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Recent developments
The Netherlands in the euro area

The rise in oil prices has pushed inflation up to the highest rate since 1994. Although the direct influence of energy prices on inflation will abate in the coming period, the indirect effects of higher commodity prices will intensify inflationary pressures. This will be consolidated by vigorous economic growth. The economy has now expanded by more than 4% for the third consecutive quarter, while tensions in the labour market continue to mount. The economic boom offers enterprises opportunities to activate the still unused labour supply (older workers, recipients of occupational disability benefits and returners), and to invest in labour-saving technology. House price inflation was considerable in the second quarter, although some signs point to an easing of the tension in the housing market.

Dutch inflation on the increase

The Dutch consumer price index (cpi) has been moving upwards recently, climbing from 2.0% in the first quarter of 2000 to 2.8% in July (Chart 1). This is the highest rate since October 1994. July is an important month for price movements in the Netherlands, since the half-yearly adjustment of gas and electricity prices and the annual rent increase take effect in this month. The steep rise in the price of oil products induced a significant upward shift in gas and electricity prices, with this category accounting for 0.8 percentage point of inflation in July. The annual rent increase slightly depressed inflation this year. Rents went up by 2.6%.

Chart 1  Inflation in the Netherlands
Percentage changes on previous corresponding period

Source: Statistics Netherlands.

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Source: Eurostat.

Table 1 Inflation (hicp)

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Source: Eurostat.

the first time since 1980 that the rent increase has been lower than the inflation rate prevailing in July. This moderate rent increase can partly be ascribed to the lower maximum rent increase, which was set at 3.8% this year compared to 6.5% in previous years (Chart 2). Moreover, as of this year, landlords were obliged to explain any rent increases in excess of 2.2% on the basis of the housing evaluation system. In previous years this only applied to rent increases of more than 5.5%. The administrative costs involved in this clarification may well have deterred some landlords from implementing higher rent increases.

According to the harmonised index of consumer prices (hicp), inflation in the euro area stood at 2.4% in July. Rates were lowest in Germany, France and Austria at 2.0%, while Ireland had the highest rate at 5.9% (Table 1). From an international perspective, the Netherlands is around average. All euro area countries recorded higher rates of inflation in the first half of the year, mainly due to the development in oil prices, which soared over the past eighteen months in response to increased demand. In addition, oil-producing countries imposed a number of restrictions on production last year, further curtailting supply. This pushed the price per barrel Brent up from USD 11 at the start of 1999 to around USD 30 in July 2000, as much as 40% higher than a year before. A further rise in oil
prices over the coming period is less likely. This is signalled by the slight increase in the number of days’ worth of stocks (Chart 3), resulting from the decision by OPEC, on Saudi Arabia’s initiative, to expand production. If the oil price does not go up any further in the coming months, the direct influence of energy prices (such as motor fuel) on inflation will abate, given the relatively high oil prices in the second half of 1999. Inflation, which measures the change in the price level, is not affected by the level of the oil price, but by oil price fluctuations.

Despite the continuing robust economic growth, cyclical inflationary pressure has so far remained relatively moderate in the Netherlands. Underlying market inflation, which excludes volatile components (energy, fruit and vegetables) and more or less regulated prices (rent and consumption-related taxes), has been remarkably stable since April at around 1.5%. However, stronger inflationary pressures over the coming months cannot be ruled out, owing to the indirect inflationary effects of the rise in oil prices and the depreciation of the euro. Oil is a major raw material for manufacturing products, while other commodities are often paid for in dollars. The rising commodity prices initially squeeze profit margins but, with some lag, enterprises will pass on the higher production costs to end-product consumers. Furthermore, the sustained economic boom enables businesses to pass on a greater share of the cost increases in the price of their end products. European Commission surveys already show that Dutch enterprises expect to be able to charge higher prices.

Another important determinant of underlying inflation is wage growth, comprising contractual and non-contractual wage increases (see Box). In virtually all sectors, the increase under collective labour agreements was higher than in previous years. From 1995 to 1998, contractual wage growth expanded steadily from 1.4% to 3%. The effects of the Asian crisis brought this figure down to 2.6%, but it has rebounded this year to 3.5%. In view of the moderate upswing in labour productivity, the rise in unit labour costs is still moderate. However, contractual wage growth picked up in the course of the year to 4%, while non-contractual wage increases also went up by 1/4%. This makes the inflation prospects for 2001 less favourable.1

Table 2 Gross contributions to real GDP growth
Percentage points, GDP growth in percentage changes

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Private consumption 1.6 0.2 1.5 1.2
Corporate investment 0.9 0.8 0.7 0.7
Public spending 1.4 0.0 -0.3 -0.8
Stock build-up 0.1 -0.2 -0.6 0.7
Net exports 0.3 0.5
Gross domestic product 4.9 3.5 3.0 3.3

Source: Eurostat.

Chart 2 Rent increases and inflation in the Netherlands
Percentage changes on previous corresponding period

Rents
Maximum rent increase
Inflation in July


DNB / Quarterly Bulletin September 2000
Box Breakdown of non-contractual wage growth

Supplements to pay rises under collective labour agreements are becoming increasingly significant. Non-contractual wage growth went up by around ¾% this year, compared to ½% in 1999. Apart from statistical effects, non-contractual wage growth is made up of the so-called structural effect and wage drift.

The structural effect is that part of the average wage increase that results from changes in the composition of the working population. The determinants of the structural effect are: age, education, sex and the extent to which a person works part-time. For example older people and well-educated employees generally earn more than younger and unskilled workers, while women and part-timers have a relatively low salary. The growing proportion of women and part-timers in the working population has slightly depressed non-contractual wage growth. Age is the most important factor of the above components. Although older workers earn more than younger ones, Chart 1 shows that the pace of the growth in income declines with age. For example, in their first twenty working years especially, employees receive supplementary increments on top of contractual increases. Between 1990 and 1998, there was a particularly big increase in the number of employees in the 45-50 age group, so that non-contractual wage growth was tempered by the age structure over the past few years. This trend will continue in the near future: under pressure from the ageing of the population, the number of over-55s in the working population will expand rapidly, while there will be fewer 18 to 25 year olds because of the impending structural decline in the number of young employees (Chart 1).

Wage drift covers all kinds of extra allowances, such as compensation for irregular hours, shift work or exceptional working conditions, and individual non-contractual forms of remuneration such as bonuses, commissions, dividends and market-related allowances. Although growth in the amount of allowances and individual forms of remuneration has been accelerating in recent years, the macro-effect of wage drift is still moderate. For example wage drift accounted for only ¼ percentage point of non-contractual wage growth in 2000, whereas the structural effect was responsible for the remaining ½ percentage point. Under pressure from the tight labour market in recent years, employers have tended to supplement the contractual wage increase with incentive pay related to profit or performance.

Economic boom continues

Real GDP has risen sharply over the past year. Whereas the economy was still expanding by 3% at the beginning of last year, growth figures of more than 4% have been recorded for the past three quarters. This upswing was mainly driven by an upturn in corporate investment and exports (Table 2).

Real GDP grew by 4.1% in the second quarter of 2000, slightly less than in the first quarter because of the slower growth rate of household consumption. However, at this stage there are no clear signs of a structural weakening of growth in consumer spending, since the first-quarter figures are distorted upwards, partly because 2000 is a leap year. Second-quarter expansion remained broadly-based too. The growth rate of exports of goods and services rose further to around 10%, while investment growth maintained the rapid pace of the last two quarters. The level of both corporate and government investment was around 7% higher than a year earlier. Economic indicators point to continued buoyant economic activity over the coming months. The Nederlandsche Bank’s economic indicator reveals an upswing, while producer confidence is at a record level. With consumer confidence and the propensity to buy still higher than ever before,
there are as yet no signs of a slowdown in domestic spending.

The surge in output growth in the euro area will form an additional impulse to Dutch economic expansion over the next few months. With an export ratio of 60% of GDP, the Dutch economy largely depends on the external market. Economic conditions in the euro area especially are vital to the prospects for Dutch exporters because of the intensive trade links (accounting for 60% of exports). The euro area economy has recently picked up considerably, with real GDP growth rising to 3.4% in the first quarter. In contrast, the economy grew by only 2% a year earlier. The euro area also benefited from the upturn in world trade. Growth in euro area exports rose to over 10% in the first quarter of 2000, compared to barely 2% in the previous year. Domestic spending was the only area to lag slightly behind, with growth stabilising at 2.8% during the last quarters. However, signs for the second quarter suggest that domestic demand is picking up. An average growth of almost 4% was recorded for retail sales in the euro area during the first two months of the second quarter, considerably higher than the first-quarter growth figure of 2%. Given that end-products make up only a small share of Dutch exports, the growth in consumer spending in the euro area is not the only factor of interest to Dutch exporters. The Netherlands mainly exports commodities and semi-manufactures, which are subsequently either used in a production process, or processed further elsewhere in the euro area. This implies that output growth in the rest of the euro area is particularly important to the Netherlands.

Tight labour market causes constraints…

The prolonged economic boom is taking its toll on the Dutch labour market. The number of unfilled vacancies has gone up to more than 200,000 in the first quarter of 2000, the highest number ever recorded. Moreover, more and more enterprises are reporting production constraints due to a labour shortage. Some 9% of enterprises experienced such impediments to production in the second quarter, the highest percentage since the survey began in 1985 (Chart 4). Having risen slightly in the first quarter of this year, registered unemployment in the second quarter resumed the downward trend seen in the last few years. At 2.7% in July, the official unemployment rate in the Netherlands is now one of the lowest in the euro area. The drop in unemployment is concentrated mainly among jobseekers who have been out of work for more than one year; the long-term unemployed accounted for three-quarters of the decline over the past year. The stable level of short-term unemployment (less than one year) indicates that it largely coincides with frictional unemployment.
...but offers challenges too

Now that employers have virtually no pool of unemployed people to draw from, they will have to seek more creative solutions if the rapid pace of economic growth is to be sustained. At present, the Dutch economy has two comparative shortcomings. If these were alleviated, the labour shortage could potentially be resolved.

Firstly, there is still a large group in the Netherlands on the fringe of the labour market. The participation rate in the Netherlands is still well below that in, for example, the Scandinavian countries, the United Kingdom, and the United States. This indicates that, in principle, there is still a considerable potential labour supply. The low level of participation is not exclusive to the Netherlands but affects other European countries too. The EU summit in Lisbon in March 2000 acknowledged this problem, and the European Commission voiced its ambition to enlarge the active proportion of the working population.

In comparison to the aforementioned countries, the low participation of older workers is particularly noticeable. The rate of participation among the 55-65 age group in the Netherlands is 31%, considerably lower than in Norway, Sweden and the US, where 65%, 70% and 55% respectively of older workers are still employed. If the Netherlands managed to reduce the outflow of older workers from the labour process, it would give an impulse to the labour supply for the coming years.

A second potential source can be found in the – in international terms – large number of people in the Netherlands with an occupational disability, although 40% of these are over 55. Not only is there a relatively large inflow into the occupational disability insurance scheme in the Netherlands, still amounting to 100,000 people a year, the outflow into the labour market has been disappointing so far. Figures from the National Institute for Social Insurance show that in 1998 only 37% of the outflow of 95,000 people from the occupational disability insurance scheme followed on a restoration to health, significantly less than the 55% share recorded in 1994 and 1995.

Furthermore, the standard unemployment statistics only reflect the inactive labour supply to a limited extent. Apart from the unemployed working population, close on another 500,000 people in 1999 indicated their willingness to work for more than 12 hours a week. However, unlike the unemployed working population, this group cannot take up work in the short term and/or is not immediately available. This is generally caused by the family situation: the vast majority have partners who already work and usually have children to look after. Bringing this group into the labour process requires employers to respond to its needs by offering child care facilities, flexible working hours and teleworking. This group’s qualifications will not always match requirements, implying that some investment in retraining and further education is unavoidable.

Besides the further integration of the potential labour supply, the opportunities for productivity growth offered by the development of information and communication technology (ICT) form a second challenge. To the extent that a conclusion can be drawn, experience in the United States shows that investment in ICT especially can result in a spectacular acceleration in productivity growth. This explains why, since 1995, the tight labour market and the already high participation rate in the US have been attended by relatively moderate inflation. In contrast, Europe has so far shown no signs of a similar boost in productivity.

ICT investment in the US has long outpaced that in Europe. While the Netherlands can hold its own in European terms, it too lags well behind the US. The US annually invests sizeably more in hardware and software than the Netherlands: for example 26% of investments in the US in 1998 (excluding residential and commercial property) went into hardware and software, compared to 17% in the Netherlands. This partly accounts for the wider distribution of Internet use in the US, where 40% of the population used Internet in 1999, compared to 19% in the Netherlands. The higher costs of Internet in the Netherlands form another barrier in this respect. For 20 hours on the Internet, a Dutch person pays almost 40% more than an American.

**Eurosystem tightens monetary policy**

On 31 August, the Eurosystem raised its main refinancing rate by 25 basis points to 4.50%. This tightening was implemented against the backdrop of favourable economic conditions and good prospects for economic growth in the euro area. To support this expansion, price stability must be safeguarded for the medium range. Looking at the first pillar of monetary policy strategy, money supply growth still exceeds the 4.1% reference value, despite the gradual impact of the measures taken since November 1999. The growth trend of M3, which is one of the policy foci, was 5.8% in July. At the same time, the expansion of lending to the private sector by approximately 10% indicates that households and enterprises had a very positive view of financing...
terms and conditions in the euro area. Given the exu-
berant growth of economic activity, prolonging the
easy liquidity conditions would jeopardise price stabil-
ity. Indicators from the second pillar point the same
way. Contrary to expectations, the price of oil remained
high during the period under review at around USD 30
per barrel, while the euro depreciated a little more
against the dollar. Nevertheless, the latest data con-
firmed that economic activity in the euro area was pick-
ing up, while prospects remain extremely favourable.

The growth rate of bank lending to the private sec-
tor in the Netherlands slowed down to 14.1% in June.
This is the second consecutive month that credit
growth has levelled off, although it remains at a high
level. The slowdown can be fully ascribed to mortgage
lending, whereas ‘other lending’ – mainly comprising
corporate lending – continues to accelerate rapidly
(Chart 5). This indicates that expectations of sustained
robust economic growth now bear more influence on
the demand for corporate lending than the higher inter-
est rates. An important consideration in this context is
that, from an historical perspective, interest rates are
still low. In contrast, against the background of the
steep rise in house prices over the past eighteen months,
mortgage lending shows a stronger response to the hike
in (mortgage) interest rates. With an increase of more
than 21%, the average house price in June too was far
higher than a year before. However, a number of quan-
titative indicators suggest that the sharpest price rises
in the housing market are over (Chart 6). The number
of houses sold in June was over 16% less than a year previ-
ously, while the average number of days that a house
was on the market increased from 36 in the second half
of 1999 to 44 in the first half of this year. Finally, the
number of newly-issued mortgage loans has been
falling sharply for some time, mainly reflecting the
huge drop in the number of mortgage replacements and
second mortgages, which are relatively sensitive to
interest rate fluctuations.

Debt reduction from a long-term perspective

Gross public debt as a percentage of GDP has fallen
sharply over the past few years. Whereas the debt ratio
in the mid-1990s was still around 80%, expectations are
that it will drop below the crucial 60% limit in 2000.
This is the first time that the Netherlands unreservedly
complies with the debt ratio requirement set in the
Maastricht Treaty in 1992. Reaching the 60% of GDP
mark is a good moment to look at the development of
the debt ratio from a long-term perspective. Along with
the debt ratio, Chart 7 shows a breakdown of four com-
ponents which are responsible for the change in the
debt ratio. Interest payments form the main debt-rais-
ing factor, annually pushing the debt ratio upwards by
around 5 percentage points. This is offset by two factors
that depress public debt: the effect of nominal GDP
growth (denominator effect) and the contribution of
net lending excluding interest payments (primary bal-
ance). Finally, financial transactions, such as granting
loans and selling public assets, also influence the debt ratio (Chart 7).

Having reached its lowest post-war level in 1977, the debt ratio doubled in the late 1970s and early 1980s to 80% of GDP, partly due to the serious recession. The primary balance in those years could not adequately compensate for the effect of the interest payments, leading to a self-reinforcing spiral. The rising debt ratio swelled the interest payments which in turn enlarged the debt ratio. This was somewhat counteracted by rising inflation during the late 1970s (high inflation reduced the real value of the debt), but higher nominal interest rates simultaneously raised interest payments, since new debt had to be issued at a high interest rate. The restoration of sound public finance got off to a difficult start in the early 1980s, a period characterised by multiple restructuring and cost-cutting operations. Nonetheless, these measures succeeded in bringing down the primary public deficit. Moreover, economic conditions in the late 1980s were favourable, and the primary balance swung from a deficit to a surplus in the early 1990s. Partly because of the adverse economic situation, the net result of these developments was merely a stabilisation of the deficit in the 1989-1993 period. The debt ratio did not actually begin to lessen until after 1994, thanks to the greater contribution of the primary balance and the improvement in economic growth. The deficit ratio was further reduced by a number of financial transactions such as the sale of a stake in KPN and the once-off profit transfer of NLF 3 billion from the Bank to central government. Driven by more structural factors, the pace of debt reduction accelerated after 1995. The primary balance rose steeply, while the vigorous economic expansion continued. The lower deficit ratio and lower interest rates also depressed the amount of interest payments. Since 1999, public sector lending has exceeded borrowing. The many years of efforts to bring the deficit ratio down to a more sustainable level are gradually being rewarded. The continuing favourable economic prospects offer an excellent opportunity to maintain the deficit ratio’s downward trend, providing a buffer for the costs of the ageing of the population in the long term.

1 See the article ‘Is the Dutch economy overheating?’ elsewhere in this Quarterly Bulletin.

Chart 7 Breakdown of debt ratio development in the Netherlands

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2000: Including proceeds from sales of UTMS licences.
Preparations for the introduction of euro notes and coins on 1 January 2001 are well under way. So is the production of the notes and coins, for which strict quality standards are observed. The Bank is closely monitoring the activities required for the introduction of the euro in retail payments on 1 January 2002. Simultaneously, the banking system, also at the instigation of the European Commission and the ECB, is working on systems that facilitate cross-border retail payments. In the securities world, too, obstacles are being levelled. Initiatives towards mergers of national stock exchanges will lead to further integration of securities trade and transaction settlement. A secure execution of the latter back-office activities is crucial for financial stability, because the systems are sources of liquidity and credit problems. In consultation with the parties involved, the Bank is developing a structure that permits oversight of settlements systems used by the Dutch-Belgian-French stock exchange combination Euronext.

Preparations for the introduction of euro notes and coins

Euro notes and coins
In slightly over a year, i.e. September 2001, the initial supply of euro notes should be ready to replace the banknote circulation in the entire euro area. The supply to be produced in the last three months of 2001 is earmarked to form the logistical reserves of the participating central banks. The ECB has resolved that the supply of euro banknotes required for 2002 should be annually recalculated by the central banks of the euro area. The latest forecast suggests that for replacement of the circulation of the national currencies and for the build-up of logistical reserves of the central banks, some 1.45 billion euro notes will be required, about 1.5 billion notes in excess of what was calculated in 1999. This increase is attributable, among others, to Greece joining the euro system as of 1 January 2001 (see Box). Other factors necessitating adjustment of the forecast are the higher-than-expected circulation growth, the intended introduction of the euro in Eastern Europe, and the slow acceptance of the chip card. In 2002, an estimated 600 million euro notes will be required for the Netherlands. If the aforesaid factors become manifest, the definitive number of euro notes for the initial supply may be adjusted upwards to 655 million. Meanwhile, the production of the Dutch euro notes is making headway. The production of 200-euro, 100-euro and 50-euro notes has been completed and that of 5-euro notes is in full swing. Some of the euro notes printed are yet to undergo a final quality check before being packed and stored. The final quality check, for which every single euro note will be inspected separately, forms part of a comprehensive set of measures adopted by the ECB to guarantee that both the visual and the technical (machine-readable) properties of all euro notes to be issued in the euro area are identical.

Preparation for the conversion in the Netherlands
To ease the process of conversion scheduled for early 2001 small packages of euro notes will be compiled, consisting of twenty notes of the three lowest euro denominations. These packages will be used by banks as an easy method to supply small and medium-sized enterprises with sufficient change in the first few weeks of the conversion process. Besides banknotes with the lowest denominations, in the beginning of 2002 the need for small change will primarily consist of coins. Almost half of the 2.8 billion Dutch euro coins required...
for 2002 have been minted now and are stored in the Bank’s storage and distribution centre (odc). This year yet, odc will begin to process part of these supplies into standard packages designed for stocking an estimated 200,000 institutions engaging in cash transactions (shops, restaurants, hotels, etc.) that make no use of the services of a carrier of valuables. For this fine-distribution service, which is provided free of charge for institutions engaging in cash transactions, the Bank has concluded contracts with tpg (Int Post Group) and hcn (Hét Callcenter Netwerk). Retail businesses must pass on their orders to a call centre set up to this end by hcn, upon which 55 regional distribution networks of tpg will see to the delivery of the euro coins and collection of the guilder coins. For this operation about 55 large lorries and some 1000 smaller vans have been set aside. Institutions engaging in cash transactions may choose from two types of standard packages: Package A, which represents a value of EUR 15, containing ten rolls of 1-cent and 2-cent coins, and Package B, which comes with 2 rolls containing the other euro coins, i.e. of 5, 10, 20 and 50 cents and EUR 1 and 2. Together, the packages number 12 rolls with a total value of EUR 239. To calculate how many coins they need, retailers will be handed rules of thumbs that the Bank will draw up using the ‘euro small change model’ it has developed in co-operation with the Raad Nederlandse Detailhandel (a council for the Dutch retail sector). Institutions engaging in cash transactions and using the services of carriers of valuables on a regular basis will receive euro notes and coins in the usual manner, i.e. through their carriers of valuables. This applies for 6,000 bank branches and 18,800 large shops, restaurants, hotels, etc.

The debiting of euros delivered in 2001
The Board of Governors of the ecb has adopted 1 September 2001 as the date on which the stocking of banks with euro notes and coins will commence. On that date, also retail and slot machine businesses and carriers of valuables will start to be supplied with euro cash. In the Netherlands, however, banks will need to wait until 1 December 2001, and institutions engaging in cash transactions that make use of the services of carriers of valuables until as late as 15 December 2001. Institutions engaging in cash transactions not making use of these services will need to turn to their banks for initial supplies. To meet their need for euro coins, they may make use of the aforesaid fine-distribution system. The financial settlement entailed by all the cash supplies delivered before 1 January 2002 has been entrusted to the banks. Recently, the ecb resolved that, for the euro coins and notes stocked in 2001, retailers will be debited after 1 January 2002, in three equal instalments, viz. one-third on 2 January 2002, one-third on 23 January 2002 and the remainder on 30 January 2002. This provision has been agreed in principle for both euro notes and euro coins. As the Ministries of Finance of the twelve countries of the euro area are responsible for the issue of the coins, this regulation cannot be applied to the euro coins without their prior approval.

Conversion of euro notes from the euro area
Since 1 January 1999 the national central banks in the euro area have converted banknotes issued by other national central banks, free of charge. This means that the Bank affords the public the opportunity to convert banknotes from other countries in the euro area into guilder notes at no charge at the Bank’s branches in Amsterdam, Eindhoven, Hoogeveen and Wassenaar. To meet the wish to be able to use this free facility also during the conversion period early in 2002, the ecb recently decided to extend the operation of these measures – which initially would cease at 31 December 2001 – up to and including 31 March 2002. Pursuant to this decision, the Bank will continue its free conversion facility at the four branches specified above. This means that the public may convert national notes from other euro countries into euros (up to a maximum of EUR 2,500 per transaction) at the Bank, free of charge, from 1 January to 1 April 2002. In accordance with the principles of the National Forum for the introduction of the euro, in the said period, banknotes from other euro countries will also still be convertible into euros at the Dutch commercial banks, under the same conditions as obtained in the period from 1999 through 2002.

Euro Second Phase Project
After the introduction of the non-cash euro in the financial markets on 1 January 1999, that of euro notes and coins will follow on 1 January 2002, as of which date also mass non-cash payments will be settled in euro. The Bank has begun to monitor the preparations involved. The so-termed Euro Second Phase Project, which is designed to spot and communicate any risks that these projects carry for institutions that are part of the core financial infrastructure of the Netherlands. This infrastructure comprises the financial institutions that are of such crucial importance that any serious obstacle in their payment systems would jeopardise the stability of the country’s entire payment infrastructure.
To assess the scope and weight of the project, status reports are being drawn up of the euro projects at the institutions making up the said core infrastructure. Practically all of the institutions visited expect to finalise the project (including tests) by mid-2001. The Netherlands Bankers’ Association has fixed 1 July 2001 as target date for the project’s completion. To this end, the institutions have set up project organisations similar to those formed for the introduction of the euro in the financial markets and for the millennium project.

Payment efficiency in the euro area

Promoting unhampered financial traffic in the euro area is among the core tasks of the Eurosystem. While, through TARGET, the central banks themselves take a direct and active role in furthering the smooth effectuation of interbank cross-border payments, most of these institutions are not directly operationally involved in cross-border retail payments executed by clients of commercial banks. The ECB and the national central banks seek to improve the efficiency of these payments through recommendations to and consultations with the European commercial banks. Involving relatively small sums, cross-border retail payments are far more expensive and time-consuming to execute than domestic payments. The ECB and also the European Commission envisage as the ideal situation a payment services market that is geared to the internal market for goods, services, labour and capital, putting an end to the differences between domestic and cross-border payments by consumers and enterprises. It takes more than the introduction of a single legal currency to attain this goal.

At the moment, the euro area is still marked by large internal differences in standardisation, automation and organisations of payment traffic. Unlike domestic transfers, cross-border transfers still cannot be processed using the central clearing and settlement system that permits banks to settle only net amounts with each other after having cancelled out the amounts to be paid and received against each other. Neither are economies of scale an easily feasible option, as the volume of the cross-border retail payments in the euro area averages one half of a percent of the domestic volume. Moreover, there often is the additional cost factor presented by the mandatory balance of payment report, in which banks and their customers report transactions exceeding a given threshold amount. Now that the introduction of euro notes and coins is rapidly advancing, the European Central Bank as well as the European Commission are stepping up pressure on the banks to make sure that the efficiency of cross-border retail payments will be materially improved by 2002, when payments and calculations will be executed in euros throughout the entire area.

Eurosystem in consultation with banks

Last year, the Eurosystem brought out a report containing seven recommendations towards enhancing the efficiency of retail payments in the euro area. These recommendations notably relate to standardisation, the fixing or rates and the time it should take for run-of-the-mill transfers to be processed. Using this report as a guideline, the Payment and Settlement Systems Committee of the ECB has since then consulted with the European banks on a regular basis about the recommendations and the banks’ efforts to improve their services in cross-border retail payment traffic. Apart from the necessary comments, the banks have responded positively to the recommendations.

Before the running year is over, an international bank account number, or IBAN, will be introduced in a great many countries, to enhance the recognisability of the origin and destination of payment orders in the various automated payment systems. To curtail the runtime and minimise the risk of mistakes, this year the bank will also introduce new standards for message traffic enabling fully automated processing of the entire payment chain from the ordering client to the beneficiary (‘straight-through processing’). These messages might be suitable for use in a payment system of the Euro Banking Association that will become operational this autumn, permitting fully automated high-speed processing of cross-border payments on a net basis and at low costs. Furthermore, a standard procedure for cross-border payment orders is in the making, as well as a European variety of an inpayment transfer form. European banks are also looking into the possibility of making the most efficient payment instrument of all, i.e. the pan-European direct debit mandate, suitable for cross-border use across Europe. While positive about the progress thus made, the Eurosystem will continue to exert pressure in order to make the banks come up within the measure of one year with products like a standard payment instrument with one common name for cross-border transfers. This fall, the Payment and Settlement Systems Committee will report to the Board of Governors of the ECB about the progress made by the banks in this respect.
Dutch banks active

The need for initiatives is underscored by a survey published by the European Commission in May this year. Not only does the Commission conclude in its survey that, compared to domestic payments, cross-border payments are still far more expensive as well as having a much longer run-time, it also establishes that on these points the differences between euro area banks surveyed are still too divergent.

Given the circumstances, Dutch banks come out relatively well from this survey. For an outgoing payment the surveyed banks charge EUR 8.7 on average, well below the overall average of EUR 15.5. The average run-time for the Dutch banks surveyed came out at 3 days, compared to the European average of 3.41 days. The favourable outcome is the result of earlier product innovations designed to improve cross-border transfers and of the far-reaching standardisation and automation that are typical of the organisation of the Dutch payments system. There even are cross-border payments that are processed centrally by standardised procedures (‘mass payments’, incoming payments up to EUR 12,500). Even so, the Dutch banks continue to make individual and concerted efforts towards enhancing the efficiency of cross-border retail payments further. In response to the ECB report, the Dutch banks have inventoried the existing bottlenecks along with the solutions they feel contribute best to realisation of the recommended efficiency. They anticipate a substantial reduction of the costs of cross-border transfers, notably when payment orders are processed automatically using IBAN.

With the implementation of IBAN, which process is expected to be completed by the end of 2001, the Dutch banks are currently at the forefront. For this implementation to be successful, it is essential that Dutch and foreign enterprises state their IBANs on their stationery and invoices and that foreign banks are equipped to process IBANs. The banks also point out the efficiency gains that uniformisation and adjustment of balance of payment reporting may yield. To help cut the costs, the Nederlandsche Bank has resolved to raise the threshold amount for the mandatory reporting of incoming payments from EUR 12,500 to EUR 50,000 as of 1 July 2000.

The oversight task of central banks and ECB

In June, the ECB explained how the ESCB has divided its duties within the scope of the oversight of interbank payment systems among the ECB and the national central banks. The exercise of oversight ensures that payments are effected smoothly. This is relevant for a number of reasons. For society at large it holds that a well-operating payment system is essential for the economy to run well, for the public’s confidence in the non-cash payments system to be retained, and, in the case of central banks, for the unhampered implementation of the monetary policy. Consequently, the 1998 Bank Act and the Articles of Association of the ECB and the ECB explicitly assigned the Nederlandsche Bank the task of promoting the smooth operation of the payment system.

This task was elaborated on the assumption that the nature of a payment system determines to what extent oversight is a joint responsibility of the ECB or a primary responsibility of the national central banks involved. It is underlain by the principle that for systems that inherently are the most likely to obstruct the economy or monetary policy if anything should go amiss, as well as for systems that might disturb the competitive relationships or have a cross-border functionality, the Board of Governors of the ECB adopts the oversight policy for the entire system. In reality, these are the systems by which the largest amounts are processed. Complementary to this responsibility, the national central banks are responsible for formulating the oversight policy in respect of the other systems, which are usually intended for the settlement of retail payments. In performing these duties, the NCBS and the ECB will keep each other posted on their activities.

Exercising oversight is a duty entrusted to the national central banks with regard to all interbank payment systems in their countries. The system coming under this oversight in the Netherlands is Interpay (so-called ‘in-house’ payment systems of banks are monitored within the scope of the Bank’s role as supervisor of financial institutions). Only in an exceptional case, i.e. when a payment system has a much broader scope of action than the country in which it is operated, the Board of Governors of the ECB may determine that the oversight required should be exercised by the ECB. So far, only the Euro 1 system of the Euro Banking Association has for this reason been subjected to ECB oversight.

Where the statutory powers of the ECB/ESCBB only leave scope for oversight of payment systems, complementary to that, national central banks may also be entrusted with oversight of securities settlement systems. Such is the case for the Nederlandsche Bank.
Developments in securities transactions

Stock exchange mergers

Announcements by European stock exchanges of impending formal co-operation with each other present a new step in a long-term process toward greater efficiency of securities transactions in Europe. The process of integration, which is being furthered by technological developments, globalisation and intensified competition, gathered momentum with the introduction of the euro on 1 January 1999. This event prompted initiatives to combine the trading systems and the electronic networks as well as bringing the divergent market practices and contract further into line with each other. To be able to continue to structure this process of integration from a European perspective, a committee of eminent persons was formed, chaired by Alexandre Lamfalussy. In December 2000, this committee will report to the Ecofin Council on the implementation of European regulations in national legislation and submit proposals for reconciling the various regulations and forms of co-operation of the various regulatory authorities.

In pursuit of cost reduction and greater efficiency, the market is committed to ongoing integration of trading systems, with an emphasis on securities transaction settlement systems. Major commercial banks would like to see one European platform for the administrative settlement of securities transactions and one central counterparty that guarantees timely delivery of securities and funds. After all, the fact that the administrative costs of settlement in Europe are considerably higher than in the United States is due to the multitude of clearing authorities in Europe. While being favourably disposed towards consolidation, the existing institutions are retrained by regulations, which differ from one country to another. For that matter, it is interesting to note within this scope that the majority of the large banks are involved in more than one initiative. The following paragraphs deal with the three recently announced mergers of stock exchanges that are beginning to become concrete: Euronext, iX and Virt-x.

The stock exchanges and derivatives exchanges of Amsterdam, Paris and Brussels will each bring their activities into Euronext, which, officially, is still to be founded. A holding company, Euronext will become a statutory two-tier company under Netherlands law, having its registered office in Amsterdam. Trading will cover all security types listed at Euronext and be executed in euros via one technical platform (nsc) at the stock exchanges of Amsterdam, Brussels and Paris. The securities will be cleared centrally, i.e. via the French-based Clearnet sa, which has branches in Amsterdam, Paris and Brussels. Payments may be settled in central bank money via the three national real-time gross settlement systems of the central banks involved, which are interlinked through TARGET the payment system of the European System of Central Banks. The Euronext organisation will be ready to start on 1 October 2000.

The merger between the London Stock Exchange and the Deutsche Börse into iX-international exchanges, which is expected to be officially completed this autumn, still requires the approval of 75% of the shareholders of both the English and the German merger partners. The principal characteristics of the merger, as known at this moment, are that iX will be situated in London and come under the supervision of the British Financial Services Authority (fsa). iX comprises a pan-European market for blue chips (the shares of listed companies with the highest market capitalisation) under British supervision and a Frankfurt-based market for technology shares under German supervision. iX does not have a central clearing and settlement path, as this was not included in the merger. Therefore, iX will for the time being continue to make use of both the German Clearstream and the British Crestco.

The Swiss stock exchange (swx) and the British Tradepoint (an electronic stock exchange of eleven commercial banks and portfolio managers in London) propose to set up Virt-x in the first quarter of 2001. Virt-x, which will have its registered office in London and, consequently, come under the supervision of the fsa, will initially specialise in world-wide trading in pan-European blue chips. Trading in securities of 230 European top-ranking companies, begun by Tradepoint, will be combined with trading in securities of thirty companies listed in the Swiss smi index. At the request of the market, Virt-x will extend its product range. The mid-cap and small-cap shares and bonds listed at the swx stock exchange will not be traded via Virt-x, but will continue to be traded at the swx stock exchange. Tradepoint will continue to offer trading uk mid-cap and small-cap shares. Trading via Virt-x will be centralised in the tsn system, at the Swiss stock exchange. Clearing will be effected via the London Clearing House (lcch). Settlement will take place either via one of the tsn systems (association of the Swiss SegaInterSettle – sis and the British Crestco) or via Euroclear, as desired.

Note of the Editor

This text reflects the position as at 15 September 2000, when the Dutch-language version of the Bulletin was published.
Each of the three initiatives provides for a joint trading platform that is accessible from the participating countries. In addition to that facility, Euronext and Virt-x intend to concentrate clearing at Clearnet SA and ISCH, respectively. As said above, the plans for the merger into iX do not provide for clearing and settlement. Only Euronext also has one settlement platform at its disposal (Table 1).

Euronext will continue to make use of existing systems. This means that investment made in the past will for the time being retain its value and that the costs for users will largely be confined to the expenses entailed by interfacing the systems. Unlike iX and Virt-x, Euronext operates in one language (English) and one currency (euro). The transition to the new computer systems (Xetra) renders the merger for iX relatively expensive. While both Euronext and iX will have to comply with regulations in various countries, Virt-x will entirely operate from one basis and be regulated by the FSA. Having succeeded in setting up a fully integrated electronic processing path (for trading, clearing and settlement), Virt-x has cut the handling expenses of share transactions drastically to a level similar to the costs level obtaining in the United States. As said above, in doing so, Virt-x has adequately responded to the market’s call for greater flexibility to enhance the efficiency of cross-border trading and cut settlement costs.

Consequences of oversight

Securities settlement systems are part of the financial system. Within the scope of its duty to maintain the stability of the financial system, the Bank exercises oversight of the securities settlement systems in the Netherlands in co-operation with the Securities Board of the Netherlands (STE). This oversight primarily focuses on system risk control. A system risk is the risk of a market party failing to meet its obligations (in time) and, thus, causing liquidity and credit problems that affect the entire financial system.

The oversight presently exercised concerns the securities settlement systems of the stock exchange organisations in the Netherlands, the Amsterdam Exchanges. On the basis of a number of minimum conditions, reflecting the so-called Lamfalussy standards, the set-up of and (proposed) changes in the clearing and settlement systems are tested. The aspects examined include the adequacy of the risk control policy pursued, the legal basis, the operational reliability, the admission criteria for potential participants and the transparency of tasks, while also the financial bases of the clearing organisations involved are assessed. Supplementary to the said testing standards, the ‘core principles’ to be observed in the oversight of securities settlement systems are discussed on an international levels. The meetings held within this scope are prepared by a working group consisting of representatives of the crss (central banks) and the rosco (securities settlement oversight authorities).

Now still confined to securities settlement on a national level, the oversight will change with the advent of Euronext. After the integration of clearing and settlement activities – now still taking place on a national level at various stock exchanges, i.e. in the Netherlands, France and Belgium – the oversight will acquire an international character. On 1 January 2001, the legal merger between the present national clearing institutions (incl. AEX-Optieclearing, AEX-Effectenclearing and the Belgian BXS Clearing) and the French Clearnet SA will become official. As of that date, Clearnet SA will act as central counterparty of the Clearing Members involved in the merged stock exchange. Clearnet SA is a French-based banking institution which, consequently, comes under the prudential supervision of the French banking supervisor. One of the oversight-related aspects relevant in this situation is the legal ground of the rights and obligations involved. Trading will take place in the Netherlands, Belgium and France and be subject to the respective national laws, whereas the clearing for these three trading platforms will be executed centrally and in accordance with French legislation. This complexity requires careful interpretation and application of the legal instruments.

Also the settlement activities of the new Euronext organisation will be centralised. It is intended to merge the various ‘Central Securities Depositories’ (in the Netherlands: Necigef) stepwise into the Brussels-based Euroclear. At the end of 2001, there will be one ‘single settlement’ system (Euroclear) for securities management, enabling financial settlement with money from both central banks and commercial banks. Also having a bank status, Euroclear will come under the prudential supervision of the Belgian supervisor. Here, too, consultations about oversight-related aspects will be necessary.

Concentration of the aforesaid activities sets specific, sometimes stricter requirements for, e.g., admission or the risk management to be conducted. The cross-border character of the organisation calls for harmonisation of the oversight criteria. Already, consultations are being held with supervisors and overseers in the countries concerned about the way in which oversight of settlement systems with and international character should be exercised, for the continuity of the system as
a whole should also be guaranteed for cross-border payments. These consultations will also be directed at the development of uniform testing standards for cross-border payment systems. These may be formed by the aforementioned standards, but also by the ‘core principles’ for oversight of securities settlement systems. In addition, the talks should result in agreements about the necessary co-operation between the various overseers to achieve maximum efficiency.

Services for the aex
To ensure a smooth operation of payments and securities transactions, since 10 July 2000 the Bank has acted as the so-called settlement bank of aex-Effectenclearing, a task it has performed for aex-Effectenclearing since 1 March 1999. Before that time, the role of settlement bank was fulfilled by one clearing member (KasAssociatie n.v.) in behalf of all clearing members (clearing members are commercial banks). The transition of this function to the Bank is in line with the international developments in this field. The aex-Effectenclearing is the clearing institution for stock exchange transactions in options and futures. Acting as central counterparty, the clearing institute guarantees the clearing members concerned that these transactions will actually be settled. As of 10 July 2000, financial settlements are effected in the books of the Bank. In the case of derivatives, securities settlement does not come into play. The Belgian and French merger partners of aex within Euronext already settle options and futures in central bank money. aex/Euronext intend to have settlement in money henceforth take place via the central banks concerned.

For reasons of risk management, a bank must provide security to the aex by way of collateral. Since November 1999, the Bank has managed this collateral in behalf of aex-Effectenclearing. As of 30 September 2000, the Bank will also be entrusted with the management of collateral for aex-Optieclearing. The clearing members already hold a ‘pool’ of securities with the Bank with a view to monetary transactions and payments. By concentrating collateral for various purposes with one institution, the banks can make more efficient use of collateral. It is not clear yet to what extent the management of securities within the scope of Euronext lends itself for application in other countries. This will be looked into on an international level in co-operation with the parties concerned. aex and the banks have indicated that they are satisfied with this efficient form of collateral management in the Netherlands and that they wish to retain at least the same service level.

In March 1996, the Trade-for-Trade facility was introduced, providing for financial settlement via the Bank. This facility processes transactions in securities deposited with Necigef, conducted on a stock exchange or otherwise (wholesale), on a real time basis per order (gross) with settlement being effected through the 10P system of the Bank. The interface between the automated systems of Necigef and those of the Bank guarantees ‘delivery versus payment’ or dvp. The current facility, which only operates on a national level, needs adjusting to permit cross-border use with the French and Belgian merger partners.

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**Table 1  Survey of announced mergers of stock exchanges**

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<td>Euronext</td>
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Developments in banking

Banks’ profitability
In the first half of the year, the banks’ profits underwent another propitious development under the influence of the favourable cyclical conditions (inter)nationally, as evidenced by a semi-annual survey among a representative group of eight banks. In those six months, their gross profits (the difference between earnings and expenses) were 16% up on the same period in 1999. Their net interest earnings expanded by nearly 7%, while the increase in their other earnings, which include commission and profits from financial transactions, was considerable at 35%. On balance, the banks’ total earnings increased 19%. On average, their expenses rose relatively faster, albeit that the degree to which the cost increases were being contained differed, especially among the large banks.

The positive external climate also manifested itself in the continuing decrease of the provisions for loan losses. 30% less was added to the provisions for changes in the value of domestic and foreign receivables, while country risk provisions were even reduced. The banks did, however, make extra transfers to the fund for general banking risks, but these additions were relatively limited. On balance, the gross operating results of the institutions concerned increased by nearly 24%, while their net profits were ultimately 20% up. In their forecasts for the rest of the year, the banks foresee continuation of these favourable developments and a 25% increase in their net profits.

Corporate lending: shifts in banks’ acceptance criteria
The outcome of the study of bank lending in the period 1994-99, published earlier in the year, prompted the Bank to undertake several follow-up activities. One was a more detailed analysis of the shift in corporate lending, with banks now analysing their debtors’ financial key figures rather than demanding collateral. In this context, the importance of analysing balance sheets and profit and loss accounts has furthermore been replaced by assessment of expected future cash flows. This is not a phenomenon of the past few years; it has been a gradual process which has taken all of two decades. In addition, the shift towards a cash flow approach has not manifested itself in all market segments at the same pace. Lending to large multinational corporations is rarely collateralised nowadays. Loans to these multinational companies are often provided by bank syndicates, so that the risks are spread. In the case of longer-term (medium-sized to) large loans to major businesses, traditional collateral has often been replaced by a system whereby no collateral is required at the outset; however, the loan contract contains a clause to the effect that if a certain financial ratio is exceeded, collateral is as yet demanded by the bank. The advantage of this system is that it compels banks to be more alert, because they have to assess their corporate debtors on a regular basis. Within the medium-sized to small business sector, however, traditional collateral is still much in use.

The shift in acceptance criteria is accounted for by several factors. To begin with, international and especially American developments in respect of financial accounting, which have come to play a greater role in the Netherlands, too, place greater emphasis on cash flows. The second factor is increased competition. The banks reaction has been not so much competing in terms of pricing, as in terms of the quality of financial constructions tailored to customer wishes. Moreover, large corporate customers have more than one bank, and are increasingly able to compare what is on offer. It must furthermore be remembered that lending usually involves a mix of factors. The greater the risk involved in a loan, the more security banks demand.

Provided it is done properly, the shift towards a cash flow approach is a positive development. Such an approach requires that a loan decision be based on consideration of all circumstances surrounding that loan. It compels banks notably to make a proper assessment of the customer’s debt servicing capacity instead of relying solely on collateral. Modern information technology gives banks access to all relevant information both when granting the loan and when checking on it later. It should be remembered though that banks really need to mobilise the resources required to arrive at a proper loan assessment.

International and national consultations on banking supervision

Economic and Financial Committee – Report on Financial Stability
During the informal Ecofin meeting held in Turkey in September 1999, it was decided that the Economic and Financial Committee would be asked to study whether the existing organisational structure in the European Union offers sufficient guarantees for financial stability, given the changes taking place in the sector. A working group was set up to this end, chaired by Henk Brouwer, Executive Director of the Nederlandsche
Bank. This working group recently published the Report on Financial Stability, which analyses various trends in the financial sector, such as internationalisation, consolidation and the despecialisation taking place among financial institutions and sectors, and the implications of these developments for the existing supervisory structure. The report concludes that the institutional structure of supervision in Europe does not need to be changed, but that its practical functioning needs improvement, and puts forward four recommendations. To begin with, international cross-sectoral cooperation among supervisors should be stepped up. Secondly, the exchange of information about market developments and the largest financial institutions should become a core element in the cooperation among supervisors, as well as between supervisors and central banks. In addition, cooperation between supervisors and central banks should be intensified. Finally, efforts should be made to achieve convergence of the manner in which the various EU countries exercise supervision. In summary, these recommendations entail intensification of the cooperation already existing between the various national authorities responsible for financial stability and supervision.

**Bill on the updating and harmonisation of financial supervisory laws**

In the spring, the Ministry of Finance laid a draft Bill before the Council of Financial Regulators which provides for the updating and harmonisation of various parts of the financial supervisory laws. The Bill serves to implement the intentions formulated in the parliamentary paper on the integrity of the financial sector. It places greater emphasis on supervision on integrity as part of the various supervisory laws. Fostering and maintaining the integrity of management will come to play an explicit role in both the Act on the Supervision of the Credit System and the Act on the Supervision of Investment Institutions. Institutions which are insufficiently able to guarantee such integrity may be refused authorisation or their authorisation may be withdrawn. It will also become possible to draw up rules on integrity in respect of supervised institutions. Furthermore, the secrecy provisions will come to include an exception for the publication of the names of those who violate the law; the scope and possibility of providing the authorities with information will be clarified. Expectations are that the Bill will be presented to the Council of State for advice before the end of the year.

**Council of Financial Regulators – supervising groups**

The Council of Financial Regulators, made up of the Nederlandsche Bank, the Securities Board of the Netherlands and the Insurance Board working together on cross-sectoral issues, has formulated proposals for supplementary supervision on financial conglomerates. Over the past few years, banks, insurance companies and securities institutions have been merging into financial conglomerates on a considerable scale. The risks run by a conglomerate where different kinds of activities are integrated, are usually more complex than those inherent in an individual bank, insurance company or securities institution. In addition, they are harder to identify because activities within a conglomerate may shift, and because they may be captained by a holding company which is not subject to supervision. In order to be able to exercise effective supervision on the risks run by a conglomerate, it has been recommended that the scope of supervision and supervisory instruments be extended. In this context, the Council of Financial Regulators drew up an outline paper containing recommendations for updating supervisory instruments and adjustment of the Protocol. On the basis of this paper, intensive consultations were held with the Ministry of Finance. A paper on this subject was subsequently presented to the Second Chamber of Parliament by the Minister. It contained a model for supplementary supervision on conglomerates; the supervision envisaged is risk-oriented and addresses the group as a whole, not just individual banks, insurance companies or securities institutions. This means that the existing sectoral supervision of banks, insurance companies and securities institutions is to be supplemented with a more integral, group-wide approach to risk.

The Council has held several consultations with the Netherlands Bankers’ Association and the Association of Insurance Companies about the concrete shape of various instruments for supervising groups. One of the results of these consultations is that a study will be made – in part by external agencies – in conjunction with these organisations on the capital adequacy of financial conglomerates on the basis of risk profiles.

**Revision liquidity directives**

The Bank and the Netherlands Bankers’ Association have been holding technical consultations since October 1999 about revision of the liquidity directives for banks. These consultations have yielded a draft memorandum which forms the basis for the revision. The revision entails that banks’ liquidity positions will be tested group-wide; at present, the test includes only
the domestic position. Foreign-based subsidiaries, which are subject to local supervision considered adequate by the Bank, and which are largely independent of their parent institution for financing, may be exempted from the new reporting requirements. The test period will be reduced to a month, and off-balance-sheet items will also be included in the assessment. Over the next few months, the banks will be making trial calculations on the basis of this new framework. Where necessary, adjustments will subsequently be made. The aim is to arrive at definitive new directives by the end of this year.

Developments in behavioural supervision

Consumer affairs
In July, the Second Chamber of Parliament was informed by the Minister of Finance and the Under-Minister of Economic Affairs about the intended amendment of the Consumer Credit Act. It is proposed to make this Act the responsibility of the Minister of Finance, and to delegate implementation of surveillance in respect of compliance to the Bank. The revision of the Consumer Credit Act will commence this autumn with the preparations for the amendment process.

Fines and penal sums
Effective 1 January 2000, the Bank has the power to

Table 1  Entries in the register under the Act on the Supervision of the Credit System
Numbers at end of period

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<td>Sub-section 2 Central credit institutions</td>
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<td>481</td>
<td>444</td>
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<td>423</td>
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<td>Sub-section 4 Security credit institutions</td>
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<td>18</td>
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<td>Sub-section 5 Savings banks</td>
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<tr>
<td>Branches of credit institutions established in non-EU countries</td>
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<td>12</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Branches of credit institutions established in EU countries</td>
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<td>12</td>
<td>11</td>
<td>15</td>
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<tr>
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<td>EU credit institutions offering cross-border services in the Netherlands</td>
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<td>146</td>
<td>170</td>
<td>194</td>
<td>211</td>
<td>214</td>
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<td><strong>Sections V, VI and VII</strong></td>
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<td>Other financial institutions</td>
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<td>1</td>
<td>2</td>
<td>2</td>
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<tr>
<td><strong>Total</strong></td>
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<td>829</td>
<td>822</td>
<td>802</td>
<td>814</td>
<td>808</td>
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</table>
impose an administrative fine or give a cease and desist order in the event of infringement of a number of specific provisions in supervisory legislation and the External Financial Relations Act, and to publicise this measure. These new powers provide for refinement of the instruments, they are not the ultimate supervisory instrument. More stringent measures are the withdrawal of an authorisation or, depending on the circumstances, giving a direction, giving a notification or appointing a trustee. The Bank can also use its new powers in respect of bodies which are not subject to its supervision. The new powers thus constitute a useful addition notably in respect of these bodies, as they enable the Bank to enforce compliance with, for instance, certain market-access rules contained in supervisory legislation.

The Bank is free to impose an administrative fine or to give a cease and desist order and to publicise this measure. It used its new power for the first time in July 2000. A non-supervised enterprise was given a cease and desist order because it had failed to provide information within the framework of the Act on the Supervision of Investment Institutions. In this case, the Bank also exercised its power to publicise this measure.

Table 2 Entries in the register under the Act on the Supervision of Investment Institutions

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<tr>
<td><strong>Section I</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Investment institutions not having UCITS status¹</td>
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<td>262</td>
<td>292</td>
<td>320</td>
<td>346</td>
<td>357</td>
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<td><strong>Section II</strong></td>
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<tr>
<td>UCITS having their registered office in the Netherlands</td>
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<td>10</td>
<td>12</td>
<td>16</td>
<td>17</td>
<td>17</td>
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<tr>
<td><strong>Section III</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCITS having their registered office in another EU Member State</td>
<td>71</td>
<td>90</td>
<td>97</td>
<td>110</td>
<td>115</td>
<td>121</td>
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<td></td>
<td>324</td>
<td>362</td>
<td>401</td>
<td>446</td>
<td>478</td>
<td>495</td>
</tr>
</tbody>
</table>

Explanatory note: An investment institution which has been granted an authorisation is entered in a register maintained by the Bank (section 18 of the Act on the Supervision of Investment Institutions). If the authorisation is subject to limitations and/or instructions, these are listed in the register. The register is open to the public and can be found on the Bank’s website.

¹ A UCITS is ‘an institution for collective investment in transferable securities’ within the meaning of the EU UCITS Directive. UCITS are subject to extra requirements with regard to investments. The advantage of the UCITS status is that, having obtained authorisation in the Member State where it has its registered office, the institution concerned may, under the home country control principle, operate throughout the European market.
In the second quarter of 2000, the following changes took place in this register (Table 1). In Section 1, Sub-section 1, the entries of MeesPierson n.v., Bank voor Zeeland n.v. and Lentjes & Drossaerts n.v. were struck out. Four new entries were added to this Sub-section, viz. Delta Lloyd Nuts Ohra Bankengroep n.v., DSB Bank n.v., Rabo Securities Asia b.v. and sns Bank Katwijk n.v. As a result of mergers, six Rabobanks have ceased to exist (Sub-section 3). Thirteen affiliated banks were incorporated into Fortis and the Stichting Bonds-spaarbank Katwijk has become an organisational entity within sns Bank (Sub-section 4). A new branch office of Citibank International plc has been entered in Section iii, and the number of eu institutions which may perform cross-border services in the Netherlands has grown by eight to a total of 248 (Section iv).

The Asian Technology Fund
Comgest Growth Fund
Colbert Dollar Bond
Colbert Europe Bond
Permal Long Funds
European Exchange Traded-Fund Company Plc

### Register under the Act on the Supervision of Investment Institutions

In the period under review, 22 institutions were entered in Section 1 of this register, of which six with a temporary authorisation (Tables 2 and 3). These authorisations are granted for a limited period (usually three months) to partnerships or limited partnerships investing in real

<table>
<thead>
<tr>
<th>New entries</th>
<th>Authorisations revoked</th>
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</thead>
<tbody>
<tr>
<td><strong>Section I</strong></td>
<td><strong>Section II</strong></td>
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<tr>
<td>Crol-Hofstad Mix Fund</td>
<td>Maatschap M2 3550 Tech Park</td>
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<td>ING Bank Duurzaam Rendement Fonds N.V.</td>
<td>ImmoRendita Vastgoed Maatschap II</td>
</tr>
<tr>
<td>ING System Trading Funds aex/dax april 2000</td>
<td>Maatschap Fortis Investments Supermarktfonds II</td>
</tr>
<tr>
<td>Royal Europe Fund N.V.</td>
<td>Vastgoedmaatschap MPC Holland 21</td>
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<tr>
<td>Eenhoorn Meadow Stone C.V.</td>
<td>HG Obligatie GroeiFunds N.V.</td>
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<tr>
<td>AEGON ParapluFonds</td>
<td>Maatschap McLean</td>
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<td>Vastgoedmaatschap MPC Holland 21</td>
<td>GIM Office Investment III</td>
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<tr>
<td>Postbank Hoog Dividend Aandelenfonds N.V.</td>
<td>Maatschap Woningmaatschap xxv</td>
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<td>MaVaGo x</td>
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<td>Holland Continu Klik Fonds</td>
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<td>Rabobank Ledencertificaten N.V.</td>
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<td>RG RenteXtra Fund jun 00/05</td>
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<tr>
<td>SteenVast Fokkerstraat C.V.</td>
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<tr>
<td>Best of Two Worlds Limited Risk Fund Mei 2000</td>
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<td>Best of Two Worlds Stock Fund Mei 2000</td>
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<td>RG Florente Fund N.V.</td>
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<td>RG Japan GarantFunds juli 00/07</td>
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<td>Vastgoedmaatschap MPC Holland 24</td>
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<tr>
<td>BNG Euro Obligatiefonds 1-3</td>
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<tr>
<td>BNG Euro Obligatiefonds 5-7</td>
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### Table 3 Changes in the register of investment institutions in the second quarter of 2000

<table>
<thead>
<tr>
<th>New entries</th>
<th>Authorisations revoked</th>
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<tbody>
<tr>
<td><strong>Section II</strong></td>
<td><strong>Section III</strong></td>
</tr>
<tr>
<td>The Asian Technology Fund</td>
<td>g-Bond Fund</td>
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<tr>
<td>Comgest Growth Fund</td>
<td>g-Equity Fund</td>
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<tr>
<td>Colbert Dollar Bond</td>
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<tr>
<td>Colbert Europe Bond</td>
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<td>Permal Long Funds</td>
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<tr>
<td>European Exchange Traded-Fund Company Plc</td>
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</table>
estate or ships. At the end of that period, no further moneys are raised, and the purchase of the investment objects is completed. The authorisation is then revoked. Eight authorisations were revoked, six of which had been temporary. There were no new entries in Section ii, nor were any entries struck out. Two Irish and four Luxembourg ucis (see the Explanatory note to Table 2) with four, two and three sub-funds respectively were entered in Section iii. The entries of two ucirs were struck out.

1 This study is discussed in detail in ‘The Nederlandsche Bank’s analysis of bank lending’ in the Quarterly Bulletin of March 2000.
2 The Economic and Financial Committee is the body which prepares ecofin meetings.
Articles
Is the Dutch economy overheating?

The Dutch economy has been performing remarkably well in recent years, recalling the economic boom in the 1960s and early 1970s. Robust economic growth is accompanied by a surge in job opportunities and a significant drop in unemployment. Meanwhile, asset prices have soared. Inflation had been moderate until recently, but has begun to rise during the last few months. The tax cuts planned for 2001 give extra impetus to the economy. The question surfaces as to whether the Dutch economy is becoming overheated, a situation that could lead to an undesirable ‘boom-bust’ scenario. The following analysis reveals that the Dutch economy is indeed showing some signs of overheating, especially in the labour market. This carries the risk that inflation might accelerate further and – whether or not linked to a major correction of asset prices – form a threat to economic growth in the medium term. Given the risks of overheating, the Dutch economy looks as if it would benefit from some degree of cooling-off. In view of the uniform monetary policy in the euro area, this can only be achieved by allowing the automatic stabilisers to take full effect, further stimulating the labour supply and continuing the policy of structural reforms.
Introduction

The Dutch economy is now experiencing an exceptionally long period of growth. For the past 17 consecutive quarters, GDP growth has stood at or above 3%, while prospects for the remainder of this year and 2001 are favourable. Economic growth has been accompanied by a sharp rise in job opportunities and, to a lesser extent, the labour supply. On balance, the unemployment rate fell significantly over the past few years to 2.4% in June 2000, the lowest level in 25 years. Asset prices soared over the same period, with the surge in house prices being particularly striking. Over the past four years, house prices have gone up by almost 13% on average, and the average price level in real terms is now higher than during the boom at the end of the 1970s. Through wealth effects, the rising equity and house prices have partly fuelled the rapid growth of consumer spending, as reflected in a considerable decline in the saving ratio in recent years. The Dutch economy can expect another considerable stimulus next year in the form of tax cuts, valuing approximately NLG 7 billion, as part of the planned tax reforms. These tax cuts largely account for the historically vast increase in purchasing power of around 5% (Chart 1). The last such rise in purchasing power was in 1970. It is fair to ask whether the Dutch economy is on a direct path towards overheating, subsequently requiring a painful period of adjustment in order to cool down the economy. Both the OECD and the IMF recently warned against the possible negative consequences, should the tensions in the Dutch economy continue to mount. This article first looks at the definition of overheating, and then examines – on the basis of tension indicators for various factor markets – the extent to which the Netherlands shows signs of overheating. The development of some financial indicators is also briefly discussed in this context, and the article concludes with a look ahead to 2001.

What is overheating?

Overheating is not precisely defined in economic literature. In general, an economy can be said to be in a situation of overheating if, owing to excessive demand, the limits of production capacity are reached in several factor markets, implying that the pace of growth is not sustainable in the long term and must be seen as inflationary. The tensions result in mounting pressure on wages and prices, and inflation will eventually increase. This is known in the literature as ‘demand-pull inflation’. As there is little chance of expanding production, enterprises will tend to widen their margins, while the scarcity of labour will induce employees to demand higher wages. The resulting wage-price spiral would have a negative impact on the business sector’s profitability and competitiveness and could lead to job losses in the long term. An economy might even enter a serious recession, should rigidities exist in the adjustment process following a situation of overheating.

Overheating eventually generates inflation, but supply factors, such as higher import prices, can push up inflation too (cost-push inflation). In addition, central government can influence the level of inflation, by levying taxes etc. Finally, inflation can be seen as a monetary phenomenon in the long term, although monetary aggregates feed through to inflation in a more indirect manner. In practice, it is difficult to ascribe the actual inflation pattern to any one of the aforementioned sources of inflation, since they mutually influence each other. In an already overheated economy, cost price rises that lead to (temporarily) higher inflation will be more readily reflected in higher wage increases, possibly creating a self-perpetuating process of price rises. Conversely, inflation may remain moderate for some time, for example due to declining oil prices, while the tensions resulting from excessive demand are already mounting. Hence, rising inflation is not automatically a sign of overheating and vice versa. In order to assess whether overheating is in evidence, we need to look at supplementary indicators.
which can provide a better insight into the underlying inflationary dynamics.

As argued above, overheating arises from tensions in factor markets arising from excessive demand. These tensions may initially lead to rationing but will eventually cause higher prices in these markets, and can be regarded as a leading indicator of inflation. At a macro-economic level, two factor markets can be distinguished: those of labour and capital goods. Tensions rise in the labour market if actual unemployment drops below the equilibrium rate. In the capital goods market, the capacity utilisation rate of industry forms an indicator of the degree to which the existing production capacity is utilised. In addition, the output gap is a tension indicator for the whole economy.

Besides these developments in real factor markets, asset prices and credit growth can also play a major part in the process of overheating. Sharply rising asset prices, which are not justified by fundamental developments, are a sign of excessive demand and, through wealth effects, may in turn lead to extra spending, so exacerbating existing imbalances. This impact on spending is reflected in a drop in savings and higher lending to households. While these higher debts are indeed offset by greater assets, the value of these assets could be distorted if it emerges that their price has risen far above their fundamental value. A possible substantial price correction could cause payment difficulties and also lead to negative wealth effects and hence lower spending. This downward effect on the real economy could be intensified if the fall in prices also has a negative influence on confidence.

Indicators of overheating in the Netherlands

To gain an insight into the degree to which the Dutch economy is overheating, the relevant indicators of overheating discussed in the previous section will be examined in relation to the Netherlands. This section first looks at the indicators for the labour and capital goods markets, both individually and together, and then at the role played by asset prices and credit growth in the Dutch situation.

**Labour market**

Boosted by vigorous economic growth, labour demand has risen by an annual average of over 2.5% since 1996. On average, growth in labour supply has remained over 1 percentage point below this figure, meaning that the unemployment rate fell on balance to the lowest level in 25 years (Chart 2).

At the same time, the number of vacancies has climbed steadily, indicating an increasing rationing of labour. At the end of March 2000, private enterprises had a record number of 201,000 unfilled vacancies. Under pressure from the growing number of vacancies, the percentage of (industrial) enterprises that experienced production restrictions due to staff shortages went up from an average of 1% in 1996 to 9% in the second quarter of this year.

An additional way of quantifying the tension in the labour market is by considering the extent to which the rate of unemployment deviates from equilibrium unemployment. If actual unemployment remains under the equilibrium rate for a prolonged period, wage increases will normally expand, so fuelling inflation. Where unemployment exceeds the equilibrium rate, wage increases will show a downward trend. This explains why the equilibrium rate of unemployment is also known as the Non-Accelerating Inflation Rate of Unemployment (NAIRU). Chart 3 illustrates how the actual unemployment rate deviates from the NAIRU, as defined by the Netherlands Bureau for Economic Policy Analysis. The chart reveals that, since 1996, actual unemployment has fallen steadily further below the NAIRU. Despite the uncertainties surrounding such calculations, the increasing deviation implies serious tensions in the labour market. It should be noted that the indicator function of a measure such as the NAIRU is distorted by the considerable openness of the Dutch economy.
economy, which is linked to a strong dependency on international price developments. In consequence, unemployment can in practice remain under the NAIRU for some time without appearing to generate inflationary pressure. A recent example is the Asian crisis, which had a dampening effect on inflation because of the sharp decline in international commodity prices at that time (see Box). However, major and prolonged deviations from the NAIRU are not sustainable, and will be reflected in rising wages and prices.

The above indicators show that the labour market is facing mounting tensions. Partly due to the tight conditions in the labour market, wage demands increased, speeding up the average contractual wage growth in the market sector from 2.5% in 1999 to 3.5% in 2000. As a lower increase in labour productivity is expected, this acceleration will convert into higher unit labour costs. The latest collective labour agreements show a further acceleration, with increases of around 4%. Moreover, indications are that wage drift is higher than before.

Is the Dutch economy overheating?

Box What kept inflation in check in 1996-1999?
The Dutch economy is now experiencing an historically long boom period, with more than 3% growth for the past 17 quarters. In view of these robust growth figures, the pattern of Dutch CPI inflation in recent years has been remarkable (Chart 1).

This paradoxical situation can be explained in various ways, with supply factors playing a vital role. During these years, the external environment contributed to curbing inflation, especially in 1998 and the first months of 1999. For example commodity prices (including oil) at the start of 1999 were almost 30% lower than three years before. A second supply factor which tempered inflation in recent years is the effect of increased competition. This competition partly stems from the process of globalisation and the

Chart 2 Services inflation
Percentage changes on previous corresponding period

Explanatory note: Services inflation excludes living expenses, consumer-related taxes and general government services.
Research by the Health and Safety Inspectorate (1999) suggests that wage drift expanded annually from 1994 to 1998, while recent anecdotal evidence points to a continuation of this trend. In view of the pattern of these labour market indicators, the tight conditions seem set to persist for the time being. In combination with the already mounting pressure on wages, this clearly implies upward risks for wage developments in 2001, without any expected upturn in productivity growth to act as a counterbalance.

Despite the tight conditions on the labour market described above, the Netherlands still has a large unused labour reserve which could provide some relief. The Statistics Netherlands survey of the working population revealed a group of more than 500,000 people in 1999 who, while not belonging to the unemployed working population, expressed a wish to take up paid employment. The labour reserve is not only visible in the number of available people, but also in the amount of work that each working person can handle. International comparisons show that the Netherlands has a relatively short working week, comprising almost six hours less than the European Union average (Chart 4). The shorter working week can be partly explained by the large number of part-timers (including flexiworkers) in the Netherlands, who also work fewer hours a week than the EU average. Figures from Statistics Netherlands also reveal that (paid) overtime has scarcely increased during the current economic boom. Along with a greater level of participation, both a selective extension of the working week and a temporary increase in overtime could help ease bottlenecks in the labour market in the short term. The introduction of the new tax system in 2001 will also advance the activation of the potential labour supply, mainly through the reduction of the marginal tax rates and the introduction of general and employment tax credits.

Capacity utilisation rate
A second indicator for the extent to which production capacity is nearing its limits, is the capacity utilisation rate, which expresses the degree to which existing machinery is being utilised. Chart 5 illustrates the development of the actual capacity utilisation rate in relation to the levels at which upward pressure on prices arose in the past. Analogous to the NAIRU, this level is regarded as the ‘Non-Accelerating Inflation Rate of Capacity Utilisation’ (NAIRC). The chart shows that while the actual capacity utilisation rate now exceeds the NAIRC, it is still well under the level of the previous economic upswing around 1990. However, the difference between it and the NAIRC is still small, and falls within the margin of uncertainty entailed in calculating such indicators. One explanation for the relatively low rate of capacity utilisation in the light of the current economic conditions is that businesses anticipated the increasing demand in time. This was facilitated by the stable pattern of high
growth over a prolonged period. The relatively high level of investment over the past few years would appear to support this hypothesis. Another reason is the drop in foreign demand in the second half of 1998 and the first half of 1999 due to the Asian crisis, which brought the capacity utilisation rate down by around 1.5 percentage points. A disadvantage attached to the capacity utilisation rate as a tension variable is that it relates exclusively to the industrial sector which accounts for only 16% of Dutch GDP.

Output gap
A broader measure than the capacity utilisation rate for the tensions in an economy is the difference between potential and actual production, also termed the ‘output gap’. In devising the measures shown in Chart 6, potential production was calculated by means of a production function for the entire economy. Based on normal utilisation, this production function determines the amount of work available on the assumption that the rate of unemployment equals the equilibrium rate. Such calculations are extremely dependent on the underlying assumptions. We hence present the results of two different calculations of the output gap.

Although the calculations by the OECD and the Bank give different results for the size of the output gap in recent years, both measures show increasing divergence between actual and potential growth. So this indicator too points to an increasing imbalance in the Dutch economy.

Asset prices and credit growth
As indicated earlier, the steep rise in asset prices can be both a contributory factor and a symptom of overheating. Asset prices in the Netherlands have soared in recent years. From 1996 to 1999, equity prices on the Amsterdam stock exchange rose by an average of almost 30% annually (Chart 7), while, in the same period, house prices went up by around 13% a year on average. It should be noted that the surge in equity prices over the past years is not a specifically Dutch phenomenon, but occurred in many European countries. In contrast, the situation in the housing market is far more exceptional. While the growth in equity prices weakened in the first half of 2000, house prices accelerated by an annual rate of 20-25% (Chart 8). At present, house prices in real terms are even higher than during the peak in the late 1970s.

The recent surge in asset prices, especially house prices, has had a clear positive impact through wealth effects on consumer spending, and consequently on GDP-growth. The extra spending was evidently financed through mortgage loans (Chart 9). The boom in the housing market induced vast numbers of households to realise the surplus value of their homes. According to the Bank’s calculations, these effects had an upward impact of 0.6 to 0.7 percentage point on real GDP-growth last year. In comparison, wealth effects in the Netherlands ensuing from the rise in equity prices have remained marginal so far. This is mainly because home ownership is more

evenly distributed than equities, which are largely held by institutional investors. The increased stock ownership by private individuals in recent years may have somewhat intensified the wealth effects.

The trend of the savings ratio provides more evidence that most of the growing debt incurred by Dutch households – whose assets, on the other hand, have increased too – has gone towards consumer spending. Non-contractual savings declined over the past few years, even becoming negative in 1999 (when NLG 2 billion was dissaved). The surge in mortgage lending in the Netherlands suggests that, over the same period, the Dutch economy has become more vulnerable to potential shocks affecting the financial positions of households. This problem might well occur, should the current price level prove unsustainable and the housing market undergo a considerable price correction.

There are signs that house prices have recently risen above their intrinsic value. If there really is a bubble in house (and equity) prices, the economy could suffer serious consequences when it bursts. Negative wealth effects, intensified by negative confidence effects, can noticeably slow down consumer spending. Calculations based on the Bank’s macroeconomic structural model for the Dutch economy, MORKMON, show that a 20% fall in house prices in combination with an interest rate hike of 1 percentage point would, over two years, lead to an accumulative reduction in real GDP growth of 2%. Moreover, a crash on the capital markets could make banks more averse to risks, possibly resulting in credit rationing for both the private sector and households.

A look ahead to 2001

The Netherlands has now been experiencing boom conditions for over four years, resulting in increasing tensions in the economy, particularly in the labour market. The nonetheless moderate rate of inflation up to the end of 1999 is largely due to positive supply factors and the merely gradual increase in wages. However, during the first seven months of 2000, inflation rose from 2.0% to 2.8%, the highest rate since October 1994. The increase was mainly caused by a trebling of the oil price since the beginning of 1999, combined with the euro’s steep depreciation, while wage growth accelerated at the same time.

The Quarterly Bulletin of June 2000 contained a projection of inflation (based on the Consumer Price Index), showing a rise from 2.2% on average in 2000 to 3.6% in 2001. A substantial part of this difference in inflation is caused by the rise in VAT, which shall have an upward effect of around 1 percentage point on inflation during the whole year. This projection was, however, based on lower oil prices and higher exchange rates for the euro than evidenced in recent data. Another assumption was that contractual wage growth will drop from 3.4 to 3.2%, as a result of the substantial tax cuts, whereas the most recently concluded collective labour agreements provide for a wage increase of around 4%.

Chart 7 Equity prices

1986 = 100

Source: Statistics Netherlands.

Chart 8 House prices

1986 = 100

Nominal Real

Source: Land register.
Scenarios calculated with morkmon indicate that, given stable oil prices and exchange rates and a collective wage round of approximately 3.5%, inflation could exceed 4% next year; a rise in prices not witnessed since 1982. Such an increase could reinforce itself if it were to generate higher inflation expectations, carrying the danger of persistently high inflation. The risk that inflation will accelerate in 2001 hence seems very real and partly depends on wage developments. In order to prevent overheating it is vital that the economy begins a gradual process of adjustment, leading to some degree of cooling down. This can also help prevent the occurrence of a considerable actual slowdown in response to a downward price shock on the capital markets.

One way to cool down the economy is to pursue a restrictive monetary policy. However, monetary policy is determined for the euro area as a whole and so offers no scope for alleviating the specific Dutch situation. Besides fiscal policy, the speeding-up of structural policy – such as the ongoing project on competition, deregulation and the quality of legislation – offers opportunities for eliminating some of the bottlenecks in the economy in the long term.

As previously stated, the Netherlands, despite the tight conditions in the labour market, still has a sizeable labour reserve owing to the relatively low level of participation. Boosting participation, especially among women and older workers, would ease the labour market. The 2001 tax reforms will more than likely further this process. Another way to create more leeway in the labour market in the short term is to prolong the effective working week.

Furthermore, the actions of the social partners are clearly essential. Partly in the light of current economic conditions, parties to collective labour agreements should look beyond the inflationary effect of the tax reforms and consider the resulting substantial growth in purchasing power. Collective wage agreements which exceed the growth in production will result in further inflationary tendencies (along with the upward pressure exerted by the price of oil and other commodities) and have a negative impact on economic growth. Along with contractual wage growth, there is a role for variable wage components, reflecting labour shortage levels and differences in production in and between various sectors.

**Literature**


IMF, Netherlands Staff Report, June 2000.


1 Registered unemployment, as defined by Statistics Netherlands.
4 Research by the Netherlands Bureau for Economic Policy Analysis shows that equilibrium unemployment depends on interest rates, the level of tax and premiums and the relationship between net benefits and net wages (replacement rate). The level of the NAIRU is based on past data and can change over time. Estimates of this variable are hence subject to considerable uncertainty margins and should be interpreted with caution. Nonetheless, the calculations by the Netherlands Bureau for Economic Policy Analysis show that the current level of unemployment is so low that it falls outside the confidence interval.
6 For a detailed analysis of the available labour reserve in the Netherlands, see the article ‘Unemployment and labour reserve in the Netherlands’ in the Nederlandsche Bank’s Quarterly Bulletin, June 2000.
7 See Nahuis (1999).
8 A more detailed discussion of the output gap can be found in the article ‘Output gap and future inflation from an international perspective’ elsewhere in this Quarterly Bulletin which also looks at additional methods of calculation.
9 These variations are caused by different methods of calculation and projection. The oecd’s production function has a different structure and covers the economy as a whole, whereas the Bank’s production function takes in the gross added value of enterprises. Moreover, the results for 1999 - 2001 are largely determined by the projections for the latest data and the expected production in the years after 2000.
10 The development of the growth in lending in recent years is dealt with thoroughly in the article ‘The Nederlandsche Bank’s analysis of bank lending’ in the Nederlandsche Bank’s Quarterly Bulletin, March 2000.

11 These calculations are based on the survey results presented in the article ‘Survey among Dutch mortgage-holders on the use of mortgage credit’ in the Nederlandsche Bank’s Quarterly Bulletin, June 2000.
13 Excluding collective savings such as pensions and individual contractual savings such as single premium policies.
14 The article ‘The Dutch housing and mortgage markets’ in the Quarterly Bulletin of September 1999 contains a detailed description of the boom in the Dutch housing and mortgage markets and concludes that there are indications ‘that house prices in the Netherlands are increasingly driven by factors other than economic fundamentals’.
15 For a more extensive analysis of the effects of improving the workings of the market, see for example Bos (1999). This study presents simulations with general equilibrium models, which estimate that making the goods and services markets in the Netherlands more flexible could depress annual inflation by –0.6 percentage point.
Electronic banking: current trends and the implications for banks and supervision

Banks are increasingly using electronic media for their services. Recently, the Internet in particular has been rapidly developing as a distribution channel for financial services. On the one hand, the Internet creates new opportunities for banks, including a reduction in costs, rapid international expansion and the ability to offer tailor-made products. On the other hand, the resulting entry of new suppliers into the market and intensification of competition, in addition to the risks involved in using the Internet, present new threats. This article outlines the implications of electronic banking ('e-banking') for the Dutch banking industry, as well as the implications for the supervisory policy of the DNB (De Nederlandsche Bank N.V.).
Introduction

Over the last two decades, the nature of distribution channels for financial services has changed dramatically in the wake of technological developments. Automated teller machines, payment by PIN cards and telephone banking were introduced some time ago. At present, the Internet is growing rapidly as a new distribution medium. The Internet differs from the channels referred to above through its accessibility and its coverage, which is much wider. The combination of mobile telephones and the Internet through the Wireless Application Protocol (wap) may also be used for financial services in the near future. Through wap, mobile telephones and the Internet can be linked, enabling customers to, for example, request account balances, make payments and place securities orders.1 Although the number of on-line banking customers is still relatively limited at present, the number may increase sharply within a few years. This will be stimulated by developments relating to the security of Internet transactions and the availability of free Internet access. Interactive tv may also form a new distribution channel. Whether the growth of tv banking will actually continue is still uncertain, because the necessary infrastructure is not yet available in every country.

This article considers the possible implications of e-banking and the associated risks for the banking industry. It then goes on to examine the implications of e-banking for banking supervision. In this context electronic banking is defined as banking services that involve the transfer of information consisting of electronic data between parties through a network. This network may be a computer network such as the Internet, but may also be a telecommunications network, including a mobile telecommunications network, or a television network, including a cable television network. According to this definition, home banking, whereby a customer makes a connection between his or her pc and a bank’s computer system through the telephone network, is also a form of electronic banking.

Possible implications of e-banking for the banking industry

Intensification of competition

The growth of electronic banking is expected to be accompanied by an intensification of competition. One consequence of the Internet is that markets are becoming more transparent. Comparison by customers of the products and services of financial institutions is facilitated, enabling them to shop around for the best offer. This applies in particular to standard products, such as mortgages and consumer credit, whose price is the key factor determining the customer’s selection. In addition, the costs of switching supplier are lower in the case of electronic banking, which could reduce customer loyalty and could mean that customers will cherry pick, only buying the most attractive product from each institution. The increase in market transparency also means that suppliers are obtaining more information about each other’s product range. As a result, new innovative products are being copied more rapidly by competitors, thereby accelerating product standardization or commoditization.

The intensification of competition may have implications for the organizational structure of banks. Banks have a very horizontal and vertically integrated value chain, which means that account management, product development and distribution (infrastructure), in other words, all aspects of their service, are linked within the limits of their own organization.2 An important feature of technology and Internet technology is that their development often requires very high initial investment, but that the marginal costs of use are low. As a result, it is possible for specialized Internet providers to provide certain aspects of banking services more efficiently than the banks themselves. One the one hand, this makes it possible for banks to outsource their activities to other organizations and thus to achieve cost reductions. On the other hand, this could lead to pressure being exerted on parts of the banks’ value chain, which could ultimately result in their activities being split into three core businesses, such as account management, product development and infrastructure.3

This decomposition may be stimulated by the entry of new suppliers into the market. Existing banks may use the Internet to bring about rapid internationalization of their activities, making it possible for foreign competitors to enter the Dutch market and vice versa. A number of banks have already set up electronic subsidiaries, which offer banking services under a new brand name or under the name of the parent bank. In addition, given that physical barriers to entry are largely absent in the virtual world, new suppliers are expected to enter the market. New entrants may be both pure electronic banks, i.e. they are not linked to an existing physical bank, and non-banking institutions. Pure electronic banks can benefit from optimum pricing because they do not have the high fixed costs of a physical dis-
distribution network. On the other hand, they have to make heavy investment in establishing a reputation. By offering a high deposit rate, these pure Internet banks are trying to attract a large number of new customers at a rapid rate. Although a number have succeeded in this, at present the market share of this type of bank is still very small.4 The principal reasons for this seem to be the lack of confidence resulting from the lack of a physical presence and the high costs of marketing the brand name.

There are three types of new entrants in the non-banking institution category: existing non-financial institutions that offer a limited range of banking services through electronic channels; organizations that specialize in payment systems (payment service providers), and new electronic intermediaries. The latter category include aggregators, portals and personal agents.

1 The first group are institutions with established brand names offering a limited range of financial services through electronic channels offering very competitively priced products through an aggressive marketing strategy.7 Retail and telecommunications companies are also expected to increasingly offer financial services, given that they have the technology needed for e-banking. Although institutions from this category are unknown players in the financial services market, they still represent a serious threat to banks because they have a strong brand name and a large, loyal customer base.

2 Payment service providers are another group of new players. If customers make a purchase via the Internet from a supplier that is associated with a payment service provider, payment is automatically made through this organization.6 In this way, payment service providers could take over part of the role of the banks in funds transfer.

3 Aggregators, portals and personal agents are also potential competitors of traditional financial institutions. Aggregators are websites on which the prices and terms of various suppliers are compared with each other so that the customer is directed to the most favourable offer. This means that aggregators operate as new, virtual intermediaries, which in turn means that banks could lose their relationships with their customers. This also applies to portals that generally give an overview of suppliers in a particular market segment and their products and also give access to various other subject matters on the Internet. The other group of players are personal agents. This is software that functions as an intermediary between a customer and a bank. It works as follows: for example, a consumer who has a current account with ING, a securities account with ABN AMRO and a mortgage with Fortis can input all these products of the various banks into the program and in this way manage all his or her financial affairs through a single interface. In the US, this software is sold by Microsoft (Microsoft Money) and Intuit (Quicken). As far as DNB is aware, these programs are not yet available in the Dutch market.

Possible responses by banks

Banks will respond to these challenges and at least four different responses are possible. First of all, the importance of banking brand names will probably increase. In an electronic environment, where there is no direct personal contact and where products can rapidly be copied, the brand name is an instrument with which competitors can distinguish themselves. Banks will probably make substantial investment in building up and maintaining confidence in their brand name and in this way, will inspire customer confidence in new markets, particularly if, as expected, banks use the Internet as a means of international expansion.

In addition, banks could make use of the opportunities offered by e-banking to collect information on customers’ wishes and requirements.7 Using this information, banking services could be increasingly personalized so that customers are offered tailor-made products and services (one-to-one marketing). This will create further opportunities for cross-selling, which will increasingly mean that non-financial products, some of which may be purchased from external suppliers, can be sold. It is possible that banks will increasingly fulfil the role of financial advisers, which not only sell their own products, but also provide information on and act as intermediaries in respect of products for third parties.

It is also expected that cost reduction will become more important. By using e-banking, banks can reduce their costs because costs per transaction are significantly lower in the case of on-line banking than in the case of off-line banking, which is based on bricks and mortar.8 In order to achieve these cost reductions, banks will probably have to reduce the size of their branch networks. Nevertheless, bank branches will probably not disappear entirely, because face-to-face contact is very important for certain banking products and customer groups and cannot be imitated by electronic channels. Even if a cost reduction is of secondary importance, many banks will still wish to offer on-line services because a particular group of customers will want to have the ability to use Internet banking. An e-banking service could form part of a
defence strategy in order to prevent these customers from moving to the competition.

Finally, in the future, banks may increasingly enter into strategic alliances with companies in, for example, the IT and telecom sector, so that they can secure ongoing access to the latest technology. Conversely, there may be interest from the IT and telecom sector in collaboration with, or even acquisition of, banks, because banking may form an important link for setting up e-commerce activities (financing and payment).

Risks

Electronic banking also involves a number of risks and in particular could affect strategic, operational, reputation, liquidity and legal risk.10

1 Strategic risk is the risk of an adverse effect on profits as a result of an inadequate response to changes in the market, or incorrect decisions or incorrect implementation of decisions. Failure to keep up with new and existing competitors is a particularly important risk in the rapidly changing ‘e-world’.

2 The operational risk associated with e-banking refers mainly to security aspects, including verification of the identity and authenticity of persons, unauthorized access to the banking systems and the protection of privacy. Access security can be achieved by means of authentication, which can currently take place on the basis of knowledge or possession, or a combination of both. Examples of authentication based on possession are digicards and ‘tokens’. Examples of authentication using knowledge are pin codes.

3 The reputation risk also plays an important role. This risk may arise in connection with e-banking if systems or products do not work as the customer expects, which means that the reputation of the institution concerned is adversely affected. Because the speed of on-line banking is higher and security may be lower than in the case of off-line banking, this type of risk is higher for e-banking than for traditional banking. The risk to a bank’s reputation is not only important for an individual institution, but also for the banking industry as a whole. If there is a serious problem with one bank, this could lead to doubts about the security of other banks’ systems.

4 Liquidity risk, the risk that a bank will not be able to meet its payment obligations on time, may also be affected. E-banking makes it easier for customers to shop around for the highest deposit rate. This could mean that if there is an interest rate change, customers will switch suppliers on a greater scale and more rapidly, which means that banks may experience greater fluctuations in their liquidity position.

5 Legal risk is the risk of losses as a result of inadequate compliance with the applicable regulations. This is particularly important in the case of cross-border financial services. In this case, banks have to comply with rules and regulations as they apply in other countries, on which there is often uncertainty about their interpretation and applicability with regard to the Internet. This is a particular risk for banks whose electronic activities are outsourced in whole or in part to external organizations.

Implication for supervisory policy

Just as the banks are affected by the growth of e-banking, supervisory authorities will also have to respond to this trend. The following issues are important for the Bank.

Regulation of non-banks

The growth of non-banks that use electronic distribution channels to offer banking services raises the question of whether existing regulations provide for the supervision of these institutions. The existing regulations in the Netherlands are geared to bringing all institutions that operate as banks under normal banking supervision. Other institutions that do not come within the definition of credit institution, but offer banking products, i.e. non-banks, are covered by relevant legislation. A well-known example are the companies that provide consumer credit and are required to comply with the Consumer Credit Act (Wet Consumentenkrediet). These regulations apply in full to institutions that offer electronic banking services, so that there is no need for special regulation of these institutions. Another type of non-bank are the electronic intermediaries that provide a service enabling customers to compare the products of the various financial institutions. Unlike traditional, physical intermediaries, they do not actively intermediate in the sale of financial products, but to date have restricted themselves to surveys of these products. Although these surveys, such as those provided by the Dutch Consumers’ Association (Consumentenbond), for example, may contain inaccurate information, for the time being no role appears to have been allocated to the financial supervisory bodies in this respect. Nevertheless, it is important to monitor the direction in which the activities of these aggregators and portals develop.
**Enforcement**

The increasing use of electronic media by banks is important for DNB’s supervisory policy. The Media Policy Rules pursuant to the Act on the Supervision of the Credit System 1992 (Beleidsregels Media Wet toezicht kredietwezen 1992) were formulated to define when banking services offered through electronic or paper media come within the scope of the Wtk 1992 (Act on the Supervision of the Credit System/Wet toezicht kredietwezen 1992). The Wtk 1992 covers all institutions established in the Netherlands that offer banking services through electronic or paper media. Even suppliers that are not established in the Netherlands are covered by the Wtk 1992 if they carry out activities that are targeted at the Dutch market through these media. Banks from other EU countries may offer banking services in the Netherlands based upon a licence in the home country. Institutions from non-EU countries that target the Dutch market must apply for a licence or dispensation or must qualify for an exemption or statutory exception. One problem that may arise is that it may not be sufficiently clear in the case of an institution established outside the EU that it is not addressing the Dutch market, but may in fact be attracting customers who reside in the Netherlands. This does not appear to happen very often in practice, however. Nevertheless an international agreement is needed whereby banks are required to state the countries to which their services are being marketed on their websites.

**Consumer protection**

With regard to the monitoring of e-banking, supervisory authorities must be alert to the risk that certain banks that do not have their security systems in sufficient order may pass on the negative financial consequences of any misuse of e-banking services to the consumer through certain terms and conditions in their customer agreements. In order to prevent such situations from arising, DNB has the task of supervising the systems that the banks are using, but it does not have powers to review customer agreements. In this regard, DNB is focusing on providing good information to consumers about the risks of electronic banking and on promoting the provision of information by institutions.

**Harmonization of supervision of conduct**

As a result of the growth of e-banking, the need for harmonization of what is referred to as supervision of conduct has increased. Unlike prudential supervision of banks, the various regulations in respect of supervision of conduct are largely national in nature. This is inefficient for banks that wish to offer electronic financial services in a number of countries. In Europe, efforts are already been made to achieve partial or full harmonization of supervision of conduct through the various directives that are currently being drawn up, which are directives on remote selling of financial services, electronic signatures and, already adopted, e-commerce. In addition, the Electronic Banking Group (EBG) of the Basle Committee is considering the possibility of harmonization of supervision of conduct at G10 level as well.

**Increasing competition**

To a certain extent, competition and financial stability are in conflict with each other. The growth of new entrants may lead to greater competition, which will mean that banks will take excessive risks in the short term, which could result in an increase in systemic risk. This underlines the importance of effective supervision of the activities of banks.

There may be greater links between banks and non-banking institutions

In principle, this may take place in two ways, through acquisitions, or, as often seen in practice, through strategic alliances. Through its vvgb policy DNB appears to have sufficient instruments available to prevent undesirable links between banks and non-banks through acquisitions of and by banks. This policy does not extend to alliances involving the outsourcing of activities, however. As a result of outsourcing, there is the risk that both the supervisory authority and the management of the bank concerned will lose the ability to monitor the activities carried out by the third party. Shortcomings in the services outsourced out by the bank to external organizations can lead to substantial financial losses for, or undermine the reputation of, the bank. It is therefore important for sufficient emphasis to be placed on the risks of outsourcing as part of the supervision of the administrative organization of banks.

**Conclusion**

The growth of electronic media and its use by banks may affect the value chain and the risks faced by banks and will probably result in an increase in competition. Banks could respond to this trend by international expansion of their activities, combined with branding, personalization of their services and by seeking to achieve cost reductions. It is also expected that banks will increasingly start to collaborate with or acquire non-banks, such as IT and telecom
companies, which may increase the links between banks and non-banking institutions. It is also anticipated that Dutch banks will make increasing use of the Internet, and perhaps in the near future, also of wap, which will mean that the importance of e-banking will continue to grow in the Netherlands.

Although e-banking may therefore have an important effect on the Dutch banking industry, various initiatives have already been taken to adapt supervisory policy to reflect this development. Important initiatives in this connection include the European directives relating to electronic services that are being drawn up. In addition, the EBG of the Basle Committee is working on the formulation of supervisory guidance for the supervision of e-banking activities. Based upon the trends in respect of electronic banking combined with the existing regulations and the international initiatives that have already been taken, there is as yet no reason for additional, special regulation of e-banking. The expected further growth of e-banking may result in a strengthening of normal supervision in various areas, such as policy with regard to the outsourcing of activities and the international harmonization of supervision of conduct. It will therefore be necessary to monitor trends in the field of electronic banking closely.

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1 In the Netherlands, KPN Telecom has recently started offering mobile telephones incorporating WAP technology (‘m-info’). Users, who are reported to number about 6000, can only request certain types of information through their WAP telephone. In some countries, such as Finland, full banking services are being provided through WAP telephones.


4 Estimated to account for 0.05% of the US deposit and loan market.

5 Examples are Volkswagen in Germany and Ikea in Sweden.


7 Struye de Swielande, H., The Internet as a challenge for financial service providers (Internet als uitdaging voor financiële dienstverleners), Bank- en effectenbedrijf, January/February 2000.

8 For example, the direct costs of a banking transaction that is effected through a bank branch, by telephone and via the Internet, are estimated to be 1 euro, 0.5 euro and 0.12 euro respectively (Booz Allen & Hamilton).

9 This is illustrated by the recently announced collaboration between ABN AMRO and KPN in relation to the launch of the ‘Money Planet’ Internet site.


11 For example, it is not possible for a resident of the Netherlands to open an account with Citibank via the Internet because a US address is needed for this.

12 Supervision of conduct encompasses regulations in the field of consumer protection, such as regulations relating to advertising and the security of payment systems, and integrity, such as regulations relating to money laundering, which partially fall within the jurisdiction of the financial supervisory authorities.

13 This is the policy regarding the issue of declarations of no objection (verklaringen van geen bezwaar / ‘vvebs’) in respect of qualifying shareholdings held by Dutch banks in non-financial commercial enterprises. A qualifying shareholding is an interest and/or voting rights of 10% or more in respect of the share capital of the enterprise concerned.
Population ageing and public finance in the longer term

For the first time in years, public finance is showing a surplus, thanks largely to a combination of favourable economic developments and adequate fiscal policy. The question arises whether the current surpluses are a one-off development or whether they will persist in the longer term. Much depends on demographic trends. This article looks into the longer-term sustainability of public finance, on the basis of the generational accounting method. It presents scenarios with estimations of net tax payments for various generations on the basis of the usual assumptions, as well as scenarios containing more propitious or less favourable circumstances, such as a policy aiming for a higher participation rate or a possible extra rise in costs for health care. Whatever the scenario, the financial situation of the public sector will prove unsustainable in the longer term unless adjustments are made.
Introduction

In 1999 public finance was in surplus, for the first time in over 25 years. In 1973, public finance had shown a surplus of 0.8% of GDP; by 1982 a deficit of more than 6% had been run up; in 1999 a surplus was again recorded, of 0.5%. This is above all the outcome of an adequate fiscal policy. A further major contribution was made by the favourable economic development of recent years. According to estimations drawn up by the Netherlands Bureau for Economic Policy Analysis and the Nederlandsche Bank, this and next year will also be seeing government surpluses. As a result, a discussion has sprung up about the ends to which these surpluses are to be put. Generally speaking, the choice is one between tax cuts, extra spending or debt reduction. The decision will be based on detailed analysis, as well as political choices. This article is concerned only with the analysis. Here, two developments must be taken into account which are interrelated.

To begin with, there is the question whether the current surpluses are non-recurring or will be sustained. Furthermore, the Dutch public sector will be materially affected by demographic trends. Chart 1 shows the expected demographic development in the Netherlands.

Declining birth rates and longer life expectancy will make for a totally different composition of the population. For instance, the number of over-65s will increase relative to the rest of the population. Expenditure on old age provisions, such as state pensions, social security and health care will consequently soar. This has serious consequences for public finance, i.e. the budget and public debt. It is these issues that are discussed in this article.

When assessing public finance, two major aspects should be taken into account. The first is that in the medium term the public debt and the budget must meet the requirements of the Stability Pact. The second aspect is fiscal sustainability. If the public debt continues to grow relative to national income, the current fiscal policies could prove unsustainable in the longer term. Another indicator of the sustainability of public finance is the growing tax burden for future generations of the Dutch population, which is inherent in the existing public debt and the fiscal and tax policies currently being pursued. Both these gauges of fiscal sustainability are discussed in this article.

Even though long-term analyses are obviously attended by much uncertainty because circumstances change all the time, they serve a purpose. In the next section, the expected development of the future tax burden is discussed with the aid of a generational accounting model developed for the Netherlands at the Nederlandsche Bank. The concept of generational accounting is first explained. The results of generational accounting form the basis for a forecast of the budget and the public debt. It turns out that if policy is not adjusted, the debt ratio and the government deficit will continue to rise commensurate with the ageing of the population. However, this outcome is sensitive to the basic assumptions chosen, such as the interest rate level, the growth of labour productivity, the labour participation rate and the development of health care costs. That is why the initial results are followed by several relevant scenarios for public finance, with adjusted assumptions vis-à-vis the baseline projection regarding the growth of labour productivity, real interest rates and the distribution of expenditure on health care among older and younger age groups. The article ends with an analytical calculation of the structural adjustment of the budget needed to ensure a stable public finance situation in the longer term. All scenarios in this article give an indication of the consequences for public finance, but it should be stressed that this is highly dependent on the assumptions made.
Future tax burden according to generational accounting

Generational accounting shows to what extent future generations will be paying higher taxes or receiving lower benefits than the current living generations. A generation is defined as a population group of a certain age category. Generational accounting was developed in the United States in the early 1990s to fortell the future tax burden as an alternative to the future budget deficit and public debt. The Netherlands Bureau for Economic Policy Analysis and the Nederlandsche Bank began to draw up generational accounts for the Netherlands several years ago. A major advantage of generational accounting is that it makes detailed allowance for demographic trends differentiated by age groups. This makes it possible to measure the influence of ageing on public finance.

The most essential component of generational accounting is the calculation of the net taxes paid by current generations, i.e. the balance of their combined taxes and transfers, during the rest of their lives, on the basis of the current rates, and other arrangements per age group. To this end, it is assumed that the individual items on the budget, such as revenues from taxation and social insurance contributions, subsidies, income transfers, expenditure on education and health care, will increase in the future in real terms, commensurate with the assumed growth of labour productivity. It must be kept in mind, however, that these amounts will also change as a result of demographic trends.

Though the amounts per person admittedly increase to the same degree throughout, both over time and when age groups are compared, the number of persons within an age group is not constant, owing to the fact that the composition of the population changes over time.

Next to 'claims' on and 'liabilities' to the current generations, the government has a liability in the shape of its capital, which is made up mainly of public debt. The balance of the two, i.e. the net burden of current generations and the capital of the public sector, yields the amount which is ultimately available for future, as yet unborn, generations. This means, for example, that a larger public debt leads to a larger future net burden. That is also the case when the tax burden is reduced to benefit the current generation. It is possible to compare the net taxes of an individual average future inhabitant during his or her entire life and that of someone now living. The net taxes for current inhabitants are known, and can be calculated on the basis of the latest data and the projection of these data to the future. Comparison of the

The balance of the two, i.e. the net burden of current generations and the capital of the public sector, yields the amount which is ultimately available for future, as yet unborn, generations. This means, for example, that a larger public debt leads to a larger future net burden. That is also the case when the tax burden is reduced to benefit the current generation. It is possible to compare the net taxes of an individual average future inhabitant during his or her entire life and that of someone now living. The net taxes for current inhabitants are known, and can be calculated on the basis of the latest data and the projection of these data to the future. Comparison of the net burden for current and future generations shows to what extent continuation of the current government policy leads to an unequal distribution of the burden among generations. This 'intergenerational inequality' indicates that government arrangements will have to be adjusted one day. In this sense, generational accounting gives an indication of the sustainability of the tax system and the distribution of income transfers and other age-related expenditure.

In accordance with the method described, the Bank's generational accounting model was used to calculate intergenerational inequality. Use was made in all calculations of recent demographic forecasts and of data on the public sector up to the end of 2001, including the planned tax reform in 2001. The basis is thus formed by a very favourable phase of the business cycle. Thanks to a combination of high economic growth and low unemployment, both the revenue and the expenditure side of the budget have undergone a highly propitious development. As this seems an overly optimistic basis, adjustments were made for the special situation with regard to public finance in 2000 and 2001. After 2001, a cyclical component is incorporated in the budget, in the form of a reduction by a percentage of GDP. This percentage includes a combination of higher spending on unemployment benefits and lower receipts from taxation and social insurance contributions. On balance, the cyclical component in the budget comes out at nearly 1% of GDP in 2001. In the course of ten years, the cyclical component is gradually phased out of the budget. By adjusting only for the cyclical component, the scenarios set out below still present a relatively favourable picture.

Table 1 shows the baseline projection. The calculations assume a future growth of labour productivity of 1.5% per annum. This is the average growth rate realised since 1970. The assumed real interest rate of 4% also equals the average for that period. For the estimation of the rise in the participation rate, specified by age group, use was made of a joint study by Statistics Netherlands and the Netherlands Bureau for Economic Policy Analysis. In that study, the total participation rate for 20 to 64-year-olds rises by 7 percentage points between 2000 and 2020. However, that percentage was not entirely included, because it is partly accounted for by assumed policy adjustments.

The first line in the Table shows that under the current fiscal and tax policies, a newborn baby will receive an average of NLG 164,000 in the course of his or her life. The average future newborn baby will receive a much lower amount; on balance, he or she will have to pay NLG 4,000 to the government. These amounts are made
up of the annual balance – summed over expected life – of taxes and social insurance contributions, on the one hand, and benefits in the form of social security, education, health care, and other public spending, on the other. The net tax burden of future generations is hence NLG 168,000 higher than that of current generations; in other words, their net benefits are NLG 168,000 lower. This difference can also be expressed as a percentage of expected income throughout life. It equals 13.6% of the expected life income of someone from the current cohort of newborn babies.

With the results given in Table 1, it is possible to make an analytical pronouncement about the sustainability of current fiscal policies. Given the current policy and the high public debt, the balance of future taxes and benefits should average no less than NLG 4,000 per person throughout his or her life. To that end, current policy will have to be adjusted at some point in time; this will make for higher net taxes in the future. The generational inequality found thus means that the current fiscal and tax policies are unsustainable in the longer term, in the sense that they cannot be continued unchanged.

To show the degree of sensitivity to the assumptions made, Table 1 also presents a scenario with a higher rise in labour productivity than has been recorded over the past decades. It turns out that a higher growth of labour productivity has a positive effect on inequality. The level of the net burden admittedly goes up, but by comparison with the life income, which comes out higher, the burden and the difference are less marked. The reverse is the case at a lower growth rate for labour productivity. The influence of the assumed level of the long-term interest rate can be seen from the last two lines of Table 1. At a real interest rate of 3% and inflation of, let us say, 2%, the capital market rate averages 5%. Generational inequality, expressed as a percentage of life income, decreases when the real interest rate is lower, notably because this makes for lower interest payments on the public debt. A higher interest rate, on the other hand, makes for greater generational inequality.

### Forecasts for budget balance and public debt

As generational accounts are based on the estimated development of the population and of public expenditure and revenues, the results can also be presented in the shape of a time path for the budget balance and public debt. This time path ensues from the current level of public debt and the development of the net taxes forecast with the aid of the generational accounting model. The forecasts for the budget include the influence of demographic changes on public expenditure and revenues. In addition, the annual budget balance depends on the interest payable on public debt. Chart 2 shows the predicted development of the

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**Table 1  Results of generational accounting for the Dutch economy: baseline projection**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Assumptions</th>
<th>Net taxes per person over expected life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real interest rate (%)</td>
<td>Growth labour productivity (%)</td>
</tr>
<tr>
<td>Baseline projection</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Higher growth rate of labour productivity</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>Lower growth rate of labour productivity</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Lower real interest rate</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Higher real interest rate</td>
<td>5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Explanatory note: The net taxes are calculated for a newborn baby, converted into present value for the same base year and adjusted for the growth of labour productivity. All values have been adjusted for inflation. The total amounts of public expenditure and income up to the end of 2001 correspond with those in the Central Economic Plan 2000 (Netherlands Bureau for Economic Policy Analysis, 2000). Detailed data and basic amounts per capita were obtained from the Netherlands Bureau for Economic Policy Analysis. The demographic development is the latest central scenario of Statistics Netherlands.
budget relative to GDP. Because the budget will be in surplus until around 2020, the debt declines until then, as also evidenced by the falling debt ratio in Chart 3. This decrease is attended by declining interest payments. As the process of ageing will begin to accelerate as from 2020, the decrease of the primary balance then begins to exceed the decline in interest payments. The deficit subsequently drops rapidly; at a real interest rate of 4%, the deficit will rise to around 3% of GDP in 2035 and nearly 6% of GDP in 2050. The debt ratio will consequently soar, coming out at almost 80% of GDP in 2050. The charts show to what extent these forecasts depend on the assumed growth rate of labour productivity. The sensitivity to an 0.5 percentage point higher or lower growth rate turns out to be minor during the next twenty years. It is only in the long term that a higher growth rate has a positive effect on the budget and the debt ratio.

With the same baseline projection as in Charts 2 and 3, Charts 4 and 5 show the sensitivity of the predicted development of public finance to the assumed real interest rate. Until 2020, an interest rate which is 1 percentage point higher or lower reduces or raises, respec-
tively, the budget outcome by 0.5 percentage point well-nigh throughout the entire period vis-à-vis the base path with a real interest rate of 4%. After that, the margin between the lower and higher interest rate scenarios increases to a total of 4 percentage points in 2050.

As an alternative to the baseline projection with a real interest rate of 4% and a productivity growth of 1.5%, one could think of a scenario characterised by a stronger increase in labour productivity, at unchanging inflation. This macroeconomically favourable scenario could serve as a model for the New Economy which has allegedly sprung up in the United States. Whether this also goes for the Dutch and European economies remains to be seen. Yet expectations are that the higher growth rate of the New Economy will be attended by an increasing demand for capital and hence a higher real interest rate level. Charts 2 to 5 show that the degree to which interest rates and labour productivity growth go up will determine the ultimate effect of this scenario on public finance. The favourable effect of the higher growth rate could be rapidly undone if real interest rates were to go up.

An alternative estimate with higher spending on health care

It goes without saying that the above long-term projections are surrounded by uncertainties. One major risk factor is the rate of growth of public spending on health care. In the recent past, the increases in the costs of health care have been unexpectedly high on many occasions. In addition to the adjusted baseline projection, this section therefore looks at a risk variant of the estimates given so far.

In the adjusted baseline projection presented earlier, it was assumed that the increase in spending on health care relative to GDP is accounted for entirely by demographic changes. After all, an ageing population will have greater recourse to publicly financed health care, assuming that spending on health care per age group remains unchanged. This means that, in principle, allowance is made for the influence of ageing on health care spending. However, unexpected developments in the publicly financed health care sector could well lead to an extra increase in such spending.

Chart 6 Expenditure on health care per person in 2020 according to baseline projection and in case of higher expenditure for over-65s

<table>
<thead>
<tr>
<th>Guilders per person</th>
<th>Baseline projection</th>
<th>Higher expenditure for over-65s</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td></td>
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<tr>
<td>35-39</td>
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<td>40-44</td>
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<td>45-49</td>
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<td>50-54</td>
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<td>55-59</td>
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<tr>
<td>60-64</td>
<td></td>
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<tr>
<td>65-69</td>
<td></td>
<td></td>
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<tr>
<td>70-74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75-79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chart 7 Expenditure on health care according to baseline projection and in case of higher expenditure for over-65s

<table>
<thead>
<tr>
<th>Percentage GDP</th>
<th>Baseline projection</th>
<th>Higher expenditure for over-65s</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
On the whole, spending on health care will not only go up relative to GDP as a result of ageing, but also because labour productivity in the health care sector lags behind that in other economic sectors. This phenomenon causes total spending on health care to rise continuously vis-à-vis GDP. In addition the government’s fiscal policy is causing some shift in the demand for health care to the private sector. It may be assumed that this shift makes itself felt notably among the middle age groups. As a result, rises in health care costs will be accounted for especially by care for the elderly. The possible consequences can be illustrated with the aid of a variant to the baseline projections. It is assumed that as from 2002, a larger share of expenditure on health care will be spent on the over-65s. In order to keep this change in expenditure neutral with respect to the budget balance in 2002, it has been assumed that the middle age groups (25-54) will be comparatively less on the receiving end of such spending, and will for instance resort to privately financed health care. The shift is assumed to account for 10% within the total budget for health care. For the over-65s, this corresponds with an extra average increase in real spending on health care per person of over 1 percentage point per annum between 2002 and 2020, on top of the assumed 1.5%. For the 25 to 54-year-olds, this means that real spending on health care per capita will be frozen at the level now prevailing. This is illustrated in Chart 6.

Chart 7 shows the consequences of the shift in the age distribution of the health care budget for the total health care spending ratio. In 2020 this ratio will be

Table 2 Results of generational accounting for the Dutch economy: scenario with shift within expenditure on health care

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Assumptions</th>
<th>Net taxes per person over expected life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real growth</td>
<td>Future generation</td>
</tr>
<tr>
<td></td>
<td>interest rate (%)</td>
<td>labour productivity (%)</td>
</tr>
<tr>
<td>Baseline projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher expenditure on health care</td>
<td>4 1.5</td>
<td>-164</td>
</tr>
<tr>
<td></td>
<td>4 1.5</td>
<td>-163</td>
</tr>
</tbody>
</table>

Explanatory note: See Table 1.

Chart 8 Budget balance in baseline projection and in scenario with shift within expenditure on health care

Chart 9 Debt ratio in baseline projection and in scenario with shift within expenditure on health care
nearly 0.5 percentage point and in 2050 nearly 1 percentage point above the base path.

Generational accounting based on this alternative assumption shows that intergenerational inequality increases by 1.3 percentage points of lifetime income on the baseline projection, i.e. from 13.6% to 14.9% (see Table 2).

Charts 8 and 9 show the development of the budget and the public debt ratio. The budget surplus declines faster here, turning into a deficit soon after 2010. In 2050, the deficit is estimated to come out at 8% of GDP, as compared with 6% in the baseline projection. For the debt ratio, a u-shaped development again emerges, with a low of just over 22% of GDP around 2025, as against 18% of GDP in the baseline projection. It then rises again, to over 100% of GDP in 2050; the figure in the baseline projection was 75%.

These results indicate that a basically neutral shift in expenditure on health care from younger to older age groups is detrimental to public finance in the longer term as well as to the intergenerational distribution of taxes and benefits. The fact is that publicly financed health care is highly sensitive to demographic trends, so that ageing leads to a significant increase in spending on health care.

How to keep the deficit sustainable

Under the scenarios presented so far for the development of the budget deficit and public debt, the deficits will, in the very long term, increase to such an extent that the debt ratio will begin to rise markedly. That goes not just for evidently unfavourable situations such as a higher ratio for spending on health care, but also for a basically favourable scenario where labour productivity growth increases moderately and steadily. In all these variants, as well as in the baseline projection, the participation rate is assumed to go up only marginally. It is a well-known fact that the Dutch participation rate for women and older people lags behind that in the rest of Europe. An increase in the share of these categories in the working population could help to ameliorate the consequences of ageing. After all, a higher participation rate makes for a broader base for the financing of public spending, and reduces expenditure on benefits. Notably policy aimed at the participation of men aged over 55 might be an effective way of raising the overall participation rate. This policy could also include a further reduction of early retirement and incapacity for work schemes. In this scenario, policy is assumed here to augment the participation rate of 55 to 64-year-olds for a period of ten years as from 2002. This goes for 230,000 persons, which means that 2011 will see a participation rate which is 1.5 percentage points up on the baseline projection. This policy turns out to have a positive effect on intergenerational inequality, which
decreases by 0.7 percentage point from 13.6% to 12.9% of lifetime income. At the same time, the budget outcome will reach a higher level throughout the period until 2050 than in the baseline projection; until 2020, the surplus will remain well above 0.4% of GDP, as compared with 0.1% of GDP in the baseline projection (see Chart 10). The debt ratio also stands to gain from a higher participation rate (Chart 11). Its lowest level now comes out at 12% of GDP around 2027 instead of 18% of GDP in the baseline projection. Although in 2050 the debt ratio comes out over 15 percentage points lower than in the baseline projection, it still shows a rising tendency in the long term. The policy aiming for a higher participation rate certainly contributes to amelioration of the consequences of ageing for public finance, but is in itself incapable of ensuring sustainable public finance.

Finally, as an analytical exercise, a calculation was therefore made with the generational accounting model of the budgetary adjustment needed vis-à-vis the baseline projection to achieve a stable debt ratio in the longer term. This was done by adjusting the budget outcome in 2002 structurally to a level which is sustainable in the long term. It may be noted that ageing affects public finance to the same degree as in the other scenarios. It turns out that a structural increase in the budget outcome of 0.9% of GDP is needed to stabilise the public debt against GDP. Compared with the baseline projection, the intergenerational inequality also decreases materially, from 13.6% of life income to 11.0%. This analysis is illustrated in Charts 12 and 13, which show the development of the budget outcome and the debt ratio.

As can be seen from the Chart, a sustainable scenario requires a fairly stable budget surplus averaging 1.7% of GDP over the next 25 years if public finance is not to run out of control in the longer term. In that event, the deficit will remain below 1% of GDP around 2070, when ageing has just peaked, eventually reaching a stable level of 0.2% of GDP. In this case, the debt ratio stabilises at around 6% of GDP as from 2070. For the deficit to be sustainable in the longer term, the public debt will have to be negative between 2020 and 2050, the period during which ageing is at its worst; this means that a public savings surplus is maintained for a long period. This allows the costs of ageing to be absorbed, and prevents the debt ratio from rising rapidly afterwards.

**Conclusions**

*Analysis of the consequences of ageing for public finance requires a very long-term view. The far future is subject to much uncertainty, so that long-term analyses must be treated with caution. Yet such exercises provide valuable information about the consequences of demographic trends for the distribution of the burden among current and future generations in the Netherlands, as well as for public finance. Generational accounts, such as those developed at the Bank are a highly useful analytical tool for such*
contemplations. They enable us to chart the influence of several relevant variables, such as the participation rate and the trend-based growth of labour productivity. This article shows up the following.

- Assuming unchanged government policy, the budget surplus foreseen for this and next year is unsustainable. Calculations made with the generational accounts for the Netherlands show that the ageing of the population will cause a budget deficit around 2020, which subsequently rises markedly. This is partly due to the higher interest payments consequent on the rising debt ratio after 2025.
- The achievement of a higher participation rate is one way of ameliorating the consequences of ageing. Other possibilities are a higher growth rate for labour productivity or lower real interest rates, but even then the unfavourable influence of the expected demographic trends cannot be fully neutralised.
- There may be an additional risk in publicly financed health care in that, for instance, expenditure on health care per person rises faster for the elderly than for the average age group. If this is the case, the demographic component of expenditure on health care reinforces the negative long-term effects on public finance.
- In the long term, public finance may reach a sustainable and balanced situation if as from 2002, the budget balance would be an additional 0.9% of GDP higher for a period of 25 years. The necessary measures will have to be taken in time, and will come on top of the surplus forecast for the next few years.

Finally, it should be emphasized once again that the calculations of public finance in the longer term, shown by the various scenarios, depend on the assumptions made. These calculations therefore give but an indication of the possible consequences of the ageing of the Dutch population in the economic situation outlined.

1 This issue manifests itself in nearly the entire euro area, as evidenced by an article in the ECB Monthly Bulletin of July 2000, ‘Population ageing and fiscal policy in the euro area’ (pp 99-72).
5 These are not formal claims and liabilities, but may be seen as such because they can in reason be expected to arise in the future.
6 The government also has assets such as its fixed capital goods and the natural gas supply.
7 The fact that continuation of the current budgetary system may entail much smaller net increases in expenditure, because it needs to remain within the expenditure framework, has been disregarded here.
8 By comparison, the difference between the budget surplus estimate of September 1999 and that of April 2000 is 0.8% of GDP.
9 Use was made here of the ‘European Coordination’ scenario (CBS/CNB, Bevolking en arbeidsaanbod: drie scenario’s tot 2020, Sdu Uitgevers, The Hague, 1997). The estimated increase in the average participation rate in persons by 7 percentage points has been reduced to 2.5 percentage points in order to adjust for the difference between policy intentions and policy measures already taken, and for the expected decrease of the average working time.
10 This is needed because of the intertemporal budget constraint: the current debt must equal the present value of future (primary) surpluses.
11 Inflation is assumed to be 2% per annum.
12 The primary balance is the difference between the budget balance and interest payments. The primary balance consists not just of total net taxes (calculated with the aid of the generational accounting model), but also of the balance on income and expenditure relating to the value of the difference between the public debt and national capital. Cases in point are deprecations and natural gas revenues.
13 See the Nederlandsche Bank’s Quarterly Bulletin of March 2000.
14 This is the result of ‘Baumol’s law’, which poses that sectors with a structurally less than average growth of labour productivity and average wage rises face relatively strong cost increases; see M.M.G. Fase and C.C.A. Winder, 1999, ‘Baumol’s law and Verdoorn’s regularity’, De Economist, No.3, pp 277-291.
15 See, for instance, the Sociaal Economische Raad (1999), Gezondheidszorg in het licht van de komende vergrijzing, a report by the committee of social and economic experts, The Hague.
16 The participation rate for 55 to 64-year-olds then comes out over 10 percentage points higher.
17 The extra increase of 0.9% of GDP comes on top of the current surplus of 0.8%. No change in policy, such as a higher participation rate, is assumed here.
Output gap and future inflation from an international perspective

The output gap, defined as the difference between actual and potential output, is a gauge for tensions within the economy, and hence a possible indicator of future inflationary pressures. This article looks at the predictive power of the output gap for inflation in a number of countries. It does so on the basis of the output gaps constructed for the Bank’s multi-country model, EUROMON. The analysis confirms that these output gaps provide information about the inflation process in the near future. It is, however, stressed that the measurement of the output gap is fraught with uncertainty. This uncertainty compels us to make cautious use of the output gap as an information variable in the preparation of monetary policy.
Introduction

The interaction between economic activity and inflation is a subject which has special relevance for monetary policy aimed at price stability. The output gap can be seen as a gauge of economic activity, which reflects deviations of actual from potential output, and hence tensions in the goods and labour markets. These tensions may be expected to influence the movements of future prices. Though deviations from potential output may persist for long periods of time, sooner or later they will prompt price reactions which restore equilibrium between actual and potential output. Given its possible signalling function as to pricing, the output gap can serve as an information variable in monetary policy preparations. As is known, the monetary policy strategy of the European System of Central Banks (ecb) rests on two pillars. The first concerns the analysis of the growth of the money supply vis-à-vis a previously determined reference value. The second is an overall assessment of future inflationary pressure, which takes into account a wide range of indicators. The output gap forms a variable which, though it should not be used as a summarising indicator, may serve as a supplementary indicator in the assessment of future price movements.1

Apart from being able to serve as an indicator of future inflationary pressures, the output gap plays another and often more discernible role in economic analyses. Estimations of the output gap are, for instance, used to gain insight into the sensitivity of public finance to cyclical conditions. The oecd and the imf publish structural financing balances on a regular basis, showing public spending and revenues without their cyclical components, in order to obtain a better indication of the medium-term orientation of fiscal policy in the countries concerned. Adjustment for cyclical factors relies heavily on estimations of potential output and the output gap.2 In this article, the emphasis is, however, on the information content of the output gap for future inflation.

The article is organised as follows. It begins with a brief overview of the methods listed in the literature for the measurement of the output gap. This overview also provides the explanatory framework for the method used in the Bank’s multi-country model, euromon, to construct the output gaps which form the basis for this analysis. This macro-economic model distinguishes eight euro area countries 3, termed the eu8 here, plus the United States, Japan, the United Kingdom, Sweden and Denmark. Secondly, the analysis examines whether the euromon output gaps indicate changes in future inflation. The analysis addresses notably the eu8, which account for over 95% of euro area gdp; for comparison, results are also given for the United Kingdom, Japan and the United States. The analysis looks at the eu8 both at an aggregate level and at some countries individually. Finally, the article focuses on the uncertainty surrounding the measurement of output gaps. The output gap for the eu8 from euromon is compared with an alternative, obtained by means of another construction method, viz. the unobserved components method. A major advantage of the latter method is that it also quantifies the uncertainty surrounding the measurement of output gaps. The analysis presented in this article is built largely on studies performed at the Bank earlier.4

Measurement of the output gap

The output gap is defined as the difference between actual and potential output, expressed as a percentage. However, potential output and hence the output gap cannot be directly observed, and therefore need to be inferred from available economic variables. In practice, several construction methods are used. These can be divided into three categories.5

The first is known as the production function method, and was used to calculate the output gaps in euromon. This method centres on the use of a production function for the determination of potential output. This function indicates how output depends on the deployment of factors of production such as labour and capital. The advantage of this method is that changes in the growth of potential output can be related to changes in both the availability of factors of production and the intensity of their use. This intensity, known as factor productivity, changes over time, as a result of, for instance, technological progress. The disadvantage is that a specific functional form of the production function must be assumed and that only a limited number of factors of production, usually labour and capital, can be distinguished. In addition, the measurement of the capital stock is subject to uncertainty.

The second category, much in vogue nowadays, is based on the use of statistical models by means of which potential output and the output gap can be derived from actual output. This category includes first of all simple methods using only data on observed output. A series for potential output is filtered from these data. This approach has the advantage of simplicity, but does not take into account other economic information which may be of importance. This disadvantage is
remedied in more sophisticated statistical methods where potential output is determined on the basis of information about output as well as other relevant observed economic variables, such as inflation or unemployment. These methods include the unobserved components (UC) models. An application of this type of models for the eu8 is discussed in this article. The potential output and output gap thus obtained are compared with those found by means of euromon. The advantage of this sophisticated statistical method is that not only is use made of additional economic information, but it also allows of quantification of the uncertainty surrounding the measurement of potential output and the output gap.

The third approach involves the use of survey data on potential output and output gaps. The degree of capacity utilisation in manufacturing industry is, for instance, obtained from surveys held among businesses. Although this information usually becomes available fairly timely, uncertainty also plays a role here. This uncertainty is inherent above all in the use of surveys (limited response, scope for respondents’ own interpretations). Capacity utilisation is furthermore too limited a gauge for the output gap because some sectors (services, agriculture) are usually not included in the survey.

### EUROMON output gaps

For the construction of output gaps in euromon, the production function method is used to determine potential output. It is assumed that production technology can be described by a Constant Elasticity of Substitution (CES) production function, with labour, measured in hours, and capital as the factors of production distinguished. Under such an assumption, the deployment of labour and capital depends on technological progress and the relative price of the factors of production. This price sensitivity may differ from country to country. The OECD and the IMF, on the other hand, use a Cobb-Douglas production function, where this price sensitivity is assumed to be the same for all countries. The euromon output gaps have been defined in terms of the gross value added by businesses at factor costs. The underlying production gauge is hence not as broad as the GDP at market prices used by the OECD and the IMF, which includes indirect taxation and public sector output. The choice for this particular concept of production is consistent with euromon’s structure. The exact calculation of potential output is not explained in detail here.

Information about the properties of the euromon output gaps for several individual countries and the eu8 as a group is presented in Table 1. For reasons of comparison, Table 1 also contains such information about eight countries: Belgium, Germany, Finland, France, Italy, the Netherlands, Austria and Spain. Ireland, Luxembourg and Portugal are not included in the model.

### Table 1 Comparison of euromon and oecd output gaps on an annual basis, 1979-1998

<table>
<thead>
<tr>
<th>Countries</th>
<th>EUROMON</th>
<th>OECD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>DE</td>
<td>-2.4</td>
<td>2.8</td>
</tr>
<tr>
<td>FR</td>
<td>-1.3</td>
<td>1.8</td>
</tr>
<tr>
<td>IT</td>
<td>-2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>NL</td>
<td>-2.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Euro area</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>UK</td>
<td>-4.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Japan</td>
<td>-1.6</td>
<td>3.3</td>
</tr>
<tr>
<td>US</td>
<td>-4.4</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Explanatory note: the oecd output gaps are taken from the oecd Economic Outlook 67 of June 2000.

1 In euromon, the euro area is approximated by the group of the following eight countries: Belgium, Germany, Finland, France, Italy, the Netherlands, Austria and Spain. Ireland, Luxembourg and Portugal are not included in the model.
the output gaps published by the oecd. Measured by the standard deviation, the output gaps for the United Kingdom (uk) are the most volatile, followed by the United States (us), Japan, Italy (it) and Germany (de). This goes for both the euromon and the oecd gaps. The output gaps for France (fr), the Netherlands (nl) and the eu8 are comparatively less volatile. The Table indicates that the oecd gaps show stronger fluctuations than the output gaps from euromon: nearly all maximum and minimum values are larger. Overall, the two gauges yield similar pictures, as can be seen from Charts 1 to 3. A notable difference in output gaps for the euro area occurs at the end of the period considered.

According to oecd data, the gap remains negative in the period 1995-98, whereas according to euromon it returns to values close to equilibrium following the economic trough of 1993. In connection with factors such as the differences in the choice of the concept of production and the production function, euro area potential output in euromon seems to be undergoing a less favourable development than is implicit in the oecd calculation of output gaps.8

Output gap and inflation

Is the output gap a useful indicator of future inflationary pressure? To answer this question, the well-known Phillips curve model is used, where inflation is determined by three factors.9 The first is inflation persistence. As a result of adjustment costs and nominal rigidities, current inflation is closely linked to that in the preceding period. Demand shocks are the second factor. Here, these are reflected by changes in the output gap. The third factor, also seen as supply shocks which affect inflation directly, is movements in energy and commodity prices, for which allowance has been made by including import prices as the third determinant.

In practice, inflation is affected by more factors than those mentioned above, viz. labour market tensions and wage determination.10 This article was, however, not written to explain the phenomenon of inflation in full; it aims to ascertain whether the output gap has predictive power for inflation in the near future. This may be the case because the output gap has a direct in-
fluence of its own on the development of inflation, but also because movements in the output gap closely interact with factors not taken into account in the analysis which determine inflation, such as wage determination. Stylized, the Phillips curve model used can be summarized as follows:

\[ \Delta \pi = a \Delta \pi_{t-1} + b \text{gap}_{t-1} + c \Delta \pi^m + \varepsilon \]

Here \( \Delta \pi \) is the change in inflation, where the national consumer price index is the price variable used. The change in the import price inflation of goods is denoted by \( \Delta \pi^m \). The \text{gap} variable relates to \text{EUROMON} output gaps; \( \varepsilon \) is the disturbance term in the equation. The equation has been estimated for all countries with the aid of quarterly figures for the period 1979:i-1998:4. The outcome is that the output gaps found have statistically significant predictive power for nearly all countries included in \text{EUROMON}, with the exception of Denmark and Spain, for which no significant results were found. For the \text{EU8} as a whole, which is roughly equivalent to the euro area, the results were also significant.

Table 2 presents the information contained in the above estimated equation and reports the predicted inflation effects of a temporary increase in the output gap for a number of countries. These effects will in principle differ per country, depending on three factors: 1) the size of the output gap shock, 2) the persistence of the shock or the rate at which the shock fades away, and 3) the sensitivity of inflation to changes in the output gap. The second column in the Table shows the size of a positive change in the output gap for the country concerned, which is representative for the sample period. This \textit{representative} shock equals once the standard deviation of the national output gap on a quarterly basis, taking into account the persistence of the shock. At around 1.5%, the representative output gap shocks for Japan and Germany are the largest. Where Germany is concerned, this probably has to do with the unification, which was attended in the early 1990s by an upsurge of economic growth. In the Netherlands and the UK, the representative output gap shock comes out at around 1%. For the US, the \text{EU8}, Italy, France and Japan, the shock is less than 1%.

At 0.1 percentage point, the inflation effect of a representative increase in the output gap for the Netherlands is very modest. At the other end of the spectrum, the UK has a considerably larger effect, at 1.9 percentage points. Of the euro area countries, the effect for Italy is relatively large, at 1.0 percentage point. Comparable effects, varying between 0.4 and 0.6 percentage point, were found for Germany, France, the \text{EU8} and the US.

The relatively major predictive power of the output gap for inflation for the UK and Italy are due in part to the fact that in these countries a representative output gap is more persistent than elsewhere. The shock consequently contributes longer to the build-up of inflation. The fourth column in Table 2 shows the inflation effects of a \textit{uniform} output gap increase for all countries. The uniformity relates to both the size of the output gap shock, viz. 1%, and its duration, put at four quarters. After this period, the gap returns to its original value. The differences among the resulting inflation effects have now decreased and reflect only the discrepancies between the countries in terms of sensitivity of inflation.

**Table 2  Inflation effects of a temporary output gap shock**

<table>
<thead>
<tr>
<th>Countries</th>
<th>Representative initial output gap shock, per cent</th>
<th>Inflation effect at uniform output gap shock of 1%</th>
<th>Half of inflation effect achieved in quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1.2</td>
<td>0.63</td>
<td>5</td>
</tr>
<tr>
<td>France</td>
<td>0.6</td>
<td>0.53</td>
<td>5</td>
</tr>
<tr>
<td>Italy</td>
<td>0.8</td>
<td>0.67</td>
<td>4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.1</td>
<td>0.14</td>
<td>3</td>
</tr>
<tr>
<td>\text{EU8}</td>
<td>0.7</td>
<td>0.69</td>
<td>5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.0</td>
<td>1.06</td>
<td>3</td>
</tr>
<tr>
<td>Japan</td>
<td>1.3</td>
<td>0.32</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td>0.8</td>
<td>0.43</td>
<td>3</td>
</tr>
</tbody>
</table>
to changes in the output gap. Again the effects are the largest for the UK (inflation +1.1 percentage point) and the smallest for the Netherlands (inflation +0.1 percentage point). The effect for Italy is now comparable to that for Germany and the EU8 (+0.7 percentage point) and only barely larger than that for France (0.5 percentage point). The last column in Table 2 gives an indication of the lag with which the uniform output gap works through to inflation. Half the ultimate inflation effect is achieved between the third and the fifth quarter, with the UK, the US, Japan and the Netherlands recording a comparatively rapid feed-through.

The conclusion is therefore that the EUROMON output gaps have predictive power for future inflation. This goes for nearly all individual countries considered, but also for the EU8 as a whole, which roughly represents the euro area. The question arises whether this automatically means that the output gap is a good indicator of future inflationary pressure. Although this is basically the case, caution is called for. The estimations of the output gap may change as new data become available about the pattern of output. This is especially true of the latest quarters, for one thing because economic data are updated all the time and for another because the exact development of potential output is difficult to pinpoint for this very period. It is therefore risky to use estimations of the output gap for the latest period without taking into consideration other relevant information about future inflationary pressure. The development of the output gap furthermore depends materially on the construction method, as we shall see below. It would consequently be better to consider various output gaps based on different methods.

A closer look at output gap uncertainty

An alternative way of determining potential output and the output gap is the unobserved components (UC) method, mentioned earlier. This method is used here to determine the output gap for the EU8 as a whole, and subsequently to compare it with that for the EUROMON EU8. The main advantage of the UC method is that it allows of quantification of the uncertainty surrounding estimation of potential output and the output gap. In the determination of potential output, use is made not only of data on observed output, but also of information on other relevant observed economic variables, such as inflation. It is assumed that the output gap interacts with changes in inflation in conformity with the above Phillips curve equation. Allowance is thus made for the information contained in the inflationary process about the output gap. Although not shown here, the UC method shows up a significant interaction between the output gap and inflation in the EU8, the inflation effects being comparable to those presented in Table 2. At the same time, the potential output and output gap constructed differ materially from their EUROMON counterparts.

Chart 4 shows this and observed output in the EU8, together with potential output as calculated with the UC method, and that according to EUROMON. By comparison with EUROMON, potential output with the UC method is much less ‘smooth’ and follows the fluctuations in the actual output more closely, so that the volatility of the corresponding output gap is smaller. This difference is especially discernible for the recession of 1992/93.

This picture is confirmed in Chart 5. In this Chart, the thin dotted line represents the confidence margin for the UC output gap as amounting to plus and minus once the standard error. This margin is so wide in the period considered that little can be said with certainty about the size of the UC gap. It is only for the end of 1992 that a negative output gap can be observed with reasonable certainty. Chart 5 shows that although the EUROMON gap is subject to greater outliers, it fluctuates nearly all the time between the uncertainty limits of the UC gap. The conclusion is warranted that, in spite of their different movements, the two gaps do not seem to differ materially.
All in all, the above analysis raises the question whether the output gap, even if it turns out to be a significant indicator of future inflation, is able to provide policymakers with sufficiently accurate information about actual tensions in the economy. Yet recent model analyses seem to show that, except for very major uncertainty in the measurement of the output gap, the monetary authorities would do better to base their policy on an uncertain output gap than to use the observed economic growth as a gauge of the cyclical phase in which the economy finds itself. Although these model analyses abstract from reality in many respects, the tentative conclusion is that uncertainty need not necessarily preclude a role for the output gap in the process of monetary policy-making.

Conclusions

The following conclusions may be drawn:

- The EUROMON output gaps have significant predictive value for inflation in the near future. The outcomes suggest comparatively strong inflation effects of the national output gaps for the UK. For the euro area, a 1% higher output gap which persists for four quarters is attended, all other things being equal, by 0.7 percentage point higher inflation. Similar results are found for Germany and Italy; for France the inflation effect is slightly smaller, viz. 0.5 percentage point; at slightly over 0.1 percentage point, the inflation effect for the Netherlands is the smallest.

- Additional calculations on the basis of the UC model for the EU8 indicate that the measurement of the output gap, as is known from the literature, is surrounded by considerable uncertainty.

- This uncertainty compels us to be cautious when using the output gap as information variable in monetary policy-making, for instance by confronting output gaps based on different approaches, and to consider them in conjunction with a wide range of indicators of economic activity and future inflationary pressure.

Literature:

Bolt, W. and P.J.A. van Els, 2000, Output gap and inflation in the EU, DNB Staff Reports No 44, De Nederlandsche Bank.


1 See European Central Bank, Monthly Bulletin, April 1999.
3 The euro area countries are Belgium, Germany, Finland, France, Italy, the Netherlands, Austria and Spain.
4 This is a continuation of and an extension to research discussed in Bolt and Van Els (2000).
5 For a more detailed explanation, the reader is referred to Claus, Conway and Scott (2000).
7 For details, the reader is referred to Bolt and Van Els (2000). Here the sample period is extended up to and including 1998:IV (instead of 1996:IV).
8 It is noteworthy that the OECD output gaps for the euro area over the twenty-year period considered (1979-1998) are on average negative.
10 Gali and Gertler (1999) point out that it is not so much the output gap which determines inflation, but the real marginal costs of production. Like the output gap, these costs are difficult to measure. Gali and Gertler take the labour income ratio as a gauge of real marginal costs.
11 It must be noted that these analyses are based on the assumption that monetary policy can be described with the aid of a simple rule where the policy interest rate depends on expected inflation, on the one hand, and the output gap or observed growth, on the other. See Claus, Conway and Scott (2000) for an overview of this literature.
Integrity supervision

The business integrity of supervised institutions will be embedded as a supervisory criterion within the legislative framework. This article gives a brief outline of how the Bank seeks to monitor the integrity of banking institutions under its supervision. As a member of platforms such as the Council of Financial Supervisors, the Bank is developing integrity-related regulations. Also, the Bank is paying special attention to integrity aspects in its current supervisory practice and has recently developed a new supervisory instrument, the integrity audit, which is discussed in this article. Finally, the article discusses the Bank’s first experiences with this integrity audit.
Integrity supervision – a short history

The confidence of economic subjects in the banking sector is of vital importance. Such confidence is not only gained by the long-term solvency of banks but also by the integrity with which banks perform their indispensable role in the economy and in society in general. A key element of the confidence in the banking sector is the requirement that banks adhere to socially accepted standards. The integrity of supervised institutions can be described as their compliance with the prevailing standards and values in society and the financial sector, and their abstinence from objectionable practices. Standards and values in society and the sector (self-imposed or not) are not static but evolve continually. A world of difference exists, for instance, between today’s views on insider trading and those that prevailed in the 1970s. Nowadays it is no longer acceptable that a bank director has more ‘privileges’ than the average investor merely because he is closer to the source of information. Nor is it acceptable that a bank assists in money laundering practices. Over the years, a great many standards and values have crystallised into legislation, regulations and case law. In its supervisory practice, the Bank adheres to existing standards and values, but influences these too.

At the entry into force, in 1978, of the Act on the Supervision of the Credit System, which incorporated the first EC Directive on the Coordination of Banking Legislation, the Bank was, for the first time, given the explicit authorisation and obligation to include in its supervisory task one of the most essential elements that could (potentially) affect the integrity of the financial sector, viz. screening bank directors for their trust-worthiness. At the end of the 1980s, the Bank issued regulations aimed at preventing conflicts of interests between a bank and its directors. One of these was the Regulation on credit facilities to individual directors or other senior officers and, in 1994, the Insider Regulation. The latter Regulation seeks to prevent that conflicts could arise between business and private portfolio investment transactions of directors and certain other officers of a credit institution.

The tendency towards monitoring and regulating several integrity aspects led in the 1980s to a succession of agreements with the banking sector designed to counter tax fraud through bearer savings certificates. Banks were, for instance, obliged to draw up registered notes, access to which could be demanded by the tax authorities. Also, the Bank informed institutions under its supervision that it would assess the measures they had taken to comply with the Disclosure of Unusual Transactions (Financial Services) Act and the Identification (Financial Services) Act 1993.

A major boost to the further development of integrity supervision came from the Minister of Finance’s Memorandum on Financial Sector Integrity of November 1997.¹ This memorandum, drawn up in close consultation with the other financial supervisors – the Insurance Board and the Securities Board of the Netherlands – discusses the (interrelated) efforts by supervisory authorities in their administrative enforcement of financial supervision laws, by law enforcement authorities in upholding criminal laws and by financial markets and the institutions themselves in safeguarding integrity. The stock exchange fraud inquiry (Operatie Clickfonds) has given such practices as insider trading, money laundering and tax offences a prominent place in the Memorandum. The Memorandum aims to give a long term perspective. The subsequently published interim memorandum on Financial Sector Integrity has detailed the proposed embedding of integrity as a supervisory criterion in supervision laws.²

The memorandum on the institutional set-up of supervision on the financial market sector, published in April 1999, distinguishes three supervisory areas: systemic supervision, prudential supervision and conduct of business supervision.³ Conduct of business supervision looks at the overall relationship between financial institutions and their clients. It covers several aspects such as consumer information, integrity and portfolio investment issues. In developing its integrity supervision, the Bank has taken account of the policy memorandum on public sector integrity and successive semi-annual reports.⁴ Three specific angles of integrity supervision can be identified. First, the personal integrity of policy-makers. Second, organisational integrity or an institution’s internal processes and procedures. Third, relational integrity or the relationship between the institution and its clients.

The Minister of Finance proposes to amend all financial supervision laws so that financial supervisors can henceforth refuse authorisation if they believe that business integrity is insufficiently safeguarded. Supervisory authorities will be given more powers to issue recommendations, general guidelines and directions for policy aimed at promoting and safeguarding business integrity. A final item under discussion is the amendment of professional secrecy clauses to facilitate the exchange of information between financial supervisors and law enforcement agencies in cases subject to criminal law.
Details of the Bank’s integrity supervision

Trustworthiness
A core aspect of the integrity of a banking institution is that it is managed by trustworthy policy-makers. The trustworthiness of people who determine or co-determine the policy of a supervised institution, such as executive directors, supervisory directors and (major) shareholders, must be beyond any doubt in the eyes of the supervisory authority. Trustworthiness – in part a manifestation of integrity – is a broad concept and seems, at first glance, elusive. In the two decades that the Bank has been using this concept it has nonetheless taken on a definite meaning. However, the scope of the integrity check carried out by the Bank and other financial supervisors has not always been clear to supervised institutions or to policy-makers. To provide clarity, the three financial supervisors (the Bank, the Securities Board and the Insurance Board) and the Ministry of Finance have jointly drawn up a policy rule on integrity supervision. The policy rule is based on the principle that a person can be known by his actions. It describes, for instance, specific behaviour that is considered to be incompatible with the qualities expected from a trustworthy policy-maker. The qualities described by the supervisory authorities include uprightness, truthfulness and honesty. In appendices to the policy rule, certain behaviour is described that would constitute antecedents. A distinction has been made between criminal, financial, supervisory and other antecedents. In addition to criminal offences, other offences have been designated as relevant to an assessment of a person’s trustworthiness; these include violations of socioeconomic, financial and economic laws that are punishable under the Economic Offences Act, tax laws and other special laws, such as the Opium Act. For a very limited group of criminal antecedents, the supervisory authority would render an a priori opinion of untrustworthiness. As regards the other antecedents, the supervisory authorities have explicitly stated in the policy rule that they will take into consideration the underlying behaviour and any other relevant circumstances before taking a decision in a particular case. The policy rule also sets out in which manner and by consulting which sources the supervisory authority will arrive at its opinion. A prospective policy-maker has to fill out a questionnaire, thereby disclosing his antecedents and all other information about his past that may be of interest to the Bank. A policy-maker in office must, if an antecedent occurs, notify it forthwith to the supervisory authority.

The policy rule does not mean that new policy has been made or that a new regulation has been set up. Its purpose is to make clear which requirements a policy-maker must meet to be considered trustworthy.

Regulations for organisational integrity
As stated earlier, the Bank has already issued directives, as part of its formal regulatory framework, that specify some aspects of an institution’s integrity. As examples the Insider Regulation and the Regulation on credit facilities to individual directors or other senior officers were mentioned. These were followed in July 1999 by the Regulation on protected accounts. The latter regulation sets rules that are to be fulfilled if an institution, on valid grounds, makes use of accounts that are not accessible to all parts of the institution.

In the Bank’s view, the organisational integrity of an institution is also reflected in the safeguards the institution has built into its internal operations to prevent the occurrence of improper actions and practices. These safeguards will mostly be of an administrative-organisational nature. Within the Council of Financial Supervisors there are plans to develop further rules on obtaining references on new employees, on screening second-echelon and key officers (for instance, compliance officers) and on reporting incidents to the supervisory authority.

Supervisory specialists
The necessary safeguards for an institution’s business integrity do not only derive from regulations set by the supervisory authority and the institution itself. Equally important is that these safeguards are properly supervised. Having been convinced for some time that a unit of specialists must provide the necessary support to this (changing) type of supervision, the Bank decided in mid-1997 to set up an Integrity Supervision Unit. The unit’s objective is to develop integrity supervision further by providing, for instance, specialist support to the departments of the Supervision Directorate that are primarily responsible for the prudential control of banks. Occasionally, the unit may also carry out autonomous examinations. Currently, the unit numbers seven employees.

Special integrity audit
Essentially, integrity supervision is not any different from prudential supervision. After all, it forms part of the Bank’s broad assessment of an institution’s business management. As has been indicated in the earlier-mentioned reports on financial sector integrity by the
Minister of Finance, business integrity will constitute an authorisation requirement for supervised institutions. Compliance with this authorisation requirement will be the legal starting point for the inclusion of integrity in current supervisory practice. In 1998, the Bank decided – in anticipation of a statutory amendment – that a special supervision/audit programme should be developed for this purpose. In addition to traditional prudential supervision, this programme should integrate formal as well as material integrity risks in the Bank’s supervisory practice. Subsequently, in consultation with the sector, the integrity audit was introduced at the end of 1999.

In making an integrity check of a bank, a distinction can be made between regular and special supervision. Regular integrity supervision assesses the effectiveness of the measures the institution has taken to manage four categories of integrity risks (described below) while giving an overall assessment of the extent to which the institution is willing and able to comply with the full set of standards that apply to it. The integrity audit has been developed especially for the purposes of regular supervision. If regular supervision should turn up evidence of any undesirable activities, a special examination may be required. Set within precise limits, such an examination seeks to assess the scope and the manner in which specific activities have been performed at an institution. It further seeks to determine the responsibilities and/or the personnel and organisational measures that are to be taken.

The integrity audit in general
The audit is primarily concerned with existing standards on which a moral consensus exists in society and within the sector. Focal points are a bank’s overall integrity policy and how it deals operationally with prejudicial treatment of third parties, insider trading, tax offences and money laundering. In choosing these focal points, the Bank has taken into consideration that they are embedded in statutory and regulatory frameworks and that they are in line with the standards described in the Finance Minister’s Integrity Memorandum. However, as integrity is a dynamic subject, a shift in these focal points may well occur over time. For instance, compliance with the sanctions act and anti-corruption convention (yet to be ratified) may be designated as autonomous integrity risks meriting special attention in the Bank’s future audits.

The integrity audit is not concerned with an institution’s handling of ethical dilemmas. These are the responsibility of the institution’s board of management. Nor does the audit look to the trustworthiness of policy-makers, for which other supervisory tools exist. Instead, it focuses on the business management of a financial institution. Point of departure is that, ultimately, the institution’s board of management is responsible for a properly structured and well-functioning administrative organisation. If the board fails in that task, the Bank may see fit to reassess the expertise and/or trustworthiness of the directors. By extension, the conduct of the employees of a bank also falls outside the scope of the integrity audit. After all, the Bank supervises institutions, not people. But institutions carry out their activities through natural persons. As regards the manner in which to attribute an employee’s actions to the institution that employs him, the Bank has based itself on Supreme Court case law, which contains criteria for the criminal imputability of an employee’s conduct to a legal entity. An employee’s actions are of importance to the Bank’s supervision if they fall within the sphere of influence of the financial institution. In other words, has the legal entity or its board of management been able to exercise control over the actions of employees and have these actions been accepted? As, however, the actions or practices should have taken place as part of the institution’s business activities, it may be important to know if the institution has benefited from the practices, has given any instructions or has taken any measures to prevent these practices or has deliberately accepted the distinct possibility that certain practices would occur. It is the extent of the control being exercised by the institution that forms the basis of the audit. By means of the audit the Bank wishes to assess the manner in which an institution takes preventive action against being culpably drawn into practices that violate the integrity of the financial sector.

Finally, it should be noted that monitoring compliance with the regulations on insider trading, tax offences and money laundering is the task of other authorities such as the Economic Investigation Service, the tax authorities and the Securities Board, which conduct specific regulatory supervision or act in a controlling capacity. The integrity audit does not infringe upon the supervision or control exercised by these other authorities as the audit looks at these areas from a risk perspective for the institution. In other words, the integrity audit seeks to verify that an institution has built sufficient safeguards into its policies and administrative organisation to avoid the risk of violating prevailing standards.
The three parts of the integrity audit

An overall assessment can be made of the extent to which the institution is willing and able to comply with the full set of standards that apply to it. This overall assessment is regarded from a strategic corporate or executive angle. Furthermore, an assessment can be made of the effectiveness of the measures the institution has taken to manage a number of integrity risks. The latter assessment is considered from the angle of a bank’s primary business management. A common feature of both assessments is that the integrity audit begins with an examination of policy. If we extend these two angles we can also speak of general policy (corporate angle) and operational policy (primary business management). Finally, in a separate module special attention is paid to compliance with the Identification (Financial Services) Act for which a questionnaire must be completed.

Part 1 General policy

General policy is the policy of the highest echelon in an organisation. It seeks to create an environment in which dishonest conduct is prevented as much as possible. In monitoring general policy the audit looks at various items such as who in the organisation is ultimately responsible for integrity aspects and how the organisation translates and manages integrity standards (for instance, by means of a binding code of conduct). Besides, the extent to which the standards prevailing within the organisation are complied with depends in part on the personal integrity of the people working in the organisation. So the Bank will also look at the way in which the expertise and trustworthiness of employees as well as directors are screened within the organisation. Finally, if an organisation is to safeguard its integrity it also has to be capable of detecting integrity violations and, if necessary, taking corrective action.

Part 2 Operational policy

Where general policy seeks to create an environment that prevents integrity violations, operational policy aims specifically at managing the risks involved in carrying out financial business processes. As mentioned above, four integrity risks are distinguished in operational policy: prejudicial treatment of third parties, insider trading, tax offences and money laundering. To remain as close as possible to the prudential supervision system, an approach has been chosen whereby, for auditing purposes, operational policy is divided into various areas of business. These areas of business are, for instance, credit business, securities business, payments, asset management, trust business and Corporate Finance. The audit provides for a structured method in which to check the individual areas of business for the four integrity risks mentioned above.

Part 3 The Identification (Financial Services) Act questionnaire

The Bank has recognised that the Identification (Financial Services) Act 1993 is an important vehicle for the inclusion of integrity checks in its supervisory practice. An adequate ‘know-your-client policy’ is not only important to prevent culpable involvement in money laundering practices, but is also important for the management of all operational integrity risks. Attention is paid to this Act in a separate auditing module.

How does the Bank conduct the integrity audit?

The integrity audit can be conducted as an integral part of prudential supervision or as an autonomous examination. A choice can be made as to the scope of the integrity audit: full or partial. In a full audit, both general and operational policy (including all financial business processes) are fully investigated. A partial audit may be restricted to either general policy or operational policy. The examination of operational policy can then be restricted further to one or only a few areas of business or integrity risks. Although the full set of tools is available, by no means all of them will be used in every audit. A check is made of general policy, and a detailed examination is only conducted if and when necessary. So a pragmatic supervisory approach is also used in the integrity audit. Integrity supervision forms part of the Bank’s regular supervisory schedule for every institution. The outcome of the risk analysis provides an important input for such a schedule.

First experiences with the integrity audit

The integrity audit is an entirely new instrument and has so far been used in about ten examinations. Clearly, banks have to get used to the new approach to issues of integrity. As outlined earlier, integrity supervision is an integral part of the Bank’s regular supervisory task. So no special or concrete reason is necessary to conduct an integrity audit. The choice of examination is made on the basis of a previously conducted risk analysis of all prudential and operational risks of an institution. The Bank’s findings as to how the examined banks handle integrity risks have been, in general, positive. The conduct of an integrity audit has, in some cases, given rise to
adjustment or tightening up of administrative organisation and internal control processes.

2 Interim Memorandum on Financial Sector Integrity, June 1998.
5 Section 9(1) under e of the Act on the Supervision of the Credit System: the Bank shall grant the authorisation, unless on the grounds of the intentions or the past history, the Bank is of the opinion that, in view of the interests of the creditors or future creditors of the enterprise or institution, the trustworthiness of one or more persons who determine or co-determine the policy of the group of which the enterprise or institution forms part and who in that capacity also co-determine the policy of the enterprise or institution, is not beyond doubt.
6 Truthfulness, a sense of responsibility, law-abidingness, openness, sincerity, prudence, punctuality, honesty, discretion, uprightness.
7 Under the 1977 Act on Sanctions, in implementation of the decisions or recommendations of bodies or institutions under international law or of international agreements with regard to maintaining and restoring international peace and security or the advancement of the international legal order, regulations and provisions may be imposed regarding the movement of goods, services and payments, shipping, air and road transport, postal services and telecommunications, in respect of designated countries or territories. Violation of the Sanctions Act constitutes an economic offence.
8 The European Council's criminal law convention on corruption, and the oecd convention on combating bribery of foreign public officials in international business transactions, in which the parties thereto undertake, among other things, to apply anti-laundering legislation to forms of bribery and other corruption.
9 A distinction between supervision, control and investigation can be made along the lines of the powers of the financial supervisory authorities (no indications are necessary), the powers under the Economic Offences Act (indications should exist, at least the investigation must be aimed at criminal prosecution), and the prosecuting powers whereby a concrete suspicion must exist within the meaning of article 27 of the Code of Criminal Procedure.
10 The distinction between control or regulatory supervision and the supervision conducted by the Bank may be illustrated by the statement that despite a (small) violation of a regulation, risk management may still be adequate.
11 Prejudicial treatment (of third parties): this means the risk that the rights of third parties are prejudiced through the actions of the institution. Insider trading: the use of specific information concerning a legal entity, undertaking or institution which has not been made public and, if made public, may reasonably be expected to have an effect on the price of the securities of this legal entity, undertaking or institution, irrespective of whether such price moves up or down. Tax offences: violation of tax laws and regulations in the presentation of products and the provision of services by the institution. Money laundering: the assistance provided by the institution to creating an ostensibly legal origin of income derived from criminal acts. Also in respect of this risk, the Bank assesses the risk management measures. The Economic Investigation Service checks compliance with the Disclosure of Unusual Transactions (Financial Services) Act and the Identification (Financial Services) Act 1993. The applicable set of standards can be found in general penal provisions such as acts of forgery, article 316 of the Penal Code (distribution of false messages), article 46 of the Securities Transactions Supervision Act (insider trading) and articles 68 and 69 of the State Taxes Act (filing of incorrect tax returns).
Publications
DNB Staff reports

DNB Staff reports have been published since 1996. Aim and scope of this publication series is to disseminate a selection of the research done by staff members of the Bank to encourage scholarly discussion. An overview of DNB Staff reports can be found on the Bank’s website, http://www.dnb.nl. During the third quarter of 2000, two Staff reports were published which are summarised below.

No. 52 Financial Fragility and Macroeconomic Performance
A Comparison of Emerging and Highly Developed Countries

A.M.C. van der Zwet and J. Swank

This paper investigates the link between financial fragility and macroeconomic performance for three emerging countries (Korea, Malaysia and Mexico) and three highly developed countries (the United States, the United Kingdom and Germany). We explicitly examine the direction of causality and control for the robustness of the financial fragility indicators. Our empirical analysis suggests that the direction of causality mainly runs from financial fragility to economic growth and inflation. We also find that the positive effect of financial fragility on macroeconomic performance is much more important in the emerging countries than in the highly developed countries in our sample.

Keywords: financial fragility, financial stability, macroeconomic performance, vector autoregression models, Wald-tests.
JEL-classification: E440.

No. 53 Monetary Transmission Channels, Monetary Regimes and Consumption Behaviour

S. Sgherri

This paper explores the characteristics of the monetary transmission mechanism in the UK, as portrayed by the National Institute’s Domestic Econometric Model (niDEm). Sensitivity to different monetary policy regimes and to alternative models of consumers’ expenditure is assessed. The methodology adopted quantifies not only the total impact of a temporary monetary shock on the main GDP components, but also the contributions of the various transmission channels. Our analysis supports the evidence that the interest sensitivity of consumption becomes significantly lower when consumers ‘excessively discount’ the future. More interestingly, we note that monetary shocks have relatively large effects on the real economy through their repercussions on fiscal variables; this is more obvious when the exchange rate is fixed and departures from Ricardian equivalence are enhanced.
The Bank has been publishing Monetary Monographs at irregular intervals since 1984. These contain compact studies and analyses relating to the Bank’s tasks. Since September 1999, the Monetary Monographs also include reports of seminars and conferences organised by the Bank. Copies of the Monetary Monographs can be obtained from the Netherlands Institute for Banking, Insurance and Stockbroking, Amsterdam.

During the third quarter of 2000, one Monetary Monograph was published which is summarised below.

No. 18 ‘De kredietverlening door Nederlandse banken onder de loep’ (A close look at lending by Dutch banks; in Dutch only)

Ralph de Haas, Aerdt Houben, Jan Kakes and Henk Korthorst

Lending by Dutch banks has nearly doubled in five years. What are the main factors underlying such credit growth? What are the possible implications for financial stability? Are banks and households taking more risks? Are there any similarities with the 1970s which also saw unbridled credit growth in conjunction with rapid house price rises? This Monetary Monograph reports on the Nederlandsche Bank’s in-depth inquiry into bank lending in the Netherlands in the last five years. The report focuses on both mortgage lending and business lending. The most significant conclusions which the Bank has drawn from the inquiry are also discussed. The authors are staff members of the Monetary and Economic Policy Department and the Supervision Directorate of the Nederlandsche Bank.