default on the part of a single party may lead to liquidity problems for other participants in a system. There is also a risk of a system owner being confronted with financial difficulties. This risk is especially important when the owner has exposures of its own, for instance, as a central counterparty or settlement bank. Next to financial risks, systems may be subject to operational risk: the risk that the system itself is affected and stops functioning. Financial stability in the Netherlands is vulnerable especially to risks which threaten the financial position of Dutch banks. Such risks may emanate from domestic and foreign payment and securities settlement systems.

As a result of international integration and consolidation, these systems are subject to continuous development. The settlement of transactions may become more efficient, while the risks are reduced by more sophisticated risk management. It must be noted, though, that the trend of commercialisation and consolidation of infrastructures makes new demands on oversight, while the increased threat of terrorism has augmented the importance of business continuity and crisis management. In the Netherlands, the institutions which form part of the core infrastructure, i.e. DNB, the ten most important commercial banks, Interpay, Euronext, ICH.Cleartnet, and Euroclear Nederland, have been stepping up their emergency procedures in recent years.

Crisis management at financial institutions is currently being given much international attention. In a crisis situation, measures need to be taken fast to contain the crisis and to limit the negative impact (on systems) as much as possible. A complicating factor is that the institutional international framework is not keeping up with developments within the financial sec-

tor. Many institutions, especially in the Netherlands, have large international exposures and engage in international operations, so that a financial crisis will have cross-border repercussions. The competences and instruments for supervision and crisis management are, however, still nationally oriented and hence limited in scope. Against this background, consultations are being held within various committees about the institutional framework for crisis management. In the Basel fora, for instance, central banks are discussing emergency liquidity support, collateral management, liquidity supervision and business continuity planning. The outcome of these consultations is still partly unknown. Every crisis is unique and there is no blueprint for crisis management. A role is also played by the limited willingness to transfer competences in respect of supervision and crisis management to foreign or international authorities. This means that crisis management procedures, notably concerning decision-making and the distribution of costs, cannot be wholly determined in advance. Because every crisis is different, important objectives are an adequate exchange of information and a capacity for improvisation.

Transfer of risks deserves attention

Under the influence of market innovations and improvements in the risk management of institutions, risks are being increasingly transferred, for instance, from financial institutions to companies and households. New rules and regulations could reinforce this trend, because the institutions would be prompted to actively manage their balance sheet positions. Risk transfer could contribute to a reduction of risk concentration at financial institutions, reinforcing the system's resilience. Risk transfer could also affect the system's efficiency. In principle, the allocation of capital and risks could become more efficient as a result of risk transfers, because a major role is played here by market forces. Risk allocation within the system could, however, also become less efficient if the risks are more compatible with the risk profile of financial institutions than that of the households to which they are being shifted; this goes for, for example, complex risks which require professional risk management. Shifting risks to companies and households will also be attended by larger wealth effects, since savings and spending will be increasingly influenced by developments in asset markets. This in turn could affect the financial institutions through their sensitivity to the business cycle.

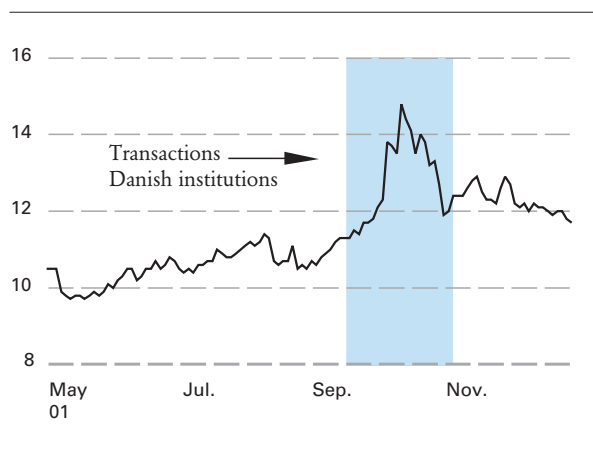
The introduction of the International Financial Reporting Standards (IFRS) as from 1 January 2005 may influence financial institutions to transfer risk. The introduction of IFRS means the introduction of fair value accounting (FVA), which will augment the transparency and comparability of balance sheet data and results. Possibly, the reported data will also become more volatile. In order to contain such volatility, banks could embark on shorter-term lending, which could also be more pro-cyclical. Under FVA, a recession could mean lower valuations for bank assets. As this would affect both the solvency and bank profits reported, it will influence lending. This could confront companies and households more directly with interest rate fluctuations and the business cycle.

The new rules and regulations such as IFRS and FTK (the new financial assessment framework for insurance companies and pension funds in the Netherlands) may also prompt pension funds and insurance institutions to hedge the short-term fluctuations which will consequently appear in their balance sheets. A dilemma then arises is that while market valuation provides these institutions with greater insight into their financial position, they could react with adjustments which might have wider-ranging effects. Take, for example, the situation where institutional investors reduce the interest rate mismatch on their balance sheets by extending the maturities of their bond portfolio. Such hedging behaviour on the part of Dutch pension funds could, depending on the measure and timing of their hedging activities, lead to volatility in the European bond market. Given the low level of long-term rates and market expectations that these rates will increase, hedging will remain unattractive for the time being. In recent years, new rules have prompted adjustments of investment behaviour at life insurance companies and pension funds in Denmark and the United Kingdom, affecting the volatility of long-term interest rates. In reaction to changes in the Danish supervisory structure in 2001, institutional investors there reduced their interest rate mismatches in a short period of time; this had an influence on the European bond market (Chart 9). Such potential effects on interest rates are detrimental to the pension funds themselves, too, as market volatility feeds through to their balance sheets.

It would seem that the risks in asset markets and at financial institutions are being increasingly transferred to the household sector, which is consequently becoming more and more of a shock absorber. The income and financial positions of Dutch households have

Chart 9 Volatility 10-year euro swaption

Implied volatility 1 year forward, per cent



Source: Bloomberg.

come under pressure as a result of the disappearance of direct positive wealth effects ensuing from the aftermath of the slump in share prices in 2002-2003 and the decelerating rise in house prices. In addition, asset market fluctuations have indirect consequences, via the institutional investors, for the real economy and for the household sector in particular. For example, about 30% of the balance sheet total of Dutch life insurers consists of unit-linked products, where the investment risk is borne by the policy-holder. Via the life insurers, negative equity price developments thus impact the financial position of households. Furthermore, the recent adjustments at pension funds, notably the rise in pension premiums and the limitations of indexation, are affecting disposable incomes (see the article Dutch pension sector: sustainability under pressure, elsewhere in this Quarterly Bulletin). As a consequence of demographic ageing, the ratio of pension liabilities to wages will rise in the future, which reduces the pension funds' room for manoeuvre and further increases the risk of volatile premiums. This implies that heavier demands will be made on the soundness of pension funds. New rules and regulations, such as the FTK, are tailored specifically to this end.

In conclusion

The downward risks for financial stability in the Netherlands remain limited in the base scenario providing for gradually rising interest rates. This overview also sets out the possible consequences of stress scenarios, such as a faster-than-expected interest rate increase, and a world-

wide confidence crisis. Thanks to a sound solvency position, the banks can withstand a stress scenario; the institutional investors remain vulnerable to sharp declines of asset prices. The stress scenarios and the downward risks do not reflect expected developments, but their analysis is a way of identifying risks to the financial system before they arise. Taking into account possibly unfavourable outcomes is essential to a proper assessment of financial stability.

The Netherlands in the euro area

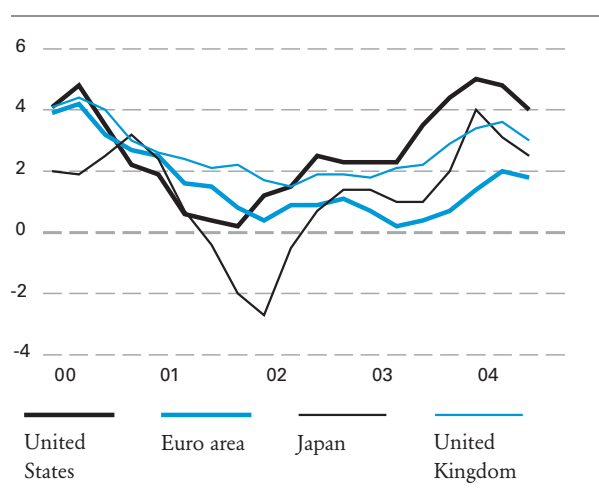
The economic recovery is continuing worldwide. However, the pace of the recovery is being depressed by the oil price hikes during the summer and the persistent depreciation of the us dollar. Thus far, the consequences of the higher energy prices for inflation have remained limited to 'first-round effects'. The gradual recovery of the Dutch economy after the recession of 2003 is encountering some setbacks. Consumption declined during the third quarter, a phenomenon last recorded in the third quarter of 2003. The rapid pace of deterioration of labour market conditions has come to an end. In structural terms, too, the Dutch labour market is better placed than it was after the previous recession, witness such factors as the increased share of flexiwork in total employment, the decreased level of long-term unemployment and the increased participation rates among the young and the elderly.

World economic recovery continues

The worldwide economic upswing continued during the second and third quarters, but was depressed by the very sharply increased energy prices and the persistent depreciation of the us dollar. After the robust growth rates of the first quarter, some growth deceleration was in evidence in most countries, including China and India, during the second and third quarters. Nonetheless, the year-on-year growth rate is still at or above potential in all regions, except the euro area (Chart 1). Provisional GDP (gross domestic product) data for the third quarter suggest that the us economy

Chart 1 GDP growth United States, euro area, Japan and United Kingdom

Percentage changes on previous corresponding period



Source: Eurostat.

continued to grow, with us employment embarking on a vigorous recovery after a slight lag. The recovery in the euro area continues to be comparatively weak and is vulnerable because economic growth is still strongly export-driven. Owing to the oil price rises, inflation is showing some incipient rise, but in the United States as well as Europe this is still barely being reflected in wage and price movements, mainly as a result of the fact that capacity utilisation is relatively low and labour market conditions are still easy. In addition, the considerably increased levels of profitability still offer sufficient scope for corporations to postpone price increases on competitive grounds. Indicators of industrial confidence are more subdued than they were at the beginning of the year, reflecting the expected effect of the higher oil prices on economic activity. Nonetheless, the levels of the indicators – over 50% – point to continued economic expansion (Chart 2).

In early December the us dollar fell to an all-time low against the euro. The us currency also depreciated against other currencies. Despite indications of a continuing recovery of the us economy, the dollar remains vulnerable to the high us current-account deficit, which is still rising further, totalling 5.7% of GDP in the second quarter. This contrasts with growing surpluses in Europe, Japan and the other Asian economies. As a result of the largely fixed exchange rates of the currencies of the Asian countries, the pressures on the dollar are to a large extent reflected in its exchange rate against the euro. Trade-weighted, the euro has appreciated by some 20% over the past three years. Over the longer term, the appreciation has been such that the effective exchange rate is again close to the average recorded since 1980. The recovery of the European economy, which, considering the current phase of the business cycle, is still highly dependent on international trade, was dampened markedly during the third quarter by the effect of the global exchange rate changes on the growth of exports.

In September, inflation in Japan was 0% (relative to September 2003), the first time since February that prices did not go down. Recent projections of the Japanese central bank suggest that the persistent deflation which has been evident in Japan for many years – the legacy of an asset bubble in the 1980s – could come to an end next year. According to these projections, prices will go up by 0.1% until the end of March 2006. Recent OECD estimates support this projection. Even though an inflation rate of 0.1% would be almost negligible, it would still mark an essential turnaround to a year-on-year increase in the price level for the first

time since 1997. The Bank of Japan has noted that it sees no grounds for adjusting its monetary policy until a positive inflation rate is actually measured. Moreover, the central bank will not raise its key interest rate – which now stands at 0% – before the economy has recovered to such an extent that an interest rate increase will no longer result in a return to a deflationary environment. After two quarters with high growth rates, Japanese GDP growth slowed down in the second and the third quarter to -0.1% and 0.1%, respectively, compared to the preceding quarter. The slowdown was mainly accounted for by exports and corporate investment; household consumption has been growing on a quarterly basis by around 1% for four quarters on end. Measured on an annual basis, the Japanese economy is showing vigorous growth, recording an expansion of 2.5% between the third quarter of 2003 and the corresponding quarter of 2004. The OECD expects that during the next two years the economy will grow at a rate of 2%, slightly above potential.

The Chinese economy is still growing fast, although the rate of growth has slowed down somewhat, from 9.7% in the second quarter to 9.1% in the third (year-on-year). Almost half of the Chinese GDP growth is accounted for by investment. According to the Chinese central bank, the current growth rate of investment – 29% in the third quarter – is unsustainable; over the past 26 years investment growth averaged 19% per annum. The inflation rate in China decelerated sharply in October to 4.3% year-on-year, 1 percentage point below the rate of August, when the highest level of the past

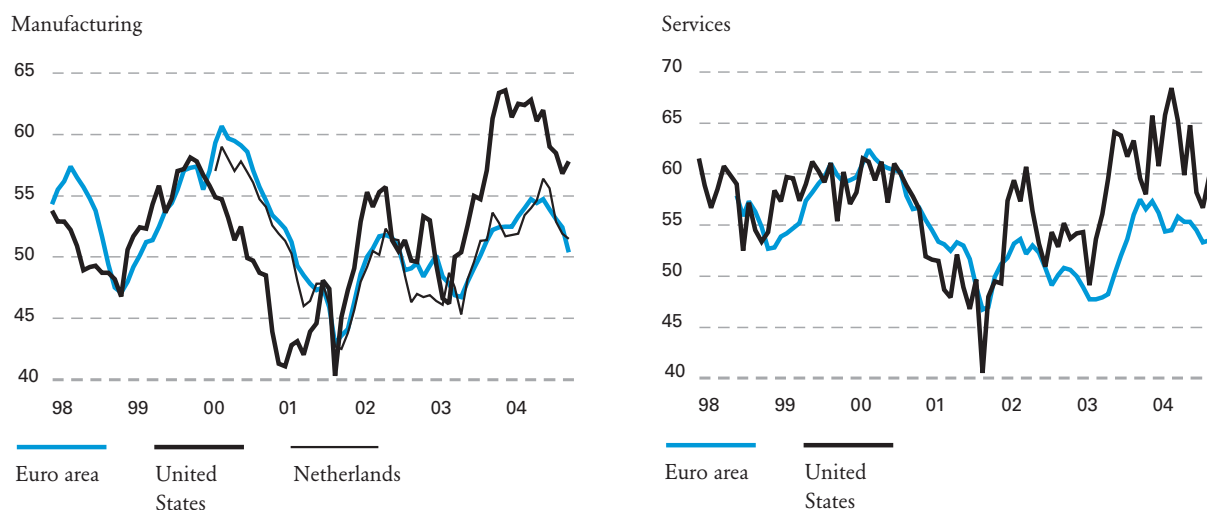
seven years had been recorded. The measures taken by the Chinese authorities to place economic developments on a more sustainable footing are beginning to bear fruit, especially in the monetary area. The higher reserve requirements imposed on banks and the credit restrictions have caused the rate of monetary expansion to slow down to some extent in recent months. Money growth (M2, year-on-year) came out at 13.5% in October, and is thus back at the level recorded at the end of 2001. The rate of credit expansion decelerated even more sharply, from 15.9% in July to 11.4% in August. Towards the end of October, the Chinese central bank took the financial markets by surprise by raising its official rates for the first time in nine years. During those nine years the size of the economy has doubled and imports have tripled. The interest rate increase constitutes a major step within a shift from the former ‘administrative measures’ to cool off the economy towards a more market-oriented approach. Until recently, for instance, mortgage loans could be taken out with a negative real rate of interest. The official rate increase now effected may help the real estate sector to reach smoother waters and to restrain the growth of investment in a more market-based way.

Oil prices continue on upward trend

Over the past few months, oil prices went up at an accelerated pace. Measured in dollars, the price of crude oil (Brent) averaged nearly USD 50 per barrel in October, 70% up on a year earlier. November saw a correction to an average of USD 45 (Chart 3). For over a year now, oil

Chart 2 Industrial confidence

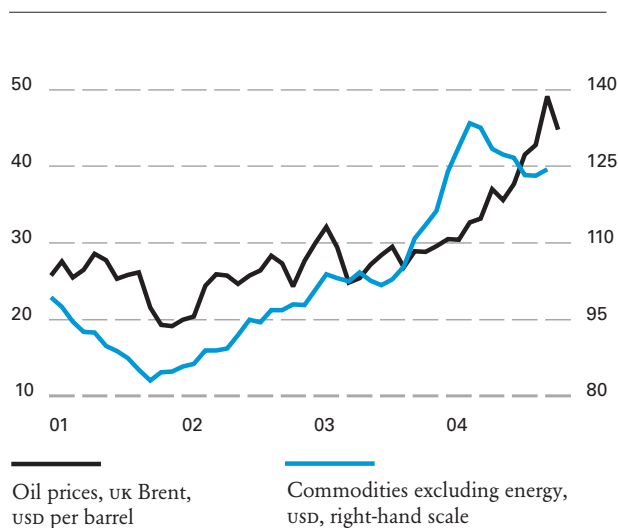
Purchasing Managers' Index; 50 = no change in economic activity



Sources: NTC Research and ISM.

Chart 3 Commodity and oil prices

Index 2000 = 100 and levels



prices have been consistently in excess of the upper limit of the official OPEC price target range of USD 22-28. Meanwhile, in dollar terms, oil prices are also up on the previous record high of the 1970s. However, expressed in 2004 dollars, the price recorded in that period would come out at nearly USD 90. Moreover, since 1970 oil intensity – oil consumption relative to GDP – has decreased worldwide by 20%, dampening the impact of the higher oil prices on the real economy.

One major factor which may help explain the high level of oil prices is uncertainty. This may be illustrated with the aid of the forward price of oil. For an exceptionally long period now, since 1999, the oil market has been characterised by backwardation, with spot prices in excess of forward prices. Hence, for almost five years now it has been cheaper to purchase oil for future delivery than for immediate delivery (Chart 4). In this market, this may be taken as a sign of uncertainty. In addition, the oil industry has to cope with shortages of refining capacity. Investment in production capacity has been insufficient in recent years to meet the sharply increased demand from such areas as the United States and China.

Table 1 Expenditure United States

Percentage changes and percentage points

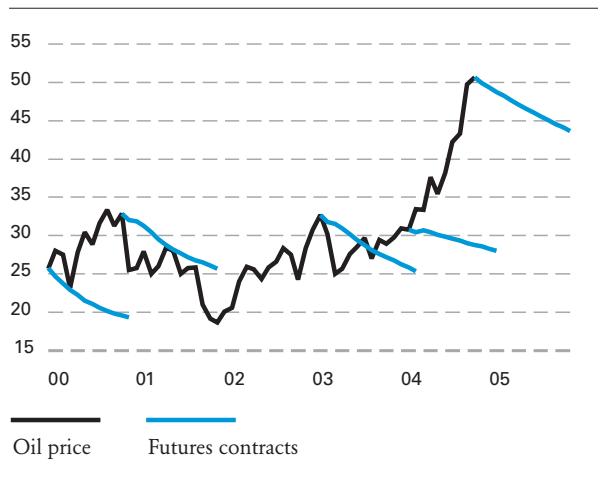
	2002	2003	2003				2004		
			I	II	III	IV	I	II	III
Percentage changes on immediately preceding period ¹									
GDP	1.9	3.0	1.9	4.1	7.4	4.2	4.5	3.3	4.0
Consumer expenditure	3.1	3.3	2.7	3.9	5.0	3.6	4.1	1.6	5.1
Private sector investment	-4.9	5.1	2.4	10.9	18.0	10.5	4.5	13.9	8.8
<i>ICT investment</i>	-4.2	12.0	17.1	14.4	29.1	16.3	16.4	14.1	7.6
Public sector expenditure	4.4	2.8	0.2	7.2	0.1	1.6	2.5	2.2	1.2
Exports	-2.4	1.9	-1.5	-1.6	11.3	17.4	7.3	7.3	6.4
Imports	3.4	4.4	-1.9	2.5	2.9	17.1	10.6	12.6	6.0
Contributions to GDP growth, percentage points ²									
Consumer expenditure	2.2	2.3	1.9	2.8	3.6	2.5	2.9	1.1	3.6
Private sector investment	-0.8	0.8	0.4	1.7	2.8	1.7	0.7	2.2	1.5
<i>ICT investment</i>	-0.2	0.5	0.7	0.6	1.3	0.8	0.8	0.7	0.4
Public sector expenditure	0.8	0.5	0.0	1.3	0.0	0.3	0.5	0.4	0.2
Stockbuilding	0.4	-0.1	-0.5	-1.1	0.3	0.5	1.2	0.8	-1.0
Net exports	-0.7	-0.5	0.1	-0.5	0.7	-0.8	-0.9	-1.2	-0.3

¹ Annualised.² Due to statistical differences, contributions do not fully add up to GDP growth.

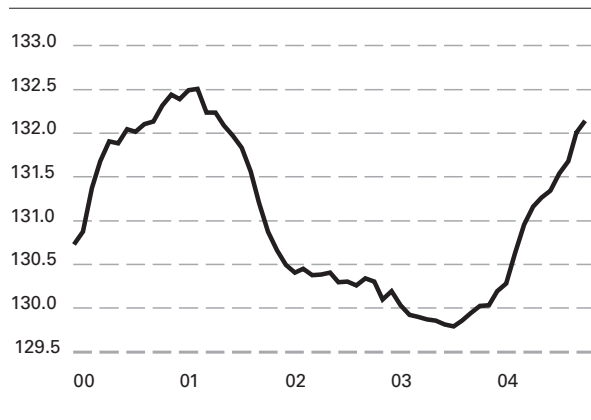
Source: Thomson Financial.

Chart 4 Oil price, spot and forward

USD per barrel of UK Brent, monthly averages

**Chart 5 Employment United States**

Millions of persons



Explanatory note: Payroll survey among non-agricultural corporations.
Source: Bureau of Labor Statistics.

Continued us growth

According to still provisional estimates, US GDP growth in the third quarter was 4.0% (on an annual basis, Table 1). Second-quarter growth has been adjusted upwards from 3.0 to 3.3%. Consumer expenditure showed a noteworthy upswing, growing by 5.1% in the third quarter, after a slightly disappointing 1.6% in the second. Private sector investment also showed strong growth, at 8.8% quarter-on-quarter and 9.4% on a year earlier. Despite the rising energy prices, inflation continued to be moderate. In October, the inflation rate, measured by the consumption deflator, speeded up slightly, to 2.4%; the three-month average came out at 2.2%. Core inflation (excluding inter alia energy), which is relevant from a policy point of view, has fluctuated around 1.5% throughout the year. This means that the higher energy prices have thus far barely worked through into the other prices. In June, the US central bank – the Federal Reserve – embarked on a gradual increase of the key interest rate towards less stimulatory levels. After the fourth successive increase by one quarter of a percentage point, the key interest rate reached 2% on 10 November, a level which the Federal Reserve still considers stimulatory. Combined with a robust underlying productivity growth, this provides the economy with sufficient support for a continuation of the recovery in the period ahead.

The gloomy employment picture shown until recently in employment in the United States underwent a marked improvement in the past few months (Chart 5). In the first half of the year employment in the corporate sector (excluding agriculture) had still gone

up by an average of 204,000 jobs. This was followed by disappointing data releases for the months of July up to and including September. October, however, saw a strong growth of the number of jobs, by 303,000. Job growth during the four-month period up to and including November now comes out at 183,000 a month. In itself, this is only just sufficient to absorb the increase in the supply of labour; the unemployment rate declined slightly, to 5.4%.

Sluggish growth recovery in euro area

The hesitant recovery of the European economy has now been underway for over a year. Since the trough in the summer of 2003, when GDP contracted, the quarterly growth figure has fluctuated around 0.5% (Table 2). Judging from provisional GDP data for the third quarter, the growth rate on a year earlier has meanwhile picked up to 1.8%. This is still below trend potential growth, which the OECD estimates at 2.1%. The composition of the growth figure makes clear that the growth in the first half of the year was in large measure accounted for by the vigorous recovery of exports, notably during the first quarter. The contribution made to growth by domestic demand, however, was weak, with investment in particular showing disappointing performance. During the second and third quarters considerable differences were again in evidence among the major euro area countries, for instance in respect of the composition of GDP growth. In the second quarter, German GDP was 0.4% up on the preceding quarter, with domestic demand contributing -0.1 percentage point and exports

Table 2 Expenditure euro area

	2002	2003	2003				2004		
			I	II	III	IV	I	II	III
Percentage changes on immediately preceding period									
GDP	0.9	0.5	0.0	-0.2	0.5	0.4	0.7	0.5	0.3
Domestic demand	0.3	1.2	0.6	-0.1	0.0	1.0	0.2	0.3	1.1
Consumer expenditure	0.6	1.0	0.2	0.0	0.3	0.0	0.6	0.2	0.2
Public sector consumption	3.1	1.6	-0.1	0.4	0.6	0.5	0.1	0.4	0.8
Investment	-2.7	-0.5	-0.8	-0.2	0.3	1.0	-0.3	0.3	0.6
Exports	1.9	0.2	-1.7	-0.8	2.6	0.3	1.5	3.1	1.2
Imports	0.5	1.9	-0.4	-0.7	1.3	2.0	0.5	2.8	3.2
Contributions to GDP growth, percentage points ¹									
Domestic demand	0.3	1.1	0.5	-0.1	0.0	1.0	0.2	0.3	1.0
Consumer expenditure	0.4	0.5	0.1	0.0	0.2	0.0	0.4	0.1	0.1
Public sector consumption	0.6	0.3	0.0	0.1	0.1	0.1	0.0	0.1	0.2
Investment	-0.6	-0.1	-0.2	0.0	0.1	0.2	-0.1	0.1	0.1
Stockbuilding	-0.1	0.4	0.6	-0.2	-0.3	0.7	-0.1	0.1	0.7
Net exports	0.6	-0.6	-0.5	-0.1	0.5	-0.6	0.4	0.2	-0.7
<i>Exports</i>	<i>0.7</i>	<i>0.1</i>	<i>-0.7</i>	<i>-0.3</i>	<i>1.0</i>	<i>0.1</i>	<i>0.6</i>	<i>1.2</i>	<i>0.5</i>
<i>Imports</i>	<i>-0.2</i>	<i>-0.7</i>	<i>0.2</i>	<i>0.3</i>	<i>-0.5</i>	<i>-0.7</i>	<i>-0.2</i>	<i>-1.0</i>	<i>-1.2</i>

¹ Due to statistical differences, contributions do not fully add up to GDP growth.
Source: Thomson Financial.

0.6 percentage point. In France, where the second quarter saw a GDP growth of 0.7%, the contribution made by domestic demand was much more substantial: 1.5 percentage points. According to provisional figures, growth decelerated in the third quarter in both Germany and France to 0.1%. In Italy, growth remained stable at 0.4%. During the four quarters until July 2004, consumption in Germany in particular performed markedly worse than in the rest of the euro area. Measured on a cumulative basis, euro area consumption increased by 1.1% during this period. At 0.4%, the Dutch figure was lower, but Germany even suffered a decrease of 0.8%. If the German figure is excluded, euro area consumption would have grown by 2% instead of 1.1%.

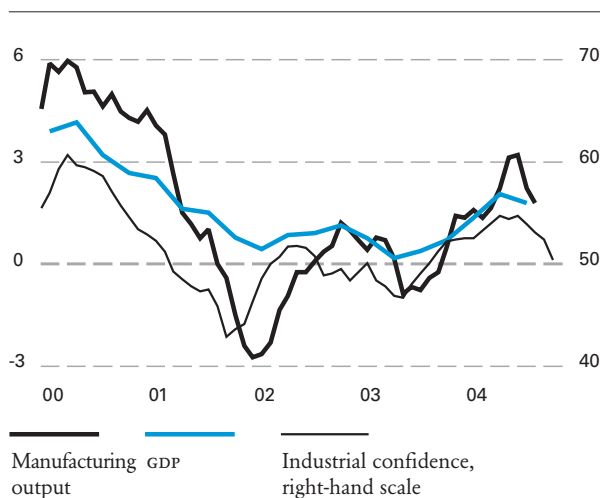
The projections of the major international institutions fairly unanimously predict a growth rate for the euro area of around 2%, for both 2004 and 2005. Relative to earlier projections, this implies an upward adjustment for 2004, largely due to the fact that the world economy has recovered more rapidly than had been expected initially. For 2005, however, most forecasters have lowered their GDP growth projections.

Declining industrial confidence and the stagnating growth of manufacturing output also indicate that the economic recovery in the euro area has lost momentum (Chart 6). Expectations are that – through higher production costs – the sharply increased energy prices will adversely affect investment. In addition, the external contribution to growth is declining, in connection with the higher euro exchange rate and the levelling-off of world economic growth on a quarterly basis.

Now that the trough of the cycle has been passed for some time, the coming months may also see a gradual recovery of the labour market. There are indications suggesting that euro area employment has decreased to a lesser extent than during earlier economic downturns. This implies, however, that corporations may be more cautious when hiring new employees. For 2005, the European Commission expects a stable euro area unemployment rate of 9%. Especially in Germany, the largest single economy in the euro area, unemployment is high; in October the number of unemployed went up to nearly 4.5 million persons. The European Commission expects unemployment in Germany to increase further, from 9.6% of the labour force in 2004

Chart 6 GDP, manufacturing output and industrial confidence euro area

Percentage changes on previous corresponding period and levels



Explanatory note: Industrial confidence is based on the monthly Purchasing Managers' Index (PMI).

Sources: Eurostat and NTC Research.

to 10% in 2005. The projections for German GDP growth are also comparatively gloomy. Both the IMF and the European Commission expect a growth rate which will not exceed 1.5%.

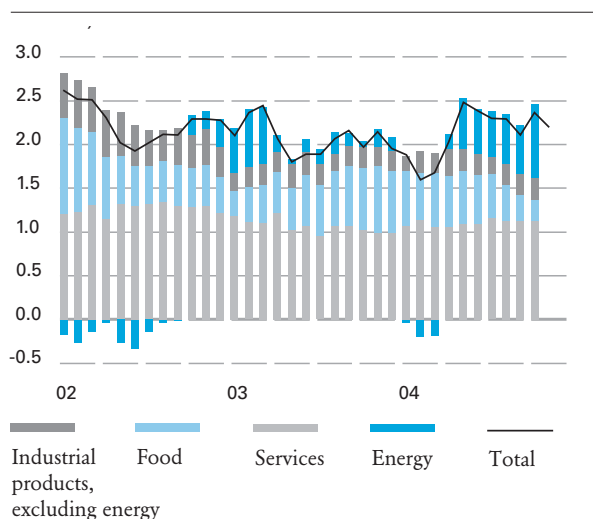
As a result of the rising energy prices, euro area inflation has been persistently above 2% since May. The declining growth rate of food prices caused inflation to decline between May and September, from 2.5% to 2.1%. In October, however, HICP inflation went up again, to 2.4%, followed in November, according to initial estimates, by a decline to 2.2% (Chart 7). So far, the effect of the increase in oil prices on inflation has been mainly direct, through the prices of energy products. The pass-through into other prices or into wages is very limited. In the second quarter, wage costs rose by 2.1%, less than in the preceding quarters. The limited nature of these 'second-round effects' can be ascribed primarily to the fact that inflationary expectations are still anchored at a low level. In addition, there is little price pressure from the factor markets. This is due not just to the still easy labour market conditions; the degree of capacity utilisation in manufacturing is also still below its long-term average. Since the beginning of 2004, capacity utilisation has increased by 1 percentage point to 81.7% in October; the average for the past twenty years is 82.3%.

Monetary developments and interest rate policy

During the past few months, the ECB left the main

Chart 7 Inflation euro area

Percentage contributions to HICP inflation; monthly figures



Source: Eurostat.

refinancing rate unchanged at 2.0%. As a result, both nominal and real rates of interest remain at very low levels. Although the increase in oil prices is keeping inflation currently above 2.0%, the ECB still expects inflation to drop below 2.0% in the course of 2005. The weakness of the labour market is a contributory factor in this regard, because it limits inflationary risks arising from wage movements. Upward risks are constituted by oil prices, indirect taxes and other administered prices.

The growth of the monetary aggregate M₃, which includes all bank deposits which can be used for transactions at short notice, speeded up slightly in the third quarter to 5.7%, up from 5.2% in the second quarter. The growth of M₁, a component of M₃ which consists solely of currency (banknotes and coins) and overnight deposits, came to almost 10% in the third quarter. In the past, a high growth rate of M₁ tended to signal a recovery of domestic spending, because the additional money was held almost exclusively for transaction purposes. At this juncture, however, a role is also being played by tendencies to hoard cash. In the third quarter, the value of currency in circulation increased by about 20%, while the number of banknotes increased by no more than 10%. The high denominations, which are held mainly on account of savings motives, are thus showing a comparatively stronger growth. It is possible that the introduction of the euro is also making itself felt here, because some countries have only recently embarked on the distribution of high denominations. In addition, the very low level of interest rates contributes to a rapid growth of M₁ at the expense of

savings deposits. These developments have detracted from the leading indicator properties of MI for spending.

In the third quarter, total lending in the euro area increased by 6.3%, compared with 5.7% in the second quarter. Lending is being stimulated by the low level of interest rates, which mainly benefits households. The growth of mortgage lending was 9% in the second quarter and reached almost 10% in the third. The favourable price movements in the housing markets in some euro area countries are contributing to these high growth rates. Lending to corporations is picking up more slowly, with a third-quarter growth rate of 4.6%, against 4.0% in the second quarter. The higher profitability ensures that corporations are less dependent on external funds. At the same time, the high level of indebtedness forces many corporations to exercise restraint when taking out new loans. As a result of the continuing process of debt restructuring, the growth of long-term loans is in excess of that of short-term loans.

The Dutch economy

According to provisional estimates of Statistics Netherlands, the Dutch economy grew by 0.2% in the third quarter, following a slight contraction of 0.1% in the second (Table 3). Compared to the third quarter of 2003, which followed three quarters of GDP contraction, GDP is now up 1.4%, the strongest increase in three years' time. According to the data, which are still provisional, the modest quarter-on-quarter growth is only accounted for by stronger stockbuilding and higher government expenditure.

Consumer spending dropped by 0.5% during the third quarter. Measured year-on-year, consumption growth came to 0.6%, of which 0.3 percentage point is, however, due to a statistical distortion as a result of changes in the Health Insurance Act and the Exceptional Medical Expenses Act. Consumer confidence gives no grounds to expect the growth of consumption to recover at short notice. Following an improvement between May and August, confidence dropped in the subsequent three-month period. Nonetheless, consumer confidence is still well above the low of mid-2003 (Chart 8). In 2005, consumption growth is expected to reach 0.5% (see the article

Table 3 Expenditure Netherlands

	2002	2003	2003				2004		
			I	II	III	IV	I	II	III
	Percentage changes on immediately preceding period								
GDP	0.6	-0.9	-0.5	-0.7	0.2	0.5	0.8	-0.1	0.2
Consumer expenditure	1.3	-0.9	-0.6	-0.9	-0.3	0.1	0.6	0.0	-0.5
Private sector investment ¹	-5.8	-3.7	-0.1	-0.6	0.4	1.8	1.2	-1.6	-2.1
Public sector expenditure	4.2	1.5	0.6	0.5	0.5	1.1	-1.1	-0.2	0.6
Exports	0.8	0.0	-0.4	-1.0	0.7	1.7	0.6	4.3	1.3
Imports	0.8	0.6	-0.6	-0.3	0.3	3.0	-0.7	3.5	1.3
	Contributions to GDP growth, percentage points ²								
Consumer expenditure	0.6	-0.5	-0.3	-0.4	-0.1	0.0	0.3	0.0	-0.3
Private sector investment ¹	-1.1	-0.6	0.0	-0.1	0.1	0.3	0.2	-0.3	-0.3
Public sector expenditure	1.1	0.4	0.2	0.1	0.1	0.3	-0.3	0.0	0.2
Stockbuilding	-0.2	0.2	0.1	0.1	-0.2	0.1	-0.1	0.0	0.6
Net exports	-0.1	-0.4	0.1	-0.5	0.3	-0.7	0.9	0.7	0.1

¹ Excluding stockbuilding.

² Due to statistical differences, contributions do not add up to GDP growth.

Source: Statistics Netherlands.

Chart 8 Consumer confidence and stock prices

Monthly figures



Explanatory note: Consumer confidence is shown as the balance of 'optimistic' and 'pessimistic' respondents among the survey population. Source: Statistics Netherlands

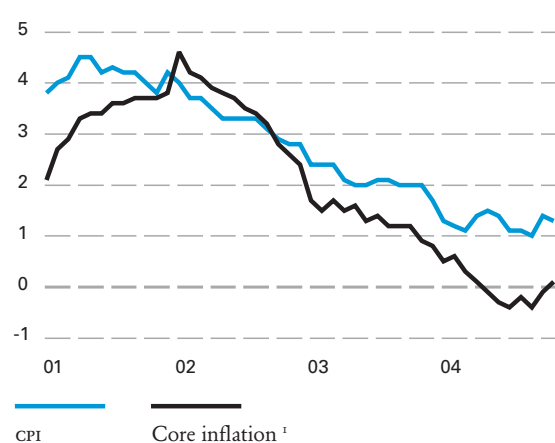
'The Dutch economy in 2004-2006: a forecast using MORKMON' elsewhere in this Quarterly Bulletin).

In the third quarter, private sector investment again performed disappointingly, recording a contraction of 2.1%. The fall was wholly accounted for by lower construction investment, for instance in dwellings and offices. Corporations did, however, expand their machinery, equipment and computers. In the third quarter, both exports and imports grew by 1.3%. Owing to the increased volume of exports, the contribution made by net exports to growth was slightly positive (0.1 percentage point). In the figures until the end of the third quarter, the recovery of world trade is meanwhile evident from an export growth figure of 8.3%. For the whole of 2003, the growth of exports had been 0%. A major proportion of exports consists of re-exports of goods imported earlier. Adjusted for this, goods exports still expanded by 5.7% in the second quarter (year-on-year).

The declining tendency shown by the Dutch inflation rate since May has come to a halt (Chart 9). In October inflation (CPI-based) was 1.4%, up 0.4 percentage point on September. In September, the inflation rate had registered its lowest level in fifteen years' time. In November, a slight decline was evident, to 1.3%. If CPI inflation is adjusted for a number of volatile categories (energy and unprocessed food) and for administered prices, a better impression is obtained of the price rise which is due to market developments. The resulting CPI core inflation shown in the chart came out at

Chart 9 Inflation Netherlands

Percentage changes on previous corresponding period



¹ Inflation based on CPI excluding public services, rents, energy, vegetables, fruit and consumption abroad. Source: Statistics Netherlands.

-0.1% in October. Core inflation was on a declining trend between January 2002 and mid-2004 and has been slightly negative for a couple of months now. One contributory factor is the continued price war in the supermarkets. Despite the recent increase in October, the Dutch inflation rate is still low compared with the euro area average. In October, HICP inflation, which is measured on the basis of a harmonised European-wide definition, was 2.5% in the euro area, while prices in the Netherlands went up by 1.5% (Table 4). A difference of this magnitude has not been seen since 1996, when the HICP was computed for the first time. The acceleration of inflation in October was mainly caused by price rises for car fuels, clothing and footwear. As has been the case for quite some time, price movements for goods are making no more than a minor contribution to inflation. In October, for instance, prices of consumer goods went up by 0.2%, whereas services prices (HICP definition) rose by 3.0%. As a rule, services inflation reacts with a slight lag to wage movements, which, given the easy labour market conditions and the recent (draft) social accord about wages in 2005, are not expected to give rise to additional pressure on prices.

Labour market not yet recovered, but improved strongly since previous low

The recovery of the Dutch economy is tentatively beginning to work through into the labour market. In the third quarter, the number of unfilled vacancies was up 38% on a year earlier, the largest increase since the

Table 4 Inflation Netherlands

	2002	2003	2004					
			I	II	III	Sep.	Oct.	Nov.
Total HICP	3.9	2.2	1.4	1.6	1.8	1.1	1.5	1.5
Goods	3.1	1.1	-0.4	0.3	0.8	-0.2	0.3	0.3
<i>Processed</i>	3.8	2.3	-0.4	0.4	-0.7	-0.7	-0.8	0.3
<i>Unprocessed</i>	3.6	0.7	-0.9	-2.5	-5.1	-6.5	-4.4	-5.1
<i>Industrial goods, excluding energy</i>	2.7	0.0	-0.9	-1.0	1.0	-0.7	-0.5	-0.5
<i>Energy</i>	3.3	4.6	2.4	7.1	6.3	6.6	8.1	6.5
Services	5.0	3.8	3.8	3.4	3.0	3.2	3.1	3.0
HICP underlying ¹	3.9	2.1	1.4	1.3	1.1	1.2	1.2	1.2

Sources: Statistics Netherlands and DNB calculations.

¹ Excluding unprocessed food and energy.

beginning of 2000. Employment still contracted, but the rate of contraction slowed down somewhat in the third quarter. Compared to a year earlier, employment – measured in full-time jobs – contracted by 1.7%, against 1.8% in the preceding two quarters. The composition of the movements in employment is showing a shift, with the growth of jobs in health care and education of past years levelling off and that in public administration turning into a decrease. In manufacturing and business services, on the other hand, the rate of labour shedding has declined.

Averaged over the year, the level of unemployment for 2004 will probably be 100,000 persons higher than for 2003. Compared to the preceding quarter, however, the movements in unemployment would recently appear to have reached a turning point. In the third quarter, unemployment decreased by 25,000 persons on the second quarter (seasonally adjusted), although this figure has been distorted upwards by the fact that a large number of school-leavers have not yet entered the labour market considering the poor prospects of getting a job. In the first quarter of 2004, unemployment had still gone up by 52,000 persons and in the second quarter by 2,000 persons. In the third quarter, the unemployment rate was 6.0%, against 6.4% in the second quarter. For the last quarter of 2004, initial figures are less favourable. On average, the number of unemployed during the three months up to and including October totalled 476,000, 16,000 up on September.

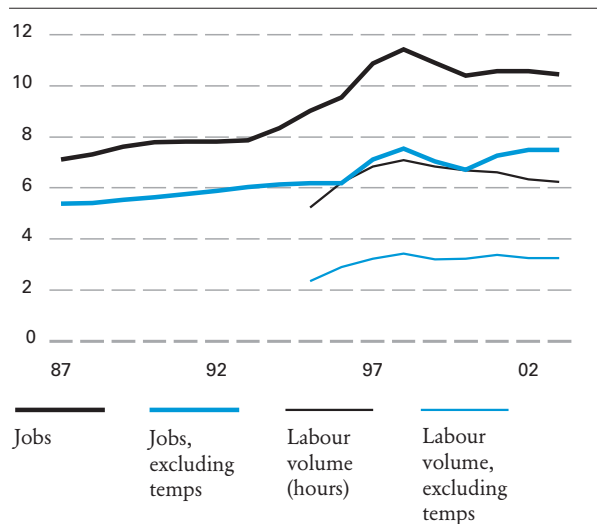
Even though the Dutch labour market has not yet recovered, it may be noted that, compared to the previous low in 1994, it has improved in a number of important respects. The share of flexiwork in total employ-

ment has gone up significantly, providing one indication of the more flexible nature of the Dutch labour market (Chart 10). Since 1992, the share of flexijobs has gone up from 7.8% to 10.5%. The somewhat shorter series for the volume of labour likewise shows an increase between 1995 and 2003. Measured in terms of hours worked – the volume of labour – the flexible share of employment has risen from 5.2% to 6.3%. As this concerns to a large extent work organised through temporary staff agencies, the chart also shows the development of flexiwork excluding temps. Viewed thus, the share of flexijobs in 2003 also proves to be higher than in 1992. An improvement in the Dutch labour market performance is also evident from the decrease in long-term unemployment. Between 1994 and 2003, the share of long-term unemployment in total unemployment decreased by over 15 percentage points. In 1994 the share of long-term unemployment in the Netherlands had been well above the average for the OECD countries, whereas in 2003 it was below this average. Finally, the number of economically non-active persons in the Dutch labour market also showed a strong decrease between 1994 and 2003. The ratio of non-active to active persons decreased from 79% to 67% (see also the article ‘The Dutch economy in 2004-2006: a forecast using MORKMON’ elsewhere in this Quarterly Bulletin). In this connection, in 2003 participation rates among both the young and the elderly were considerably higher than in 1994, with the Netherlands ranking among the OECD countries recording the largest increases.

It is likely that the improved performance of the Dutch labour market is linked to the policy efforts undertaken from the second half of the 1980s onwards.

Chart 10 Flexible labour

Percentages of labour volume and number of jobs



Source: Statistics Netherlands.

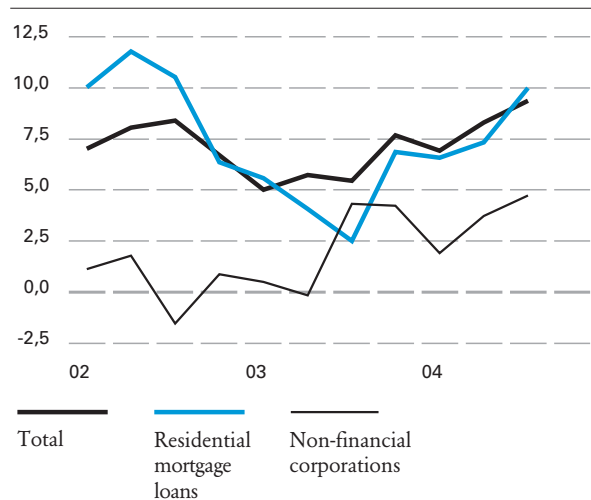
Since that time, a large number of countries have taken measures to reform the labour market, a broad range of strategies being deployed in the areas of taxes, benefits, working hours, employment contracts, labour participation and protection against dismissal. For instance, in the Netherlands the adjustment of the maximum duration of temporary employment contracts has contributed to the increase in temporary (flexible) labour. Adjustment of statutory arrangements providing protection against dismissal may also help create more flexible labour relations, which in turn enable corporations to adjust the composition of their labour force more rapidly and at lower cost. At the macro-economic level, the presence of fewer obstacles to a more productive utilisation of labour means that this factor of production can be put to more effective use.

Lending

Bank lending to corporations showed an increase in the third quarter. The increase was 4.7%, the highest growth rate since September 2001 (Chart 11). Since the trough of the recession in mid-2003, lending to non-financial corporations has grown by an average of 3.8%. Corporations notably opt for loans with maturities in excess of one year. In the third quarter, as in the previous quarter, short-term lending contracted by 0.2%. Long-term lending, however, expanded by 6.8%. Corporations have sufficient liquid funds at their disposal and have not yet completed their balance sheet

Chart 11 Bank lending to private sector

Quarterly figures; annual percentage increases



Source: Statistics Netherlands.

restructuring efforts aimed at extending the maturities for borrowed funds.

Among households, borrowing in the form of residential mortgage loans has increased materially in recent months. Following a growth rate of 7.3% in the second quarter of 2004, mortgage lending went up by 10% in value terms in the third quarter. This is close to the growth rates of more than 10% last seen in 2002. The persistently strong growth of mortgage lending is due not least to the fact that capital market rates have been low for quite some time. The low mortgage interest rates also lead to continued steady increases in house prices. According to the Dutch Land Registry, the average price rise for dwellings on a year earlier has gone up to 5.2% in the period August-October. On average, during the first ten months of 2004, house prices increased by 4.6% on an annual basis. Since the low – an increase of 1% in the third quarter of 2003 – the recovery of house price rises has taken place in sync with the cyclical recovery of the Dutch economy.

Latest developments in prudential supervision

This article addresses current developments in the financial sector and prudential supervision. The profitability of Dutch banks improved strongly in the third quarter of 2004. The rise in profits came mainly from a fall in additions to provisions. There are indications that Dutch banks' policy on provisions is generally procyclical. After a difficult period, the insurance industry recovered in 2003. Although there are considerable differences between sectors, results and premium income rose moderately at life, non-life and health insurers. If liabilities are valued using the fixed discount rate, the financial position of pension funds improved slightly in the third quarter of 2004. With valuation at current market interest rates, however, a deterioration can be seen in the financial position of pension funds. The standard valuation of liabilities and investments by insurers and pension funds will be at market interest rates under the financial assessment framework (FTK). DNB issued the consultation document on the FTK at the end of October. As well as the FTK, this article looks at the implementation of Basel II, increased supervisory attention to customer due diligence and the introduction of international accounting standards on 1 January 2005.

The organisation of the prudential supervision of the financial sector was integrated by the merger of the PVK (Pensions and Insurance Supervisory Authority of the Netherlands) and DNB on 30 October 2004. The size of the three principal industries, banking, insurance and pension funds, and their contribution to economic development show that they are very important to the Dutch economy and this importance has increased over the past two decades (Table 1 and Chart 1; see also the article Financial institutions and financial stability elsewhere in this Quarterly Bulletin). Banks are the largest segment in the financial sector, with total assets of 285% of gross domestic product (GDP) at year-end 2003. The relevance of the pensions industry can be illustrated by the fact that, jointly, the pension funds manage pension savings with a value of EUR 516 billion (111% of GDP) for almost 6 million employees, or four-fifths of the total working population. Together, insurance companies had outstanding liabilities with a value of some EUR 234 billion (52% of GDP) at the end of 2003.

Prudential supervision of the financial sector focuses on protecting the interests of deposit holders, the insured and members of pension schemes. This enhances confidence in the solidity and integrity of individual financial institutions and the stability of the financial system, serving the interests of the Dutch economy as a whole. There are many features that are common to the prudential supervision of banks, insur-

ance companies and pension funds. A key assumption in this is that supervision is risk oriented. Consequently, DNB uses risk analysis models to identify and analyse the risks run at each individual institution and assesses the effectiveness of the measures for managing those risks. A supervisory plan focused on the principal risks is then drawn up and implemented. These systematic risk analyses allow DNB to reach a considered balance in the use of scarce supervision capacity. The capital adequacy requirements placed on an institution also depend to a significant extent on its risk profile. In this way, lower risk institutions also need to hold relatively less capital (see also the article DNB and the Pensions and Insurance Supervisory Authority of the Netherlands merge: a new organisation under a familiar name elsewhere in this Quarterly Bulletin). Another similarity relates to the implementation of supervision. The various key supervisory duties, such as market authorisation and compliance, operational off-site and on-site supervision and corrective action where necessary, and the way in which they are carried out, are very comparable. Supervision also aims at transparency for financial institutions, the government and society in the approach to, implementation and results of prudential supervision. This transparency is needed to show that supervision is being performed efficiently and effectively.

There are, of course, also differences between the sectors. In addition to market risks, as in the case of banks, insurers and pension funds also run specific

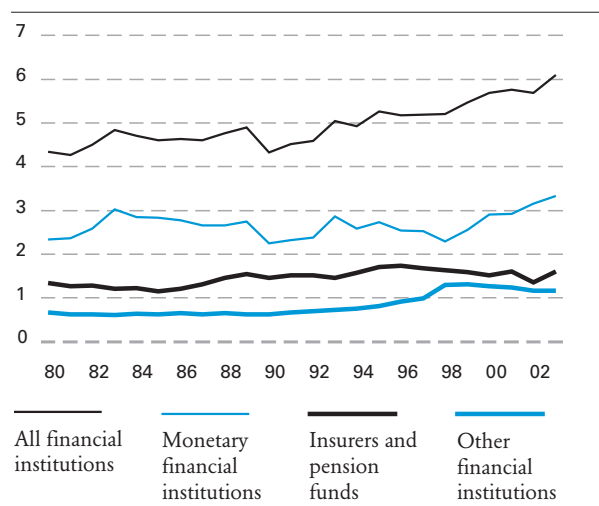
Table 1 Features of the financial sector in the Netherlands

	Number	Domestic total assets as a percentage of GDP
Reporting banks	85	285
Largest 5	5	230
Others	80	55
Pension funds	873	111
Largest 10	10	68
Others	863	43
Insurance companies	371	65
Largest 6	6	34
Others	365	31

Year-end 2003. Source: DNB, Statistics Netherlands.

Chart 1 Gross value added domestic product

Percentage of GDP



Source: DNB

actuarial and underwriting risks, and supervision is aligned with these. Furthermore, supervision is generally more intensive for banks than for other types of financial institutions. A key reason for this is their individual size and their central role in financial intermedi-

ation and the payment system. Furthermore, banks are more sensitive to liquidity risks than insurance companies and pension funds as a result of their balance sheet structure, with current liabilities payable on demand (deposits) and illiquid long-term lending. Consequently, problems show up more quickly and so there is separate liquidity supervision for banks.

Results of Dutch banks

Dutch banks saw strong growth in profitability in the third quarter of 2004. Operating profit after tax rose by almost 30% compared with a year earlier to EUR 2.74 billion (Table 2). The increase in profit came mainly from a fall in expenses, which were down 5% compared with the same period last year. Income rose slightly (2%) compared with that period. This appears to have been caused by the flattening of the yield curve, or a narrowing difference between long-term and short-term interest rates (the interest rate margin), which occurred this quarter. This is disadvantageous for banks, as they generally attract short-term funds, while their lending is of a longer-term nature. The limited growth (1%) in inter-

Table 2 Results of Dutch banks

EUR billion

	2003		2004		
	III	IV	I	II	III
Total income	11.48	11.82	12.24	12.26	11.73
<i>Interest income</i>	7.19	7.05	7.11	7.42	7.27
<i>Non-interest income</i>	4.28	4.77	5.13	4.84	4.46
Commission income	2.46	2.80	2.79	2.70	2.68
Other income	1.82	1.97	2.34	2.13	1.78
Total expenses	8.45	9.16	8.11	8.72	8.06
<i>Operating expenses</i>	7.61	8.37	7.56	8.12	7.73
<i>Total provisions¹</i>	0.85	0.79	0.55	0.60	0.33
Operating profit after tax	2.13	2.15	3.00	2.57	2.74
BIS ratio ²					
All banks	11.8	12.1	11.9	11.8	11.8
Largest banks	11.0	11.3	11.2	11.1	11.1
Tier-I ratio ²					
All banks	9.1	9.4	9.3	9.4	9.4
Largest banks	8.3	8.7	8.6	8.7	8.7

¹ The sum of value adjustments to receivables, value adjustments to financial fixed assets and net transfers to/from the Fund for General Banking Risks.

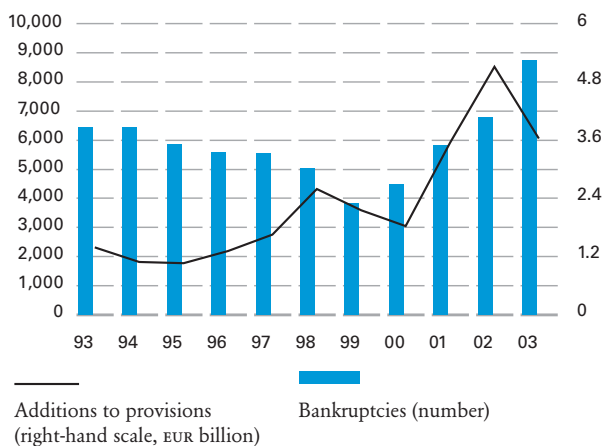
² Percentage.

est income in this period was, therefore, lower than the average in recent years.

The fall in banks' expenses was mainly as a result of the limited additions to provisions. Compared with the same period a year earlier, the addition was down by over 60%. In recent years, additions to provisions have been very volatile and several matters play a role in this. For example, it is often stated that provisions are formed procyclically, since credit risk increases in an economic downturn. On the other hand, there is the argument that credit risks are in fact accumulated during an economic boom and crystallise during a downturn, and so provisions should be formed in periods of growth. In such a situation, banks form more provisions when growth in lending (and, therefore, profit) is high. There is, however, no persuasive empirical evidence for these arguments. There are indications that Dutch banks have a (slightly) procyclical provisions policy. Additions to provisions increase when GDP growth is lower and when the number of bankruptcies is rising (Chart 2a). Additions to provisions also fall when operating profit is rising and vice versa (Chart 2b). In this light, the fall in the addition to provisions in the third quarter can be explained in part by a rise in the quality of the lending portfolio, given the improving economy.

Despite the limited increase in income, banks have been able to keep their solvency position stable at a BIS ratio (defined as a bank's capital divided by its risk-weighted assets) of 11.8% and a tier 1-ratio (defined as its core capital divided by risk-weighted assets) of 9.4%.

Chart 2a Bankruptcies and provisions



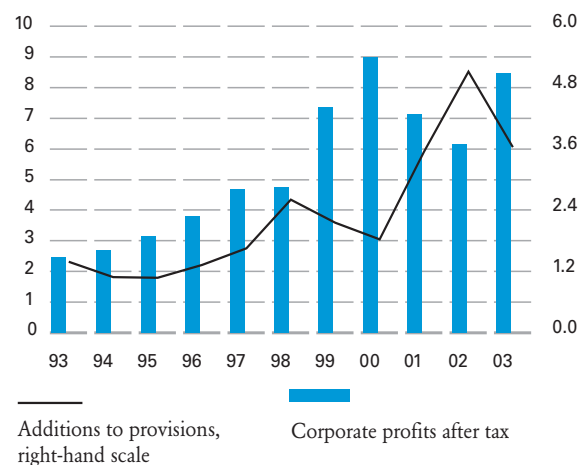
Source: DNB, Statistics Netherlands.

This BIS ratio is at more or less the same level as the solvency ratios of banks in other EU countries, while the Dutch banks' tier 1-ratio is considerably (over one percentage point) higher. The average BIS and tier 1-ratios of the largest banks are lower than those of banks as a whole, but can be related to advanced (more finely tuned) risk management systems and more diversified portfolios.

Despite the historically low level of long-term interest rates in recent years, the banks have managed to maintain a healthy profit position. Low long-term interest rates are linked with a persistently flat yield curve, which is continuing to put banks' interest rate margins under pressure. Although the associated lower interest income is traditionally the main source of income for banks (on average about 60% of their income comes from deliberate acceptance of interest rate risk), this has been offset by the continuing demand for credit (see Chart 3). The overall effect on banks' profitability cannot be ascertained in advance because quality effects, for example, play a role here (higher lending can involve greater credit risks for the banks). In order to mitigate the effect of lower interest rates, banks are making increasing use of innovative financial instruments such as interest rate swaps and securitisation. As well as the consequences for the lending portfolio, low interest rates create capital gains on the fixed-income bonds in banks' trading portfolios, but these are a smaller part of income.

Chart 2b Corporate profits and provisions

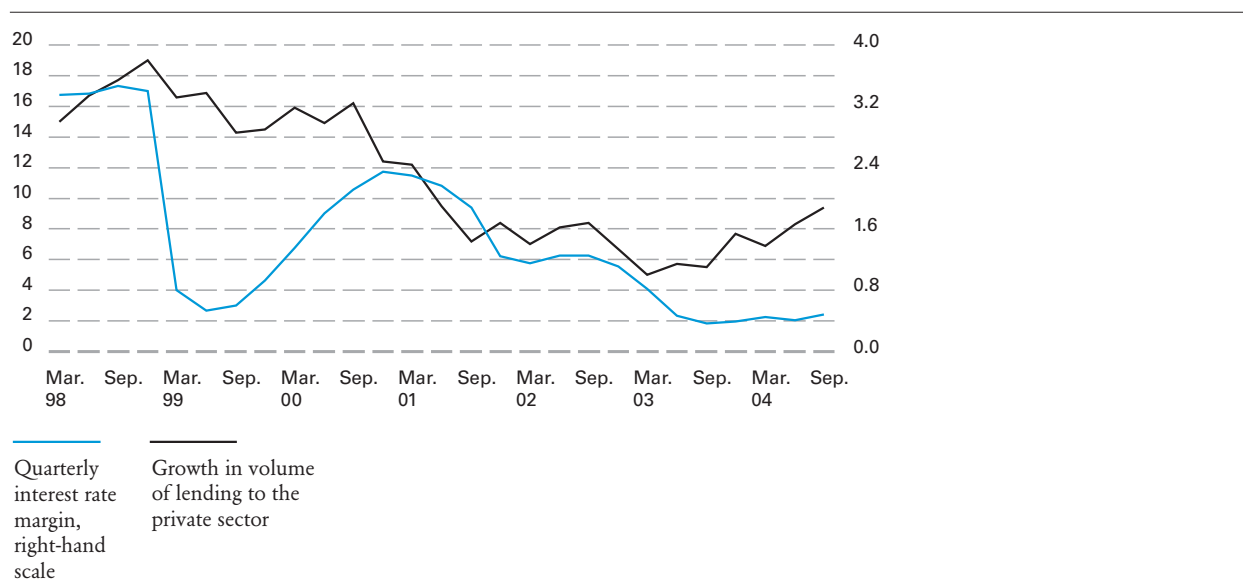
EUR billion



Source: DNB.

Chart 3 Growth in volume of lending to the private sector and interest rate margin

Percentages



Source: DNB and IMF.

Results of Dutch insurance companies

The insurance industry consists of life, non-life and in-kind funeral insurers. Non-life insurance includes for example, motor, fire and health insurance. The significance of the life sector is shown in particular by its total assets. At year-end 2003, these were EUR 256 billion for all life insurers under supervision, EUR 37 billion for non-life insurers and over EUR 1 billion for in-kind funeral insurers. The relatively low total assets of non-life insurers relate to the fact that non-life insurance, unlike life insurance, generally has short-term contracts. In 2003, the life and non-life insurance sectors had premium income of EUR 25 billion and EUR 21 billion, respectively. After a difficult period since 1999, the insurance industry gradually recovered in 2003. Results and premium income at life insurers, non-life insurers and health insurers rose in 2003 compared with 2002 (Table 3).

A distinction should be drawn in life insurance between policies on individuals (individual life) and policies in which one party insures other parties (group life, for example, a group pension policy for employees taken out by an employer). The increase in life premium income in 2003 came entirely from the group life segment, caused to a significant extent by the large amount of switching in this segment (a reserve already built up at one company is recorded as a premium by the company that the policy is transferred to).

Premiums for existing pension entitlements also rose to safeguard schemes against disappointing returns. In addition, the majority of pension entitlements in the group segment are linked to salary changes (average of about 4% in 2003). Premium income in the individual life segment stabilised compared with 2002. A note on trends in the life sector is that organic profitability of life insurance continues to be under pressure. In recent years, the number of new policies has fallen gradually in both the individual and group segments as a result of restrictions on the tax deduction for life insurance products since 2001. Furthermore, sales of individual unit-linked policies have fallen considerably as a result of the poor stock-exchange climate in recent years. Current low interest rates have also made it less attractive for consumers to buy long-term products, such as life insurance with guaranteed returns.

Results in the non-life sector improved mainly because of better risk assessment and greater attention to prevention, so that the claims burden fell. This fall was concentrated in motor insurance (as a result of fewer car thefts) and household fire policies. Consequently, the loss ratio – claims paid as a percentage of premiums earned – fell from 78% to 75%. In addition, ongoing cost cutting translated into a slight fall in operating expenses. Partly as a result of this, the net combined ratio (ncr) improved from 106 in 2002 to just above 100. This ratio is the proportion of operating expenses (excluding reinsurance) plus claims paid to

premium income. An ncr higher than 100 means a loss (excluding investment income). The favourable trend in the non-life sector appears to be continuing in 2004 given the increased attention to cost cutting and ongoing falls in the claims burden. The solvency ratio, the proportion of actual and required solvency margin, in the life and non-life sectors improved in 2003. The solvency ratio rose from 231% to 259% for life insurers and from 267% to 298% for non-life insurers, mainly as a result of the improvement in the stock exchange climate in 2003. This brought an end to the downward trend in solvency in both sectors since 1999. It should be noted, however, that the computation of required solvency is still not sufficiently based on the actual risk, and this may distort the picture.

Results in the health sector have benefited from premium increases. Furthermore, the fall in absenteeism through illness and fewer people claiming under the Occupational Disability Insurance Act in 2003 created a lower claims burden for the income protection insurance class. Increased attention to prevention and rehabilitation activities by insurers and the poor

state of the economy contributed to this. By contrast, results from health insurance are still negative and the net combined ratio is still over 100. The health insurance sector has been loss-making for years.

Insurers have also been hit by low interest rates in recent years. While banks are affected mainly by the yield curve (or interest rate margin), insurance companies and pension funds (see below) are particularly sensitive to the low level of long-term interest rates. Insurers face investment risk as a result of the mismatch between investments and liabilities, which can be considerable especially for life insurers. Partly for reasons of competitiveness, in the past many life insurers offered high interest rate guarantees or guaranteed minimum returns on their commitments. As a result of the current low market interest rates, the difference between the return on investments and that on liabilities (the profit margin) is under pressure. This may have consequences for insurers' solvency positions and they may, therefore, be drawn to reducing the return on new products, which could have an adverse effect on premium income.

Table 3 Results of Dutch insurance companies 2003

	Premium income 2003		Net combined ratio	Result (percentage of earned premium)				Solvency ratio (percentage)
	EUR billion	Percentage growth compared with 2002		2003	2002	2001	2000	
Total Life	25.1	5	n.a.	7.6	3	7	9	259
Total Health	10.5	8	96	5.8	5	2	-1	
medical expenses	6.4		102	-0.8	-2.1	-3.8	-2.4	
Total Non-life	11.1	7	101	3.9	0	0	0	298
motor	4.5	6	103	3.2	0	0	-1	
transport	0.6	5	97	6.8	5	6	-1	
fire	3.4	8	96	5.5	-1	3	0	
other, incl.:	2.7	7	105	1.7	2	2	2	
third-party liability	0.8	8						
legal assistance	0.4	13.2						
travel	0.4	2						

Source: DNB.

Results of Dutch pension funds

The financial performance of the pensions industry can be measured in two ways depending on the policy used to value pension liabilities. There has been a slight improvement based on valuation using the traditional discount rate but a deterioration can be seen in the solvency position in the third quarter of 2004 if market interest rates are used. Using the fixed discount rate of 4% to establish the amount of liabilities, the increase in the average asset-liability ratio was about 1 percentage point compared with the end of the second quarter (see also Table 4). The weighted average asset-liability ratio was 118% for the 75 largest pension funds that report key information to the supervisory authority each quarter. For most pension funds, therefore, the third quarter brought a tentative improvement in the financial position, due entirely to investment results. The slight fall in the stock markets in this period (MSCI World Index (with reinvestment) in euro: -3.4%) was offset by positive investment results on the portfolio of fixed-income securities, the property portfolio and commodities. The dominant factor in the last category was the sharp increase in oil prices (+40%), but commodities only make up a small part of pension funds' investment portfolios.

The slight improvement in the solvency position described above depends on the method for valuing pension liabilities. A fixed discount rate is currently

used for this valuation and so, if there is a fall in interest rates only the positive effect on the financial position will be reflected through an increase in the price of fixed-income assets. Pension funds are already able to opt for marking liabilities to market under a new policy rule issued by the supervisory authority in October 2004 (transitional regime for the financial assessment framework). This means that the fixed discount rate is replaced by the current yield curve on the capital market (see below in this article). If valuation is based on current interest rates, the fall in capital market interest rates had a strong effect in the third quarter. Although this resulted in a profit on fixed-income investments, the other side of this was that the value of liabilities also rose (and relatively more strongly). When the interest rate risk is incorporated in the liabilities in this way, the conclusion is that the financial position of the pensions industry must have deteriorated again in the third quarter, as in the second quarter. As the average term of pension liabilities is generally 2½ to 3 times longer than the term of the fixed-income investments, an interest rate fall has a greater effect on the value of the liabilities. The opposite effect of the interest rate movement on the financial position of the pensions industry under marking to market shows that volatility in interest rates will be a real, if not the most significant, element in the overall risk management of pension funds in future, when all pension funds have moved to marking to market.

Table 4 Results of Dutch pension funds

	2003			2004		
	II	III	IV	I	II	III ³
Asset-liability ratio ¹	116	119	117	118
Invested assets ²	457	459	479	504	502	512
of which equities	174	180	196	206	209	205
fixed-income	224	220	215	229	223	237
property	46	47	47	50	49	50
commodities	5	5	6	7	8	10
Percentage return ⁴	5.0	1.1	1.9	3.8	-0.7	
of which equities	10.4	3.8	5.7	5.3	-0.1	
fixed-income	1.1	-1.3	-1.8	2.7	-1.5	
property	0.7	0.4	-0.1	0.7	0.6	

¹ Weighted (by total assets) average asset-liability ratio for the 75 largest pension funds at quarter end. Source: DNB.

² Invested assets in billions of euros at quarter end. Source: DNB.

³ Provisional figures (based on 87% of invested assets). Source: DNB.

⁴ Source: Statistics Netherlands/DNB survey

Consultations and regulation

The Financial Assessment Framework (Financieel Toetsingskader/FTK) and transitional regime for pension funds

On 21 October 2004, the then PVK published a consultation document on implementation of the financial assessment framework for pension funds and insurers. The industry has been asked to respond in an open consultation. The FTK includes a solvency test and a continuity analysis. A significant innovation compared with the current regime is the introduction of fair value as the basis for valuing both liabilities and investments. The current method of valuing pension and life-insurance liabilities is based on a maximum, fixed discount rate. Another new element is explicit analysis of the way in which institutions ensure continuity in their financial structure. These two changes improve the insight into an institution's financial position and allow both the institution and the supervisory authority to take corrective action at an earlier stage. The new FTK is based on the memorandum of principles published by the PVK in September 2001. Following publication, there were informal consultations on the initial implementation plans with all interested parties and those concerned, using the discussion documents. These discussion documents were also published. The internal and external comments were then incorporated into the substantive and practical application of the FTK. The international dimension, including the revision of accounting standards (IASB/IFRS), the Solvency 2 project for the revision of European insurance directives, and the Basel II framework for banks, has also been very important here.

The FTK also offers an instrument for risk-based supervision. With the FTK, supervision can be more in line with national and international developments in the financial world where competition, overlaps between industries and new investment methods play a key role. In addition, supervision methods in Europe are converging. The FTK fits in with this development and contributes to the Netherlands remaining a leading country for insurance and pensions. Thanks in part to being able to use internal models, the FTK can help to cut the administrative burden as internal models are generally aligned to a large extent to an institution's internal reporting. Furthermore, the risk sensitivity of the FTK helps in tailoring supervision more closely to the characteristics of individual institutions so that the effectiveness and efficiency of supervision can be improved with a limited amount of additional effort from the supervisory authority.

For insurance, work is progressing on the development of Solvency 2, the European project for determining the required margin of solvency in a more risk-based way, as for banks under Basel II. The FTK fits into this development and so it is already possible to benefit from this. If progress on Solvency 2 is good, the result of the FTK consultations, in conjunction with practical experience, will be reflected in the legislation implementing Solvency 2. No amendments are currently needed to the Act on the Supervision of the Insurance Industry 1993 to apply elements of the insights emerging from the FTK; the current provisions give sufficient scope for incorporating elements of the FTK in the supervision of insurers and reports arising from it. The FTK does not change the existing statutory capital adequacy requirements for insurers. The FTK is also a catalyst for clearing and streamlining existing supervision reports and so may reduce the administrative burden on institutions.

For pension funds, the FTK will be anchored in the Pensions Act, and a Bill is expected in the coming parliamentary year with an intended implementation date of 1 January 2006. The outlines of the new Pensions Act were set out in a government policy paper on the main principles for regulation of the financial supervision of pension funds in the Pensions Act (hereafter: main principles memorandum). The Lower House of Parliament reacted positively to this on 11 March 2004. It was also concluded that the Under-Minister for Social Affairs and Employment and the Lower House saw no obstacles to applying the assumptions in the main principles memorandum to supervision. A consequence of this is that a confidence level of at least 97.5% can be used from now on (in other words the probability that a shortfall of cover will not occur more than once in forty years).

One of the basic assumptions in the main principles memorandum is that assets and liabilities must be valued at fair value. This valuation method creates additional fluctuations in the financial position. The main principles memorandum offers an important method for limiting premium fluctuations as a recovery period of up to 15 years is permitted if there is a shortfall on reserves. In addition, stabilised self-funding contributions can be set, provided that the guidelines for the required capital are respected. Contribution discounts are only allowed if the fund capital is above the required level and, furthermore, is sufficient to achieve the indexation ambition in the longer term. A pension fund does not have to form a reserve for conditional indexation commitments provided the scheme rules and communications on this are consistent.

Communications to members must be completely clear on this.

Pension funds that wish to, may anticipate the new Pension Act. A transitional regime for pension funds has been introduced for the period until the new Pension Act takes effect, i.e. in any event 2004 and 2005. After consulting pensions industry coordinating bodies, DNB published guidelines on this on its website on Friday 22 October 2004. These guidelines are in line with the main principles memorandum and further details on it issued by the Minister of Social Affairs and Employment. The existing supervision policy continues to apply in full to pension funds which cannot or do not yet wish to meet all the criteria in the main principles memorandum.

Introduction of Basel II

The definitive text of the Basel II framework on capital adequacy requirements was adopted by the Basel Committee on Banking Supervision in June this year. Depending on the approach used, the new capital adequacy regime is expected to be introduced at the end of 2006 (standardised approach) or the end of 2007 (advanced approach). Implementation of Basel II by banks with international operations that want to be eligible for the advanced approach (such as the large Dutch banks) demands intensive co-operation and co-ordination between the relevant national supervisory authorities. Under the new draft EU Directive that converts the Basel II framework into EU legislation and the principles on co-operation set by the Basel Committee, the supervisory authority in the country where the bank has its head office is responsible for co-ordinating the Basel II implementation. Consequently, DNB is responsible for the consolidated supervision of the implementation of Basel II by the large Dutch banks. The preparatory steps needed for this have now been taken.

To start with, all host-state supervisory authorities have received a letter notifying them of the implementation of Basel II by the large Dutch banks and the way in which DNB will monitor and test it. In principle, DNB will take the initiative for assessing the risk models and systems that have been developed centrally by the head offices. In exceptional cases, for example where foreign subsidiaries of Dutch banks use different risk models and techniques, their national supervisory authorities may be better placed to validate them. Those supervisory authorities may also have sound reasons for assessing the local application of centrally-developed systems by subsidiaries in their countries. In other words, DNB leads the co-ordination of the supervision work, with

host-state supervisory authorities playing a significant role in validating the systems at subsidiary institutions.

Meetings will be held with all host-state supervisory authorities in early 2005, in order to give them further information and get them involved. It was specifically decided to involve all host-state supervisory authorities in the initial phase of this co-ordination process. For efficiency, a more differentiated approach will probably be desirable at a later stage. More intensive co-operation could be developed with authorities supervising foreign entities in a Dutch bank group which form a significant part of that group, or which have a great weight in the financial system of the host country. All in all, this approach limits the burden on banks from implementing Basel II and contributes to efficient use of supervision capacity at both DNB and the host-country supervisory authorities.

Customer Due Diligence

A financial institution may become the victim of the dishonest intentions of people or businesses and unwittingly facilitate illegal activities. These activities can range from money laundering to raising funds for terrorism. There may be considerable risks for a financial institution if inadequate steps are taken to prevent these activities. There is a risk of damage to the institution's reputation or it may even be held liable. To limit these risks, a financial institution must know who it is doing business with. To this end, the Regulation on Customer Due Diligence (CDD Regulation) came into effect for Dutch credit institutions and insurers on 1 January 2004. The CDD Regulation criteria are based on internationally agreed standards and focus mainly on the institution developing a CDD policy. Financial institutions are required to have a proper client acceptance and identification policy focused on getting information on the client's background and other relevant details. The substance of the policy is a risk-based approach. This means that the institution assesses the risks involved with a given client or a given service, product or activity. The bank or insurer focuses mainly on those clients who the institution has decided from its CDD policy have an increased risk from acceptance or possible further service provision. In order to reduce the possible risks, an institution must then apply control measures. DNB now expressly includes CDD requirements in its supervision. This is not limited to checking whether an institution has a proper policy and adequate procedures and measures, but mainly at whether they all contribute to the best possible cover against integrity risks. A trend has now been seen in the supervision of banks towards

relaxing the more rule-based approach (clearly-defined frameworks in laws or rules) and people becoming more familiar with using the risk-based approach. This approach also meets general supervision wishes.

Introduction of International Accounting Standards

Step by step, the outlines of the introduction of international standards for financial reporting (IAS/IFRS) in the Netherlands and Europe have become clearer in the past year, although the details have still not been finalised. The government has decided in the relevant draft legislation of 7 September 2004 to permit the *voluntary* use of IAS/IFRS in the consolidated and company financial statements of unlisted enterprises and in the company financial statements of listed companies. In addition, the use of IAS/IFRS is already *mandatory* for the consolidated financial statements of listed companies under an EU regulation. The earlier cabinet proposals for extending the use of IAS/IFRS to the financial statements of all credit institutions and insurers has been dropped for the time being. These institutions may only use standards approved by the European Commission. IAS 32 (Financial instruments: disclosure and presentation) and IFRS 4 (Insurance contracts), standards of great significance to the financial sector, are expected to be approved in full. A decision on the full recognition of IAS 39 (Financial instruments: recognition and measurement) has not yet been taken. There are temporary exclusions pending definitive rules on the optional use of *fair value* valuation for financial instruments and the outcome of the ongoing discussion between the IASB and banks on *hedge accounting* rules.¹

The IASB is still making the final revisions to the standards that it wants to apply from 2005. Preparations are being made for a more fundamental revision of IAS 39 and the development of a definitive standard for insurance contracts. DNB is following national and international developments closely. A key point for DNB is that the published financial statements should, as far as possible, be the basis for the supervision report from 2005. Single-track reporting is to the fore in this. However, where IAS/IFRS do not offer a satisfactory outcome for supervision, DNB will apply *prudential filters*. This means that specific adjustments must be made to the financial statement figures when computing solvency. In this area, DNB is consulting fellow supervisory authorities in various global and European bodies. Attention is also being given to harmonising supervision reporting models. DNB is aiming to achieve possible further convergence between published reports and the supervision report in the international sphere in the longer term,

partly with a view to cutting the administrative burden. In recent months, DNB has investigated the implementation of IAS/IFRS by banks. In general, Dutch banks' preparations for this have been made professionally but the implementation project is being hampered by the uncertainties in the final regulations mentioned above. The introduction is also difficult to manage given the need to update group-wide IT systems and the combination with other projects such as the American Sarbanes-Oxley Act and the Basel II framework.

¹ For IAS/IFRS, hedge accounting is defined as the use of one or more hedging instruments so that the change in the fair value of those instruments fully or partly offsets the change in the fair value or cash flows of a hedged position.

Recent developments in payment and settlement systems

The European central banks are working on a common large-value payment system for payments between financial institutions, which is called TARGET2. Detailed specifications for this system are expected to be agreed by the Eurosystem at the beginning of next year.

Since November 2004, DNB and Interpay have been offering Dutch banks access to the STEP2 system of the Euro Banking Association on a cost-recovery basis. This system is intended for payments of up to EUR 12,500 in the euro area. By having cross-border payments via DNB and Interpay processed by STEP2, banks avoid the high costs of direct access to this system, while cutting the costs of cross-border payments.

The National Forum on the Payment System has published a report on the accessibility of bank services. The number of bank branches has declined in recent years, with the result that it can be difficult for consumers and businesses to access bank services at a local level. The report uses a number of measures to describe the accessibility of bank services in a number of municipalities so that municipalities can compare their local problems with those in similar municipalities. The report provides an overview of solutions and best practices that can improve the accessibility of bank services.

The number of counterfeit records recorded by DNB has fallen since the beginning of 2004, but the public must, of course, continue to be on their guard. DNB has published the test results of counterfeit detection equipment on its website, which potential buyers can use to help them choose the most appropriate equipment. It should be noted that a test is a snapshot in time and DNB will therefore be carrying out these tests periodically with a set of the latest counterfeit banknotes.

TARGET 2

The EU central banks are working on a new real-time gross settlement system for euros, TARGET2. Like the current TARGET system, this system is primarily intended for monetary policy transaction settlement, for settling clearing system positions and for making large-value interbank payments. Each day, TARGET handles an average of over EUR 1,800 billion in payments. TARGET2 will replace the current central bank systems and will become a central European system. The continuity and reliability functions of this system are superior to those of the existing systems. A distinction will no longer be made between domestic and cross-border payments,

including in terms of charges, so that payments will be processed as euro-domestic payments. Actual payment processing will take place in Germany and Italy alternately, while statistical and statement issuing services will be provided in France. The central banks of these three countries are currently carrying out the technical development of the project, on the instructions of the central banks in the Eurosystem.

The outline specifications have been drawn up in consultation with the market and were approved in July 2004. The detailed specifications are in the final phase following a consultation round for market participants ending in mid-December 2004. A number of additions will be made in the following months, enabling the final detailed specifications to be adopted by the Eurosystem at the end of the first quarter of 2005. TARGET2 will be developed during 2005 and part of 2006. During the same period, the commercial banks will modify their systems for connection to the new system. According to the timetable, the system will be tested from the second quarter of 2006 on, which will be followed by phased migration in 2007, probably in four groups. DNB's preference, and also that of the Dutch banks and clearing organisations, is for migration in the second group, probably in April 2007. This is based upon consideration of the risks, speed and the availability of human and other resources. DNB has decided that it will cease to operate its own systems from the time of migration; after the changeover to TARGET2, DNB's own large-value payment system, 'TOP', will therefore be dismantled. In spite of the fact that certain other central banks will keep their own subsystems operational for national solutions for a transitional period of three to four years, by far the majority of all payments will be processed centrally as from 2007. The TARGET2 start date is also important for Estonia, Lithuania and Slovenia, which have recently joined the ERM II exchange rate mechanism. If they join the monetary union in 2006 they will need to be able to join TARGET2 as from 1 January 2007 to process monetary policy transactions.

STEP2 services

Under a European regulation, banks are required to process cross-border payments in Europe for the same charges that apply to domestic transfers. For Dutch consumers this means that a transfer to, for example, a campsite in France is 'free', as is the case for a transfer

within the Netherlands. For the banks of these consumers, however, the costs of a cross-border transfer are much higher than the costs of a transfer within the Netherlands. The European banks are therefore actively looking for ways to process cross-border payments more efficiently. The STEP2 system currently offers the greatest potential in this regard. Since 8 November 2004, DNB and Interpay have jointly been offering Dutch banks access to the STEP2 system of the Euro Banking Association (EBA). The STEP2 system is primarily intended for processing payments of up to EUR 12,500 within Europe. The STEP2 service may offer particular benefits to small and medium-sized banks.

STEP2 is not directly accessible for all European banks. Banks need to be members of the EBA and of the EBA's EURO1 payment system for large-value payments, which involves high membership and subscription charges. For many banks, these costs would not be offset by the savings that they could achieve by having their payments processed via STEP2. Another option is for a bank to send and receive payments through a large bank that is a member of the EBA. In view of the move towards euro-domestic payments, a Dutch bank that would choose now to use a large bank to process its European cross-border payments, would also seem in essence to be opting not to process existing domestic payments by itself within a few years. However, a number of Dutch banks regard the processing of domestic payments as a key task, because this is an important element of their relationship with their customers.

In view of the problems outlined, which are the need to cut the costs of European cross-border payments and the barriers of entry to STEP2, a number of banks have asked DNB and Interpay to play a role in providing access to STEP2. For DNB, the decisive argument underlying its decision to provide this service was that the efficiency of payments would be increased if more banks were placed in a position to use STEP2. However, a precondition of the service is that it must be offered on at least a cost-recovery basis to the participating banks, because the intention is not to compete with the commercial banks that also offer access to STEP2.

Since DNB does not see a role for itself in the actual processing of retail payments, DNB can only develop and offer this service jointly with Interpay. Conversely, Interpay needs DNB, as Interpay cannot be an EBA member. Only banks can be members of the association.

Six banks have been using the service since it started, namely SNS Bank, Dresdner Bank, Bank of America, Delta Lloyd Bank, Bank Nederlandse Gemeenten and

Nederlandse Waterschapsbank. In the next few months, a number of medium-sized and smaller banks are expected to join the service.

National Forum on the Payment System

The National Forum on the Payment System that represents providers and users of payment systems, is seeking to effect improvements in the accessibility, efficiency, security and technological developments of retail payments. The matters considered at its second meeting in 2004, on 15 November, included the following.

Accessibility of bank services

The National Forum on the Payment System has published the report 'Bereikbaarheid bancaire dienstverlening – analyse en inventarisatie van oplossingen en 'best practices'' ('Accessibility of bank services – an analysis and review of solutions and best practices'), which can be found on the National Forum on the Payment System page of DNB's website. The section of the report on the analysis considers the nature of the issue and explains that the decline in bank services is not an isolated phenomenon. It is also occurring in the case of many other types of services, both in the private and in the public sectors. The clearest manifestation of these trends in bank services is the closure of bank branches. The number of bank branches has fallen more rapidly than the number of ATMs has grown, so that the number of places where consumers can withdraw cash has reduced in recent years. Branch closures are also creating problems for businesses, particularly with regard to depositing surplus cash and withdrawing change. These developments are the result of social and technological trends. The IT revolution, for instance, has meant that the banks currently use a range of alternative distribution channels, whereas previously the bank branch was the only distribution channel. Call centre and Internet banking services are currently used by large numbers of consumers. As a consequence, bank branches have come to focus more on high-value advisory services and relationship management. In view of the high costs of keeping branches open, it is therefore no surprise that banks are intensively promoting the use of new distribution channels. The result is a balancing act between sound commercial management on the one hand, and meeting the social obligation to ensure the availability of bank services, on the other hand.

As well as providing a general analysis of the issue of accessibility, the first part of the report discusses a number of accessibility statistics for a representative group of municipalities, such as the number of inhabitants per cash withdrawal facility and the total area served. These statistics enable local administrators to see how their situation compares with that in similar municipalities and thereby put any problems into perspective. The second part of the report reviews solutions and best practices and discusses aspects such as the initiatives that the banks have developed together with other service providers to deal with the problems. Examples are the activities of Rabobank (multifunctional service units), Postbank (cash service points) and ABN AMRO (multifunctional service buses). In addition to these 'customised' solutions, the report also covers solutions that are more generic and more facilitating in nature and that can help to overcome the problems, such as the possible expansion of small-scale cash transport facilities and improving the public information campaign on cash-back (debiting a larger amount to a debit card than the purchase amount and receiving the difference in cash from the retailer). Retailers who offer this facility are asked to indicate this through a clear notice stating the maximum amount that can be withdrawn and, if applicable, any charge.

Rounding off cash payments

Following a successful trial in Woerden between April and June 2004 and on the advice of the National Forum on the Payment System, rounding off the total amount paid in cash at retailer's tills to the nearest multiple of 5 eurocents has been introduced nationwide. As from 1 September 2004, over 70,000 retailers have voluntarily adopted this policy. Retailers are required to make it clear to consumers in advance that rounding off will be applied in their stores, for example, by displaying a sticker on the door and/or at the till. Use of 1 and 2 eurocent coins was very inefficient and costly for retailers and these problems are now resolved. Based upon the positive experience with rounding off on a voluntary basis, the National Forum on the Payment System believes that legislation is not needed for the time being.

Identity fraud

Society is increasingly being confronted with identity fraud, a problem that is also occurring in relation to payments. Unique identity data is being accessed by third parties, for example, by card cloning, theft of identity cards, the retrieval of personal details from refuse, and is used by these parties to take on the identity of

the legitimate owner with a view to committing fraud. There are different ways of combating the various forms of identity fraud, and the chances of success can be increased by raising awareness of the risks. The National Forum on the Payment System has therefore recommended that a public awareness campaign should be started and that it should not be confined to the payment system, but should involve all of the relevant parties (the government, police, judiciary and members of the National Forum).

Issue of coins

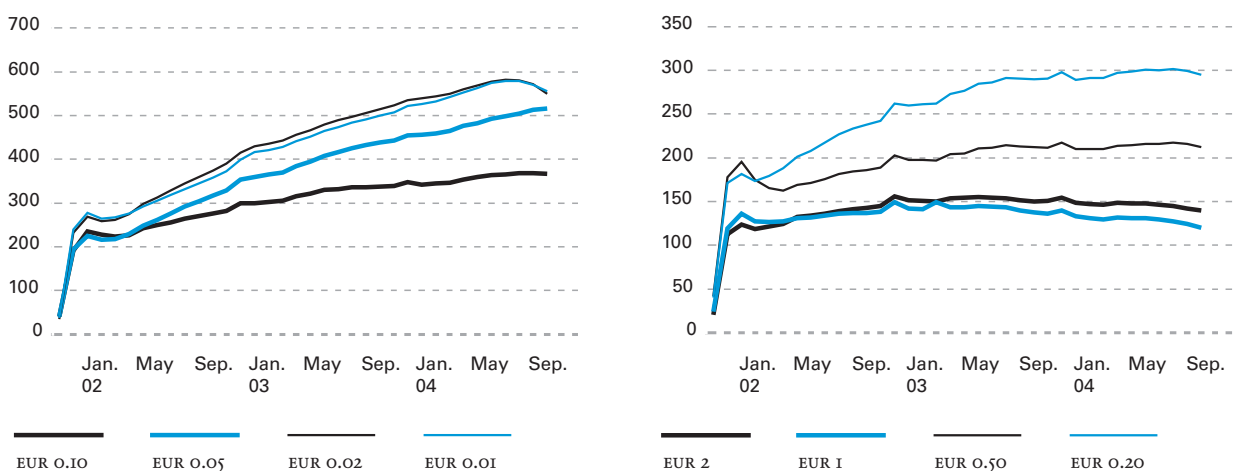
Changes have occurred in the issue of coins by DNB recently, which in part reflect a number of changes in the use of coins in payments in the Netherlands. The effects of coin migration in the euro area are also gradually becoming clear. Coin migration in the euro area arises through business travellers and tourists taking coins out of their own countries with them and then returning with foreign coins. The changes in the cumulative net issue (cumulative number of coins issued less the number of coins received) for the eight coin denominations are shown in Chart 1.

The introduction of rounding off cash payments in September has brought about a sharp fall in demand for 1 and 2 eurocent coins, because retailers no longer need to hold these coins as change. Whereas in the past DNB virtually only issued the 1 and 2 eurocent coins and received virtually none, this position has reversed since September 2004, with the result that large numbers of these coins are received, but they have virtually ceased to be issued. Over the next few months, it is expected that large numbers of 1 and 2 eurocent coins will be returned to DNB, resulting in large stocks of these coins. The number of coins of these two denominations issued by DNB peaked at approximately 580 million at the end of August. This represented just over 40% of the net number issued by DNB. DNB's surplus stocks of eurocents will probably be delivered to other national central banks in the euro area.

There will be a rise in the net issue of other low coin denominations – the 5, 10, 20 and 50 eurocent coins – this year, although it will be lower than in the two preceding years. Since the introduction of euro banknotes and coins, the issue of these coins has begun to stabilise after two years of high growth. This is a sign that the public is gradually completing the process of building up new holdings of eurocent coins (and replacing the old national coins).

Chart 1 Net issue of coins by DNB

Month-end figures, millions of coins



Source: Interpay.

In the case of the higher denomination coins, the EUR 1 and EUR 2 coins, there is evidence of a clear migration effect. Strong growth in the net issue by DNB in 2002 has now become a slight fall, which is expected to accelerate this year. This means that the Netherlands is becoming a net recipient of these coins, which are generally more inclined to be the subject of migration than the smaller coin denominations.

Continued growth in the number of prepaid card payments

Chart 2 shows the trend in the number of payments made by prepaid card (the electronic purse) and how these payments have been distributed among the principal submarkets in 2003 and 2004. Seasonally adjusted, the number of prepaid card payments is continuing to grow. In the first three quarters of 2004, 91 million prepaid card payments were made, with a total value of approximately EUR 250 million. This represents a growth in the number of payments by 16% relative to the corresponding period in 2003, although the growth is lower than in the two preceding years, when it was approximately 30%. This may be an indication that the growth is plateauing at a reasonably modest level relative to the total number of point-of-sale payments, which stands at approximately 8 billion.

The trend in the number of prepaid card payments is different for each submarket. The most rapid growth in the last three quarters has been in catering (+23%).

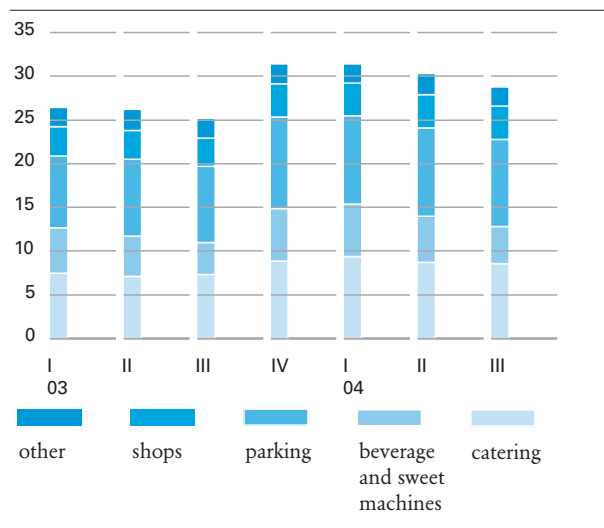
The ‘other services’ category includes very specialised submarkets, where growth is higher, for example, 52% in the case of museums and cinemas and 26% in the case of public transport. However, some submarkets have seen a decline in the number of prepaid card payments, such as payments in telephone boxes (-11%) and cigarette machines (-8%). Relative to the number of retailers that accept prepaid cards, use of these cards in shops continues to be low.

The survey on the costs of point-of-sale payment instruments carried out by DNB as a member of the National Forum on the Payment System (see the article ‘The cost of payments’ in the March 2004 Quarterly Bulletin) has revealed that the prepaid card is the most cost-effective point-of-sale payment instrument. Growth in the number of prepaid card payments is helping to cut the societal costs of retail payments.

An international comparison on prepaid card use reveals that in the vast majority of countries, apart from Singapore and Hong Kong, use of the prepaid card is much more modest than in the Netherlands. The large number of transactions in these countries is due to the use of the prepaid card in public transport and for toll roads. Particularly in Hong Kong, the prepaid card for public transport is also frequently used in shops. Unlike the Dutch prepaid card (e-purse), in Hong Kong the card does not need to be inserted into a device, but only needs to be held near to a card reader. The prepaid card for public transport that is being developed in the Netherlands works in a similar way. In Belgium, use of the prepaid card is slightly greater than in the

Chart 2 Trend in number of prepaid card payments, by submarket

Number of payments in millions



Source: Interpay.

Netherlands. Further innovation of the Belgian card is scheduled for 2005, which will make it easier to use. It will then be possible to load the card automatically up to a preset balance whenever it is used in an online terminal. This will substantially reduce the frequently cited disadvantage of prepaid cards, which is the risk of the balance being too low.

An example of how the prepaid card is being made more user-friendly in the Netherlands is the introduction of talking prepaid card loading points. In mid-November, Rabobank started to install these devices in care homes to make it easier for the blind, visually impaired and the elderly to load their prepaid cards. The talking loading points give users more time to load the prepaid card than normal loading terminals and also give instructions on loading the card, which simplifies the loading process.

Testing of counterfeit detection equipment for the retail trade

The number of counterfeit banknotes identified in the Netherlands has fallen in recent months, but this does not mean an end to the problem of counterfeiting. The June and September 2004 Quarterly Bulletins reported that DNB is testing counterfeit detection equipment for the retail trade. The equipment in question indicates whether a euronote is genuine or counterfeit. All the user needs to do is to place the note in the equipment

and it will decide. Through its tests, DNB is trying to obtain information on the reliability of the different equipment on the market. Other equipment, such as UV lamps, infra-red equipment and devices equipped with magnifying glasses and mirrors have been excluded from the tests because they can only be evaluated according to subjective criteria. They may in fact be valuable tools, because the knowledge needed by users in order to be able to decide whether a banknote is counterfeit continues to be an important weapon in the identification of counterfeit euronotes.

The test results for autorecognition devices, which DNB has published on its website (www.dnb.nl), have attracted considerable interest, not only nationally, but also internationally. This interest has meant that the European System of Central Banks (ESCB) is now considering the options for following this up on a European scale.

Publication of the test results naturally benefits the potential purchasers of detection equipment in terms of helping them to make choices, but equipment suppliers also have an interest in their equipment being tested using as full and up-to-date a set of counterfeit banknotes as possible. For obvious reasons, they themselves have only limited facilities to do so. The testing and publication of the results provides them with more information about how their own equipment works correctly and helps them to work on ongoing improvement. On several occasions, for example, suppliers have modified their equipment extensively or have dropped the equipment from their product range after unsatisfactory test results.

It is important for published test results to be interpreted correctly by potential buyers because this will help them greatly in making the right choice. First of all, it is important that they recognise that a test is a snapshot in time, showing, broadly speaking, how different devices perform relative to each other on the test date, using the counterfeit banknotes that have been identified at that time. If counterfeit banknotes are correctly identified during the test, this is not a guarantee that new types of counterfeit notes will also be identified, however. DNB therefore repeats the test periodically with an entirely new set of counterfeit notes and updates the published test results where necessary. The results of the round of tests in December, for example, will be available on the Internet from the second week in 2005.

A further factor is that a device that achieves a relatively low score for its ability to recognise genuine banknotes correctly will not necessarily be inferior, because

the score will partly depend on the detection strategy chosen by a manufacturer. Certain devices will concentrate on checking only one feature very accurately and will do this extremely well, whereas others will check a whole range of features and will only approve a banknote if all of the features checked are found to be in order. This latter category, i.e. the 'careful deciders', will be somewhat more sensitive to damaged banknotes because damage to one of the features alone may lead to a 'not recognised as genuine' result. Actually, the set of genuine banknotes used in the tests deliberately includes a slightly higher number of soiled and damaged banknotes than occurs on average in circulation. This means that the test covers a wide range of banknotes, with which cashiers will be confronted in practice, without the test set becoming too large, and at the same time it enables any minor differences between devices to be highlighted.

A useful tip for potential purchasers of detection equipment is that counterfeiters generally only forge a limited number of security features simultaneously. And just as DNB advises everyone to check at least three features, so it is true for detection equipment that the risk of accepting a counterfeit note reduces as more and more features are found to be in order. 'Careful deciders' – equipment that checks a large number of features – may therefore offer benefits when new types of counterfeits appear. Even then it continues to be a must to be familiar with and be able to check security features by oneself. This is also useful if a device fails to work.

Securities settlement

Pan-European and harmonised securities settlement

The activities of the Belgian-based settlement organisation, Euroclear, include the settlement of transactions on the Euronext exchanges. Settlement systems for these transactions have traditionally been different for each country because they were set up for the national markets. In addition, the systems need to comply with national legislation and regulations, which have yet to be harmonised. Euroclear has set an objective of having a single IT platform on which the securities transactions of the three Euronext exchanges can be settled centrally by 2007. Euroclear believes that this will make the settlement of cross-border securities transactions less complex and more efficient.

Euroclear has divided the development of this pan-European platform into a number of subprojects,

which include the development of a single-settlement engine (SSE) and will bring the required IT components into operation on a phased basis. The first step was the introduction, in September 2004, of Euronext Amsterdam Stock Exchange Settlement, which is a change in the settlement method for securities transactions effected in Amsterdam, as a result of which the clearing organisation LCH.Clearent SA was able to consolidate its national clearing systems. Euroclear's securities settlement platform will be linked to the European payment system TARGET2. The set-up of both TARGET2 and the SSE will be developed with the option of achieving an efficient and secure link between pan-European platforms.

Reorganisation of the Euroclear Group

In order to bring the Euroclear organisation in line with these developments, Euroclear will be reorganised with effect from 1 January 2005. The main objectives of this reorganisation are the promotion of transparency and uniformity of organisational structure in the countries concerned and the improvement of corporate governance. The Dutch securities settlement organisation, Euroclear Nederland, will become a subsidiary of a newly incorporated parent company, Euroclear SA (ESA), and will cease to be a subsidiary of Euroclear Bank. Under Belgian legislation, ESA will be regarded as a settlement organisation and will be subject to prudential supervision by the Belgian Banking, Finance and Insurance Commission and to oversight by the National Bank of Belgium. Euroclear Bank, the existing parent of Euroclear Nederland, will also become a subsidiary of ESA and will therefore have the same organisational position as the national central securities depositories. This change will reduce systemic risk, because, for example, there will be less chance of the credit risk to which Euroclear Bank is exposed having an impact on the proper operation of the securities settlement infrastructure. An ESA branch will also be set up in the Netherlands, which will be responsible for group services that are provided in the Netherlands.

Memorandum of Understanding on co-ordinated oversight and supervision of Euroclear

In order to also streamline supervision of the continuing harmonisation of platforms, the various national supervisory authorities and overseers of Euroclear intend to enter into a Memorandum of Understanding. The shared services that Euroclear manages centrally and provides to the national central securities depositories (CSDs) will be monitored by the supervisory author-

ities and overseers jointly. The Netherlands will be represented by DNB and the Netherlands Authority for the Financial Markets (AFM). As long as there remain considerable differences in settlement systems for the member countries, however, the national supervisory authorities will have the task of assessing major system changes on a national level. When assessing these changes, DNB will focus in particular on systemic risk and the proper functioning of the systems.

Implementation of Euronext Amsterdam Stock Exchange Settlement in the Dutch market

On 5 November 2004, Euroclear Nederland implemented a second version of the Euronext Amsterdam Stock Exchange Settlement system. Under the original settlement method, the purchase of securities had to be prefinanced during processing and LCH.Clearnet SA had therefore entered into a liquidity facility with a number of commercial banks that were also members of the LCH.Clearnet SA system. There were objections to this structure from an oversight perspective. The settlement method has been changed in the second version, which has enabled the liquidity requirement to be substantially reduced. Therefore, the liquidity facility has been cancelled.

Articles

DNB and the Pensions and Insurance Supervisory Authority of the Netherlands merge: a new organisation under a familiar name

As from 30 October 2004, the Nederlandsche Bank (DNB) and the Pensions and Insurance Supervisory Authority of the Netherlands (Dutch acronym: PVK) have merged. The merger is the natural conclusion to a process of integration which had been set in motion earlier. It was prompted by changes within the financial sector such as the emergence of vast financial conglomerates, the explosive growth of capital flows, increasing globalisation and de-specialisation. The new organisation constitutes an improvement of the efficacy and efficiency of prudential supervision. Furthermore, the synergy between supervision, monetary policy and oversight on payments can now be exploited to the full. DNB is thus able to contribute even more to financial stability, one of the main pillars of a sound economy.

Introduction

As from 30 October 2004, DNB and PVK have formally merged. The new organisation operates under the familiar name of De Nederlandsche Bank (DNB). On 1 May 2004, the work forces were in fact already integrated, but DNB and PVK continued to function as two legally separate institutions. While PVK had been reorganised earlier, DNB was thoroughly reorganised during the merger process.

The new organisation's mission is '... to maintain the stability of the financial system and of the institutions ... in that system.' In pursuit of this aim, DNB

- contributes to the price-stability-oriented monetary policy of the euro area through its participation in the European System of Central Banks,
 - exercises supervision on the soundness of financial institutions, i.e. their solvency and liquidity, and consequently the integrity of their operations, so that the public can rely on liabilities being met,
 - exercises oversight on payments and promotes the smooth operation of the payment system,
 - exercises material supervision on pension funds and performs other tasks delegated to it by the Government,
 - performs and stimulates research relating to the above.
- The organisation shall perform its tasks effectively and efficiently.

Run-up to the merger

Financial supervision in the Netherlands was always organised on a sectoral basis. DNB exercised supervision on banks and collective investment schemes, the Pensions and Insurance Supervisory Authority of the Netherlands (PVK) on insurance corporations and pension funds, and the Securities Board of the Netherlands (STB) on securities institutions. In the course of 2002, the supervisory structure was completely overhauled and its traditionally sec-

toral organisation was replaced by a functional approach. Several objectives were envisaged, namely to boost a level playing field among financial institutions, to adopt an unequivocal approach to consumers and to improve supervision. With these goals in mind, the Netherlands Authority for the Financial Markets (AFM, the successor to STB) has since become exclusively responsible for conduct-of-business supervision on the entire financial sector. Conduct-of-business supervision seeks to promote an orderly and transparent market process and a level playing field for market parties, and to protect consumers. PVK and DNB became responsible for prudential supervision. Prudential supervision is aimed at boosting and maintaining the financial soundness of supervised institutions. As central bank, DNB remained responsible for system supervision, monetary policy and oversight on payments.

Prompted by overlaps in their prudential activities, DNB and PVK intensified their cooperation. As from 1 March 2002, members of DNB's Governing Board were appointed to PVK's Board of Management and vice versa; the same happened to their Supervisory Boards. It was also decided that DNB and PVK would cooperate more intensively with regard to the supervision of financial conglomerates. Much progress was made with this cooperation. However, in view of their specific responsibilities, competences and secrecy provisions, DNB and PVK soon reached the limits of closer cooperation. As a consequence, the consistency, efficacy and efficiency of supervision could not be sufficiently guaranteed. Moreover, the demands made on supervisors are becoming heavier all the time, as set out in the Box 'Characteristics of the financial sector and the consequences for prudential supervision'. In December 2002, DNB and PVK therefore submitted a proposal to the Ministers of Finance and of Social Affairs and Employment for complete integration of the two institutions. The merger of 30 October 2004 marks the completion of that integration.

Box Characteristics of the financial sector and the consequences for prudential supervision

The Dutch financial sector accounts for much economic activity. The balance sheet total of all banks, insurance corporations and pension funds registered in the Netherlands amounts to about five times the Netherlands' economic output per annum (see the article Financial institutions and financial stability). The financial sector also provides (direct and indirect) employment to a formidable share of the working population.

Internationally, too, Dutch financial institutions play a prominent role. Financially, the Netherlands is among the top 10 countries worldwide.

The Dutch financial system may be characterised as stable, and has been for some time. Financial stability is not self-evident, however, as we know from experience in other countries. Prudential supervisors need to beware of developments which could affect the soundness of individual financial institutions. System supervisors must ensure that the stability of the financial system as a whole is not undermined. There is a correlation between the

soundness of – notably large – individual institutions and the stability of the system as a whole.

The Dutch financial system is dominated by a limited number of conglomerates. These offer sophisticated and differentiated services, where the traditional distinction between banking, insurance and pension products has faded. The financial products now on offer, by smaller institutions, too, have become increasingly complex. Finally, over the years financial institutions have become ever more internationally-oriented, which makes them more vulnerable to developments abroad. De-specialisation, growing complexity and internationalisation are making ever heavier demands on supervision.

With financial institutions increasingly undertaking cross-border operations, the need for international harmonisation of supervisory policy has also gained in importance. The international consultations make increasing demands on the attention and quality of supervisors. A case in point is risk-based supervision. The requirements to be met by an institution are dependent on the nature and magnitude of the risks which it runs. Such an approach is increasingly required in the context of the revision of the Capital Accord for banks (Basel II), the revision of the solvency requirements for insurers in

Europe (Solvency 2) and the new Financial Assessment Framework for insurance corporations and pension funds.

To be able to adequately exercise such risk-based supervision, supervisors must meet several requirements. To begin with, it has become much more important to have a cross-sectoral orientation and profound insight into macroeconomic and financial-economic developments. Banks, insurers and pension funds have come to face comparable risks to a much greater extent than before. In addition, risks are being traded among sectors much more extensively than before. Secondly, supervisors must approach risks on a group-wide basis, because risks in one group company may have direct consequences for other group companies. Where supervision on financial conglomerates is concerned, this means that prudential supervisors need to cooperate much more closely. Financial, expert knowledge is required to develop methods for risk analysis and to adequately assess sophisticated risk management techniques. The supervisory authorities consequently need highly-qualified staff. As the labour market for such experts is tight, the available resources should be used and developed as much as possible.

Objectives of merging

The objectives of the merger are:

- To improve the efficacy and efficiency of prudential supervision.
- To reinforce the contribution to financial stability.
- To improve the efficiency of the institution as a whole.

Improving the efficacy and efficiency of prudential supervision

Given the overlaps in DNB's and PVK's supervisory activities, the merger has obvious advantages in terms of synergy. These are most evident where supervision on financial conglomerates is concerned, but also, more in general, where executive supervisory tasks and supervisory policy-making are concerned. Apart from improving efficacy, the integration will also improve the efficiency of prudential supervision. The supervisory approach turns on the identification and analysis of solvency, credit, market and operational risks. Combining the knowledge and experience of the two organisations makes it easier to comprehend these risks. It also means that financial institutions are approached consistently and unequivocally. The supervisory instruments used by both supervisors and financial institutions are complex. They necessitate major investment and rely on scarce

expertise. Economies of scale can be achieved here. Supervisors frequently perform on-site examinations. For such examinations, uniform examination and reporting methods are more efficient than a diversity of approaches and make for a smaller administrative burden for the supervised institutions. For example:

- a single contact desk for institutions which had to deal with both supervisory authorities before the merger;
- integrated supervisory examinations for financial conglomerates and hence fewer examinations;
- a single instead of a double integrity test for directors, Supervisory Board members and key officers;
- integrated research and publications, supervisory policy-making, the combined approach to financial stability tasks and macro/micro-economic analyses;
- cessation of double representation at national and international consultations and a greater influence for the Netherlands at international forums.

Reinforcing the contribution to financial stability

Financial stability is one of the main pillars of a sound economy. All DNB's activities contribute to financial stability in one way or another. Supervision contributes by ensuring that banks, insurers and pension funds remain sound. Oversight on payment contributes by

ensuring smooth payments and monetary policy by helping to safeguard the value of the currency. That, too, is an essential aspect of financial stability.

In this context, a major outcome of the merger and reorganisation process is the introduction of the new Financial Stability division. The added value of this new division is that it links the knowledge available within the Supervision divisions, the Payments divisions, the Monetary and Economic Policy division and the Financial Market division. This makes it possible to achieve an overview of the financial sector and to draw more unequivocal conclusions.

Here supervision on the financial system as a whole (system supervision) and prudential supervision interact. Insight into the financial soundness of individual institutions allows the central bank to assess more thoroughly whether problems at one financial institution may prove contagious for other financial institutions or markets and whether emergency financing or other measures are appropriate. Vice versa, the central bank's role as system supervisor results in better prudential supervision. Macroeconomic knowledge can contribute to more adequate risk assessment and allows of more pro-active supervision. Being the monetary authority, the central bank, overseeing the stability of the payments system and as financial market party (involved in money market operations and the management of the official reserves), has information at its disposal which may contribute to greater insight into prudential risks. As the authority exercising oversight on the stability of payments, DNB has information about the safety and reliability of payment systems and products, and can use this information for prudential supervision. Well-functioning payment systems are indispensable to financial institutions for liquidity management, and hence crucial to their stability.

Improving the efficiency of the institution as a whole

Apart from the above objectives, the merger is intended to improve the efficiency of the institution as a whole. DNB runs on public funds. As a public body, DNB is required to account for how these funds are spent (especially those for supervisory tasks). The operational costs of supervisory bodies are being increasingly passed on to the sector; any cost-saving is of direct benefit to the supervised institutions. By combining comparable work processes and making joint use of central supporting services and systems, synergy can also be achieved in internal operations.

Structurally, nearly EUR 25 million can be saved annually. This reduction is the result of both the merger and the radical reorganisation. Of this amount, EUR 8-9

million accrues to the financial sector, the remainder to the central government.

As a result of the merger and the reorganisation process, the new organisation has 254 full-time equivalents less than the sum of the two institutions before the merger date, and about 50 fewer temporary jobs.

Model of the new organisation

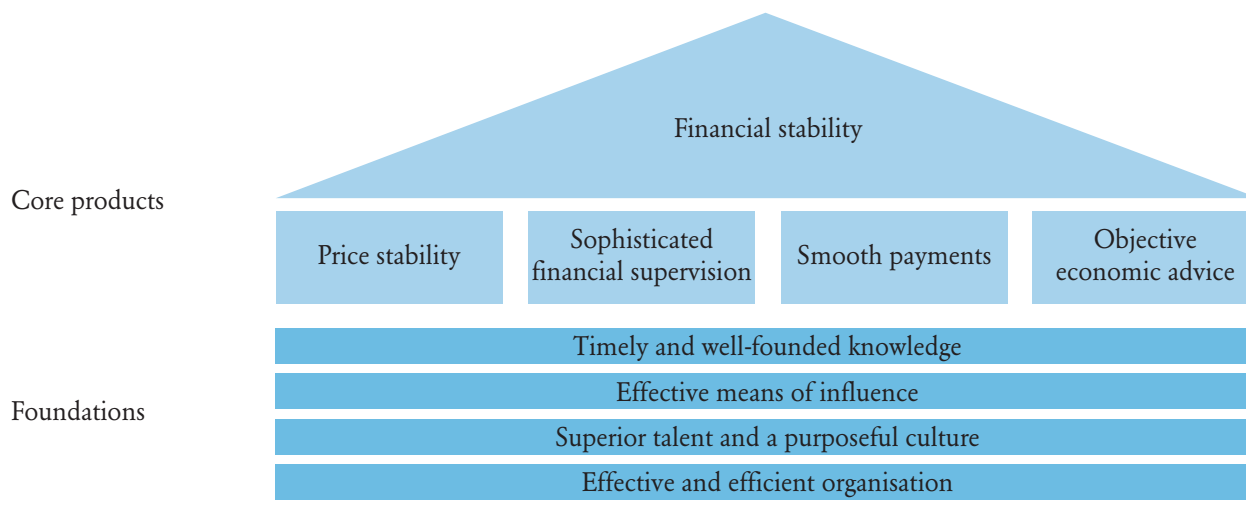
DNB's activities are conducive to lasting financial stability. Financial stability rests on four pillars: price stability, sophisticated financial supervision, smooth payments and objective economic advice about issues relating to these tasks: the core products of the new organisation (see Figure 1).

These core products do not arise out of the blue. They require a sound foundation. This foundation consists of timely and well-founded knowledge, effective means of influence, superior talent and a purposeful culture, as well as an effective and efficient organisation.

De Nederlandsche Bank's Governing Board has five members. The Governing Board give overall direction to the organisation, deal with strategic issues, and have internal and external policy responsibilities. The organisation is made up of fifteen divisions, each headed by a Director. Each division is made up of one or more departments, headed by a Departmental Director. A distinction has been made between divisions operating in a more knowledge-intensive environment (eleven) and those with executive tasks (four). This distinction is important because there is a difference in the manner in which they are managed. The executive departments are mostly made up of sections, headed by a section head. The supporting divisions and departments in an executive environment operate on demand. The knowledge-intensive divisions have two management layers between staff and the Governing Board, the executive divisions three. In these divisions, managers have a greater span of control.

The new organisation is flatter in structure, the number of managers having been reduced from 190 to around 100. A management model with a limited number of management layers makes the direction given more transparent and more effective. Managers are required to give result-based direction and staff are required to take responsibility. The line management is responsible for the results and the budget of the organisational entity. Within set limits, the line management can decide on the deployment of resources to achieve the predetermined objectives (integral management).

Figure 1 DNB's strategic structure DNB



Conclusion

The merger of DNB and PVK is the natural conclusion to the integration process set in motion earlier. The two institutions have been cooperating since 1990. The new DNB is one of the few central banks worldwide which combine supervision on banks, insurers, pension funds, trust offices and other institutions. The institution which has now emerged aims to make prudential supervision even more effective and efficient, and is able to make optimum use of supervision, monetary policy and oversight on payments. We have achieved a viable organisation striving for financial stability, one of the pillars of a sound economy and hence our prosperity.

Financial institutions and financial stability

Financial institutions constitute essential links within the financial system. Over the past decades, the combined balance sheet total of Dutch banks, pension funds and insurance corporations has grown much faster than the real economy. Moreover, these institutions have become more concentrated and more interwoven with financial markets and other countries. As a result, it has become increasingly important to look at financial institutions in the broader context of financial stability. Such an assessment should view the financial system as a whole, and focus especially on the links between different types of financial institutions, markets and infrastructures. In addition, there is a growing need for the harmonisation of supervisory rules, among both sectors and countries. It is also necessary to shift the perspective from a micro- to a macro-economic level. Finally, it is important for policymakers to strike a proper balance between boosting the resilience of financial institutions and stimulating the efficiency of the financial system.

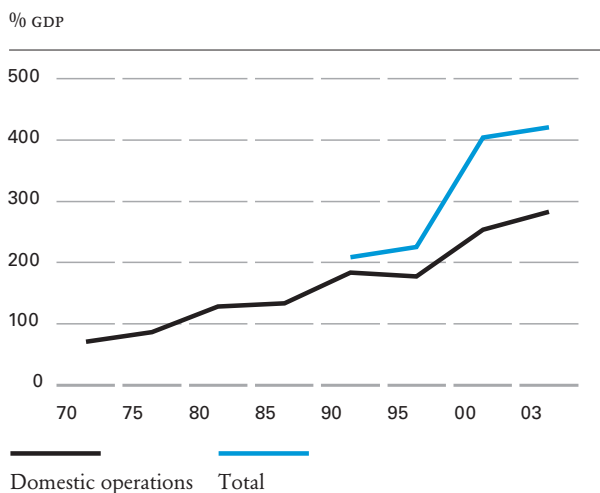
Introduction

The financial system can be defined as the total of financial institutions, markets and infrastructures. This article focuses on Dutch financial institutions, especially banks, pension funds and insurance corporations. It takes a broad perspective with emphasis on interaction among the institutions themselves, vis-à-vis other parts of the financial system and vis-à-vis the real economy. This interaction has changed over the years. The traditional watershed between banks and other institutions has faded, while interaction between financial institutions and financial markets has intensified. The various trends are discussed in the following sections, as are the consequences for policy.

Dutch financial institutions from an historical perspective: expansion, concentration and integration

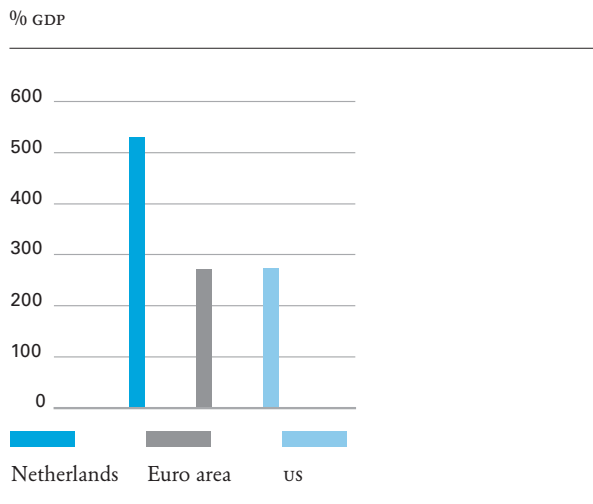
At the beginning of last century, the Netherlands had a large number of financial institutions, with a combined balance sheet total which was modest by today's standards. Around 1900, it was less than national income. In the course of the twentieth century, however, financial institutions grew rapidly, especially in the last three decades. Chart 1 shows that, expressed as a percentage of GDP, the balance sheet total of both banks and institutional investors has expanded more than fourfold since 1970. In addition, off-balance-sheet activities such as derivatives positions have also expanded materially. On the basis of these rough figures, financial institutions would

Chart 1a Balance sheet total of banks



Source: DNB.

Chart 2 Balance sheet total of financial institutions in 2003

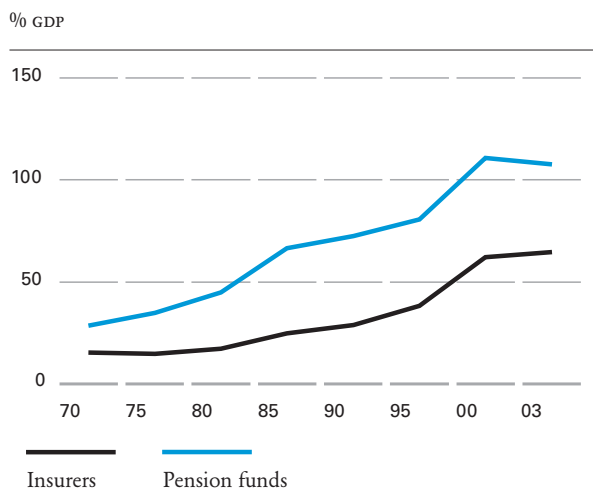


Source: OECD, DNB.

Explanatory note: For the sake of comparability, use was made of data from the returns submitted for the benefit of monetary supervision. For the Netherlands, these correspond fairly well to the domestic operations set out in Chart 1a.

seem to have gained in importance vis-à-vis the real economy. This is an international trend, which has been more pronounced in the Netherlands than in other countries. For example, the balance sheet total of Dutch financial institutions is about five times Dutch GDP, far exceeding that in the euro area as a whole and in the United States (Chart 2). The relatively major importance of financial institutions for the Netherlands is also evidenced by their share in national income (see the chapter *Recent developments in the financial sector and prudential supervision*, elsewhere in this Quarterly Bulletin).

Chart 1b Balance sheet total of institutional investors



Source: DNB.

Tabel 1 Concentration per sector

	Banks	Pension funds	Insurers
Largest institution	34%	30%	21%
Top 3	80%	45%	39%
Top 10	94%	62%	63%
Top 20	98%	72%	75%
Number of institutions	85	873	371
Balance sheet total (EUR billion)	1,621	505	294

Explanatory note: Share in the combined balance sheet total of the sector concerned. For banks, this is the consolidated balance sheet total; a look at domestic operations alone yields a similar picture.

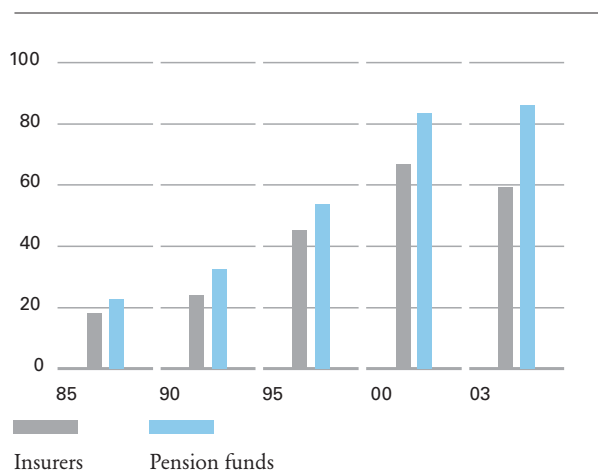
Sources: Statistics Netherlands, DNB.

The expansion of financial institutions went hand in hand with increasing concentration. The number of banks, for instance, dropped from around 300 just after the Second World War to less than 100 today. The 1960s and early 1970s saw large numbers of mergers and take-overs. In this period, the Algemene Bank Nederland (ABN) came into existence when the Twentsche Bank and the Nederlandsche Handel-Maatschappij merged, the Amro Bank was the result of the merger between the Amsterdamsche Bank and the Rotterdamsche Bank, and the Rabobank emerged when two groups of cooperative banks, the Raiffeisen bank and the Boerenleenbank joined forces. Over the years, the traditional distinctions between trade, savings, mortgage, agricultural credit and state credit banks faded. Another wave of mergers took place in the early 1990s, one of the newly formed banks being ABN AMRO.

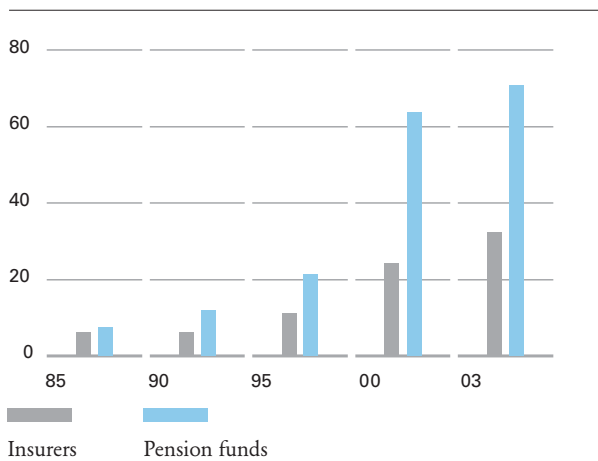
Notably banks and pension funds are highly concentrated today (Table 1). In both sectors, the largest institution accounts for about one-third of the balance sheet total, while the largest three banks combined account for about 80% of the banking market. The degree of concentration is even more pronounced if allowance is made for cross-sectoral links within financial conglomerates. In the Netherlands, these are usually combinations of banks and insurance corporations, sometimes together with collective investment schemes. Although the banking and insurance components of a conglomerate are legally independent, in practice they function as a single financial institution. When the prohibition to combine banking and insurance institutions was lifted in 1990, financial conglomerates took flight. Cases in point are ING and Fortis. Today a substantial number of Dutch financial institutions form part of a conglomerate.

Financial conglomerates are the most evident exam-

ple of the increasing interwovenness within the financial system. Another indication is the changing balance sheet structure of financial institutions, which also shows the greater interaction with the financial markets. The investment portfolio of insurance corporations and pension funds now consists largely of shares and bonds (Chart 3). Traditionally, these institutions invest a large proportion of their capital in government debt, until the end-1980s largely in the form of private loans, but these have been almost completely replaced by government bonds. Furthermore, the pension funds in particular materially expanded their share holdings in the 1990s. Banks, too, are becoming increasingly market-oriented. Via securitisation, bank assets and the appurtenant credit risks become marketable instruments. Moreover, an increasing share of bank liabilities consist of funds other than

Chart 3 Institutional investors: relative share of securities (% of balance sheet total)

Source: DNB.

Chart 4 Institutional investors: relative share of foreign investments (% of balance sheet total)

Source: DNB.

deposits raised from the public, such as bonds and funds raised in the inter-bank money market.

Finally, Dutch financial institutions have increasingly embarked on international operations, and have thus become more involved with other countries. This shows up in the growing share of banks' foreign operations (Chart 1), but also in the fact that institutional investors' holdings of foreign paper are expanding (Chart 4). Pension funds have even invested more than half their assets outside the Netherlands. It is worth noting that bond holdings are concentrated within the euro area, whereas share investments are made mostly outside the euro area.

Interaction with the real economy

The financial system plays a major role in the allocation of funds and risk diversification within the economy. Just how effectively and efficiently is hard to ascertain, but it is clear that the trends outlined above affect the relationship between the financial institutions and the real economic sectors. It is essential that the financial system reacts appropriately to changes in the real economy, such as supply shocks or demographic ageing. In a well-developed financial system, companies can hedge their financial risks, and households can spread their consumption and savings over a longer period.

Table 2 presents an overview of the financial position of financial institutions vis-à-vis Dutch companies and households, in 1990 and 2002. It is worth noting that both household claims and liabilities, expressed as percentages of GDP, have expanded markedly. The increase in claims relates mainly to the technical provisions (liabilities) of pension funds. This reflects the pension rights accumulated by the ageing population. The material expansion of liabilities is accounted for especially by the exuberant house market in the second half of the 1990s, and the attending expansion of mortgages. The changes shown in Table 2 for the corporate sector are less spectacular. Total claims have grown slightly, while liabilities have remained largely unchanged. The decrease in the debts of Dutch businesses to institutional investors is partly due to the growing international orientation of pension funds and insurance corporations.

How do these developments affect the interaction between financial institutions and the real economy? For

Table 2 Claims and liabilities of Dutch companies and households vis-à-vis financial institutions

		Households		Non-financial businesses	
		Claims	Liabilities	Claims	Liabilities
1990	Banks	46	30	27	43
	Insurers and pension funds	108	9	-	16
	Total	154	39	27	59
2002	Banks	51	71	32	48
	Insurers and pension funds	143	12	-	10
	Total	194	83	32	58

Explanatory note: Outstanding amounts as percentages of nominal GDP. Claims are made up of deposits, savings, technical provisions, etc. Liabilities are made up of loans and securities.

Source: Statistics Netherlands, DNB.

households in particular, the changes seem considerable. As a result of the expansion of mortgage debt, in combination with the spectacular rise in house prices, households have become more vulnerable to wealth effects. In the 1990s, for instance, it became easier to make mortgage equity withdrawals. Via spending effects, this contributed to the sustained boom of the end-1990s, with a procyclical effect. Growing pension liabilities, too, may have a material impact on cyclical conditions. This became apparent in recent years, when pension funds recorded major losses on their investments, and raised their premiums markedly. The influence of pension arrangements on the economy may increase further over the next few years. Owing to ageing, the number of active participants in pension schemes is declining relative to the number of inactive participants (deferred members and retirees). This declining basis of active participants is detrimental to the efficacy of the premium instrument: larger premium increases are needed to achieve the same effect. An alternative is to adjust pension schemes (see the article *Dutch pension sector; sustainability under pressure*, elsewhere in this Quarterly Bulletin). The changeover from final pay to average pay systems has made the financial position of pension funds more manageable. After all, nominal liabilities thus become easier to forecast, because the extra premium needed to compensate for the gap between current wages and unknown final pay (past-service obligations) is no longer required. Another option is to introduce defined contribution systems, where the investment risk is borne entirely by the participants themselves. This is a major difference vis-à-vis defined benefit schemes, which are typical in the Netherlands, where the pension fund guarantees a certain benefit, plus possible indexation. Under a defined contribution scheme, premiums are much more stable, which is beneficial for the sponsor, but pension benefits become more sensitive to financial market fluctuations.

Consequences for financial stability

A stable financial system is conducive to a proper allocation of funds and helps to absorb shocks, without the economy or other financial systems being disrupted.¹ This is due to the interaction between financial institutions and other parts of the financial system, as well as with the real economy. In this context, the above developments with regard to financial institutions have various consequences for policy.

To begin with, the financial system must be seen as a whole, rather than individual sectors. Banks have always

been the most relevant part of the financial system, and hence the most important for financial stability. Banks are closely linked, essential for payments, and sensitive to liquidity risks owing to the structure of their balance sheets, which are made up mainly of short-term liabilities and long-term illiquid assets. Now that the sectors have become ever more intertwined, systemic risks can increasingly easily arise outside the banking system. Take, for example, developments in the financial markets or at non-banking institutions, which impact the banking system to a larger extent than before. It is therefore necessary to monitor the links between banks, other financial institutions, financial markets and financial infrastructures closely and continuously. Financial conglomerates obviously deserve special attention because they combine banking and non-banking activities within a single institution. Vulnerabilities may consequently arise as a result of the financial ties between the various components. In order to contain the direct risks of contagion within a conglomerate, the legal firewalls need to work properly. Indirectly, too, negative developments at a single group company could impact the entire conglomerate. A case in point is reputation risk.

Secondly, the increased integration of financial systems necessitates the harmonisation of rules, both cross-border and cross-sectorally. The need for international harmonisation of banking supervision was recognised as early as the 1970s, and resulted in the establishment of the Basel Committee. Here agreements are made about minimum capital adequacy requirements, the aim being to create a level playing-field worldwide for internationally active banks. Such international arrangements are also being made for insurance supervision, for example, the European supervisory framework Solvency 2. Then there is a tendency towards cross-sectoral harmonisation of rules and regulations. In the past, banking supervision distinguished between different types of banks: this distinction was abandoned in 1978.² Supervision on banks, insurers and pension funds has furthermore converged over the past few years. For all three categories, prudential supervision has become increasingly risk-oriented (see the section on recent developments in the financial sector and prudential supervision, elsewhere in this Quarterly Bulletin). This does not mean, however, that all types of institutions can be treated the same. For banks, in particular, a number of different requirements remain necessary, notably because deposits are withdrawable on demand.

It has also become more important to view the financial system in a macro-prudential context. It is essential that the perspective be shifted from a micro- to a macro-

economic level. What might seem favourable for individual financial institutions could, after all, prove disastrous for the economy as a whole and hence ultimately for the institutions themselves, too. During an economic downturn, when lending risks go up, banks may become reluctant to lend, thus reinforcing the business cycle. For individual pension funds or insurance corporations, market developments may be a reason to adjust their portfolios; massive purchases of shares or bonds may, however, disturb the financial markets. A major issue is to what extent the financial system's risks are passed on to other parts of the economy. If financial institutions have fewer shocks to absorb because these are shifted to the real sectors, the economy's stability may be affected. Pension funds may become more resilient if they adopt a defined contribution system, but the investment risk is shifted to households.

Finally, policies aimed at financial stability need to strike a balance between boosting the resilience of financial institutions, on the one hand, and making the system more efficient, on the other. Capital adequacy requirements imposed by supervisors are, for instance, an important instrument for absorbing downward shocks, but they also necessitate a capital investment which makes for a reduction in both lending and possibly profitable investment. The trade-off between resilience and efficiency can sometimes be mitigated. As risk-oriented supervision is more finely-meshed, capital adequacy requirements can be tailored more precisely to the actual risk. Efficiency can thus be boosted without detracting from the system's resilience.

In conclusion

Over the past decades, financial institutions have undergone a remarkable development. Their balance sheet total has expanded materially, and they have become more intertwined. The Dutch financial sector is furthermore characterised notably by its formidable size, international orientation, high degree of concentration and the prominent role of financial conglomerates. For the Netherlands, it is therefore essential to recognise that the various elements which determine financial stability are linked. In this context, the combination of a central bank and prudential supervisor on the entire financial sector is highly advantageous.

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¹ See De Nederlandsche Bank (2000a).

² In 1978, mortgage banks, the Bank Nederlandse Gemeenten, the Nationale Investeringsbank, de Postcheque- en Girodienst and the Rijkspostspaarbank became subject to the same supervisory regime as commercial banks.

Operational risk in banking

Operational risk plays an important role in DNB's supervisory practice. With the forthcoming introduction of Basel II, the new risk-sensitive framework of minimum capital requirements for banks, explicit attention is now also being paid internationally to this risk category. Recently, DNB has conducted a survey among 60 Dutch banks to determine which approach they wish to adopt as regards the regulatory capital requirement for operational risk, and to assess their progress in managing this type of risk. The survey has shown that banks are, for the major part, well-prepared. Most of the banks surveyed favour the type of approach that matches the complexity of their operational risk. The large, internationally active Dutch banks are all meeting expectations by developing advanced internal models. Small banks fairly often favour the simplest approach; for a number of these institutions, a slightly more advanced approach would be worth considering. As regards the management of operational risk, the current situation and the projected developments in this respect are, on the whole, in line with expectations.

Introduction

In January 2004, the National Australia Bank hit the headlines with an internal fraud case. Foreign exchange traders reported fictitious transactions to disguise losses ensuing from unauthorised trading. The total loss was estimated at USD 360 million. In March 2003, Danske Bank of Denmark was faced with the breakdown of its internal IT and internet banking systems. An electrical outage during regular computer system maintenance took some key trading systems down for a few days. As a consequence, Danske Bank had to pay damages to its clients. These incidents are random examples of failing internal procedures and systems. The risk that such incidents happen is called operational risk.

The Basel Committee on Banking Supervision¹ defines operational risk as 'the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events'. A bank may, in principle, control its internal sources of risk by adopting an effective system of internal controls, thereby reducing the risk of incidents such as deficiencies in information systems, fraud, human errors or technical breakdowns. External causes of operational risk, such as natural disasters, terrorist attacks, extortion or war are outside a bank's sphere of influence. A bank may take out insurance against such risks and take measures to absorb the consequences (continuity planning).

In its supervision of banks, DNB pays a great deal of attention to the management of operational risk. In 2001, it developed qualitative requirements about this type of risk management, laying them down in its so-termed Regulation on Organisation and Control (hereafter to be referred to as ROC). The ROC has led to a marked quality enhancement of banks' administrative organisation and internal control and thereby also to an improved management of operational risk. For the first time, explicit attention is now also being paid to operational risk internationally, within the new Basel framework of capital requirements and standards (in short, Basel II). In addition to risk management requirements, Basel II also specifies globally harmonised capital requirements for operational risk. In a survey, DNB has examined the current operational risk policies of 60 Dutch banks to see how they plan to organise their operational risk management under Basel II. This article discusses the results of DNB's survey. It focuses on the approach which banks, under Basel II, will use to calculate the capital requirement for operational risk. The article also examines the extent to which banks fulfil the Basel II requirements for the management of this type of risk. Although there is

some room for comments, the results of the survey are broadly satisfactory.

After this introduction, section two sets out how operational risk has been included in Basel II. The third section describes the survey's setup and findings, and the article ends with conclusions.

Operational risk in Basel II

Sound risk management is based on a two-track approach: one is to take effective control measures and the other is to maintain a capital buffer. It is also along this two-track approach that operational risk has been specified in Basel II. First of all, methodologies have been included for determining the minimum regulatory capital requirement for operational risk. In addition, guidelines have been established for the management of operational risk. Both are discussed in detail below.

Methodologies to determine the capital requirement for operational risk

Basel II defines three alternative methods to calculate the minimum capital requirement for operational risk, to be distinguished by their degree of sophistication and complexity. A bank may choose which of these three approaches it will adopt. The Basel Committee sought to provide banks with an incentive to implement a more advanced approach. It has done so by choosing a calibration whereby a more advanced approach will on average lead to a lower capital charge. In addition, Basel II expects the sophistication of the approach adopted by a bank to be in line with its risk profile. The three possible approaches to determining the regulatory capital requirement for operational risk are:

- *The Basic Indicator Approach (BIA)*. This is the simplest of the three approaches. The bank's income is used as an indicator for the bank's exposure to operational risk. The capital requirement for operational risk is equivalent to a fixed percentage of this indicator.
- *The Standardised Approach (SA)*. This methodology is somewhat more sophisticated than the BIA. Here, too, income is regarded as the indicator for operational risk, but the business activities that generate the income are divided into eight business lines. The capital requirement is calculated per business line by multiplying the income of each business line by a corresponding percentage related to the risk of the relevant business line.
- *The Advanced Measurement Approaches (AMA)* is the most advanced approach. With the aid of its own statistical models, the bank calculates how much capital it

needs to allocate against operational risk. Basel II only sets the preconditions for building these internal models. They need, for instance, to be based on backward-looking and forward-looking elements (on the one hand, loss data and, on the other, levels of control). Best practices for building these models will develop over time. DNB is closely monitoring the development of these internal models by banks. However, it is still too premature to give a considered opinion.

Operational risk management

The second track in sound risk management practices is the control of risks. After all, the mere holding of capital does not reduce risk: a capital buffer is solely meant to absorb unexpected losses. Deliberate and active risk control is needed to actually reduce operational risk.

Although, in terms of intensity and complexity, risk management by institutions is moving along a continuum of sophistication (from simple to advanced), several standards deriving from regulatory practice can be used to make a distinction between three (stylised) levels of risk management. In ascending order of sophistication we distinguish a minimum level, a medium level and a high level of risk management:

- *Minimum level:* Compliance with DNB's Regulation on Organisation and Control. The ROC is the standard for current risk management practices in Dutch banking. It will continue to constitute the basis for risk management also after the implementation of Basel II. The ROC first outlines a few general principles regarding risk management. Subsequently, these are supplemented with guidelines and recommendations with respect to specific types of risk, including operational risk. The ROC governs all banks in the Netherlands.
- *Medium level:* Meeting qualitative principles of risk management. The standard for the medium level is provided by the Sound Practices for the Management and Supervision of Operational Risk (called Sound Practices Paper)². In this guideline, the Basel Committee has out-

lined a set of qualitative principles for the effective management of operational risk (such as, for instance, the introduction of a management framework for operational risk).

- *High level:* Meeting qualitative principles as well as using quantitative methods for risk management. An example of a quantitative method is the systematic collection and analysis of loss data resulting from operational risk.

Correlation between level of risk management and calculation method

The new framework requires that institutions match the complexity of the calculation method they choose with their level of risk management. For institutions wishing to use the simplest approach (BIA), risk management at the minimum level of the ROC will suffice. Institutions wishing to use the somewhat more advanced SA may only do so if, in addition to the provisions of the ROC, they also meet a number of medium-level qualitative risk management criteria prescribed by the SA. Institutions opting for the most advanced approach (AMA) should, in addition to qualitative risk management criteria, also take a number of high-level quantitative criteria into account. All large, internationally active banks are supposed to meet the principles set out in the Sound Practices Paper. The correlation between calculation method and corresponding level of risk management is set forth in Table 1.

Current situation regarding operational risk in Dutch banking

Survey by DNB

Against the above-mentioned background, DNB conducted a survey among 60 banks established in the Netherlands. These banks were subdivided into three groups:

Table 1 Correlation between calculation method and level of risk management

Calculation method to be used by an institution under Basel II	Corresponding risk management level		
	Minimum level (ROB)	Medium level (qualitative principles)	High level (quantitative principles)
Basic Indicator Approach	Mandatory	Optional	Optional
Standardised Approach	Mandatory	Mandatory	Optional
Advanced Measurement Approaches	Mandatory	Mandatory	Mandatory

- 17 internationally active Dutch banks
- 16 non-internationally active Dutch banks
- 27 Dutch branches or subsidiaries of foreign banks

The survey sought to find out which approach banks would adopt under Basel II to calculate their capital requirement for operational risk. Another purpose of the survey was to see how they organised or proposed to organise their operational risk management until implementation of the new framework.

This survey is important for three reasons. First of all, operational risk is a new type of risk in Basel II. For a timely issue of adequate rules and regulations, it is necessary that an overall view of the developments within the sector is obtained as early as possible. Second, both for the institution and for DNB, it is important to assess whether or not a bank can timely fulfil the conditions attached to a specific calculation method. After all, in due time every bank should notify the supervisory authority of the calculation method it will be using.³ It is then up to DNB to assess whether the bank meets the admission criteria. Finally, banks opting for AMA must also submit their internal models for assessment to DNB. To be able to handle this properly, DNB should have timely insight into the number of banks adopting the AMA.

Further to the above-outlined correlation between calculation method and risk management, the survey also sought answers to the following three key questions:

- 1 Which method will the institutions be using to calculate their capital requirement for operational risk under Basel II?
- 2 To what degree does the banks' current management of operational risk comply with the medium level, i.e. the standard from the Sound Practices Paper?
- 3 To what extent can banks over time meet the conditions attached to their chosen calculation method?

Note that the second key question, about the level of risk management, confines itself to only one of the three levels that are distinguished by the model, viz. the medium level. The exclusion of the minimum level and the high level here is due to the following: in its role of supervisory authority, DNB now already requires that all Dutch banks comply with the ROC. In this survey, it has therefore been assumed that all banks surveyed have organised their risk management at least at the minimum level. The exclusion of the high level is due to the fact that it is a level that must actually be reached only by specific banks and only after a few years. In DNB's survey, it was not yet opportune to inquire after the extent to which these banks would now already meet this high level of risk management.

Survey findings

An analysis of the survey results leads to three conclusions.

- 1 Slightly less than half of the banks wishes to adopt the BIA approach under Basel II, about one-third opts for the SA and one-fifth favours the AMA. Overall, the sophistication of the chosen methodology matches the institution's size and complexity.
- 2 The vast majority of the banks surveyed are halfway between the minimum and medium levels of operational risk management, i.e. somewhere between the ROC and the Sound Practices standards.
- 3 Most of the banks do not anticipate any problems in bringing their risk control frameworks to the appropriate level in relation to their chosen method of calculating the capital requirement for operational risk.

These conclusions are explained in detail below.

Planned calculation method under Basel II

As for the first key question – the planned method of calculating the capital requirement for operational risk under Basel II – all banks were asked which of the three approaches they would adopt. In Table 2 the results are broken down by the different groups of banks.

The table shows that internationally active Dutch banks are spread fairly evenly across the three approaches. From the group of non-internationally active Dutch banks, two-thirds will opt for the BIA and one-third for the SA, whilst none of the banks in this group intends to implement the AMA. From the group of Dutch branches/subsidiaries of foreign banks, half will opt for the BIA. Remarkable is also that nearly one-third of this group opts for the AMA, thereby adopting the approach of their foreign parent bank.

Also, the banks surveyed appear to have made their choice for the longer term: only a few banks were planning to move on to a more advanced approach in the future. None of the banks that opted in the first instance for the BIA approach is now already planning to migrate to the SA or AMA approaches. Of the banks that wanted to use the SA in 2006, 10% said they would thereafter switch over to the AMA.

Not only the number of banks that plan to implement a specific approach, but also their size is important. This is because of the assumption that banks are becoming more complex as they grow in size and the calculation method they are using should match the complexity of their risk profile. Table 3 shows market share as an indicator of the size of the banks surveyed.⁴

Indeed, the positive correlation between the sophistication of the approach and the size of the bank is reflect-

Table 2 Planned calculation method of the capital requirement for operational risk

Breakdown by approaches	Basic Indicator Approach	Standardised Approach	Advanced Management Approaches	Total number of banks per group
<i>Breakdown by groups</i>				
Internationally active Dutch banks	6	7	4	17
Non-internationally active Dutch banks	10	6	0	16
Dutch branches/subsidiaries of foreign banks	13	6	8	27
Total number of banks per approach	29	19	12	60
Total banks per approach (%)	48	32	20	100

ed in the combination of figures from Tables 2 and 3. It appears that banks favouring the AMA (12 institutions, see Table 2) have a combined market share of 64% (of the banks surveyed). The 19 banks planning to use the SA have a market share of 28.7%. The remaining 29 banks, with a combined market share of only 7.3%, want to adopt the BIA.

If the results are considered per group of banks, this correlation manifests itself even more clearly. Tables 2 and 3 show that in the group of internationally active Dutch banks, the six banks favouring the BIA have a market share of only 2%, whereas the seven SA banks have a market share of 23.7%. The four internationally active Dutch banks favouring the AMA account for almost two-thirds (63.5%) of the total market share.

Analysis of the group of non-internationally active Dutch banks also shows that the larger banks indeed opt for the more advanced SA (instead of the BIA). After all, the average market share of a bank favouring the SA (six banks with a combined market share of 4.6%) slightly exceeds the average market share of a BIA bank (ten banks with a combined market share of 4.4%).

With a total market share of 1.8%, the 27 Dutch branches or subsidiaries of foreign banks are relatively

small. The fact that eight of these small banks still opt for the advanced AMA approach is because these banks, as mentioned earlier, adopt the approach of their (large) foreign parent company. There is not much difference in the average market shares of banks favouring the BIA and those favouring the SA.

The present level of operational risk management

To respond to the second key question about the projected or actual level of operational risk management, institutions specified their respective implementation stages in respect of nine principles of risk management. These nine principles of operational risk management derive from the *Sound Practices Paper* (see Box 1).⁵

In the survey, banks could make a choice between three implementation stages in respect of each risk management principle, viz.:

- 1 policy in this respect *has already been implemented*;
- 2 policy in this respect *has been planned*;
- 3 policy in this respect *shall not be implemented*.

The results have been compared with the earlier-outlined analytical framework for operational risk management in

Box 1 Principles of operational risk management

- 1 Management framework for operational risk
- 2 Responsibility of the Board of Directors for operational risk management policy
- 3 Operational risk management is subject to independent internal audit
- 4 Responsibility of senior management for implementing operational risk management policy
- 5 Identification of operational risk inherent in products, activities, processes and systems
- 6 Monitoring operational risk profiles and issuing regular reports
- 7 Periodical review of operational risk management
- 8 Operational risk management with respect to outsourced activities
- 9 Contingency and continuity planning

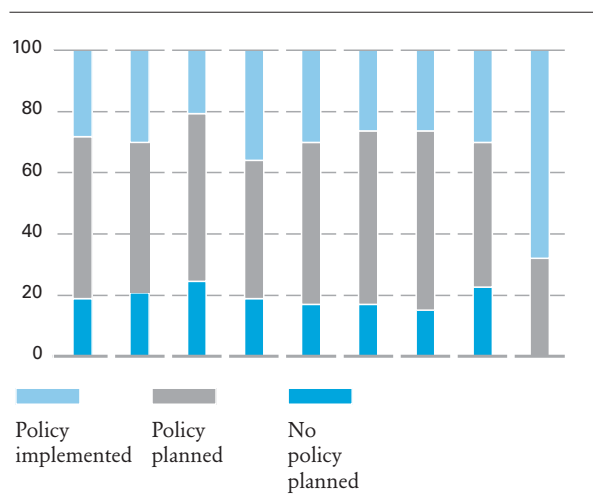
the following manner: if an institution has implemented policy in respect of all nine principles of risk management, it complies with the earlier-mentioned medium level of risk management. If an institution has no plans to implement policy in respect of any of the principles, that institution is still considered to comply with the minimum level as represented by the ROC.

With the aid of this analytical framework, three groups can be distinguished. The first group comprises banks that indicated having no plans to implement policy in respect of any of the risk management principles. This group consists of three banks that have opted for continuation of their management framework in conformity with the minimum level (the ROC). The second group comprises banks that indicated having implemented adequate policy in respect of all nine risk management principles. Four banks comply in full with the medium level (the *Sound Practices Paper* standard). The third group is made up of the vast majority of banks (53). These banks indicated that, in respect of a few principles, they have implemented or are preparing to implement policy that goes beyond the ROC level, but they are not yet fully compliant with the *Sound Practices* standard.

In Chart 1, the implementation stages are depicted on the bars of the nine risk management principles. It appears that all banks are paying attention to contingency and continuity planning (principle 9). Such a high score is not surprising as it refers to a bank's existence.

The importance that banks assign to the other eight principles of risk management is allocated fairly evenly. It should be noted that, in respect of these eight principles, different banks have different implementation stages. However, when combining the scores for all 60 banks, a similar breakdown into the three implementation stages emerges for each risk management principle.

Chart 1 Implementation stages per risk management principle



Level of operational risk management and planned approach under Basel II

The third key question in the survey addresses the extent to which banks can timely comply with the conditions attached to their chosen calculation method. This can roughly be inferred by cross referencing the results of the first two questions (Table 4):

For each approach, the table shows the number of institutions that indicated having the same implementation stage in respect of five or more risk management principles. It appears that most of the BIA institutions favour a risk management level that exceeds the ROC minimum level: six institutions have implemented policy in respect of five or more risk management principles and twelve are planning to do so.

Furthermore, Table 4 shows up a difference between institutions planning to adopt the SA approach and those favouring the AMA. About one-third of the SA institutions plans to implement policy in respect of five or more risk

Table 3 Market share of banks surveyed (in assets) by group and by approach

Percentage

Breakdown by approaches	Basic Indicator Approach	Standardised Approach	Advanced Measurement Approaches	Total market share per group
<i>Breakdown by groups</i>				
Internationally active Dutch banks	2,0	23,7	63,5	89,2
Non-internationally active Dutch banks	4,4	4,6	–	9,0
Dutch branches/subsidiaries of foreign banks	0,9	0,4	0,5	1,8
Total market share per approach	7,3	28,7	64,0	100

Table 4 Level of qualitative risk management by banks, broken down by approach

Institutions which in respect of 5 or more principles:	Basel II approaches			
	BIA	SA	AMA	Total
– have implemented policy (response 1)	6	11	3	20
– plan to implement policy (response 2)	12	6	9	27
– have no plans to implement policy (response 3)	11	-	-	11
Other ¹	-	2	-	2
Total	29	19	12	60

¹ Institutions in the 'Other' category are those that comply with fewer than 5 principles in each of three response options and can therefore not be included in one of the lines above.

management principles, and almost two-thirds has already implemented policy in respect of five or more principles. The reverse is true for the AMA banks: three-quarters of the AMA institutions surveyed still have to realise their plans for policy implementation, whereas one-quarter has already implemented its policy (both in respect of five or more principles). Hence, it could be inferred that the SA banks are showing relatively greater progress in policy implementation than the AMA banks. A more detailed analysis of the underlying data reveals, however, that the three AMA institutions that have already implemented their policy, belong to the group of internationally active Dutch institutions. As appears from Table 3, this group represents the largest market share. So in terms of market share, a large portion of the AMA banks is already halfway or further along the way toward policy implementation. In terms of the number of banks, it may be concluded that although half of the banks favouring the SA or the AMA approaches has planned policy in respect of five or more principles, they have not yet implemented such policy. To get their risk management framework on target level, they still have to take considerable steps.

Another survey question was to what extent banks anticipate difficulties in meeting this level over time. About 70% of the banks indicated that they did not anticipate any problems. They have mapped out the migration path and are now developing their risk management framework so as to arrive at the desired level at the end of 2006 or 2007, as the case may be. The remaining 30% is anticipating problems and is currently engaged in an inventory and solution-seeking exercise.

Conclusion

The survey described in this article sought to find out (1) which approach banks will adopt to calculate their capital requirement for operational risk under Basel II, (2) to what degree their current operational risk management complies with the principles set out in the Basel Committee's Sound Practices Paper, and (3) to what extent they can meet the conditions attached to their chosen calculation method at the time Basel II enters into force.

Based on the survey findings it can be concluded that there is indeed a correlation, as sought by Basel II, between a bank's risk profile and the degree of sophistication of the regulatory capital approach it has chosen. The size of a bank is thereby used as an indicator of the complexity of its operational risk. The large, internationally active Dutch banks are all meeting expectations by developing advanced internal models. Some smaller banks could consider taking the relatively small step from the BIA to the slightly more advanced SA.

The current risk management and the projected developments in this respect generally meet the requirements associated with the chosen calculation method. Although institutions wishing to adopt the BIA are not obliged to implement risk control measures that exceed the ROC's minimum level, these banks, too, appear to attach much significance to the management of operational risk. More than 60% of the BIA banks plans to implement additional policy for the management of operational risk or has already done so.

All institutions favouring the SA or the AMA approaches have made concrete plans to meet the qualitative risk control criteria under Basel II. A rough inventory shows

that banks wishing to use the SA have already implemented most of the necessary policy. Of the banks wishing to adopt the AMA, the large, internationally active Dutch banks are already more than halfway in their policy implementation. The other banks opting for the AMA, mostly Dutch branches or subsidiaries of foreign banks, are still in the planning stage; their policy plans as yet await implementation.

On the whole, these results are satisfactory. Banks recognise the importance of a sound management of operational risk and, in many cases, they have organised their operational risk management even better than what is minimally required. As regards their preparations for Basel II, most banks, including the largest, are well on schedule. In the years ahead, DNB will continue to closely monitor the progress made by individual institutions.

1 In the Basel Committee on Banking Supervision, the banking supervisors from the most important industrial countries have joined forces to devise regulatory frameworks for banks. Although the Basel Committee has no supranational powers, its recommendations and guidelines are generally adopted worldwide.

2 Basel Committee on Banking Supervision, 2002, The Sound Practices for the Management and Supervision of Operational Risk, Basel, Bank of International Settlements (www.bis.org).

3 As from 31 December 2007, all institutions must be using one of the new approaches for determining operational risk. However, institutions wishing to use the BIA or the SA approaches may already do so from end 2006.

4 Market share is expressed in assets. The combined market share of the 60 banks surveyed is set at 100%. The total Dutch banking sector is only marginally (1.5%) larger.

5 The Sound Practices Paper describes ten principles for the effective management of operational risk. Two of these principles refer to the role of supervisors; these two have been disregarded in this study. One risk management principle has been added, viz. the role of the Board of Directors in the management framework for operational risk. All in all, nine principles of operational risk management have been defined. It should be noted, however, that this analytical framework provides no insight into the extent to which banks already comply with a higher standard than the Sound Practices standard, e.g. in the field of the qualifying quantitative criteria that are, in the first instance, relevant to the use of the AMA.

Dutch pension sector: sustainability under pressure

Pension funds have gone through exceptionally turbulent times in recent years. Following a period of low contributions and increased pension rights, various factors including the stockmarket slump weakened the funds' solvency position. Just over two years ago, this prompted the supervisor to intervene and to subsequently enter into consultation with the funds on sound solutions. Many contributors were confronted with steep increases in their contributions or indexation cuts, while some far-reaching changes were introduced to support the sustainability of the Dutch pension system. These developments and decisions partly reflect the intense interaction between the pension sector and the real economy. The financial supervision of pension funds, in terms of legislation and implementation, is also under current review. This article presents an overview of these dynamics in the area of pensions. A key conclusion is that transparency should be enhanced in many respects, notably the firmness of pension commitments and the attendant costs. The challenge is to maintain a commendable – but not cheap – pension system, without hampering Dutch economic growth.

Introduction

Pensions are in the spotlight. Notably the financial position of pension funds, the material details of pension schemes and the statutory retirement age are current subjects for debate. Prior to the stockmarket recovery in 2003, pension funds suffered huge capital losses and resorted to raising contributions among other measures. Demographic ageing is also putting pressure on pension affordability. This calls for increasing the labour participation rate and for raising the actual average retirement age. Moreover, the indexation of pension rights can no longer be taken for granted. One of the provisions of the new Pension Act is that each fund, based on its own level of ambition, should pursue mutually consistent policies on financing, communication and indexation. In addition, both assets and liabilities will have to be marked to market.

Against this backdrop, this article presents an overview of recent developments and the current situation in the area of pensions. It looks back on the pension funds' financial ups and downs and then gives a brief outline of the background to, and consequences of, the supervisory regime in the transitional phase leading up to the new Pensions Act. The article next deals with the macroeconomic aspects of the Dutch pension system, including the role of demographic and labour market developments, and ends with a short conclusion.

Overview of pension landscape

Pension funds

The Dutch pension system is internationally respected and notably derives its solidity from the three firm pillars at its base. The first pillar is the basic pension under the General Old Age Pensions Act (*Algemene Ouderdomswet/AOW*), which is open to everybody on reaching 65 and is financed on a pay-as-you-go basis. The second pillar is formed by the collective, fully-funded pension commitments linked to employment contracts. The third pillar comprises the voluntary personal pension components, which receive favourable tax treatment subject to certain conditions. These three pillars together provide a solid pension base, which can withstand shocks as long as they are well maintained.

The collective pension provisions in the second pillar are the focus of this article. Broadly speaking, employees are obliged under their terms of employment to join their employer's pension scheme. Such schemes are in part organised by collective insurers, but pension funds are mainly responsible in terms of financial volume. Pension funds jointly manage more than EUR 500 billion, an amount exceeding annual gross domestic product, whereas total assets held by life insurers come to less than half that figure. Pension funds look after the pension build-up of almost six million employees, representing four-fifths of the total dependent labour force. The majority of these employees (almost 85%) are contributors to schemes run by one

Table 1 Breakdown of pension funds by category (2004; relative percentages)

	Number of funds	Number of active contributors	Contributions	Pension liabilities provision	Balance sheet total
Company pension funds	85.6	14.4	40.4	26.8	29.9
Compulsory industry-wide pension funds	9.8	79.7	54.2	65.3	61.7
Optional industry-wide pension funds	2.6	5.2	3.7	4.7	5.1
Occupational pension funds	1.3	0.7	1.4	3.1	3.0
Company savings funds	0.6	0.0	0.0	0.0	0.0
Statutory pension fund	0.1	0.1	0.2	0.2	0.2
Total (absolute)	819	5,969,270	17,640	430,002	441,767

Source: PVK Pension Monitor 2004.

of the 101 compulsory or optional industry-wide pension funds. Each of these funds serves the companies in a specific sector. The other active contributors belong to occupational pension funds, savings funds or company pension funds. The number of company pension funds linked to specific companies or concerns is relatively high, but these funds are usually smaller. Relative to the number of active contributors, the contributions (for employers and employees collectively) are high. This reflects the extra increase in contributions and especially the additional payments by sponsors during 2003. This article focuses mainly on company pension funds and the compulsory industry-wide pension funds, since these categories are of key importance as regards numbers of funds and contributors.

Pension schemes

A short history of pension funds, member numbers, and balance-sheet data reveal an increase in the number of active contributors, both within sector and company pension schemes (see Table 2). That is striking given the virtual stagnation of job creation in recent times; the reach of pensions among employees has evidently expanded considerably. Another noticeable develop-

ment is the gradual decrease in the number of company pension funds. In recent years, an average of around 30 funds were in the process of winding up. The reasons are varied: funds may follow their associated company's merger or seek to join an industry-wide pension fund. The ever higher standards imposed on the quality of pension fund management – and on that of the managers themselves – may be another factor.

The types of pension schemes seen are changing too. Until recently, the level of pension payments was linked to last-earned salary: a so-termed final pay scheme. But in recent years a shift has occurred from final pay to career average, whereby the level of pension payments depends on the average salary earned during the years of contribution, and on the pension fund management's annual policy decisions on the indexation rate. Note that, for the contributors, the change solely relates to rights built up as of the changeover. The rights accrued under a final pay scheme during an employee's working career should be left intact. This shift can mainly be attributed to the large industry-wide pension funds ABP and PGGM, which changed from a final pay scheme to a career average scheme with conditional indexation as of 1 January 2004. Of the

Table 2 Pension scheme types by pension fund category (2002-2004; relative percentages)

	Number of pension funds			Number of active contributors			Balance sheet total (EUR million)		
	2004	2003	2002	2004	2003	2002	2004	2003	2002
Company pension funds									
Defined benefits: final pay	50.8	54.0	57.5	26.4	33.1	41.5	37.6	42.4	49.3
Defined benefits: career average	20.8	18.0	15.7	31.4	26.3	23.7	28.3	26.2	25.0
Defined contribution	4.4	4.0	4.4	6.6	6.9	1.6	1.5	1.4	0.9
Combined scheme	17.4	15.3	13.6	33.7	32.0	31.2	32.2	29.4	24.3
Other schemes	6.6	8.6	8.9	1.8	1.8	2.0	0.4	0.7	0.5
Total (absolute)	701	744	779	856,691	870,827	792,865	132,233	141,484	143,165
Compulsory industry-wide pension funds									
Defined benefits: final pay	17.5	21.6	20.8	10.5	59.9	62.8	8.5	76.8	81.4
Defined benefits: career average	71.3	68.9	66.7	85.7	38.6	35.3	91.1	22.9	18.2
Defined contribution	2.5	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Combined scheme	5.0	4.1	4.2	3.4	1.1	1.0	0.3	0.2	0.2
Other schemes	3.8	4.1	6.9	0.4	0.4	0.9	0.1	0.1	0.2
Total (absolute)	80	74	72	4,756,913	4,521,843	4,276,811	272,786	292,592	294,737

Source: PVK Pension Monitor 2004.

company pension funds, mainly smaller funds maintain a final pay scheme; the probable reason is that the sponsors of these funds give less priority to pensions and that decision-making processes hence take longer to complete. The somewhat larger company pension funds have a career average or a combination scheme (a mix of the different schemes). Owing to the change within the industry-wide pension funds, the majority of the total labour force is now accruing pension rights under a career average scheme. In absolute figures, the amount has more than doubled: only one in ten active contributors is now making pension contributions under a final pay scheme, compared to one out of two in 2003.

Most of the above types of pension schemes in the Netherlands are defined benefit (DB) schemes, which give contributors an advance commitment on the (minimum) level of pension payments. This means that prolonged shortfalls in the pension funds are largely compensated by the employer. Such shortfalls may occur if the financial management of the pension funds is deficient, for example if it fails to maintain adequate buffers to absorb investment risk. In that case, employers cannot be certain as to the extent of the financing liabilities arising from their pension commitments. Equally worth mentioning is that – in contrast to the practice in some other countries – the smallest group is formed by the so-termed defined contribution (DC) schemes. Pure DC schemes, which are popular in the United States and the United Kingdom, are not often seen in the Netherlands. Under such a contract, no commitment is given for a pension in the form of certain (lifelong) benefits; instead, an amount is

deposited in the fund annually. Contributors acquire pension rights on the basis of this amount, including investment gains. In advance, no more than an estimate can be given of the amount of capital in the fund on reaching retirement age. Likewise, DC contracts do not include an explicit inflation-correcting mechanism, albeit conditional. On the other hand, contributors often have a say in the investment strategy for their pension capital. Finally, there are many combination schemes which can to some extent soften the disadvantages of both types.

In summary, no massive shift to defined contribution schemes has yet occurred in the Netherlands. Under a pure DC scheme, households effectively take on all the risks and that has so far failed to win widespread favour. Recent research shows that more than half of Dutch households are willing to pay higher pension contributions in return for a guaranteed pension (DNB, 2004). For employers and sponsors, DC schemes offer benefits in terms of labour cost control. They cannot be forced to make additional deposits because the pension rights are not linked to a performance obligation. Ultimately, the costs must be borne by the contributors. The converse is true of final pay schemes: the employer will have to step in if the fund cannot meet its pension commitments. The transition from final pay to career average leads to a more equal risk distribution: the costs of control mechanisms can be more evenly shared between the employers, active contributors, former (deferred) contributors, and pensioners.

Table 3 Pensionable (target) age (2000-2004; relative percentages)

	Number of active contributors				
	2004	2003	2002	2001	2000
55 - 59	0.1	0.1	0.1	0.1	0.1
60	11.9	9.0	0.9	0.8	0.7
61	10.9	10.8	8.7	8.4	8.2
62	17.5	17.5	8.0	6.7	3.2
63	1.3	1.3	1.3	1.4	1.4
64	0.0	0.0	0.3	0.3	0.3
65	58.1	61.2	80.5	82.3	85.9
Total (absolute)	5,969,270	5,754,903	5,413,217	5,140,574	4,934,297

Source : PVK Pensions Monitor 2004.

Flexibility in pension benchmarks

The extensive switch from final pay to career average schemes could be seen as a drawback for contributors. But there is room for compensatory measures. In a number of cases the annual pension accrual rate has been raised (obviously in conjunction with a correspondingly higher contribution). While the most usual rate is 1.75% (resulting after 40 years to pension entitlement of 70%), the average rate has become slightly higher since the shift to career average schemes (close to 2%). Moreover, the average franchise has been lowered, implying an increase in the salary component which is part of the so-termed pension base (pensionable salary minus franchise). The amount on which the pension contribution is based rises accordingly, leading to an extra accumulation of rights (likewise in tandem with an extra nominal rise in premiums). Finally, the average entry age has been slightly lowered, so employees can make an earlier start on building up their pension. All in all, such adjustments can be viewed as forms of compensation for the transition from final pay to average pay in the relevant pension schemes.

Statutory retirement age

Not all pension schemes have opted for the age of 65 (the age of eligibility for the state pension) as the (target) retirement age. In addition, many contributors are still covered by an early retirement scheme or pre-pension scheme. Moreover, a retirement age of 60, 61 or 62 is no longer exceptional; indeed, there has been a rising tendency towards these ages in recent years. This reflects the marked emergence of temporary pensions:

the percentage of active contributors enjoying this commitment has risen over the years from 34.5% (in 1998) to 87.0% (2004). Two factors are at play here: the introduction of (fully-funded) pre-pension schemes and simultaneous discontinuation of a (pay-as-you-go) early retirement scheme, and a reduction of the retirement age set down in the pension contract. In the near future this tendency will of course be influenced by components of the recent agreement between the Cabinet and the social partners. But this agreement falls beyond the scope of this article and will be dealt with in detail in a future Quarterly Bulletin.

Indexation

A final important dimension of the pension scheme is the level of ambition as regards ensuring that the commitment remains inflation-proof or index-linked. Whether or not accrued rights and benefits are indexed is a crucial issue for the quality of a pensions scheme. For active contributors in a final pay scheme, such an adjustment occurs automatically and unconditionally during the accrual period, since pensions are dependent on the final pay amount, or – in the case of a so-termed mitigated final pay scheme – the average of the last few years.

Under career average schemes, the accrued pension rights are linked to price or wage developments, usually in the relevant sector (see Table 4). In most contracts, however, this is a conditional right, depending on the financial scope of the pension funds. The actual level of the allocation depends on the decision of the pension fund management. Another essential aspect is

Table 4 Average pay scheme: indexation bases for active contributors (2000-2004; relative percentages)

	Number of active contributors				
	2004	2003	2002	2001	2000
Company wage movements	3.4	3.7	4.0	7.2	6.4
Industry-wide wage movements	65.4	31.0	51.3	49.5	48.7
Overall wage movements	11.5	20.3	3.8	2.7	2.7
Overall price movements	5.6	12.1	5.1	2.1	0.9
Periodic management decision	11.9	28.2	30.3	32.1	34.4
Other	1.9	4.1	4.5	5.8	6.4
No indexation	0.2	0.6	1.0	0.5	0.6
Total (absolute)	4,430,228	2,059,768	1,778,272	1,684,048	1,545,049

Source: PVK Pensions Monitor 2004.

the basis for indexation of the commenced pension benefits (and the associated rights of the deferred contributors). The majority of the pension funds hence apply an indexation that is linked to wage developments in the sector. But the price index often applies to retirees and deferred contributors too. Just as for the active contributors, this indexation is conditional since it depends on the levels of ambition. The (level of) indexation is bound to frequently appear on the agenda of management board meetings in the coming period, especially as the pensions funds' financial positions are still not in great shape.

Pension funds in financial difficulties

The PVK's alarm bell

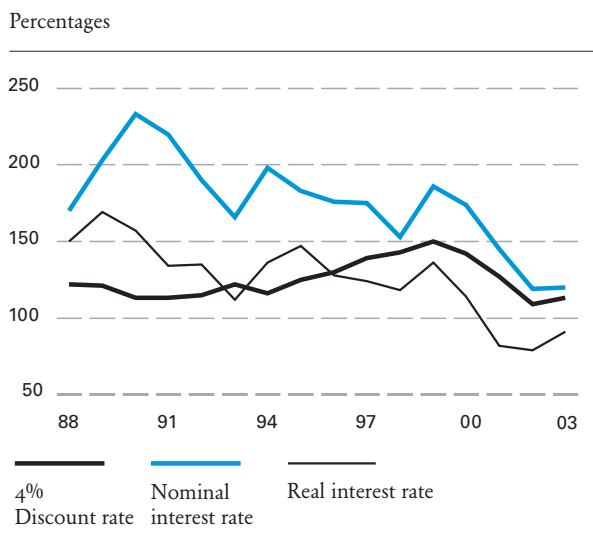
The start of the new millennium saw a sharp deterioration in pension funds' solvency. The poor stockmarket returns eroded the value of their assets, while their liabilities began to rise because of the steep wage increases, since most pensions were (still) based on final pay. In reaction to the impaired solvency position, the PVK codified the prevailing supervisory principles in a policy rule issued in late September 2002. Funds which were unable to meet these principles at that time were obliged to draw up a recovery plan. In outline, a 'recovery plan' was required in order to absorb acute funding shortfalls in the short term, and a 'reserves funding plan' was needed to restore the required buffer for the medium term to the appropriate level.

Retrospective funding ratio based on market value

It turned out in retrospect that the financial deterioration was more serious than the parties involved had realised. Applying the usual fixed discount rate of 4%, calculations of the development of the extent of the liabilities had actually been overoptimistic. This can be explained with the help of Chart 1.

The curves reflect the funding ratios calculated by different means (a pension funds' assets relative to its liabilities). The practice has always been that assets are marked to market, whereas liabilities, comprising the nominal pension liabilities, are converted to cash at a discount rate of 4 per cent. Between 1988 and 1995, the resulting funding ratio shows a rather steady development: amounting to around 110, at a time of relatively few equity investments, reaching more than 150 per cent in 1999, before declining within three years to just under 110 per cent. Note that these percentages are averages and mask vast differences between the funds. The

Chart 1 Pension funds' funding ratio; fixed discount rate versus market value calculations



Source: PVK, internal calculations.

downward price risk of the large share invested in equities – stimulated by the historically high returns – is very much in evidence. Whereas in 1991 the funds still invested no more than 15% of their assets in equities, this had risen to just under 50% in late September.

But the decline in interest rates was at least as significant. If the liabilities are not valued at the fixed discount rate, but at the market rate, a far more informative picture emerges. The market rate can be factored in as a nominal variable, but also as a real variable, if annual inflation is taken into account. The differences between the funding ratios that were actually applied and that are calculated in retrospect, based on nominal and real interest rates, are revealing. For one, the funding ratio at a fixed discount rate shows a rise until well into the 1990s, whereas the funding ratio at market value is already beginning to show a trend decline at that time. In addition, the latter funding ratios show a much faster decline after 2000, with funding ratios based on real interest rates even dropping below 100%. Implicitly, there is leeway between both funding ratios at market value that can in part be used for indexation (provided that the funding ratio remains above 100% and a provision for general risks and investment buffers is factored in). The message in this chart is that the scope for indexation has narrowed substantially, not just as of 2000 but in reality from as early as 1990. On average, the funds' assets had, from 2000 onwards, ultimately become inadequate for inflation-proof pensions, let alone index-linked ones.

The price of solid pensions

Following the 'booming nineties' and the creeping stock market collapse of the new millennium, the recovery in the equity markets in 2003 relieved some of the pressure: the funds average funding ratio (at a 4% discount rate) has improved by a few percentage points relative to end-2002. Another positive development is that, of the 25 largest pension funds, not one has to contend any longer with underfunding of its nominal liabilities, and half no longer have a shortage in their reserves. Of the funds that were underfunded at end-2002, three-quarters had remedied that situation a year later. A further improvement can be expected for 2004 – judging by the recovery plans submitted – even though the positive trend in the equity markets has slightly weakened once again.

All in all, it is no exaggeration to conclude that, for a prolonged period, the price awareness of a pension appropriate for the prosperous Dutch welfare state was lacking. That can be explained from a historical perspective. The Dutch pension system was in a state of permanent revamping for successive decades, from fixed nominal amounts via average pay to final pay. The standard pension eventually amounted to 70 per cent of final pay. But the increase in pension costs were moderated via the franchise by the development of the state pension to a full basic pension. The Netherlands subsequently faced the weak economic developments which prompted the social partners to reach the Wassenaar Agreement on wage moderation in 1982. The pension costs were held in check by the moderate wage increases, and the funds presented healthy balance sheets at the end of that decade. In the early 1990s, government policy posed the threat of early collection of the hidden tax gains in the pension funds' capital. Unfortunately, the social partners and the fund management boards overreacted to this message by creaming off the funds' assets – a measure that proved undesirable in retrospect. This opened the door for supplementary pension schemes, reductions in contributions, contribution holidays and sometimes even to repayments. All of this occurred without a pass-through of the associated costs to labour costs. Moreover, again with hindsight, too much emphasis was put on the annual contributions, rather than the actual costs which were steadily rising.

Pension supervision in transition

Price of pensions under supervision

The price of pensions is a key issue in the new Pensions Act and in the current transitional phase. Binding agreements have already been made in some essential areas, including valuation methods, solvency and calculation of contributions. The underlying political principles are set out in the 'Outline Memorandum for the regulation of the financial supervision of pension funds in the Pension Act', which the Lower House, on 11 March 2004, declared applicable to current supervision. The essence of this memorandum can be summarised as follows.

The basic principle is the requirement that the assets and liabilities are reported at a realistic valuation. This promotes insight into the pension funds' financial positions. In addition, the memorandum sets down a confidence level, which effectively determines the solidity of a pension scheme. Contributors must have confidence that all the commitments made to them will actually be paid out. In a technical sense, the memorandum refers to the highest acceptable probability that a pension fund will find itself underfunded and will have to take corrective measures, since an uncorrected shortfall would jeopardise payment of pension entitlements. The complement of this probability is the confidence level. The political choice was made to fix this confidence level at 97.5 %. This means there is a probability of 1 to 40 that a pension fund could find itself in a recovery situation within a term of one year. Such a fund would subsequently be granted a long period (15 years maximum) to fully re comply with the statutory limits.

Cost-covering contributions and transparent pension commitments

The underlying principle for setting contributions is the cost-covering contribution, comprising four elements. The first is the actuarial contribution required, for the 'purchase' of the unconditional components of the pension contract. The second part is the solvency premium, related to the fund's actual risk profile, on the contribution for those unconditional components (the premium for achieving or maintaining the regulatory capital base, including the minimum capital requirements for the purchase of the unconditional components of the pension contract). Subsequently, a premium is required for the operational costs and finally – unless in the case of a nominal pension – the actuarial contribution for conditional components of the pen-

sion contract, taking into account the formulated ambition and the agreed method of financing. This cost-covering contribution can fluctuate widely – a bad thing from a macroeconomic perspective as well as being difficult to communicate. However, there are ways of opting for a more stable development in contributions, by basically using long term assumptions when setting the contribution level. Essential in this regard is to give solid proof that, on the basis of multi-year analyses of risks and returns, and in conjunction with management tools, the established criteria can be met. Namely, that starting from the equilibrium situation with minimum coverage of 97.5%, the unconditional liabilities will not be underfunded within a term of 1 year, and that given policy continuation, an unforeseen shortfall in reserves could be absorbed within at most 15 years after its emergence.

The future indexation of pensions is currently by no means fully funded by the pension funds, nor is it a statutory requirement: funding by a pay-as-you-go method or by extra returns is also permitted and is more or less in line with usual practice. The content of the pension commitment should be clearly communicated to the contributors. Funds are obliged to use exact prescribed texts on the conditionality of an indexation commitment and to ensure consistency as to the scheme, collective labour agreement, and other issues communicated to the contributors. Where a pension fund has not clearly communicated these texts by including them in the fund documents, the indexation commitment in its policy is considered to be unconditional. Moreover, the memorandum puts a stop to the practice of immediately sharing out extra returns on investment by reducing contributions. In future, a pension fund must first have built up enough reserves to cover its indexation ambition, before it can grant reductions in contributions. That forces pension funds to make careful choices about the level of ambition, which must also be communicated transparently and unambiguously.

Pensions and the economy

Interaction with the economy and the labour market

The conduct of pension funds has macroeconomic effects, especially via the labour market and public finances. In recovering their financial position, most pension funds opted for a sharp rise in contributions (Chart 2), among other measures, with employers bearing the greater share of the increase. For employers, the

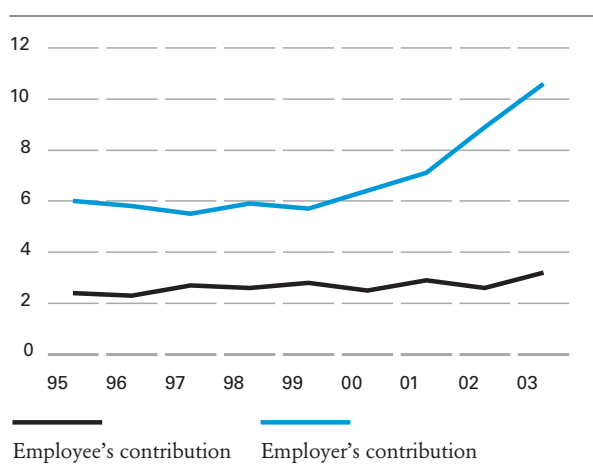
pension contribution as a share of gross salary rose from 5.7% in 1999 to 10.6% in 2003.

Higher pension contributions have led to upward pressure on compensation per employee, with the expected negative consequences for private sector labour demand and employment. The increase in contributions may also have an impact on labour supply. If employees perceive the rise in contributions as a burden, they will also match their labour supply to the new higher level of contribution. A decline in labour demand and labour supply would have a tempering effect on the economy through consumption and corporate investment. Higher unemployment and reduced purchasing power would slow down consumer spending, while lower profitability would stand in the way of investment.

Besides the labour market channel, government revenue would be hit directly too because of the facilities for accruing pensions in the Netherlands: the contributions of both employers and employees are tax-free, whereas pension payments are taxed. A rise in pension contributions hence results in a decline in corporation and income tax. All other things being equal, this means a higher fiscal deficit and greater recourse by the government to the capital markets. If the government wants to keep the fiscal deficit in check, other options arise such as reducing spending or imposing more premiums and contributions.

The recovery of the pension funds' financial position hence has a macroeconomic price. This price largely depends on the way in which the funding shortfalls are made up: by raising contributions, reducing

Chart 2 Pension contributions as a percentage of gross salary¹



Source: Netherlands Bureau for Economic Policy Analysis, 2004.
¹ Contributions for market sector and health care sector.

indexation or a combination of both. The Netherlands Bureau for Economic Policy Analysis (Centraal Planbureau/CPB) recently published a study with projections of the extent of these effects (CPB (2004)). The CPB drew the conclusion that a mix of contribution increases and indexation reductions would result in 60,000 jobs compared to a system in which the funding shortfall is restored through increases in contributions alone. A growing number of pension funds are choosing this option, which makes sense from a macroeconomic perspective. The shift towards career average schemes has made it easier to more evenly pass on the cost of the retrenchment to all involved in the form of indexation reductions.

On balance, the recent history is a prime example of procyclical behaviour. When the economy prospered, pension contributions were levied which lay below the cost-covering level and so led to a moderation in labour costs which the economy did not really require. On the contrary: the result was at best a further squeeze on the already tight labour market with the accompanying wage-inflating effect. Now that the funds have run into financial difficulties, the economy is also going through a bad period and can just barely absorb the extra increase in pension costs. But one could also argue that the earlier reductions in contributions have ended and now need to be compensated. This is exactly the trap which should be avoided in future by the introduction of cost-covering contributions for the short and medium term.

Solidarity and sustainability

The ongoing restoration of the financial position of pension funds relies heavily on the willingness of employees to make up financial shortfalls by accepting increases in their contributions. Inter-generational solidarity is an essential element in the Dutch pension system, since it makes advance commitments on the level of pensions and subsequently matches the required contributions to meet that level. The willingness to participate is based on the existence of, and confidence in, a broad equilibrium between deposits and withdrawals. Demographic developments are set to put this willingness under pressure in future. Owing to demographic ageing, the number of older people drawing a pension, and so no longer paying any contributions, is increasing, whereas the number of contribution-paying employees is declining. This decline means that an increase in contributions is less effective as an instrument for absorbing shocks to pension capital, because this would quickly lead to extreme contribution rates.

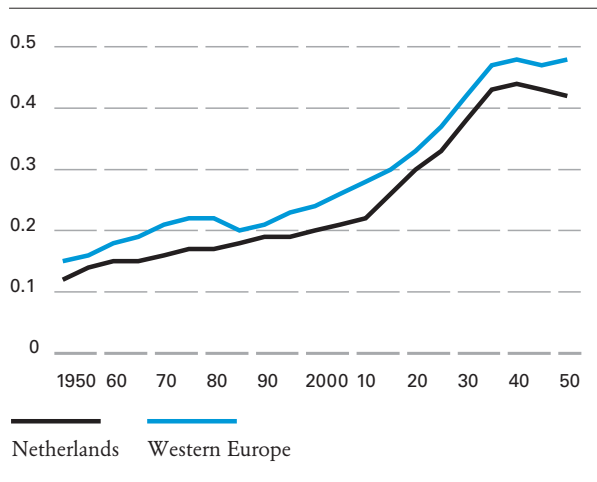
But current retirees cannot be asked to fully bear the costs of a possible shock in returns: they joined the pension system, voluntarily or otherwise, to safeguard their income in old age and can no longer take any additional measures against reductions in their rights. Such action would undermine the reliability of the pension system, and consequently the willingness of the current younger generation to participate in a pension fund, seeing as today's younger generation will become tomorrow's retirees. By allowing all the parties involved to contribute to the build-up of adequate capital buffers, fluctuations in the returns on the investment portfolio can be absorbed without 'extreme' adjustments when setting contributions and pension benefits. The supervisory framework hence focuses on the accrual of adequate buffers, a sound financial position and transparency. All contributors and potential contributors must be assured that the costs will be fairly distributed in the event of financial setbacks.

Labour participation as panacea

The public authorities also have an important role, albeit from the sideline, in enhancing the system's capacity to withstand shocks. A higher participation rate can partly alleviate the consequences of demographic ageing, and the more limited options for absorbing shocks by raising contributions.

Population ageing implies an ever smaller base for collecting contributions on a past service or pay-as-you-go basis. The dependency ratio, the ratio between over-65s and the category aged 15-65, is expected to more than double over the coming 35 years: from 21% to 44% (Chart 3). Against this development, pay-as-you-go or past service funding will weigh ever more heavily on wages. Labour participation then becomes crucial: in the category of the so-termed potential labour force, the entire category aged 15-65, the share of those actually in employment should be as high as possible. As illustrated in the chart, the Netherlands is not the only country facing this problem. As far as its pension system is concerned, the Netherlands has a relatively strong initial position, due to the high degree of funding. If labour participation can be increased, a future shock in capital returns could be absorbed by more people. Moreover, an expansion of labour participation (along with an increase in labour productivity) is an effective means of upholding economic growth.

Chart 3 Demographic ageing in Europe¹



Source: United Nations, 'World Population prospects', 2002.
¹ Dependency ratio (over 65s relative to 15-65 age group).

Conclusions

Developments in the financial sector should be regarded and assessed in the context of the real economy. This is also true of the pension sector, which has been through stormy times in recent years. There is a strong interaction with macroeconomic concerns: pension contributions and benefits affect labour demand, competitiveness, public finances, disposable income and public confidence in general, while the dynamics of the economy influence the position of pension funds via developments in interest rates, the stockmarket, inflation, and wages.

In response to seriously impaired solvency, significant steps were taken over the past two years towards restoring the pension sector: there has been a substantial shift from final pay to career average schemes, contributions have been raised closer to a cost-covering level, and the downward tendency in the actual retirement age has been brought to a halt. Pensions supervision is changing too: a new Pensions Act is in preparation, involving major efforts to develop a risk-based financial assessment framework. Transparency surrounding pensions needs to be enhanced in several respects, notably the reliability of the pension commitments given to contributors and the attendant costs. Choices are called for in order to maintain a valued – but not cheap – pension system, without unwelcome obstacles to the emergent economic recovery.

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The Dutch economy in 2004-2006: a forecast using MORKMON

Economic recovery is expected to gather momentum in the years 2004–2006. In 2004, the Dutch economy is to grow by 1.2%, or almost half a percentage point above the expectation published in the June 2004 Quarterly Bulletin, reflecting higher-than-expected world trade growth this year. In 2005, economic growth will accelerate slightly to 1.7%, a quarter of a percentage point below the June 2004 expectation. These adjustments are based on the high level of energy prices which, through consumer price increases, eat into consumers' purchasing power. Nonetheless, the underlying economic recovery is gaining both vigour and breadth. Over the next few years, (wage) cost reductions will allow the Dutch private sector to profit more from the growth of world trade. Also during the projection period, export-driven recovery will spread out steadily across the various domestic sectors. On balance, the volume growth of Dutch gross domestic product (GDP) will touch 2.5% in 2006. Uncertainties discussed in detail by this article relate to the developments in the oil market, to the exchange rate of the US dollar and to pension contributions. Simulation results suggest that further oil price rises may depress growth by several tenths of a percentage point, while simultaneously pushing up prices by over half a percentage point. Sustained weakening of the US dollar by 10% would cost the Netherlands almost three quarters of a percentage point in economic growth. Continued pension premium increases, finally, would harm the recovery of consumer spending, in particular, but would affect economic growth less severely. Estimates and scenario results were obtained using MORKMON, the Nederlandsche Bank's macroeconomic model for the Netherlands.

Introduction

De Nederlandsche Bank releases twice-yearly forecasts for the Netherlands based on outcomes of its macroeconomic structural model named MORKMON. This article presents the latest estimates for the Dutch economy during the 2004–2006 period. The actual figures for the first three quarters of 2004 have been incorporated in the forecast.

In many respects, the current year is still a year of transition. Companies aim for rationalisation and cost reduction, and seek to reinforce their balance sheets, while the government sector has to make extra spending cuts in order to balance its budget. As a result of a subdued wage development combined with increasing financial burdens, Dutch families face very meagre purchasing power increases for the coming years. However, (wage) cost reduction measures are enabling the Dutch private sector to benefit more from the upswing of the global volume cycle. Over the projection period this export-driven recovery will broaden across domestic sectors. Towards the end of the projection period, corporate investments and private consumer spending will get under steam.

For 2004, GDP volume growth is expected to come out at 1.2%, well over the estimate published this spring by the Nederlandsche Bank.

Almost all spending components have contributed to this adjustment. In the first place, the supplementary budget cuts made in April appear to have less of an adverse effect on public spending volume than was assumed at the time. Estimates of public sector current expenditure and investment were upward-adjusted accordingly. Private consumption also contributes to the upward adjustment of estimated growth for 2004. During the first half of this year, consumers' spending propensity turned out higher than expected, although its effect on the annual figure is partly cancelled out by disappointing third-quarter figures. The recovery of economic growth in the EU is also reflected more clearly, as it benefits the Dutch economy in terms of more rapid export volume growth. The volume growth of GDP estimated for 2005 is slightly below the prediction made this spring, largely owing to a fall in consumer purchasing power caused by high energy prices. In 2006 economic growth will be more firmly undergirded by domestic sectors as the growth rates of investments and private consumption accelerate as well, taking GDP volume growth for that year to 2.5%.

The estimated inflation rate for 2004, at 1.4%, is slightly above the spring projection, as the effects of

high oil prices are partly offset by falling food prices. For the next few years, price boosting effects will dominate more emphatically than had been foreseen earlier on. For 2005 the consumer price index is now expected to rise 1.4%, against an expected 0.8% in the spring projection. In 2006, consumer prices should go up by 1.1%, up from an expected 0.7% in spring.

This article will first discuss the assumptions underlying the estimated figures. Following this is a detailed explanation of the economic picture that arises from the projections. Finally, a few alternative scenarios chart the main domestic and international uncertainties surrounding the projection. They concern the effects of developments in the currency and oil markets and an additional financial burden on Dutch households in the form of further rises in pension contributions.

Assumptions 2004-2006

As usual, the projections for the Dutch economy are based on assumptions compiled by the Eurosystem in the context of the common forecasting exercise – see Table 1. These assumptions do not reflect an opinion on the exchange rate or the (policy) interest rate. For this reason, exchange rates are assumed to remain constant for the entire projection period at the levels which applied at the time this analysis was finalised (19 November 2004). The assumed short-term interest rate in the euro area is almost unchanged and remains at the historically low level of 2.2% for the entire projection period. The long-term interest rate development reflects expectations in the financial markets of a long-term rate rising gradually over the projection period, from 4.1% this year to 4.5% in 2006.

The strong upswing of the global business cycle during late 2003 and the first half of 2004 made a decided impact on Japan's economy. Recording exceptionally strong figures for the last quarter of 2003 and the first of 2004, the country seems finally to have struggled free of the slump it had been in for many years. Meanwhile, domestic expenditure seems to have picked up as well, suggesting that 2005 will bring an end to a protracted period of deflation. In 2004, Japanese GDP is to grow by 3.9%, while for the rest of the projection period starting 2005 it is assumed to record growth figures around 2¼%. Underlying the strong global recovery of early 2004, however, were liberal macroeconomic policies. The risks of sustained expansionary macroeconomic policies have caused monetary policies in both the USA and the UK to be tightened. Over the past twelve

Table 1 Assumptions

	Actual	Assumed		
	2003	2004	2005	2006
International¹				
Percentage changes				
Relevant world trade (in volume terms) ²	3.2	6.8	7.0	6.6
US GDP volume growth	3.0	4.4	3.4	2.9
UK GDP volume growth	2.2	3.2	2.9	2.7
Japan GDP volume growth	2.5	3.9	2.0	2.3
World GDP volume growth excluding euro area	4.7	5.4	4.6	4.5
Commodity prices ex oil (in USD)	13.0	17.8	1.1	5.2
Imported goods and services prices (in EUR)	-0.7	0.9	1.0	0.7
Competitors' export prices (in EUR) ²	-5.9	-1.5	0.3	1.7
Average levels				
Euro area short-term rates (%)	2.3	2.1	2.2	2.2
Netherlands long-term rate (%)	4.1	4.1	4.1	4.5
Euro exchange rate (in USD)	1.13	1.24	1.29	1.29
Oil price (UK Brent in USD per barrel)	28.9	39.0	44.4	40.8
Domestic				
Public sector employment (x 1000 FTE)	785	786	790	793
Government consumption (% volume changes)	1.8	0.4	0.7	0.8
Government gross fixed investments (% volume changes)	-0.4	-0.7	0.0	2.1

¹ The source of international assumptions is BMPE (autumn 2004, Eurosystem).

² Concerns the volume of world trade and world trade prices of goods and services relevant to the Netherlands.

months UK interest rates were increased five times. The British housing market is currently showing early signs of cooling down while the growth rates of consumer spending and investment seem to level off. Economic growth in the UK is expected to slow down accordingly, from 3.2% this year to 2.7% in 2006. In the USA, the tightening cycle was interrupted when during the summer 'weak spots' were showing in the world's largest economy. These now seem to have been overcome, given especially the most recent dynamics in September and October job figures, whereas during the second quarter job growth had been a cause for concern. Added to this, interest rates have meanwhile been upped. GDP growth in the US is assumed to be 4.4% in 2004, gradually declining to more sustainable levels around 3%. The projections further include a slight improvement of US public finances, while a current account deficit of 5% of GDP is estimated across the entire period.

Taking its cue from the vigorous global recovery in 2004, world trade growth – an important factor for the Netherlands – also picked up speed. While world trade,

at 3.2%, recorded historically modest growth in 2003, this year growth will more than double to 6.8%. In 2005, it is expected to move up further to 7.0%, before leveling off somewhat in 2006, to 6.6%. The breakdown of world trade growth in geographical terms shows subdued demand increases for Dutch goods and services from outside the euro area, offset by a further pick-up in demand within the euro area. Such favourable external economic conditions may benefit an open economy like the Dutch one.

Assumptions concerning oil prices have been derived from market expectations based on futures prices. The average price of a barrel of Brent crude in 2004 is currently expected to come out at USD 39.0, compared to expected 2004 averages of USD 34.6 in June 2004 and USD 26.2 in December 2003. The factors that have pushed up prices are found both on the demand and on the supply side of the oil market, with the strong development of demand from Asia, and especially China, playing an important part. On the supply side, uncertainties regarding the future supply of oil have

had a strong upward effect on prices. Oil market developments will return further down, where several variant projections are discussed. Despite the appreciation of the euro in year-average terms by almost 10% from USD 1.13 in 2003 to USD 1.24 in 2004, average oil prices in euro have been 20% above 2003 levels. The projections assume that oil prices will remain high for some considerable time, at USD 44.4, on average, in 2005 (up from USD 31.8 in the spring projection). Not before 2006 does the market expect a decline to USD 40.8, on average (up from USD 29.2 last spring).

Commodity prices in USD excluding energy went up 13% in 2003, with a further rise by 17.8% expected for 2004. The pick-up in world trade lays a solid foundation under these price rises, with the weakening of the US dollar pushing dollar commodity prices up even further these current years. The latter effect will evaporate during the projection period under the assumption of exchange rate constancy, amid only marginal further increases of world trade growth. Resulting from this during 2005 and 2006 will be subdued commodity price developments in both dollars and euros. The decline, during 2003, in the price levels of imported goods and services, followed by subdued development in 2004, was also due in part to the appreciation of the euro. This leads to a more modest price development in goods and services during 2005 and 2006, by 1.0% and 0.7%, respectively. Supported by an appreciated euro, our competitors' export price levels are also falling off in both 2003 and 2004, by 5.9% and 1.5%, respectively, before finally picking up again in 2005 and 2006.

Domestic assumptions relate to government policy intentions. Policy principles for 2004 and beyond, as presented in the Budget Memorandum for 2005, stressed cutbacks on the cost of government and on total spending, while austerities on social benefits and various subsidies were announced as well. The Government also felt compelled – as in the two previous years – to include an additional austerity package of supplementary tax increases and budget cuts totalling EUR 4.75 billion, needed to keep the EMU fiscal balance within the agreed limit of 3.0% of GDP. Against this background, current expenditure growth is predicted to fall from 1.8% in 2003 to 0.4% in 2004, with growth figures for the next two years expected to average 0.75%. This slowdown compared to 2003 reflects net austerities on public service spending and social security. Budget reallocations benefited the policy areas of policing, public prosecution and – on a more modest level – education and care. It should be noted here that public spending on care is also affected by a purely statistical

phenomenon: as of 1 January 2004, part of what used to be publicly financed care spending was hived off to private care spending through reductions in the state-sponsored health care package. The budget reallocations and austerities caused a change in the distribution of employment across the different government sectors. Total government labour volume, nearly unchanged in 2004, will increase slightly in both 2005 and 2006.

Baseline projection results 2004-2006

Table 2 shows the 2003 results and projections for 2004–2006 of the main macroeconomic variables. The annual figures for 2004 include realised results for the first three quarters. This section focuses on (the determinants of) economic growth, the labour market, wages and prices.

Economic growth

The nadir of the most recent recession was reached in the second quarter of 2003, when GDP volume contracted by 0.7% compared to the first quarter. Since then, the economy has found its way back to growth, although still tentatively. In the fourth quarter of last year and the first of this year GDP volume growth picked up with remarkable vigour, recording quarter-on-quarter growth rates of 0.5% and 0.8%, respectively. The next two quarters were needed, it appears, for the economy to catch its breath after the preceding acceleration, with quarter-on-quarter GDP volume changes of -0.1% and +0.2%, respectively. The baseline projection assumes that this was a temporary fallback and that underneath, economic recovery is steadily gaining in both vigour and breadth.

The economic recovery in the Netherlands is driven primarily by export growth, in a clear break with the recent past, when the performance of Dutch exports disappointed even the meagre expectations based on relevant world trade growth: in 2003, Dutch export growth stagnated, while the volume of relevant world trade increased by 3.2%. Underlying this poor performance were a 5.9% deterioration of price competitiveness in 2003, which had already been deteriorating in both 2002 and 2003. This development hit the Dutch economy with even greater force because historically speaking the volume growth of world trade in the years 2001 and 2003 (about 2% on average) may be said to have been very modest indeed. Not only will world trade growth accelerate during the projection period,

Table 2 Key indicators for the projection

	Actual	Assumed		
	2003	2004	2005	2006
Demand and production				
	Percentage changes			
Private consumption	-0.9	0.1	0.5	1.6
Gross business investment (ex housing)	-3.4	0.5	1.3	4.5
Exports of goods and services	0.0	6.1	6.2	7.3
Imports of goods and services	0.6	5.1	5.5	7.1
Gross domestic product	-0.9	1.2	1.7	2.5
Wages and prices				
Contractual wages per employee, private sector	2.7	1.4	0.6	1.5
Wage cost per employee, private sector	3.8	2.4	0.4	1.7
Consumer price index	2.2	1.4	1.4	1.1
Price competitiveness ¹	-5.9	-1.9	-0.5	0.9
Price level of GDP	3.0	0.8	1.3	1.2
Labour market				
Employment (persons)	-0.4	-0.9	0.7	1.7
Labour supply (persons)	0.7	0.4	1.2	1.3
	Average levels			
Change in unemployment (x 1,000 persons)	90	115	51	-27
Inactive-to-active ratio (%)	67.5	69.4	70.4	69.9
Public sector				
EMU fiscal balance (% of GDP)	-3.2	-3.0	-2.5	-2.0
EMU fiscal debt (% of GDP)	54.1	56.3	57.7	58.3
Overig				
Trade balance – goods and services (% bbp)	5.0	5.5	6.0	6.5
Labour-to-income ratio, private sector (%)	86.9	87.5	86.4	86.3

¹ Change in competitors' export prices of goods and services less Dutch goods and services export prices.

the development of price competitiveness will also end up pointing in the right direction again. While for 2004, the euro's high exchange rate still leads to a 1.9% expected loss in the price competitiveness of Dutch exports, followed by another slight loss in 2005, 2006 will see an improvement of 0.9%. This improvement would result from a very subdued development in Dutch (wage) costs combined with the projected stable exchange rates. In 2006, Dutch exporters will be regaining market share. With world trade growth touching 6.6% that year, Dutch export growth will soar to 7.3%.

The Dutch private sector is going through a far-reaching reorganisation and restructuring phase.

Operational processes are being rationalised while non-core business lines and redundant labour are shed in order to reduce costs. These developments show up in the figures as, inter alia, numbers of bankruptcies unprecedented since the early 1980s. During the first quarter of this year, almost 800 businesses failed each month. In the meantime these figures seem to have fallen off somewhat, witness the 757 bankruptcies, on average, pronounced per month during the third quarter. In tandem with subdued wage developments, corporate profits are slowly recovering, as is shown even now in figures disclosed by listed companies. During the projection period, profit recovery will spread out, as

reflected by the profit-to-income ratio – the complement to the labour-to-income ratio – which will rise by more than a percentage point from 12.5% this year to 13.7% in 2006. At first, the extra profits will not be reflected immediately in investment volume but used to reinforce financial balance sheets through debt redemption. Although this year, gross private sector investments excluding housing have gone up for the first time in three years, growth is still modest at 0.5%. This is because increasing demand is initially absorbed by existing labour slack. Although capacity utilisation is up this year, its relatively low level provides little incentive to undertake large-scale expansionary investments. During the remaining projection period, however, rebuilding competitive and financial muscle will enable the Dutch private sector much better than before to profit from increasing domestic and international demand, with investment growth ultimately picking up as well. Also contributing to this scenario are sustained easy financing conditions in the form of low interest rates. Investments in housing will increase throughout the projection period, as an ebbing willingness to invest in industrial and office premises releases construction capacity at a time of continued strong demand for (new) housing. In addition, the Government has announced that it will encourage the construction of 450,000 new homes in twenty urban areas.

During last year, consumers have kept a historically tight hand on their purses. In 2003, year-on-year private consumption volume fell by 0.9%, the steepest fall in 20 years, owing both to the development of real disposable wages and to confidence effects. The rapid increase of unemployment in 2003 caused a parallel fall in total household income combined with a strongly negative confidence effect. This year and the next, wage restraint and an increased tax burden depress the development of disposable incomes. In 2003 and 2004, extra burdens relate primarily to pension contributions. Although the baseline projection does not envision further significant pension contribution rises during 2005 and 2006, a variant projection discussed below includes the effects of additional contribution rises. Through 2005, wage increases will continue to level out, while the upward movement of consumer prices stabilises. Income conditions will keep consumers from relaxing their spending patterns, causing consumption growth to remain below its long-term average for most of the projection horizon. This year, private consumption volume growth comes out at 0.1%, expected to climb to 0.5% in 2005. Last spring's projection still put the latter

figure at 1.9%. The sizable downward adjustment was made for three reasons. First, this estimate includes the assumption that the proposed no-claim discount on health insurance premiums as of 1 January 2005 is to have no statistical effects on the development of private consumption volume. In the spring, assumptions were of an upward distortion by almost half a percentage point. This is a purely technical matter and does not reflect any change in economic views. Also, stiff rises in energy prices compared to the previous projection have eaten into consumers' purchasing power, accounting for a good half percentage point of the adjustment. Finally, private consumption growth turned out weak in the third quarter of 2004 (quarter-on-quarter contraction), leading to adjustment by a few tenths of a percentage point of the 2005 annual forecast. It will be 2006 before we leave the worst behind us: consumption will be growing by 1.6% again, driven by both wage developments and confidence in the labour market, as unemployment falls by 27,000 persons.

Although in absolute terms consumption growth remains modest, Dutch households spend a large part of their disposable incomes in relative terms. In 2004, this is reflected by an individual households' savings-to-income ratio of 2.4%, a level which for the sixth consecutive year lies well below what during the latter decades of the 20th century was considered as the long-term average. Based on this observation and taking into account the average Dutch household's wealth accretion during the 1990s caused by rising prices of housing and equity, the estimate assumes that the observed decline in saving propensity will persist for some time to come. Finally, the estimates assume that in 2005 households will anticipate the arrival of better times, supported by restored private sector profitability and accelerating world trade growth. A further, temporary decline in the individual savings-to-income ratio may boost private consumption volume next year despite a decline in real disposable incomes. In 2006, consumer spending is expected to increase in accordance with income development, while individual savings will edge upwards.

Wages

The estimate of wage developments in 'polder' Netherlands completed a full cycle within the past twelve months. First, the Government, employers and trade unions agreed, in the Autumn Accord of 2003, to freeze contractual wages during 2004 and 2005. However, the following spring's consultations on structural labour market reforms broke down over the issue

of early retirement plans. As a result, the wage restraint that had been promised earlier on condition that agreement should be reached on early retirement, lost its binding force. Since the social partners have finally reached a new Accord this autumn, the baseline projection now includes modest wage demands for 2005. More specifically, the estimate for 2005 and 2006 assume contractual wage increases by 0.6% and 1.5%, respectively (see Table 3). The increase compared to the spring estimate is caused in part by higher inflation. For the year 2005, there is also the fact that the Accord now reached no longer states the intention to keep contractual wage rises as close to nil as possible. Instead, the unions have promised to observe 'the utmost restraint' in wage negotiations. In addition to contractual wage rises, remuneration growth also includes non-contractual wage increases and employers' contributions to social security. Non-contractual wage increases comprise a structural factor and wage drift. Structural effects are caused by changes in the composition of the private sector workforce. Within the forecast horizon, this factor results in a positive contribution to increasing wages due to ageing of the active workforce. Wage drift is a component that is closely linked to the business cycle and includes, inter alia, incremental rises, bonuses and special allowances. Given the phase of the business cycle, wage drift is expected to be low between 2004 and 2006. Apart from these two factors, the non-contractual wage rise component will be negatively distorted during 2005-06 by the introduction of the Act providing for Extended Wage Payment during Sickness (*Wet Verlenging Loondoorbetalingsverplichting bij Ziekte / VLZ*). This Act extends the period during which the employ-

er must continue to pay wages from one to two years. After this period, sick workers are dismissed and may claim disability benefits (WAO). The introduction of the VLZ will not affect total remuneration, since wages paid during sick leaves are counted, with WAO contributions, as social security contributions. Employment and labour supply do increase, however, because while sick employees are included in employment, people on disability benefits are not. This purely statistical employment increase, combined with unchanged total remuneration, will lower average wages, causing a -0.4% downward adjustment of non-collective wage increases during 2005 and 2006. Lastly, employers' social security contributions are rising by 0.9% in 2004, due primarily to increased pension premiums. In 2005 and 2006, the share of employers' social security contributions in the rise of remuneration is expected to be considerably smaller.

Labour market

As a rule, employment developments tend to lag some way behind economic developments, and the current economic recovery is no exception. During the recent economic slowdown, employers were reluctant to dismiss workers who had been hired with considerable effort in the tight labour market conditions prevailing in 1999 and 2000. When in 2003, it became clear that the growth dip was developing into a GDP volume contraction of a size not seen since the early 1980s, the labour hoarding trend was reversed. Employers started rationalising and reorganising and last year, employment in terms of persons contracted by 0.4%. When this process continued in 2004, austerity measures also

Table 3 Breakdown of private sector unit wage costs

Contributions in percentage points

	2003	2004	2005	2006
Contractual wages	2.7	1.4	0.6	1.5
Non-contractual wages	0.4	0.1	-0.3	0.1
Employers' social security contributions	0.8	0.9	0.1	0.1
Wage costs per employee	3.8	2.4	0.4	1.7
Labour productivity ¹	0.2	4.0	2.2	1.3
Unit wage costs ²	3.6	-1.6	-1.8	0.4

¹ Gross value added to enterprises by working employee (in FTES).

² Remuneration per employee in FTES less labour productivity.

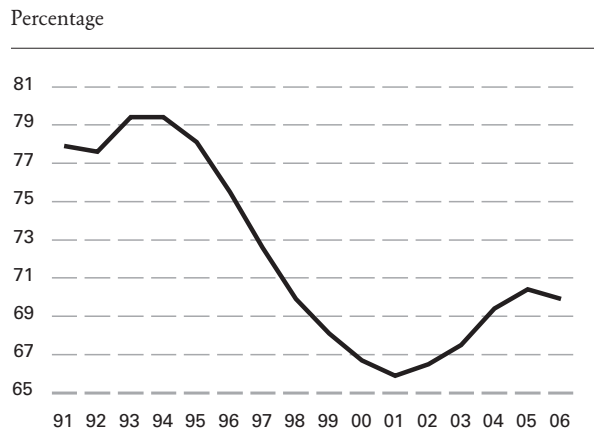
brought government employment growth to a near standstill – for the first time since 1997. As a result, total employment growth remains negative in 2004, although the low point was reached some time during the first quarter. Meanwhile, however, the 0.9% annual contraction of employment in terms of persons, together with the recovery in GDP volume growth, does make for strong improvement of labour productivity. Employment is expected to curve tentatively upward again in 2005, by 0.7%, and more confidently in 2006, by 1.7%. These figures are somewhat on the rosy side as a result of the statistical effect produced by the VLZ, which accounts for 0.4 percentage point of the employment growth in 2005 and another 0.4 percentage point in 2006 caused by spillover effects.

Labour supply increases in 2005 and 2006 by 1.2% and 1.3%, respectively. On the one hand this increase reflects the structural growth of labour supply on account of increasing participation by women and of various policy measures by the current Administration to stimulate labour supply. On the other hand, rapidly growing unemployment generates a discouraging effect, dampening the growth of labour supply, especially in 2004. The sharp decline of employment, together with sustained labour supply growth, leads to a hefty increase of unemployment in 2004, by 115,000 persons. This strong increase of the average number of registered funemployed compared to last year conceals a slowdown of unemployment growth in the course of this year. Although in 2005, the annual average level of unemployment will still rise, the increase will level off further, to 51,000 persons. Next, 2006 will see the first decline of unemployment since 2001, by 27,000 persons. Together, growing unemployment and declining employment in 2003–2005 push up the inactive-to-active, or i/a, ratio, from 67.5% in 2003 to 70.4% in 2005. After that year, as employment picks up and unemployment falls off, the movement of the i/a ratio will turn around, taking it back to 69.9% in 2006. Looking at the i/a ratio across a longer period, one finds that the Dutch labour market presents a sunnier picture than it did in the early 1990s, when the i/a ratio came close to 80% (see Chart 1).

Prices

The inflation rate, calculated according to its harmonised European definition, steadily declined since its 5.5% peak of April 2001, to a low of 1.1% in September 2004, well below the euro area average, which in that month stood at 2.1%. This year's inflation picture is delineated in part by the ongoing supermarket price war

Chart 1 Inactive-to-active ratio



that continues to press down on processed food products until the end of this year. Temporary price-boosting effects are caused by excise duties on tobacco, which were stepped up in February 2004. In January 2005, excise duties on house brand tobacco will also go up in January 2005, making an additional contribution to inflation.

Compared to the 2.3% private consumption price level increase recorded in 2003, price developments during the projection period may be called subdued. A major foundation underlying the inflation slowdown is the development of unit labour costs (Table 4). The contribution of labour costs to inflation has continued to decline, from 1.6 percentage point in 2003 via -0.1 percentage point this year to -0.04 the next. Unit labour cost pressure may continue on its downward slope thanks to subdued wage developments and the recovery of labour productivity resulting from companies' restructuring efforts. Favourable wage developments will also enable companies to improve their gross margins over the projection period, for the first time since 1994.

The euro's increased exchange rate has continued to contribute negatively, via import prices, to private consumption price levels in 2003 and 2004. In 2004, however, this effect is more than counterbalanced by the strong rise of dollar-denominated commodity and energy prices. In 2005, rising energy prices will continue to exert upward pressure on inflation, through the contribution made by imports. Declining oil prices and a more moderate development of commodity prices in dollars during 2006 will, helped by a steady exchange rate, provide a lower but still positive, import price driven contribution to inflation.

In terms of the rate of increase of the (domestically defined) consumer price index, inflation is to be cut in

half during the projection horizon, from 2.2% in 2004 to 1.1% in 2006.

Public sector

The EMU balance has rapidly declined after 2000 – when a surplus of 2.2% of GDP was recorded – and turned into a deficit. In 2003, the deficit, at 3.2% of GDP, crossed the 3.0% of GDP threshold set down in the Maastricht Treaty. The deterioration of public finances is naturally connected to the cyclical downturn which has brought both disappointing tax revenues (in particular profit tax and VAT) and higher-than-expected spending on social benefits. In addition, diminishing reserves of provincial and local government have, since 2002, been partly responsible for the deterioration of the EMU fiscal balance, together with higher-than-expected spending on care. Amid a gradually recovering economy, however, net borrowing will decline from 3.0% of GDP in 2004 to 2.0% of GDP in 2006. EMU debt will increase from 54.1% in 2003 to 58.3% in 2006, although in line with the decline of EMU public borrowing, the growth rate of the debt ratio will level off significantly in 2005 and 2006.

Scenario analysis

The picture arising from the baseline projection is one of recovering growth, initially driven by world trade, then gradually spreading out as domestic spending components pick up. International developments are surrounded by uncertainties, especially those relating to oil and currency market sentiments. Consequences if oil prices should continue to rise while the us dollar

depreciates further are discussed in the following sections, while an uncertainty scenario of domestic origin, namely the contingency of continued rises in pension contributions, is also highlighted.

Oil market developments

Recent record heights scaled by the us dollar price of oil and the euro/dollar exchange rate have received a great deal of attention. The dollar price of a barrel of Brent crude rose steadily from about USD 20 in late 2001 to over USD 20 in the first quarter of 2004. Over the same time span, commodity prices excluding energy also rose by a cumulative 50%, while world trade growth picked up as well. Since the spring of this year commodity prices excluding energy have stabilised, however, whereas oil prices raced ahead. The divergent developments of the several commodity classes underlines the special uncertainty surrounding current oil prices, which is perhaps also fed by record market prices in absolute terms. Chart 2 provides a historical perspective on the relative height and recent boom of oil prices. First and foremost, it shows that the level of oil prices in euro is now considerably lower than it was in the early 1980s, and comparable to the end-2000 level. Secondly, it demonstrates that the oil price rise expressed in euro, compared to that in dollars, has been considerably less severe because the dollar has come down against the euro. Even more important, in terms of production costs, is the development of the cost of oil in constant euro prices, which the chart also shows. The euro price of oil expressed in terms of the 1985 price level – the year when the highest ever nominal oil price in euro was quoted – is currently roughly half that record price. Moreover, the oil price sensitivity of the

Table 4 Breakdown of consumer price rises

Contributions in percentage points

	2003	2004	2005	2006
Imports	-0.3	0.3	0.4	0.3
Indirect taxes, gas, rents and public services	1.1	0.6	0.9	0.5
Unit labour costs ¹	1.6	-0.1	-0.4	0.2
Gross margin improvement ²	-0.1	0.4	0.5	0.3
Private consumption deflator	2.3	1.3	1.5	1.2
Consumer price index	2.2	1.4	1.4	1.1

¹ Remuneration per employee in FTEs, divided by GDP at market prices per active employee in FTE.

² Including cost of capital.

Dutch economy has come down quite a bit since those days, witness the decrease of oil usage: from over 4% of GDP in the early 1980s to just over 1% of GDP in the 2000-2003 period.

Aside from the historical perspective on current oil price levels, the question arises whether current high prices are a temporary phenomenon or mark the beginning of an era of structurally higher oil prices. One often-used argument supporting the latter view is that the growth of the global economy, together with the rapid industrialisation of China, India and other emerging economies is generating a structurally increasing demand for oil and other forms of energy. The rate at which demand will increase seems hard to predict. A July 2003 estimate by the International Energy Agency of world-wide oil usage during the second quarter of 2004, for instance, proved to be 3.7 million barrels per day (or almost 5%) too low in retrospect. A considerable part of the difference, some 2.2 million barrels per day, reflects increased oil thirst in Eastern Asia, especially China.

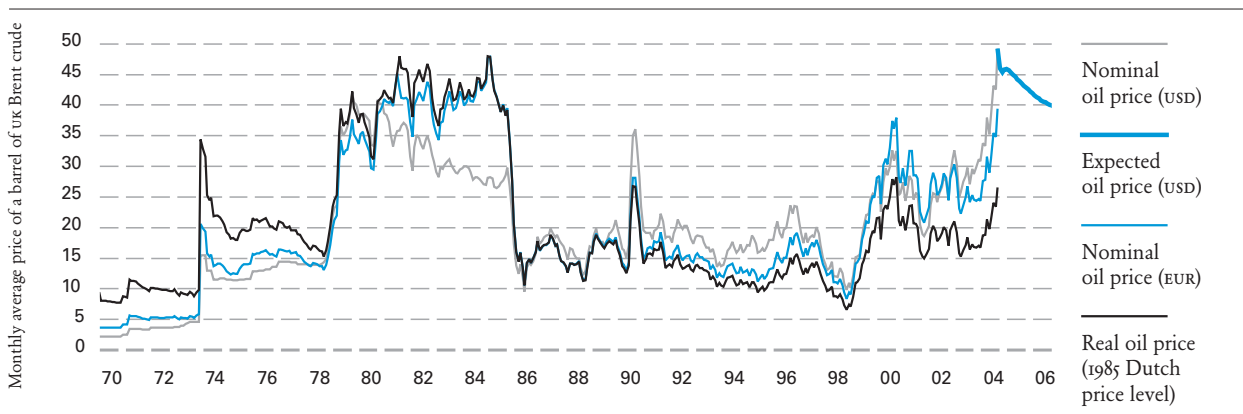
The supply of oil is also beset with uncertainties. At the end of 2003, proven reserves world-wide ran to over 1,148 billion barrels, up 12% compared to ten years ago and sufficient to satisfy 40 years' worth of global demand at the current level. These reserves include total amounts of underground oil that are considered extractable given the present state of technology and current economic circumstances. They do not include the potential discovery of new oil fields, nor the likelihood that future technological developments and higher oil prices may make known reserves economically extractable. Examples of this are the deep-water fields off West Africa, the Gulf of Mexico and the east coast

of South America. Proven reserves thus represent a conservative estimate for potential long-term oil supply. In addition, alternative energy sources may be exploited to a greater extent in the long term as a replacement for oil: gas, coal, nuclear energy and renewable sources such as wind, hydraulic and solar power. On the downside, some 65% of proven oil reserves are in the politically unstable Middle East region. Short-term uncertainty with respect to oil supply is fed by attacks on production and transport facilities in Iraq and by assaults on employees of foreign oil companies in Saudi Arabia. Political risks to the supply of oil also exist in Nigeria and Venezuela and with respect to the continuity of Russian oil company Yukos and strained labour relations in Norway. And to end the list, hurricane Ivan damaged production facilities in the Gulf of Mexico.

These uncertainties on both the demand and the supply side of the oil market have laid a firm floor under market expectations that current price levels will be sustained for the near future. The market expectations represented by Chart 2 indicate that over the forecast horizon, prices will fall in 2006 to an average level around USD 40. High oil price levels have been factored into the baseline projection; the impact of possible further price rises on the baseline projection may be charted in a simulation.

The macroeconomic consequences of a 20% permanent oil price rise, including supply effects, are represented by the first three columns of Table 5. These effects are the sum of demand and supply reactions and also the second-round effects in the shape of stepped-up wage demands. On the demand side, higher oil prices push energy and consumer prices upwards, eating into households' purchasing power. This in turn

Chart 2 Nominal¹ and real oil prices



1 Up to 1999, the nominal oil price in euro is expressed as the us dollar price of oil times the guilder/dollar exchange rate and divided by the guilder/euro conversion factor (2.20371).

translates to lower levels of consumer spending and hence to discouragement of corporate investments. Part of the fall in demand leaks across the border, however, in the shape of decreased imports. These demand-side effects cover roughly half of the total effects on GDP as represented. Oil price rises also make themselves felt in the form of increasing costs of production and hence declining corporate profitability. Enterprises will adapt their behaviour by raising their sales prices in order to pass the burden of higher cost on to the consumers. At the same time, however, increased cost levels draw down total production levels and especially the relative demand for capital. In reaction to this, companies will cut back on investments, with negative effects on employment. These supply-side effects account for about one-third of the total effects on GDP as presented. The remainder is accounted for by second-round effects that occur when employees express the resulting higher cost of living in increased wage demands. While such effects support consumption volume, they also serve to increase production costs. This process translates,

through a fall in corporate profits, to a fall in investment volume and, through higher sales prices, to declining exports. Overall, GDP volume decreases by 0.3 percentage point over a three-year horizon. The oil price rise reaches its maximum 0.6% effect on consumer prices as early as by the second year.

The effects presented in the first part of Table 5 are partial in the sense that they do not reflect international knock-on effects of higher oil prices on world trade and trade prices. Basically, an increase in the price of oil is a current transfer by net oil importing countries to oil-exporting countries. In the first part of the table for the Netherlands, this is expressed as a contraction of net domestic income (NDI) which exceeds the contraction of production. Such a decline of real disposable income will, not only in the Netherlands but in all oil-importing countries, to a decline in domestic demand. Because the Netherlands' main trading partners are all net importers of oil, the fall in domestic demand in those countries will translate, for the Netherlands, into a lower volume of relevant world trade. The assump-

Table 5 Effects of a permanent 20% oil price rise

Cumulative effects in % relative to the baseline, unless indicated otherwise.

	Including supply effects			Including supply effects and international knock-on effects		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Assumptions						
Oil price (UK Brent in USD per barrel)	20	20	20	20	20	20
Prices of commodities excluding energy (in USD)				-0.5	-0.4	-0.2
Grondstoffenprijzen exclusief energie, in USD				0.4	0.6	0.8
Long-term interest rate (Netherlands, %)				0.2	0.2	0.2
Results according to MORKMON						
Expenditure and production by volume						
Private consumption	-0.0	-0.3	-0.4	-0.1	-0.5	-0.7
Gross private sector investments (ex housing)	-0.5	-1.2	-1.3	-1.0	-2.2	-2.3
Exports of goods and services	-0.1	-0.2	-0.3	-0.5	-0.5	-0.5
Imports of goods and services	-0.2	-0.5	-0.6	-0.4	-0.8	-0.9
Gross domestic product	-0.1	-0.3	-0.3	-0.2	-0.5	-0.6
Net national income	-0.5	-0.4	-0.4	-0.7	-0.6	-0.7
Other						
Unemployment (levels, x 1000 persons)	4	13	20	7	20	29
Private consumption deflator	0.2	0.6	0.6	0.2	0.6	0.5

tions regarding the international knock-on effects were charted with the help of the NIGEM world model. The ramifications for the Netherlands as calculated with MORKMON are represented in the second part of Table 5. The fall in foreign demand depresses goods and services exports and puts a brake on consumer spending and corporate investment, its inhibiting power reinforced by rising long-term interest rates. Each successive year, as a result, GDP lags behind the baseline projection by a further tenth of a percentage point. On account of the rise in commodity prices excluding energy, this simulation also shows up a deterioration of the terms of trade, expressed as a steeper initial drop of NDI against GDP.

Depreciation of the us dollar

From its apex against the euro reached in 2001, the us dollar has been slipping in more recent years. Since September of this year, the rate at which the dollar is losing ground seems to have increased. Both the recent movement in the dollar/euro exchange rate and the uncertainty about future developments are closely connected to the us deficits on both the government budget and the trade balance current account, dubbed the 'twin deficits'. If international investors should become less willing to fund these deficits, a further adjustment of the exchange rate (i.e. further depreciation of the dollar) seems inevitable. The consequences

of a us dollar depreciation combined with a decline in us import demand are expected to lead to the following scenario.

Under this scenario we assume sustained weakening of the dollar by 10% against the baseline projection in 2005, to a level of USD 1.42 on the euro. The effects of a depreciated dollar on the Dutch economy are felt first and foremost in the segment of imports and exports that is related to the us and to all dollar-linked trade partners. Since oil and commodity prices are quoted in dollars, moreover, prices of such commodities will fall in tandem with the dollar/euro rate. Finally, the weakening of the dollar will cause us import demand to decline as well, resulting in a negative effect on world trade volume relevant to the Netherlands. This effect was charted with the help of the NIGEM world model.

The simulation results, obtained with the use of MORKMON, are presented in Table 6. The decline of the dollar causes the price competitiveness of Dutch exports to fall also, contributing to a drop in domestic price levels. In addition, the decline of foreign demand for Dutch products results in contracting goods and services export volumes, and hence discourages corporate investment. The combined effect on GDP comes to a 0.7 percentage point loss against the baseline, which is realised in full as early as in 2005. Unemployment rises by 17,000 persons in 2005, and by another 18,000 in 2006.

Table 6 Effects of 10% USD depreciation

Cumulative effects in % relative to the baseline projection, unless indicated otherwise

	2005	2006
Assumptions relative to baseline projection		
USD depreciation	10	10
World trade volume	-1.2	-1.0
Results according to MORKMON		
Expenditure and production by volume		
Gross private sector investment (excluding housing)	-1.5	-2.4
Exports of goods and services	-1.6	-1.4
Imports of goods and services	-0.9	-1.2
Gross domestic product	-0.7	-0.7
Other		
Unemployment (levels, x 1000 persons)	17	35
Private consumption deflator	-0.7	-1.3

Continuing rise of pension contributions

Pensions have been attracting a great deal of attention. Pension funds' financial positions have suffered major setbacks prior to the 2003 recovery of the stock markets. In light of a long history of high returns on equity, funds expanded their equity holdings from about 15% of total assets in 1991, on average, to just under 50% in September 2001. The subsequent fall in stock market prices during 2001 and 2002 led to large-scale capital losses, causing a historic low in pension funds' average cover ratios. With a view to the sustainability of the Dutch pension system, radical measures were taken in terms of contribution increases and restrictions on indexation. As a share of gross salaries, employers' pension contributions rose from 5.7% in 1999 to 10.6% in 2003. For a comprehensive overview on pension sector developments see the article entitled 'Dutch pension sector: sustainability under pressure' in this Quarterly Bulletin.

The behaviour of pension funds leads to macroeconomic effects through the strong interaction between the pensions sector and the real economy. The most direct channel is that of public finances. Premium contributions by both employers and employees are tax exempt, whereas pension payments are not. A rise in pension contributions therefore causes an immediate fall in tax revenues. Also, contribution increases and limited indexation lead to a decline in consumer purchasing power. Contribution policies may have

additional consequences in that employees may base their wage demands on net expected wages. The total macroeconomic effects if pension contributions are raised may be gauged by means of a computer simulation. In the present simulation, pension contributions are raised by 1/2% of gross salaries in both 2005 and 2006. Both raises are assumed to be paid in equal measures by employers and employees.

The macroeconomic effects according to MORKMON are presented in Table 7. Initially, the assumed increase of the employee share of pension premiums will eat into households' real disposable incomes, letting the air out of private consumption. As a result, the private sector will be faced with decreasing demand – of which a part will leak out in the form of decreasing imports. Next, employees will try to shift some of the burden to employers by making stronger wage claims. The hike in remuneration costs caused by this and also by the increase the employers' share of contributions will, in turn, translate into declining employment, depressed profits and, hence, to lower private sector investments. After three years, GDP will turn out 0.3% below the baseline.

Conclusion

A sustained upturn in world trade growth, the recovery of productivity growth resulting from far-reaching private sec-

Table 7 Effects of rising pension contributions

Cumulative effects in % relative to baseline projection, unless indicated otherwise.

	2005	2006	2007
Assumption			
Pension contributions (% of remuneration)	1/2	1	1
Results according to MORKMON			
Expenditure and production by volume			
Private consumption	-0.1	-0.4	-0.7
Gross private sector investment (excluding housing)	-0.0	-0.3	-0.8
Imports of goods and services	-0.0	-0.2	-0.3
Gross domestic product	-0.0	-0.2	-0.3
Other			
Unemployment (levels, x 1000 persons)	2	7	13
Private consumption deflator	0.0	0.1	0.1

tor rationalisation and restructuring operations, and the fiscal consolidation undertaken by the present Cabinet have reinforced the basis supporting economic recovery in the medium term. GDP volume growth this year is to come out at a modest 1.2%. Unemployment will continue to increase considerably this year and the next as a result of private sector restructuring operations, while improvements in public finances are realised through austerities in social security and tax burden increases. In the course of the projection period, declining wage costs and reinforced financial positions will increasingly enable Dutch companies to benefit from the growth of world trade in terms of improved export performance and of employment, which will pick up in 2006. Towards the far end of the forecast horizon, consumer spending will also gather momentum. Although developments on the oil market in particular seem to slow down the recovery of consumer spending in 2005 compared to the June 2004 forecast, the 2006 GDP volume growth, at 2.5%, will still outpace its trend rate. Moreover, wage restraint and cost control will allow inflation to continue its downward trend during the projection period, from 2.2% in 2003 to 1.1% in 2006. This will put inflation in the Netherlands below that of the euro area as a whole, where the rate is estimated to remain in the 2% ballpark for the next few years.

1. See the article entitled 'The Dutch economy in 2004-2006: a forecast using MORKMON' in the Nederlandsche Bank's June 2004 Quarterly Bulletin. It should be noted that annual growth figures are compiled from quarterly figures adjusted for seasonal and trading-day influences. Thus annual growth is not distorted by the additional business days during the fourth quarter of 2004.

2. This figure does not take account of the forthcoming changes in the care system, which is likely to result in a statistical downward distortion of consumer spending volume.

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- Influence of stock market strongest in housing market's top segment
- The role of national central banks within the European System of Central Banks: The example of the Nederlandsche Bank
- Getting used to the euro
- Export credit insurance eighty years on

December 2002

- Banking supervision: the Act on the Supervision of the Credit System 50 years on
- Just a normal cyclical downturn in the Netherlands
- Different economies, synchronised cycles?
- The Dutch economy in 2002-2004: a forecast using MORKMON

March 2003

- Immigration from an historical and an economic perspective
- Need for transparent financial reporting and sound corporate governance
- More synchronous cyclical movements through mergers and acquisitions?
- An assessment of the Bank's large-value payment system TOP under the 'core principles'
- Better price measurement through hedonic price adjustment

June 2003

- The economic consequences of the war in Iraq
- Corporate sector's financial position under pressure: causes and consequences
- Transparency and confidence: the common ground between market operation and supervision
- Role reversal: a closer look at the rating agencies
- The Dutch economy in 2003-2005: a forecast using MORKMON

September 2003

- Financial behaviour of Dutch households
- Basel II: implications for the Netherlands
- Paying on-line any time, anywhere? Developments in mobile and Internet payments
- Exchange rate regimes in future EU Member States

December 2003

- Does wage moderation lead to lower labour productivity growth in the long term?

- Relationship between monetary and financial stability
- Dutch small firms relative to large firms: trading in tougher economic conditions?
- The Dutch economy in 2003-2005: a forecast using MORKMON

March 2004

- EU enlargement and its economic impact: what will change after 1 May 2004?
- Currency practices in Dutch exports and imports (1975-2002)
- The cost of payments
- Systemic risk and contagion channels: the interbank market

June 2004

- The origins of growth: the Dutch economy in 1998-2006
- Institutional investment and equity price stability
- The benefits of the euro for Dutch enterprises: an impression
- The influence of the exchange rate on the euro area economy
- The Dutch economy in 2004-2006: a forecast using MORKMON

September 2004

- Implications of the new health care system
- Developments in retail payments and the changing role of Interpay
- The Dutch consumer: from shopaholic to enthusiastic saver
- Financial behaviour of Dutch households
- How strong is the Dutch financial system? Results of the Financial Sector Assessment Program
- Stress testing the Dutch financial sector

December 2004

- DNB and the Pensions and Insurance Supervisory Authority of the Netherlands merge: a new organisation under a familiar name
- Financial institutions and financial stability
- Operational risk in banking
- Dutch pension sector: sustainability under pressure
- The Dutch economy in 2004-2006: a forecast using MORKMON

Publications

Occasional Studies

Occasional Studies have been published since 2003. Occasional Studies aim at disseminating thinking on policy and analytical issues in areas relevant to the Bank. Occasional Studies will appear in Dutch or in English. An overview of Occasional Studies can be found on the Bank's website, www.dnb.nl. During the fourth quarter of 2004, two Occasional Studies were published which are summarised below.

concludes by noting that debate in the Netherlands concerning reform is vigorous. It is hoped that this paper will contribute to that debate and will help to build a consensus on the nature of the reforms that are needed.

No. 1 (2004) Towards a framework for financial stability

Aerdt Houben, Jan Kakes and Garry Schinasi

This study examines the emergence of financial stability as a key policy objective. It discusses the underlying trends in the financial system, as well as the role of finance in relation to money, the real economy and public policy. Financial stability is defined in terms of its ability to help the economic system allocate resources, manage risks and absorb shocks. Moreover, financial stability is considered a continuum, changeable over time and consistent with multiple combinations of its constituent elements. On the basis of these concepts, a framework is presented that comprises an encompassing analysis and assessment of financial stability, and maps out broad policy implications.

Keywords: Financial stability, Policy framework.

JEL codes: E60, G00.

No. 2 (2004) Depositor and investor protection in the Netherlands: past, present and future

Gillian Garcia and Henriëtte Prast

Globalisation and changes in financial systems across the world are causing marked changes in processes of financial regulation and supervision and are they are also calling into question the existing arrangements for protecting depositors and investors. This paper briefly examines the factors prompting the changes. It first presents theoretical considerations governing supervision, regulation and protection. It continues by presenting some history of depositor protection in the European Union in the process overcoming a remarkable paucity of accessible information on the subject. It continues by presenting as much history of depositor and investor protection in the Netherlands as could be garnered from public and DNB sources. It describes instances where the present arrangements might be changed. It

DNB Staff Reports

DNB Staff Reports have been published since 1996. Aim and scope of this publication series is to disseminate a selection of the research done by staff members of the Bank to encourage scholarly discussion. An overview of DNB Staff Reports can be found on the Bank's website, www.dnb.nl. During the third and fourth quarters of 2004, twelve Staff Reports were published which are summarised below.

No. 115 Expectations and the Effects of Money Illusion

Ernst Fehr and Jean-Robert Tyran

This paper analyzes the role of expectations in determining the real effects of money illusion. We argue that money illusion may cause significant but transitory nominal inertia following changes in monetary policy and that money illusion may even have permanent effects because it coordinates agents onto inferior equilibria. We provide experimental evidence for both transitory as well as permanent effects of money illusion. These effects arise mainly because money illusion shapes expectations. Forming expectations is necessary for making optimal decisions in a strategic environment. We show that strategic complementarity is a key determinant of aggregate-level effects of money illusion.

Keywords: Money illusion, rational expectations, nominal inertia, coordination failure.

JEL codes: C9, E32, E52.

No. 116 Optimal Monetary Policy with Imperfect Common Knowledge

Klaus Adam

We study optimal nominal demand policy in a flexible price economy with monopolistic competition where firms have imperfect common knowledge about the shocks hitting the economy. Information imperfections emerge endogenously because firms are assumed to have finite (Shannon) capacity to process information. We then ask how policy that minimizes a quadratic objective in output and prices depends on firms' processing capacity. When price setting decisions of firms are strategic complements, we find that policy should nominally accommodate white noise mark-up shocks for a large range of capacity values. This finding is robust to the policy maker observing shocks imperfectly or being uncertain about firms' processing capacity. When mark-up shocks are persistent, accommodation may even

have to increase in the medium term but has to decrease in the long-run, thereby generating a hump-shaped price response and a slow reduction in output. Instead, when prices are strategic substitutes, policy tends to react with nominal demand contractions to mark-up shocks. In addition, there might exist discontinuities between common knowledge equilibria and equilibria with small amounts of imperfect common knowledge.

Keywords: Optimal policy, information frictions, imperfect common knowledge, higher order beliefs, Shannon capacity.

JEL codes: E31, E52, D82.

No. 117 Public and Private Information in Monetary Policy Models

Jeffery D. Amato

In an economy where agents have diverse private information, public information holds important consequences for the conduct of monetary policy – consequences that are not captured in standard models without private information. In an otherwise standard macro model, public information has a disproportionate effect on agents' decisions, and thereby has the potential to degrade the information value of economic outcomes. In particular, in an economy with keen price competition, prices no longer serve as a good signal of the output gap. Also, increased precision of public information may give rise to more volatile economic outcomes. Since disclosures by central banks are an important source of public information, our results throw some light on the debate on central bank transparency.

Keywords: Imperfect information, monopolistic competition, targeting rule, Markov chain, Kalman filter.

JEL codes: D43, D82, D84, E31, E52.

No. 118 Does inflation targeting matter?

Laurence Ball and Niamh Sheridan

This paper asks whether inflation targeting improves economic performance, as measured by the behavior of inflation, output, and interest rates. We compare seven OECD countries that adopted inflation targeting in the early 1990s to thirteen that did not. After the early 90s, performance improved along many dimensions for both the targeting countries and the non-targeters. In some cases the targeters improved by more; for example, average inflation fell by a larger amount.

However, these differences are explained by the facts that targeters performed worse than non-targeters before the early 90s, and there is regression to the mean. Once one controls for regression to the mean, there is no evidence that inflation targeting improves performance.

JEL code: E5.

No. 119 Coordination of Expectations in Asset Pricing Experiments

Cars Hommes, Joep Sonnemans, Jan Tuinstra and Henk van de Velden

We investigate expectation formation in a controlled experimental environment. Subjects are asked to predict the price in a standard asset pricing model. They do not have knowledge of the underlying market equilibrium equations, but they know all past realized prices and their own predictions. Aggregate demand of the risky asset depends upon the forecasts of the participants. The realized price is then obtained from market equilibrium with feedback from individual expectations. Each market is populated by six subjects and a small fraction of fundamentalist traders. Realized prices differ significantly from fundamental values. In some groups the asset price converges slowly to the fundamental price, in other groups there are regular oscillations around the fundamental price. In all groups participants coordinate on a common prediction strategy. The individual prediction strategies can be estimated and correspond, for a large majority of participants, to simple linear autoregressive forecasting rules.

Keywords: Experimental economics, expectations, asset pricing, coordination.

JEL codes: C91, C92, D84, G12, G14.

No. 120 Information variables for monetary policy in a small structural model of the euro area.

Francesco Lippi and Stefano Neri

This paper estimates a small New-Keynesian model with imperfect information and optimal discretionary policy using data for the euro area. The model is used to assess the usefulness of monetary aggregates and unit labor costs as information variables for monetary policy. The estimates reveal that the information content of the M3 monetary aggregate is limited. A more useful role emerges for the

unit labor cost indicator, which contains information on potential output that helps reducing the volatility of the output gap. Finally, the estimated weights for the objectives of monetary policy show that a considerable importance is attributed to interest-rate smoothing, greater than the one attributed to the output gap stabilization. This finding indicates that the welfare gains of commitment may be smaller than what is suggested by typical parametrizations of New-Keynesian models.

Keywords: Monetary policy, Kalman filter, inflation, output gap.

JEL code: E5.

No. 121 Inflation Expectations and Learning about Monetary Policy

David Andolfatto, Scott Hendry and Kevin Moran

By various measures, inflation expectations appear to evolve sluggishly relative to actual inflation. Further, they often fail conventional tests of unbiasedness. These observations are sometimes interpreted as evidence against rational expectations. We embed, within a standard monetary DSGE model, an information friction and a learning mechanism regarding the interest rate targeting rule followed by monetary policy authorities. The learning mechanism enables optimizing economic agents to distinguish between transitory shocks to the policy rule and occasional shifts in the inflation target of monetary authorities. We show that the model's simulated data is consistent with the empirical evidence. When the information friction is activated, simulated inflation expectations fail conventional unbiasedness tests much more frequently than in the complete information case when this friction is shut down. We interpret these results as suggesting that an important size distortion may be present when conventional tests of unbiasedness are applied to relatively small samples dominated by a few significant shifts in monetary policy and sluggish learning about these shifts.

JEL codes: E47, E52, E58.

No. 122 Central Bank Communication and Output Stabilization

Marco Hoeberichts, Mewael Tesfaselassie and Sylvester Eijffinger

Some central banks have a reputation for being secret-

ive. A justification for that behavior that we find in the literature is that being transparent about its operations and beliefs hinders the central bank in achieving the best outcome. In other words, a central bank needs flexibility and therefore cannot be fully transparent. Using a forward-looking New-Keynesian model, we find exactly the opposite. A central bank that is conservative improves output stabilization by being transparent about the procedures it uses to assess the economy and, especially, about the forecast errors it makes. Under certain conditions transparency by a conservative central bank also improves interest rate stabilization. We also find that higher transparency makes it optimal for the central bank to be more conservative as the benefits from higher transparency in terms of output stabilization are greater the more conservative the central bank is.

Keywords: Monetary policy, central bank, information processing, expectation formation.

JEL codes: D83, E52, E58.

No. 123 The Dynamic Adjustment towards Target Capital Structures of Firms in Transition Economies

Ralph de Haas and Marga Peeters

We study the capital structure dynamics of Central and Eastern European firms to get a better understanding of the quantitative and qualitative development of the financial systems in this region. The dynamic model used endogenises the target leverage as well as the adjustment speed. It is applied to microeconomic data for 10 countries. We find that during the transition process firms generally increased their leverage, lowering the gap between actual and target leverage. Profitability and age are the most robust determinants of capital structure targets. While banking system development has in general enabled firms to get closer to their leverage targets, information asymmetries between firms and banks are still important. As a result, firms prefer internal finance above bank debt (pecking order behaviour) and adjust leverage only slowly.

Keywords: Capital structure dynamics, transition economies, financial system development.

JEL codes: C23, G32, O57.

No. 124 Dutch Corporate Liquidity Management

W. Allard Bruinshoofd and Clemens J.M. Kool

In this paper we investigate Dutch corporate liquidity management in general, and target adjustment behaviour in particular. To this purpose, we use a simple error correction model of corporate liquidity holdings applied to firm-level data for the period 1977-1997. We confirm the existence of long-run liquidity targets at the firm level. We also find that changes in liquidity holdings are driven by short-run shocks as well as the urge to converge towards targeted liquidity levels. The rate of target convergence is higher when we include more firm-specific information in the target. This result supports the idea that the degree of error in defining liquidity targets associates negatively with the observed rate of target convergence. It also suggests that the slow speeds of adjustment obtained in many macro studies on money demand are artefacts of aggregation bias.

Keywords: Corporate liquidity demand; Precautionary liquidity.

JEL codes: C33; C43; E41; G3.

No. 125 Market Impact Costs of Institutional Equity Trades

Jacob A. Bikker, Laura Spierdijk and Pieter Jelle van der Sluis

This paper is the first to analyze market impact and execution costs of equity trading by a pension fund. We find that, on average, these costs are nonnegligible. Average market impact costs equal 20 basis points for buys and 30 basis points for sells; average execution costs equal 27 basis points and 38 basis points, respectively. Furthermore, we show that volatility and momentum have considerable influence on market impact costs. Other important determinants of these costs are trade type (agency, single, or principal), trading venue, and industry sector. Additionally, we find that the timing of trades plays a substantial role in explaining trading costs. The moment of the day, as well as the day of the week and the period of the month significantly affect the costs of trading. Moreover, we also establish a cost-risk trade-off: the longer it takes to execute a trade, the lower the expected market impact costs but the higher the volatility of these costs.

Keywords: Market impact costs, trading costs, price effects, institutional equity trading, pension funds.

JEL codes: E32, G14, G23, G28.

**No. 126 Eurozone money demand:
Evidence from a nonstationary dynamic panel data
analysis**

E.M. Bosker

The effectiveness of the important role for money in the monetary policy of the European Central Bank (ECB) is usually assessed by looking at time series estimates of the eurozone money demand equation. This implicitly calls for a choice of aggregation method to construct data series long enough to obtain meaningful econometric results. The choice of aggregation method can affect the results of such studies. This study tries to avoid the issue of aggregation by adopting a (nonstationary) dynamic panel method that uses the data for each of the eurozone countries by itself. Specific tests are developed to test for differences in the long run money demand equation across eurozone countries. The results show that differences in the money demand equation across the eurozone countries are likely to exist. A drawback of the method used is that it is not able to quantify these differences, which makes it difficult to give specific implications for the ECB's monetary policy. The found differences could however influence the time series estimates and through these have implications for the ECB's monetary policy.

Keywords: Money demand, eurozone, dynamic panel estimation.

JEL codes: C12, C32, C33, E41, E52.