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Westeinde 1, 1017 2h Amsterdam – Postbus 98, 1000 aH Amsterdam, the Netherlands – Telephone (31)20 524 91 11 – Telex 11355 dnbam nl – Telex (31)20 524 35 00
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Recent developments
The Netherlands in the euro area

Following a downturn in 2001, the growth of the world economy has undergone a slight recovery, which is not only less vigorous than initially anticipated, but also accompanied by risks. Overcapacity in the United States (US) and in the euro area has not yet been fully run down. The recovery of economic activity in the US is hesitant, while cyclical conditions in the euro area remain weak, owing in part to wariness among European consumers. Although in a structural sense, the Dutch economy compares more favourably with the euro area than in previous period of cyclical slack, cyclical conditions here are taking longer to adjust. At this juncture, neither the industrial nor the business services sector are contributing to growth, so that practically only the public sector is still making a positive contribution. The downturn is translating into weakening employment growth and rising unemployment.

Uncertainty in the world economy

In 2001, growth throughout the OECD area dropped sharply (Table 1) as three economic blocs were being confronted with cyclical slack at the same time (see the article ‘Different economies, synchronised cycles?’ elsewhere in this Quarterly Bulletin). Judging by the growth figures in the first three quarters, the recovery took off hesitantly in 2002. This development reflects the expansion of world trade in the recent past: major growth of over 10% in 2000, a slight contraction by 0.2% in 2001 and an anticipated expansion of 2% in 2003. Where 2003 is concerned, the initial optimism about the OECD area has been dampened somewhat, witness the downward adjustment of growth in 2003 to 2.2%. At the beginning of this year, GDP was still expected to grow by 3.0% in 2003.

The disequilibria which had arisen during the bonanza on the equity markets over the past few years are now being redressed all over the world. On a vast scale, businesses in both the ICT sector and elsewhere are writing off losses on acquisitions and investment undertaken during the boom, which are proving unsuccessful. Over the past few years, businesses invested on the basis of unrealistic profit expectations, and are now being confronted with overcapacity. Capacity utilisation in the US in particular is below the long-term average (Chart 1). So long as overcapacity persists, the marginal return on investment will be limited. In addition, businesses are having greater trouble obtaining finance for new investment, both in-house and from external sources. Internally, the cash flow has been diminished by lower profitability, while lower price-earnings ratios and higher risk premiums have made it more difficult to procure finance externally (see the article ‘Financial stability’ elsewhere in this Quarterly Bulletin). As a result, investment is being postponed in large parts of the world (Chart 1). The reduction of production capac-

Table 1 GDP volume

<table>
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</thead>
<tbody>
<tr>
<td>Total OECD</td>
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<td>1.4</td>
<td>1.3</td>
<td>0.4</td>
<td>0.3</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
<td>1.8</td>
<td>2.6</td>
<td>0.8</td>
<td>1.8</td>
<td>2.7</td>
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<td>0.7</td>
<td>0.3</td>
<td>0.2</td>
<td>0.7</td>
<td>1.5</td>
<td>1.5</td>
<td>2.2</td>
<td>2.3</td>
<td>2.8</td>
<td>2.6</td>
<td>3.6</td>
<td>2.6</td>
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<tr>
<td>Japan</td>
<td>2.1</td>
<td>-0.3</td>
<td>-1.3</td>
<td>-3.1</td>
<td>-3.2</td>
<td>-0.6</td>
<td>1.5</td>
<td>-0.5</td>
<td>1.1</td>
<td>-0.6</td>
<td>1.2</td>
<td>1.4</td>
<td>-0.7</td>
</tr>
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<td></td>
</tr>
<tr>
<td>Germany(^a)</td>
<td>2.9</td>
<td>0.6</td>
<td>0.4</td>
<td>0.1</td>
<td>-0.2</td>
<td>0.1</td>
<td>0.4</td>
<td>0.5</td>
<td>2.0</td>
<td>0.4</td>
<td>1.4</td>
<td>2.3</td>
<td>0.4</td>
</tr>
<tr>
<td>France(^a)</td>
<td>3.8</td>
<td>1.8</td>
<td>2.0</td>
<td>0.3</td>
<td>0.5</td>
<td>1.0</td>
<td>0.8</td>
<td>1.2</td>
<td>2.3</td>
<td>1.0</td>
<td>2.7</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Italy</td>
<td>2.9</td>
<td>1.8</td>
<td>1.7</td>
<td>0.6</td>
<td>0.0</td>
<td>0.2</td>
<td>0.5</td>
<td>0.7</td>
<td>2.3</td>
<td>0.4</td>
<td>1.8</td>
<td>2.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Spain(^a)</td>
<td>4.2</td>
<td>2.7</td>
<td>3.0</td>
<td>2.3</td>
<td>2.0</td>
<td>2.0</td>
<td>1.8</td>
<td>2.0</td>
<td>2.7</td>
<td>1.9</td>
<td>2.6</td>
<td>3.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Netherlands(^a)</td>
<td>3.3</td>
<td>1.3</td>
<td>1.1</td>
<td>0.3</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.1</td>
<td>0.4</td>
<td>2.0</td>
<td>0.2</td>
<td>0.9</td>
<td>2.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Sources: Eurostat and Statistics Netherlands.
Seasonally adjusted.
\(^a\) Adjusted for seasonal fluctuations and number of working days.
ity has been causing a rise in unemployment for several quarters now, while consumer confidence is down worldwide, albeit more in the US and the euro area than in Japan (Chart 2). In various countries, the restructuring process is also manifesting itself in a marked increase in bankruptcies.

A global recovery is not self-evident. Apart from the risk entailed by the fact that overcapacity has not yet been fully phased out, the US recovery is fragile and

Chart 1 Private sector investment
Quarterly figures; per cent changes on previous corresponding period

Chart 2 Consumer confidence
Index 1999-1 = 100; percentage points

Source: Thomson Financial.

1 Each horizontal line shows the long-term average (1990-2002).
Source: bis.

Capacity utilisation
Quarterly figures; per cent

Unemployment
Per cent of labour force

Source: Thomson Financial.
quarters. Following the strong appreciation in the second quarter of this year, the euro continued its ascent in the third. By comparison with the second quarter, the euro rose by over 7% against the US dollar. In nominal effective terms (a currency’s exchange rate change being calculated against the currencies of all relevant trade partners), the euro appreciated less markedly, viz. by 2.9%.

The fragile recovery in the US

The economic situation in the US constitutes a major uncertainty for the world economy. Following a long-lasting economic expansion in the 1990s, the US economy recently saw a relatively brief recession. Its cyclical trough lay in the third quarter of 2001, with GDP growth of –0.4%. From this trough, recovery set in slowly but surely in the course of 2002, with provisional GDP growth of 3.2% in the third quarter. At this juncture, most forecasters envisage GDP growth of around 2.3% in 2002 and 2.7% in 2003; earlier a faster return to potential growth of 3.3-3.5% was foreseen (assuming a structural labour productivity increase of 2.5%). Nevertheless, should the scenario of growth picking up to 2.7% be realised, the US economy would be evincing remarkable resilience, given the sharp equity price drops on the stock exchanges, the oil price rise and 11 September. This optimistic view of the future is endorsed by the still relatively high and robust rate of labour productivity growth. In 2001, labour productivity increased by 1.9%, in spite of cyclical slack. In the first three quarters of 2002, labour productivity growth accelerated to an average of around 3%.

Yet this rosy picture calls for comment. For two years now, the greatest contributions to growth have been made by the expenditures of the US government and American consumers (Chart 3). In the third quarter, consumer spending again expanded materially, by 4.2% on the year before. There is, however, no telling how long this will go on. There is a danger that this stimulus to growth will subside. In October, for instance, consumer confidence dropped to a level last seen during the previous slump, in 1993. Although confidence recovered somewhat in November, American consumers are worried about the deteriorating labour market and equity price adjustments.

So far, private consumption in the US has been supported by wealth effects ensuing from the still ongoing rise in house prices. In the period 1991-2001, US house prices went up by 60% (euro area: 43%). In the first three quarters of 2002, they even rose by over 8.5% (compared with the year before). With mortgage rates steadily declining, American consumers were able to repay their mortgages ahead of maturity, taking out larger mortgages and using the mortgage equity for consumer spending. US household debt consequently expanded by 4 percentage points of GDP in 2001, the largest increase in 20 years, to around 70% of GDP in that year (compare euro area household debt, which comes out at 49% of GDP). The question arises whether and for how long the factors mentioned will continue to support private consumption, and what spending category will take its place to prop up the US economy. Exports have been making a negative contribution for some time now, while investment, a much smaller expenditure category, can stimulate growth only partially. So far, US producers are lacking in confidence (Chart 4). As

Chart 3 US expenditure
Contributions to GDP growth compared with previous corresponding period; percentage points

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>-2</td>
<td>1</td>
</tr>
<tr>
<td>Government consumption</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Investment</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Stock-building</td>
<td>-1</td>
<td>-2</td>
</tr>
<tr>
<td>Net exports</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Euro area expenditure
Contributions to GDP growth compared with previous corresponding period; percentage points

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
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</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>-2</td>
<td>1</td>
</tr>
<tr>
<td>Government consumption</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Investment</td>
<td>-1</td>
<td>-2</td>
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<tr>
<td>Stock-building</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Net exports</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
OECD forecasts for 2002 still foresee a contraction. For 2003, an expansion of 2.0% is anticipated, but investment growth will only pick up substantially to 5% in 2004, still well below the rates recorded in the second half of the 1990s.

According to the Fed the uncertainty outlined, as well as the political uncertainties worldwide, are hampering economic recovery in the US. In this light, the Fed lowered its interest rates by 50 basis points on 6 November. The most important rate, the federal funds rate, has thus reached its lowest level in 40 years. This means that the official rates have been reduced by over 5 percentage points in two years’ time. In the wake of the strong decrease in short-term rates, long-term rates have also dropped to historically low levels.

Euro area recovery weak

In 2001, euro area growth still exceeded that in the US, but now the tables have turned. In the third quarter, euro area growth lagged 0.8% behind. The recovery foreseen earlier has not really yet come off the ground. In the spring, the European Commission (EC) still expected 1.4% growth in 2002 and 2.9% in 2003. In the autumn, it adjusted its figures downwards to 0.8% and 1.8%, respectively. It will take until 2004 for growth to approach its potential, at 2.6%. The cyclical slack is apparent in some measure in all countries, the Netherlands in particular. The EC estimates that, at 0.2%, Dutch growth in 2002 will be 0.6 percentage point below that in the euro area. With 0.9% and 2.2% in 2003 and 2004, respectively, the Netherlands will continue to lag behind the euro area average. The Nederlandsche Bank’s estimates come out at 0.2% in 2002, 1.1% in 2003 and 2.1% in 2004 (see the article ‘The Dutch economy in 2002-2004: a forecast using Morkmon’ elsewhere in this Quarterly Bulletin).

The expectations for economic activity in the US and the euro area show economic resilience on this side of the Atlantic to be smaller. In the past, the US admittedly recorded greater cyclical outliers, but this meant that recessions there were usually shorter-lived. Greater flexibility of product and labour markets has made the US more adaptable. This is demonstrated by the diverging developments of unemployment. In 2001, US unemployment rose by over 1.5 percentage points (Chart 2), while the number of hours worked declined over the past eight quarters. In the euro area, on the other hand, unemployment has risen by no more than 0.3 percentage point since mid-2001. In the US, cyclical slowdown translates into labour market adjustments faster.

The restructuring process in the euro area has not yet been completed. The contraction of investment growth set in later in the euro area than in the US, and the inventory cycle has not yet come to an end (Chart 3). Owing to caution on the part of industrial entrepreneurs, business investment in the euro area will not be returning to its past level for the time being. This year, the EC expects business investment to contract by 4.1%. For the coming years, positive growth is anticipated, of 2.6% in 2003 and 6.1% in 2004. This does not bring investment growth back to the (high) level of the end-1990s, however. Not just the inventory and investment cycles, but other expenditure categories too are undergoing diverging developments. By contrast with the US, exports have made a positive contribution to growth in the euro area in all quarters. Consumption growth in the euro area, however, makes no more than a very modest contribution. This weak domestic growth is evident in most euro area countries. Although European consumers are better off financially, they have shown greater restraint for some time now than American consumers. Consumers are known to engage in consumption smoothing, i.e. spreading their expenditures over time, saving and desaving. Apparently American consumers have been stepping up their spending in recent quarters in the expectation that the American productivity miracle will persist and that incomes will go up accordingly.
ECB policy
At its meeting of 5 December, the Governing Council of the European Central Bank (ecb) decided to lower its interest rates by 50 basis points. This decision was taken in reaction to new information indicating that inflation is continuing to fall under the influence of the current weak economic conditions and is expected to drop below 2% in the course of 2003. Economic growth in the euro area is furthermore still being confronted with downward risks.

At the same meeting, it was also decided to leave the reference value for \( m3 \) unchanged at 4 1/2%. The underlying analysis shows there to be no indications that the trend growth of \( \text{gdp} \) and the velocity of \( m3 \) have changed. In October, seasonally adjusted \( m3 \) growth came out at 7.0%, down on September (7.3%). The strong growth of \( m3 \) vis-à-vis the reference value is due to financial market uncertainty, which is prompting investors to shorten the time horizon of investment portfolios. At the same time, thanks to the low interest rate level, it is cheap to hold very liquid assets.

Cyclical adjustment in the Netherlands disappointing

Coming out at around 0% three times in succession, Dutch growth has come to a virtual standstill (Table 1); quarter on quarter, the Dutch economy has not grown for five quarters. The year 2002 as a whole is now expected to see 0.2% growth. On the whole, the current downturn does not differ much from those in the past (see the article ‘Just a normal cyclical downturn in the Netherlands?’, elsewhere in this Quarterly Bulletin). It is worth noting, however, that the downturn in the Netherlands compares unfavourably with that in the other euro area countries, and that recovery is weaker, even though the Netherlands’ structural position has improved on the earlier period of cyclical slack in 1993. The Netherlands has made greater progress with the restructuring of its public finances, raising the participation rate and enhancing the percentage of flexible labour, so Table 2 shows.

The current Dutch cycle is characterised by a relatively sharply decelerating rate of growth of private consumption. During the 1998-2000 boom, many employees saw their purchasing power grow considerably and collected vast capital gains from the rise in equity and house prices. Private consumption soared, growing by over 4.5% in 1998 and 1999. This was not the case in the other euro area countries, where the growth of private consumption remained 1-1.5 percentage points lower throughout the second half of the 1990s. The high Dutch growth figures have, however, become a thing of the past. Private consumption has been increasing by around 1% for some time now; in the third quarter, consumption expanded by 1.2%.

The current consumption growth may still be accounted for by wealth effects. It is, for instance, remarkable that in the past year the expansion of banks’ mortgage lending, 11.1% on an annual basis in the third quarter, exceeded the rise in house prices, which came out at over 6% on an annual basis in the third quarter (Chart 5). At the same time, the number of houses sold has not gone up. This indicates that home owners are refinancing their mortgages, and that new owners are taking out relatively larger mortgages vis-à-vis the purchase price (higher loan-to-value-ratio). Since the first quarter of 2001, this ratio for house sales has risen by over 3 percentage points to 105.4%. These developments

<table>
<thead>
<tr>
<th>Table 2 Structural features Netherlands and euro area</th>
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<tbody>
<tr>
<td><strong>Netherlands</strong></td>
</tr>
<tr>
<td><strong>1993</strong></td>
</tr>
<tr>
<td>Labour participation 1/ (ft e)</td>
</tr>
<tr>
<td>Unemployment (per cent labour force)</td>
</tr>
<tr>
<td>Flexible labour 1 (per cent working population)</td>
</tr>
<tr>
<td>Tax burden (per cent ( \text{gdp} ))</td>
</tr>
<tr>
<td>emu balance (per cent ( \text{gdp} ))</td>
</tr>
<tr>
<td>Debt ratio (per cent ( \text{gdp} ))</td>
</tr>
</tbody>
</table>

Source: Autumn 2002 Economic Forecasts (ft), unless stated otherwise.
1 Eurostat.
have been prompted by the declining capital market rates, which have enhanced households’ borrowing capacity. Between January and October of this year, the average mortgage rate fell by nearly 25 basis points. Research into the financial position of Dutch households shows that the bulk of households (86%) used mortgage equity to improve their homes; the remainder is used mainly for consumption. If this wealth effect were to evaporate, consumption will decline further.

The assumption that consumer spending will pick up rapidly and forcefully is not warranted by consumer confidence either, which has been steadily declining since the beginning of this year, to a level last seen in 1983. The Markmon forecast expects private consumption growth to accelerate slightly, from 0.9% in 2002 to 1.1% in 2003.

At the same time, adjustments in the Dutch business sector have not yet been completed, as in other euro area countries. Stockbuilding was up again in the third quarter, after having fallen three quarters, but investment has not yet recovered. Investment in fixed assets continued to be negative in the third quarter, contracting by 3.7%. Yet there is still overcapacity, as evidenced by the degree of capacity utilisation, which stabilised at 82.9 this year. Such a low was last seen around a decade ago. The picture presented masks that Dutch businesses are suffering more from the international fall in demand than businesses in other euro area countries because of the higher percentage of Dutch re-exports. By contrast with other European businesses, Dutch businesses feel the pressure not just on the sales side, but in terms of costs too. A sharp rise in labour costs has eroded profits; return on own funds fell to around 5% in 2002 (ten-year average: about 8%).

**Slowdown affects sectors differently**

Fluctuations are evident in all sectors; they may, however, differ in severity and be caused not just by cyclical factors, but by other factors as well (Chart 6). The greatest turbulence is recorded in mining and quarrying, agriculture and construction, especially as a result of disturbing influences such as the weather. Government and health care are subject to much less fluctuations. It is worth noting that the turbulence in the business services sector practically matches that in the industrial sector. The economy as a whole is more stable because sectoral fluctuations are not synchronised.

The current slowdown is making itself felt in nearly all sectors, albeit differently (Chart 7). In the current cycle, the turnaround first became apparent in the industrial sector. When economic activity was booming worldwide in 2000, the industrial sector underwent a favourable growth development. Since the summer of 2001, however, this sector’s contribution to growth has been negative; in the third quarter of 2002, industry was still feeling the effects of the negative world trade climate. The continuing fall in output in the Dutch industrial sector in the third quarter is an indication that recovery is not really setting in yet. Recovery usually

---

**Chart 6  Standard deviation value added**

<table>
<thead>
<tr>
<th>Sector</th>
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<tbody>
<tr>
<td>Mining and quarrying</td>
<td>8</td>
</tr>
<tr>
<td>Agriculture, forestry and fishing</td>
<td>7</td>
</tr>
<tr>
<td>Construction</td>
<td>6</td>
</tr>
<tr>
<td>Energy and water</td>
<td>5</td>
</tr>
<tr>
<td>Trade, catering and repairs</td>
<td>4</td>
</tr>
<tr>
<td>Transport, storage and communication</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing industry</td>
<td>2</td>
</tr>
<tr>
<td>Financial and business services</td>
<td>1</td>
</tr>
<tr>
<td>Government</td>
<td>0</td>
</tr>
<tr>
<td>Health care and other services</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
</tr>
</tbody>
</table>

Explanatory note: The standard deviations are calculated from the percentage (real) quarter-on-quarter increase in the (seasonally adjusted) value added, at base prices for the period 1987-i – 2002-ii.

Source: Statistics Netherlands.
starts at the forefront of the production chain, in those sectors which produce raw materials and intermediate products. In this respect, it is gratifying that the oil, chemicals and rubber industries (accounting for one-fifth of the industrial sector) are recording higher growth rates again.

The cyclical turnaround is also feeding through to the services sector, although not equally powerfully in all segments. The services sector is highly heterogeneous, comprising a vast variety of services, some of which are cyclical in nature. Expenditure on catering and recreation is the first to suffer when consumers begin to economise when faced with uncertainty. Contrary to the standard picture of turbulence, financial and business services saw a major deterioration this year, which lagged behind that in the industrial sector, however. In early 2000, financial and business services contributed over 1 percentage point to growth, but this figure gradually declined, and even came out negative in the third quarter, for the first time. Demand for business services is cyclical; in times of slowdown, businesses economise on temporary staffing services, IT services, financial services, consultancy and advertising. Financial services are also feeling the negative effects of the current stock exchange slump, which is causing a decline in volume. Both business clients and private clients are buying fewer services; there are fewer issues, mergers and takeovers, and household demand for investment products is down.

The non-commercial services sector, made up of the government, education and health care, is traditionally stable. In the current downturn, that is again the case. In the third quarter, the volume of the non-commercial services sector expanded by 2.1%. This means that growth is levelling on earlier quarters, though remaining above the 1.8% growth recorded in 2001. Traditionally, this sector is less affected by one-off disturbances, for one thing because it is always less prone to sharp fluctuations, but also because volume is determined largely during the budgetary process. As this process takes time, a cyclical turnaround takes time to work through to a budgetary change. In the past years of boom, budgetary windfalls in terms of interest payments and social security were used to step up public spending markedly, certainly in comparison to other European countries. In the period 1997-2001, employment in the public sector expanded by 1.3% per annum, as compared with −1.7%, 0.8% and −0.5% in Germany, France and Italy, respectively.

Given the economic stagnation, inflation remains fairly high (Table 3). The cost of living, measured by the consumer price index (CPI), went up 3.4% in October. Following a decline early in the year, inflation is more or less stable. For a period of cyclical slowdown, it is remarkably persistent; experience shows that businesses usually lower their prices during such a period to safeguard their market share. Profit margins in the Netherlands are depressed even more by the sharply increased labour costs; since 1997, the rise in unit labour costs in manufacturing industry has far exceeded that in the rest of the euro area. The differential between Dutch HICP inflation and that in the euro area has declined since the beginning of this year, however, from 2.2 percentage points in January to 1.3 percentage points in October. Dutch inflation is expected to decrease substantially in January 2003. Both CPI and HICP inflation will decline by 0.5 percentage point as a result of base effects ensuing from the introduction of euro banknotes and coins and the high vegetable and fruit prices in early 2001.

Labour market slow to adjust
Labour market tensions have declined over the past year (Chart 8). Labour market developments usually follow changes in economic activity with a lag because businesses’ first reaction to a downturn is to hoard
labour. So far, Dutch businesses have not been shedding staff recruited with great difficulty at the end of the 1990s, when labour was in short supply, and in which they have invested. They have, however, been making adjustments to the flexible part of their staff. In all quarters shown, the expansion of the number of temporary employment hours is negative, with major adjustments having been made notably at the end of 2001 and the beginning of 2002. In addition, the number of vacancies has gone down since mid-2000. On the whole, the labour adjustments in terms of volume made since early 1999 have brought the growth of the labour volume down from 3.6% to 0.8% on an annual basis. Employment growth only remains positive because the public sector is continuing to show stable growth. In the second quarter, the latest period for which data are available, the labour volume in man-years in the industrial sector and in financial and business services fell by 1.7% and 0.8%, respectively. The labour volume in other commercial sectors expanded slightly. The weak employment situation at commercial businesses was, however, amply compensated for by the increase in the labour volume within government and in health care, of 3% and 4%, respectively.

Labour market prices have been slower to adjust than volume. Over the past few years, real wage rises have surpassed labour productivity, making the labour income share go up, from 82.0 in 1999 to 84.8 in 2002. In the Netherlands, wages are adjusted only after collective labour agreements have expired. So far, flexible remuneration linked to positive and negative operating results is applied on a limited scale. This means that when economic developments and forecasts do not coincide, cyclical movements are inevitably slow to work through to wage formation. At this juncture, businesses are being confronted with wage rises negotiated at a time when prospects seemed rosier. In contrast to earlier cycles, there is also the problem that pension funds’ coverage ratios have declined owing to the stock exchange developments. As this necessitates an increase in pension premiums, the scope for wage rises becomes even more limited.

By far the most important adjustment moment lies in the first half of the year (Chart 9). Before the sum-

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### Table 3 Inflation

Per cent changes on previous corresponding period

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Sources: Eurostat and Statistics Netherlands.

1 Excluding unprocessed food and energy.
In mid-2003, collective labour agreements for around 60% of employees will run out, most of them in March, April and May. Further expiries between then and the end of 2003 will involve only a small percentage of employees. It is important that the new collective labour agreements provide for wage rises which make allowance for the cyclical slowdown, as well as the rise in wage costs due to higher pension premiums. The Autumn Accord, where employers and trade unions agreed to restrict wage rises to 2.5% in the coming year, is a gratifying development. It is now for those taking part in the decentralised negotiations to implement this objective.
Starting this issue, the Quarterly Bulletin features a regular chapter on current developments relating to financial stability. The safeguarding of financial stability is one of the Nederlandsche Bank’s principal objectives. Being the custodian of the stability of financial institutions and payment systems in the Netherlands, and co-responsible for the policy of price stability in Europe, the Bank is ever alert to factors which might affect the health of the financial system or the robustness of financial institutions and markets. This chapter on financial stability emphasises the non-financial corporate sector. Against a background of sharply fallen equity prices, soaring debts and disappointing profits, enterprises face deteriorated financing conditions. Not only has internal financing become more problematic, access to the money and capital markets and to bank loans has also come under pressure because investors and banks have been less prepared to take risks. Another sector facing difficulties as a result of the developments in the financial markets is that of Dutch pension funds.

International financial markets

Economic recovery is taking longer to arrive than was still expected as recently as the beginning of 2002. Faced with continued excess capacity, companies have postponed capital expenditures. Also, consumer confidence has decreased during the year, amid wealth losses and increasing unemployment. It is against this backdrop that projections for the world economy have been downward adjusted in recent months. The disappointing rate of economic recovery is one of the reasons why financial market sentiment has deteriorated in the course of 2002. Amid such a climate of insecurity, not only are risks themselves perceived to be larger, but the willingness to take on risk has faded also, as investors move towards relatively safe assets such as government bonds.

The stock markets have for some months been characterised by sharp price falls and high volatility. Since early 2002, the MSCI worldwide share index has declined, in euro, by some 30% (chart 1). At the bottom of the market (on 9 October) the decline was 37%. Volatility on the stock markets also reached record highs. Daily movements of 5% or more were no exception. Chart 2 shows volatility as expressed by the VIX volatility index, which measures average volatility of a basket of options on the Chicago Board Options Exchange. The volatile image presented by the stock markets partly reflects the deterioration in the macroeconomic climate and the uncertainty about future economic developments. But there is also the impact of international political factors (the threat of war in Iraq), decreased confidence in corporate financial reporting and its collateral uncertainty regarding companies’ creditworthiness and financial positions. Finally, stock market developments were also influenced by the possibility that large investors such as pension funds and life insurers were going to reduce their equity portfolios.

Disappointing economic developments, added to investors’ increased uncertainty and risk averseness, gave a major impulse to the bond market. Interest rates on government paper have fallen sharply since early 2002, by almost 50 basis points in Europe and by just under 100 basis points in the United States (US) (chart 3). As on the equity market, the bond market showed strong price fluctuations.
The market movements were further reinforced by activities in the context of dynamic interest rate hedging by large institutional investors, especially in the US, where declining interest rates led to a strong increase in early redemptions of mortgage loans. For investors in predominantly fixed-rate US mortgage debts, early redemptions resulted in decreased interest rate risk on their portfolios. In order to mitigate the disequilibrium in their balance sheets, they engaged in additional interest rate risks, as in the form of longer-maturity paper or via the derivatives markets. This is especially true of the government-sponsored enterprises, large players in the US mortgage market.

The low interest rates on government bonds did not translate fully into lower rates on corporate bonds. The risks of investing in corporate bonds were perceived to be higher, amid declining confidence in expected profits and an increasing number of downgrades in companies’ credit ratings. Under such conditions, investors’ risk tolerance also tends to decline, pushing risk premiums even higher. Another negative factor for many enterprises was increased financial risk, caused in part by the high debts they had run up during the preceding years. The declined attractiveness of corporate bonds translated into rising spreads on corporate bonds (chart 4).

The development of spreads shows a clear distinction between companies with lower and higher credit ratings. Creditworthy companies still find the corporate bond market readily accessible and a cheap financing source, given the generally low interest rates and hardly increased spread. Other companies, however, have found interest rates on roughly the same or even rising levels for the past two years, while those on government bonds decreased. Added to this, financing rates have become more volatile for these companies, complicating the timing of new bond issues. This, in combination with a declining appetite for credit risks, has put the number of newly issued loans under pressure, while several envisioned issues were cancelled for lack of demand.

In the recent past, investments in financial institutions themselves had also declined in value. Initially, the focus was mostly on insurance companies, whose solvency position is sensitive to developments in the stock market, because insurance capital has largely been invested in equity (in the Netherlands: 30%). This is especially true of life insurers. Meanwhile, however, insurers have passed part of their investment risk on to policyholders by offering unit-linked products. Because such policies do not guarantee returns, they are, from the policyholder’s point of view, investment products rather than insurance products.

Insurers’ financial positions deteriorated through the combined effects of declining market returns and the return guarantee on life policies customary in many European foreign countries. Mainly as a result of unfavourable developments in the financial market, the average solvency ratio of Dutch insurers declined from 374% in late 2000 to 305% in late 2001. Non-life companies did slightly better in this respect. Investment losses carry over into the solvency of insurers through the reduction of revaluation reserves built up out of investment profits. One possibility to reinforce a weak-

### Chart 3 10-year interest rate

<table>
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<th>Year</th>
<th>Rate</th>
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<td>00</td>
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<td>01</td>
<td>6.5</td>
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<td>02</td>
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**Source:** Goldman Sachs.
ened solvency position is by raising new capital. In the course of 2002, the investment buffer of some insurers had dwindled so low that investment losses had to be charged directly to profits. The weakened buffers may, moreover, impair insurers’ risk tolerance and by consequence, possibly, the composition of their investment portfolios.

After the insurers, banks also fell from investors’ grace. Losses incurred on lending portfolios and declining commission earnings translated into downgraded credit ratings and poor performance on the stock markets. The rising trend in credit risk was also clearly reflected in the market for credit default swaps. These financial instruments may be regarded as marketable insurance policies against the failure of a third party specified in the contract. The premiums of credit default swaps on some foreign banks have risen sharply in recent months. The deterioration of the credit-worthiness of these banks may result in a declining willingness to do business with them. This development may have implications for the functioning of some interbank markets, especially the highly concentrated derivatives market.

Increased risk aversion is also apparent in the development of lending to emerging economies, especially in Latin America. Already sharply fallen last year, the capital flow to these countries is expected to ebb further in 2002. Since the emerging economies themselves also face disappointing growth, the outlook for their ability to restore health to the debt positions built up in the past is unfavourable. This in turn impacts the financing conditions they are now facing. Brazil has to contend with a profound confidence crisis, the result of doubts over the plans of the country’s newly elected President and worries about its debt burden of over USD 250 billion. This uncertainty is spilling over into other heavily indebted countries in Latin America, such as Uruguay and Peru, but also to Turkey. Most worrisome is the situation in Argentina, where despite large loan packages from international financial institutions there is still little inclination to make structural adjustments.

Surprisingly, the factors that led to the unrest in the securities and derivatives markets had a much less strong effect on the currency markets. Exchange rate developments were remarkably calm, and although volatility rose somewhat compared to the low level at the beginning of the year, the increase was far below that seen in other financial markets. This might be explained by the increased correlation of national economies and the global character of the economic recession (see also the article ‘Different economies, synchronised cycles?’ elsewhere in this Quarterly Bulletin).

The developments outlined above and the deterioration of the macroeconomic climate raise the question of whether the financial intermediation process is functioning as it should. In the first place, it should be noted that companies have required less operational capital, reducing funding demand. Secondly, one should look at the set of sources available to enterprises to satisfy their residual financing needs: internal financing, the capital market and the banks. The diminishing growth of profit has strongly affected the potential size of internal finance through profit retention. Increasing risks and a declining willingness to take risks have made access to the equity and capital market very costly for many enterprises, which therefore have come to depend mostly on bank finance. As the section on Bank lending shows, however, even banks have reasons to be more reluctant to extend loans. All in all this means that corporate finance is a highly topical subject amid the current situation in the international financial markets. The following sections deal with, first, developments in bank lending and after that the implications for the private sector of recent market developments.

**Bank lending**

Bank loans are the most important source of finance for companies without immediate access to the capital market. Especially the smaller and the less creditworthy enterprises are almost totally dependent on bank loans for their external finance. Hence a smooth functioning of the economy is helped by a banking system that is able to meet the borrowing requirements of these enterprises. If it is not, bank lending will impose restrictions on economic growth.

In theory, the volume of bank lending is related in various ways to the business cycle. One aspect of the relationship is the credit supply, which may be procyclical as a result of irrational behaviour by lenders. In times of prosperity, banks are assumed to underestimate credit risk, prompting them to extend too many and too affordable loans. In less prosperous times, the reverse is assumed to happen, with banks refusing loans to even sufficiently creditworthy parties and demanding risk premiums that are too high. On balance, such behaviour reinforces the movement of the business cycle: it is procyclical. A further precipitation of the downward slope results if banks are willing but unable to extend loans. An unexpected increase in loan losses may lead to tightness in the capital market, forcing
banks to scale down lending and thereby reinforcing the business cycle.

During an adverse cyclical phase, demand for loans is reduced as well, for instance because companies put off investment. Finally, the picture is distorted even further by an accounting phenomenon: the growth of lending is the net result of new lending, repayments and write-offs. If write-offs go up, an equal growth in lending corresponds to a larger amount extended in new loans. The conclusion must be that a decline in lending does not in and of itself imply that banks restrict their willingness to extend loans.

The current adverse cyclical phase is reflected in Dutch banks’ loan acceptance policies. Information provided by the banks shows that loan assessments have become more elaborate since the beginning of this year. This could well be the main explanation for the recent reduction in bank lending facilities and credit-substitute guarantees. Between mid-2001 and mid-2002 these categories declined by EUR 40 billion (a good 10%): indeed it has transpired in recent months that even highly creditworthy counterparties may run into problems. Loans that were extended perhaps somewhat too readily during the new economy euphoria, are now subject to more stringent risk assessment.

The cyclical downturn is also expressed in corporate lending, whose growth rate in the Netherlands for years outstripped that of the euro area and the US (chart 5). In more recent quarters, this growth declined sharply, however, to below the euro area average. In contrast to the US, where the cyclical pattern is more emphatically manifest, the Netherlands has not seen a decline of corporate lending in absolute terms. So the current rate of credit growth does not justify the belief that banks extend less credit, thereby hampering economic growth.

An interesting question is to what extent recent developments in lending are explained by weakness in the financial position of banks. Where Dutch banks are concerned, this has not been the case. To begin with, whereas the growth of corporate lending declined somewhat in the reporting quarter, the growth of consumer credit remained level, even rising slightly. Apparently, banks perceive better profit opportunities on the consumer than on the corporate market. Secondly, the existence of capital shortage is not very likely, since the bis ratio (a solvency indicator) for Dutch banks was well above the 8% minimum requirement by mid-2002. Also, more than half of Dutch banks were able to increase their bis ratios, partly through active solvency management, and also by using a larger share of profits to strengthen their capital base. Of the profits realised during the first half of 2001, 53% was added to capital; for the first half of 2002, that share was 89%.

International comparison also shows that Dutch banks are able to maintain their capital base, and with it the possibilities for expanding their lending business, at a level position (chart 6). In 2001, Dutch banks managed, on average, to realise 11% internal capital growth. By comparison, British banks realised 7% average inter-

![Chart 5 Corporate lending growth in the Netherlands, Euro area and the US](chart5)

Twelve-month moving average of percentage changes from corresponding period of the previous year.

Source: Moody’s, dnb.

![Chart 6 bis ratio comparison](chart6)

Median bis ratio for banks rated by Moody’s at year-end; per cent.

Source: Moody’s, dnb.
nal capital growth; for German banks the figure was a mere 2%. In fact, one in five of the German banks rated by Moody’s recorded negative capital growth. Lending by these banks may indeed have been affected by capital shortage.

Summarising, one may conclude that Dutch banks reduced the amount in credit facilities and credit substitute guarantees they extended, and that the strong growth in corporate lending has declined somewhat. The extent to which the figures are affected by demand and supply factors cannot be determined. If banks have reduced the amount in credit facilities and credit substitutes to extend guarantees they offered, and that the strong growth in corporate lending has declined somewhat. The extent to which the figures are affected by demand and supply factors cannot be determined. If banks have tightened the supply of loans, their b/5 ratios show that it was not because of capital shortness. Banks have, however, tightened risk management.

Risks to financial stability in the corporate sector

The last section demonstrated how banks’ willingness to extend loans to enterprises is affected by conditions in the corporate sector. However, it is not only banks that have taken a more reserved stance: companies, too, feel the pinch of increased risk aversion in the financial markets. That pinch is made the more painful by the strong increase in the indebtedness of European and US enterprises. From 1995 to 2001, the ratio of non-financial corporations’ indebtedness to gdp rose from 57% to almost 74% in the euro area, and from a good 51% to 64% in the US, taking debt ratios to historic highs on both sides of the Atlantic. The expansive growth of debt had its roots both in relatively low interest rate levels and in the investment boom of the later 1990s. Major contributions to growing debt were strongly increased mergers and acquisitions, and the purchase of mobile licences. As the ratio of debt to equity goes up, so does the sensitivity of profits to interest rate fluctuations. While operational results exceeded debt servicing on borrowed funds, shareholders benefited by the increasing leverage on corporate balance sheets: equity prices continued to go up until 2000. At the same time, however, lenders were becoming increasingly sensitive to rising financial risks and proceeded to demand higher premiums. This development explains the concurrence of rising stock market prices and rising credit spreads during the 1997-2000 period.

Since 2001, the leverage ratio has turned sour on corporations, as profits fell under the impact of decelerating growth and write-offs on participating interests. US corporations, for instance, saw annual profits come down by 12% in 2001. The steep fall in profits ate into companies’ debt servicing ability, thereby affecting their creditworthiness. During 2002, this combination of factors resulted in a more usual inverse relation between share prices and risk premiums on corporate bonds. The opposite movements of falling share prices and rising credit spreads was most pronounced among firms with lower credit ratings, as their relatively weak financial position translated into more limited access to capital, against high capital costs.

Decreased availability of funding and declining profits has driven many corporations to an emphasis on generating liquidity in order to meet debt servicing obligations. In many cases, this has led to restructuring of balance sheets and the sale of activities. In some cases, however, the market value of assets has fallen to such depths that the price they fetch is insufficient to pay off the debts owed on them. When this happens, it may lead to debt rescheduling or bankruptcy. In 2001 and 2002, amid historically high corporate debts and an exceptionally steep fall in stock market prices, many companies found themselves in such dire straits. This may be illustrated by average annual debt service default figures which, according to Standard & Poor’s rating agency, stood at 3.5% in 2001 and at 3.0% in the first three quarters of 2003, which was above levels prevailing in the early 1990s. Unlike the situation at that time, however, the recent slump has been synchronised across the industrialised world, leading to a global increase in corporate risks. To date, the consequences of increasing credit risks for financial stability have been limited. This may be owing in part to increased spread of credit risk within the financial system, made possible by the increased marketability of credit risks, enabling players to pursue more diversified credit portfolios. Another factor was the large-scale purchase of credit risks from banks by institutional investors.

On average, Dutch non-financial listed corporations suffered a 2% loss over the first six months of 2002, against the small profit (1/%) they made over the preceding year. Losses were concentrated in the telecommunications sector, and in a limited number of companies: of the listed companies whose 2002 results have been published, less than 15% suffered losses during that year. In tandem with the deterioration of corporate profits, the value of non-financial corporations listed on the Amsterdam exchange fell by as much as €125 billion during the first three quarters of 2002, equal to almost 30% of gdp. The fall in market value has led to downward adjustments of expected profits by individual companies, compounding the already unfavourable positioning of many companies, especially in the
telecommunications sector, owing to high debt levels. This is illustrated by two measures of corporate debt: first, debt as a share of the book value of equity; and secondly, debt as a share of the market value of equity (chart 7). The latter measure includes the effects of any equity price rises and hence future earnings prospects. By end-2001, the debt-to-book-value ratio had reached historically high levels, at about 190% (for telecommunications firms as much as 300%), owing to the debt expansion of the late 1990s. The debt-to-market-value ratio, however, has been substantially smaller. Yet it, too, rose strongly during 2000 and 2001, as a result of sharply falling share prices.

For companies whose market value has fallen, access to external finance becomes more difficult. In particular those companies with high debts and relatively strongly fallen share prices, such as telecommunications firms, have severely limited access to the capital market, where they face very stiff interest rates. For this reason, such companies have been forced to dramatic reorganisations in order to secure the necessary cash flow. In a sense, the current situation presents a mirror image of that during the later 1990s. Under today’s market conditions, investors prefer ample cash positions, whereas before, ‘risky’ investments were rewarded by rising stock market prices. In addition, decreased demand by investors has led in some cases to issues where shares are offered at a discount (rights issues), in contrast to the repurchasing of own stock popular during the 1990s.

The preference for liquidities is not only being enforced by the financial markets, but is also the result of a lack of appealing investment opportunities. Both factors are linked to the general increase in risk averseness and to corporate uncertainty about the recovery of the economy, which factors also dampen credit demand. In light of this, there is no evidence of a credit crunch, under which lenders ration credit to almost any company. Nevertheless, bank lending is in many cases made subject to the continuity of creditworthiness factors, such as a company’s rating and financial ratios. Because of this, the recent deterioration of corporate financial positions has impacted the supply of credit. A ratio used by many banks as part of their lending policy is the interest coverage ratio (profits as a share of net interest spending). For Dutch corporations, this measure has deteriorated considerably during the first half of 2002, with low interest rates unable to compensate for sharply fallen profits. As appears from chart 8, the transport and communications sector, for instance, (and especially the communications subsector), has to contend with low interest coverage. Companies in this sector are therefore sensitive to credit rationing. In the event that interest rates go up or profits decline any further, the creditworthiness of these companies will soon reach dangerous levels.

The current financial restructuring and cost saving drive in the corporate sector is gradually reducing the surplus capacity built up during the investment boom, thus laying the foundation for renewed profitability. In

**Chart 7  Debt ratio of listed Dutch non-financial corporations**

Net debt as a percentage of equity (at book value and at market value)

![Debt ratio chart](chart7)

Source: Statistics Netherlands.

**Chart 8  Interest coverage of listed Dutch corporations**

Corporate earnings/net interest spending, per cent

![Interest coverage chart](chart8)

Source: Statistics Netherlands.
the euro area and the Netherlands, the recovery of profits has not yet set in, but in the US the first signs showed when in the second quarter a 7% annualised profit growth was recorded. Yet tentative profit recovery has not repelled the risks threatening the corporate sector. During the first half of 2002, corporate failures in the Netherlands rose by 15% compared to the corresponding period of 2001 (chart 9) – a lower rate than during the early 1990s, although the recent economic slowdown has been stronger. Possibly, the relatively low interest rates have helped to keep the number of bankruptcies down. Nevertheless, a further growth of bankruptcies in the current early stages of recovery cannot be precluded: the preceding slowdown has eroded financial buffers, whereas new working capital will be needed as demand picks up. Since financiers are expected to remain reluctant for the time being, companies suffering liquidity shortages will be at a disadvantage compared to competitors with larger financial reserves.

Dutch pension funds

Lower equity prices have not only affected the balance sheets of non-financial corporations, but those of pension funds as well. This is reflected by the funds’ coverage ratio, relating asset value to the level of pension obligations. The relatively steep wage rises of recent years have also affected the financial position of pension funds. The negative effect of wage rises on coverage ratios is no longer compensated for by high returns on investment (chart 10). Given a 40% fall in share prices in 2002, current policy, if unchanged, will lead to an average coverage ratio of only just above 100%. If that happens, some 300 of the approximately 950 pension funds will find themselves in a situation of undercoverage. Pension funds have become more vulnerable to stock exchange movements as they have gradually increased their investments in shares (Chart 11), necessitating the maintenance of larger asset buffers.

In late September 2002, the Pensions and Insurance Supervisory Authority (‘pvk’), in response to deteriorating coverage ratios, pointed pension funds to the
measures available in order to redress undercoverage and to recreate adequate financial buffers in the longer term. In an undercoverage situation, pension funds may consider contribution increases and perhaps extra capital contributions by companies, and also index limitation of pension benefits. Depending on their present situation, pension funds must also adjust their investment policy to PVK standards for maintaining investment buffers.

These measures may, at the micro level, in the case of individual funds and to varying extents be necessary and inevitable. This also implies that the degree of urgency in taking these measures may vary on a case-by-case basis. However, if a large number of pension funds should find themselves compelled to make policy adjustments all at the same time, it will be important, from the point of view of financial stability, to identify the possible macro level consequences this might have. A general rise in pension contributions, for instance, though desirable in itself, might have an upward impact on corporate wage costs, with adverse effects on the Netherlands’ competitiveness and hence on exports. Also, as a result of higher wage costs, corporate earnings would grow more slowly, which would squeeze the funds available for investment, as would additional capital contributions to corporate pension funds. Moreover, consumer spending might come under pressure as a result of declining employment growth and also as purchasing power runs out of steam because of higher pension contributions or a possible ceiling on pension benefit indexing.

Calculations on the basis of the Bank’s macro-econometric model, \( M \), \( M \), show the consequences of a rise in corporate and public sector pension contributions by, respectively, 4% and 6% of gross wages, in combination with a 20% global slump in stock market prices. This would cause annual GDP growth to be slowed down by an average 0.5 percentage points for a period of four years.1 Although for simplicity’s sake a uniform rise in contributions is assumed here, any actual measures will, of course, be based on individual pension funds’ conditions, which are affected by demographic composition, the quality of the sponsor and industry sector conditions.2 By consequence, the actual measures taken by pension funds are bound to be less uniform and spaced out over a greater time-span, thus reducing their macroeconomic implications.

Current developments in the financial markets may cause pension funds to review their investment policies. As reserves decline, so will funds’ ability to bear investment risks. Against this background the erosion of financial positions may force funds to move away from the riskier types of investment, such as equity, towards, for instance, bonds. Should a large number of funds make such a move at the same time, this will have a procyclical impact on the stock market. To date, there are no signs that pension funds have begun to sell off large quantities of shares. Yet a number of funds have decided not to purchase more equity, despite the fact that this led to underweighting of the strategic equity allocation. Pension funds may also decide to hedge downward price risk in the derivatives market, which may indirectly impact price developments. Fears that this might be the case, whether justified or not, may have contributed to the fall in stock market prices in the course of 2002 (see the ‘International financial markets’ section above).

Traditionally, pension funds have been regarded as a stabilising factor because of their long investment horizon and their ability to absorb short-term market fluctuations. The strong price falls or recent times showed that this assumption no longer holds if market performance turns out worse than assumed by the scenarios on which the pension funds base their risk analyses. If reserves evaporate or, worse, if undercoverage develops, pension funds may be forced to deviate from their long-term strategy. Besides not being in the interest of the pension funds themselves, this also undermines the stabilising effect they have on financial markets. A similar comment may be made with respect to the use of derivatives by pension funds. In principle, pension funds ought to be perfectly capable to absorb short-term volatility. If recent developments should lead to a situation where pension funds use derivative transactions to transfer volatility risks to other market players, this may be harmful to the stabilising effect on financial markets which pension funds have traditionally had.

3 The revenue of umts auctions in the euro area is estimated at 1.1% of GDP in 2000 (source: ECB).
4 Developments on the credit risk market are discussed by, e.g., the Global Financial Stability Report, IMF, March 2001.
5 It is assumed that of pension contribution rises, two-thirds will be paid by employers and one-third by employees. In the public sector, a stronger rise is projected because of the relatively higher age of public sector workers.
6 See the PVK policy letter entitled Principles underlying the financial design and position of pension funds (Uitgangspunten voor de financiële opzet en positie van pensioenfondsen), 30 September 2002, as published on www.pvk.nl.
Latest developments in supervision

*Dutch banks’ results have not been left unscathed by weak macroeconomic conditions and the gloomy mood on the stock exchange. Nonetheless, the solidity of the Dutch banking sector gives no cause for concern. The Bank is obviously keeping a close eye on current developments at individual institutions. Other points for attention are the structural changes in the European arrangements, the Dutch supervisory model and international standards.*

Dutch banks’ results

Dutch banks’ operating results continued to deteriorate in the third quarter. With a 4.4% drop on the same period last year, earnings fell more sharply than expenses (-2.4%), while higher provisions were necessary. On balance, operating results declined by more than 7% (Table 1).

This is in keeping with a development that has been going on for some time, namely that a marked change can be seen in the composition of banks’ operating results. In parallel with the downturn on the stock exchange, there was a substantial decline in returns on investments, holdings and financial transactions as well as in commission income. Over the first nine months of the current year, returns slid back to €2.8 billion (same period 2001: €4.0 billion) while commission income dropped to around €9.5 billion (ditto 2001: €10 billion).

A second factor that has been an issue for some time now is the revaluation of claims owing to the reduced creditworthiness of households and enterprises. Provisions have been rising sharply since mid-2001, depressing banks’ operating results and leading to a drop in their net earnings. The main explanation for the increased credit losses can of course be found in the unfavourable economic environment.

This is countered, however, by some important positive developments. For one, banks’ net interest income improved by close to one-and-a-half billion euro in the first nine months of this year (from €18.5 billion to almost €20 billion), reflecting the generally rather steep interest rate term structure seen so far this year. In other words, long-term interest rates significantly exceed short-term rates. Since banks essentially convert short-term deposits into long-term loans, a steep interest rate term structure results in higher net interest income. However, since the interest rate term structure is now levelling off slightly, this positive effect is expected to subside. The volume growth in lending also boosted interest income. Moreover, indications are that credit spreads have widened, implying that, at the moment, the price of credit that banks charge to customers better reflects the higher costs for the attendant risk. In view of the increase in defaults, banks have become more aware of the costs of credit risk and are passing them on to customers. In addition, there appear to be less cross-subsidies between lending and other

Table 1 Dutch banks’ results

<table>
<thead>
<tr>
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<th>2000</th>
<th>2001</th>
<th>2001</th>
<th>2002</th>
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<tr>
<td></td>
<td></td>
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<td>iv</td>
<td>i</td>
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<tr>
<td>Total income</td>
<td>17.5</td>
<td>-0.2</td>
<td>1.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Interest</td>
<td>6.3</td>
<td>6.6</td>
<td>10.2</td>
<td>15.9</td>
</tr>
<tr>
<td>Commission</td>
<td>28.9</td>
<td>-9.9</td>
<td>-4.0</td>
<td>-2.7</td>
</tr>
<tr>
<td>Other income</td>
<td>38.9</td>
<td>-4.1</td>
<td>-13.3</td>
<td>-17.3</td>
</tr>
<tr>
<td>Total expenses</td>
<td>16.7</td>
<td>7.4</td>
<td>7.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>19.8</td>
<td>2.5</td>
<td>-2.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Provisions^2</td>
<td>-18.4</td>
<td>92.2</td>
<td>231.5</td>
<td>50.1</td>
</tr>
<tr>
<td>Operating result after tax</td>
<td>21.5</td>
<td>-19.3</td>
<td>-11.5</td>
<td>-8.8</td>
</tr>
</tbody>
</table>

^1 Based on the Nederlandsche Bank’s supervisory reports, corrected for population changes.

^2 The sum of the value fluctuations of claims, value fluctuations of financial fixed assets, and the balance of additions to and withdrawals from the General Risks Fund.
activities. Another positive development is that the effect of cutbacks implemented by the banking sector can be seen ever more clearly in the gradual decline in operating expenses. All these factors help to create a solid foundation for improving profitability.

Nonetheless, concerns about the quality of loans portfolios and credit losses seem to have made investors uncertain about financial institutions as evidenced by declines and increased volatility in the major banks’ equity prices (Charts 1 and 2). To refine this picture, however, it should be noted that Dutch banks had sizeable capital bases when the downturn set in. Over the past year, they have even improved their solvency. While risk-weighted assets indeed show a slight increase, this is more than offset by the expansion of the capital base. Since the banks are still comfortably profitable, despite high credit losses, they are able to strengthen their capital base by retaining earnings (see also the article ‘Financial stability’ elsewhere in this Quarterly Bulletin). On balance, the solvency ratio hence shows a modest rise on end-September of last year (Figure 1).

All in all, banks have not escaped the effects of the unfavourable economic conditions and mood on the stock exchanges. However, their starting position was sound, notably in terms of solvency, and some positive developments are under way beneath the surface. So the solidity of the Dutch banking sector gives no cause for concern. As always, however, the Bank is keeping a close eye on developments at individual institutions.

Structure of supervision

Institutional discussion on supervision in the European Union

In the Spring of this year, the British and German ministers of finance suggested exploring whether the procedure for the securities sector, developed under the guidance of former EMU president Alexandre Lamfalussy and since brought in operation, could also be introduced for banking and insurance supervision. This approach seeks to speed up and improve prudential regulation and could hence contribute to a swift revision of the EU solvency directives for banks if a new Capital Accord is agreed on in Basel next year (see below). The Lamfalussy approach makes a clear distinction between regulation, implementation, exercise of supervision and the enforcement of rules. It calls for two committees per sector: one made up of representatives from the ministries which have national regulatory competence, and one comprising supervisors.

In early October, the Council of Ministers of Finance (Ecofin) laid down its outline position. According to the Council, the Lamfalussy approach should be extended to the supervision of banks, insur-
banks not directly responsible for supervision. Their expertise in the area of systemic risk and financial stability supervision can thus be used in advising on prudential regulations and in consultations on the exercise of banking supervision. In addition, a group of ministerial representatives will advise the Ecofin on the political aspects of financial sector issues.

The Ecofin aims to take a final decision on these plans before the end of this year. Concerned about the erosion of its powers, however, the European Parliament rejects the Ecofin proposal outright. One of the Parliament’s demands is a commitment that it will have the right to ‘call back’ regulations and deal with them itself. So realisation of these plans in the short term is still uncertain.

Reform of financial supervision and supervisory legislation in the Netherlands
In the past year, a new, function-based structure for the supervision of financial institutions was introduced in the Netherlands. The new structure distinguishes between systemic supervision, prudential supervision and conduct-of-business supervision. The Bank is responsible for systemic supervision, while the Bank and the Pensions and Insurance Supervisory Authority (PVK) exercise prudential supervision, aimed at promoting the soundness of financial institutions. The Netherlands Authority for the Financial Markets (the Authority) is the conduct-of-business supervisor.

Against this background, on 1 September last, conduct-of-business supervision of collective investment schemes was transferred from the Bank to the Authority, while prudential supervision of securities firms passed from the Authority to the Bank. This marked the completion of the first phase in the reform of financial sector supervision.

What is required in the coming phase is to ‘tilt’ the supervisory legislation from a sector-based to a function-based structure with the objective of gaining optimal benefit from the advantages of the new supervisory model, namely effectiveness, market orientation and efficiency. In effect, this involves a restructuring of the existing Acts for the banking, securities and insurance sectors. Broadly speaking, the new legislation could consist of a General section on financial supervision and a number of specific sections. The General section is expected to govern issues relevant to all areas of supervision, such as the designation of the supervisors, the relationship between the Minister and the supervisors and the instruments with which the latter can perform their tasks. The specific sections contain the stan-
Figure 1 Composition of bis ratio for Dutch banking sector
As on 30 September 2002 (ditto 2001)

Explanatory note: Simplified calculation method, correct bis ratio is 11.26 (10.99%).
Source: Nederlandsche Bank’s supervisory reports.

dards which supervised institutions are required to meet. In these sections too, a clear distinction could be made between prudential and conduct-of-business supervision.

This extensive legislative operation calls for meticulous planning and sound organisation. To this end, the Minister of Finance has installed a departmental project structure closely involving the supervisors. Moreover, market participants and the Consumers Association will be involved and consulted from the outset. The Ministry plans to present a concrete elaboration of the project structure and approach to the Lower House of Parliament before the end of the year.

Covenant between the Authority/the Bank and the PVK
Under the new supervisory model, most supervised institutions will have both a prudential and a conduct-of-business supervisor. In order to keep the burden on institutions to a minimum and to avoid an overlap of supervisory activities, the supervisors have made mutual agreements on coordination. These have been laid down in a Covenant between the Authority as conduct-of-business supervisor on the one hand, and the Bank and PVK as prudential supervisors on the other. This Covenant was signed and came into effect on 9 September last.

The Covenant distinguishes between the authorising and the non-authorising supervisor. For banks and


current and the new Capital Accord is that the latter does not apply a one-size-fits-all approach for setting capital charges, but offers several options for banks to choose from. Depending on how advanced its internal system is, a bank may opt for methods of calculation with a higher or lower degree of risk sensitivity.

To test the proposal for minimum capital requirements in practice, the Basel Committee has launched a comprehensive field test, referred to as the Quantitative Impact Study (qis 3). The objective of the qis 3 is to advance the effectiveness of the new Accord by assessing – prior to the publication of the final consultative document – whether further modifications are required. The study notably seeks to obtain insight into the impact of the new proposals on solvency and serves as a basis for the final calibration of the capital requirements. In revising the Accord, the Committee does not intend to change the minimum solvency level in the banking sector as a whole. In contrast to previous impact studies, the qis 3 is an integral test of the influence of the new proposals on banks’ capital requirements – and hence their solvency ratios.

Some 300 banks from around 40 countries worldwide, including seven Dutch institutions, are participating in the exercise. The Committee has asked the banks to submit the results of their calculations by no later than 20 December. The Committee will subsequently assess the outcome and, where necessary, modify its proposals. The third consultative document will be released in the spring of 2003 and the final text of the new Accord will be published in the autumn.

Meanwhile, an Accord Implementation Group (aig) has been launched under the auspices of the Basel Committee. The aim of this consultative body of supervisors is the exchange of knowledge and experiences surrounding the introduction of two pillars of the new Accord: the minimum capital requirements and the supervisory review. This will foster the adequate implementation of these pillars and allow for the development of best practices.

Revision of accounting standards

The ongoing revision of a number of international accounting standards is just as relevant to the banking sector and supervision as the new Capital Accord. Under a European Regulation, listed Dutch enterprises, including a number of banks, shall – by no later than 2005 – be obliged to apply the International Accounting Standards (ias, or: International Financial Reporting Standards, ifrs) when compiling their consolidated...

Policy and regulations

Quantitative research into effects of new Capital Accord

In early October, the Basel Committee for Banking Supervision published the first complete version of the proposals for the minimum capital requirements for credit risk and operational risk, which are part of the new Capital Accord. One of the objectives of the Accord is to use methods for calculating regulatory capital which are sensitive to a bank’s particular risk profile. A major distinction between the current and...
annual accounts. The Dutch government wishes to extend this obligation to all financial institutions, meaning that all Dutch banks will then have to switch to ias for their external financial reporting.

The transition to ias will be another major operation for banks and supervisors, since accounting standards are fundamental to financial reporting and hence to the prudential reports submitted by banks to the Bank. The preparations for this change are being hampered, however, by the fact that the revision of ias, including ias 32 and 39, has not yet been completed. Comments on the relevant proposals by the International Accounting Standards Board (iasb) could be submitted up to mid-October. Some consequences of these proposals are: that financial derivatives in the bank book, notably for hedging purposes, would appear earlier on the balance sheet than is now the case; that the so-called fair value would be used to value financial instruments; and that credit provisions would be made on the basis of anticipated cash flows. Many of the parties involved, such as the Basel Committee and the Netherlands Bankers’ Association, have reacted to the iasb’s proposals. The iasb will process these comments before setting new standards. The final texts of ias 32 and 39 are expected around March 2003.

The change to the accounting standards will directly impact on banks’ reported capital and calculated solvency ratios, having a one-off effect when introduced and a permanent effect subsequently. The application of fair values will, for example, result in book profits and losses, which will moreover fluctuate, meaning that a bank’s own funds will fluctuate more than at present. A question for the supervisors is thus whether, and to what extent, the value fluctuations can be included in the calculation of actual own funds.

Against this background, the Bank wants to gain more insight into the solvency effects of the new standards. To this end, it has proposed conducting a harmonised measurement at a number of banks. The results of this measurement will be discussed individually with the institutions involved. In addition, the Bank will use the results to explore the consequences for solvency testing. Any undesirable effects will be brought up for discussion during international consultations.

**Investor Compensation Scheme**

As a result of the reform of the supervisory structure in the Netherlands, the tasks surrounding the Investor Compensation Scheme were – in view of the scheme’s primarily prudential objective – transferred from the Authority to the Bank. The scheme offers a safety net to investors in securities firms which are not banks, offering a guarantee of a maximum €20,000 per investor if a securities firm is unable to return monies or securities which should have been segregated from the firm’s assets, but which apparently were mixed with them and subsequently lost. Investment losses are emphatically not covered by the scheme; fluctuations in the value of securities are hence unprotected. In contrast to the Collective Guarantee Scheme for bank deposits, a fund is established under the Investor Compensation Scheme to cover any possible payments.

As of 1 September, the Bank has been in charge of policy regarding the Investor Compensation Scheme and, in that capacity, has since been holding talks with sector representatives. The scheme must first be modified before a complete transfer to the Bank can be effected. However, a difference of opinion as to the scope of the scheme has so far stood in the way of a swift modification. The disagreement centres on the question whether the scheme should be modified so as to exclude market makers. The Bank holds that the scope should be limited, in view of the history of the scheme’s development and its objective, the relevant case law and the Authority’s standpoint. In the Hammock case1 namely, a market maker successfully pleaded that he was not bound by the obligations under the scheme.

If agreement is reached on the scope, a draft for a new scheme can be presented, and the operational responsibility, which is still held by the Authority, can be transferred to the Bank. The Bank aims to bring a modified scheme into effect in the spring of 2003.

**Real estate companies**

Real estate companies in the Netherlands do not seem to take into account that they could qualify as a credit institution and must in that case comply with the provisions contained in or based on the Act on the Supervision of the Credit System 1992 (the Act). The Act defines what a bank is and prohibits the pursuit of the business of a credit institution without authorisation. At the same time, the Act provides that certain groups of institutions are exempted from the obligation to obtain authorisation, or can be given a dispensation. Such institutions are referred to as finance companies.

In a Policy Rule which came into effect on 1 July last, the Bank set down how it was to apply the Act, including in relation to real estate investments. Companies which acquire real estate are, in principle, investing as referred to in the Act, unless the institution uses the
building or buildings itself for its own tasks. The investments are often an independent main activity pursued by the institution, unless the institution is a holding company which holds real estate to support the concern’s operations. If the real estate company also solicits borrowed funds in order to finance its activities, it meets the three elements of the statutory definition of credit institution. That means that it must comply with the provisions of the Exemption Regulation pursuant to the Act.

Under these provisions, a real estate company may exclusively solicit funds from professional market parties, such as banks and insurance companies, or within a restricted circle, for example within its own group. In addition, the real estate company should notify the Bank and inform it of its directors and commissioners, and should furnish the Bank with information which the Bank can use in assessing whether it actually falls under the exemption. It should be noted that real estate companies which partly finance themselves using borrowed capital may also be subject to the Act. The Bank is now considering a communication plan aimed at making real estate agents aware of their obligation under the Exemption Regulation to notify the Bank.

Current developments in payment and settlement systems

On 24 October 2002, the Governing Council of the European Central Bank took a decision on the second generation of TARGET, the system for large-value funds transfers. The realisation of TARGET2, planned for the second half of the decade, will lead to a more harmonised service to the linked commercial banks, and a uniform price structure for cross-border and domestic transactions. TARGET2 is a multiple platform system, which means that each central bank can either operate its own payment system or link up (on a voluntary basis) with a central platform still to be developed. The national central banks continue to maintain the accounts for the commercial banks.

CLS Bank, the global settlement institute for foreign exchange transactions, has been operational since September. The proportion of foreign exchange transactions settled through CLS Bank has risen steadily over the past months. The settlement system has operated without noteworthy problems from the start. The completion of CLS marks a major step towards the reduction of risks in international payments.

Security was the dominant theme in the field of national retail payments over the past months. Fraud with PIN cards, direct debits and internet banking attracted widespread media and political attention. Though the actual losses were extremely small compared to the total value of payment transactions and the victims received full compensation, such instances of fraud can damage the public’s trust in the payment system. The Bank is monitoring developments closely and has been requested by the Minister of Finance to conduct a further investigation into the security of direct debit payments.

The bank is introducing a change in the field of currency effective from 1 January 2003. The distribution of coins, which is carried out for the Ministry of Finance, is to be wholly transferred to the market. Like many other central banks in Europe, the Bank will then only fulfill a role as a national depot where shortages can be replenished and surpluses deposited.

Decision to adopt TARGET 2

On 24 October 2002, the Governing Council of the ECB took a decision on the future of TARGET. The implication for the commercial banks is that the services will be harmonised with a view to achieving greater transparency and lower costs. TARGET2 is a multiple-platform system enabling the central banks either to retain their own payment system or participate on a voluntary basis in a shareable platform still to be set up. Commercial banks continue to maintain their accounts at the national central banks.

TARGET consists of the totality of interlinked central bank payment systems where payments are processed according to the principle of Real Time Gross Settlement (RTGS). This means that payments are settled individually and immediately provided that the debiting scope of the bank submitting the order suffices. TARGET permits EU-based commercial banks to pay each other quickly and securely (in relation to e.g. money market operations). The Netherlands is connected to this network via TOP, the payment system of the Nederlandsche Bank. The national systems each have their own architecture which was set up well before the advent of the euro. Though the limited harmonisation implemented early in 1999 served to create a smoothly operating European payment system, it also gave rise to the desire for further harmonisation. In addition, the demands that systems must meet to ensure continuity of service have been further tightened since 11 September.

The Governing Council has determined that the banks’ access will be uniform for all platforms within TARGET and that the services package will be harmonised. This implies major cost savings, particularly for the internationally oriented banks (different interfaces are currently still in place). It was also decided that all central banks within the EU will apply a single price structure for a large number of core services, so that the difference between domestic and cross-border prices will disappear for each of these services. The prices will be set on the basis of the most cost-efficient system. TARGET2 is to recover costs fully within four years after the launch, taking into account, however, a ‘public good factor’. As for the RTGS systems within the EU the central banks will no longer be obliged to run their own RTGS system: they can opt to retain their own system or to discontinue that system and join a single shareable system. During its first three years of operation TARGET2 will consist of the combination of a single shareable system plus the systems of all central banks that do not link up and continue their own system. After this initial period each central bank can decide whether to retain its own system (subject to the cost recovery obligation) or to link up with the existing shareable platform or to create another platform together with other central banks. The decision to join the shareable platform or not will partly depend on the number of processed transactions as economies of scale influence the transaction price. There are large differences between the existing systems in this respect (Chart 1).
Implementing the aforementioned changes will take several years, so that T_{\text{ar} \text{g} 2} is expected to be operational around 2006. All central banks will continue to maintain their own relationships with the banks and other market parties and can continue offering services specifically developed for that market according to their own insights. The Bank will determine its position in this connection, taking account of the importance of these specific services. The Bank has held regular consultations with the banks concerning the policy to be pursued vis-à-vis T_{\text{ar} \text{g} 2}. As a follow-up to the decision of the Governing Council, the ECB started a public consultation process with the banks in December 2002 in order to give market parties an opportunity to formulate their wishes. This consultation will last until 14 February 2003.

The decision may also have implications for the future EU countries. Of the ten countries that may join the European Union shortly, the central banks of Estonia, Hungary, Latvia, Malta, Poland, Slovenia and the Czech Republic currently have an RTGS system. The central bank of Lithuania plans to have its own RTGS system in place by the end of 2003, while the central banks of Slovakia and Cyprus have not yet announced a specific time schedule. The Governing Council of the ECB has decided that the accession countries, as well as the current 'out' countries (i.e. the United Kingdom, Sweden and Denmark), can join T_{\text{ar} \text{g} 2} immediately after their accession to the EU. The government leaders are expected to take a definite decision about which countries can probably already enter the EU in 2004 during the mid-December summit in Copenhagen. The ECB has assessed the operation of the payment and securities settlement systems in the accession countries and has concluded that the development of the infrastructure in these countries need not impede their accession to the EU. Recommendations have however been formulated to make certain improvements to the infrastructure.

**CLS gets underway**

9 September 2002 brought the launch of CLS Bank with the participation of 39 large global banks, who are also shareholders. CLS stands for 'Continuous Linked Settlement'. CLS Bank is dedicated to the settlement of foreign exchange transactions according to the 'payment-versus-payment' principle: payment and delivery of foreign exchange must take place simultaneously. The credit risk formerly attendant on the settlement of foreign exchange transactions has thus been eliminated. In the traditional settlement process, payment and delivery were separated so that the buyer ran the risk of the other party failing to meet its obligations.

The operationalisation of CLS Bank required the permission of the Federal Reserve Bank, which carries out the oversight of CLS Bank on behalf of the central banks, and of the other central banks whose currencies are included in the CLS system. So far, the following currencies are involved: the euro, the United States (US), Canadian and Australian dollar, the yen, the pound sterling and the Swiss franc. It took a long time before CLS Bank could finally get underway. Extensive testing was necessary to rule out operational risks as far as possible and the banks had to qualify during the test period. As an additional precaution, the qualifying banks were subdivided into six groups at the start of the operational phase. Only transactions entered into within such a group of banks could be offered to CLS for settlement. On 23 September the banks were redivided into three groups of 13, resulting in roughly a doubling of the number of transactions and turnover. The restrictions were finally lifted on 14 October, so that now all transactions concluded between the banks can be settled through CLS. On 4 November a second group of shareholding banks was admitted after qualifying in a test process. On that same date CLS was also opened for the settlement of so-called 'third party transactions', i.e. transactions that the participating banks perform on behalf of other parties (in general smaller banks). Chart 2 shows that the volumes rose steadily in the
various phases. The dips in October and November were due to public holidays when the US financial system was closed, a clear illustration of the large share of the US dollar. In mid-November cls processed an average of some 32,000 transactions daily, representing a total value of 360 billion dollars. The US dollar was involved in almost 80% of the transactions. Once the market has adapted to the new system, an expected two thirds of foreign exchange transactions will be settled through cls and turnover levels will rise accordingly.

Assessment migration to Clearing 21

Euronext has been the stock exchange organisation for the Dutch, French and Belgian markets since September 2000. The integration in the field of trade, clearing and settlement is taking place in a phased process. In order to promote the smooth functioning of payments systems and safeguard financial stability, safe and efficient systems for clearing and settling payments and securities transactions must be in place to minimise (systemic) risks. To achieve this, the Bank performs oversight. In this connection it assesses in conjunction with the Netherlands Authority for the Financial Markets (the Authority) whether the securities clearing and settlement systems of Euronext are adequately organised.

One of the systems that Euronext uses is the clearing system of Clearnet S.A., based in France. Clearnet sees to the prompt clearing of securities transactions between Euronext members. As of 1 February 2001 Clearnet acts as the legal counterparty for all Euronext securities and derivatives transactions. As the central counterparty, it takes over the counterparty risk from the buyer and seller who thus have a receivable or obligation vis-à-vis this central counterparty instead of towards each other. One step in the integration process within Euronext concerns the changeover from the existing clearing system to the Clearnet system known as Clearing 21. Belgium and France had already been using this platform for some time and the Dutch members switched over on 25 October. The move necessitated software and other IT system adjustments as well as the modification of the risk control measures (e.g. the margin calculation system).

The Bank assessed this integration step in its role as overseer. In this context it looked at the risk control policy and the operational reliability of Clearing 21 and also checked whether adequate legal rules had been formulated for the new system. Specific attention was given to the set-up and reliability of the new automated system, its technical and functional management, the organisation and supervision of the overall change process and the continuity measures for the IT environment, also in the light of the events on 11 September 2001. On the basis of the assessment performed in conjunction with the Authority, the Bank has approved the migration to the Clearing 21 system on condition that Clearnet meets a number of (additional) demands within a certain time limit.

Single European payments area

The integration of European retail payments received further attention from the relevant parties in the past months. The central obstacle to the realisation of a single payments area is the existence of national products, standards and systems based on historical and legal frameworks. These existing national systems process domestic payments efficiently but their mutual incompatibility is a problem when it comes to international payments. Efforts are therefore being undertaken to create an infrastructure and products that do permit efficient processing within the entire euro area. The banks, the Eurosystem (the ECB and the national central banks of the euro area) and the European Commission are all involved in this development.

Market parties have further elaborated the initiative to set up the European Payments Council (epc) and
several working groups have been put in place in the fields of infrastructure, standards, ‘business and customer requirements’, cash and payment cards. These working groups are making preparations for the actual realisation of the single European payments area. The next target is to enable fully automated credit transfers within the euro area as from 1 July 2003.

The Eurosystem is represented in both the epxc and in most underlying working groups. There are two arguments for this intensive involvement. It is important to avoid decisions that might meet with objections from the Eurosystem in its capacity as overseer. In addition, the Eurosystem can act as a catalyst to help steer the process towards a more efficient European payment market by solving problems jointly with the banks. If the occasion arises, the Eurosystem may also be able to support the process, for instance by using its regulatory authority to make arrangements binding.

Retail Payments Security

Over the past few months there have been regular reports of fraud and security problems affecting payment products. Several cases of fraud with pin cards came to light, for instance. With the aid of technical devices, criminals succeeded in copying cards and reading pin codes in order to plunder consumers’ accounts. Victims promptly received their money back after reporting such incidents. Though the actual financial loss was not on a worrying scale compared to the number of correct pin payments, the banks responded quickly by analysing the fraud cases and taking appropriate measures. Users have been urged to be vigilant and to observe simple precautions such as never handing over their payment cards and covering the keypad when entering their pin.

Internet banking was also found to be vulnerable to fraud in internal computer networks of companies due to an error in old versions of the general operating software. As a result, employees using internet banking services at the office could be followed via other connected computers by colleagues who were even technically able to change data. That never happened, however, and nobody actually suffered any loss. The software has been modified in the meantime.

The efficiently operating direct debit system attracted negative publicity when fraudulent attempts were made to collect money without the account holder’s permission. Fraudsters try this out several times a year but without much success. Thanks to internal control systems, banks usually reverse the malafide transfers very rapidly before the money can be sluiced away. The direct debit contracts stipulate that the collector’s bank carries the financial risk of fraud of its business clients. Even so, the public’s faith in this payment product can still be undermined. The Minister of Finance has requested the Bank to review the procedures that banks follow with direct debit collections. Furthermore the Minister has promised to report to Parliament on the overall security of the payment system before the end of the year.

Banks must weigh the costs of extra security against the costs of fraud and any increased inconvenience for consumers. The aim ultimately is to pre-empt fraudsters, but this cannot always be guaranteed in practice. However, customers who have demonstrably suffered a loss are indemnified and, if anything goes wrong, it is usually the banks and not the customers who bear the cost. Nevertheless, reports about lack of security obviously undermine the public’s faith in the payment system. For this reason, the Bank closely monitors developments in the field of payment products and also considers the imposition of security requirements as part of its oversight task. The Bank is currently investigating how it can help to strengthen the public’s trust. In doing so, it is trying to strike the right balance between efficiency, user convenience and security.

Dutch coin distribution about to change

The introduction of the euro has prompted a review of the way in which the coin distribution process is organised. The reason is that the different tariff structures applied by the national central banks in the field of coin distribution can cause inefficiency and superfluous coin flows. Arrangements have therefore been made within the Eurosystem to harmonise this tariff structure. In this framework the Ministry of Finance and the Bank have agreed to change the Dutch coin distribution system.

On 1 January 2003 the Dutch coin distribution system fell into line with common European practice, thereby minimising the reasons for unnecessary cross-border coin flows and allowing the market to do its job. As a consequence, Belgian and German coin processors may enter the Dutch market, but the reverse may also occur. In the current situation, banks still deposit and order coins at the Bank which has outsourced the processing task to two professional operators. With effect from 1 January 2003 the Bank scaled down its role in the
coin distribution process to the operation of a central depot. Before that date banks were required to conclude contracts with the coin processors for the depositing, processing and ordering of coins. The Bank’s depot will serve to absorb surpluses or replenish shortages of its customers. The use of the depot will depend mainly on seasonal fluctuations in supply and demand and the loss (wear and tear) of coins. Coin processors will receive access to the depot subject to conditions.

The new system makes the physical distribution of notes and coins more efficient by avoiding unnecessary coin transportation. For instead of being conducted through the agencies of the Bank, the coin flows will now take place directly between the banks or their customers and the coin processors. The new distribution system will also involve the introduction of new tariffs for the banks. At present, charges are made for orders but not for deposits. In addition, the government made a contribution towards the coin processing costs until 2003. The current tariffs are consequently not entirely based on the actual costs. The elimination of the government contribution and the improved efficiency will be reflected in the tariffs applicable for 2003.

**Guilder notes destroyed**

When the operation to make the guilder coins unusable was started up, the Bank had just completed the destruction of its stocks of guilder notes and the guilder notes returned as a result of the euro conversion. The euro conversion compelled the Bank to carry out its biggest destruction operation ever. At the end of August 2002 there were still 363 million guilder notes in circulation. The majority of these have now been returned to the bank. In addition to the notes that were taken out of circulation, the remaining stocks were also destroyed.

The guilder processing era is still not entirely over incidentally. Ten months after the euro was launched, 44 million guilder notes representing a value of 760 million euro had still not been returned to the Bank. The Bank can continue to receive guilder notes until the year 2031. Since April 2002, however, the receipts of guilder notes from circulation have steadily dwindled to a minimal level.
Articles
Banking supervision: the Act on the Supervision of the Credit System 50 years on

This year marks the fiftieth anniversary of the Act on the Supervision of the Credit System. This brief retrospective of the Act’s first half-century shows how banking supervision in the Netherlands has consistently responded to financial sector developments and public needs. The growing importance of the banking sector for the economy necessitated the further reinforcement of supervision and its legal basis. And owing to internationalisation and globalisation of financial markets, international regulations bear increasing influence on national banking supervision. Moreover, despecialisation within the financial sector and the greater complexity of financial products prompted a change in the structure of financial sector supervision in 2002.
History

Up until 1948, the Nederlandsche Bank (the Bank) carried out supervisory activities in an informal way. These activities had no legal basis since the Bank Act made no mention of a supervisory task. This early form of banking supervision, sometimes referred to as ‘paternal supervision’, evolved from the Bank’s commercial activities as a discount bank. The first step towards regular prudential supervision was taken in 1932, when the Bank requested banks to submit quarterly balance sheets. During that period, banks also provided the Bank with information on large outstanding loans. In this way, the Bank hoped to gain more insight into the development of the credit system. The roots of monetary supervision also date back to 1932, when, after the fall of the pound, the Bank and the banks agreed to support the guilder. All of this was done on a voluntary basis. In 1937, a parliamentary debate on the possible revision of the Bank Act culminated in the establishment of the State Committee for the banking sector. Its task was to investigate the desirability of a legal framework for banking supervision and to assess whether the Statutes of the Bank should be changed. The outbreak of the Second World War prevented the State Committee from publishing an official report. However, its work laid the foundation for post-war banking supervision.

Under the new Bank Act 1948, which provided for its nationalisation, the Bank was assigned the task of ‘regulating the value of the Netherlands monetary unit in such a way as will be most conducive to the nation’s prosperity and welfare, and in so doing to keep the value as stable as possible.’ The Act also gave the Bank responsibility for supervision of the credit system and ruled that further legal arrangements governing this supervision would follow. This resulted in the first Act on the Supervision of the Credit System (the Act) which took effect in 1952.

The 1952 and 1956 Acts

The 1952 Act distinguished between socio-economic (later known as monetary) supervision, aimed at supporting monetary policy, business (prudential) supervision, intended to protect creditors’ interests, and structural supervision, which sought to create the conditions for a sound banking sector with an adequate level of competition. Supervision was based on consultations with representative organisations from the banking sector, appointed by the Minister of Finance. Where appropriate, the Bank could, however, issue general or specific directives. In effect, this legislation reflected the voluntary cooperation and consultation practised before the war.

The Act prohibited banks from acting as credit institutions without authorisation from the Bank. To qualify for authorisation, the banks needed to fulfil minimum solvency requirements, the required amount of own resources being determined by the Minister. During the 1950s, stricter reporting obligations were imposed on credit institutions, enabling the Bank to monitor their solvency and liquidity. The Bank could also intervene in banking activities, such as the reduction of issued or paid-up capital, participation in or acquisitions of other credit institutions, mergers and financial reorganisation. In all these cases, a declaration of no objection by the Bank was required. Moreover, the Bank could give credit institutions a direction if it detected a development which could jeopardise the solvency or liquidity of a particular bank. An amended version of the Act, which was initially provisional, was finalised in 1956, strengthening the Bank’s position as supervisor.

The Bank could issue warnings to individual banks regarding risks to their solvency or liquidity. That usually had the desired effect, but not in the case of Gebr. Teixeira de Mattos in 1966, a small bank that ran into difficulties due to its risky credit policy. In the end, suspension of payment and publication were inevitable, followed by liquidation several years later. The affair drew much attention and the Bank came in for harsh criticism, in part because many small depositors suffered financially. This failure was one of the reasons why the next Act, which was already in preparation, paid more attention to protecting depositors’ interests.

The financial landscape changed considerably in this period. Some important mergers occurred in the 1960s, leading to consolidation in the banking sector. The Bank was convinced notably by banks’ argument that mergers were essential in order to strengthen their position in the international financial arena and so gave its approval. Given its responsibility for structural supervision, the Bank could have refused to issue a declaration of no objection if it had found that a merger would lead to an undesirable development in the credit system.

The change in the banking landscape was not confined to mergers. The range of banking activities also expanded. Traditionally, banks could be categorised by their specific activities, e.g. commercial banks, mortgage
banks, savings banks, agricultural banks. By the 1970s, this strict division had disappeared. The agricultural banks, which were traditionally focused on financing agricultural activities began to diversify their banking activities in order to attract new customers. Supervision responded to these changes with the 1978 Act.

### 1978 Act

Following lengthy preparations, a new Act took effect in 1978. In the run-up to this new Act, the Bank had explored banking supervision in other eec countries and the United States. Special attention was paid to deposit insurance, authorisation, solvency requirements and mergers. This Act was the first one to incorporate international regulations, specifically the first eec directive on coordinating rules for authorising and supervising credit institutions.

The 1978 Act shows that the growing importance of the banking sector called for more extensive prudential supervision. It gave the Bank more monitoring instruments and also broadened the scope of supervision by applying a wider definition of credit institutions. From then on, capital market institutions such as mortgage banks came under the Bank’s supervision. The new Act imposed requirements on the expertise and trustworthiness of directors and those who co-determine policy. In order to obtain authorisation, banks needed to have at least two people responsible for day-to-day operations as well as a Supervisory Board comprising at least three members. In addition, credit institutions were required to have a certain minimum amount of available own resources and each credit institution had to submit its annual accounts, accompanied by an explanatory report and certified by a registered accountant, to the Bank within a certain period. If an institution no longer complied with the imposed requirements, the Bank could revoke its authorisation.

As for structural supervision, the 1978 Act stated that a declaration of no-objection was needed before banks could take a holding in non-credit institutions. The Act did not allow credit institutions to merge with other enterprises or institutions. The rationale was to prevent concentration of power or developments which might not be in the public interest.

To protect creditors’ interests, this new Act introduced deposit insurance and emergency regulations. It

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**Box 1 Landmarks in the history of supervision**

- 1948 Bank Act
- 1952 Act on the Supervision of the Credit System
- 1956 Amendment of Act on the Supervision of the Credit System
- 1978 New Act on the Supervision of the Credit System
- 1988 Memorandum on the reliability and continuity of computerised services in the banking sector
  - Basel Capital Accord
- 1990 Protocol on supervision of financial conglomerates
- 1992 New Act on the Supervision of the Credit System
- 1993 Revised Protocol on supervision of financial conglomerates
- 1994 Disclosure of Unusual Transactions (Financial Services) Act
  - Amendment to 1992 Act regarding supervision of financial conglomerates
- 1995 Amendment to 1992 Act regarding deposit guarantee scheme
- 1996 Amendment to 1992 Act regarding exchange of information between supervisors; reorganisation within the Directorate Supervision at the Bank
- 1998 New Bank Act in view of ému
- 1999 Council of Financial Supervisors
- 2000 Introduction of Risk Assessment Support Tool (rast)
  - Amendment to 1992 Act regarding the provision of information to the public
  - Supervision Quality Management Manual
- 2002 Regulation on Organisation and Control (t o c)
  - New institutional structure for financial sector supervision
  - Covenant between the three financial sector supervisors
guaranteed that if a credit institution failed, all affected creditors – private individuals, associations or foundations – would recover all claims in their name up to a fixed maximum amount. The emergency regulations were designed for situations where the solvency or liquidity of a credit institution showed signs of a dangerous trend and no improvement could reasonably be expected. In those cases the Court could, at the Bank’s request, declare ‘the credit institution to be in a position requiring special measures in the interest of all creditors’ and so grant a suspension of payment in a form specifically geared to banks.

With the 1978 Act, the Bank had become the supervisor of mortgage banks in respect of their solvency and liquidity. The supervised institutions were granted a period of three years to adapt their organisation and operations to the new legislation. During this transitional phase, the mortgage banking sector was confronted with serious difficulties, partly stemming from macroeconomic developments and the ensuing collapse of the housing market. In 1982, the small mortgage bank *De Tilburgsche Hypotheekbank* went bankrupt when attempts to save it failed. *De Tilburgsche* thus became the first mortgage bank to which the emergency regulations were applied. Two other mortgage banks ran into difficulties too. However, they survived with the help of two major insurance companies. This rescue operation was facilitated by the statement by the Minister of Finance in 1981 that, if banks and insurance companies wished to increase the solvency of mortgage banks, a declaration of no objection under section 25 of the Act would not be automatically refused. With hindsight, the Minister’s statement can be seen as a first step towards the removal in 1990 of the prohibition on mergers between banks and insurance companies.

The period when the 1978 Act was in force saw competition from foreign banks intensify. Against this backdrop, the Bank and the Minister of Finance reacted positively to applications for declarations of no objection when a number of large banks wanted to merge. The economic significance of the banking sector increased significantly during those years. Measured by balance sheet total it emerges that between 1978 and 1992 the balance sheet total of Dutch banks, expressed as a percentage of GDP, increased from just over 100% to more than 200%. Less than ten years later – in 2001 – that figure had risen to over 400%.

**1992 Act and other amendments**

The final decades of the twentieth century saw a distinct change in the financial landscape, presenting new challenges for supervisory structures and practices and requiring more consultation and closer cooperation between the various financial supervisors at both national and international level. Changes in banking supervision were no longer made solely through the Act, but also through protocols and international agreements.

Besides organisational changes in the financial landscape, a growing dependency on computerised data processing emerged in the 1980s. Although most supervised financial institutions had already taken essential organisational measures, differences in set-up and practices prompted the Bank in 1988 to send out a ‘Memorandum on the reliability and continuity of computerised services’. The main point of the memorandum was that events which could seriously jeopardise the liquidity and or solvency of an institution must be prevented. It assigned an explicit task to the external auditor. This Memorandum was one of the regulations which would be replaced in 2002 by the new Regulation on Organisation and Control.

Thanks to the liberalisation of capital markets in the 1980s, financial institutions had begun to develop more cross-border activities. Supervisors worldwide intensified their contacts and cooperation with the result that, although banking supervision remained a national responsibility, banking supervision in the Netherlands became increasingly subject to international agreements and regulations. Some agreements, such as the Basel Capital Accord of 1988, applied to industrial nations. This Accord was drawn up by the Basel Committee, which had been established in 1974 at the initiative of the *g10* central banks. The Accord was inspired by the desire to create adequate solvency and an international level playing field for banks.

A second development was the emergence of a single market for financial services in 1992, a major step towards financial integration in the EU. Banks, insurance companies and investment firms authorised by one Member State of the EU may offer cross-border services or set up branches in other Member States. Within this single market, supervision is the responsibility of national authorities. The single market for financial services requires a considerable harmonisation of financial regulation, the harmonised EU directives being important instruments. They are legally
binding and are designed to prevent regulatory arbitrage and to create a level playing field. The EU legislation obliges supervisors to cooperate with each other and to exchange information. One way that this cooperation takes shape is through a web of consultative and decision-making bodies, such as the Banking Supervision Committee, the Groupe de Contact and the Banking Advisory Committee. In response to the growing internationalisation supervisors also cooperate with their foreign counterparts in the exercise of supervision, both within the EU and in non-EU countries where Dutch banks have major holdings, such as the United States. This cooperation includes the exchange of information on current investigations but is also formalised in Memoranda of Understanding, usually on a bilateral basis.

The 1992 Act adapted national legislation to the demands of the single market for financial services in the EU. Since the late 1980s, various EU directives had laid down how national legislation regarding various banking activities and prudential supervision should be modelled. Where they dealt with prudential supervision, the directives were largely based on recommendations by the Basel Committee on Banking Supervision. The 1992 Act legalised the principle of home country control. It also widened supervision to take in the administrative organisation of credit institutions. Since 1992, the Act and the rules based on it have been amended several times. The Act was amended as a result of regulations regarding the supervision of financial conglomerates (1994), the EU directive on deposit insurance (1999), the exchange of information with other supervisory authorities (1996) and the provision of information to the public (1999).

Thirdly, important changes took place in the structure of the financial sector within the Netherlands. The removal in 1990 of the prohibition on combining banking and insurance activities was crucial and immediately unleashed a process of mergers and acquisitions among banks and insurance companies. In 2000, ten of the fifteen largest banks in the Netherlands belonged to a financial conglomerate. The lifting of the prohibition also marked the start of cooperation between the financial supervisors in the Netherlands. The Bank and the Insurance Supervisory Authority signed a Protocol in 1990 to safeguard the adequate supervision of financial conglomerates. The Protocol set down the authorisation conditions for conglomerates and obliged supervisors to exchange information. In response to the rapid developments in the creation of financial conglomerates and the introduction of the new Act in 1992, the Protocol was revised in 1994.

Another significant development in the 1990s was that financial integrity came increasingly to the fore in the debate on financial market regulation and supervision. The 1992 Act imposes strict requirement on the expertise and trustworthiness of the director and supervisory directors of credit institutions. Authorisation shall be refused if the Bank holds that the interests of (future) creditors of the institution could be seriously jeopardised. The application for authorisation must also include detailed information on the number of persons determining the institution’s day-to-day policy.

The growing prominence of the integrity issue was partly related to stock market developments and the realisation that suspicions of insider trading could undermine market parties’ confidence in the financial system. Deeper insight into the importance of integrity in the financial sector led to a stronger role for the Securities Board of the Netherlands.

In view of the establishment of Economic and Monetary Union and the impending introduction of the single currency, a new Bank Act was adopted in 1998. The supervisory task is laid down in Section 4 of this Act: ‘The Bank shall have the task of supervising financial institutions in pursuance of the relevant statutory regulations.’ Section 105 (5) of the Maastricht Treaty (1992) states: ‘The ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system.’ The national authorities continue to hold the primary responsibilities in these areas.

The Bank adapted its internal organisation and supervisory practices to the changing structure of the financial sector and the demands of society. In 1996 the Directorate Supervision carried out an internal reorganisation which included the formation of separate teams for the supervision of systemically relevant banks. A quality management system was introduced in 2000 aimed at demonstrably controlling and steering the quality of supervision, taking elements such as transparency, precision and flexibility into account. In the same year, a risk analysis method (RAST) was added to the supervisory tools. RAST looked at the risks incurred by banks and at the quality of the institution’s control measures. In respect of the latter, the Bank has drawn up the Regulation for Organisation and Control (ROC) which officially took effect as of 1 April 2002. Besides being a modernisation, ROC is also a general revision and compilation of existing regulations in the
area of administrative control and internal organisation. The new regulation is a response to recent developments in areas such as risk management, integrity and compliance, and information technology. Although supervision has become more detailed and formalised, the guiding principle is still that the Bank exercises risk-based supervision and does not step into the banker’s shoes.

A new supervisory model

The blurring of distinctions between different types of financial firms and products called for more co-operation between the three financial sector supervisors. In 1999 the Council of Financial Supervisors was established, aimed at giving an additional impulse to cross-sector cooperation between the supervisors of banks, insurance companies and securities firms.

In 2002, the fiftieth anniversary of the 1952 Act, a major change took place in the institutional structure of financial supervision in the Netherlands. In the new model, financial supervision is not organised by financial sector, but by function. The Bank remains responsible for systemic stability while prudential supervision is exercised by the Bank and the Netherlands Pensions and Insurance Supervisory Authority (pvk). The Netherlands Authority for the Financial Markets (the Authority) is responsible for conduct-of-business supervision of all financial institutions. The choice for a structure in which the central bank is responsible for the prudential supervision of banks is inspired by stability considerations. Given the high degree of concentration in the banking sector, problems at an individual large bank can quickly affect the stability of the system as a whole.

Cooperation between the prudential supervisors on the one hand and conduct-of-business supervisors on the other continues, since various supervisory issues such as financial integrity comprise both prudential and conduct-of-business aspects. The rules for cooperation and coordination were laid down in a Covenant between the three supervisors in September 2002.

Conclusion

The financial environment has changed considerably since the Act on the Supervision of the Credit System (1952) came into effect. This influenced the way banking supervision was formalised. The first Act still reflects the old spirit of gentlemen’s agreements. Later Acts provided for more codification and, as time went on, for more detailed formalisation. The scope of supervision became gradually wider, firstly because more institutions were brought under the definition of credit institution, and hence became subject to solvency and liquidity requirements, and secondly, because conduct-of-business supervision was applied not only to credit institutions but also to other financial intermediaries.

Over the past 50 years, the pace of change in supervision in the Netherlands has accelerated. The 1956 Act survived for 22 years and its 1978-successor for 14 years. Since 1990, there has been a rapid succession of major changes, both in the legal framework and in the institutional structure of supervision. Looking back on the past fifty years, it can be concluded that the changes in financial supervision were not inspired mainly by banking crises. The evolving role of banks and changes in the structure of the financial sector formed the main impulse for the revision of legislation, although lessons were learnt from the bank failures that occurred. The new model of financial supervision is expected to provide a solid supervisory structure for the future.

2 RAST stands for Risk Assessment Support Tool.
How much has the business cycle of the Dutch economy changed? Business cycles in – but also outside – the Netherlands have been less volatile in recent decades than in earlier periods. There are several explanations for this trend, the most important two being the increased medium-to-long-term orientation of monetary and fiscal policies and the absence of large worldwide shocks.

While comparable to earlier cycles in terms of depth, the present cyclical downturn in the Netherlands may be characterised as atypical in several other respects. For one, the upward phase of the cycle lasted longer than usual, private consumption being boosted by significant autonomous job creation and a house price boom. Dutch inflation has risen relatively sharply during the current cycle, driven by the increase in oil and food prices, the depreciation of the euro and shortage in specific labour market segments. Strikingly, more than before, domestic factors played a role in the cyclical turnaround. Unlike the usual pattern, exports did not turn round until after several decades. The cyclical slowdown was signalled by a drop in investment. Contrary to the situation in the United States (US), falling investment in our country would seem to be attributable to supply side restrictions rather than to developments in the ICT-sector.
Introduction

In the recent two decades, business cycle amplitudes have declined compared to the period before that. This article looks into the underlying causes of this trend towards a milder business cycle, in order to bring the current downturn into the right perspective. In 2001, economic growth in the industrialised countries was approximately 2 percentage points below the ten-year average of 2.7%. This considerable growth deceleration was also registered in the Netherlands. According to the latest statistics, seeing five quarters of zero growth, our country just barely escaped economic contraction. This raises the question how the current economic slowdown in the Netherlands relates to earlier recessional periods.

Less extreme cyclical movement?

The business cycles seen in the recent past seems to be less pronounced than those of the more distant past. There are indications suggesting that in most industrialised countries their volatility has substantially declined since the first half of the eighties. This trend also manifested itself in the Netherlands (Chart 1). The standard deviation of the annual growth rates of the Dutch gross domestic product (\textit{gdp}) fell from 2.5% in the period 1961-83 to 1.1% in the period 1984-2001. What is behind this?

In the first place, the role of services in the economy as a whole has gradually increased, while the importance of the – more cyclical – manufacturing industry has diminished. The share of services in employment in the Netherlands has grown from 47% in 1960 to 70% now. The relevance of this shift is to be found in the relatively large fluctuations typical of industrial production. The standard deviation of the annual growth rates of industrial production in the period 1961-2000 was 3.6%, against 2.0% for the overall domestic production. This is related to demand for some industrial products – notably for consumer durables – being rather sensitive to cyclical fluctuations. Moreover, the majority of the industrial products are exported and the industry is more energy-intensive. These factors render the industry sector more sensitive to changes in the external environment, such as fluctuations in exchange rates, oil prices and world trade. In addition, owing to the relatively high fixed operating costs, earning capacity is more vulnerable to drops in sales. Consequently, more than in the services sector, in the industry investment plans are adjusted downwards in response to economic adversity.

In the second place, developments in information and communication technology (\textit{ict}) may have enhanced efficiency of inventories management. Traditionally, inventories are among the most volatile components of \textit{gdp}. American research has demonstrated that inventory reduction in times of recession usually accounts for more than half the fall in \textit{gdp}. Normally, some time lapses before operations respond to unforeseen changes in sales. Therefore, short-run changes in sales cause short-term fluctuations in inventories. Better and more readily available updates on sales permit companies to stock less and respond more adequately to changes in sales. American companies these days keep less than 1.4 times the monthly output sold in stock, whereas in the late eighties, inventories were permanently at a higher level. While making for a more efficient inventory control, \textit{ict} applications do not enable companies to predict consumer spending with greater accuracy. This explains why the reduction of the average inventories level seen in the United States since the early nineties concerned raw materials and intermediate goods rather than finished product stock.

A third possible explanation for business cycles levelling off is the increased medium-to-long-term orientation of monetary and fiscal policies. These past two decades, monetary policy has managed to keep inflation within reasonable bounds. The moderating effect it has had on the inflation expectations of companies and individuals has enhanced the predictability of the macro-economic environment. As a result, the

![Chart 1 Volatility of the Dutch cycle](image)

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\[1\] The trend was determined as the 40-year average of the annual \textit{gdp} growth rate (3.2%).
risk of a wage-price spiral developing during a cyclical boom in an overstrained labour market is – albeit far from negligible – less high than before. As regards the fiscal policy, many policy-makers in the 60s and 70s were convinced, with Keynes’ body of ideas in mind, that the economic cycle could well be influenced. In the Netherlands and in other countries alike, this was a generally accepted notion in those days. Given the time involved by translating fiscal measures into legislation, in many cases such an active policy tends to be counterproductive in that the fiscal policy reinforces the cycle instead of attenuating it. The Dutch cabinets in office in the eighties found themselves compelled by the alarming government budgetary position to plot a time path for reducing the fiscal deficit, perforce also excluding the potentially stabilising effect of public sector finance on the business cycle. Meanwhile, the basis of public sector finance has appreciably improved, both in the Netherlands and in some other countries, permitting a long-term fiscal policy. This policy should basically make for a dampening effect on the business cycle.

A fourth factor in relation to the comparatively low volatility marking the business cycles of the past twenty years is that fewer large worldwide shocks occurred in this period than, for example, in the 70s, when two oil crises disrupted the global economy. While it is true that the following decades were to experience shocks that spread unchecked into other countries in the region – e.g. the Asia crisis in 1997 – these shocks had little impact on the industrialised countries. One important difference with the previous decades is that the recessions in the nineties were not synchronic (see ‘Different economies, synchronised cycles?’ elsewhere in this Quarterly Bulletin). For example, the recession in the United States during 1990-91 was somewhat tempered because it coincided with a strong upswing of the European economy in the wake of the German reunification, keeping up American exports to Europe. By the same token, the economic downturn in Europe in 1993/94 was moderated by strong exports to the United States. There is no such buffer if – as is happening in the present cycle – the major economic powers pass through a phase of decelerating growth at the same time.

The foregoing dealt with four possible explanations for the declining amplitudes of business cycles witnessed in the past decades. Research based on American statistics has cast some light on the quantitative relevance of these explanations. The diminished importance of the manufacturing industry has only played a minor role: both the industry and the services sector are displaying a stabler production course than several decades ago. In the Netherlands, the standard deviation of the annual industrial production growth rates fell from 4.3% in 1961-83 to 2.1% in 1984-2001, whereas for the other sectors of the economy (mainly services, besides agriculture and mining) this measure declined from 3.1% to 1.6% in the same period. Also the efficiency improvement of inventory control has contributed but little to reducing the business cycle’s amplitude. This clearly emerges from a comparison between the volatility of production and that of sales. Indeed, unlike production, the latter is not influenced by the stock cycle. However, the volatility of sales decreased practically as much as that of production. Furthermore, on a quarterly basis, the real volume of the changes in inventories shows no declining trend. This implies that the reduction of the business cycle amplitude perceived in the first half of the eighties should be attributed to other factors. According to the American survey referred to above, the two factors discussed in this paragraph – a less active policy and fewer major shocks – each account for 20-30% of the reduction in volatility.

A typical growth deceleration in the Netherlands?

Against the background of the milder business cycle, we shall now look into the current cyclical downturn in the Netherlands. Insight into the nature of this slowdown may help make for better economic forecasts. For the Bank’s latest forecast reference is made to ‘The Dutch economy in 2002-2004: a forecast using market’ elsewhere in this Quarterly Bulletin.

To permit a historical comparison of the current business cycle, first the cyclical component of the GDP is identified. This approach presupposes that the trend-based development can be separated from the cyclical development. As in reality, a neat separation is not possible, the cyclical component was calculated for this purpose by stripping the ‘trend’ (fluctuations lasting longer than 10 years) and the irregular component (fluctuations shorter than eighteen months) off the GDP. Table 1 shows when the Dutch economy reached a cyclical peak and when it hit a cyclical low. The past twenty-five years have known three full cycles. The average for these cycles is used as frame of reference for the recent development. As argued above, seen from a historical perspective, these cyclical movements may be considered mild. Table 1 illustrates that a cyclical down-
Turn lasts approximately 10 quarters on average. For comparison: the average cyclical upturn lasts more than four years. The depth of the trough clearly varies per cycle, but averages out at 1½ to 2% below trend. This indicates that the cyclical troughs experienced in the Netherlands in recent decades usually were not attended by economic contraction.

At first sight, the current cyclical downturn would seem to differ little from the previous periods of economic downturn. Chart 2 shows the recent development in relation to earlier business cycles. It is apparent from this chart that the most recent business cycle of the Dutch economy had an atypically long upward phase. After reaching its potential production level, the economy went through three years of relatively robust growth before the downturn set in. Also, the cyclical peak was relatively low, whereas the downward phase is as yet following the regular pattern.

In various respects, though, the current cycle may be called atypical, just as in fact every cyclical movement has its own specific characteristics. The most striking aspect of the current cycle is the development of foreign trade. In the past, a cyclical downswing in the Netherlands used to be signalled by a drop in exports (Chart 3), as is to be expected from an open economy. This time, however, it took some time for exports to turn round, suggesting that the current business cycle is far more than usual determined by domestic factors. The turnaround in exports in 2000-2001 was unusually strong, which may be attributed to the European and American business cycles being in phase. In this respect, the current cycle obviously deviates from that in the first half of the nineties, when the cyclical movements of the major economic powers were not synchronised (see ’Different economies, synchronised cycles?’ elsewhere in this Quarterly Bulletin). The development of exports is having a substantial impact on domestic expenditure, which has repercussions on the demand for imports (Chart 4).

On balance, the external sector in 2000 helped to maintain the growth of the Dutch economy, but as of 2001 it does so no longer.

The sustained upturn of the Dutch economy pointed out above is to be put down to private consumption. Consumer expenditure peaked at the end of 1998 and, subsequently, remained above trend level for a considerable time (Chart 5). The persistent growth of cons-

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Table 1  Turning points in GDP of the Netherlands

<table>
<thead>
<tr>
<th>Peak</th>
<th>Trough</th>
<th>Duration of downturn 1</th>
<th>Depth of trough 2</th>
<th>Duration of upturn 3</th>
<th>Strength of recovery 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980 i</td>
<td>1982 iv</td>
<td>11</td>
<td>-2.8</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>1986 i</td>
<td>1988 ii</td>
<td>9</td>
<td>-1.3</td>
<td>13</td>
<td>1.3</td>
</tr>
<tr>
<td>1990 iv</td>
<td>1993 iii</td>
<td>11</td>
<td>-1.3</td>
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<td>0.5</td>
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<tr>
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<td></td>
<td>10</td>
<td>-1.8</td>
<td>16</td>
<td>1.5</td>
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<td>Average</td>
<td></td>
<td>10</td>
<td>-1.7</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Since previous peak</td>
<td>10</td>
<td>-1.7</td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

1 Number of quarters from peak to trough.
2 Most negative deviation of GDP level from trend, as a percentage of the trend level.
3 Number of quarters from trough to peak.
4 Difference in percentage points between the GDP’s cyclical component during the trough phase and 1 year later.

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Chart 2 GDP

Percentage deviation from trend, quarterly basis, calculated from cyclical peak 1

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1 Positive and negative values on the horizontal axis correspond with the number of quarters after and before, respectively, the cyclical peak.
sumer expenditure was notably driven by the sharp growth of employment (Chart 6), which made for a favourable development of disposable personal income. Combined with the low real rate of interest and the big-heartedness of mortgage lenders, the rise in income also provided an important impulse for the rapid increase in house prices in recent years. Mortgage equity withdrawals led to a substantial additional spending impulse (see ‘Spotlight on household wealth management in the Netherlands’, Quarterly Bulletin, June 2002).

The decline in demand for investment seen in the present cycle set in sooner than usual. Generally speaking, investment demand lags total GDP by one quarter. While investment decisions are usually based on anticipated future developments, they are partially realised after some delay. This particularly holds for large-scale investment projects, but also for the development of new industrial and commercial buildings as well as new dwellings. During the previous cycle, investment was one quarter ahead of the turnaround in production (Chart 7). At first sight, this observation would seem to be in line with the picture for the US, where the recent growth retardation appears to have been triggered by the decline of ICT investment. A decomposition of the Dutch investment figures, however, shows that...
between 1995 and 2000 the share of ICT in total investment rose from approximately 11% to circa 16 1/2%, but that the cyclical development of investment excluding ICT does not differ materially from the picture reflected by Chart 7. The early fall in investment growth in the Netherlands would appear to be caused rather by restricting factors on the supply side, such as labour shortage in housebuilding and commercial and industrial building. In the second half of 1999, 54% of the vacancies were hard to fill – more than during the previous boom – and in the construction industry, as many as 78%. In addition, the decelerating investment growth is the result of market sector companies’ net worth profitability and solvency starting to erode as of 1998. The fall in investment demand was precipitated when in the third quarter of 2000 – i.e. several quarters after the cyclical turnaround, the stock market bubble began to break. Chart 8 shows that that stock depletion, too, set in relatively early this time, which is consistent with the situation for investment in fixed assets.

In the present cycle, Dutch inflation has risen relatively sharply. Chart 9 illustrates that inflation will rise slowly at the end of the upward cycle and peak approximately six quarters after the business cycle reached its top. The fact that at this stage the rise in inflation comes to a halt, is also explained by monetary tightening: Chart 10 shows that, in the past, money market rates started to mount already well before the cyclical peak. The sharp rise of inflation in the present cycle is largely brought about by the high VAT rate obtaining since 1 January 2001 and the inclusion of TV and radio licence fees in taxation, which together pushed up inflation by approximately 1 percentage point. This effect has meanwhile waned. From Chart 9 it is clear that the present level of inflation is ‘normal’, considering the phase that the business cycle is in now. As the level prior to the cyclical peak was considerably more favourable, however, than in earlier cycles, it cannot be but concluded that the rise of inflation during the present cycle was relatively strong, also as a result of the increases in oil and food prices as well as the depreciation of the euro. These factors apply to all euro countries alike. For the Netherlands, also the tight conditions on the labour market played a role in the acceleration of inflation. The development of gross wages in the upward phase of
the current cycle did not differ materially from that seen during previous booms (Chart 11), but real wages (i.e. gross wages adjusted for inflation) rose above average in that period, again, because the initial level of inflation was favourable. This relatively strong real wage development should notably be attributed to unemployment reaching an unusually low level amply before the cyclical peak. Gross wage went up relatively strongly – i.e. compared to corresponding periods in previous business cycles – between 4 to 8 quarters after the cyclical peak had been reached. This period corresponds with 2001. In that year, wages rose sharply despite substantial net tax cuts. After that, the annualised wage rise levelled off to approximately 3%.

Conclusion

Business cycle amplitudes have declined since the early eighties, compared to the previous period. This seems to be caused primarily by the absence of large, worldwide shocks and because monetary and fiscal policies have a longer-term orientation now. Monetary policy has succeeded in stabilising private individuals’ inflation expectations, and the tendency towards fiscal activism is waning, leaving more and more room for the automatic stabilisers of the fiscal policy to act.

In several respects, the cyclical development of the Dutch gross domestic product seen in recent years has been atypical. For one, the upward phase of the cycle lasted much longer than on average. In addition, private consumption was stimulated by the robust autonomous employment growth and the increase in house prices. Dutch inflation has risen relatively sharply during the present cycle, driven by the increase in oil and food prices, the depreciation of the euro and tight conditions in several labour market sectors. Furthermore, the recent cyclical turnaround was more than before induced by domestic factors. The cyclical downturn was signalled by a fall in investment demand. Unlike in the United States, the decline of investment in our country was not due to developments in the ICT sector, but seems to be attributable to, notably, supply-side bottlenecks.

Chart 10 Money market rates
In percentage points, calculated relative to money market rate cyclical peak (= 0)

Chart 11 Gross wage
Percentage quarter-to-quarter change on previous at corresponding period, calculated from cyclical peak

Average for previous cycles  Current cycle

1  Negotiated wages including wage drift.

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Just a normal cyclical downturn in the Netherlands

1 A conclusive explanation for the remaining 40-60% of the amplitude reduction has as yet not been found. Presumably, part of it may be ascribed to improvements of the economic statistics, as a result of which they contain less ‘noise’ than a few decades ago.
2 The statistics cover the period from the first quarter of 1977 through the third quarter of 2002. The cyclical component was calculated using Christiano and Fitzgerald’s filter. Subsequently, the turning points were identified by excluding cycles with very small amplitudes (a deviation from the trend by less than 1 percentage point) and/or a brief duration (fewer than 6 quarters).
3 In 1997-1998, exports surged, driven, though, by re-exports. For domestically produced exports, no turning point was recorded in that period (unlike in 2000-2001).
4 Furthermore, the strong correlation between imports and exports in the Netherlands can be attributed to re-exports. As this factor has considerably gained in importance since the beginning of the nineties, this argument is particularly favoured in the present cycle.
5 Having just a minor cyclical component, government consumption has been left aside for this analysis.
The euro area has narrowly escaped outright recession and is now experiencing its ninth consecutive year of growth. The relatively mild recession in the United States (US) succeeded the longest unbroken economic expansion in its history. The Japanese economy, on the other hand, is suffering the third recession since its bubble burst in the early 1990s. Are Europe and the US in for a Japanese scenario? It looks as if the current recession will remain mild for the Western countries, though not for Japan. The joint global downturn resulting from the bursting of the ICT bubble is no guarantee for a joint recovery worldwide. This article goes into the question to what extent cyclical movements in individual countries are moving in the same direction at the same pace. It turns out that the synchronisation of cyclical fluctuations in countries depends on their economic and financial interdependence, as well as the extent to which they are undergoing common shocks. Economic interdependence may be a precondition for the convergence of cyclical movements, the decisive factor is whether countries are prey to identical shocks, such as the oil price rises in the 1970s, the global restructuring of public finances of the 1980s and the ICT hype in the 1990s.
Introduction

The global slowdown of growth evident since 2000 is manifesting itself partly in turbulence on the financial markets. Not only do these markets turn out to be firmly correlated, cyclical movements in real economies have so far evinced remarkable synchronisation. The international synchronisation of economic fluctuations can be explained by two factors in particular: the growing measure of economic interdependence and the occurrence of common shocks.

This article begins by discussing how individual economies came to be increasingly interdependent over time. It then looks at the simultaneity of cyclical developments in the German and US economies. Do the cyclical patterns of these two economies coincide more in times of common shocks? The two explanations offered show how cycles came to be synchronised. It is furthermore interesting to see the relative measure of simultaneity of economic developments in two economies. Are German cycles more synchronised with those in the euro area or with those in the US? The synchronisation of international cyclical movements between individual countries is discussed towards the end of this article.

The structural factor: interdependence

Since the collapse of the Berlin Wall, the trend of internationalisation, globalisation and increasing integration of economies and financial markets has intensified, as evidenced by the monetary unification of Europe, the growing number of financial transactions, the immensity of capital flows and the increasing importance of trade. The ensuing interdependence is a measure of the economic and financial ties between individual economic blocs. The question is whether greater interdependence between economies leads to greater synchronisation of cyclical developments among countries. Here synchronisation refers to the extent to which cycles in different economies coincide.

The first indication of increasing cyclical synchronisation can be seen in the scatter diagram (Chart 1) showing the different growth rates of nine economies, to wit Belgium, Germany, France, Italy, Japan, the Netherlands, Spain, the United Kingdom (UK) and the US. The rate of correlation achieved at end-2001 is the highest in thirty years. The diagram also shows a (slightly) declining trend. The peaks indicate that all countries underwent the same shocks. The declining trend points towards underlying convergence of growth rates, brought about by increasing trade and investment relations and the financial interdependence of individual economies.

Chart 1 Convergence

Spread of growth rates \(^1\)

\(^1\) Standard deviation of GDP growth rates, weighted with GDP.
Trade relations and direct foreign investment

The increased interdependence of countries is reflected in international trade in goods and services. Take for instance the growing share of exports and imports in the gdp of large economic blocs (US and the euro area) over the past twenty years. The share of exports and imports in Japanese gdp, however, shows a slight decline (Table 1). The expansion of imports and exports is accounted for in part by the increasing trade flows among these three blocs, as well as by trade with other economies (Table 2). On average, trade has also come to account for a greater share of the world economy as a whole. In the period 1982-2000, world trade growth averaged 6.4%, far exceeding average gdp growth of 3.5%. World trade currently accounts for 17% of global gdp (as against 8% in 1914). Actually, the considerable expansion of trade flows does not explain all of the increase in international interdependence, which also takes the form of the multinationalisation of business. Through foreign direct investment, i.e. the establishment of factories and branches abroad, as well as cross-border mergers and takeovers, businesses are optimising their production processes and reinforcing ties with local outlets. Splitting up production processes and moving some parts to other countries allows businesses to make optimum use of comparative advantages such as the availability of cheap or highly skilled labour. Foreign direct investment can furthermore form a substitute for trade if the transportation costs of the finished product exceed production costs in the local sales market.

The increased trade relations are the result of deregulation, liberalisation, improved infrastructures and lower transportation costs. The simultaneity of cyclical movements seems to have been clearly enhanced by interdependence. As, in times of boom, foreign production capacity can be imported via the trade channel, inflationary pressures are kept to a minimum. During a recession, the excess stocks of finished product resulting from poor domestic demand can be exported. Such mechanisms reinforce mutual influences internationally. Cyclical movements then become more synchronised, while cyclical volatility is dampened. If country a is booming and country b is in recession, the trade channel offers both a panacea. Trade provides both country a with its excess demand and a production deficit and country b with its insufficient demand and a production surplus with a win-win situation. By importing more, country a can reduce its excess demand, while country b can lower its production surplus by expanding its exports. On balance, both countries’ cyclical movements will become less extreme. This is a good example of a situation where cyclical fluctuations are levelled off by trade. The article ‘Just a normal cyclical downturn in the Netherlands?’ elsewhere in this Quarterly Bulletin goes into other mechanisms with the same effect. Not just trade flows, but direct investment flows too make for increasing synchronisation of business cycles. After all, multinational firms’ investment decisions regarding foreign subsidiaries are determined in part by their domestic profitability.

The counterargument is provided by the American economist, Paul Krugman. He avers that the expansion of cross-border trade in goods and services can lead to further international specialisation, in part because of the segmentation of production chains mentioned earlier. Let us suppose country a is relatively specialised in agricultural production and country b in industrial production. Increasing trade flows allow both countries to specialise further. Thanks to economies of scale and its superior knowledge, it is more lucrative for country a to step up its agricultural output and to trade it for industrial products from country b. However, progressing specialisation increases the chances of a shock having an asymmetrical impact. Adverse weather conditions will severely impact country a, while having hardly any effect on country b. The occurrence of a country-specific shock will make cyclical developments in the two countries move out of step. Increasing trade and direct investment relations constitute a precondition, but not a guarantee, for greater synchronisation of business cycles; according to the specialisation argument, they could even lead to decreasing simultaneity. The question whether greater interdependence will generate more or less simultaneity of cyclical movements is especially relevant for Europe’s Economic and Monetary Union. The price transparency generated by the introduction of the euro provides a stimulus for intra-European trade. There is as yet no telling to what extent

<table>
<thead>
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<th>1980</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
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<td></td>
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</tr>
<tr>
<td>Japan</td>
<td>13.1</td>
<td>12.0</td>
<td>8.0</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Financial interdependence and confidence

The financial markets have become increasingly integrated. The correlation between equity prices is considerable, and mutual influencing seems almost immediate. Research recently done at the Bank concludes that the correlations among the German, UK and US stock markets have more than doubled over the past twenty years, from around 0.30 to 0.65. As a result, the cost of capital for businesses and households’ net worth have become more sensitive to equity movements in other parts of the world. Increased interdependence has augmented the sensitivity of equity prices worldwide to events elsewhere. Deregulation, for example, has generated a considerable expansion of cross-border trade in equities over the past decade. In most rich countries, households are increasingly investing in foreign equities. Large businesses are listed on more than one stock market. Equity prices are underlain in part by profitability. As a result of cross-border mergers and takeovers, a growing share of company turnover and profits originates abroad. A related direct form of financial interdependence is the conglomerisation of financial institutions across both sectors and borders. The mergers of banks, insurance corporations and portfolio managers have an increasingly international dimension. On the whole, there has been more integration of financial institutions from different countries (international interdependence) than of different types of financial institutions (cross-sectoral integration). Except in the Netherlands, cross-sectoral integration is moreover more prevalent internationally than nationally.

A less tangible form of interdependence is the confidence channel through which developments can spread across countries. The terrorist attacks in the US demonstrate that a loss of confidence in one country can directly impact consumer and producer confidence elsewhere. In addition, stock exchange sentiments worldwide have recently been affected by the exposure of dubious accountancy practices among US businesses in the wake of the collapse of energy giant Enron. Another case in point is the contagion effect of the crises in Asia and Latin America. When financial markets changed their perceptions of a region on the basis of problems in a single country, the entire region was affected much more seriously than was justified by macroeconomic fundamentals.

These examples show the importance of the confidence channel. It is, however, not easy to gauge exactly whether the chances of international contagion have increased and to what extent changes in confidence are translated into expenditure and investment decisions.

Non-recurring factors: shocks

Increased interdependence may be a precondition for the growing synchronisation of business cycles, the decisive factor is the worldwide occurrence of common shocks. Over the past thirty years, global shocks have occurred in the form of two oil price shocks in the 1970s, the restructuring of public finances in the 1980s,
and the recent bursting of the ICT bubble on the equity markets. These four global shocks show up as peaks in the scatter diagram (Chart 1). The diagram also shows a local trough after each shock.

To demonstrate the synchronisation of cyclical movements, the cyclical component of an economy must first be calculated. This is done by deducting both the trend (fluctuations with a duration in excess of ten years) and the irregular component (fluctuations lasting less than 1.5 years) from GDP. As EMU is still young, Germany's cyclical development was taken as being representative for Europe. The cyclical patterns of Germany and the US are shown to coincide most in periods of common shocks (Chart 2). Negative shocks cause both economies to go into recession. In periods without common shocks, a mixed picture emerges. During the early 1970s, the mid-1980s and the mid-1990s, the cyclical patterns do not quite coincide. Differences are evident both at turning points and in the outliers of individual cyclical patterns. At the beginning of the 1990s, the two cyclical patterns cross, indicating opposite movements for cyclical developments in Germany and the US. The reason is German unification. This is an almost classical example of a country-specific shock whose effects remain restricted to the region. The South East Asia crisis in 1997 and the crises in Latin America are further examples of regional shocks with a limited impact, especially on the Western economies.

The recently increased synchronisation of cycles can be explained in part by two recent common global shocks. These are the recent oil price rises and the bursting of the ICT bubble. Between 1987 and 1998, oil prices never moved outside the EUR 10-20 band per barrel for more than a few months. In the course of 1999 and 2000, however, the oil price rose by nearly 300% from the bottom of this band to a high of EUR 37.70. Although oil dependence has declined since the oil crises of the 1970s, oil remains one of the main commodities for the Western economies, so that an oil price rise may be expected to have a material impact. Under the influence of the global slowdown, the oil price has been declining since end-2000. Uncertainty about a possible war against Iraq could, however, drive oil prices up again.

The second common shock worldwide was the bursting of the ICT bubble on the equity markets. Since peaking in March 2000, ICT-equity prices have nose-dived, dropping by two thirds. The turnaround was not only reflected in lower equity prices, but also led to greater reluctance on the part of banks and providers of venture capital to invest in new ICT businesses. Industrial investment in ICT – expanding by 10-20% since 1992 – has been on the decline since mid-2000. In the fourth quarter of 2000 and the first quarter of 2001, the downward adjustment of profit expectations for the ICT sector spread to the rest of the economy.

**Chart 2  Cyclical patterns of Germany and the US**

![Chart 2: Cyclical patterns of Germany and the US](image)
Internationally synchronised business cycles?

Increased interdependence, especially in combination with the occurrence of common shocks, leads to convergence and greater synchronisation of business cycles. But to what extent are economies which are assumed to be more interdependent actually more synchronised?

In recent Bank research, the cyclical developments of nine countries were analysed, to wit Belgium, Germany, France, Italy, Japan, the Netherlands, Spain, the UK and the US. The cyclical patterns of each country are determined in a manner identical to that for Germany and the US (Chart 2). The cyclical movements of individual countries differ remarkably in several respects. The Netherlands and Belgium, for instance, are characterised by substantial stability and moderation. Stability means a relatively low variability of cyclical movements around the trend and relatively moderate outliers for cyclical peaks and troughs. Both economies move relatively rapidly from one turning point to the next. In this respect, Japan mirrors the Netherlands. The US is characterised by considerable fluctuations (low stability). Its cyclical pattern shows relatively deep and sharp troughs, and relatively flat, round peaks. The German cyclical pattern is fairly jagged, with its relatively long, slow-moving expansions and steep, fast-moving recessions.

The cyclical patterns of the nine individual countries yield research material for an assessment of the extent to which countries assumed to be more interdependent actually experience greater synchronisation of cyclical movements. Two measures are used to gauge the synchronisation of cycles, namely the correlation and the concordance measure. The correlation measure gauges the link between individual cycles. The higher (lower) the measure, the more (less) countries’ cycles are synchronised. The concordance measure gauges the proportion of time during which both cycles are either simultaneously in an expansionary phase or in recession. In an expansionary phase (recession), the cyclical pattern goes up (down) (Chart 2). The results of these two measures for four countries (Table 3) yield several interesting observations. The Netherlands and Germany are very highly correlated. That also goes for the Netherlands and Belgium, as well as for France and Belgium on the one hand, and France and Spain, on the other. Generally speaking, the cycles of neighbouring economies are more synchronised than those of non-neighbouring economies. The argument that major interdependence leads to specialisation and hence to divergence and low synchronisation therefore does not seem to hold for cyclical movements.

Six out of the nine countries analysed form part of the euro area. These six yield fifteen unique combinations with an average of 0.74 and 0.66 for the concordance and the correlation measure, respectively, relatively high for an average. The corresponding average measures for the UK (an EMU candidate) and the six euro area countries are 0.64 and 0.36, respectively, comparable to the corresponding averages for the US. The general impression that emerges is that the cycles of the euro area countries are relatively highly synchronised, and that the cycles of the euro area countries and the UK, on the one hand, and the euro area countries, Japan and the US, on the other, are synchronised. This is confirmed when Germany is taken as proxy for the euro area. According to the measures, Germany and the Netherlands are considerably synchronised, and the cycles of Germany and the UK, on the one hand, and those of Germany and the US, on the other, are also largely in step (Table 2). The measures furthermore indicate a strong correlation between the US and the UK, although less strong than that for the euro area countries.

Conclusion

The current common cyclical downturn of economies worldwide as a result of the bursting of the ICT bubble is not unprecedented. Comparable peaked convergence and temporary considerable synchronisation of cyclical fluctuations between economies have occurred in the face of earlier common shocks such as the two periods of marked oil price rises in the 1970s and, to a lesser extent, the restructuring of public finances in the 1980s. The occurrence of country-specific shocks, on the other hand, makes for diver-
gence and less synchronisation of cycles. The German unification is almost a classical example. At that time, cyclical movements in Germany ran counter to those in the US. The occurrence of common shocks and the absence of country-specific shocks do not automatically lead to increasing convergence and greater synchronisation of business cycles. Some financial and economic interdependence is called for. But considerable interdependence can also lead to specialisation and hence to divergence and low synchronisation of cycles. This does not hold for cyclical movements in neighbouring economies. Cyclical patterns within the euro area are relatively highly synchronised.

Once the effects of the ICT shock have ebbed away, international convergence of cyclical movements could well subside. The Western countries are experiencing a joint downward movement of the business cycle. Should the tide turn, revival could take place at different speeds.

Literature


1 The growth percentages mentioned relate to the US. No figures are available for the euro area.
The Dutch economy barely grew in 2002. The expected vigorous recovery in the second half of this year failed to materialise, so that economic growth stalled at a mere 0.2% in 2002. This low growth figure has various causes. Falling share prices, rising unemployment and heightened political tension in the Middle East severely dented consumer and producer confidence in 2002. Added to this, the wealth effect of the house price boom has waned. As a result, consumer spending was only fractionally higher while business investments decreased relative to last year. Economic growth will recover slowly in the coming years and is estimated at 1.1% in 2003 and 2.1% in 2004. Inflation this year will work out at 3.5%. Though still high, this is significantly lower than the 4.5% recorded in 2001. The decline is set to continue in the coming years with inflation running to 2.5% next year and 2.1% in 2004. Attention is also devoted here to two special themes, namely private consumption and the operation of automatic stabilisers during economic cycles. The estimates were made with the aid of MORKMON, the Nederlandsche Bank’s macroeconometric model for the Netherlands.
Introduction and key points

This article presents a forecast for the Dutch economy in the 2002-2004 period using information up to and including 14 November 2002. A forecast is presented every six months for the Netherlands on the basis of computations made with MORKMON, the Nederlandsche Bank’s macroeconometric structural model.¹

The Dutch economy contracted somewhat in the first half of this year. Towards the end of the year, the economy embarked on the long-anticipated recovery, so that GDP volume growth for full-year 2002 worked out at 0.2%, half a percentage point lower than the forecast six months ago. The expectations for GDP volume growth for 2003 and 2004 have also been revised significantly downwards, with growth now estimated at 1.1% in 2003 and 2.1% in 2004 versus 2.1% and 2.8% respectively in the previous projection. By the end of 2004 growth will amount to about 2¾%, which is once again in line with trend growth. The sluggish recovery of the Dutch economy is partly due to subdued world trade growth in 2002 and 2003 and high wage costs which, in combination with the appreciation of the euro, have weakened Dutch price competitiveness both in and outside the euro area.

The inflation outlook has hardly changed compared to the forecast six months ago. Inflation, measured by the increase in the consumer price index (CPI), will work out at 3.5% this year and 2.5% next year. In 2004 inflation will fall further to 2.1%. A Nederlandsche Bank survey indicates that the introduction of euro notes and coins fuelled inflation in 2002 by an estimated 0.6 percentage point.² The further decline in inflation is mainly attributable to a significantly lower increase in wage costs. The fall in imported goods prices in 2002 and 2003 will serve to dampen inflation both this and next year. Unemployment this year will rise less quickly than expected in the previous forecast. The number of registered unemployed will increase from 146,000 last year via 169,000 this year to 215,000 next year. Given accelerating economic growth, the rise in unemployment will level off to arrive at 245,000 people in 2004.

The assumptions underlying the baseline projection concern the relevant external factors influencing the Dutch economy (Table 1). These are based on the assumptions applied for 2002-2004 within the European System of Central Banks (ESCB) in the context of the recent Broad Macroeconomic Projection Exercise (BMPE).³ The key policy interest rates and exchange rates are those prevailing at the time of projection. The projection therefore does not encapsulate a specific interest or exchange rate outlook. The long-term interest rates are based on a technical assumption.

Assumptions for 2002-2004

The main assumptions underlying the baseline projection concern the relevant external factors influencing the Dutch economy (Table 1). These are based on the assumptions applied for 2002-2004 within the European System of Central Banks (ESCB) in the context of the recent Broad Macroeconomic Projection Exercise (BMPE).³ The key policy interest rates and exchange rates are those prevailing at the time of projection. The projection therefore does not encapsulate a specific interest or exchange rate outlook. The long-term interest rates are based on a technical assumption.

The world trade relevant to the Netherlands increased in 2002 by a meagre 0.5% relative to 2001. A recovery was initiated in the course of this year however, completely in line with a nascent worldwide economic revival. In 2003 and 2004 growth will gather pace to 4.5% and 6.2% respectively. After the slowdown last year when GDP volume rose only 0.3%, the United States will recover both this and the coming two years, with growth estimated at 2.4% for this year and accelerating to 3.0% in 2004. The economic revitalisation of most other major industrialised countries outside the euro area got off to a cautious start in the current year and this process is expected to continue in 2003. Economic growth in the UK lagged behind the previous year at 1.6%, but this was mainly caused by a lacklustre first quarter. In mid-2002 the UK economy resumed the upward trend and the growth projections for 2003 and 2004 are 2.6% and 2.8% respectively. This year Japan will see its economy shrink further due to negative spillover effects from last year, but can look forward to renewed growth of 1.2% and 1.6% in 2003 and 2004. The economies in the other Asian countries are set to flourish throughout the 2002-2004 period with growth averaging 6%.

The assumptions underlying the prices of oil and other commodities are based on futures prices. Oil prices increased from an average of $24.4 per barrel in 2001 to an average of $24.8 per barrel this year, but are expected to fall again in 2003 and 2004 to $24.0 and $22.2 per barrel respectively. The threat of armed conflict in the Middle East already appears to have been partly priced into the oil prices. In the event of military intervention in the Middle East, oil prices are likely to temporarily increase by more than assumed in the current projection. Other reasons for the recent oil price hike are the accelerating world economy and the production restrictions of the OPEC countries. The worldwide economic recovery will also drive up other dollar-
The Dutch economy in 2002-2004: a forecast using MORKMON

Table 1 Assumptions

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
<td>2002</td>
</tr>
<tr>
<td><strong>International</strong></td>
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<tr>
<td>Relevant world trade</td>
<td>1.7</td>
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</tr>
<tr>
<td>US GDP volume growth</td>
<td>0.3</td>
<td>2.4</td>
</tr>
<tr>
<td>UK GDP volume growth</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Imported goods price level, in euros</td>
<td>0.2</td>
<td>-1.9</td>
</tr>
<tr>
<td>Commodity prices ex-oil, in dollars</td>
<td>-16.2</td>
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</tr>
<tr>
<td>Export prices competitors, in euros</td>
<td>0.9</td>
<td>-2.3</td>
</tr>
<tr>
<td><strong>Average levels</strong></td>
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<td></td>
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<tr>
<td>Short-term interest rate – euro area</td>
<td>4.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Long-term interest rate – the Netherlands</td>
<td>5.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Euro exchange rate (in USD)</td>
<td>0.90</td>
<td>0.94</td>
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<tr>
<td>Oil price (UK Brent in USD)</td>
<td>24.4</td>
<td>24.8</td>
</tr>
<tr>
<td><strong>Domestic</strong></td>
<td></td>
<td></td>
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<tr>
<td>Public sector employment (x 1,000 full-time equivalents)</td>
<td>752</td>
<td>758</td>
</tr>
<tr>
<td>Government consumption (%-volume changes)</td>
<td>3.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Government gross fixed investment (%-volume changes)</td>
<td>9.3</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

1 The source for the international assumptions is the BMPE (autumn 2002, Eurosystem).
2 Geographically weighted, goods excluding oil and gas.

denominated commodity prices, particularly in 2003. This year’s 4.7% increase in other commodity prices will be followed by a surge of almost 21% next year and a further 5.5% in 2004. The euro strongly reasserted itself against the dollar this year. After averaging 90 dollar cents last year, the euro has now been hovering around parity for some time. Our calculations assume an average euro rate of 94 dollar cents in 2002 and 99 dollar cents in 2003 and 2004. The stronger euro will dampen the prices of dollar-denominated imports into the euro area, despite increased demand. Imported goods prices will consequently fall 1.9% this year and 0.9% next year. In 2004 the euro appreciation will no longer serve to offset the price increases resulting from buoyant global demand and imported goods prices will rise 1.1%. Exported goods prices of competitors will follow a pattern similar to that of imported goods prices.

Domestic assumptions mainly relate to budgetary policy and other public-sector aspects. The collapse of the Balkenende government in October and the coming elections in January next year mean that the government policy for 2003-2004 is still uncertain. The projections assume that the measures as described in the Strategic Accord and the 2003 Budget will be implemented in terms of budgetary impact.

Baseline projection results for 2002-2004

Table 2 gives the actual figures for 2001 and the estimates for 2002-2004 of the key macro-economic variables. The principal focus below is on economic growth, its determinants and the trends in employment, wages and prices during the projection period.

Economic growth

The Dutch economy, as measured by GDP volume, will grow by a mere 0.2% in 2002, the lowest growth rate since 1982 when the economy contracted 1.2% and a full percentage point below the growth realised last year. The Dutch economy has been virtually stagnant since the third quarter of 2001. The last time that happened was also during the economic slump in 1982. But this can still be seen as a normal cyclical downturn (see the article ‘Just a normal cyclical downturn in the Netherlands?’ elsewhere in this Quarterly Bulletin). The Netherlands is currently in
better fundamental shape than it was in the early 1980s. The public finances for instance are healthier and employment is growing rather than contracting. The modest economic growth in 2002 is largely related to subdued domestic spending. Economic growth will pick up cautiously during 2003, working out at an average of 1.1%. A further recovery is foreseen for 2004 with growth accelerating to 2.1% on an annual basis.

Chart 1a presents the quarter-on-quarter growth of GDP volume underlying the projection. It shows that starting from the third quarter in 2001 the Netherlands has witnessed either no or negative quarter-on-quarter growth for a whole year. The (flash) projection for the third quarter of 2002 is 0.1%, followed by projected positive growth of 0.2% to 0.3%. Chart 1b shows year-on-year growth together with the spillover. There is virtually no spillover in 2002 and only fractional spillover (0.3 percentage point) in 2003. The 1.1% GDP volume growth projected for 2003 thus consists largely of growth generated in that year itself.

GDP volume growth in 2002 consisted in equal measure of the net export volume of goods and services (exported less imported goods and services) and domestic investments.

Table 2  Key indicators of the baseline projection

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demand and production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private consumption</td>
<td>1.2</td>
<td>0.9</td>
<td>1.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Gross business investments (excluding housing)</td>
<td>-3.0</td>
<td>-3.4</td>
<td>0.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>1.7</td>
<td>-2.4</td>
<td>3.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>1.9</td>
<td>-3.0</td>
<td>3.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>1.3</td>
<td>0.2</td>
<td>1.1</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Wages and prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotiated wage rates per employee in the market sector</td>
<td>4.5</td>
<td>3.5</td>
<td>2.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Wage cost per employee in the market sector</td>
<td>5.1</td>
<td>4.8</td>
<td>4.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Consumer price index</td>
<td>4.5</td>
<td>3.5</td>
<td>2.5</td>
<td>2.1</td>
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<tr>
<td>Price competitiveness 1</td>
<td>-0.5</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.7</td>
</tr>
<tr>
<td>Price level of GDP</td>
<td>5.3</td>
<td>3.5</td>
<td>2.2</td>
<td>2.4</td>
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<tr>
<td>Real disposable wage income per employee 2</td>
<td>6.8</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.6</td>
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<tr>
<td><strong>Labour market</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Employment (fte)</td>
<td>1.8</td>
<td>0.5</td>
<td>-0.4</td>
<td>0.5</td>
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<tr>
<td>Labour supply (persons)</td>
<td>1.6</td>
<td>0.9</td>
<td>0.9</td>
<td>1.1</td>
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<tr>
<td><strong>Average levels</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Unemployment (x 1,000 persons, level)</td>
<td>146</td>
<td>169</td>
<td>235</td>
<td>245</td>
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<tr>
<td>Unemployment (ILO definition, percentage)</td>
<td>2.4</td>
<td>2.7</td>
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<td>3.5</td>
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<tr>
<td>Inactive-to-active ratio (percentage)</td>
<td>65.6</td>
<td>66.1</td>
<td>68.7</td>
<td>68.9</td>
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<tr>
<td><strong>Public sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fiscal balance (% of GDP)</td>
<td>0.1</td>
<td>-0.7</td>
<td>-0.7</td>
<td>-0.3</td>
</tr>
<tr>
<td>Gross debt (year-end, % of GDP)</td>
<td>52.8</td>
<td>51.7</td>
<td>50.9</td>
<td>48.9</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current account (transaction basis; % of GDP)</td>
<td>3.4</td>
<td>4.0</td>
<td>4.1</td>
<td>5.1</td>
</tr>
</tbody>
</table>

1 Change in competitors’ export prices less change in goods export prices (excluding energy).
2 Excluding wage drift.
spending. Of this, public sector consumption showed the strongest growth due to volume increases in the health, education, social security and infrastructure sectors. The composition of economic growth will change in subsequent years. Domestic spending is accelerating and will act as the engine behind economic growth in 2003 and 2004. Net exports will increase because exports are rising just slightly faster than the imports. Private consumption will grow 0.9% this year, 1.1% next year and 1.4% in 2004. Exports will decrease 2.4% in 2002 and then rise 3.0% and 4.6% in 2003 and 2004 respectively. Imports will decelerate 3.0% this year but will increase by the same percentage next year and then by 4.4% in 2004. In 2002 total public expenditure will rise 2.6%, thus making an important contribution to economic growth. The expected increase in public expenditure in the subsequent years is much more moderate, namely 0.5% in 2003 and 0.4% in 2004. Business investments contracted in 2002 for the second year running, this time by 3.0%. Businesses are expected to start spending more however in the coming years, leading to growth of 0.3% in 2003 and 3.0% in 2004.

Private consumption will grow by a mere 0.9% this year, which is less than the 1.2% growth realised last year. The low growth this year is the consequence of the sharp deterioration in consumer confidence, which has sunk to the level of 1983. Consumer confidence may have been undermined by rising unemployment, the debate about euro-induced price increases, the unrest in the financial markets and political tensions in the Middle East. The gloomy economic outlook has made Dutch consumers tighten their purse strings. House prices were less buoyant than in the past years, so consumption is receiving a less strong impulse from owners cashing in the surplus value of their homes. In addition, worldwide share prices plummeted this year. The Amsterdam Stock Exchange for instance lost almost one third of its value between April and September. Depressed share prices are hitting private consumption in two ways. Many consumers financed part of their consumption in previous years with stockmarket gains. The share price decline has cut off this source of income for many share-owning consumers. In addition, owing to the stockmarket malaise, some pension funds no longer meet the statutory coverage ratio and will therefore be forced to raise the premiums in the coming years to continue meeting their obligations. These increases will be partly financed by raising the pension premiums for employees, who will thus be left with less money to spend. The section on private consumption illustrates the impact of higher pension premiums on the contribution of disposable income to consumption.

Business investments slowed down more sharply this year than last, namely by 3.4% versus 0.8%. They will recover in the course of 2003 and 2004, growing by 0.3% and 3.0% respectively. The decline in business investments is the consequence of the downward economic cycle and the squeeze on profit margins. Corporate profits have been under severe pressure in the past few years due to strong wage increases and lower sales. As most companies are initially reluctant to downscale their operations when faced with a (temporary) economic slowdown, labour productivity has decreased. The economic decline has proved more pro-
longed than expected however and companies are now compelled to shed employees after all. The number of vacancies rose in the past year and redundant staff are being laid off. Unemployment will consequently rise in the coming years and wage increases will be more moderate. This creates some scope for renewed investments in 2003 and 2004.

After barely growing in 2001, the import and export volume of goods and services actually decreased this year. Due to the worldwide economic decline and the further deterioration of the Netherlands’ international price competitiveness, the export volume of goods and services contracted this year by 2.4% (see the article ‘Different economies, synchronised cycles?’ elsewhere in this Quarterly Bulletin). A decline in the export volume has not occurred in the Netherlands since 1975, when exports shrank 3%. As the global economy starts to regain momentum, exports are expected to perk up again in 2003 and 2004, growing by 3.0% and 4.6% respectively. As these growth rates are lower than the increase in the world trade relevant to the Netherlands, the Dutch export sector will lose market share. Poorer price competitiveness, which has suffered from a sharp increase in unit wage costs, is to blame for this. The rise in unit wage costs will decelerate during the projection period but without leading to an immediate improvement of the price competitiveness. The reason for this is that employee wage costs in the competing countries are rising less quickly than in the Netherlands, while average labour productivity is growing slightly faster. The price competitiveness of the Netherlands compared to competitors outside the euro area is under further pressure from the strong advance of the euro against the US dollar since mid-2002.

In an open economy like that of the Netherlands, imported and exported goods normally follow roughly the same pattern in terms of volume growth. This is because of re-exportation, where goods are imported into the Netherlands and are subsequently re-exported (immediately or after further processing). Re-exported goods therefore count both as imports and as exports. Imports will fall this year by 3.0% and will thus lag behind exported goods, but in 2003 and 2004 imports will again grow by roughly the same as exports. The decline in imported goods in 2002 is attributable to several causes. Sluggish economic growth has dampened the importation of raw materials and semi-finished products. In addition, capital goods imports decreased because companies revised their investment plans. Finally, consumer goods imports only edged up slightly in line with lower-than-expected consumer spending.

Wages
Growing unemployment together with the lower rise in inflation have kept the lid on further wage rises. The negotiated wage increase is 3.5% this year, a full percentage point lower than last year but still higher than the 2.9% and 3.2% negotiated in 1999 and 2000 respectively. The deceleration initiated this year is expected to continue in the coming two years, working out at 2.9% in 2003 and 1.9% in 2004. The 2.9% projected for 2003 is higher than the percentage that the government, employer organisations and trade unions agreed in the Social Accord during the Autumn Consultation. This arrangement concerns, among other things, a negotiated wage increase of no more than 2.5% for 2003. The negotiated wage increase estimated here for 2003 is higher in view of the relatively large number of collective bargaining agreements already concluded which contain arrangements for part or even all of 2003.

Table 3 gives the breakdown of individual wage cost components. This year the wage sum per employee increased 4.8% in the market sector, which is 0.3 percentage point lower than in the previous year. Wage increases will continue to decelerate in the subsequent years, dropping to 3.3% in 2004. The year 2001 was exceptional because of the grossing up of the premium transfer allowance. This led to a one-off 1.7% increase in the contribution from the wage drift component and a simultaneous one-off 1.7% reduction in the employers’ social security contributions. The employers’ social security contributions will rise substantially in 2002-2004, namely by 0.7% in 2002 and 0.8% in 2003 and 2004. This increase is largely caused by the higher pension premiums that are being charged to compensate for the disappointing returns realised by the pension

<table>
<thead>
<tr>
<th>Table 3  Breakdown of market sector unit wage costs</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negotiated wage rates</td>
<td>4.5</td>
<td>3.5</td>
<td>2.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Wage drift</td>
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<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
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<td>Employers’ social security contributions</td>
<td>-1.3</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Wage sum per employee</td>
<td>5.1</td>
<td>4.8</td>
<td>4.2</td>
<td>3.3</td>
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<tr>
<td>Labour productivity</td>
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<td>-0.5</td>
<td>1.0</td>
<td>1.2</td>
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<tr>
<td>Unit wage costs</td>
<td>5.7</td>
<td>5.3</td>
<td>3.2</td>
<td>2.1</td>
</tr>
</tbody>
</table>
funds over the past three years. The stock exchange malaise has eroded the buffers of some pension funds to such an extent that their coverage ratios (the value of a pension fund’s assets as a percentage of its obligations) have come close to, and in some cases have even fallen below, 100%. The wage drift component will remain almost constant at 0.5-0.6 percentage point during the projection period and largely reflects the increase in average wages due to the ageing of the working population. The contribution of cyclically-dependent wage components (market-related allowances, bonuses etc.) to wage drift is expected to decrease as a result of the expanding labour market. As in the previous year, labour productivity growth will fall this year to about -0.5% owing to the economic slowdown in combination with the possible retention of redundant staff. When the economy starts to pick up in the course of 2003, this will increase to 1.0 percentage point in 2003 and 1.2 percentage point in 2004. Unit wage costs will rise 3.3% in 2002, which is slightly less than the 5.7% in 2001. The increase in unit wage costs will halve between 2002-2004 to reach a level of 2.1% in 2004. This, however, is still fairly high and indicates that Dutch wages have a long braking distance.

**Employment**

Employment growth will be sharply lower in the coming years compared to the previous period. This is the result of limited economic growth in combination with sizeable increases in unit wage costs in 2001 and 2002. Though the economy is expected to recover in the course of 2003, this will not translate immediately into the creation of new jobs. Employment usually lags several years behind economic developments. The job growth of only 0.5% this year will be virtually cancelled out next year, after which 2004 will bring meagre growth of 0.3%. This makes a stark contrast with the 1996-2001 period when employment growth averaged 2.5% per year. Unemployment is therefore expected to continue rising in the coming years, though by less than expected six months ago. The jobless rate will actually increase by less than could be expected given the current and recent economic growth levels. Half a year ago the number of registered unemployed was projected to rise by 50,000 from 146,000 in 2001 to 196,000 in 2002. The current estimate however is 23,000 newly unemployed people, bringing the total number to 169,000. Unemployment will rise further in 2003 and 2004, though levelling off in the course of 2004 to eventually reach a level of 245,000. Disappointing economic growth and increasing unemployment will dampen labour supply growth, which will decelerate from 1.6% in 2001 to about 1% in 2002-2004. This is still higher than the employment growth rate, hence the increase in unemployment during the projection period. Partly as a result of the rising unemployment, the number of inactive people relative to the number of active people in the labour market will grow. This is reflected in a higher ‘inactive-to-active’ ratio. This ratio was still 65.6% in 2001, but rose half a percentage point to 66.1% in 2002. In 2003 it will climb a further 1.6 percentage point to 68.7%, finally reaching 68.9% in 2004.

**Prices**

The consumer price index (cpi) jumped 4.5% in 2001, well above price stability level. Of this, one percentage point was attributable to tax measures implemented in 2001. The impact of indirect taxation will be much more subdued in 2002-2004. This year the cpi increase will be 3.5%, subsequently slackening to 2.5% and 2.1% in 2003 and 2004 respectively (Table 4). The sharp increase in unit wage costs was the principal cause of the high inflation in 2001 and 2002. Last year the labour costs contributed 2.7 percentage points to inflation, slightly more than the 2.4 percentage points this year. The impact of this factor will lessen in 2003 and 2004 to 1 percentage point on average. This decrease has two causes, namely the lower wage increases resulting from the rising unemployment and the strong labour productivity growth. Falling import prices due to the worldwide economic slowdown and the appreciation of the euro will make a negative contribution to inflation of 0.6 percentage point and 0.5 percentage point in this and next year respectively. Resurging world demand will drive up import prices in 2004, so that these will make a positive contribution of 0.4 percentage point to inflation in that year. Indirect taxes contributed 1.8 percentage points to inflation last year, compared with 0.8 percentage point this year and an estimated 1.0 percentage point in 2003 and 2004. The figures for 2003 and 2004 are highly uncertain however as the new government’s (tax) policy measures for these years are not yet known. While the gross profit margin was still under pressure in 2001 and previous years, this will widen in 2002 and 2003 and thus contribute 0.6-0.7 percentage point to inflation. Companies have benefited from the lower import prices in 2002 to widen their margins. The sharp reduction in the increase in unit wage costs will provide scope for further margin improvement in the subsequent year. The contribution of the gross profit margin to price increases will once again be virtually zero in 2004.
Public sector
In 2001 the gross debt ratio of the public sector amounted to 52.8% while the fiscal balance showed a surplus of 0.1% of GDP. The economic recovery is progressing less vigorously than initially anticipated. This is one reason why the deficit is rising despite the spending cuts announced by the Balkenende caretaker government in the Strategic Accord and 2003 Budget. The spending cuts are insufficient to offset the lower tax and premium revenues and the higher benefit pay-outs. The collapse of the Balkenende government makes the precise status of these measures uncertain however. The parliamentary approval of the 2003 Tax Plan on 14 November 2001 suggests however that most of the measures will be implemented after all and that any changes to the Tax Plan will have a neutral budget effect. Public spending in 2003 is a more uncertain factor as the caretaker or newly elected government can still change these for 2003. Due to the economic decline that started in 2001, the general government surplus realised over the past three years will turn into a deficit of 0.7% of GDP both in 2002 and 2003. In 2004 the deficit will fall back to 0.3% of GDP as a result of the economic recovery. All this assumes unchanged policy. The gross debt ratio will decrease from 51.7% of GDP in 2002 to 48.9% of GDP in 2004. This is wholly due to the fact that GDP is growing faster than the debt (denominator effect).

Table 4 Breakdown of consumer price rise
Contributions in percentage points

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>0.7</td>
<td>-0.6</td>
<td>-0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Indirect taxes and non-market sector ¹</td>
<td>1.8</td>
<td>0.8</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Unit wage costs</td>
<td>2.7</td>
<td>2.4</td>
<td>1.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Gross margin improvement ²</td>
<td>-0.6</td>
<td>0.7</td>
<td>0.6</td>
<td>-0.0</td>
</tr>
<tr>
<td>Private consumption deflator</td>
<td>4.6</td>
<td>3.2</td>
<td>2.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Consumer price index</td>
<td>4.5</td>
<td>3.5</td>
<td>2.5</td>
<td>2.1</td>
</tr>
</tbody>
</table>

¹ Indirect taxes, natural gas, rents and public sector services.
² Including cost of capital.

The surprising growth of private consumption
Private consumption in the Netherlands underwent a surprising development in the past two years. In 2000 spending on consumer goods was much higher than expected. The stock exchange powered ahead during the first three quarters, the housing market flourished and economic growth was vigorous. The economy showed signs of overheating. Compared with the high consumption growth in the previous years, however, the growth in private consumption was disappointing in 2001. All the more so because the implementation of the promised tax and premium burden was expected to give consumption an additional impulse in that year.

The lines in Chart 2 illustrate the under- and over-estimation of consumption growth in 2000 and 2001 respectively. The continuous line indicates the actual

Chart 2 Private consumption growth and the contribution of determinants

Wealth Interest Unemployment Government balance
Real disposable income

Actual consumption Forecast consumption
consumption growth of 3.5% in 2000 and 1.2% in 2001. The dotted line represents the forecast on the basis of an estimated consumption comparison. The positive difference between the actual figures and the forecast in 2000 is (in absolute terms) roughly the same as the negative difference in 2001. The underestimation of consumption growth in 2000 was thus about equal to the overestimation in 2001. In addition, this estimation error was comparatively big. In the more distant past the average estimation error of consumption growth was 0.4 percentage point while the errors for 2000 and 2001 were over four times as big.

The forecast for consumption growth consists of the estimated contributions of the determinants. These contributions too are represented in Chart 2 (see columns). The most important factor for consumer spending is actual disposable income. Thanks to the easing of the tax and premium burden in 2001, this increased very strongly as is confirmed in the high peak in Chart 2. In addition, real wealth had a heightened impact during the past years. The considerable wealth growth resulting from the house price boom and growing share ownership gave a positive impulse to private consumption. In 2000 wealth growth was the main propellant of consumption growth. In addition to income and wealth, the development of interest rates, unemployment and the fiscal balance play a role. Crucial confidence indicators such as lower unemployment and a higher fiscal balance generally stimulate consumer spending.

Chart 2 also shows consumption growth of 0.9% in 2002, 1.1% in 2003 and 1.4% in 2004 as forecast in the baseline projection for the period 2002-2004 (see Table 2). The contribution of disposable income, as in most years, is the principal determinant for consumption in 2002, 2003 and 2004. The contribution of wealth is minimal on account of the more pessimistic outlook for the stock market and housing market. In addition, the strong increase in unemployment and the growing public deficit act as a drag on consumption growth, particularly in 2002.

Private consumption growth during the 2002-2004 projection period is relatively flat compared to the buoyant growth witnessed in the years before 2001. The foregoing shows however that consumption growth in the very recent past was severely under- or overestimated. The forecasting error, therefore, was large. Such an error could occur again. Consumer confidence, for instance, could revive much more strongly if unemployment rises less rapidly than currently assumed. In that case consumer spending could quicken at a brisker pace. Such a positive demand shock would have considerable implications for the Dutch economy. Table 5 shows the effects for GDP volume growth, unemployment, inflation, and the fiscal balance on the basis of a simulation with MORKMON where consumption growth would work out at 2.1% in 2003 and 2.4% in 2004 instead of 1.1% and 1.4% respectively in the baseline projection.

Such a positive impulse for private consumption could permit additional GDP volume growth of 0.3 and 0.4 percentage point in 2003 and 2004 respectively. In addition unemployment would increase less quickly as a result of the additional employment growth thanks to higher domestic production. The government would also profit from lower benefit pay-outs and higher tax revenues. Combined with the higher GDP growth, the fiscal balance would then improve. In addition, the revitalisation of domestic spending through private consumption only leads to upward price effects in the medium term. Inflation will therefore show little or no increase in the first two years compared to the baseline projection.

### Asymmetry in policy compels procyclical measures

Both the Dutch and the European economies are currently going through a period of low economic growth. As a consequence public finances are under pressure in various EMU countries. The Netherlands is in a less unfavourable position thanks to its diligent efforts in the past to eliminate the public deficits. As a consequence the current Dutch government now has the option of allowing the automatic stabilisers to restore the economy to an even keel. Higher spending in connection with rising unemployment and falling tax revenues will not immediately propel the Netherlands into the danger zone. According to the baseline projection,

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**Table 5** Consequences of 1% higher consumption growth in 2003 and 2004 according to MORKMON

<table>
<thead>
<tr>
<th>Effect</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP volume growth</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Registered unemployment</td>
<td>-3.9</td>
<td>-11.3</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fiscal balance (level, % GDP)</td>
<td>0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>
the Dutch fiscal balance will be -0.7% of GDP, well below the 3% norm agreed in the EU treaty.

Not all EMU countries have managed to put their public finances in order in time. Owing to the current recession, some countries are either close to or already above the 3% limit and must now resort to tax or spending measures to restore their budgetary health. The great disadvantage of these measures is their procyclical impact. This is illustrated below for the Netherlands on the basis of several simulations.

**Simulations with MORKMON**

Three scenarios are analysed. The simulations cover an eight-year period. In each scenario domestic consumer spending initially receives a negative shock of 2%. This fall-off in demand persists for two years. The government’s reaction to the shock is different in each scenario. In the first scenario the government decides to rely on the automatic stabilisers. Tax revenues decrease and benefit pay-outs increase. In the second and third scenarios the government acts to prevent the negative shock impacting on the fiscal balance either by increasing wage and income tax rates (second scenario) or by reducing material government spending (third scenario).

Chart 3 shows the development of GDP volume growth, inflation and the gross debt ratio of the public sector (all as deviations from the baseline projection). Both the tax increases and the spending cuts heighten the impact on GDP volume growth compared to the situation where the automatic stabilisers are left to do the job. This applies both to the initial negative effects and to the positive effects in the longer term. In the scenario with automatic stabilisers, GDP volume growth suffers a cumulative fall in the first two years of 1.4 percentage point. GDP volume growth thus decreases by 1.7 and 2 percentage points in the event of tax increases and material public spending cuts respectively.

Spending cuts have the strongest procyclical impact. In this case, the fluctuations in GDP are about 40% stronger in the first two years than if the government had relied on the automatic stabilisers. Tax adjustments intensify the fluctuations by about 20%. Lower public spending has a more direct impact on GDP than changes in wage and income tax rates. In this latter case, consumers can decide not to let the full tax increase or decrease affect their spending. Ultimately, the temporary fall-off in demand does not lead to permanent effects on GDP volume in any of the scenarios.

The inflation effects in the scenario with automatic stabilisers are initially limited. Wages decrease, but so...
tion leads to higher wage rises, lower economic growth is even accompanied by higher inflation in the first two years.

The debt ratio grows in the automatic stabilisers scenario by 1% of GDP in the first year and 1.8% of GDP in the second year compared to the baseline projection. This increase is the result of the general government deficit that has arisen and a lower nominal GDP. In the following years the debt ratio decreases slightly. Public debt does however rise to a permanently higher level because the temporary fall-off in demand leads to a lower fiscal balance during a number of years. This is prevented if measures are taken to control the fiscal balance: both with tax increases and spending cuts, the public deficit only rises temporarily.

Analysis
The automatic stabilisers can make a clear contribution towards dampening the economic fluctuations, but there must be sufficient budgetary room to allow these stabilisers to operate. If this is not the case, governments are forced to resort to procyclical policy. It is also important to remember in this context that spillover effects between European countries may reinforce the economic cycle even further.

Governments should be more alert in the future and create surpluses in times of prosperity to eliminate the need for procyclical measures in times of economic hardship. In the Netherlands the need for intervention appears to be slightly less acute than elsewhere. The relatively low general government deficits provide scope for the automatic stabilisers to do their work without compromising the ultimate objective of creating a structural surplus to cope with the future costs of ageing.

Conclusions
The recovery of the Dutch economy is taking longer to materialise than anticipated at the beginning of this year. Consumer confidence deteriorated sharply in 2002 due to the unrest in the financial markets and the political tensions in the Middle East. As a result, the Dutch economy barely grew, particularly in the first half of the year, with annual growth stalling at a mere 0.2%. As the international economy starts to improve, growth will recover in the course of 2003, working out at 1.1% in 2003 and 2.1% in 2004. The labour market usually responds to economic developments with a time lag. Consequently, unemployment initially rose by a modest 23,000 to 169,000 in 2002, while in 2003 the jobless rate will jump by 66,000 to 235,000. The increase in the number of unemployed will only start to level off in 2004, eventually reaching a total of 245,000 people. Negotiated wages will still rise this year by 3.5%, but mounting unemployment will subsequently cause the negotiated wage increases to drop to 1.9% in 2004. In combination with a more favourable development of labour productivity, unit wage costs will also rise more significantly than in previous years. Due to lower wage costs and lower import prices, inflation will fall during the 2002-2004 projection period from 3.5% via 2.5% to 2.1%. The contribution of profit margins to inflation was positive in 2002 and 2003, but about zero in 2004. The lower-than-expected economic growth is also expressed in the government budget. After four years of surpluses, deficits will be incurred in each year of the 2002-2004 projection period. This article also discussed the relatively low consumption growth and the effect of the automatic stabilisers compared to a government policy based on a deficit norm. The past two years have shown that consumption can be erratic. Given an unexpectedly early surge in consumption, the economy will immediately advance more strongly than predicted in the coming years. Thanks to the Netherlands’ former efforts to reduce public deficits, it can now rely on the automatic stabilisers without necessarily having to fully compensate this with public spending cuts. A decision not to rely on the automatic stabilisers would reinforce the cyclical fluctuations. The fiscal balance would rise if the automatic stabilisers are used, but would still remain below the 3% norm applied in the Stability Pact.

2 See the article ‘Getting used to the euro’ in the Nederlandsche Bank’s Quarterly Bulletin September 2002, pages 51-56.
3 The ECB releases projections for the euro area every six months, in its June and December Monthly Bulletins, calculated on the basis of projections by the individual national central banks of the euro area and the ECB’s own staff.
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- Different economies, synchronised cycles?
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Publications
**No. 92 Does Competition Enhancement Have Permanent Inflation Effects?**

**P.A.D. Cavelaars**

This paper presents empirical evidence that a higher degree of product market competition leads to a permanently lower inflation rate. Among a broad set of possible candidate variables, the indicator for product market competition used in this paper (the markup) is superior in explaining inflation differentials across twenty-one OEC countries and also across the subset of EU member states. Using a regulation index, it is confirmed that the markup is indeed a good proxy for product market competition.

*JEL codes: D400, E310.*

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**No. 93 Is Financial Market Volatility Informative to Predict Recessions?**

**N. Valckx, M.J.K. de Ceuster and J. Annaert**

It is commonly agreed that the term spread and stock returns are useful in predicting recessions. We investigate whether interest rate and stock market volatility play an additional role as recession indicators. Both risk-return analysis and the theory of investment under uncertainty provide a rationale for this extension. The results show that interest rate and stock return volatility do not contribute systematically to the forecasting of recessions in the US using the NBER definition but do so, to some extent, when using the OEC dating. In Germany and Japan, using a variety of volatility indicators, the evidence is slightly more favourable.

*Keywords: Business cycles, stock market volatility, interest rate volatility, probit model.*

*JEL codes: E32, E44, C25.*