Oesterreichische Nationalbank

# Focus on Austria

3/1998

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The opinions expressed in the section *"Studies"* are those of the individual authors and may differ from the views of the Oesterreichische Nationalbank.

# REPORTS

# Calendar of Monetary Highlights

### August 1998

14 Three acts, the First Euro-Related Amendment to Civil Legislation, (1. Euro-Justiz-Begleitgesetz), the First Euro-Related Amendment to Financial and Fiscal Legislation (1. Euro-Finanzbegleitgesetz), and the Takeover Act (Übernahmegesetz), are promulgated.

The First Euro-Related Amendment to Civil Legislation covers changes and additions to Austrian legislation relating to the introduction of the euro on January 1, 1999, such as the option of drawing up financial statements in euro, the launch of no-par stocks and the substitution of interest rates and indices in regulations and contracts by comparable eurozone parameters.

The First Euro-Related Amendment to Financial and Fiscal Legislation provides, among other things, the legal basis for converting, from the start of monetary union, government bonds and private issuers' bonds into euro.

The Takeover Act is to regulate the purchase of shares via public offerings as well as the legal consequences of the acquisition of controlled participations in Austria.

# Economic Background

### Commodity Exports Weaken Moderately, Current Account Improves

The development of Austria's economy largely hinges on the trends prevailing across Western Europe. With the international framework conditions favorable and Austrian exports having become more competitive, Austria's economic data have picked up nearly across the board.

Real economic growth in Austria ran to 2.5% in 1997 according to preliminary calculations, far higher than forecast. Not only did construction close with a better result than anticipated, goods exports also expanded more vigorously. According to the Austrian Central Statistical Office's foreign trade returns, deliveries of goods abroad widened by 16.8% in 1997 and imports of goods grew by 10.9% in nominal terms. As a consequence, the trade deficit improved by ATS 32.5 billion, and net merchandise exports according to the national accounts contributed 0.9% to GDP growth. As in the preceding years, deliveries to Eastern Europe expanded especially powerfully. Nevertheless, the current account shortfall remained unchanged at 1.9% of GDP, because services canceled out the improvement of trade.

Most of the gratifying export performance can be ascribed to the growing interlinkage of world trade and the healthy expansion of Austria's export markets. However, the marked improvement of Austrian unit labor cost over comparable costs in trade partner countries is also likely to have helped shore up trade. The real effective exchange rate of the schilling decreased by 3.3% in 1997. In terms of industrial unit labor cost, Austria's price competitiveness in fact improved by 5.4%.

In the first half of 1998 export growth began to flag a bit, but Austria's competitive position remained essentially unchanged in the first five months of the year. Compared to the like period of 1997, exports as reflected in foreign trade statistics advanced by 9.2% in nominal terms whereas imports climbed by 7.2%. The rise in merchandise payments as shown in the balance of payments was somewhat more pronounced at 10.7 and 10.4%.

At the same time, the current account (cash balance) improved significantly. In the first half of 1998, the deficit shrank by ATS 4.4 billion to ATS 20.7 billion. By subbalances, the deficit on goods (merchandise payments) worsened by ATS 2.3 billion to ATS 32.8 billion whereas the services surplus mounted by ATS 9.4 billion to ATS 28.5 billion. The travel surplus rose by ATS 4.2 billion to ATS 17.5 billion.[1])

### Growth Impulses Shift to Domestic Sectors

The expansion of domestic demand was comparatively sluggish in 1997 at 1.5%. In the first few months of 1998, however, more and more signs pointed to an acceleration of the domestic recovery. With the conclusion of the budget retrenchment program, real incomes are expected to rise in 1998 and 1999 following two years of sharp reductions. While consumers may use some of the additional income to fatten up savings, they will also boost private consumption, which will lift domestic business. The leading indicators confirm this trend – they have been pointing to a progressively brighter economic outlook since the beginning of 1998. The most recent results of the OeNB's Consumer Confidence Survey indicate much more optimism on the part of respondents, with positive expectations outweighing a negative outlook for the first time in two years. After having declined across the board in 1997, retail sales increased by 2.3% in the first four months of 1998 compared to the 1997 period. At 3.7%, sales of consumer durables, which are more sensitive to income changes, outperformed nondurables (+1.6%).

The June 1998 forecast of the Austrian Institute of Economic Research pegs GDP growth at 3.0% for 1998 and 3.2% for 1999. While the contribution of net goods exports will decrease markedly, consumption (1.9% and 2.2%) and investment in machinery and equipment (7.5 and 6.5%) will fuel the upturn. Under the budget notification of September 1998, the general government deficit will run to 1.9% of GDP, which is clearly below target. The state and local government's prudent fund management contributed markedly to this outcome. General government gross debt came to 64.3% of GDP in 1997, down substantially from just under 70% in 1996. The Federal Ministry of Finance forecasts a rise in the deficit ratio to 2.2% in 1998. Considering the animated pace of economic

growth, this rise signals a pronounced increase in the structural component of the deficit ratio.

### Manufacturing Continues to Expand at a Solid Pace

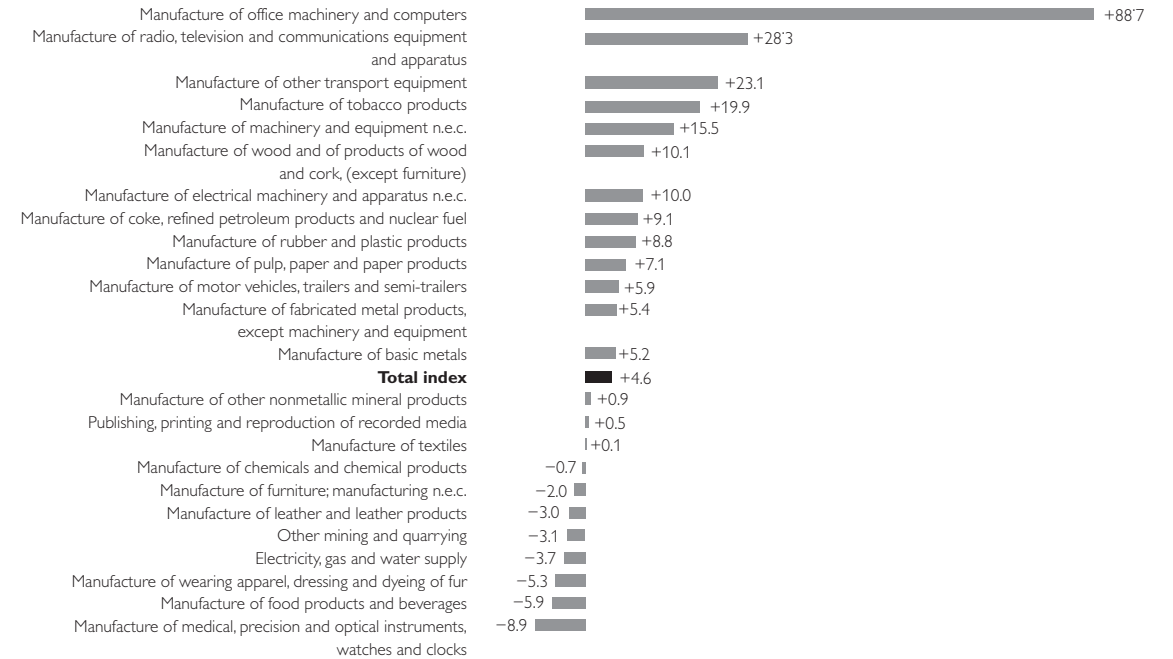
According to the economic activity survey conducted by the Austrian Central Statistical Office, manufacturing skyrocketed by 6.4%, above all purchased materials and services (8.7%) and capital goods (5.2%). Consumer durables, by contrast, contracted (–2.3%). The monthly data indicate more momentum in the development of capital goods and consumer durables in the second half of 1997. Construction augmented by an annual average of 4.3% in 1997.

Manufacturing continued to advance vigorously in the first four months of 1998, though at 5.5% the pace was slightly less robust than the 1997 annual average. Capital goods (10.5%) and consumer durables (3.3%) were on an uptrend, but the rise in purchased materials and services was down (6.1%). These figures dovetail with the assumption of a slowdown in the rise of exports and expanding domestic demand.

The quarterly national accounts calculations performed by the Austrian Institute of Economic Research, however, produce somewhat higher figures. Accordingly, GDP increased by 4.2% in the first quarter of 1998 compared to the preceding quarter. Manufacturing (8.9%) advanced much more powerfully than indicated in the economic activity survey. The expansion of construction by an animated 10.2% due to favorable weather conditions is likely to have added half a percentage point to GDP growth.

**Manufacturing by Divisions in the Austrian Statistical Classification of Activities January through May 1998**

*Annual change in %*




*Source: ÖSTAT.*

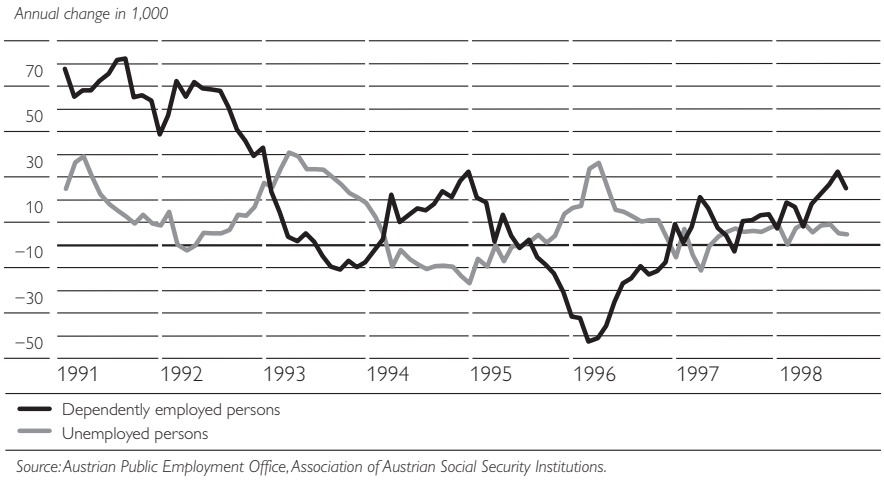
According to the economic survey of the Austrian Institute of Economic Research, the manufacturing growth slowdown is going hand in hand with a stagnation of business confidence. The confidence of the industries surveyed has more or less stabilized at a high level without actually improving for a year now. In fact, output expectations are clearly below their March peak. The business confidence indicator, too, declined in April and May. Taken as a whole, the results seem to indicate no acceleration of growth in the upcoming months. The capital goods industry represents a positive exception to the trend. Construction orders are expected to largely stabilize in 1998, but the latest figures were still below the comparable 1997 data.

## Employment on the Up and Up

In 1997 the upturn in economic activity added 0.4% to employment, but the overall effect was rather small. In the first half of 1998 employment advanced vigorously to put it 1.2% above the year-earlier value in June 1998. Manufacturing added most to its workforce, with employment shooting up by 2.3% in the first half of 1998 from the 1997 period despite productivity gains. The labor force in the service sector widened at the more languid pace of 0.7%. This masks a dynamic boost by 6.3% in business-related services and a more languid development of payrolls in trade and repair as well as the health sector. However, the statistic does not register persons in marginal part-time employment, the category of labor which most recently grew disproportionately above all in trade and repair.

If the recovery feeds through fully to the domestic sector at the current pace, service sector employment could benefit. However, with labor supply augmenting at the same time, the unemployment rate is not likely to fall more than marginally in 1998. This pronounced reaction of labor supply to changes in labor demand is a typical feature of the Austrian labor market. Currently this effect is particularly prevalent because of institutional changes (reduction of the period of parental leave, the phasing out of special assistance payments pending retirement). Not until 1999 is the upturn

**Employment and Registered Unemployment**




*Source: Austrian Public Employment Office, Association of Austrian Social Security Institutions.*

expected to reduce the ranks of the unemployed. At 6.0%, the June 1998 jobless rate exceeded the year-earlier value by 0.1%.

### Austria Remains a Price Stability Leader in the EU

Austria has been one of the EU-wide role models for price stability since 1997. The inflation rate according to the Harmonized Index of Consumer Prices (HICP) ran to 1.2% in 1997. The national CPI pegged 1997 inflation at 1.3%, the lowest value since the 1950s. The rate of price increase continued to diminish in the first half of 1998. In June 1998, HICP inflation amounted to just 0.8% year on year (national CPI: 0.9%), marking the EU record. Wholesale prices, too, were very stable, with June 1998 prices no higher that those of June 1997.

Several factors are likely to have coincided to produce the inflation result. To begin with, a moderate wage policy course was chosen in 1996 and 1997 to absorb burgeoning unemployment and the deterioration of competitiveness resulting from the schilling's strength against other currencies. Real wages declined by a total of 1.1% between 1996 and 1997. In the first months of 1998, the recovery of incomes was still slow to gain momentum. Gross wages per dependently employed person were 1.6% above the year-earlier value in the first quarter in nominal terms. Thus wages exerted no upward pressure on inflation.

Moreover, the effect of the depreciation on import prices, which means higher domestic prices, is dampened considerably by nonregular factors. For one thing, the world market prices for crude oil dropped by roughly a quarter from the 1997 figure. Also, more intense competition in some domestically oriented sectors is likely to have markedly reduced inflationary pressures.

The stagnation of the real effective exchange rate, which fell by 0.1% in the first half of 1998, is the outcome of opposite trends of the nominal exchange rate and the inflationary gaps. The nominal effective appreciation of the schilling by 0.9% was more than offset by Austria's low inflation rate.

*1 This lagged reaction of the current account to the effective depreciation of the schilling in 1997 can be interpreted as a J-curve effect, which results from the different speed at which foreign trade volumes and prices adjust to exchange rate changes.*

## Development of Selected Economic Indicators

| | 1996 | 1997 | 1998[1]) | 1999[1]) | last recently available period | |
|---|---|---|---|---|---|---|
| | | | | | 1997 | 1998 |
| | *Annual change in %* | | | | | |
| **Overall economy** | | | | | *1st quarter* | |
| GDP, in real terms at 1983 prices | + 1.6 | + 2.5 | + 3.0 | + 3.2 | + 2.1 | + 4.2 |
| *thereof: investment* | + *2.4* | + *3.6* | + *4.2* | + *4.1* | + *4.4* | + *8.6* |
| *private consumption* | + *2.4* | + *0.7* | + *1.9* | + *2.2* | + *0.1* | + *1.2* |
| **Productivity** | | | | | *January to May* | |
| GDP per employee | + 2.1 | + 2.2 | + 2.0 | + 2.2 | × | × |
| **Manufacturing** | + 1.0 | + 5.8 | + 6.0 | + 5.0 | + 5.2 | + 4.6 |
| Hourly productivity | + 4.6 | + 5.9 | + 5.7 | + 5.3 | × | × |
| **Labor market** | | | | | *January to July* | |
| Dependently employed persons | − 0.7 | + 0.3 | + 0.6[2]) | + 0.9[2]) | + 0.2 | + 0.8 |
| Registered unemployment | + 6.9 | + 1.2 | + 3.1 | − 2.5 | + 0.2 | + 2.4 |
| | % | | | | | |
| **Unemployment rate** | | | | | | |
| according to the EU concept | 4.3 | 4.4 | 4.5 | 4.3 | 4.4 | 4.5 |
| according to the national concept | 7.0 | 7.1 | 7.3 | 7.0 | 7.3 | 7.4 |
| | *Annual change in %* | | | | | |
| **Prices** | | | | | | |
| National CPI | + 1.9 | + 1.3 | + 1.2 | + 1.5 | + 1.5 | + 1.0 |
| HCPI | + 1.8 | + 1.2 | × | × | + 1.2 | + 1.0 |
| Wholesale price index | + 0.0 | + 0.4 | × | × | + 0.3 | + 0.2 |
| **Wages** | | | | | | |
| Negotiated standard wage rate index | + 2.4 | + 1.8 | + 2.0[3]) | + 2.7[7]) | + 1.7 | + 2.3 |
| **Unit labor cost** | | | | | | |
| general | − 0.5 | − 0.5 | + 0.0 | + 0.6 | × | × |
| in manufacturing | − 1.0 | − 5.2 | − 3.5 | − 2.5 | × | × |
| **Relative unit labor cost[4])** | | | | | | |
| compared to trade partners | − 2.2 | − 5.1 | − 2.9 | − 2.3 | × | × |
| compared to Germany | − 0.6 | − 0.8 | − 1.4 | − 1.9 | × | × |
| **Trade according to the Austrian Central Statistical Office** | | | | | *January to May* | |
| Imports, in nominal terms | + 6.7 | +10.9 | + 8.6 | +10.5 | + 6.3 | + 8.4 |
| Exports, in nominal terms | + 5.5 | +16.8 | +11.7 | +10.9 | +12.5 | +10.4 |
| | *ATS billion* | | | | | |
| **Balance of Payments[5])** | | | | | *January to June* | |
| Current account | −52.3 | −56.1 | −35.8 | −38.3 | −25.1 | −20.7 |
| Merchandise | −77.3 | −51.7 | × | × | −32.8 | −35.1 |
| Services | +48.4 | +20.8 | × | × | +19.1 | +28.5 |
| Travel | +18.6 | +10.7 | +18.2 | +19.7 | +13.3 | +17.5 |
| | % | | | | | |
| **Interest rates** | | | | | *August* | |
| Call money rate | 3.19 | 3.27 | × | × | 3.24 | 3.37 |
| Secondary market yield (federal government)[6]) | 5.30 | 4.79 | × | × | 4.83 | 4.24 |
| | *Annual change in %* | | | | | |
| **Effective exchange rate** | | | | | *January to June* | |
| Nominal | − 1.5 | − 2.3 | + 0.2 | + 0.7 | − 2.1 | − 0.5 |
| Real | − 2.1 | − 3.3 | − 0.9 | − 0.3 | − 2.9 | − 1.3 |
| | % | | | | | |
| **Budget** | | | | | | |
| Central government deficit | 4.1 | 2.6 | 2.6[7]) | 2.5 | × | × |
| General government deficit | 3.7 | 1.9 | 2.2[7]) | 2.4 | × | × |

*Source: OeNB, Austrian Central Statistical Office, Austrian Institute of Economic Research, Austrian Public Employment Services, Association of Austrian Social Security Institutions.*

*[1]) Austrian Institute of Economic Research, forecast of June 1998.*

*[2]) Excluding persons doing compulsory military service and persons on paid leave.*

*[3]) Change in gross earnings per employee.*

*[4]) In manufacturing.*

*[5]) Monthly cash balance data.*

*[6]) 10-year federal government bonds (benchmark).*

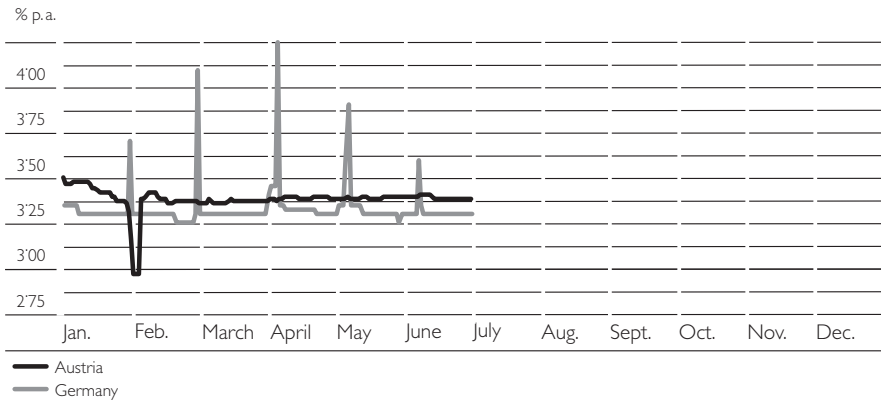
*[7]) Notification of September 1998.*

# *Money and Credit in the First Half of 1998*

## Ample Liquidity on the Money Market

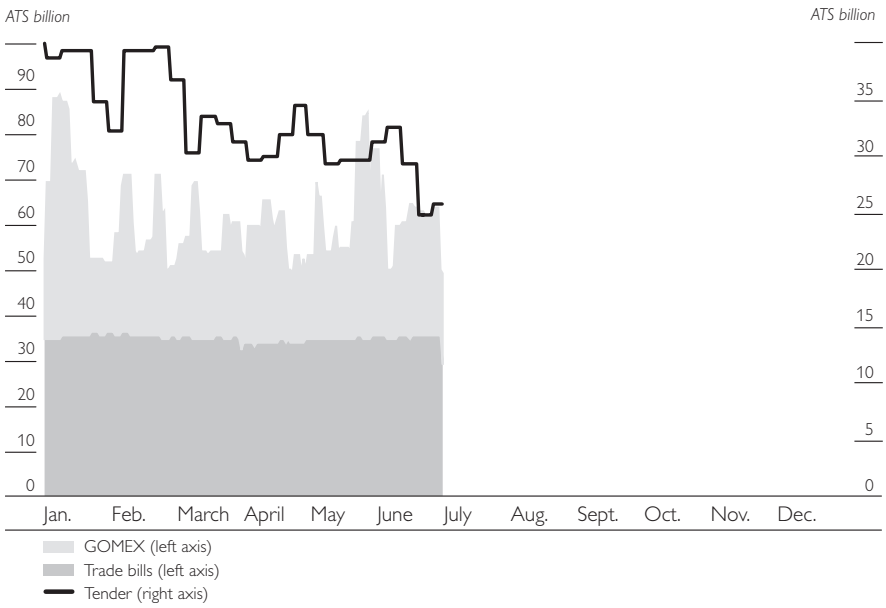
In the first six months of 1998, schilling money market rates went largely unchanged, fluctuating only marginally. At 2.95%, the call money rate hit an unusual low at the end of January/beginning of February, undercutting the tender rate. After that, its movement was confined to a very narrow span between 3.35 and 3.40%. Thus, with the exception of the temporary drop in the call money rate at the close of January and the month-end gyrations of the Deutsche mark rates, short-term interest rates in Austria were somewhat higher than the comparable euro-Deutsche mark rates in the first half of 1998. The differential to the Deutsche mark remained unaffected by the preannouncement of the bilateral conversion rates for the currencies of the countries to participate in monetary union at the beginning of May.

**Call Money Rates Austria – Germany 1998**




*Source: OeNB.*

**Tenders and Refinancing Limits in 1998**




*Source: OeNB.*

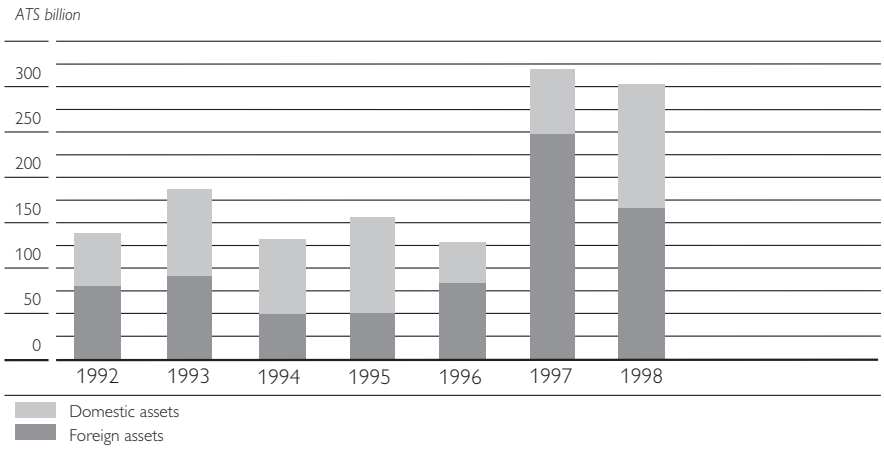
Throughout the first six months of 1998, the OeNB left the tender rate unchanged at 3.2%. The discount and lombard rates (2.5 and 4.75%, respectively) as well as the interest rate for GOMEX transactions (3.4%) also stayed unaltered in the period under review.

Austria's money market was generally awash with liquidity during the entire survey period. Banks used the central bank's standard refinancing lines to a slightly greater extent (61%) than in the analogous 1997 period (1997: 55%). At over 90%, the allocation of central bank money via tender operations was relatively high up until early March; in the following months it declined gradually, running to somewhat over 60% at the semiannual cut-off.

### Balance-Sheet Growth Slowed Slightly

The business volume of Austrian banks reflected in their balance sheets, which was less than in the comparable 1997 period, but nevertheless more than in the preceding years, expanded by ATS 282 billion (4.7%) in the first half of 1998. Banks' international business was the driving force behind the expansion, contributing roughly 60% to the boost in their balance sheets. It has lost some steam since then, with growth now clearly shifting to domestic business.

**Change in Balance Sheet Total in the First Half of 1998**




*Source: OeNB.*

Domestic demand both in terms of direct lending and deposits continued to shift from schilling to foreign currency transactions. After the steep fall in the first half of 1997, interbank claims rose again significantly, which is why overall domestic business reported growth rates exceeding those of the previous year.

### Sustained Expansion of International Business

Foreign transactions continued to boom in the first six months of 1998, the rate of expansion slowed somewhat, however, compared to 1997. On the assets side, the increment only amounted to two thirds of the corresponding 1997 figure, while liabilities grew only half as much. Foreign assets advanced

by ATS 168 billion (11.6%), foreign liabilities by ATS 149 billion (9.1%). Net foreign liabilities thus shrank by ATS 18 billion to ATS 181 billion. The share of foreign assets in the balance sheet total rose further, recording 25.8% or 1.6 percentage points above the 1997 year-end figure. The share of foreign liabilities progressed from 27.5 to 28.6%.

Interbank transactions both on the assets and liabilities side accounted for roughly half of all additional foreign transactions. The interbank balance contracted by ATS 6 billion to –ATS 140 billion, and net liabilities to foreign nonbanks sank by ATS 12 billion to ATS 41 billion.

Foreign lending, which comprised a larger share of funded loans than in 1997, was more than 40% below the analogous 1997 figure. In the first half of 1997, the expansion of securities and participations outperformed that of lending to foreign nonbanks by some 25%, in the period under review this figure jumped to about 80%. However, investment in securities and participations grew by a third less than in the comparable 1997 period, lending to foreign nonbanks slid by 55%.

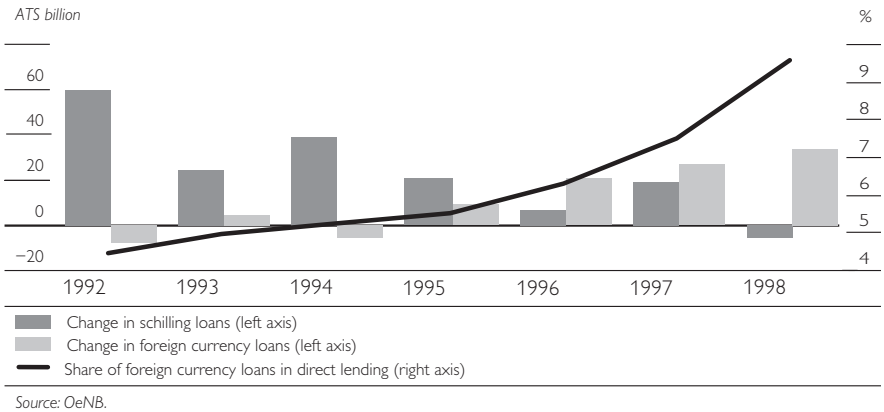
Nevertheless, 50% of overall direct lending growth registered by Austrian credit institutions is attributable to foreign loans. As at the end of June, 21.8% of all nonfunded claims was on foreign debtors and/or denominated in foreign currencies. The 1997 year-end figure stood at 20.2%.

Austrian banks increasingly tapped capital markets for refinancing abroad. Nearly half of the inflow of funds from abroad, around ATS 62 billion, was derived from issues on international capital markets. Foreign deposits edged up a mere ATS 10 billion.

### Domestic Demand for Direct Loans Ebbed Somewhat

In the first six months of 1998 (+ATS 28.7 billion), domestic direct lending grew at a slower pace than in the analogous 1997 period. For the seventh consecutive year, direct loans contracted in the first quarter, only to mount again in the second quarter. The public sector curbed its demand for direct loans, whereas households and enterprises extended their liabilities more pronouncedly than in 1997. Likewise, loans taken out to acquire and

**Changes in Direct Lending in the First Half of 1998**




*Source: OeNB.*

maintain housing increased on last year, rising by ATS 14.4 billion. Cash advances augmented only half as much (+ATS 7.3 billion) as in the corresponding 1997 period. Breaking down loans by maturity, it became evident that demand for short-term loans with a maturity of up to 12 months had been stepped up considerably.

The replacement of schilling loans by foreign currency loans extended to domestic nonbanks continued to pick up speed in the first six months of 1998. Schilling direct loans diminished in absolute terms and fell short of the 1997 year-end figure by ATS 5.5 billion. Bills discounted dropped sharply in the first half of 1998 (–ATS 21.8 billion or –37.8%), which may be first and foremost ascribed to changes in export financing. As of end March, lending has no longer been based on bills but on book credits instead. For this reason, loans are no longer reported as bills discounted but as interbank liabilities or claims on nonbanks. By contrast, other schilling loans posted roughly as pronounced an expansion as in 1997. Enterprises in particular widened their schilling liabilities, while the government and private households reduced theirs in net terms.

Foreign currency loans sustained their momentum, registering a two-digit growth rate (+ATS 34.1 billion) in the first half-year for the third time in a row. Consequently, their share in total direct loans outstanding further augmented, running to no less than 9.5% at the end of June, having doubled in the past six years. Low interest rates of a number of foreign currencies make such financing especially attractive. Both enterprises and private households expanded their foreign currency liabilities – frequently at the expense of schilling transactions, while the public sector reduced its foreign currency loans.

Securitized loans including GOMEX transactions recorded a hefty increase again, which was primarily due to Austrian banks' stepped-up investment in government debt securities.They augmented by ATS 11.6 billion in the first six months of 1998. Here, foreign currency securities progressed much more dynamically than their schilling counterparts as well, rising – granted, from a low level to start with – twofold since the beginning of the year.

Nonsecuritized claims on the government shrank by ATS 17.6 billion, so that total government financing through credit institutions climbed by ATS 1.6 billion.

Holdings of domestic bank bonds advanced to a somewhat lesser extent than the year before; bonds denominated in foreign currencies again rose more sharply than schilling paper. By contrast, holdings of fixed income securities of enterprises slid. Holdings of stocks were replenished only negligibly, while both schilling and foreign currency investment certificates were snapped up.

Domestic interbank claims mounted by ATS 25 billion, after having receded by ATS 34 billion in the first six months of 1997. Liabilities rose by ATS 60 billion following a comparably sharp decline a year earlier. This changing trend was, however, due in part to a different calculation method and the abovementioned reclassification of export financing bills.

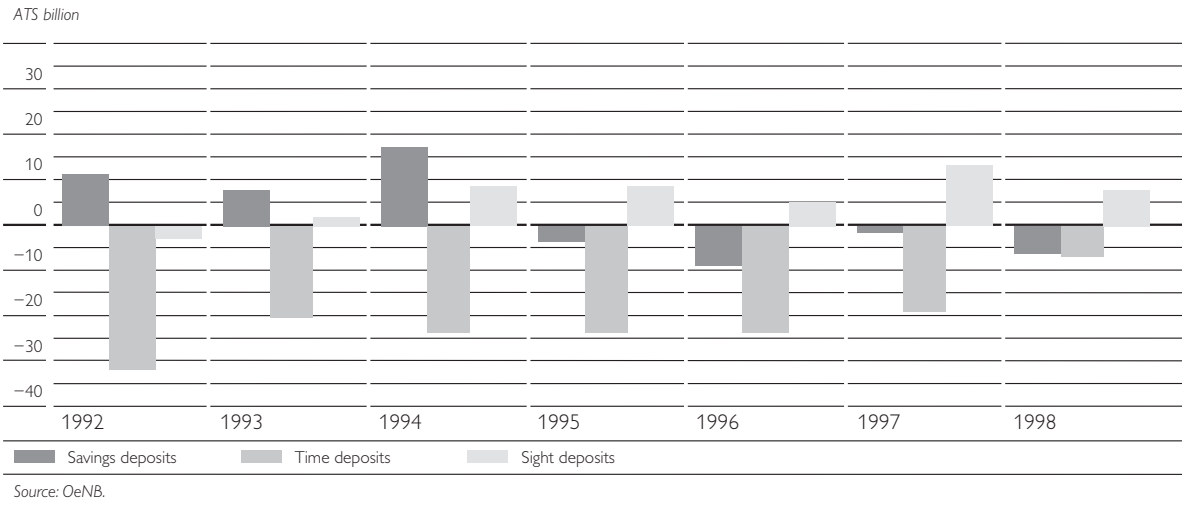
### Foreign Currency Deposits on the Up and Up

Schilling deposits at credit institutions declined for the fourth year in a row in the first six months (–ATS 5.5 billion). The contraction moderated noticeably in 1998, though. This was mainly due to the marginal reduction in time deposits, which decreased by ATS 6.8 billion (after ATS 19.1 billion). The public sector drew down its time deposits to a significantly lesser extent than in the comparable 1997 period (nearly –ATS 10 billion).

Authorities cut their sight deposits by almost as much, while households and nonfinancial enterprises boosted their bank deposits. On balance, sight deposits grew by ATS 7.5 billion.

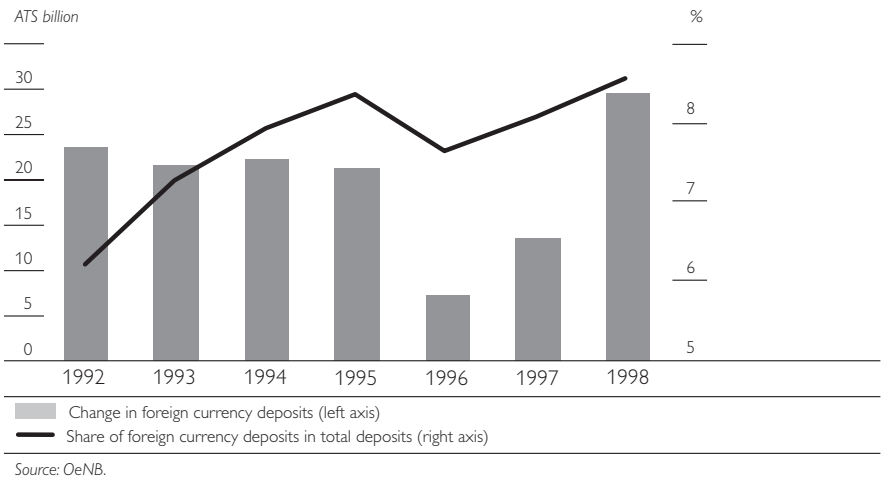
Savings deposits contracted for the third year in a row in the first half of 1998 (–ATS 6.2 billion). The decrease was particularly marked with deposits with maturities of up to 12 months, while savings tied for more than five years and savings bonds edged up slightly. Building society deposits continued to rise, too.

**Schilling Deposits in the First Half of 1998**




*Source: OeNB.*

**Change in Foreign Currency Deposits in the First Half of 1998**




*Source: OeNB.*

The increment in foreign currency deposits accelerated further, posting a record plus for the first half-year at ATS 29.6 billion. The share of foreign currency deposits in total deposits thus increased from 7.3% at year-end 1997 to 8.5%.

All in all, deposits of domestic nonbanks augmented by ATS 24.1 billion (first half of 1997: ATS 5.7 billion) in the first six months of 1998.

Demand for deposit substitution remained strong. The volume of credit institutions' own domestic issues shrank by ATS 2.9 billion from the end of 1997, but investment certificates nevertheless continued to be highly sought after. Investment funds' assets rose by ATS 93.5 billion to ATS 660.9 billion in the first six months of 1998 (first half of 1997: +ATS 82.4 billion). Measured in terms of savings deposits, investment certificates already accounted for 41% by mid-1998, after 35% at the end of 1997.

### Rise in the Equity Ratio to 13.57%

In the first six months of 1998, domestic credit institutions' own funds advanced by ATS 14.2 billion (+3.6%) to a total ATS 410.4 billion, clearly lagging behind last year's boost. They had mounted by ATS 26.7 billion (+7.7%) in the corresponding year-earlier period. The banks' equity ratio according to § 23 of the Austrian Banking Act 1993 thus improved from 12.94 to 13.57%.

# The Balance of Payments in the First Quarter of 1998

As of the January 1998 reporting period, the OeNB has been compiling a balance of payments based on a new concept marked by sweeping change. The major points of this new strategy for publishing the balance of payments are highlighted below, while in-depth information on the strategy and the conceptual modifications has already been provided in the study "Conceptual Changes in the Austrian Balance of Payments" in the 2/1998 issue of Focus on Austria.

The public is now furnished with monthly balance-of-payments data which offer timely and condensed information six weeks after the end of the reporting period, complemented by quarterly balances of payments which provide more clearly categorized and in-depth data. The quality of the new quarterly balance of payments matches that of the old preliminary revised balance, which would undergo its first revision three months after year-end. This means that high-quality results are now available much faster.

The quarterly balance of payments largely complies with the statistical concept of measuring "economic transactions" rather than payments. As a result, the sum total of the three monthly statistics does not tally with the corresponding quarterly figure. The quarterly results are released three months after the reporting period in the OeNB's German-language statistical monthly "Statistisches Monatsheft" (Table 7.0.1).

The present report on the development of the balance of payments is based on quarterly data.

## 1 Current Account

In the first quarter of 1998 the current account on a transaction basis (see Table 1) posted a surplus of somewhat more than ATS 1 billion, which contrasts with a deficit of about ATS 1.5 billion in the year-earlier period (the corresponding three-month total of the cash balance version had still suggested a worsening).

This improvement can be traced primarily to the reduction of the deficit of the subaccount goods by approximately ATS 6 billion to ATS 13 billion. Moreover, the services surplus widened by almost ATS 1 billion. The subaccounts income and current transfers, by contrast, deteriorated by ATS 1 billion and close to ATS 3 billion, respectively.

A more detailed analysis of the individual accounts of the Austrian balance of payments in the first quarter of 1998 can be found below.

### 1.1 Goods

The shrinking deficit of the subaccount goods in the first quarter of 1998 compared with the analogous 1997 period was due to a rise in goods exports by 10%, whereas imports of goods increased by only 6%. Unlike the monthly balance, the quarterly balance makes use of the foreign trade data of the Austrian Central Statistical Office (ÖSTAT) as reference values. The difference between transactions and merchandise payments, amounting to ATS 3.2 billion, falls under the heading unclassified transactions, a services subaccount. It should be pointed out that both exports and imports of goods are now indicated without the factors transportation and insurance, in accordance with international conventions. Transactions primarily involving

production and merchandise are also classified under goods, above all processing.

The improvement of the goods balance in the first quarter can be ascribed above all to Austria's *successful export performance* in Germany, Italy and the U.S.A., which helped trim the trade deficits with these countries (see Table 2). Trade with the Central and Eastern European countries, where Austria has traditionally posted surpluses, continues to grow at an above-average pace, although the surplus diminished by ATS 0.5 billion.

The economic turmoil in Asia is reflected, among other things, by a *slump* of about 30% in *exports* to Japan. However, this affected the total export performance only insignificantly (–ATS 0.5 billion), as the Japanese market is of minor importance to Austria.

The merchandise trade balance according to foreign trade statistics has improved across all *categories.* Exports and imports of food and raw materials grew only moderately, with the fuels trade volume even contracting, whereas semi-manufactured articles and capital goods were characterized by an extremely robust expansion (see Table 3).

### 1.2 Services

The surplus on services went up by ATS 0.75 billion to ATS 24 billion in the first quarter of 1998, profiting mainly from transportation (including international passenger transport), travel, merchanting income and above all from the new item miscellaneous business, professional, and technical services. The latter, which comprises services such as legal, accounting and management consulting, engineering etc., turned from a shortfall of about ATS 1.5 billion into a surplus of practically the same amount.

Given the significance of tourism for Austria, the services item travel is dealt with in greater detail below. In analyzing the data, one should keep in mind that travel is defined in more restrictive terms in the new presentation and includes fewer transportation services, namely the use of one's personal car or use of means of transportation within the country of destination. International passenger transport – primarily air transport – is now shown as a separate item. Additions and corrections, hitherto performed only once a year, are carried out continuously so that quarterly results correspond to the former revised annual outcome.

*Travel* results are likely to recover in 1998, for the first time after six consecutive years of contracting surpluses. Under the new concept, the surplus on travel rose by ATS 0.5 billion to ATS 19.5 billion in the first quarter of 1998. The surplus from international passenger transport, which had previously formed part of travel, also progressed by ATS 0.5 billion.

*Receipts* from travel (see Table 4) remained unchanged from the analogous 1997 period at ATS 42.5 billion (including passenger transport, a 3% increase would have been registered). This means that the recovery noticeable since the second quarter of 1997 has continued unabated. An assessment of the year 1998 as a whole is currently impossible, as data on the crucial summer months have not yet become available.

The slight improvement of the travel balance can be pinpointed primarily to the fact that the long trend towards travel abroad, which led to double-digit growth rates of expenditure in some years, has come to a virtual standstill. Compared with the analogous 1997 period, *Austrian tourists' expenditure abroad* shrank by 3% in the first quarter (if passenger transport were included, the growth rate of 2% would be the lowest in a period of more than 10 years).

The most recent data on *foreign tourist bednights* for the period January through May 1998 reflect the favorable development of travel receipts (see Table 5 for first-quarter figures). The number of foreign tourists visiting Austria is still slightly on the decline, but domestic tourists' overnight stays have gone up by 3%. The shrinking number of foreign tourist bednights can be traced primarily to a lack of guests from traditionally important countries such as Germany and the Netherlands, whereas the growth rates of visitors from Central and Eastern Europe accounts are hefty.

### 1.3 Income

In the first quarter of 1998, the deficit of the subaccount income came to ATS 2 billion, i.e. about twice the volume of the first three months of 1997.

Income from portfolio investment was the main factor behind this deterioration, whereas compensation for employees remained unaltered from the analogous 1997 period. The widening deficit of direct investment income was compensated for by rising surpluses of income derived from other investment.

A comparison with the first quarter of 1996 (–ATS 5 billion) should take into account that the accruals principle applying since the reporting period 1997 (i.e. income is recorded when it is created rather than when payment occurs) and the resulting more uniform annual distribution of portfolio investment tend to improve the balance above all in the first quarter, given the current issuing conditions.

### 1.4 Current Transfers

This subaccount of the current account now only encompasses those transactions which impact the wealth and consumption of the respective economies. Capital transfers, formerly under the heading transfers, have been excluded. The new concept still makes a distinction between public and private transfers.

Austria's contributions to the EU are a typical example of public transfers. Even under the old concept, they were classified under transfers. EU disbursements to Austria, by contrast, are covered by the capital account. Private transfers comprise e.g. migrants' transfers, pensions and annuities.

The shortfall under the heading current transfers came to approximately ATS 7.5 billion in the survey period, which compares with somewhat less than ATS 5 billion in the first three months of 1997.

## 2 Capital Account

The capital account comprises two categories: capital transfers as well as *acquisition/disposal of non-produced, nonfinancial assets* such as the purchase

of patents, the sale of customer bases, transfer fees for professional athletes and so on.

As regards *capital transfers,* a distinction is made between public sector and private sector transfers. The former comprise in particular those EU reimbursements which serve infrastructure purposes and therefore are not attributable to current transfers. The latter cover, inter alia, debt forgiveness, migrants' transfers, legacies, the setting up of foundations and the like.

In the quarter under review, the capital account remained practically in equilibrium, whereas one year previously a surplus of ATS 1 billion had been recorded.

### 2.1 EU Transactions

As pointed out above, Austria's transactions with the EU can be found in two subaccounts, namely the balance of current transfers and the capital account.

As one year before, EU reimbursements totaled ATS 6 billion in the survey period, while Austria's contributions came to some ATS 10.5 billion, exceeding the 1997 result by ATS 1 billion.

### 2.2 Financial Account

The financial account, which also comprises the transactions in connection with official reserves, closed with capital imports of around ATS 6.5 billion (see Table 6).

#### 2.2.1 Direct Investment

In line with international definitions, direct investment covers not only participations, but also the acquisition of premises as well as reinvested earnings. Moreover, starting with the reporting period 1997, credits between affiliated enterprises are also included in this item, as they are deemed to permanently reinforce the direct investment relationship. This widened definition, which at times involves financing decisions at short notice, results in massive fluctuations in gross direct investment flows.

Transactions under the heading *active direct investment* led to net capital exports of nearly ATS 8 billion in the first quarter of 1998, with new participations abroad accounting for some ATS 6 billion net, reinvested earnings for almost ATS 2 billion and purchases of premises as well as credit repayments for a negligible amount.

Austrian direct investment abroad, in particular in the sectors food, tobacco and credit institutions, came to a transaction value of slightly more than ATS 6 billion, which exceeds the quarterly averages of the period 1995 to 1997 by around ATS 2 billion. 65% of total Austrian direct investment went into the European Union. Preliminary estimates for 1998 suggest rising corporate earnings for Austrian investors by comparison with the years before. Based on these calculations, reinvested earnings came to almost ATS 2 billion in the first quarter of 1998.

In the same period, transactions in connection with *inward direct investment* closed with capital imports of somewhat more than ATS 11.5 billion, with new participations accounting for about ATS 3.5 billion, sales

of premises for ATS 0.5 billion, reinvested earnings for approximately ATS 5 billion and credits between affiliated enterprises for ATS 2.5 billion.

Nonresidents' direct investment in Austrian enterprises – in particular in the sectors chemicals and telecommunications – expanded by close to ATS 4 billion, with EU enterprises accounting for some 85% of total direct investment. Since earnings in 1998 will very likely be almost as high as in the previous year, calculations show reinvested earnings at slightly more than ATS 5 billion in the first quarter of 1998.

### 2.2.2 Portfolio Investment

Portfolio investment on a transaction basis covers purchases and sales without accrued interest as well as interest claims from securities investment calculated for the respective period.

*Purchases by domestic investors* including accrued interest claims from securities investment came to a bit less than ATS 52 billion in the first quarter of 1998, marking the continuation of the trend towards a massive acquisition of foreign securities that had begun in 1996 and 1997 (annual results: about ATS 86 billion and ATS 122 billion, respectively). Most of the investors chose bonds including registered bonds – primarily government securities denominated in DEM and USD – as well as listed stocks. It should also be pointed out that German Pfandbriefe play an increasingly important role in investment strategies. Investors' pronounced interest in stocks has not ebbed, with purchases totaling around ATS 10.5 billion in the reporting period and concentrating on German and U.S. stocks. Total investment in equity securities (stocks, investment certificates) came to almost ATS 14 billion in the first quarter of 1998.

The sum total of *nonresidents' net purchases of domestic securities* and accrued interest claims amounted to roughly ATS 61 billion in the first quarter of 1998. This means that nonresidents also continued to make large cross-border purchases of securities, which echoes the development on the assets side (annual results for 1996 and 1997: approximately ATS 59 billion and ATS 137 billion, respectively). Long-term debt securities, which have traditionally held a very strong appeal for nonresidents, accounted for almost ATS 63 billion in the review period. Public sector bonds met with very strong interest (ATS 30 billion), in particular the 1998 issues launched by the Republic of Austria. Moreover, foreign investors acquired long-term bank issues (transaction value including accrued interest claims: ATS 32 billion), whereas net redemptions of domestic banks' money market paper caused the item domestic money market instruments to post net capital exports to the amount of ATS 14.5 billion.

With a total sales volume of some ATS 8 billion, domestic stocks found only hesitant buyers abroad. A package of Bank Austria common stock, which was sold abroad in February, accounted for the biggest share by far in foreign investors' total purchases.

The difference between the acquisition and disposal of *financial derivatives* resulted in total net capital imports of almost ATS 2 billion.

### 2.2.3 Other Investment

The capital flows recorded under the heading other investment are dominated by short-term bank deposits and loans, with a marked expansion noticeable by comparison to the analogous quarters of previous years (assets side: approx. ATS 54 billion net; liabilities side: approx. ATS 58.5 billion net). Domestic banks' assets and liabilities rose primarily vis-à-vis foreign banks, above all from the United Kingdom.

Furthermore, the Republic of Austria conducted short-term cash raising operations abroad, which amounted to somewhat more than ATS 6 billion.

On balance, capital flows on the assets and liabilities sides of the subitem *other investment* practically offset each other in the first quarter of 1998.

### 2.2.4 Official Reserves

The balance of payments encompasses only the transaction-related inflows and outflows of changes in the volume of official reserves. Any comparison with net stock changes is therefore only of limited value.

In the first quarter of 1998, official reserves augmented by nearly ATS 7 billion, primarily as a result of time deposit transactions and an IMF quota increase.

## Tables

Table 1

### Summary

| | 1st quarter 1997[1]) | 1st quarter 1998[1]) | Annual change |
|---|---|---|---|
| | *ATS million* | | |
| **Current account** | − 1,542 | + 1,192 | + 2,734 |
| **Goods, services and income** | + 3,197 | + 8,675 | + 5,478 |
| **Goods and services** | + 4,307 | +10,993 | + 6,686 |
| **Goods** | −18,848 | −12,910 | + 5,938 |
| **Services** | +23,155 | +23,903 | + 748 |
| *thereof:* | | | |
| *Travel* | *+19,055* | *+19,651* | *+ 596* |
| *Construction services* | *+ 392* | *+ 955* | *+ 563* |
| *Financial services* | *+ 164* | *− 276* | *− 440* |
| *Royalties and license fees* | *− 1,711* | *− 2,641* | *− 930* |
| *Other business services* | *+ 80* | *+ 5,080* | *+ 5,000* |
| *Government services, n.i.e.* | *+ 1,457* | *+ 1,273* | *− 184* |
| *Unclassified transactions* | *+ 1,391* | *− 3,214* | *− 4,605* |
| **Income** | − 1,110 | − 2,318 | − 1,208 |
| Compensation of employees | + 1,716 | + 1,726 | + 10 |
| Investment income | − 2,826 | − 4,044 | − 1,218 |
| **Current transfers** | − 4,739 | − 7,483 | − 2,744 |
| General government | − 4,562 | − 5,713 | − 1,151 |
| Private sector | − 177 | − 1,770 | − 1,593 |
| **Capital and Financial Account** | + 1,597 | + 6,599 | + 5,002 |
| **Capital account** | + 1,072 | − 77 | − 1,149 |
| *thereof:* | | | |
| *General government* | *+ 353* | *+ 240* | *− 113* |
| *Private sector* | *+ 563* | *− 317* | *− 880* |
| **Financial account** | + 525 | + 6,676 | + 6,151 |
| Direct investment | + 838 | + 3,822 | + 2,984 |
| Portfolio investment | − 7,316 | + 9,191 | +16,507 |
| Other investment | −13,417 | + 592 | +14,009 |
| Official reserves[2]) | +20,420 | − 6,929 | −27,349 |
| **Errors and omissions** | − 55 | − 7,791 | − 7,736 |

*Source: OeNB.*

*[1]) Provisional figures.*

*[2]) OeNB: gold, foreign exchange, reserve position in the IMF, Special Drawing Rights, etc; increase: - / decrease: +.*

Table 2

### Merchandise trade according to foreign trade statistics

**By country groups**

| | 1st quarter 1998 | | | | | |
|---|---|---|---|---|---|---|
| | Exports | | Imports | | Balance | |
| | Annual change | Share in total exports | Annual change | Share in total imports | | Annual change |
| | % | | | | *ATS million* | |
| OECD | +17.1 | 81.8 | + 9.9 | 84.8 | −21,085 | + 6,243 |
| EU | + 9.3 | 64.1 | + 4.3 | 68.3 | −20,281 | + 4,170 |
| EMU | +10.2 | 57.8 | + 4.8 | 63.2 | −21,490 | + 3,858 |
| *thereof:* | | | | | | |
| *Germany* | *+10.4* | *36.4* | *+ 4.5* | *40.6* | *−15,201* | *+ 2,615* |
| *Italy* | *+15.5* | *8.9* | *+ 0.1* | *8.2* | *− 312* | *+ 2,110* |
| *France* | *+ 0.0* | *4.2* | *+15.5* | *5.4* | *− 3,104* | *− 1,427* |
| Central- and Eastern Europe[1]) | +12.3 | 12.3 | +18.4 | 11.9 | + 6,081 | − 427 |
| U.S.A. | +34.2 | 4.1 | + 7.2 | 0.4 | − 2,707 | + 1,179 |
| Japan | −31.5 | 0.8 | + 0.2 | 2.3 | − 2,991 | − 682 |
| Total | + 9.9 | 100.0 | + 5.7 | 100.0 | −18,683 | + 5,503 |

*Source: ÖSTAT.*

*[1]) Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Ukraine, Belarus, Moldova, Russia, Armenia, Azerbaijan, Kazakstan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyz Republic; Romania, Bulgaria, Albania, Georgia, Slovenia, Croatia, Bosnia and Herzegovina, Serbia/Montenegro, Former Yugoslav Republic of Macedonia.*

Table 3

## Merchandise trade according to foreign trade statistics

### By product categories

| | Exports | | | Imports | | | Balance | |
|---|---|---|---|---|---|---|---|---|
| | 1st quarter 1998 | Annual change | | 1st quarter 1998 | Annual change | | 1st quarter 1998 | Annual change |
| | *ATS million* | | % | *ATS million* | | % | *ATS million* | |
| Food | 6,796 | + 233 | + 4 | 10,324 | − 268 | − 3 | − 3,528 | + 500 |
| Raw materials | 7,938 | + 388 | + 5 | 17,299 | − 34 | − 0 | − 9,361 | + 423 |
| *thereof: fuels (SITC 3)* | *1,645* | *− 30* | *− 2* | *9,130* | *− 829* | *− 8* | *− 7,485* | *+ 800* |
| Semi-manufactured goods | 29,017 | + 4,070 | +16 | 28,265 | +3 ,553 | +14 | + 752 | + 517 |
| Manufactured goods | 134,348 | +10,557 | + 9 | 140,020 | + 5,641 | + 4 | − 5,672 | +4,917 |
| Capital goods | 45,969 | + 4,841 | +12 | 43,247 | + 2,526 | + 6 | + 2,722 | +2,316 |
| Consumer goods | 88,379 | + 5,716 | + 7 | 96,773 | + 3,115 | + 3 | − 8,394 | +2,601 |
| Other manufactured goods | 894 | × | × | 1,766 | × | × | − 872 | × |
| Total | 178,993 | +16,099 | +10 | 197,675 | +10,595 | + 6 | −18,682 | +5,504 |

*Source: ÖSTAT.*

Table 4

## Travel and international passenger transport

| | 1st quarter 1997[1]) | 1st quarter 1998[1]) | Annual change | |
|---|---|---|---|---|
| | *ATS million* | | % | |
| **Travel** | | | | |
| Receipts | 42,633 | 42,565 | − 68 | − 0.2 |
| Expenditures | 23,578 | 22,914 | − 664 | − 2.8 |
| Balance | 19,055 | 19,651 | + 596 | + 3.1 |
| **International passenger transport** | | | | |
| Receipts | 3,204 | 4,681 | +1,477 | +46.1 |
| Expenditures | 1,373 | 2,443 | +1,070 | +77.9 |
| Balance | 1,831 | 2,238 | + 407 | +22.2 |
| | *in 1,000* | | % | |
| Foreign tourist bednights | 27,053 | 25,318 | −1,735 | − 6.4 |

*Source: ÖSTAT, OeNB.*

*[1]) Provisional figures.*

Table 5

## Foreign tourist bednights in Austria by country of origin

| | 1st quarter 1998 | | | |
|---|---|---|---|---|
| | Tourist bednights | Annual change | | Share |
| | *in 1,000* | | % | |
| Germany | 16,013 | −1,704 | − 9.6 | 63.2 |
| Netherlands | 3,097 | − 261 | − 7.8 | 12.2 |
| United Kingdom | 853 | + 51 | + 6.4 | 3.4 |
| Belgium, Luxembourg | 743 | − 158 | −17.6 | 2.9 |
| Switzerland, Liechtenstein | 795 | − 42 | − 5.0 | 3.1 |
| Sweden | 264 | + 4 | + 1.5 | 1.0 |
| France | 419 | − 10 | − 2.4 | 1.7 |
| Italy | 401 | + 35 | + 9.6 | 1.6 |
| Spain | 48 | − 1 | − 1.3 | 0.2 |
| Finland | 55 | + 4 | + 7.0 | 0.2 |
| U.S.A. | 215 | + 13 | + 6.6 | 0.8 |
| Japan | 80 | + 2 | + 2.0 | 0.3 |
| Hungary | 240 | + 17 | + 7.7 | 0.9 |
| Slovakia | 50 | + 18 | +57.1 | 0.2 |
| Czech Republic | 261 | + 47 | +21.9 | 1.0 |
| Poland | 377 | + 73 | +24.2 | 1.5 |
| Commonwealth of Independent States | 144 | + 38 | +36.0 | 0.6 |
| Slovenia | 111 | − 4 | − 3.3 | 0.4 |
| Croatia | 142 | + 20 | +16.0 | 0.6 |
| Other countries | 1,011 | + 122 | +13.7 | 4.0 |
| Total | 25,318 | −1,735 | − 6.4 | 100.0 |
| *Memorandum item: Austrian tourists* | *7,364* | *+16* | *+0.2* | *x* |

*Source: ÖSTAT.*

Table 6

## Financial account including change in official reserves

| | 1997[1]) | 4th quarter 1997[1]) | 1st quarter 1998[1]) |
|---|---|---|---|
| | *Net values in ATS million* | | |
| **Financial Account** | + 54,120 | +16,565 | + 6,676 |
| **Direct investment** | + 6,813 | + 8,061 | + 3,822 |
| Austrian direct investment abroad | − 23,406 | − 6,697 | − 7,837 |
| Foreign direct investment in Austria | + 30,219 | +14,758 | +11,659 |
| **Portfolio investment** | + 14,593 | +22,787 | + 9,191 |
| Portfolio investment in foreign securities | −122,267 | + 9,141 | −51,913 |
| Equity securities | − 29,334 | + 20 | −13,750 |
| Long-term debt securities | − 94,937 | + 9,378 | −36,184 |
| Money market instruments | + 4,352 | + 1,279 | − 3,222 |
| Financial derivatives | − 2,348 | − 1,536 | + 1,243 |
| Portfolio investment in domestic securities | +136,860 | +13,646 | +61,104 |
| Equity securities | + 32,028 | + 5,944 | +12,183 |
| Long-term debt securities | + 86,771 | − 2,594 | +62,768 |
| Money market instruments | + 15,209 | + 6,702 | −14,352 |
| Financial derivatives | + 2,852 | + 3,594 | + 505 |
| **Other investment** | − 3,171 | −29,604 | + 592 |
| Assets | − 56,793 | + 618 | −59,931 |
| Trade credits | + 6,000 | + 2,000 | + 100 |
| Loans | − 51,933 | −21,411 | −26,560 |
| Sight and time deposits | + 16,006 | +19,246 | −36,168 |
| Other assets | − 26,866 | + 783 | + 2,697 |
| Liabilities | + 53,622 | −30,222 | +60,523 |
| Trade credits | − 4,000 | − 750 | − 1,500 |
| Loans | − 5,222 | − 6,810 | + 5,447 |
| Sight and time deposits | + 65,798 | −17,930 | +55,813 |
| Other liabilities | − 2,954 | − 4,732 | + 763 |
| **Official reserves[2])** | + 35,885 | +15,321 | − 6,929 |

*Source: OeNB.*

*[1]) Provisional figures.*

*[2]) OeNB: gold, foreign exchange, reserve position in the IMF, Special Drawing Rights, etc; increase: - / decrease: +.*

# Austrian Outward and Inward Direct Investment in 1996: Stocks at Year End

This paper sums up the main results of the OeNB's survey of Austria's direct investment position at the end of 1996, focusing on a number of key indicators defined in issue 4/1995 of the OeNB's "Reports and Summaries," for which it provides updates. The full report, with survey results disaggregated by regions and sectors, forms a supplement to this issue of "Focus on Austria."

## Review of 1996 and Outlook

The most recent direct investment survey, for which year-end 1996 positions were compiled and evaluated, shows the stock of Austrian direct investment abroad at ATS 136.4 billion, and foreign direct investment (FDI) stocks in Austria at ATS 195.9 billion. Ultimately, the figures on cross-border investment were just marginally lower than the latest projections had anticipated.

In a reversal of the trend displayed in 1995, Austrian direct investment stocks abroad rose faster (16%) than FDI stocks in Austria (almost 11%), with the various subcomponents mirroring the overall growth dichotomy between outward and inward direct investment. The respective growth rates were 17 and 4% for nominal capital, and 18 and 14% for total equity held in direct investment enterprises (i.e. nominal capital plus reserves and reinvested earnings). By the same token, intercompany loans between affiliated enterprises expanded ATS 1 billion on the outward direct investment side while they contracted almost ATS 4 billion on the inward direct investment side. Measured against the growth pattern established over the preceding years, Austrian direct investment abroad, while not as buoyant as at the beginning of the 1990s, gained fresh momentum in 1995 and rebounded yet more strongly in 1996 after having hit bottom in 1994. The expansion of FDI volumes in Austria in 1996, by contrast, did not keep up the quickened pace of 1995; at 10.8%, it slipped back to the average growth rate of the 1990s.

To put the book values reflected in the direct investment survey in perspective, the OeNB has been calculating the hypothetic market values of the direct investment interests disclosed since the beginning of the 1990s, based on a model that extrapolates the market value of direct investment positions from the direct investment income earned.[1]) For 1996, the relation between the book value (i.e. equity shown in the books) and the market value of cross-border direct investment stocks remained unchanged from 1995 for both outward and inward direct investment: The equity market value of Austrian direct investment abroad by relation to its equity book value yielded a factor of 0.96, which means that Austrian equity capital held in direct investment enterprises abroad is more or less marked to market. By contrast, the hypothetic market value of FDI interests in Austrian affiliates exceeded the equity shown in the books by 60%.

The gap between Austrian outward and inward direct investment, which had widened in 1995, narrowed somewhat in 1996. The stock of total equity injected by Austrian direct investors into foreign affiliates corresponded to roughly 62% of nonresidents' total equity holdings in Austrian affiliates. A rough estimate for 1997 based on cross-border direct investment flows

during the year suggests that the growth dichotomy apparent in 1996 shrank or perhaps even disappeared completely. On balance, the ratio of outward to inward stocks ought thus have remained at the 1996 level in 1997.

### Geographical Distribution

Contrary to the preceding years, the further expansion of outward direct investment in 1996 was not accompanied by a further shift of investor interest among the two major target regions of Austrian direct investors. Virtually unchanged from 1995, EU Member States and Eastern European countries received 46 and 29% of Austrian direct investments, respectively. In 1997, however, the Eastern European region is expected to have attracted more Austrian capital, at the expense of the EU area. Within Eastern Europe, investor interest concentrated less on the traditionally important recipient Hungary and more on other locations in the area (such as the Czech Republic, Slovakia, Slovenia and Poland). Whereas the 1996 statistics showed the stocks of Austrian direct investment in Switzerland, Liechtenstein, the U.S.A. and Canada stagnating at previous years' levels, they also signaled a newly emerging structural trend of investment in offshore financial centers.[2])

On the inward direct investment side, too, the strong ties between the Austrian economy and the single market economies are reflected by the predominance of the EU region, Germany in particular, among the ranks of foreign direct investors in Austria. In 1996, EU countries accounted for almost 68% of Austria's FDI stock, and in 1997 the EU share is expected to have risen to over 70%. EU residents raised their direct investments in Austria by ATS 14 billion in 1996, with ATS 10 billion coming from Germany alone. Direct investment interests of Swiss and Liechtenstein investors in Austrian affiliates have been stagnating for years, while investments from the U.S.A. and Canada have been on the up again since 1994. As in the past, Austrian affiliates of Eastern European direct investors played a minor role. The share of inward investment from other regions, which doubled in 1994, has since dropped below the 1994 figure.

### Income and Return on Equity

The 1996 direct investment survey confirmed that the profit situation of foreign affiliates of Austrian direct investors, which had improved over the past few years, kept on track also in 1996. Affiliates in practically all regions targeted by Austrian investors posted better annual results. Overall, Austrian direct investment enterprises abroad closed the year with an annual profit of ATS 6.7 billion, which is an appreciable rise on 1995 and a historic peak. Four fifths of this amount were earned – in practically equal parts – in the EU Member States (excluding Germany), Switzerland and Liechtenstein, Hungary, and offshore financial centers. Most regions meanwhile carried forward high cumulative losses, though, with the losses even expanding in some cases. Switzerland and Liechtenstein were the only recipients of Austrian direct investments that posted both annual profits and positive carryovers. Notwithstanding the fact that the overall loss carried forward was higher in 1996 than in 1995, retained earnings (–ATS 2 billion), which

consist of the annual result plus the carryover, improved roughly ATS 4 billion over the 1995 result.

On the inward direct investment side, affiliates of German and American parent groups were the only ones whose earnings situation kept improving. The slump in the annual result of EU investors' affiliates (excluding Germany) caused the profit for the year to contract by ATS 3 billion to some ATS 19 billion on balance. Moreover, there continues to be a distinct "inward-outward divide" when it comes to return on equity: Total FDI equity stakes in Austrian affiliates, being some 60% higher than Austrian direct investors' equity holdings abroad, earned three times the annual profit of the latter. Since profit and loss carried forward by Austrian affiliates of foreign direct investors roughly canceled each other out as in recent years, retained earnings (some ATS 2.5 billion lower than 1995) were more or less on a par with the profit for the year, same as 1995.

Key ratios calculated for individual enterprises confirm that the surge in the aggregate profit for the year of Austrian direct investment enterprises abroad in 1996 was indeed carried by a rise in the return on equity of most affiliates. One gauge for the better performance is the median productivity of Austrian direct investors' foreign affiliates, which has been augmenting continually since 1993 and which edged up some 2 percentage points to 3.1% in 1996. While this figure is put in perspective somewhat by the concurrent drop in the equity ratio (which, in a purely arithmetic comparison, pushes up annual profit by relation to equity capital), the fact that the return on sales in the manufacturing industry[3]) likewise jumped from 0.6 to 1.4% confirms that the profitability of outward direct investment did indeed improve.

On the outward direct investment side, profitability continued to be highly correlated with the age structure of the individual direct investment enterprises also in 1996: On average, foreign affiliates that have been operating for more than four years had a significantly higher return on equity and on sales than their younger counterparts. However, unless a new investment boom were to occur, the annual results will be distorted less and less in the years to come by the start-up losses of new undertakings. Already in 1996 almost half of the foreign affiliates of Austrian direct investors were mature enterprises, compared with just 40% in 1995. By contrast, the age structure correlates negatively with the degree of external financing: Older affiliates tend to have a lower equity ratio than younger ones.

Improved profitability went hand in hand with higher productivity rates. Sales per employee, which had been expanding continually over the past few years, accelerated appreciably in 1996: At ATS 1.2 million, median sales per employee in the manufacturing industry were 12% up on the 1995 figure. While the median productivity of older affiliates dropped in 1996, younger affiliates again posted a massive surge of productivity with a plus of 23% year on year.

Turning to inward direct investment, the overall decline in retained earnings can be traced to a worsening of the profit situation of the individual enterprises. Following two years of rising profits, the median return on equity of inward direct investment in Austria dropped from 5.9 to 4.2%,

a development which can hardly be explained by the slight rise in the equity ratio alone.

One would expect enterprises that have been operating for more than four years to have a lower return on equity because they have a higher equity ratio. Quite to the contrary, the survey found older enterprises to have outperformed their younger counterparts by a wide margin in 1996, with a profitability rate of 6% for the former against 0% for the latter. Compared with 1995, the profitability of the more mature enterprises did decline by roughly 2 percentage points, though.

Since the Austrian affiliates of foreign direct investors operate within a relatively homogeneous macroeconomic framework, one can argue that the decline in profit appears to have been cyclically induced, just like the drop in the return on sales in the manufacturing industry, which slipped from a peak of 2.1% in 1994 to 1.3% in 1996. More mature enterprises, incidentally, tended to be hit less hard than younger ones.

However, the fact that some three thirds of foreign direct investment enterprises in Austria are older than four years is proof that, on the inward investment side, overall profitability correlates less with the age structure than on the outward investment side.

Following a series of continual industrial productivity gains, sales per employee stagnated in 1996 on the 1995 level. Only enterprises that had been in operation for more than four years posted a slight productivity increase of 2%. As in the past, Austrian affiliates of foreign investors were much more homogeneous across the age spectrum in terms of productivity than Austrian direct investment enterprises abroad.

### Impact on Employment

In 1990 Austrian direct investors employed 260,000 people within Austrian boundaries. This compares with a rise to slightly less than 350,000 by 1995 during the outward direct investment boom. While this expansion can be primarily traced to a swelling of the ranks of investing enterprises over the years, the reduction by some 40,000 employees in 1996 did not result from a decline in the number of investors (which remained virtually the same), but was above all due to the fact that a single major company in the transport sector shed its foreign affiliates. On average, Austrian direct investors employed 284,000 people in Austria, of which 177,000 worked in the manufacturing industry[4]) and 107,000 in service jobs, thus accounting for slightly less than 9.5% of all Austrian employees. At 19%, the share of the manufacturing industry was somewhat higher in 1996 than in 1995.

The recent increase in the number of people employed with the foreign affiliates of Austrian direct investors was even more pronounced; the respective job figure rose more than threefold between 1990 and 1996. Weighted for the investors' nominal capital share, 135,500 people were on the payroll of foreign affiliates, 88,500 thereof in the manufacturing industry (i.e. almost twice as much in the manufacturing industry as in the service industry).

In 1996, for every 100 people dependently employed in the domestic manufacturing industry another 50 people were on the payroll of Austrian

direct investors' affiliates abroad. The sum total of employees, and the number of service sector employees, plummeted on account of the abovementioned shedding of affiliates by a single big employer. The ensuing shift in the ratio of domestic employees to nonresident employees toward the latter must be seen with this development in mind. The new benchmark for the ratio of jobs in Austria to jobs abroad is 100:48 for the industry total and 100:44 for the service industry alone.

Turning to inward direct investment, the sum total of residents hired by nonresident investors' Austrian affiliates rose but slightly to somewhat below 212,000. Both in the manufacturing industry and in the service sector the number of foreign-controlled jobs augmented marginally to 119,000 and 93,000, respectively.

Compared with the overall number of dependently employed people in Austria this means that – as in the past few years – slightly less than 7% of all Austrian jobs were directly influenced by nonresident investors. In the manufacturing industry, this factor was roughly 13%, and in the service sector 4.5%. These calculations merely cover the first tier of direct investment enterprises, in other words employees in nonresident investors' indirectly owned direct investment enterprises do not figure in this sum. If the (weighted) number of employees of indirectly owned direct investment enterprises of 80,500 is factored in, the share of foreign-controlled Austrian jobs rises to 9.5%.

*1) For more detailed information on the method of calculation, see the paper on the "The Concept of Market Value in Austrian Direct Investment Statistics" published in issue 4/1995 of the OeNB's "Reports and Summaries."*

*2) The offshore centers which are attracting Austrian direct investment capital are located in Europe and, above all, in the Caribbean area (see the direct investment supplement to the Statistisches Monatsheft, 6/1997).*

*3) In order to keep the time series on which the calculation of the key ratios for the manufacturing industry is based consistent, individual enterprises were classified according to the system employed until 1994 also for the years 1995 and 1996.*

*4) The classification by sectors is based on the Austrian Statistical Classification of Economic Activities (ÖNACE). For the purpose of the survey, the sectors corresponding to ÖNACE sections C to F have been aggregated further. Back calculations for the years prior to 1995 are not available at present.*

Table 1

## Cross-Border Direct Investment Stocks

| | Austrian direct investment stocks abroad | | | | | | | Foreign direct investment stocks in austria | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[1]) | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[1]) |
| | *ATS billion* | | | | | | | | | | | | | |
| Nominal capital | 38.5 | 45.4 | 60.4 | 64.2 | 71.4 | 83.2 | 95 | 58.3 | 60.9 | 62.5 | 64.5 | 71.5 | 74.5 | 85 |
| *Annual change in %* | *35.5* | *18.0* | *33.2* | *6.2* | *11.3* | *16.5* | *14.2* | *5.7* | *4.4* | *2.7* | *3.1* | *10.9* | *4.1* | *14.1* |
| Other equity | 12.7 | 17.6 | 17.4 | 19.8 | 23.9 | 29.4 | 33 | 47.5 | 52.9 | 55.0 | 60.0 | 86.9 | 106.6 | 120 |
| *Annual change in %* | *10.3* | *39.2* | *– 1.1* | *13.6* | *20.6* | *23.0* | *12.4* | *6.7* | *11.4* | *3.9* | *9.0* | *44.9* | *22.7* | *12.6* |
| Total equity | 51.1 | 63.0 | 77.8 | 84.0 | 95.3 | 112.6 | 128 | 105.9 | 113.8 | 117.5 | 124.5 | 158.4 | 181.0 | 205 |
| *Annual change in %* | *28.2* | *23.3* | *23.6* | *7.9* | *13.5* | *18.1* | *13.7* | *6.0* | *7.5* | *3.3* | *5.9* | *27.3* | *14.3* | *13.2* |
| Intercompany loans | 13.4 | 14.9 | 20.6 | 19.0 | 22.8 | 23.8 | 27 | 4.9 | 13.4 | 20.6 | 20.8 | 18.5 | 14.9 | 15 |
| Total | 64.5 | 77.9 | 98.5 | 103.0 | 118.0 | 136.4 | 155 | 110.8 | 127.3 | 138.1 | 145.3 | 176.9 | 195.9 | 220 |
| *Annual change in %* | *34.2* | *20.9* | *26.4* | *4.6* | *14.6* | *15.5* | *13.7* | *4.0* | *14.8* | *8.5* | *5.2* | *21.8* | *10.8* | *12.3* |
| EU 15 (excl. Germany)[2]) | 20.7 | 22.8 | 29.5 | 28.6 | 31.7 | 35.3 | 36 | 28.7 | 33.2 | 35.8 | 36.6 | 44.7 | 47.5 | 59 |
| Germany | 15.6 | 19.5 | 20.9 | 18.1 | 23.1 | 27.3 | 30 | 41.7 | 47.4 | 51.1 | 50.6 | 74.4 | 85.2 | 98 |
| Switzerland, Liechtenstein | 9.3 | 9.7 | 10.3 | 11.6 | 11.3 | 11.1 | 12 | 18.5 | 23.2 | 23.3 | 25.9 | 27.2 | 25.7 | 28 |
| Eastern Europe (excl. Hungary) | 2.7 | 5.7 | 9.8 | 14.8 | 17.7 | 22.5 | 29 | 1.0 | 1.0 | 1.3 | 2.3 | 2.4 | 2.9 | 3 |
| Hungary | 8.6 | 12.3 | 16.4 | 17.7 | 16.0 | 17.0 | 20 | 0.3 | 0.8 | 0.6 | 0.5 | 0.5 | 0.6 | 1 |
| U.S.A., Canada | 5.0 | 5.0 | 7.3 | 7.2 | 8.1 | 8.4 | 9 | 12.0 | 14.6 | 16.1 | 9.8 | 11.7 | 15.3 | 14 |
| Other countries | 2.5 | 3.0 | 4.2 | 4.9 | 10.1 | 14.8 | 19 | 8.6 | 7.2 | 9.9 | 19.5 | 16.0 | 18.7 | 18 |
| Market value | 46.6 | 56.0 | 70.5 | 72.7 | 91.7 | 108.2 | x | 174.8 | 170.8 | 179.9 | 194.5 | 253.3 | 293.0 | x |
| *Annual change in %* | *x* | *20.2* | *25.9* | *3.1* | *26.2* | *18.0* | *x* | *x* | *– 2.3* | *5.3* | *8.1* | *30.2* | *15.7* | *x* |
| *By relation to total equity* | *0.91* | *0.89* | *0.90* | *0.87* | *0.96* | *0.96* | *x* | *1.65* | *1.50* | *1.53* | *1.56* | *1.60* | *1.62* | *x* |

*Source: OeNB.*
[1]) *Estimate.*
[2]) *Members as in 1996.*

Table 2.1

## Profit Situation of Austrian Direct Investors' Foreign Affiliates by regions

| | Foreign affiliates' share of | | | | | |
|---|---|---|---|---|---|---|
| | Retained earnings | | Profit/loss carried forward | | Profit/loss for the year | |
| | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 |
| | *ATS billion* | | | | | |
| EU 15 (excl. Germany) | −0.7 | 0.4 | −1.0 | −1.4 | 0.3 | 1.8 |
| Germany | −4.6 | −4.2 | −4.8 | −4.8 | 0.1 | 0.6 |
| Switzerland and Liechtenstein | 3.7 | 4.4 | 2.9 | 3.3 | 0.8 | 1.1 |
| Eastern Europe (excl. Hungary) | −1.9 | −1.3 | −1.5 | −1.9 | −0.4 | 0.6 |
| Hungary | −1.4 | −1.1 | −1.5 | −2.5 | 0.0 | 1.4 |
| U.S.A. and Canada | −1.9 | −2.3 | −1.8 | −2.3 | −0.1 | −0.1 |
| Other countries | 0.7 | 2.1 | 0.2 | 0.9 | 0.5 | 1.3 |
| Total | −6.2 | −2.0 | −7.5 | −8.7 | 1.3 | 6.7 |

*Source: OeNB.*

Table 2.2

## Profit Situation of Foreign Direct Investors' Austrian Affiliates

by regions

| | Austrian affiliates' share of | | | | | |
|---|---|---|---|---|---|---|
| | Retained earnings | | Profit/loss carried forward | | Profit/loss for the year | |
| | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 |
| | *ATS billion* | | | | | |
| EU 15 (excl. Germany) | 5.5 | 2.4 | −0.2 | 0.5 | 5.6 | 1.8 |
| Germany | 11.9 | 12.6 | 2.9 | 2.0 | 9.0 | 10.6 |
| Switzerland and Liechtenstein | 1.1 | 0.9 | −1.3 | −0.8 | 2.4 | 1.7 |
| Eastern Europe (excl. Hungary) | − 0.2 | − 0.1 | −0.2 | −0.1 | 0.0 | 0.0 |
| Hungary | 0.0 | 0.0 | −0.1 | 0.0 | 0.0 | 0.0 |
| U.S.A. and Canada | 4.7 | 4.6 | 0.3 | −0.2 | 4.5 | 4.8 |
| Other countries | − 1.0 | − 0.7 | −1.5 | −0.8 | 0.5 | 0.1 |
| Total | 22.0 | 19.7 | −0.1 | 0.6 | 22.1 | 19.1 |

*Source: OeNB.*

Table 3.1

## Outward Direct Investment Performance Indicators

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1996 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Age of DI enterprise | |
| | % | | | | | | *< 5 years* | *≥ 5 years* |
| **Total** | | | | | | | | |
| **Return on equity[1])** | | | | | | | | |
| Top percentile | 34.2 | 33.9 | 31.9 | 35.7 | 42.9 | 52.5 | 47.8 | 63.5 |
| Top quartile | 10.7 | 10.0 | 10.0 | 13.5 | 14.2 | 18.2 | 15.6 | 21.0 |
| Median | 0.0 | 0.0 | 0.0 | 0.7 | 1.0 | 3.1 | 0.2 | 5.9 |
| Lower quartile | − 6.6 | − 9.8 | −13.0 | −10.2 | − 9.2 | − 5.1 | −10.0 | 0.0 |
| Lower percentile | −40.2 | −47.1 | −55.7 | −52.2 | −52.5 | −34.6 | −43.8 | −25.2 |
| **Equity ratio[2])** | | | | | | | | |
| Top percentile | 93.5 | 91.5 | 92.9 | 95.5 | 92.7 | 93.7 | 96.6 | 89.4 |
| Top quartile | 67.3 | 64.8 | 68.1 | 68.4 | 63.2 | 62.4 | 66.1 | 57.9 |
| Median | 32.1 | 31.6 | 34.6 | 32.1 | 31.3 | 28.8 | 32.1 | 25.5 |
| Lower quartile | 13.9 | 12.6 | 13.1 | 12.0 | 12.0 | 11.4 | 12.1 | 10.3 |
| Lower percentile | 4.3 | 2.8 | 3.6 | 2.6 | 2.4 | 1.3 | 2.6 | 0.7 |
| *Number of enterprises* | *1,188* | *1,290* | *1,495* | *1,617* | *1,718* | *1,810* | *958* | *852* |
| **Industry** | | | | | | | | |
| **Return on sales[3])** | | | | | | | | |
| Top percentile | 10.9 | 8.8 | 10.8 | 10.9 | 9.5 | 12.0 | 13.3 | 11.6 |
| Top quartile | 3.7 | 2.8 | 4.3 | 4.9 | 4.4 | 5.8 | 5.4 | 6.1 |
| Median | 0.1 | 0.0 | 0.0 | 0.6 | 0.6 | 1.4 | 1.0 | 1.8 |
| Lower quartile | − 4.0 | − 7.3 | − 7.2 | − 4.8 | − 3.7 | − 1.6 | − 4.0 | 0.0 |
| Lower percentile | −26.6 | −42.7 | −39.3 | −27.0 | −22.6 | −16.2 | −28.8 | − 6.8 |
| | *ATS million* | | | | | | | |
| **Productivity[4])** | | | | | | | | |
| Top percentile | 5.4 | 5.7 | 5.2 | 4.7 | 5.6 | 5.1 | 3.7 | 9.1 |
| Top quartile | 2.2 | 2.5 | 2.5 | 2.4 | 2.5 | 2.6 | 2.1 | 3.5 |
| Median | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.0 | 1.7 |
| *Annual change in %* | *−13* | *8* | *− 1* | *1* | *3* | *12* | *23* | *− 6* |
| Lower quartile | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 3.9 | 0.7 |
| Lower percentile | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 1.3 | 0.2 |
| *Number of enterprises* | *424* | *464* | *526* | *581* | *621* | *673* | *372* | *301* |

*Source: OeNB.*

*[1]) Profit or loss for the year as a percentage of equity.*

*[2]) Equity as a percentage of total assets.*

*[3]) Profit or loss for the year as a percentage of the return on sales.*

*[4]) Sales per employee.*

Table 3.2

## Inward Direct Investment Performance Indicators

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1996 | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Age of DI enterprise | |
| | % | | | | | | *< 5 years* | *≧ 5 years* |
| **Total** | | | | | | | | |
| **Return on equity[1])** | | | | | | | | |
| Top percentile | 61.7 | 47.5 | 54.8 | 79.4 | 81.5 | 65.8 | 51.9 | 70.0 |
| Top quartile | 25.9 | 19.6 | 19.0 | 26.7 | 27.1 | 22.6 | 10.1 | 26.0 |
| Median | 6.7 | 3.8 | 3.5 | 5.6 | 5.9 | 4.2 | 0.0 | 6.1 |
| Lower quartile | − 1.1 | − 6.7 | − 7.2 | − 4.0 | − 2.8 | − 5.6 | − 32.5 | − 0.8 |
| Lower percentile | −46.9 | −50.0 | −55.6 | −49.9 | −50.0 | −50.7 | −108.4 | −32.5 |
| **Equity ratio[2])** | | | | | | | | |
| Top percentile | 69.4 | 74.1 | 74.2 | 72.2 | 74.6 | 77.6 | 92.3 | 73.3 |
| Top quartile | 40.9 | 44.2 | 45.0 | 44.4 | 45.2 | 47.1 | 52.3 | 46.0 |
| Median | 21.2 | 23.9 | 22.5 | 21.5 | 22.7 | 23.4 | 21.1 | 24.3 |
| Lower quartile | 8.8 | 8.8 | 8.1 | 7.6 | 7.6 | 7.5 | 5.3 | 8.3 |
| Lower percentile | − 0.6 | − 3.6 | − 5.3 | − 6.3 | − 6.4 | − 7.5 | −10.8 | − 6.8 |
| *Number of enterprises* | *2,167* | *2,205* | *2205* | *2,205* | *2,262* | *2,362* | *571* | *1,791* |
| **Industry** | | | | | | | | |
| **Return on sales[3])** | | | | | | | | |
| Top percentile | 9.2 | 8.6 | 8.7 | 12.2 | 12.8 | 11.8 | 7.7 | 12.9 |
| Top quartile | 5.0 | 4.6 | 4.0 | 6.3 | 6.0 | 5.4 | 2.3 | 6.2 |
| Median | 1.8 | 1.2 | 1.2 | 2.1 | 1.7 | 1.3 | − 0.2 | 1.9 |
| Lower quartile | − 0.4 | − 1.5 | − 1.6 | − 0.9 | − 1.2 | − 1.0 | − 7.0 | − 0.2 |
| Lower percentile | −10.4 | −10.5 | − 9.7 | − 7.3 | − 8.3 | − 9.1 | −34.9 | − 6.0 |
| | *ATS million* | | | | | | | |
| **Productivity[4])** | | | | | | | | |
| Top percentile | 4.0 | 4.3 | 4.4 | 4.7 | 4.8 | 5.2 | 6.1 | 5.1 |
| Top quartile | 2.3 | 2.4 | 2.5 | 2.9 | 3.0 | 3.0 | 3.2 | 3.0 |
| Median | 1.5 | 1.6 | 1.7 | 1.8 | 2.0 | 2.0 | 1.8 | 2.0 |
| *Annual change* | *3* | *5* | *5* | *9* | *6* | *0* | *0* | *2* |
| Lower quartile | 1.1 | 1.1 | 1.2 | 1.2 | 1.3 | 1.3 | 1.2 | 1.4 |
| Lower percentile | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | 0.6 | 0.9 |
| *Number of enterprises* | *563* | *563* | *543* | *549* | *548* | *562* | *112* | *450* |

*Source: OeNB.*

*[1]) Profit or loss for the year as a percentage of equity.*

*[2]) Equity as a percentage of total assets.*

*[3]) Profit or loss for the year as a percentage of the return on sales.*

*[4]) Sales per employee.*

Table 4

## Direct Investment and Employment

| | 1990 | 1992 | 1995 | 1996 |
|---|---|---|---|---|
| | *Number of employees in 1,000* | | | |
| **Austrian direct investment abroad** | | | | |
| Employment at Austrian direct investors' enterprises | 260.8 | 346.3 | 346.6 | 284.0 |
| Manufacturing industry | x | x | 173.2 | 177.2 |
| Service industry | x | x | 173.4 | 106.8 |
| | % | | | |
| Share of total employment[1]) | 8.9 | 11.3 | 11.3 | 9.3 |
| Manufacturing industry | x | x | 18.3 | 19.2 |
| Service industry | x | x | 8.7 | 5.3 |
| | *Number of employees in 1,000* | | | |
| Employment at Austrian direct investors' foreign affiliates[1]) | 43.6 | 72.8 | 125.0 | 135.4 |
| Manufacturing industry | x | x | 83.6 | 88.4 |
| Service industry | x | x | 41.4 | 47.1 |
| *Ratio home country : host country employment* | *17* | *21* | *36* | *48* |
| *Manufacturing industry* | *x* | *x* | *48* | *50* |
| *Service industry* | *x* | *x* | *24* | *44* |
| **Foreign direct investment in Austria** | | | | |
| Employment at foreign direct investors' Austrian affiliates[1]) | 235.8 | 213.5 | 207.7 | 211.7 |
| Manufacturing industry | x | x | 116.3 | 118.9 |
| Service industry | x | x | 91.4 | 92.9 |
| | % | | | |
| Share of total employment[1]) | 8.1 | 7.0 | 6.8 | 6.9 |
| Manufacturing industry | x | x | 12.3 | 12.9 |
| Service industry | x | x | 4.6 | 4.6 |

*Source: OeNB, ÖSTAT.*

*[1]) Weighted for the (affiliate's) share of nominal capital.*

# STUDIES

# *Core Inflation in Selected European Union Countries*

Christine Gartner,
Gert Wehinger[1])

## 1 Introduction

The issue of how to measure inflation and, in particular, its underlying trend has attracted increasing attention in recent years. A major reason for this renewed interest is that a number of central banks, both inside and outside the European Union, have committed themselves to the use of direct inflation targets.[2]) The assessment of deviations of current and expected inflation from the target requires exact data on long-term influences on price levels. Deviations of current and expected inflation from the target can only be reliably assessed if volatile and temporary price influences are eliminated. The issue of distinguishing transitory from persistent price movements is also relevant for central banks in countries aiming for price stability with monetary policy frameworks other than inflation targeting. Alternative inflation indicators, especially those of underlying inflation, may cast light on the sustainability of a country's inflation performance.

An important limitation of commonly used inflation measures such as the Consumer Price Index (CPI) is their susceptibility to specific disturbances with no immediate link to the "pure" (or core) inflationary process. As a result, measured inflation may provide a misleading picture of the underlying price trends which are to be used in determining monetary policy.

In this study our main objective was to calculate and analyze two of the core inflation indicators most relevant to the ECB's single monetary policy for a group of selected European countries, using a model-based approach. The core inflation process is identified by means of a VAR (vector autoregression) technique based on assumptions about the long-term effect of factors determining inflation. The idea of splitting measured inflation into core and non-core components by this method goes back to Quah and Vahey (1995). The underlying inflation process is defined as driven by demand shocks. In recent years, several researchers have employed this method and have extended the original model along the lines proposed by Quah and Vahey (1995). For our extended model we drew mainly upon the work of Blix (1995) as well as Dewachter and Lustig (1997).

In view of the central role price stability plays for the ECB's single monetary policy, core inflation indicators will play an important role in the decision-making process, regardless of which monetary policy strategy the ECB decides to adopt.

## 2 The Concept and the Measurement of Underlying Inflation

Although underlying inflation is widely used in monetary policy analysis[3]), views on the exact definition of this concept.

Most papers[4]) refer to Eckstein's (1981) definition of underlying or core inflation as the rate of price increases that occur along the economy's long-term growth path. According to Eckstein the core inflation rate is thus a steady-state concept and equivalent to the trend increase of the price of aggregate supply. Alternatively, Parkin (1984) assumes that in the long-run equilibrium, factor prices for labor and capital fully reflect inflation expectations. In that case, core inflation is identical to expected inflation.

Deviations of actual from core inflation are only short-term and result from demand fluctuations and random supply disturbances.

Core inflation is not directly quantifiable and therefore needs to be calculated by a method which in turn has to be established. As there is no single concept of what core inflation is, it is not surprising that views on how to measure it differ.

The standard approach has been to remove, in some ad hoc manner, the "unwanted" component, such as transitory noise, which has its sources in changing seasonal patterns, exchange rate changes, indirect tax changes or asynchronous price adjustments. In addition, recording errors in the compilation of the CPI can lead to distortions.[5]) The adjusted figure is seen as a reliable estimate of the underlying inflation process.[6]) Removing distorting, temporary or particularly volatile components can be done either on an ad-hoc, case-by-case basis or in a more structured way. The first group of procedures includes the zero-weighting technique and its variants. Many central banks simply eliminate the share of food and energy from CPI inflation to arrive at core inflation indicators. The structural methods of calculating specific underlying inflation indicators include simple as well as more sophisticated smoothing techniques (trimmed mean method; Hodrick-Prescott filter, Kalman filter) and the VAR models based on the paper by Quah and Vahey (1995). Such model-based calculations allow an interpretation of core inflation that is based on economic principles. By contrast, in the case of ad-hoc procedures such as zero-weighting and smoothing techniques such an interpretation runs the risk of being fallacious.

Besides these considerations, we decided to use a VAR approach similar to Quah and Vahey's for two reasons:

1. Fluch and Gartner (1997) suggest that mechanical procedures such as the zero-weighting approach have certain drawbacks for cross-country analyses. In spite of harmonization efforts initiated by the European Monetary Institute, concepts of calculating core inflation still differ markedly, especially where the calculations are based on national CPIs. Both the trend of and deviations from headline inflation heavily depend on which components of the price developments are eliminated. One of the main reasons why agreement on a common definition has not been reached (so far) is that the economies' structures still differ significantly.
2. We are interested in an advance assessment of inflation performance. Forecasting is not possible with the zero-weighting procedure and possible only with certain restrictions using the smoothing technique, whereas a model-based approach enables to project historical structures into the future.

## 3 Identifying Core Inflation with a Model-Based Approach

The method designed by Quah and Vahey (1995) attempts to overcome the shortcomings of the other two approaches. The authors argue that the conceptual mismatch between current methods for calculating inflation and economic theory is more than just a measurement error. Economic theory does not prescribe a particular functional type of inflation indicator; there is

no reason, however, to assume that core inflation can be adequately defined as the result of an arbitrary smoothing procedure.

Consequently Quah and Vahey (1995) propose an alternative technique that is more closely linked to economic assumptions. They define core inflation as the component of measured inflation that has no medium to long-term impact on real output. This definition is consistent with a vertical long-run Phillips curve interpretation of the co-movements in output and inflation. This approach implies the assumption that in the long term inflation is a strictly monetary phenomenon. This long-term restriction is applied to identify a bivariate SVAR (structural vector autoregressive) model, which in turn is used to extract an indicator for core inflation. Our procedure differs just slightly from that of Quah and Vahey in that we examine the effects on price levels rather than on inflation. From a theoretical point of view, we refer to a standard aggregate demand/aggregate supply framework.[7])

### 3.1 Identification and the Bivariate Model[8])

The identification scheme of Quah and Vahey's model is very similar to that of Blanchard and Quah (1989) as well as Shapiro and Watson (1988).

It follows the VAR tradition in methodology, employing impulse response analysis and variance decompositions. The identification of the shocks is based on a Choleski decomposition of a long-run parameter matrix and is therefore different from the short-run identification schemes of Bernanke (1986) and others.

The structural model of real GDP, y, and CPI, p, has the long-run solution form

$$\begin{aligned} y &= f(\varepsilon^s) \text{ and} \\ p &= f(\varepsilon^s, \varepsilon^d). \end{aligned} \qquad (1)$$

We assume the economy is susceptible to two kinds of shocks: supply shocks $\varepsilon^s$ and demand shocks $\varepsilon^d$, which form the vector $\varepsilon = (\varepsilon^s, \varepsilon^d)'$. While supply shocks[9]) may have permanent effects on both prices and output, demand shocks are defined to have no long-run effect on output, i.e. they are transitory with respect to real variables. We identify the core inflation process as that part of the increases in the CPI that has no long-run effects on output, i.e. price movements that are determined solely by shifts in the aggregate demand curve (demand-pull inflation).

Pursuant to our concept the values for core inflation presented in Graphs 1 through 9 were calculated on the basis of the estimated models, i. e. certain assumptions on structural shocks were included, and core inflation is defined as the component of inflation that is free of supply shocks.

### 3.2 The Trivariate Model: Including Monetary Policy

In a critical review, Quah and Vahey (1995) highlighted the multiple downsides of a simplified approach and proposed a number of extensions. Above all, the authors point out that the results obtained with a bivariate model offer only a limited range of conclusions. They warn that admitting only two types of possible shocks in the model economy is unrealistic given the multitude of shocks that occur in actual fact.[10]) Consequently, they

suggest expanding the SVAR technique by a monetary variable to test the robustness of the model's identification of core inflation. A number of researchers heeded the call: Blix (1995) added a monetary aggregate as a third variable; Dewachter and Lustig (1997), who are mainly concerned with empirical results for ERM countries, introduced a short-term nominal interest rate. As we are also mainly interested in inflation trends in EU countries, this study proceeds along the lines of Dewachter and Lustig (1997). In the extended version of our model we included a short-term interest rate as a monetary variable. Implicitly, we presuppose that monetary aggregates are endogenous, which appears to be reasonable for most European countries.

We assume that an economy is affected by three types of structural innovations: a supply shock, a monetary shock and a real demand shock, the latter two of which are core innovations. Hence, the structural model consists of real output, y, short-term interest rates, i, and CPI, p, and has the following form in its long-run representation:

$$y = f(\varepsilon^s), \tag{3}$$
$$i = f(\varepsilon^s, \varepsilon^m) \text{ and} \tag{4}$$
$$p = f(\varepsilon^s, \varepsilon^m, \varepsilon^d). \tag{5}$$

The non-core innovations $\varepsilon^s$ are interpreted as supply disturbances (e.g. technology shocks[11])), and, as in the bivariate case, we postulate that only these supply shocks have a permanent effect on real output.

The first type of core innovations $\varepsilon^m$ captures the effects of a monetary disturbance. These LM innovations do not affect real output permanently, but by definition they exert a lasting influence on short-term nominal interest rates and on inflation. In the theoretical model this is argued as follows: Given the validity of interest parity $i = i^* + \dot{e}$[12]) in the long run, $\varepsilon^m$ innovation can also be interpreted as an EU-wide (ERM-wide, see below) monetary policy shock. As for countries pursuing a fixed exchange rate regime it holds that $\dot{e} \,@\, 0$ in the long run, an exogenous shift in the level of $i^*$ has to be accommodated by a permanent shift in i. In the short run, due to lower credibility of the peg, i can deviate from $i^*$ to the extent of devaluation expectations.

Two major effects of nominal interest rate innovations can then be observed in the countries of the European Monetary System (EMS): For (smaller) countries with a credible and tight exchange-rate peg (within the Exchange Rate Mechanism, ERM) an interest rate increase will arise mainly to accommodate an increased ERM-wide interest rate level; short-run output and price effects should be very small. For countries with a more flexible exchange-rate peg (who did not permanently participate in the ERM) a nominal interest-rate shock can also be interpreted as an autonomous expansionary monetary disturbance. If the interest parity is adhered to, this could give rise to devaluation expectations $\dot{e}$, increasing output at least temporarily (long-run effects are defined to be zero) and prices even in longer time horizons.[13])

The second type of core innovations consists of a real demand shock. This AD- or IS-shift affects the rate of inflation in the short run and the price level

in the long run, but leaves output and the interest rate level (i) unchanged at an infinite horizon.

As illustrated in the annex, core inflation in the trivariate model is again calculated as the component of inflation which is affected not by supply shocks, but solely by demand and monetary shocks.

## 4 Estimation

In this section we applied the identification technique outlined above to assess bi- and trivariate VAR systems of GDP growth, changes in prices and short-term interest rates for Austria, Belgium, Germany, Finland, France, Italy, the Netherlands, Sweden and the United Kingdom. The estimation period runs from the first quarter of 1971 to the fourth quarter of 1996. The values for 1997 and 1998 are forecasts from the estimated VAR model.

### 4.1 Data

We used quarterly, non-seasonally-adjusted data for the CPI (or a comparable price index such as cost of living or Retail Price Index – RPI) provided by OECD Main Economic Indicators database. Quarterly GDP data and short-term interest rates (three-month) are taken from the BIS data base. Following standard stationarity tests, fourth lag differences of the level data, i.e. logarithmic annual growth rates, were used in the VAR model estimates. GDP growth data as well as interest rate changes were adjusted for the mean rate, and annual inflation rates were adjusted for a trend variable, to capture the impact of a "secular" downward trend of inflation to be observed in most countries over the past decades.[14]) Such a behavior of inflation appears plausible given the increase in competitive pressures, in connection with the ongoing deregulation and integration of markets. The results of cointegration tests indicate that error correction terms do not have to be applied in the estimation.

### 4.2 Bivariate SVAR

As a first step bivariate VAR systems in GDP growth and changes in prices were estimated for all countries over the period 1971:4 to 1996:4. We included three lags, supported by various information criteria. Estimation results are illustrated in Charts 1 to 9 in the annex. As described above, both inflation measures (CPI and core inflation) are calculated as the log change in the price level with respect to the corresponding quarter of the previous year. Core inflation is defined as price changes excluding supply shocks.

#### 4.2.1 Comparative Analysis

In most countries CPI inflation and core inflation appear to follow parallel cyclical patterns.[15]) Peaks and troughs of both measures more or less coincide; persistent deviations can be traced to the dominant effect of some shock or another. This is particularly apparent in the case of Austria (Chart 1), Germany (Chart 5), Belgium (Chart 2), France (Chart 4) and Sweden (Chart 8). In Italy (Chart 6) and the Netherlands (Chart 7) core inflation deviates marginally from measured inflation over time. Supply shocks seem to have had very little effect on measured inflation in either of

the two countries. In Finland (Chart 3) and the United Kingdom (Chart 9), by contrast, supply shocks strongly affected inflation trends. As a consequence, the deviation between core and measured inflation is sizeable.

We compared our findings with those of Bjørnland (1997), Blix (1995), Dewachter and Lustig (1997), Fase and Folkertsma (1997), Quah and Vahey (1995) and Jacquinot (1998), who used similar concepts. It is not surprising that their results sometimes differ markedly. We want to name only three main possible reasons for these differences. First, in contrast to other empirical studies on this topic, we did not use industrial output data as a proxy for the economy's overall output, but we applied real GDP. This appears to be justified from an econometric point of view, as industrial output is far more exposed to cyclical imbalances than GDP. The second difference is a consequence of the first: we used quarterly instead of monthly data, as the latter were not available. The third source for the deviation clearly comes from the specification of the model, as we assumed the inflation rate to be trend stationary.

#### 4.2.2 Impulse Response Functions and Variance Decompositions

An impulse response function reports the estimated dynamic response of CPI inflation and output to supply (non-core) and demand (core) shocks. The dynamic response of CPI inflation to supply disturbances differs substantially from its response to demand disturbances. The results for the impulse response functions very much coincide with what we would expect from theory. A positive productivity shock would shift the AS curve to the right. As a consequence, prices would decrease. An initial slump is followed by step-by-step decreases of prices until the inflation rate converges to zero and the new price level is found.

A positive demand shock shifts the AD curve to the right. In the absence of price rigidities, we would observe immediate price increases. In any case, prices adjust until the new equilibrium is reached. The short- and long-run impacts, of course, differ across countries due to structural differences.

The variance decomposition results in Table 1 show that the fluctuations of CPI inflation are mainly explained by the core (demand) innovations for almost all countries. This observation is most accentuated for Italy and the Netherlands. It is less pronounced for Austria, Germany, Belgium, France and Sweden. Finland and the U.K. are exceptions, because CPI inflation forecast variance can be attributed to both core and non-core innovations, to a more or less equal extent.

### 4.3 Trivariate SVAR

In a second step we differentiate monetary or LM shocks from real demand shocks. Both of these shocks were restricted not to have long-lasting effects on the level of output. Objective of the model extension is to investigate whether real aggregate demand and monetary innovations have similar effects on measured inflation. We also expect that the estimates for the inflation measures could be improved by the extension. We estimate a trivariate VAR system comprising GDP growth, the change in nominal interest rates, and CPI inflation rates. The inflation rates were calculated on

a year-on-year basis. Again, the estimation period is 1970:1 to 1996:12 with forecast values for 1997 and 1998 added. The system includes 3 lags; cointegration tests revealed no evidence of cointegrating vectors.

#### 4.3.1 Core Inflation versus CPI Inflation

The estimation results for all countries are summarized again in Charts 1 to 9 (see Annex). Even though the core-CPI differentials differ somewhat from those obtained in the bivariate approach, the pattern of deviations closely matches the one of the previous results. In almost every case, the cyclical pattern of over- and underestimations is remarkably similar across both specifications.

For Austria, Belgium and Germany, the difference between the bivariate and the trivariate approach is negligible. For Finland, the Netherlands, Sweden and U.K. the deviations are minor. For France and Italy differences in the results are more notable.

#### 4.3.2 Impulse Response Functions and Variance Decompositions

The impulse response estimates for the trivariate VAR reveal significant differences between the effects of real shocks and monetary demand shocks on measured inflation. According to the theoretical background outlined above, we expect the monetary policy or LM innovations to have negligible output and price effects for countries with a credible exchange rate peg, and positive effects for countries with lesser credibility of the peg. Such "credibility effects" can only be found for Austria, Germany and the Netherlands. In all other countries monetary innovations temporarily bolster output in the short term and push up prices even in the long term.

As for the bivariate case, the estimated variance decompositions are presented in Table 1. Dewachter and Lustig's (1997) findings are only partly confirmed by our results. Their assessment that inflation is primarily a monetary phenomenon is not upheld by the conclusions of our research.

## 5 Summary and Conclusions

We calculated core inflation indicators for Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Sweden and the United Kingdom in a structural VAR framework applying long-run identification schemes similar to the ones proposed by Quah and Vahey (1995). As also suggested by their work, we included a third variable in the VAR system: short-term nominal interest rates, which we assumed in order to capture the effects of monetary disturbances in the system. Comparative analysis seems particularly appropriate with research carried out by Blix (1995) and Dewachter and Lustig (1997). Our results differ from these publications in several points, mainly on account of the data selection, the fact that we used different identification schemes and other specifications for our models. On the whole, however, our analysis is also based on an aggregate demand and supply model.

Dewachter and Lustig (1997) find that the inflation process is mainly driven by monetary shocks, rather than demand shocks. According to our estimates, we find that inflation is essentially demand-driven, but our results

at this stage do not support their view that inflation is a purely monetary phenomenon.

Core inflation indicators are useful not only in the assessment of inflation trends' sustainability in individual Member States, but they will also be a key factor in the ESCB's single monetary policy. The advantage of these model-based methods of calculation is that they can be used both for individual countries and for aggregate time series (e.g. for the Euro-11), thus facilitating a comparison of the results.

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1 *The authors would like to thank Carsten Folkertsma, Eduard Hochreiter, Manfred Neumann, Axel Weber and the participants of research seminars at the Sveriges Riksbank, Stockholm and the Bank for International Settlements, Basle. An extended version of this paper is to be found in Gartner and Wehinger (1998 a, b).*

2 *For a comprehensive survey see, e.g., Leiderman and Svensson (1995), Haldane (1995). More recent contributions include Debelle (1997) or Masson et al. (1997).*

3 *The interest in Austria in alternative inflation indicators is relatively new. As is well known, the Oesterreichische Nationalbank (OeNB) follows an exchange rate target and thus gears its monetary policy to that of the anchor currency (among others, see Gartner, 1995, and Hochreiter and Winckler, 1995). The effectiveness of the monetary strategy is measured in terms of the degree of inflation convergence with Germany. Up to now measures of underlying inflation played only a limited role. The OeNB focused its attention on the headline inflation rate, making adjustments for the contribution of specific indirect tax changes or seasonal food prices whenever relevant, to obtain other types of information.*

4 *Among others, see EMI (1995).*

5 *For the case of Germany and for an overview of similar research conducted in other countries see Hoffmann (1998).*

6 *This approach has been used, i.a., in the U.K., Sweden, Finland etc. and was also recommended by the EMI.*

7 *From an empirical viewpoint we refer to the fact that the rates of price changes in most of the countries we surveyed can be considered as (trend-)stationary. However, this interpretation of the inflation rate as a stationary variable has its critics. Several authors find empirical evidence to prove that the variable is difference stationary. See also foot note 14.*

8 *A comprehensive description of identification in bivariate and trivariate structural models and related estimating procedures can be found in Gartner and Wehinger (1998 a, b).*

9 *Typical supply shocks are productivity changes, energy shocks, taxes and price controls.*

10 *The simple framework applied here could be extended in order to also capture, e.g., cost-push inflation effects by including other variables such as wages and prices for commodities, imports etc.*

11 *See footnote 9.*

12 *i denotes the domestic interest rate, i* the foreign interest rate or that of the anchor currency country and e is the expected change in the nominal exchange rate over time.*

13 *In fact, we find such behavior of variables for Belgium, Finland, France, Italy, Sweden and the United Kingdom.*

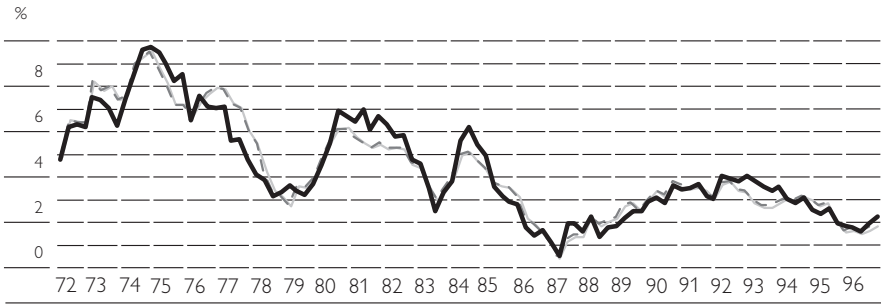
14 *Many price series can be considered borderline cases between being I(1) and I(2) (integrated of order one or two, respectively). As we found I(1) evidence in many cases (especially stationary variables in the differences) we treated borderline cases similarly in order to provide a single framework for our analysis.*

15 *See Gartner and Wehinger (1998 a, b) for a comprehensive comparison of the trends of calculated core inflation indicators and measured CPI inflation in each country and an analysis of the causes of discrepancies.*

## 7 Annex

Chart 1

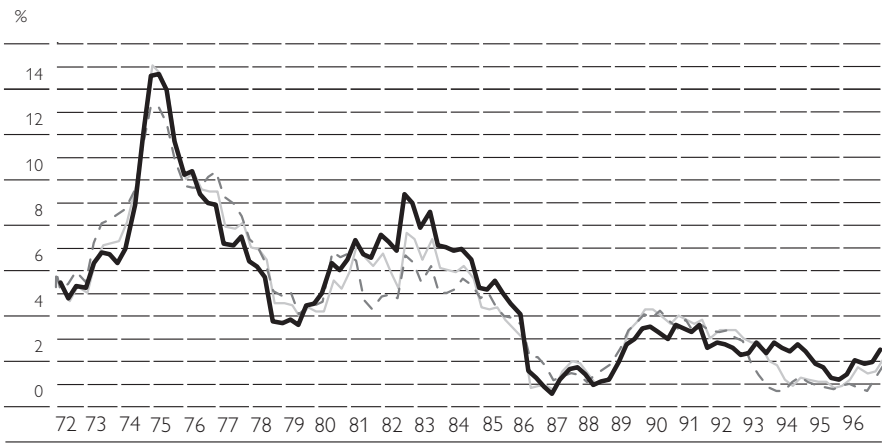
### Inflation and Core Inflation in Austria




*Source: OeNB.*

Chart 2

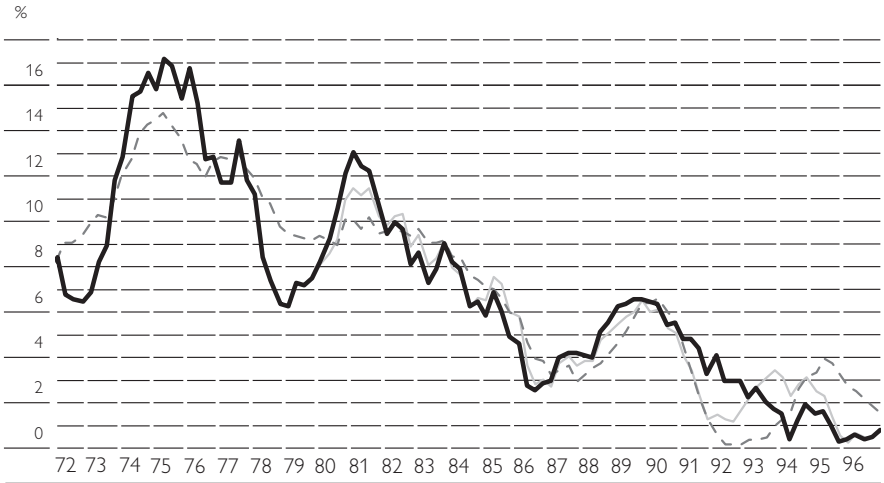
### Inflation and Core Inflation in Belgium




*Source: OeNB.*

Chart 3

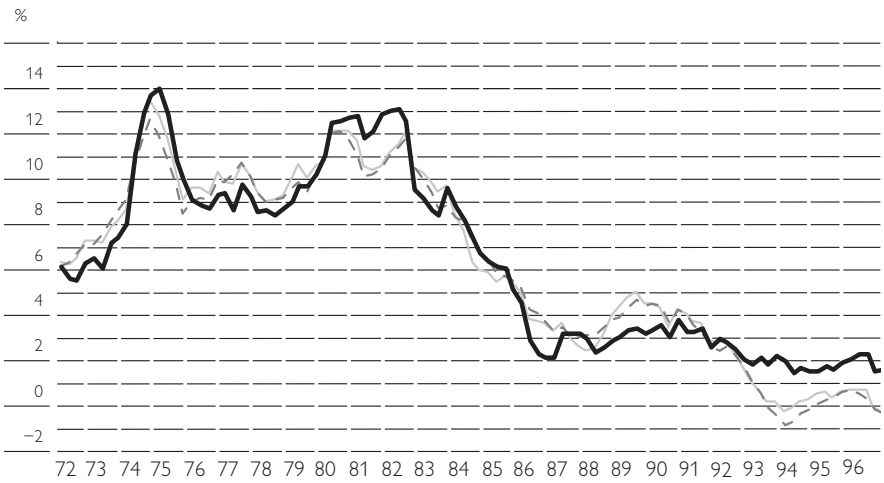
## Inflation and Core Inflation in Finland




*Source: OeNB.*

Chart 4

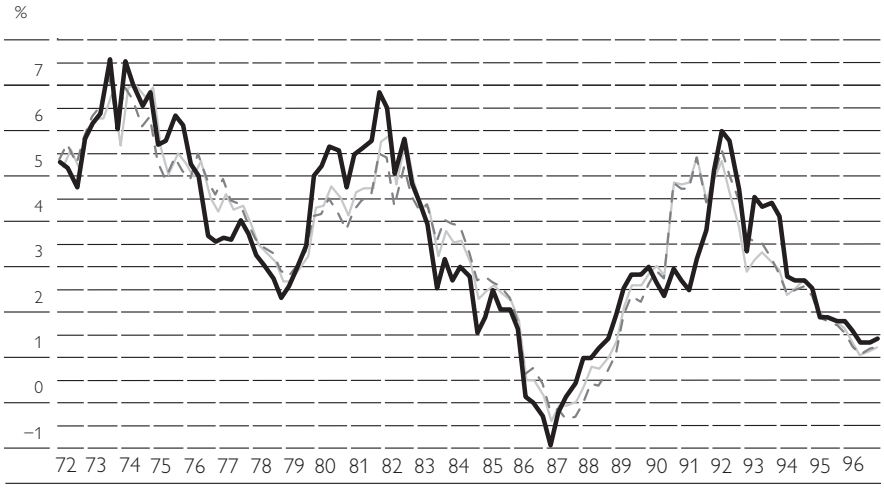
## Inflation and Core Inflation in France




*Source: OeNB.*

Chart 5

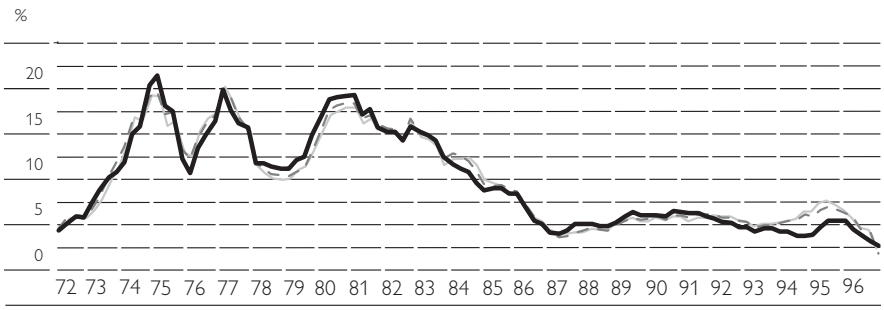
## Inflation and Core Inflation in Germany




*Source: OeNB.*

Chart 6

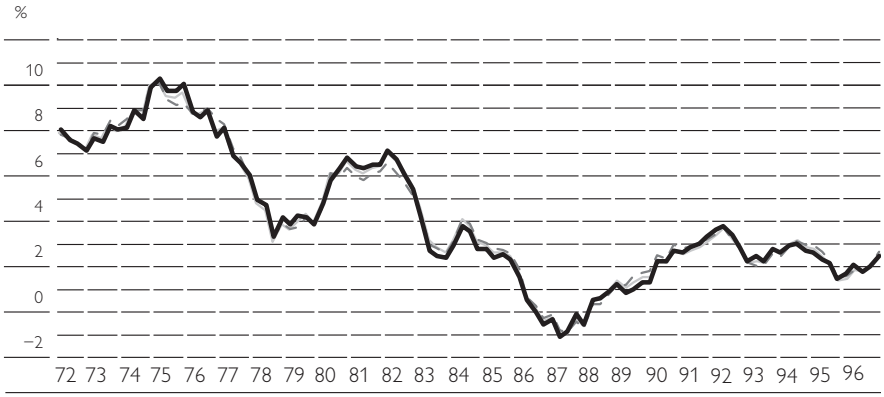
## Inflation and Core Inflation in Italy




*Source: OeNB.*

Chart 7

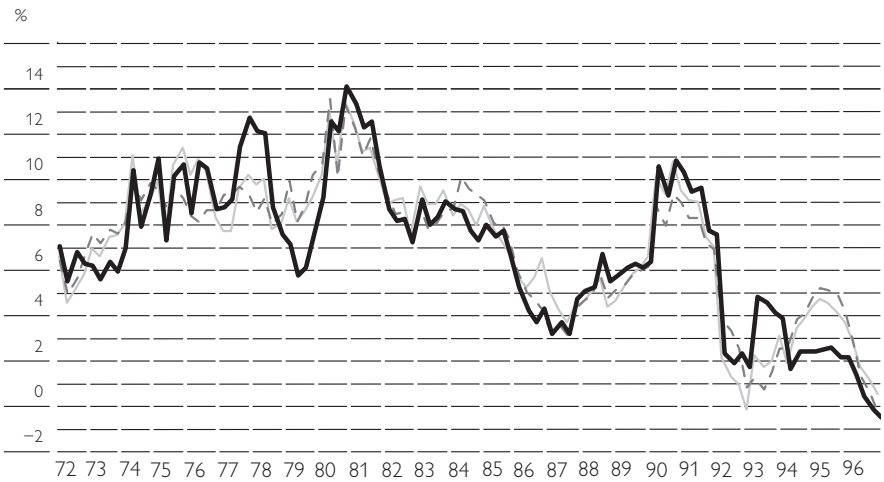
## Inflation and Core Inflation in the Netherlands




*Source: OeNB.*

Chart 8

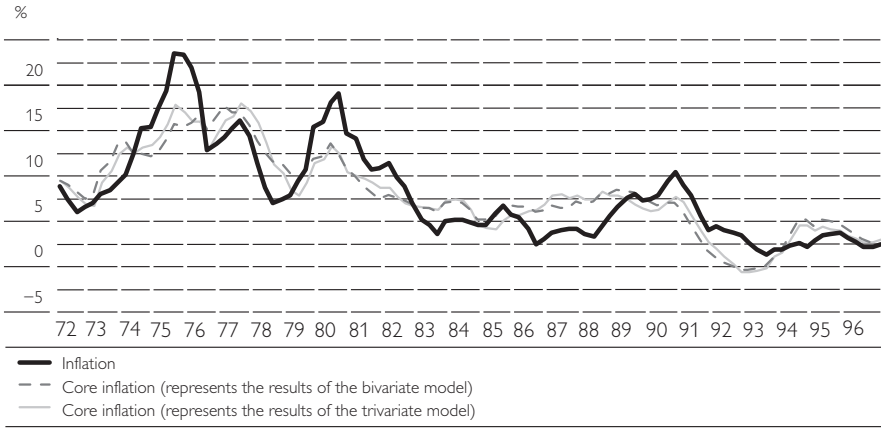
## Inflation and Core Inflation in Sweden




*Source: OeNB.*

Chart 9

Inflation and Core Inflation in the United Kingdom




*Source: OeNB.*

## 8 Annex

Table 1

### Variance Decompositions[1])

(as percentages of forecast variance)

| | Real GDP growth | | | | | | Interest rate | | | CPI inflation | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Periods | | | | | | | | | | | | | | |
| | 1 | | 10 | | 20 | | 1 | 10 | 20 | 1 | | 10 | | 20 | |
| **Austria** | | | | | | | | | | | | | | | |
| Supply shocks | 48 | (53) | 58 | (62) | 57 | (62) | 9 | 15 | 17 | 39 | (42) | 27 | (27) | 27 | (28) |
| LM shocks | 9 | | 9 | | 10 | | 82 | 74 | 70 | 8 | | 10 | | 12 | |
| Demand shocks | 43 | (47) | 33 | (38) | 33 | (38) | 9 | 11 | 13 | 53 | (58) | 64 | (73) | 61 | (72) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Belgium** | | | | | | | | | | | | | | | |
| Supply shocks | 68 | (50) | 51 | (48) | 50 | (49) | 9 | 13 | 13 | 9 | (38) | 26 | (39) | 27 | (39) |
| LM shocks | 13 | | 22 | | 22 | | 75 | 60 | 59 | 8 | | 16 | | 16 | |
| Demand shocks | 19 | (50) | 27 | (52) | 27 | (51) | 16 | 27 | 27 | 82 | (62) | 58 | (61) | 56 | (61) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Finland** | | | | | | | | | | | | | | | |
| Supply shocks | 48 | (35) | 68 | (59) | 69 | (57) | 37 | 29 | 31 | 27 | (76) | 29 | (46) | 32 | (47) |
| LM shocks | 39 | | 22 | | 21 | | 48 | 54 | 52 | 17 | | 29 | | 28 | |
| Demand shocks | 13 | (65) | 9 | (41) | 10 | (43) | 15 | 17 | 18 | 56 | (24) | 42 | (54) | 40 | (53) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **France** | | | | | | | | | | | | | | | |
| Supply shocks | 47 | (34) | 42 | (39) | 42 | (40) | 15 | 19 | 19 | 39 | (54) | 36 | (40) | 37 | (39) |
| LM shocks | 30 | | 39 | | 39 | | 72 | 69 | 68 | 14 | | 33 | | 32 | |
| Demand shocks | 23 | (66) | 19 | (61) | 19 | (60) | 14 | 13 | 13 | 46 | (46) | 31 | (60) | 31 | (61) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Germany** | | | | | | | | | | | | | | | |
| Supply shocks | 61 | (58) | 62 | (61) | 61 | (60) | 7 | 16 | 17 | 36 | (48) | 31 | (34) | 32 | (34) |
| LM shocks | 11 | | 12 | | 13 | | 79 | 59 | 57 | 9 | | 12 | | 12 | |
| Demand shocks | 28 | (42) | 26 | (39) | 26 | (40) | 14 | 25 | 26 | 55 | (52) | 57 | (66) | 56 | (66) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Italy** | | | | | | | | | | | | | | | |
| Supply shocks | 67 | (63) | 59 | (60) | 57 | (60) | 5 | 19 | 21 | 18 | (19) | 23 | (18) | 23 | (18) |
| LM shocks | 22 | | 29 | | 30 | | 67 | 63 | 61 | 56 | | 43 | | 42 | |
| Demand shocks | 11 | (37) | 12 | (40) | 13 | (40) | 28 | 18 | 18 | 26 | (81) | 34 | (82) | 35 | (82) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Netherlands** | | | | | | | | | | | | | | | |
| Supply shocks | 67 | (74) | 63 | (72) | 63 | (72) | 7 | 17 | 18 | 28 | (29) | 28 | (24) | 28 | (25) |
| LM shocks | 12 | | 13 | | 13 | | 55 | 39 | 39 | 32 | | 21 | | 22 | |
| Demand shocks | 21 | (26) | 24 | (28) | 24 | (28) | 38 | 44 | 43 | 40 | (71) | 51 | (76) | 50 | (75) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **Sweden** | | | | | | | | | | | | | | | |
| Supply shocks | 43 | (61) | 49 | (68) | 49 | (67) | 25 | 24 | 25 | 26 | (50) | 27 | (36) | 28 | (37) |
| LM shocks | 48 | | 39 | | 39 | | 34 | 50 | 50 | 22 | | 46 | | 44 | |
| Demand shocks | 9 | (39) | 12 | (32) | 12 | (33) | 41 | 25 | 25 | 53 | (50) | 27 | (64) | 28 | (63) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |
| **United Kingdom** | | | | | | | | | | | | | | | |
| Supply shocks | 45 | (50) | 58 | (65) | 57 | (65) | 31 | 30 | 30 | 55 | (63) | 52 | (55) | 52 | (55) |
| LM shocks | 20 | | 20 | | 21 | | 63 | 62 | 61 | 5 | | 15 | | 16 | |
| Demand shocks | 35 | (50) | 22 | (35) | 22 | (35) | 6 | 8 | 9 | 39 | (37) | 33 | (45) | 32 | (45) |
| Total | 100 | (100) | 100 | (100) | 100 | (100) | 100 | 100 | 100 | 100 | (100) | 100 | (100) | 100 | (100) |

*Source: OeNB.*

*[1]) The values in parentheses show the result of the bivariate model (GDP, inflation); all other values are results of the trivariate model (GDP, interest rates, inflation).*

# Abbreviations

| | |
|---|---|
| ARTIS | Austrian Real Time Interbank Settlement |
| BWA | Bundes-Wertpapieraufsicht (Federal Securities Supervisory Authority) |
| BWG | Bankwesengesetz (amendments to the Banking Act) |
| CAD | Capital Adequacy Directive |
| CEECs | Central and Eastern European Countries |
| COICOP | Classification Of Individual Consumption by Purpose |
| CPI | Consumer Price Index |
| EC | European Community |
| EEA | European Economic Area |
| EEC | European Economic Community |
| EGVG | Einführungsgesetz der Verwaltungsverfahrensgesetze (Introductory Act to the Administrative Procedure Acts) |
| EMI | European Monetary Institute |
| EMU | Economic and Monetary Union |
| EQOS | Electronic Quote and Order Driven System |
| ERM | Exchange Rate Mechanism |
| ERP | European Recovery Program |
| ESNA | European System of National Accounts |
| EU | European Union |
| EUROSTAT | Statistical Office of the European Communities |
| GDP | Gross Domestic Product |
| GOMEX | Zinssatz für kurzfristige Geldmarkt-Offenmarktgeschäfte (interest rate for short-term open market operations) |
| HICP | Harmonized Index of Consumer Prices |
| IHS | Institut für Höhere Studien (Institute for Advanced Studies) |
| IIP | International Investment Position |
| IMF | International Monetary Fund |
| NACE | Nomenclature générale des Activités économiques dans les Communautés Européennes (Statistical Classification of Economic Activities) |
| ÖCPA | Austrian version of the Classification of Products by Activities |
| OECD | Organisation for Economic Co-operation and Development |
| OeNB | Oesterreichische Nationalbank |
| ÖNACE | Austrian version of the Statistical Classification of Economic Activities |
| ÖSTAT | Österreichisches Statistisches Zentralamt (Austrian Central Statistical Office) |
| REGOM | Liquiditätsabschöpfende Offenmarktgeschäfte (interest rate for contractionary short-term open market transactions) |
| RTGS | Real-Time Gross Settlement System |
| SDR | Special Drawing Right |
| SNA | System of National Accounts |
| TARGET | Trans-European Automated Real-Time Gross Settlement Express Transfer System |
| TEU | Treaty on European Union |
| VIBOR | Vienna Interbank Offered Rate |
| WAG | Wertpapieraufsichtsgesetz (Securities Supervision Act) |
| WIFO | Österreichisches Institut für Wirtschaftsforschung (Austrian Institute of Economic Research) |

# *Legend*

– = The numerical value is zero.
. = Data not available at the reporting date
× = For technical reasons no data can be indicated
0 = A quantity which is smaller than half of the unit indicated
_ = New series
Note: Apparent arithmetical discrepancies in the tables are due to rounding.

# *Official Announcements of the Oesterreichische Nationalbank*

| | | Authentic German text published in the Official Gazette (Amtsblatt zur Wiener Zeitung) | Translation published in "Reports and Summaries" issue no. |
|---|---|---|---|
| **Official Announcements Regarding the Foreign Exchange Law** | | | |
| DL 1/91 | Promulgation of the new Official Announcements regarding the Foreign Exchange Law; general provisions<br>1. Issuance of new Official Announcements<br>2. Definitions<br>3. Fees | Sept. 24, 1991 | 4/1991 |
| DL 2/91 | Granting of general licenses<br>1. General license<br>2. Waiver of obligation to declare; release<br>3. Nonbanks<br>4. Banks not engaged in foreign business<br>5. Foreign exchange dealers<br>6. Exchange bureaus<br>7. Special banks and financial institutions<br>8. Provisions applying to both banks and financial institutions | Sept. 24, 1991 | 4/1991 |
| DL 3/91 | Reporting requirements<br>1. General provisions<br>2. Exemptions from the reporting obligation<br>3. General reports<br>4. Reports by banks<br>5. Reports by nonbanks and financial institutions<br>6. Special reports | Sept. 24, 1991 | 4/1991 |
| DL 4/91 | Assets of nonresidents with residence (domicile) in Iraq | Oct. 29, 1991 | 4/1991 |
| DL 2/93 | Modification of the Official Announcement DL 3/91 | May 5, 1993 | 2/1993 |
| DL 3/93 | Modification of Official Announcement DL 2/91; Sanctions of the United Nations Against Libya (SC Resolution No. 883/1993) | Dec. 15, 1993 | 4/1993 |
| DL 1/96 | Modification of Official Announcement DL 3/91 | Sept. 3, 1996 | 3/1996 |
| **Official Announcements Regarding Minimum Reserve Requirements** | | | |
| MR 4/95 | Calculation of the minimum reserve | Aug. 3, 1995 | 3/1995 |
| MR 5/95 | Minimum reserve ratios and special interest | Aug. 3, 1995 | 3/1995 |
| MR 6/95 | Minimum reserve requirements for credit institutions in the customs exclaves | Aug. 3, 1995 | 3/1995 |
| MR 1/96 | Supplement to § 2 subparagraph 1 of Official Announcement MR 4/95 issued by the Oesterreichische Nationalbank | Dec. 20, 1996 | 12/1996 |

Please see the German-language publication "Berichte und Studien" for a list of all Official Announcements in German.

# List of Reports, Summaries and Studies[1])

Please see the German-language publication "Berichte und Studien" for a list of all German-language reports, studies and special publications of the OeNB.

| | Published in F = "Focus on Austria" |
|---|---|
| **Oesterreichische Nationalbank and Selected Monetary Aggregates** | |
| Official Announcements Regarding the Foreign Exchange Law and Minimum Reserve Requirements – see preceding page | |
| Implications of Cash Innovations for Monetary Policy | F 1/1997 |
| Calendar of Monetary Highlights | F 3/1997 |
| The Influence of the Oesterreichische Nationalbank on the Financing Conditions of Austrian Enterprises | F 3/1997 |
| Calendar of Monetary Highlights | F 1/1998 |
| EMU-Decisions on the Changeover to the Euro | F 2/1998 |
| Calendar of Monetary Highlights | F 2/1998 |
| Calendar of Monetary Highlights | F 3/1998 |
| **Austrian Financial Institutions** | |
| Austria's Major Loans Register – Functions, Classification of Major Loans by Sectors and 1996 Results | F 1/1997 |
| The Second Major Amendment to the Banking Act | F 1/1997 |
| Financial Flows in the Austrian Economy in 1996 | F 3/1997 |
| Austrian Bank Holidays in 1998 | F 4/1997 |
| Money and Credit in the First Three Quarters of 1997 | F 4/1997 |
| Money and Credit in 1997 | F 1/1998 |
| Austria's Major Loans Register in 1997 | F 1/1998 |
| Money and Credit in the First Quarter of 1998 | F 2/1998 |
| Money and Credit in the First Half of 1998 | F 3/1998 |
| **Austrian Interest Rates** | |
| The Information Content of the Term Structure – The Austrian Case | F 1/1998 |
| **Austrian Capital Market** | |
| The Bond Market in 1997 | F 2/1998 |
| **Austrian Public Finance** | |
| Structural Budget Deficits in Austria | F 3/1997 |
| **Austrian Real Economy** | |
| The Influence of the Oesterreichische Nationalbank on the Financing Conditions of Austrian Enterprises | F 3/1997 |
| Economic Background | F 4/1997 |
| The Payment Habits of Austrian Private Households | F 4/1997 |
| Economic Background | F 1/1998 |
| Economic Background | F 2/1998 |
| Economic Background | F 3/1998 |

1 *For a comprehensive list of reports, summaries and studies hitherto published please refer to issue no. 4/1997 of "Focus on Austria."*

| | Published in F = "Focus on Austria" |
|---|---|
| **External Sector** | |
| Austria's Balance of Portfolio Investment | F 1/1997 |
| Austria's International Investment Position in 1996 – Austria's Portfolio Position and the International Investment Position of the Domestic Banking Sector | F 3/1997 |
| Austrian Direct Investment Stocks in 1995 | F 3/1997 |
| Austrian Portfolio Investment | F 3/1997 |
| Austrian Outward and Inward Direct Investment at the End of 1995 | F 3/1997 |
| Balance of Payments in the First Three Quarters of 1997 | F 4/1997 |
| Austria's Balance of Portfolio Investment 1997 | F 2/1998 |
| Balance of Payments in 1997 | F 2/1998 |
| Conceptual Changes in the Austrian Balance of Payments | F 2/1998 |
| Balance of Payments in the First Quarter of 1998 | F 3/1998 |
| **Economic and Monetary Union** | |
| Disinflation and Fiscal Indicators – A Comparative Analysis of the EU Meber States between 1970 and 1996 | F 2/1998 |
| Core Inflation in Selected European Union Countries | F 3/1998 |
| **International Economy** | |

# *Publications of the Oesterreichische Nationalbank*

| | Published |
|---|---|
| **Periodical Publications** | |
| Statistisches Monatsheft | monthly |
| Statistische Daten der inländischen Kreditinstitute (advance excerpts from "Statistisches Monatsheft") | monthly |
| Leistungsbilanz Österreichs, revidierte Jahresdaten gegliedert nach Regionen und Währungen | annually |
| Berichte und Studien | quarterly |
| Focus on Austria (selected chapters from "Berichte und Studien") | quarterly |
| Focus on Transition | semiannually |
| Geschäftsbericht | annually |
| Annual Report (English translation of "Geschäftsbericht") | annually |
| Notenbank und Währung | annually |
| Volkswirtschaftliche Tagung (for a list of the topics discussed at the conferences see below) | annually |
| The Austrian Financial Markets – A Survey of Austria's Capital Markets – Facts and Figures | annually |
| **Other Publications** | |
| National Bank Act 1984 (as of September 1990) | 1990 |
| Money and the Central Bank (English translation of "Notenbank und Währung") | 1990 |
| New Developments in Banking and Finance in East and West (Kranichberg 1989) | 1990 |
| Erfahrungen Österreichs beim Übergang von administrativer Regulierung zur Marktwirtschaft (Moscow 1990) | 1990 |
| Challenges for European Bank Managers in the 1990s (Badgastein 1990) | 1991 |
| From Control to Market – Austria's Experiences in the Post-War Period (Warsaw 1990) | 1991 |
| The Economic Opening of Eastern Europe (Bergsten Conference Vienna 1991) | 1991[1]) |
| Erneuerung durch Integration – 175 Jahre Oesterreichische Nationalbank | 1991 |
| Striking a Balance – 175 Years of Austrian National Bank | 1991 |
| Transparente Dispositionen – Liberalisierter Devisenverkehr unter Beachtung internationaler Publizitätsverpflichtungen | 1991 |
| Ausgeglichene Position – Die neue Präsentation der österreichischen Zahlungsbilanz | 1992 |
| Aktive Bilanz – Ein Jahr vollständig liberalisierter Devisenverkehr in Österreich | 1992 |
| Nationalbankgesetz 1984 (as of January 1993) | 1993 |
| Economic Consequences of Soviet Disintegration (Bergsten Conference Vienna 1992) | 1993 |
| Neuorientierung – Internationale Vermögensposition und Außenwirtschaftliche Investitionsbilanz Österreichs | 1993 |
| Bankwesengesetz 1993 | 1994[1]) |

*1 Out of print.*

| | Published |
|---|---|
| **Other Publications (cont.)** | |
| Internationale Vermögensposition 1992 – Die grenzüberschreitenden Forderungen und Verpflichtungen Österreichs | 1994 |
| International Investment Position for 1992 – Austria's cross-border assets and liabilities | 1994 |
| Western Europe in Transition: The Impact of the Opening up of Eastern Europe and the former Soviet Union | 1995 |
| Die Oesterreichische Nationalbank als Unternehmen | 1996 |
| Monetary Policy in Central and Eastern Europe: Challenges of EU Integration 1996 | 1996 |
| Information literature on banknote security | recurrently |
| Working Papers (for a list of the topics discussed in the papers, see below) | occasionally |
| **Videos** | |
| Wie Mozart entsteht (banknote security) | 1990 |
| The Evolution of W. A. Mozart (English version of "Wie Mozart entsteht") | 1995 |
| Bank der Banken (tasks and functions of the OeNB) | 1991 |
| The Banks' Bank (English version of "Bank der Banken") | 1991 |

## List of the Topics Discussed at the Volkswirtschaftliche Tagungen

| | |
|---|---|
| 1975 | Die ökonomischen, politischen und sozialen Konsequenzen der Wachstumsverlangsamung |
| 1976 | Störungsanfällige Bereiche in unserem ökonomischen und sozialen System |
| 1977 | Fiskalismus kontra Monetarismus |
| 1978 | Wirtschaftsprognose und Wirtschaftspolitik |
| 1979 | Technik-, Wirtschaftswachstums-, Wissenschaftsverdrossenheit: Die neue Romantik – Analyse einer Zeitströmung |
| 1980 | Probleme der Leistungsbilanz in den achtziger Jahren |
| 1981 | Systemkrisen in Ost und West |
| 1982 | Forschung und Wirtschaftswachstum |
| 1983 | Ausweg aus der Krise – Wege der Wirtschaftstheorie und Wirtschaftspolitik |
| 1984 | Der Weg zur Welthandelsnation |
| 1985 | Weltanschauung und Wirtschaft |
| 1986 | Vollbeschäftigung, ein erreichbares Ziel? |
| 1987 | Vollendung des Binnenmarktes in der Europäischen Gemeinschaft – Folgen und Folgerungen für Österreich |
| 1988 | Sand im Getriebe – Ursachen und Auswirkungen der Wachstumsverlangsamung in Österreich |
| 1989 | Banken und Finanzmärkte – Herausforderung der neunziger Jahre |
| 1990 | Wettbewerb und Kooperation im Finanzbereich |
| 1991 | Wirtschaftliche und politische Neugestaltung Europas – Rückblick und Perspektiven |
| 1992 | Zukunft regionaler Finanzmärkte in einem integrierten Europa |
| 1993 | Europäische Währungspolitik und internationaler Konjunkturverlauf |
| 1994 | Neue internationale Arbeitsteilung – Die Rolle der Währungspolitik |
| 1995[1]) | Die Zukunft des Geldes – das Geld der Zukunft |
| 1996[1]) | Auf dem Weg zur Wirtschafts- und Währungsunion – Bedingungen für Stabilität und Systemsicherheit |
| 1997 | Die Bedeutung der Unabhängigkeit der Notenbank für die Glaubwürdigkeit der europäischen Geldpolitik |
| 1998 | Wirtschaftspolitik 2000 – Die Rolle der Wirtschaftspolitik und nationaler Notenbanken in der WWU |

*1 Out of print.*

## List of the Topics Discussed in the Working Papers

| | | Published |
|---|---|---|
| No. 1[1]) | Hat Böhm-Bawerk recht gehabt? Zum Zusammenhang zwischen Handelsbilanzpassivum und Budgetdefizit in den USA[2]) | 1990 |
| No. 2[1]) | Ost- und Mitteleuropa auf dem Weg zur Marktwirtschaft – Anpassungskrise 1990 | 1991 |
| No. 3[1]) | Die Wirtschaft Österreichs im Vergleich zu den EG-Staaten – eine makroökonomische Analyse für die achtziger Jahre | 1991 |
| No. 4[1]) | The Soviet Banking Reform | 1991 |
| No. 5[1]) | Die Auswirkungen der Finanzmarkt- und Kapitalverkehrs-liberalisierung auf die Wirtschaftsentwicklung und Wirtschafts-politik in Norwegen, Schweden, Finnland und Großbritannien – mögliche Konsequenzen für Österreich[2]) | 1991 |
| No. 6[1]) | Zwei Jahre G-24-Prozeß: Bestandsaufnahme und Perspektiven unter besonderer Berücksichtigung makroökonomischer Unterstützungsleistungen[2]) | 1991 |
| No. 7[1]) | Die Finanzoperationen der öffentlichen Haushalte der Reformländer ČSFR, Polen und Ungarn: Eine erste quantitative Analyse | 1991 |
| No. 8[1]) | Erfüllung der Konvergenzkriterien durch die EG-Staaten und die EG-Mitgliedswerber Schweden und Österreich[2]) | 1992 |
| No. 9[1]) | Alternative Strategies For Overcoming the Current Output Decline of Economies in Transition | 1992 |
| No. 10[1]) | Signaling a Hard Currency Strategy: The Case of Austria | 1992 |
| No. 11[1]) | The Impact of the Opening-up of the East on the Austrian Economy – A First Quantitative Assessment | 1993 |
| No. 12[1]) | The Scope for Regional Autonomy in Russia | 1993 |
| No. 13[1]) | EMU and the International Monetary System: A Transatlantic Perspective | 1993 |
| No. 14[1]) | Austria's Role as a Bridgehead Between East and West | 1993 |
| No. 15[1]) | Prospects for Growth in Eastern Europe – Some questions raised in the course of a macroeconomic forecasting exercise | 1994 |
| No. 16 | A Survey of the Austrian Capital Market | 1994 |
| No. 17 | Trade and Employment: Can We Afford Better Market Access for Eastern Europe? | 1994 |
| No. 18 | Interdependence of Politics and Economic Development: Financial Stabilization in Russia | 1994 |
| No. 19[1]) | Austrian Exchange Rate Policy and European Monetary Integration | 1995 |
| No. 20[1]) | Monetary Spill-over Effects in the ERM: The Case of Austria, A Former Shadow Member | 1995 |
| No. 21 | Investing in Insider-dominated Firms: A Study of Voucher Privatization Funds in Russia | 1995 |
| No. 22 | Pessimism Confounded? Economic Recovery in Eastern Europe | 1996 |
| No. 23 | Will Asymmetric Shocks Pose a Serious Problem in EMU? | 1996 |
| No. 24 | Exchange Rates and Monetary Policy in Central Europe – a Survey of Some Issues | 1997 |

*1 Out of print.*
*2 Published in a modified form in "Berichte und Studien".*

## List of the Topics Discussed in the Working Papers (cont.)

| | | Published |
|---|---|---|
| No. 25 | Sources of Currency Crises: An Empirical Analysis | 1998 |
| No. 26 | Structural Budget Deficits and Sustainability of Fiscal Positions in the European Union | 1998 |
| No. 27[1]) | Trends in European Productivity: Implications for Real Exchange Rates, Real Interest Rates and Inflation Differentials | 1998 |
| No. 28 | What Do We Really Know About Real Exchange Rates? | 1998 |
| No. 29 | Goods Arbitrage and Real Exchange Rate Stationarity | 1998 |
| No. 30 | The Great Appreciation, the Great Depreciation, and the Purchasing Power Parity Hypothesis | 1998 |
| No. 31 | The Usual Suspects? Productivity and Demand Shocks and Asian Pacific Real Exchange Rates | 1998 |
| No. 32 | Price Level Convergence Among United States Cities: Lessons for the European Central Bank | 1998 |

*1 Out of print.*

# *Addresses of the Oesterreichische Nationalbank*

## Head Office

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| **Graz** | P. O. Box 451 | (31 6) 81 81 81, ext. |
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| Franz-Josef-Straße 18 | A-5027 Salzburg<br>Austria | Fax: (66 2) 87 12 01 99 |
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| Permanent Mission of Austria to the EU<br>Avenue de Cortenbergh 30<br>**B-1040 Brussels**<br>**Belgium** | (2) 285 48 41, 42, 43<br>Fax: (2) 285 48 48 | |
| Permanent Mission to the OECD<br>3, rue Albéric-Magnard<br>**F-75116 Paris**<br>**France** | (1) 53 92 23 39<br>Fax: (1) 45 24 42 49 | (1) 842/61 19 46 |