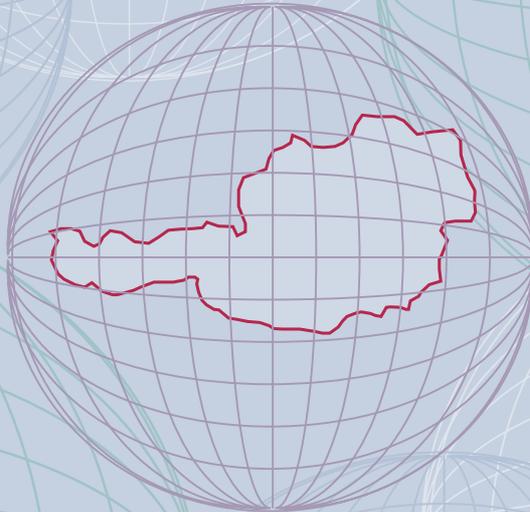




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*The move to Stage Three of the Economic and Monetary Union (EMU) had a favorable effect on the further integration of European bond markets. In international bond markets, the past few years saw a shift in activity from public to private issuers, an increasing dominance of international institutional investors and a convergence of yields in the run-up to EMU. Our analysis reveals that these international trends only partly fed through to the Austrian bond market. In Austria, public bond issuance continued to rise, consolidating its lead over bank bond issuance. If, however, Austrian issues abroad are taken into consideration as well, we discover that bank bonds and, to a lesser degree, also corporate bonds have been gaining much greater momentum than government issues. After the trend towards interest rate convergence before EMU, the yield differential between Austrian and German government bonds again widened slightly, especially in 2000. We try to explain the greater yield gap by means of the factors credit risk and liquidity. Furthermore, econometric tests reveal that Austrian interest rate development has increasingly been influenced by European factors in recent years.*

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# R E P O R T S

# Calendar of Monetary and Economic Highlights

## **Austria**

### **January 2001**

5 *Federal Law Gazette I No. 2/2001 Federal Law: Capital Market Promotion Act.* On January 5, 2001, a number of legal measures designed to promote the Austrian capital market become effective. Among other things, the changes in legislation facilitate the issuing of euro-denominated securities under the Austrian Stock Exchange, Banking and Securities Supervision Acts. In addition, the Austrian Securities Authority is adapted so as to comply with EU guidelines.

### **April 2001**

27 *Federal Law Gazette Part I No. 41/2001* contains a federal act regulating the electronic filing of annual accounts that amends the Commercial Code, the 1st Euro-Related Amendment to Fiscal and Civil Legislation, and the Court Fees Act to this end. Data that need to be entered in the Company Register may now be transferred electronically to the competent court. Electronic filing facilitates both the onward transmission of data to the Austrian Federal Economic Chamber and the Federal Chamber of Labor and data availability for the OeNB and Statistics Austria, thus reducing the reporting burden on businesses. The act does not make electronic filing mandatory.

*Stock Options Act* published in *Federal Law Gazette Part I No. 42/2001*: While the Capital Markets Promotion Act created tax advantages for stock options, the Stock Options Act simplifies corporate law regulations on the use of stock options. The new act allows new shares from a conditional capital increase to be used to issue stock options to employees and management.

## **European Union**

### **January 2001**

1 *Sweden* takes over the *Presidency of the Council of the EU* from France. The key issues of Sweden's presidency program are enlargement, employment, and the environment. As the presiding country, Sweden intends to establish an economic and political dialog between the EU and the accession countries on macro-economic stability and the stability of financial markets in the accession countries. Regarding employment, the Swedish presidency plans to set an interim objective with respect to the overall goal of increasing the total rate of employment to 70% (and to 60% for women) by 2010, as decided at the Lisbon Summit. A strategy for sustainable development is to be defined with regard to the environment.

On January 1, 2001, *Greece* enters the European Monetary Union. As of this date, the Bank of Greece becomes a fully-fledged member of the Eurosystem, assuming the same rights and duties as the eleven incumbent members. The bank will contribute to

- the system's capital and monetary reserves as provided for in Article 49 of the Statutes of the ESCB. The irrevocable euro conversion rate has been fixed at EUR 1 = GRD 340.75.
- 18 According to the assessment of the Eurogroup of finance ministers of the EMU member states, the economy is going to grow faster in the EU than in the U.S. dollar zone.
- 19 In debates on harmonizing fuel taxation across the EU, the *ECOFIN Council* decides to further extend existing special regulations on petroleum tax for individual member states. Sweden's convergence program is approved. Moreover, the ministers discuss a draft report on the general governments' contribution to growth and employment. Talks on the taxation of savings income are initiated with non-EU countries (Switzerland, Liechtenstein, Monaco, Andorra, and San Marino).
- 24 *EUROFRAME* presents its newly designed forecast for the EU and the euro area at the European Parliament. *EUROFRAME* unites European economists from the following economic research institutions: WIFO (Austria), ETLA (Finland), OFCE (France), IfW and DIW (Germany), PROMETEIA (Italy), NIESR (United Kingdom). *EUROFRAME* sees real GDP rise 2.8% in 2001 and 2.7% in 2002.

### February 2001

- 8 The Monetary Policy Committee of the *Bank of England* decides to reduce its official repo rate by 0.25 percentage point to 5.75%.
- 9 *Danmarks Nationalbank* reduces its key interest rate by 10 basis points to 5.3%, thus narrowing the gap between this rate and the ECB's respective refinancing rate to 0.55 percentage point.
- 12 The *Eurogroup* agrees with the IMF analysis carried out in the course of the Article IV Consultations on the euro area, which highlights the need for further structural reforms. Basically, however, the Eurogroup's growth expectations are considered to be realistic. The euro area's economic development is largely unaffected by the slowdown in U.S. economic growth.
- In the course of the implementation of the *Stability and Growth Pact*, the *ECOFIN Council* formulates recommendations on the stability programs of Austria, France, Ireland, Italy, and Greece as well as on the convergence programs of Denmark and the United Kingdom. The Council recommends that Ireland eliminate the inconsistency of its excessively expansionary fiscal policy with the Broad Economic Policy Guidelines.
- In the course of the *preparation for the European Council of Stockholm*, the *ECOFIN Council* meets for a first orientation debate on the scope of the Broad Economic Policy Guidelines. Further topics under discussion are the extension of derogations for excise duty on certain mineral oils, the EU's supplementary amending budget (SAB) concerning measures related to the current BSE crisis as well as an amendment of the institutional regulations applicable to

mutual funds (the UCITS directive). Moreover, in the course of preparing the introduction of the euro, the ECOFIN Council adopts a regulation on the protection of the euro against counterfeiting and on additional information measures aimed at disadvantaged groups of the population.

- 20 The *ECB* and the *European Commission* provide *sample euro banknotes* for persons in need of special familiarization with the new banknotes (persons suffering from sensory or intellectual disabilities).

### March 2001

- 1 The *ECB* presents its Euro 2002 Information Campaign. Key elements of this campaign are partnership programs with public and private organizations, a mass media campaign providing information on the appearance and security features of euro banknotes and coins, and a dedicated website.
- 7 The European Commission, the *ECB* and Europol establish a *common interinstitutional Steering Group*, whose principal objective is to ensure the comprehensive protection of the euro against counterfeiting.
- 11 Despite the economic slowdown in the U.S.A. and Japan, the *finance ministers of the Eurogroup* expect the economic outlook for the euro area to remain positive, forecasting an economic growth of 3% for both 2001 and 2002.
- 12 The *ECOFIN Council* adopts the stability programs of Belgium, Luxembourg, Spain and Portugal and passes the Directive on the Reorganization and Winding-up of Credit Institutions. Moreover, the Council presents the Annual Report on Structural Reforms and a draft report on the limited list of structural performance indicators. The Council endorses the Key Issues Paper on the Broad Economic Policy Guidelines, which will serve as a guideline for the discussions of the EU heads of state or government.
- 15 The *Governing Council of the ECB* decides to establish a Eurosystem Cash Changeover Committee, consisting of representatives of the *ECB* and the twelve NCBs of the Eurosystem. The Committee is entrusted with coordinating the euro cash changeover in the runup to January 1, 2002, and until February 28, 2002.
- 22 At a *special meeting of the ECOFIN Council*, EU finance ministers reach a compromise regarding the development of a single market in financial services based on their Resolution on More Effective Securities Market Regulation in the European Union. According to this resolution, the European Commission will not override the majority view within the Council when implementing measures acknowledged to be particularly sensitive. By advancing the process of establishing securities market regulation, the Council intends to ensure that the key steps for achieving an integrated securities market will be implemented by the end of 2003 as a basis for establishing the Single Financial Market by 2005.

23/24 At its meeting in Stockholm, the *European Council* focuses in particular on how to attain the strategic goal formulated a year ago at the Lisbon Summit: to make the European Union the world's most competitive and dynamic knowledge-based economy by 2010 and to reach full employment and greater social cohesion by that time.

Aside from discussing how to face up to the demographic challenge of aging populations, how to create more and better jobs, accelerate economic reform, modernize the European social model and harness new technologies, the European Council of Stockholm issues strategic guidance for the Broad Economic Policy Guidelines in order to achieve sustained growth and create stable macroeconomic conditions. In particular, the Council agrees to develop ways and means of actively involving the candidate countries in the goals and procedures of the Lisbon strategy.

The European Council welcomes the report on the contribution of public finances to growth and employment, emphasizing that budgetary policies should continue to be geared to achieving public finances close to balance or in surplus.

Moreover, the European Council approves the Resolution on More Effective Securities Market Regulation in the European Union, prepared at the special meeting of the ECOFIN Council, and asks for full implementation of the Financial Services Action Plan by 2005. In addition, the Council endorses the objective of a well-functioning risk capital market by 2003 through implementation of the Risk Capital Action Plan.

#### **April 2001**

5 The *Bank of England* announces a 25 basis point cut in its key interest rate. The new rate will be 5.5%.

20 The *Eurogroup* of finance ministers meeting in Malmö, Sweden, express "realistic optimism" about the state of the economy and reiterate the need for further budget consolidation and structural reform.

21 Participants in the informal *ECOFIN meeting* in Malmö stress that the integration process, achievements in structural reform, and adequate fiscal and monetary policies are supporting economic growth in the EU in a global economy dragged down by the economic slowdown in the United States and economic developments in Asia. The best way to counteract an economic setback in the EU is to advance structural reform, contain fiscal deficits, and promote wage moderation. Some ministers call for an interest rate cut. The President of the ECB, Wim Duisenberg, argues that continued upside risks to price stability do not warrant a rate cut at the present juncture.

The ministers and NCB governors participating in the meeting welcome the Brouwer II report on financial crisis management.

- In discussions with the candidate countries, the ECOFIN Council stresses the significance of implementing structural reform, creating adequate legal framework conditions, and achieving and sustaining financial soundness as a precondition for EU accession.
- 25 In its Spring 2001 Forecast, the *EU Commission* revises its growth estimate for the euro area and the EU as a whole for the year 2001 to 2.8%, down from 3.2% in the Autumn 2000 Forecast. At 2.2% (EU as a whole: 2.1%), euro area inflation stands to remain above the Eurosystem's price stability benchmark (HICP increase below 2%). The Commission blames the slowdown in the EU mainly on the weakness of U.S. output growth, estimated at 1.6% in 2001. For 2002, it forecasts a GDP growth rate of 2.9% for the euro area and the EU and an inflation rate of 1.8%.
- The Commission has become less upbeat about employment growth (which it sees slowing down to 1.3% in 2001 and 2002, from 1.9% in 2000) but more optimistic about the reduction of unemployment (which it expects to drop from 8.9% in 2000 to 7.9% in 2002).
- Austria is projected to achieve a GDP rate of 2.5% in 2001 and a fiscal deficit of 0.7% of GDP, which would be exactly the euro area average. Austria's inflation rate is pegged at 1.6%.

# Economic Background

## I Overview

With exports booming and production widening in their wake, Austria's economy posted an excellent performance in 2000. Moreover, household spending, benefiting from the income tax reform which had gone into effect at the beginning of the year, provided a fillip to economic activity. In the course of the second half, especially toward the end of the year, signs accumulated that the upswing was petering out. The rise in output slowed, and manufacturing growth weakened as the year drew to a close.

Real GDP growth, having barreled ahead 4.1% in the first half, dropped to 2.3% in the third quarter of 2000. The rise in GDP recovered marginally to 2.6% in the fourth quarter. GDP advanced by 3.2% over the entire year 2000.

Martin Schneider

Editorial close:  
April 27, 2001

### Key Figures for Austria

	GDP	Private consumption	Government consumption	Gross capital formation	Exports of goods and services	Imports of goods and services
<i>Annual percentage change (in real terms, 1995=100)</i>						
1998	+3.3	+2.9	+2.8	+2.4	+ 5.5	+ 3.7
1999	+2.8	+2.3	+3.2	+2.0	+ 7.6	+ 7.1
2000	+3.2	+2.7	+2.3	+3.1	+ 9.8	+ 9.2
2000						
1st quarter	+4.1	+4.1	+3.7	+7.9	+15.7	+16.7
2nd quarter	+4.1	+2.5	+2.8	+2.6	+11.3	+11.9
3rd quarter	+2.3	+1.7	+1.6	-1.2	+ 7.4	+ 4.1
4th quarter	+2.6	+2.6	+1.1	+4.4	+ 5.4	+ 5.1

Source: OeNB, Statistics Austria, Austrian Institute of Economic Research.

At 1.6 percentage points, consumer spending made the biggest contribution to GDP growth; public spending added 0.5 percentage points. Investment accounted for 0.8 percentage points, and net exports finally made up 0.3 percentage points.

High oil prices, faster budget consolidation, and a cloudier outlook for international economic developments put the brake on Austria's powerful economic upturn after just one year.

Output remained robust throughout the first three quarters of 2000. In particular, manufacturing scored solid growth on the back of dynamic exports. Into the fourth quarter, however, production began to exhibit signs of a slowdown. Construction, too, failed to keep up the favorable performance of the first quarter as the year progressed.

Austrian foreign trade was full of dynamic momentum in 2000. Both goods exports and imports posted hefty gains, much more so in trade with non-EU countries than with EU member states. Merchandise exports slumped in December 2000 and bounced back in January 2001. Austria's current account mirrors last year's economic developments: The current account posted a shortfall of EUR 5.88 billion or 2.8% of GDP. This result represents an improvement on the order of 0.4% of GDP compared to 1999.

The generally bright economic performance in 2000 also had positive repercussions on the labor market, although employment growth lost some

ground in the course of the year. This trend lasted into 2001, with employment growth steadily losing speed in the first three months of the year. The wave of people pushing to take early retirement before the new pension provisions become effective is likely to be an important reason for this decline. The change in labor supply also explains the ongoing decline of registered unemployment. The unemployment rate (Eurostat definition) dropped from 4.0% in 1999 to 3.7% on average in 2000; it has been hovering around 3.7% since January 2001.

Inflation as measured by the Harmonised Index of Consumer Prices (HICP) has stood at roughly 2% since February 2000; it came to 1.9% in March 2001. After the Consumer Price Index (CPI) eased from its peak of 3.1% in November 2000 (the highest value since September 1994) to 2.6% in December 2000, the rate of price increase climbed to 3.0% again in January 2001, but then moved down again. Inflation was measured at 2.7% in March 2001. Hikes in fees are now the main culprit in higher inflation, whereas the impact of oil prices is declining.

Business activity is expected to flag significantly in Austria in 2001. In its most recent forecast of March 2001, the Austrian Institute of Economic Research (WIFO) anticipates real GDP growth of 2.2% in 2001 and 2.1% in 2002, naming the acceleration of budget austerity measures and the worldwide slowdown in economic growth as the reasons. The Institute for Advanced Studies (IHS) is more optimistic in assessing the outlook for the U.S. economy and hence also international economic developments, forecasting real GDP growth at 2.3% for 2001 and 2.5% for 2002. In spite of the slowing pace of business activity, forecasters feel that Austria will still be in a position to achieve its zero budget deficit target in 2002.

## **2 More Cloudy Prospects for World Economy**

The development of the international economic framework is contingent on the faltering U.S. economic growth observed toward the end of 2000. In 2000 real GDP skyrocketed by 5% (1999: +4.2%), with a powerful expansion in the first half of 2000 followed by slipping momentum in the two quarters which followed. Fourth-quarter growth fell to 3.4% year on year. Consumer purchases were the mainstay of growth, while gross fixed investment contracted. The economy is expected to lose more steam in 2001. The confidence indicators signal a halt to growth in the first quarter of 2001. It appears unlikely that the U.S. economy will experience a lengthy recession, however. By the second half of 2001, it should start to recover. This assumption is based on announced tax cuts, the anticipated reaction of the Federal Reserve System to the lull in growth and lower oil prices.

So far, the growth recession in the United States has had little impact on economic developments in the euro area. Real GDP growth in the euro area progressed from 2.5% in 1999 to 3.4% in 2000. However, in the fourth quarter economic growth dipped to 3.0%, which was probably caused mainly by real income losses in the wake of more expensive oil and the resulting contraction of consumer spending. On the whole, however, domestic demand should remain stable in 2001, not least because many euro area countries will tackle tax reform. Taking into account these

changes in the worldwide economic framework, the latest international forecasts expect a slight weakening of economic growth in the euro area.

Coming to 3.8% (seasonally adjusted) in February 2001, the euro area's industrial output trailed the results of the preceding months (November 2000: 4.3%, December 2000: 8.0%, January 2001: 5.4%). Austrian foreign trade was full of dynamic momentum in 2000. Real exports augmented 11.7%; imports went up 10.3% in real terms. Exports did not reflect signs of an economic slowdown in the fourth quarter of 2000: Exports gained 11.6%, imports rose 10.5%. Nevertheless, consumer and business confidence in the economic prospects are on the decline, albeit from a very high level. The Economic Sentiment Indicator sank 0.5 points to 102.2 points in March 2001, compared to a ten-year record of 104.6 points in the second quarter of 2000. Whereas consumer confidence stayed fairly level in 2000, business confidence clearly deteriorated in the same period.

Like in February 2001, the HICP came in at 2.6% in March compared to 2.9% in November 2000. More expensive energy (+8.3%) remained the main contributor to inflation. The seasonally adjusted unemployment rate in the euro area amounted to 8.7% in February 2001 and has thus barely changed since October 2000 (8.8%) after having declined steadily from its peak of 11.5% in 1996 and 1997.

### **3 Manufacturing Remains at a High Level in Austria; Construction Is still Contracting**

With exports booming, the Austrian manufacturing sector posted robust 10.4% growth in the year 2000. Manufacturing of capital and intermediate goods surged most. However, growth began to falter in the second half of the year. This applied especially to capital goods, which felt the impact of weaker domestic demand.

Consumer durables output expanded by just 1.1% in 2000, but manufacturing of nondurables widened by a healthy 6.2%. Consumer goods reflected the general development of business activity with somewhat of a time lag: While consumer durables manufacturing contracted already in the third quarter (-1.1%), nondurables recorded 10.0% growth in the second quarter followed by 9.2% in the third quarter, to drop to 3.0% growth only in the fourth quarter. However, the growth path of durables had already been quite unstable throughout the past years. The manufacturing sector's orderbooks were still full in December 2000. New orders gained 9.1% on the same month of 1999, and orders as a whole surged by 18.4%.

Construction output lost 1.0% against the previous year in 2000. This sector also accurately reflected the slowdown in growth: The 4.2% rise in the construction output index in the first quarter of 2000 could not be matched in the following quarters. From the second quarter, building posted overwhelmingly negative growth (second quarter: -2.7%, third quarter: -3.5%, fourth quarter: 0.0%). Although building construction stabilized in the fourth quarter (+1.2%), civil engineering output continued to tumble (-3.8%). In January 2001 the overall construction output index

progressed by 16.6%, but this value is likely to be distorted upward by adjustments in statistical recording methods.

Construction sales excluding the auxiliary construction business as measured by gross output advanced by 3.5% on 1999. Turnover increased at different rates in the various construction sectors. While building construction performed well, enlarging by 4.6%, civil engineering at +1.3% growth was only just above the year-earlier level. Sluggish demand for additional housing is weighing on residential construction, but industrial and engineering construction is gathering speed. In the same period, public sector construction contracts diminished by 1.5% as a result of the obligation to contribute to the consolidation of general government budgets. The order intake of the construction sector does not point to a pickup in activity: Whereas at EUR 1.52 billion new orders stood 2.1% above the year-earlier level in December 2000, orderbooks at EUR 4.77 billion were 1.2% below the 1999 figure.

Retailing boosted sales by 5.7% at current prices (2.7% at constant prices). Wholesale and commission trade scored the biggest gains (+4.6% in real terms), followed by retailing with 1.8% in real terms. Motor vehicle and motorcycle retail sales, though, fell by 2.1%. Although new vehicle registrations declined by a total of 1.7% in 2000 against 1999, the second highest figure for new registrations was recorded at 401,000. Unlike registrations of cars, which dropped by 1.5% against the previous year, registrations of new motorcycles and trucks exhibited a rising trend in 2000. The downtrend of new registrations continued into the first quarter of 2001, with new registrations tumbling by 4.8% against the same quarter of 2000.

#### **4 Austrian Business Activity Marked by Listless Domestic Demand**

The decline in economic growth from 4.1% year on year in real terms in the first two quarters of 2000 to 2.3% in the third quarter and 2.6% in the fourth quarter is attributable chiefly to the sharp fall in domestic demand.<sup>1)</sup>

All components of domestic demand reflect this slowdown. Total consumer spending slackened from 4.0% in real terms in the first quarter to 2.6% in the second quarter and 1.7% in the third quarter, and then edged up to 2.2% in the fourth quarter. This drop in consumer spending is distributed among households (first quarter of 2000: 4.1%, second quarter: 2.4%, third quarter: 1.6%, fourth quarter: 2.6%; total: 2.7%) and the public sector (first quarter of 2000: 3.7%, second quarter: 2.8%, third quarter: 1.6%, fourth quarter: 1.1%; total: 2.3%). While the income tax reform provided a stimulus to consumer spending in the first half of the year, the first budget austerity package, which went into effect in June 2000, acted as a damper on household spending, as did rising oil prices.

<sup>1</sup> Although it may be assumed that business activity peaked in the summer of 2000 in Austria, the extent of the weakening in the second half does appear to be somewhat overstated. As growth was especially low in the first half of 1999 (only 1.7% year on year), this base effect produced above-average growth in the first half of 2000.

Purchasing power received a further knock when the second consolidation package became effective at the beginning of 2001.

Capital spending slumped even more dramatically: Real gross capital expenditure, which had still been soaring by 7.9% in the first quarter, in fact diminished 1.2% year on year in the third quarter. In the fourth quarter it recovered to +4.4%. However, the fourth-quarter figure is distorted upward by investment advanced in expectation of the elimination of the investment allowance at the beginning of 2001.

Languid domestic demand and the bleaker international economic outlook presage a substantial cooling of business activity in Austria. WIFO bases its March forecast on considerably more pessimistic assumptions of the international economic framework than does the IHS, predicting a slowdown in real GDP growth to a rate of 2.2%. Growth is expected to sink further to 2.1% in 2002. The IHS, by contrast, projects 2.3% real economic growth in 2001 and an improvement to 2.5% in 2002.

## **5 Less Confidence in Economic Prospects**

The confidence indicators largely confirm the expectations in the forecasts. The Industrial Confidence Index has been pointing downward again since autumn 2000 (September 2000: 2, March 2001: -5) after having clearly improved in 2000 against 1999 (-14). Conversely, the slightly negative consumer confidence results of October and November picked up again: The Consumer Confidence Index recouped some losses to become slightly positive again in March 2001 (+3). However, it is not really a very reliable indicator by which to gauge consumer demand. The general confidence in Austria's cyclical development as reflected in the Economic Sentiment Indicator edged up 1.7 points from 101.5 to 103.2 points in March 2001 against the previous month. This pickup may be traced chiefly to the buoyed confidence in construction as reflected by the Construction Confidence Indicator. After bottoming out at -58 in February 2001, this indicator, which offsets positive and negative sentiment in percent of total responses, recovered to -28 in March 2001, thus regaining the level of November and December 2000.

## **6 Stagnating Capital Expenditure Plans**

The results of the investment survey conducted by WIFO in fall 2000, which were published in February 2001, indicate that entrepreneurs are standing on the sidelines at the moment. Manufacturers are planning to boost capital spending by a mere 1.4% in nominal terms in 2001. This caution makes manifest both the expectation that demand will slacken and the fact that the tax break for investment was eliminated in the second austerity package, compelling entrepreneurs to schedule their investment for 2000. The above-average surge in investment in the reporting year - 18.6% - corroborates the assumption that investment was frontloaded to 2000. The investment ratio (investment as a percentage of turnover) is thus set to drop from 6.6% in 2000 to 6.3% in 2001. The capital expenditure plans put forward by enterprises are based on expectations that turnover will climb by 5.7% in 2001 (2000: 7.5%).

In a more detailed sectoral analysis, manufacturers of automotive vehicles (+63.1%) and of nondurables (+10.2%) expect to step up capital spending substantially. Conversely, manufacturers of durable consumer goods are looking to slash investment (–20.5%); investment in other manufacturing sectors is likely to remain fairly constant.

## **7 Foreign Trade Recovers after Year-End Slump**

In 2000 economic growth in Austria drew heavily on exports. Exports of goods and services (national accounts definition) mounted 9.8%, with deliveries of goods expanding faster (10.9%) than exports of services (7.4%). Imports of goods and services posted a similarly high rate of increase (9.2%), but services (12.7%) outpaced goods (7.7%). As a result, net exports nearly doubled (+93.9%) against the previous year, adding 0.3 percentage point to total GDP growth at 3.2%.

Nominal goods exports according to foreign trade statistics advanced by 14.8% to EUR 69.2 billion (ATS 951.6 billion) compared to 1999; goods imports enlarged by 13.7% to EUR 74.3 billion (ATS 1,022 billion). Hence the deficit on merchandise trade widened by 1.3% to EUR 5.12 billion (ATS 70.4 billion).

After the decline in nominal exports by 4.4% year on year in December 2000 had signaled a possible letup in foreign demand, the January 2001 value of 13.5% instead indicated that goods exports had returned to the growth path of 2000. Nominal exports of goods to the euro area averaged 11.4% growth in 2000 according to foreign trade statistics. Nominal deliveries of goods to countries outside the EU, however, were raised by some 20%. The regional breakdown of nominal imports of goods shows a rise in imports from non-EU countries by roughly 24% in 2000; by comparison, goods imports from the EU went up by just 9.1%. The jump in nominal imports of products from countries outside the EU is chiefly the result of oil price and exchange rate developments, but also of vigorous domestic demand in the first half of 2000.

Austria's current account mirrors last year's economic developments, too: The current account deficit narrowed from –EUR 6.2 billion (3.2% of GDP) in 1999 to –EUR 5.9 billion (2.8% of GDP) in 2000. This improvement may be pinpointed above all to the dynamic development of exports and to the improvement of the income balance, which cushioned the negative effects of the oil price hikes and the deterioration of the balance of services. The data on a cash basis show the current account deficit to have shrunk by EUR 0.39 billion in the first two months of 2001 compared to the same period of 2000.

## **8 Labor Market Outlook Remains Positive**

The good economic performance in 2000 also had a lasting positive impact on the labor market, although employment growth lost some ground in the course of the year. The number of dependently employed Austrians widened by 25,800 year on year in 2000. The average workforce came to 3,133,700 in 2000. In March 2001, the number of persons working for an employer had expanded by 16,500 or 0.5% on the same period of 2000. With output

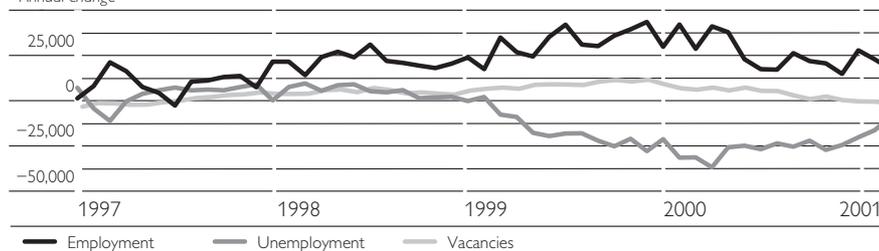
rising solidly and total employment reacting with a lag, cyclical factors cannot explain the slowdown in employment growth. The wave of people pushing to take early retirement before the new pension provisions become effective is likely to be an important reason for this decline in employment growth. The steady fall in registered unemployment also supports this supply-side explanation of the dip in employment growth. Registered unemployment sank by approximately 27,400 or 12.4% to an average of 194,300 job seekers against 1999. At the same time the number of job vacancies increased to an average of 35,500, 13.7% more in 2000 than in 1999. As a result, the rate of unemployment receded from 6.7% in 1999 to 5.8% in 2000 according to the Austrian Public Employment Service (AMS). In January 2001 seasonal fluctuations brought the jobless rate up 1.2 percentage points to 7.7%. In March 2001 the rate edged back down to 6.4%. In March 2001 the number of registered unemployed was recorded at 211,000. This represents a slight fall in the rate of persons listed as unemployed by 4.3% against March 2000.

The unemployment rate calculated in line with EU criteria ran to 3.7% on average in 2000 (1999: 4.0%). During the first quarter of 2001 it consistently stayed at this level and was thus 0.3 percentage point lower than in the same period of the previous year.

### Selected Labor Market Indicators for Austria

since 1997

Annual change



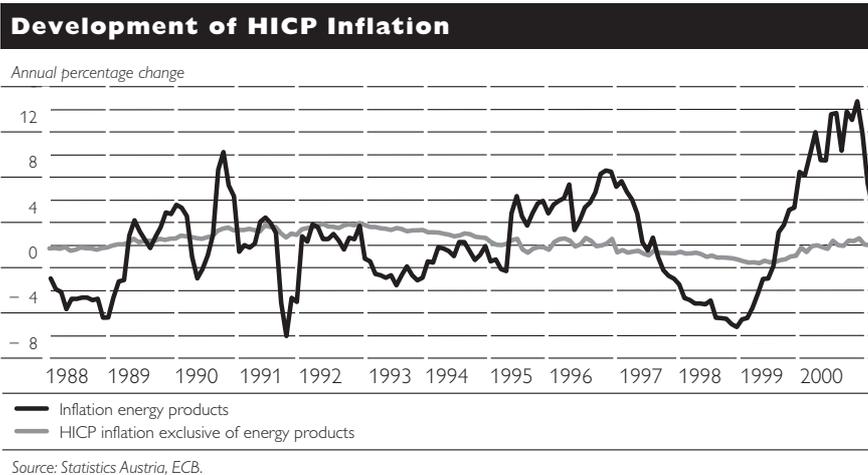
Source: Austrian Public Employment Service.

## 9 Inflation Begins to Lose Momentum

After inflation had peaked at an annual high of 3.1% in November 2000 (national CPI), a value last reached in September 1994, the rate of price increase eased to 2.6% in December 2000. In March 2001 the CPI augmented by 2.7% year on year (February: 2.6%). Seasonal goods drove up prices most (+7.7%), followed by lighting and heating (+7.4%), and tobacco (+6.1%).

The annual rate of CPI inflation amounted to 2.3%; the HICP rate ran to 2.0%. The HICP rate rose more slowly, but the course of the HICP curve is the same as that of the CPI. The annual rate of HICP inflation had moved around the 2% mark since February 2000, coming to 1.9% in March 2001, down from 2.2% in January 2001. The differences between the CPI and HICP rates can be ascribed to the effect of the vehicle excise duty, which added some 0.3 percentage point to the CPI but – being a tax – was

not factored into the HICP. Moreover, construction material has a much lower weighting in the HICP. The pickup in inflation reflected by both indices since mid-2000 was largely attributable to the higher price of fuel, the energy tax on electricity introduced at the beginning of June 2000 and hikes in a variety of fees for public services. If the development of HICP prices is adjusted for energy prices, inflation comes to 1.1% in 2000. The influence of energy prices on inflation has been declining sharply since the end of 2000: The rise in energy prices had still run to 11.8% in December 2000, but fell steadily to 3.6% in March 2001.



Wholesale prices appear to have crested in September and October 2000, when they were surging by over 6% on the year. The rise came to 4.4% in December 2000, and finally diminished to 2.6% in March 2001. Wages climbed by an average of 2.1% in 2000 in terms of the Negotiated Standard Wage Rate Index, that is, by less than the national CPI (2.3%). In March 2001 the Negotiated Standard Wage Rate Index advanced by 2.5%.

## Development of Selected Economic Indicators

	1999	2000	2001 <sup>1)</sup>	2002 <sup>1)</sup>	Last recently available period		
	1999	2000	2001	2002	1999	2000	2001
<i>Annual change in %</i>							
<b>Economic output</b>					<i>4th quarter</i>		
<b>real GDP at 1995 prices</b>							
GDP	+2.8	+ 3.2	+2.2	+2.1	+4.0	+ 2.6	..
Gross capital formation	+2.0	+ 3.1	+2.5	+2.1	+1.2	+ 4.4	..
Private consumption	+2.3	+ 2.7	+2.0	+2.0	+2.8	+ 2.6	..
Public consumption	+3.2	+ 2.3	+1.5	+1.5	+3.9	+ 1.1	..
Exports	+7.6	+ 9.8	+5.4	+4.3	+9.8	+ 5.4	..
Imports	+7.1	+ 9.2	+4.7	+4.0	+9.3	+ 5.1	..
GDP per employee	+1.4	+2.2	+1.4	+1.5	+2.1	+ 2.1	..
<b>Industrial output</b>					<i>January to February</i>		
Output index incl. construction	+5.0	+ 7.0	x	x	+1.3	+10.1	+ 8.9
Productivity per hour	+3.8	+ 8.0	+4.5	+4.6	x	x	x
<b>Labor market</b>					<i>1st quarter</i>		
Payroll employment	+1.0	+ 0.8	+0.5	-0.2	+0.8	+ 1.1	+ 0.7
Registered unemployment	-6.8	-12.4	-6.8	+0.5	-0.9	-10.1	- 6.2
%							
<b>Unemployment rate</b>							
EU concept	4.0	3.7	3.6	3.6	4.0	4.0	3.7
National concept	6.7	5.8	5.4	5.5	8.6	7.7	7.2
<i>Annual change in %</i>							
<b>Prices</b>							
National CPI	+0.6	+ 2.3	+1.7	+1.3	+0.5	+ 1.6	+ 2.8
HICP	+0.5	+ 2.0	x	x	+0.2	+ 1.8	+ 2.0
Wholesale price index	-0.8	+ 4.0	x	x	-2.2	+ 2.8	+ 3.3
<b>Wages</b>							
Negotiated standard wage rate index	+2.5	+ 2.1	+2.7 <sup>2)</sup>	+2.2 <sup>2)</sup>	+2.5	+ 2.0	+ 2.5
<b>Unit labor cost</b>							
General	+0.9	+ 0.2	+1.3	+0.5	x	x	x
Manufacturing industry	-0.5	- 5.3	-1.4	-2.0	x	x	x
<b>Relative unit labor cost<sup>3)</sup></b>							
Vis-à-vis major	-1.5	- 5.2	+0.4	-1.7	x	x	x
Vis-à-vis Germany	-0.1	- 1.7	-0.4	-1.3	x	x	x
<b>Foreign trade</b>					<i>January</i>		
(Statistics Austria)							
Imports, in nominal terms	+6.7	+13.7	+7.2	+6.6	+0.5	+11.3	+14.5
Exports, in nominal terms	+7.0	+14.8	+8.1	+7.3	-0.9	+15.6	+13.5
<i>EUR billion</i>							
<b>Balance of payments<sup>4)</sup></b>					<i>January to February</i>		
Current account	-6.2	- 5.9	-6.2	-6.4	-0.6	- 0.5	- 0.1
Goods	-3.4	- 2.9	-2.8	-2.4	-1.0	- 1.4	- 1.6
Services	+1.7	+ 0.8	x	x	+1.5	+ 1.6	+ 1.7
Travel	+1.7	+ 1.5	+1.5	+1.5	+1.3	+ 1.2	+ 1.3
%							
<b>Interest rates</b>					<i>April</i>		
EONIA	2.74	4.12	x	x	+2.7	+ 3.7	+ 5.1
Secondary market yield (government bonds) <sup>5)</sup>	4.69	5.56	4.70	4.70	+4.0	+ 5.5	+ 5.2
<i>Annual change in %</i>							
<b>Effective exchange rate of the euro</b>							
Nominal	x	-10.4	x	x	x	-11.5	1.7
Real	x	-10.1	x	x	x	-11.3	2.8
Indicator of Austria's price competitiveness <sup>6)</sup>					<i>February</i>		
	-1.1	- 3.5	+0.8	-0.1	+1.7	- 4.0	- 1.1
%							
<b>Budget</b>							
Net government debt <sup>7)</sup>							
Central government	-2.4	- 1.4	-1.1	-0.8	x	x	x
General government	-2.1	- 1.1	-0.4	+0.0	x	x	x

Source: OeNB, Statistics Austria, WIFO, AMS Austria, Association of Austrian Social Security Institutions.

<sup>1)</sup> WIFO forecast of March 2001.<sup>2)</sup> Change in gross earnings per employee.<sup>3)</sup> Manufacturing industry, calculated in uniform currency.<sup>4)</sup> Annual figures are based on transactions, last recently available period on cash balances.<sup>5)</sup> Ten-year federal government bonds (benchmark).<sup>6)</sup> Until December 1998: real effective exchange rate of the Austrian schilling.<sup>7)</sup> According to the report of government deficits and debt levels (February 2001 data).

# Recent Developments on the Meat Markets and Their Impact on Inflation in Austria and the Euro Area

Manfred Fluch

The identification of cases of bovine spongiform encephalopathy (BSE)<sup>1)</sup> in October 2000 and the February 2001 outbreak of foot and mouth disease (FMD)<sup>2)</sup> have resulted in major disruption to European meat markets. Furthermore, in Austria a discussion flared up in December 2000 on the illegal practice of feeding antibiotics to pigs. In the wake of these developments both consumers and producers have had to deal with profound changes. Meat production has since become subject to more stringent controls, consumers' buying patterns have shifted and meat prices have changed amid heightened consumer awareness. This report briefly explores the factors that have been disrupting meat markets, before illuminating their implications for meat and livestock prices and their effects on inflation rates. While it focuses primarily on the Austrian context, it also provides a comparison to the euro area.

## **I Recent Occurrence of Animal Disease Epidemics**

The disease BSE, which was first discovered in the United Kingdom and then also in a number of other European countries, triggered the collapse of the beef market. For a brief period Austria, too, was on BSE alert, but to date not a single case has been reported. All countries joined the EU in taking large-scale preventive measures to contain the spread of this epidemic. Meat production has since become subject to more stringent and cost-intensive inspection and quality procedures. In some countries numerous animals of a certain age group were culled and slaughtered. Such mass slaughterings, especially in the United Kingdom and a few other EU member states, forced farmers to the brink of financial ruin.

A few months on, the UK was hit by the outbreak of foot and mouth disease, the first case of which was reported on February 20, 2001, and the cause of which was traceable to contaminated imported feed. FMD then also spread to other EU countries.<sup>3)</sup> Again, governments all across Europe activated their contingency plans, imposing, for instance, import bans, tightening incoming traffic controls, and installing disinfectant points and so-called anti-epidemic carpets at borders. The Austrian Health Ministry also adopted strict guidelines and took preemptive measures. To date, Austria has remained free of FMD.

## **2 Changes in Meat Consumption**

Austrian consumers responded to the health scares by cutting back their meat consumption and shifting to (currently) less troubled meat alternatives. Consequently, demand for organically produced meat, e. g. poultry, turkey, horse meat, and ostrich, and also fish, surged. In the wake of the debate about the use of antibiotics in pigs, Austrians opted, above all, for poultry. Since no FMD cases had been reported in Austria and investigations showed that pigs had been fed antibiotics only in a few isolated

1 *The disease BSE damages the brains of cattle, causing spongelike holes in the brain and other nervous tissue.*

2 *Foot and mouth disease is a highly infectious viral disease of cloven-hoofed animals, such as cattle, pigs, goats and sheep (it very rarely infects humans and nonmammals).*

3 *Cases were also reported in Asia and Latin America.*

regions, consumers shortly switched back to pork, the meat for which Austria typically posts the highest (and uptrending) per capita consumption (approximately 58 kg a year). Beef (19 kg), consumption of which has been on a steady decline for the past ten years, and poultry (17 kg), demand for which has, by contrast, been rising, come in second and third place. Annual per capita consumption of the remaining types of meat (lamb and sheep, goat, horse meat, other meats, variety meat) total some 5 kg.<sup>1)</sup> On balance, 1999 per capita meat consumption in Austria came to almost 100 kg (see table 1).

Table 1

<b>Meat Consumption in Austria</b>								
	Beef	Pork	Lamb/ Goat	Horse	Variety meat	Poultry	Other	Total
	<i>kg/per capita</i>							
1985	22.0	52.1	×	×	3.8	11.8	1.5	89.2
1990	21.7	51.8	×	×	3.6	13.9	1.9	92.9
1995	19.5	56.8	1.1	0.1	2.2	15.3	1.8	96.8
1999	19.3	57.7	1.1	0.1	3.2	17.2	0.8	99.4

Source: Statistische Nachrichten, various annual volumes, n. a. = not available.

### 3 Meat Price Developments as of September 2000<sup>2)</sup>

The developments of producer, wholesale, and consumer prices reflect the changes that have taken place on the meat market (see table 2 and chart 1). In Austria, these changes have been less pronounced than in other countries of the EU or the euro area. This report covers the period from October 2000 to February/March 2001 (at editorial close, March 2001 data were not yet available for producer prices of agricultural products).

#### 3.1 Producer Prices of Agricultural Products

As a result of the beef crisis, from October 2000 to February 2001 producer prices of agricultural products, as demonstrated by the main category of bull calves, plummeted by close to 24%. While 1 kg of beef had cost an average of ATS 39.5 in October 2000, its price dropped to slightly over ATS 30 by February 2001. Over the same period, the price of pork mounted by 11.9% or from ATS 20 to ATS 22.40 per kilogram. Poultry showed a similar trend: The price at which producers sold broiler chickens to retailers in February 2001 amounted to nearly ATS 27 per kilogram; at ATS 26, it had been only marginally lower in October 2000. By contrast, in January 2001, the producer price for broilers stood at close to ATS 30 (+15% against October 2000), but this interim peak may have been attributable to the antibiotics scandal, which temporarily boosted poultry sales.

1 Wilding, E. (2000). *Versorgungsbilanzen für tierische Produkte 1999*. In: *Statistische Nachrichten* 10, 812–817.

2 The author would like to thank Statistics Austria (notably Erwin Wilding, Peter Müller, and Paul Haschka) for their cooperation.

### 3.2 Wholesale Prices

The price information gleaned from the Wholesale Price Index is not conclusive, since meat – a few exceptions notwithstanding – does not represent a wholesale good and is mainly sold via retailers. Yet the information available, however little, ties in with the picture obtained from producer prices. Livestock<sup>1</sup>), the price of which had risen sharply throughout the year 2000, fetched a good 2% less in February 2001 than in October 2000. Here, the slide in cattle prices certainly more than offset the increase in hog prices. In March 2001, these prices had again mounted by 16.1% on October 2000, not least due to the upcoming Easter holidays.

The component “meat, meat products, poultry and game” (weighted at 2.29% in the Wholesale Price Index) jumped by almost 7% in the observation period. The bulk of this component consists of (mostly canned) pork, poultry and game products.

The price of both categories rose substantially in March 2001 year on year (+28.5 and +11.9%, respectively), with the contribution to inflation (wholesale prices) running at close to 0.6 percentage point<sup>2</sup>).

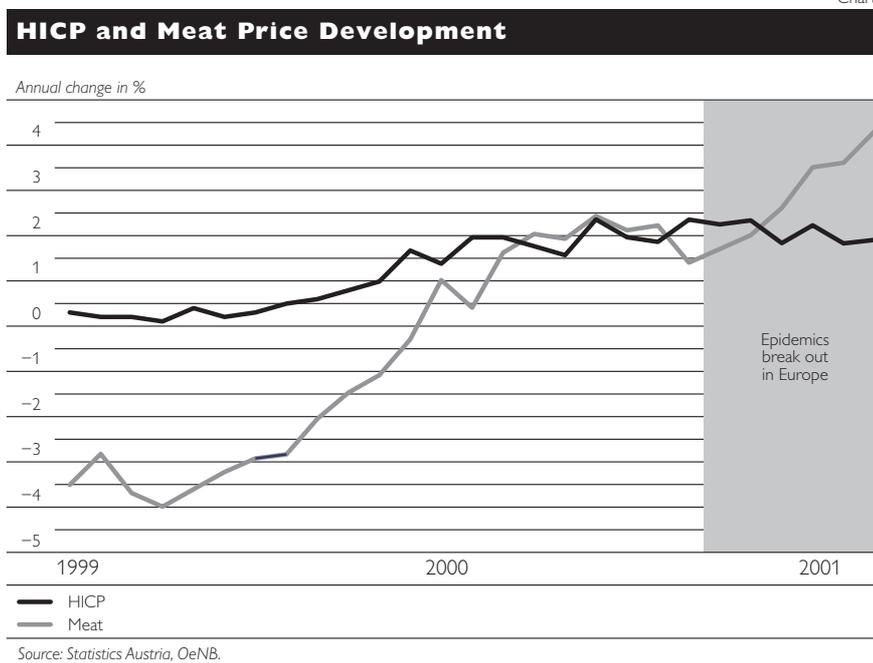
Table 2

Meat Price Developments								
	2000 September	October	November	December	2001 January	February	March	Change October 2000/ February/ March 2001
	ATS/kg							%
<b>Producer prices of agricultural products</b>								
Hogs	19.98	20.01	20.61	21.59	21.15	22.39	..	+11.9
Cattle	39.57	39.47	38.39	34.97	32.46	30.02	..	-23.9
Poultry	26.08	26.09	26.27	26.06	29.95	26.84	..	+ 2.9
Annual change in %								
Hogs	+12.8	+24.0	+29.5	+35.7	+45.2	+38.3	..	x
Cattle	+ 4.4	+ 5.1	+ 0.3	-10.8	-16.9	-23.9	..	x
Poultry	+ 5.6	+ 6.1	+ 9.5	+ 8.0	+20.6	+10.6	..	x
Annual change in %								
<b>Wholesale prices</b>								
Livestock	+ 6.2	+10.7	+14.7	+ 9.8	+13.7	+14.9	+28.5	+16.1
Meat	+ 4.1	+ 4.5	+ 5.2	+ 5.2	+ 7.7	+11.3	+11.9	+ 7.0
Annual change in %								
<b>Consumer prices</b>								
<b>HICP</b>								
Meat	+ 1.4	+ 1.7	+ 2.0	+ 2.6	+ 3.5	+ 3.6	+ 4.3	+ 3.1
Contribution to inflation rate in percentage points	+ 0.05	+ 0.06	+ 0.07	+ 0.09	+ 0.11	+ 0.11	+ 0.13	+ 0.07
<b>CPI</b>								
Beef	+ 1.0	- 0.2	+ 0.6	+ 1.9	+ 1.9	+ 1.4	+ 1.9	+ 2.3
Pork	+ 0.3	+ 2.4	+ 1.6	+ 3.4	+ 4.8	+ 7.1	+ 8.4	+ 4.3
Poultry	+ 2.1	+ 3.5	+ 4.1	+ 2.8	+ 2.2	+ 5.2	+ 5.4	+ 3.4

Source: Statistics Austria, OeNB.

- <sup>1</sup> Weight in the Wholesale Price Index: 0.98%. Hogs account for <sup>2</sup>/<sub>3</sub> and cattle for <sup>1</sup>/<sub>3</sub> of price information in the livestock category.
- <sup>2</sup> In March 2001, the Wholesale Price Index increased by 2.7% year on year.

Chart 1



### 3.3 Consumer Prices

End users have been faced with similar price movements, even though consumer prices fluctuated less pronouncedly than producer and wholesale prices (see table 2 and chart 1). Having picked up perceptibly since October 2000, meat prices accelerated markedly from January to March 2001. In contrast to producer and wholesale prices, consumer prices, as reflected by CPI and HICP<sup>1)</sup> data, registered steep increases for some meats, notably pork. Beef consumer prices advanced, too, despite the difficult market situation and the partly hefty slump in the producer and wholesale sectors. In other words, the retail sector appears to have adhered to the existing price level irrespective of the ongoing drop in private consumption.<sup>2)</sup>

At any rate, the mounting meat prices have only a minimal impact on inflation. Meat carries a weight of 3% in the HICP. In March 2001, with meat prices posting a year-on-year increase of 4.3% according to the HICP (see table 2 and chart 3), their contribution to inflation came to 0.13 percentage point, up a slight 0.07 percentage point on October 2001.

### 4 Meat Price Developments in the Euro Area and the EU

Given supply bottlenecks and tightened market regulation, meat prices uptrended clearly from September 2000 to February 2001. While the year-on-year rate of inflation for meat stood at 2.1% in September 2000, it

1 CPI and HICP data are based on the same primary price information. This analysis is generally based on HICP data. Since a detailed breakdown of meat prices by meat types is not available for the HICP, table 2 also uses CPI data, which provide this information.

2 Here, the collection methodology may likewise influence the CPI, as it covers both meat wholesalers and supermarkets. Since the larger retail chains claim to offer beef at a discount, smaller meat retailers, which predominate the surveys, have obviously tended to keep their prices unchanged.

progressed to 3.0% in October and more than doubled by March 2001 (7.6%). Virtually all member states follow this trend, with the regions hardest hit by the epidemics, however, showing the most pronounced changes in meat price levels.

In line with ECB calculations for the year 2001, the weight (see table 3) accorded to meat in the HICP ranges from 3.02% (Austria) to 5.66% (Portugal). In the euro area as a whole, meat is weighted at 4.12%. The United Kingdom and Sweden account for the lowest weights. Charts 2 and 3 show the contribution to inflation of rising meat prices in the various countries and the overall euro area. The pressure of meat prices on national inflation is highest in Portugal and Spain (see chart 2) and lowest in Luxembourg and Austria (see chart 3). In the euro area the contribution to inflation of rising meat prices increased from 0.12 percentage point in October 2000 to 0.31 percentage point in March 2001.<sup>1)</sup> The meat crisis thus added 0.19 percentage point to inflationary pressures in the euro area.

Table 3

### Meat Weightings in the HICP in the EU Member States

	%
<b>Euro area</b>	4.12
Belgium	4.47
Germany	3.10
Greece	4.93
Spain	5.57
France	5.02
Ireland	4.79
Italy	4.14
Luxembourg	3.33
Netherlands	3.32
Austria	3.02
Portugal	5.66
Finland	3.19
Denmark	3.65
Sweden	2.92
United Kingdom	2.50
<b>EU</b>	3.81

Source: European Central Bank.

## 5 Summary

Both in Austria and in the euro area meat prices mounted markedly following the outbreaks of animal disease epidemics in some EU countries (excluding Austria), which proved a slight price strain. Meat contributed 0.31 percentage point to inflation in the euro area in March 2001, compared to 0.12 percentage point in October 2000, when the first

<sup>1</sup> Contribution to inflation of meat prices in the euro area in percentage points:

October 2001: 0.12

November 2000: 0.13

December 2000: 0.15

January 2001: 0.20

February 2001: 0.26

March 2001: 0.31.

epidemic broke out. In individual countries, such as Portugal and Spain, where meat contributes around 0.6 to 0.8 percentage point to inflation, these price effects have in part been far more pronounced.

At 0.13 percentage point (half of which is attributable to the meat crisis), rising meat prices exerted comparatively little pressure on inflation in Austria. On the one hand, this may be due to the fact that to date no BSE or FMD cases have been reported in Austria. On the other hand, meat retailers already faced with stiff competition and pricing pressures have no leeway for hefty price hikes. The increases of poultry and pork consumer prices were much more moderate than those registered for producer prices and the rather inconclusive wholesale prices. The decline in beef producer and wholesale prices did not impact consumer prices. This means that either consumer demand for beef did not slow down to the extent reported by the media or that despite weakened demand retailers did not pass on price decreases to consumers. Changes in the demand for other types of meat and the resulting price hikes benefit this pricing policy.

Chart 2

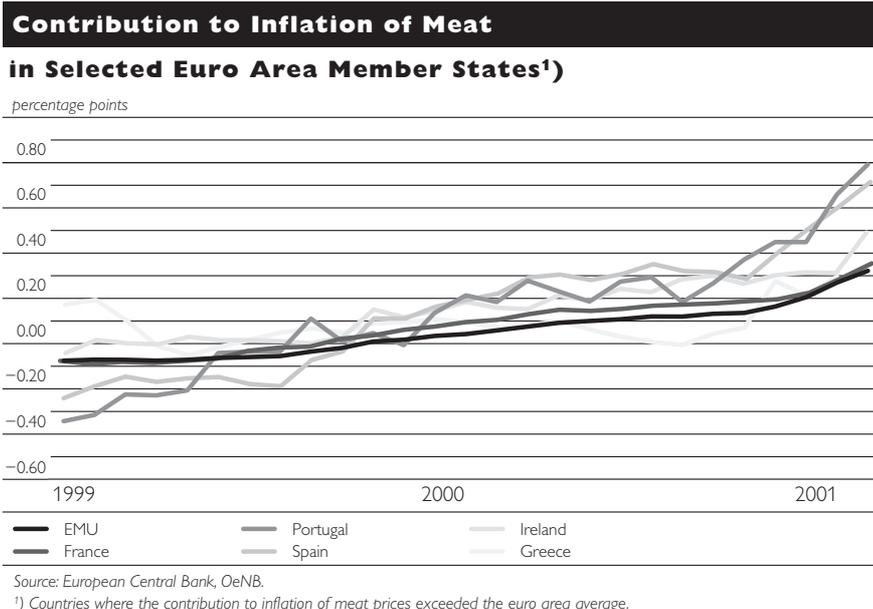
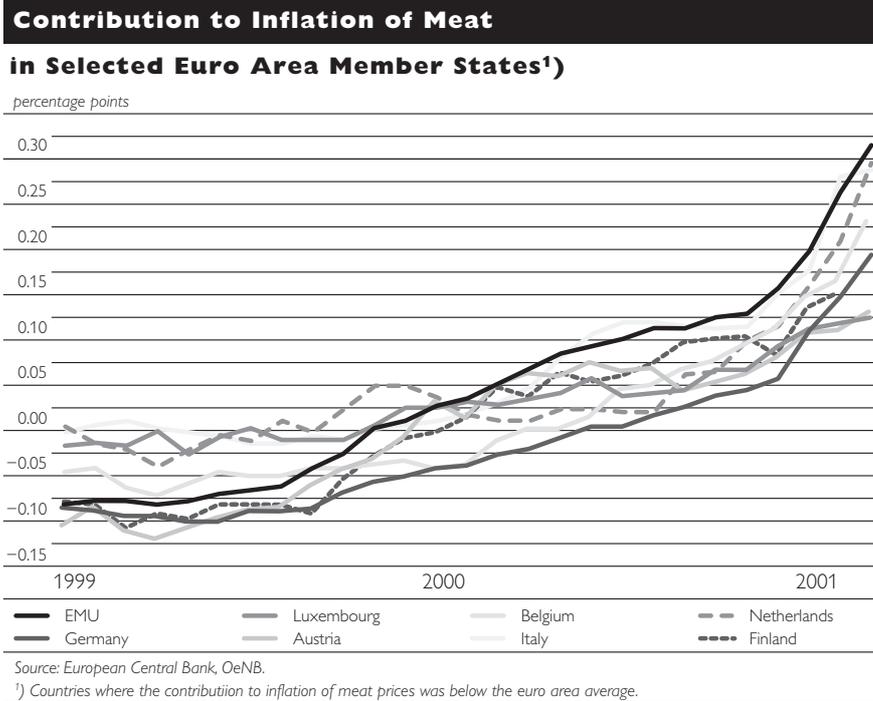


Chart 3



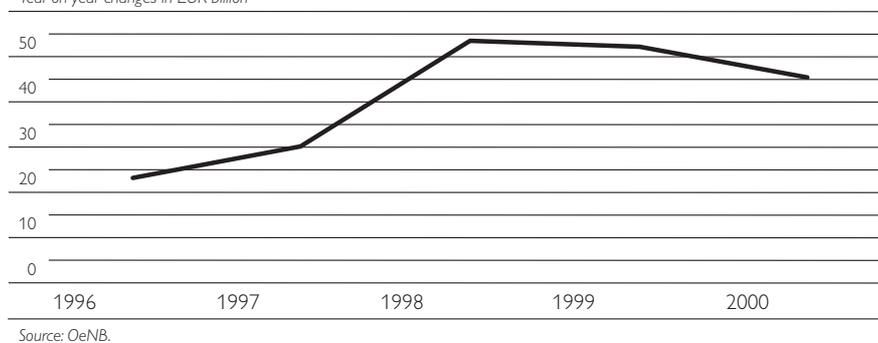
# Money and Credit in the Year 2000

## Banks' Total Assets Up 7.3%

In the year 2000, Austrian banks' total assets expanded by EUR 38.17 billion or 7.3%, compared to EUR 43.78 billion (+9.1%) in 1999. Until September 2000, cumulative growth had been as high as EUR 51.76 billion (+9.9%), marking the strongest increase since the beginning of the 1980s. The integration of Bank Austria AG into Bayerische Hypo- und Vereinsbank AG (HVB) in November, the subsequent merger of Bank Austria AG and BA/CA-International as well as the takeover of a number of Bank Austria's foreign branch offices<sup>1)</sup> by HVB, however, reversed this uptrend, which had been largely based on interbank transactions.

### Asset Growth of Domestic Banks

Year-on-year changes in EUR billion



Although interest rates stagnated at a high level toward the end of 2000, credits – mainly to households and businesses – nevertheless augmented faster than in 1999. Banks continued to rely mainly on deposit intake for extra funding, followed closely by liabilities to nonresidents, which went up sharply. Deposit growth, however, remained below the 1999 level. Particularly funds held in savings deposits contracted markedly, owing to the heightened appeal of alternative forms of investment and, perhaps, also to the abolition of anonymous savings accounts.

A breakdown by sectors shows that savings banks (+12.2%), special purpose banks (+12.1%), state mortgage banks (+11.6%) as well as Raiffeisen credit cooperatives (+9.6%) and Volksbank credit cooperatives (+9.2%) posted above-average growth in percentage terms. Only building and loan associations and joint-stock banks remained below average (at +4.5% and –4.5%, respectively).

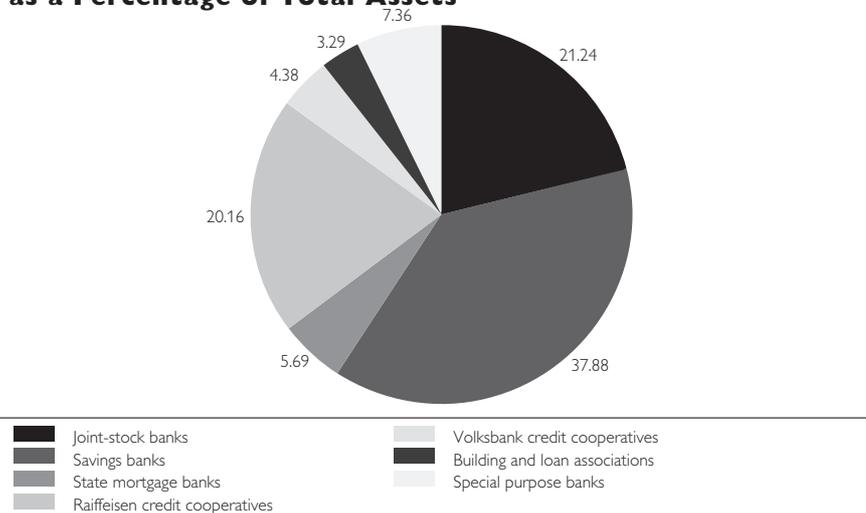
Owing to the previously mentioned takeover of a number of BA branch offices by HVB, total assets of Austrian banks' foreign branches expanded by no more than EUR 1.23 billion or 3% in 2000, compared to a EUR 6.31 billion or 18.0% increase in 1999. By contrast, at EUR 1.57 billion or 11.3%, credit institutions majority-owned by nonresidents<sup>2)</sup> clearly posted higher asset growth than in 1999.

1 Bank Austria's branches in London, Hong Kong and Singapore.

2 Excluding Bank Austria AG, which has only been counted as a foreign bank as of February 2001.

**Austrian Banks' Market Share**

**as a Percentage of Total Assets**



Source: OeNB.

The market share (as measured by total assets) of the five largest individual credit institutions came to 45.9% in December 2000, compared to 43.9% in December 1999.

**Ranking of Austria's Ten Largest Banks**

**by Total Assets**

As in December 2000

- Bank Austria Aktiengesellschaft
- Erste Bank der oesterreichischen Sparkassen AG
- Creditanstalt Aktiengesellschaft
- Raiffeisen Zentralbank Österreich Aktiengesellschaft
- Oesterreichische Kontrollbank Aktiengesellschaft
- Bank für Arbeit und Wirtschaft Aktiengesellschaft
- Österreichische Postsparkasse Aktiengesellschaft
- Raiffeisenlandesbank Niederösterreich-Wien reg GenmbH
- Raiffeisenlandesbank Oberösterreich reg GenmbH
- Österreichische Volksbanken-Aktiengesellschaft

The number of banks operating in Austria continued to decline in the year 2000, with the number of head offices going down by 28 and that of branch offices and bureaux de change dropping by 20 since December 1999. The peak in bank closures (-139) appears to have occurred already in 1998.

**Strong Decline in Interbank Business**

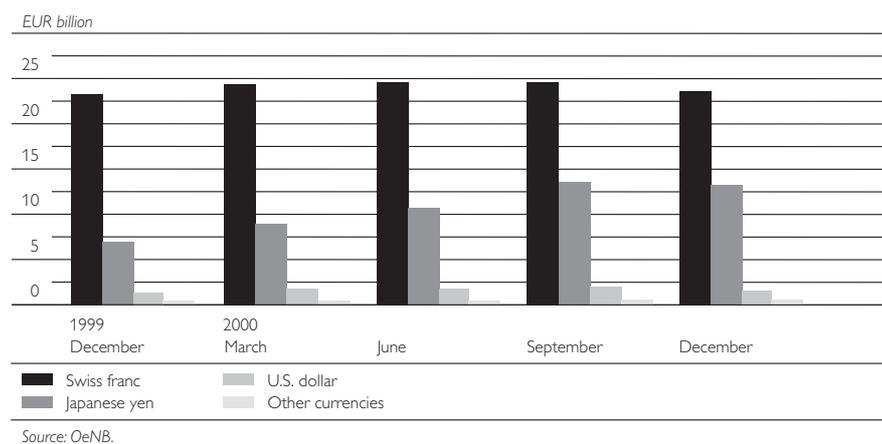
Not least owing to the previously mentioned restructuring of Bank Austria AG, domestic interbank business contracted sharply in the reporting year, while transactions with foreign banks continued to grow. After advancing by EUR 8.01 billion or 8.0% in 1999, domestic interbank claims went down by EUR 5.97 billion or 5.5% in 2000. On the assets side, banks' external interbank transactions augmented by 18.9% (+EUR 12.59 billion), up from 10.8% in 1999, while on the liabilities side, at 11.0% (+EUR 8.36 billion),

growth remained below the corresponding 1999 figures (+EUR 10.78 billion or +16.6%).

### Lively Demand for Loans

In 2000, demand for loans advanced by EUR 14.10 billion or 6.7% compared to EUR 10.51 billion or 5.2% in 1999, marking the biggest growth, in absolute terms, since the beginning of the 1980s. Net growth remained considerable even upon deduction of interest payable per quarter (December 2000: EUR 2.67 billion). In December 1999, interest payable had amounted to no more than EUR 2.26 billion. This growth in interests is mainly attributable to a trend reversal back toward euro-denominated loans, which bear slightly higher interests. While foreign currency loans had contributed around 80% to absolute credit growth in 1999, euro-denominated loans were advancing again in 2000 (+EUR 7.70 billion or +4.3%).<sup>1)</sup> As at December 31, 2000, the ratio of euro-denominated loans to foreign currency loans was 5 : 1.

### Foreign Currency Loans to Domestic Nonbanks



In December 2000, approximately 61% of all foreign currency loans were denominated in Swiss francs (1999: around 73%). The amount of loans outstanding in this currency climbed only slightly since the beginning of 2000, namely by EUR 0.4 billion or 1.5%. With the Swiss franc's exchange rate against the euro going up by around 5% over the same period, however, net new exposure in Swiss francs appears to have declined. Yen-denominated loans continued to be in high demand in 2000, with their volume almost doubling to a level of EUR 13.4 billion since the beginning of the year. The fact that – notwithstanding its third-quarter ascent – the yen's exchange rate almost stagnated against the euro indicates that net new exposure in Japanese yen increased. At the end of December 2000, yen-denominated loans accounted for a share of 33.9% in total foreign currency loans, up from 21.7% in 1999. With a share of merely 4.0% in the total volume of loans (1999: 4.0%), U.S. dollar loans continued to play a

<sup>1</sup> In 2000, foreign currency loans only accounted for around 45% of credit growth.

subordinate role in foreign currency lending during the reporting year. In December 2000, Austria accounted for 3.2% of all outstanding foreign currency loans in the euro area. At the same time, the Austrian share in loans denominated in Swiss franc and Japanese yen amounted to 32.8 and 32.1%, respectively.

<b>Number of Loans</b>		1996	1997	1998	1999	2000
		<i>1,000</i>				
Euro-denominated loans	up to ATS 1 million	6,353	6,040	5,969	6,067	5,853
	over ATS 1 million	275	288	286	287	301
Foreign currency loans	up to ATS 1 million	54	47	72	81	118
	over ATS 1 million	19	31	60	98	122

Source: OeNB.

Judging from the currency distribution of net new borrowing in 2000, borrowers again tended to take on large exposures (over ATS 1 million) in foreign currencies rather than in euro. At the same time though, the gap between the number of foreign currency loans below ATS 1 million and that of foreign currency loans above ATS 1 million narrowed in the year under review; this means that, in 2000, for the first time, banks granted more new foreign currency loans below than above the ATS 1 million line.

A sectoral breakdown clearly shows that building and loan associations in particular recovered in 2000, as they succeeded in slightly reducing the large gap between deposits and loans. Thus, outstanding loans of building and loan associations expanded by 15.7%, after having contracted by -5.6% in the previous year. With a 13.8% rise in their credit volume, special purpose banks posted the second biggest growth in percentage terms. Savings banks and Raiffeisen credit cooperatives also registered an above-average increase in this area, with the Raiffeisen sector being particularly successful in the foreign currency loans segment (+32.0%). This segment was also largely responsible for the credit growth of Volksbank credit cooperatives.

In 2000, at a rate of approximately 31%, the share of foreign currency loans in total credit volume was more than twice as high in the Western parts of Austria than in the Eastern parts (around 15%). A closer look at growth rates, however, reveals that Eastern Austria is catching up rapidly, with foreign currency loans clearly growing faster than euro-denominated loans.

Stepping up by EUR 8.00 billion or 8.6% compared to EUR 6.56 or 7.6% in 1999, nonrevolving loans accounted for more than half of credit growth. Advancing at a slightly slower pace than in 1999, namely by EUR 4.28 billion or 7.8%, current account credits contributed an additional 30% to credit growth. Long-term loans, which are equally important in terms of volume, reversed their 1999 downward trend by picking up 2.1% in the year under review. Other types of lending moved up slightly, by EUR 0.55 billion.

Owing, among other factors, to a positive investment climate and to fiscal measures which prompted businesses to bring forward investment

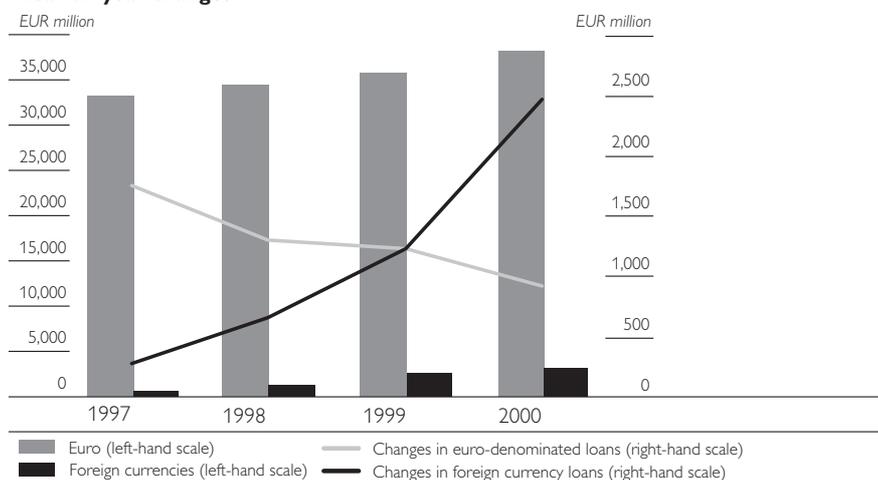
projects to 2000, the rising demand for loans in the reporting year was mainly attributable to businesses, which raised their level of exposure by EUR 8.96 billion or 7.6%. In 1999, the comparable growth rate had only been 5.6%. Businesses took on around 40% of total credit growth (+EUR 3.76 billion) in foreign currencies, mainly in the form of long-term liabilities. Interest<sup>1)</sup> on commercial loans climbed by 1.18 percentage points to 6.95%.

Owing, among other things, to the excellent economic situation (at least until mid-2000), credits extended to households went up rather sharply, by EUR 5.19 billion or 9.6%. Compared to 1999, the volume of new loans went down rapidly, however, in the fourth quarter of 2000; this decrease is most likely attributable to a series of fiscal burdens and to rising oil prices which caused the consumer climate to deteriorate toward the end of the year. Long-term loans were responsible for nearly the entire expansion of exposure. While in 1999, credit growth had almost entirely been based on foreign currency loans, their share only came to slightly more than 50% in 2000.

Interest on personal loans climbed by 1.06 percentage points since the beginning of 2000, while interest on home and home improvement loans went up by 1.01 percentage points to 6.38%.

### Home and Home Improvement Loans

#### Year-on-year changes



Since the beginning of 2000, home and home improvement loans expanded faster than in 1999, namely by EUR 3.29 billion (around 8%) to EUR 41.28 billion. While in the previous year, however, euro-denominated loans and foreign currency loans had both accounted for around 50% of credit growth, the share of euro-denominated loans in total growth even came to 75% in 2000.

<sup>1</sup> All interest rates given here are average interest rates.

The public sector's borrowing requirements were extremely low in 2000. Liabilities only went up moderately, by EUR 0.26 billion or 0.9%. The central government sector, in particular, reduced its exposure to Austrian banks by EUR 1.78 billion or 13.2%, compared to a 12.4% contraction in 1999. Regional authorities slightly expanded their exposure by EUR 0.29 billion or 5.3%, compared to EUR 0.13 billion or 2.5% in 1999. In the reporting year, changes in their revenue structure prompted municipal authorities to step up their exposure by EUR 1.61 billion or 16.8%, up from EUR 0.96 billion or 11.0% in the previous year. Nearly 80% of loans taken on were euro-denominated. In 2000, social security funds stepped up their exposure by EUR 0.14 billion (15.3%), thus remaining slightly below the comparable 1999 figures. When taking on new loans, public authorities mainly opted for short-term varieties. Average interest on public sector loans went up by 1.03 percentage points to 5.31% since the beginning of 2000.

### **Downward Trend in Securitized Lending**

The development of securitized lending was contrary to that of loans. In this segment, banks operating in Austria reduced their portfolio by EUR 0.83 billion or 3.3%, which was still relatively moderate compared to 1999 (EUR -2.10 billion or -7.7%). In 2000, the share of foreign currency transactions in securitized lending came to around 1%, thus remaining almost negligible. The slowdown was most pronounced in the field of other public sector debt instruments, which contracted almost as sharply as in 1999, namely by EUR 1.40 billion or 7.4%. Debt securities including fixed-income securities went down by EUR 0.21 billion or 12.8%, following a reduction by EUR 0.72 billion or 30.1% in 1999. Federal Treasury bill holdings stagnated at a level of EUR 1.94 billion. Only variable-yield securities other than shares went up dramatically (EUR +0.55 billion or +41.7%). This category includes mutual fund shares held by banks.

In the field of securitized lending, building and loan associations posted the strongest decline in terms of percent (EUR 0.12 billion or 14.7%), followed by Raiffeisen credit cooperatives (-14.1%) and joint-stock banks (-4.4%). Special purpose banks registered the highest growth (+50.8%).

### **Deposit Growth Slower than in 1999**

At a level of EUR 175.78 billion, deposits remained the most important source of funding for banks operating in Austria in 2000. External business (December 2000: EUR 174.08 billion) – particularly external interbank transactions – made considerable progress, however, and if this uptrend continues, will most likely overtake deposits in 2001 as the largest item on the liabilities side. Expanding by EUR 3.97 billion or 2.3% in 2000, deposit holdings remained below their dynamic 1999 increase (EUR +5.14 billion or +3.1%). With a share of 1.9% in total deposits, deposits in foreign currencies continued to play a rather subordinate role.

Euro-denominated sight deposits augmented by EUR 4.35 billion or 14.4% in the reporting year, thus remaining only slightly below the 1999 figures (+EUR 4.70 billion or +18.5%). Households held almost half of all

euro-denominated sight deposits (EUR 15.85 billion), which went up by EUR 2.43 billion or 18.1%. Deposits held in the form of personal checking accounts – a subitem of sight deposits – came to EUR 9.58 billion, up EUR 0.38 billion on 1999, when this type of accounts had still expanded by EUR 1.3 billion. An additional 40% of sight deposits were held by nonfinancial corporations in 2000. Following an increase of EUR 2.12 billion or 19.2% in 1999, businesses only raised their holdings by EUR 0.66 billion or 5.0% in 2000. The general government sector heavily raised its sight deposit holdings by EUR 1.09 billion or 52.9% year-on-year, to EUR 3.14 billion.

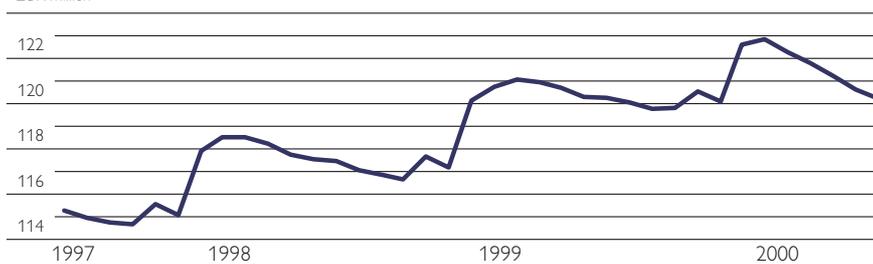
A sectoral breakdown shows that special purpose banks and savings banks posted the most pronounced increase in sight deposit holdings, by +103.9 and +16.2%, respectively. All other sectors remained below the average growth rate of 14.4%.

In addition, banks also took in more euro-denominated time deposits in 2000. Growth in this segment, however, only came to EUR 2.02 billion or 12.4% in 2000, following a EUR 5.50 billion or 51.1% rise in 1999. At the reporting date, about half of all time deposits were held by businesses, which, however, only expanded their holdings by one fourth compared to 1999, namely by EUR 0.60 billion or 6.9%. Time deposits held by households developed along entirely different lines, with households almost doubling their financial assets by EUR 1.72 billion or 98.4% to EUR 3.48 billion. The government sector slightly reduced its time deposit holdings by EUR 0.26 billion or 5.5%.

Broken down by sectors, savings banks recorded the highest percentage growth in time deposits (+25.3%); state mortgage banks also registered above-average growth in this segment.

### Savings Deposits of Domestic Nonbanks

EUR million



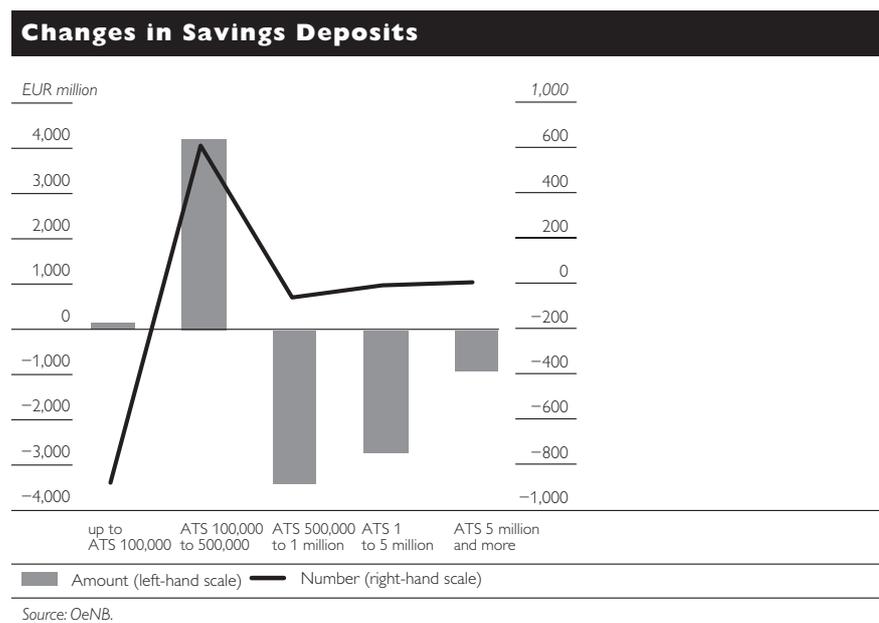
Source: OeNB.

Although interests on savings deposits had been rising continuously since the beginning of 2000,<sup>1)</sup> savings deposits went down by EUR 2.63 billion or 2.2% to EUR 119.71 billion, almost reversing the gains of 1999, when this type of deposits had expanded by +EUR 2.46 billion or +2.1%. The short-term segment, in particular, saw massive outflows of funds, while long-term savings deposits (with a maturity of one year or more) even registered a slight increase, by EUR 0.35 billion. Adjusted for interests capitalized as per

<sup>1</sup> Thus, for example, the average interest rate for savings deposits with terms of over twelve months went up by 1.04 percentage points to 3.6%.

December 31, 2000 (EUR 2.94 billion, including capital earnings tax), interests on savings deposits even shrank by EUR 4.84 billion.

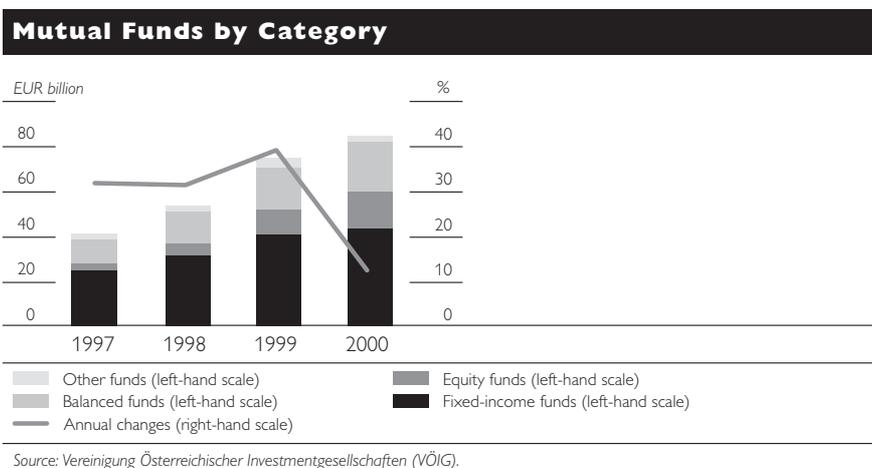
Bearing these facts in mind, the question is whether the decline in savings deposits and the abolition of anonymous savings accounts as of November 1, 2000, are somehow connected. Obviously, households reacted to this change by closing savings passbook accounts of more than ATS 500,000 on the one hand, while reallocating savings to accounts of up to ATS 500,000<sup>1)</sup> on the other. At the same time, investors switched from rather short maturity periods to longer ones. Available data also suggest reallocations from savings deposits to sight and time deposits (e.g. current accounts of both households and – owing to increased consumption<sup>2)</sup> – businesses). The number of ATS 5,000 banknotes in circulation augmented as well, suggesting that households withdrew parts of their savings account holdings. The abolition of anonymous savings accounts coincided with the issue of EUR 1.46 billion worth of Telekom Austria shares. Reallocations are likely to have taken place in this context as well.



In 2000, the EUR 2.63 billion decline in savings account holdings was contrasted by a EUR 9 billion increase in mutual fund shares (approximately +12%). This increment, however, remained clearly below the analogous results of 1999, which had amounted to around EUR 21 billion or 39%. Although fixed-income funds remained the most important segment in

1 Up to an amount of ATS 200,000, savings passbooks may be kept as “password savings books,” from which identified bearers may make withdrawals upon statement of the password. For reporting purposes, however, savings are currently classified only by the following sizes: ATS 100,000, or below, and ATS 500,000, or below.

2 An increase of +2.7% in real terms is expected for 2000.



terms of volume, equity funds and balanced funds grew at a clearly faster pace.

Domestic pension funds recorded a similar slowdown, which was even more pronounced when compared year-on-year: After soaring by EUR 2.45 billion or 52.5% in 1999, pension funds only expanded their holdings by EUR 0.71 billion or 9.9% in 2000.

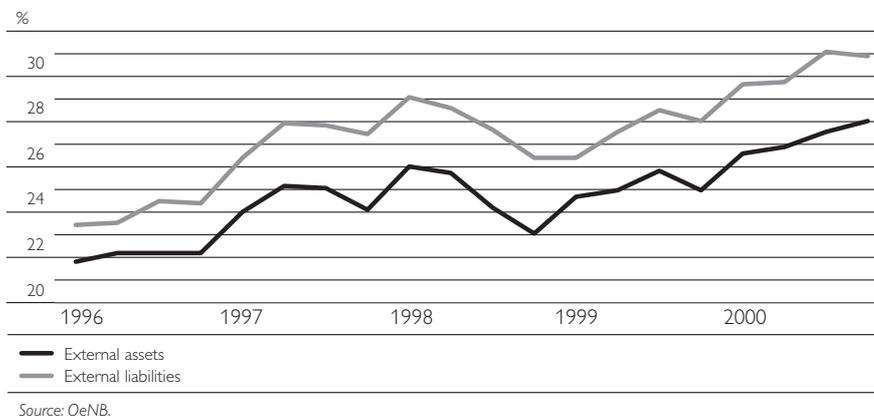
In the reporting year, banks operating in Austria increasingly relied on issuing direct papers for refinancing purposes; augmenting by up to EUR 5.83 billion or 12.4%, this segment accounted for 10% of banks' total assets by end-December. More than 80% of all new issues were euro-denominated. Both bonds and other securitized liabilities accounted for approximately 50% of growth.

### External Business Gaining Strength

External business is becoming increasingly important for credit institutions operating in Austria; this is inter alia attributable to the fact that more and more banks are majority-owned by nonresidents and thus increasingly tend to settle interbank payments via their parent companies abroad. Thus, in 2000, external assets went up by EUR 26.47 billion or 20.2%, compared to +EUR 20.58 billion or +18.6% in 1999. The weight of external interbank transactions, which accounted for a share of around 50% in total growth, was over-proportional compared to previous years. In 1999, their share had only come to around 30%. Claims against nonresident customers rose by EUR 6.07 billion or 13.7%, thus failing to match 1999 growth (+EUR 8.45 billion or +23.6%). By contrast, the volume of foreign-owned debt securities including fixed-income securities clearly grew faster than in 1999, namely by EUR 6.33 billion or 55.2%. External liabilities developed along the same lines as external assets, augmenting by EUR 26.84 billion or 18.2%, i. e. by around EUR 6 billion more than in 1999. Climbing by EUR 3.13 billion or 33.0%, Austrian banks' own issuances abroad constituted the most important item. In December 2000, external assets accounted for 28.0% of banks' total assets, while external liabilities had a share of 30.9%.

**External Assets/Liabilities of Austrian Banks**

**as a Share of Total Assets/Liabilities**

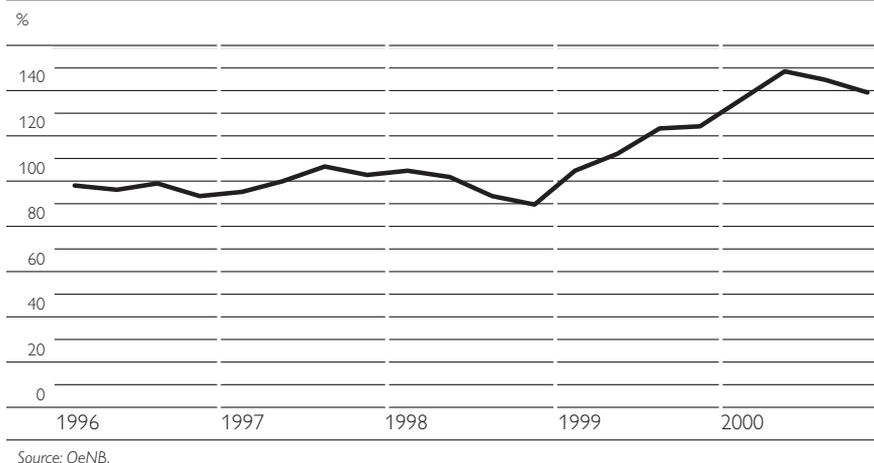


Despite the takeover of Bank Austria's London, Hong Kong and Singapore branch offices by HVB, Austrian banks' foreign branches expanded their total assets by EUR 1.23 billion or 3.0%, a rather modest growth, however, compared to +EUR 6.31 billion or +18.0% in 1999.

While interbank transactions with domestic banks almost halved owing to the above-mentioned takeover, the assets side saw a considerable augmentation of claims on foreign banks (+56.5%) and foreign-owned debt securities including fixed-income securities (+78.2%).

On the liabilities side, particularly claims against nonresident customers and claims against foreign banks went up sharply, by +31.3 and +14.4%, respectively.

**Derivatives Transactions in Relation to Total Assets**



**Derivatives Transactions Fail to Match Strong 1999 Growth**

Expanding by EUR 130.54 billion or 19.9% in 2000, the volume of derivatives transactions failed to match the pronounced growth recorded in 1999. This trend reversal became particularly obvious as of mid-2000. In

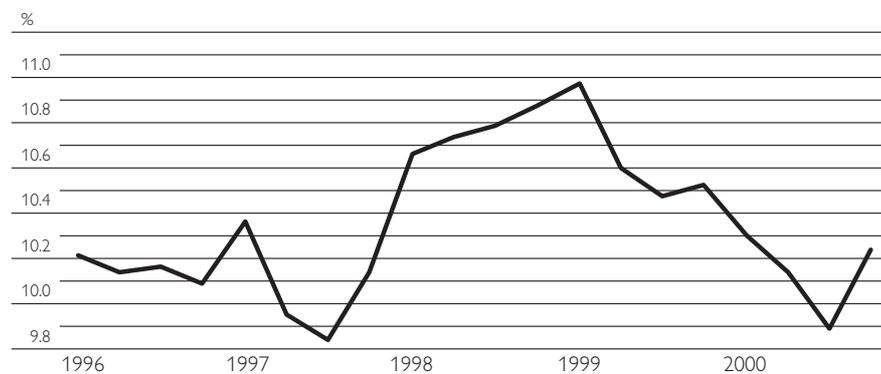
December 2000, the ratio of derivatives transactions to total assets came to 139.8%. Accounting for approximately 78% of all derivatives transactions, interest rate contracts (interest rate swaps in particular) were the fastest-growing segment in banks' transactions (+EUR 123.49 billion or +25.3%).

### Capital Ratio Comes to 13.8%

As per December 31, 2000, the capital held by Austrian banks amounted to EUR 37.43 billion. Compared to the previous year, banks thus expanded their capital holdings by EUR 2.27 billion or 6.5%. Since the assessment base<sup>1)</sup> rose faster than banks' capital base, the (unconsolidated) capital ratio went down by 0.1 percentage point to 13.8% since December 1999; by international standards, however, this value is still rather high.

Around two thirds of banks' total capital consisted of core capital, which augmented by EUR 0.86 billion year-on-year. Eligible capital, comprising core capital and supplementary capital minus deductible items, stood at EUR 35.86 billion in December 2000, compared to only EUR 32.94 billion in December 1999. Tier III capital, which principally serves to cover market risks<sup>2)</sup>, came to EUR 1.57 billion.

#### Austrian Banks' Core Capital Ratio



Source: OeNB.

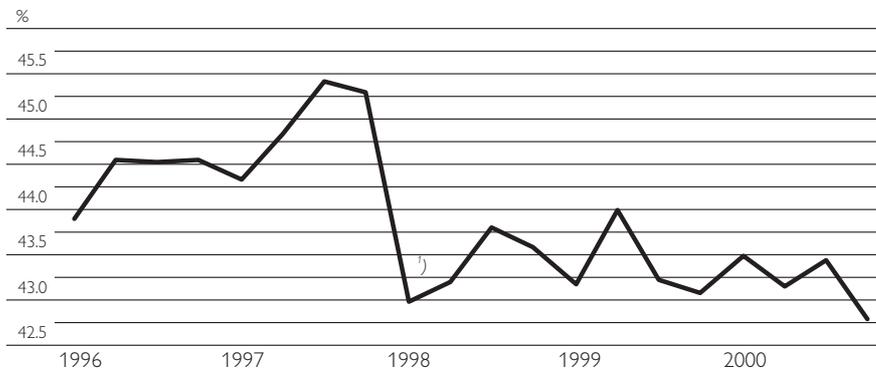
Banks' risk-weighted assets<sup>3)</sup> went up by EUR 14.68 billion or 6.5% since January 2000, thus remaining slightly below total assets in terms of percentage growth.

1 The assessment base consists of weighted asset-side items, off-balance-sheet activities and special off-balance-sheet transactions.

2 Market risk comprises capital required for the securities trading book and capital required for outstanding foreign currency positions and gold.

3 This item comprises those assets, reduced by value adjustments, which must be weighted according to risk categories in line with § 22 (3) Austrian Banking Act.

**Risk-Weighted Assets as a Percentage of Total Assets**

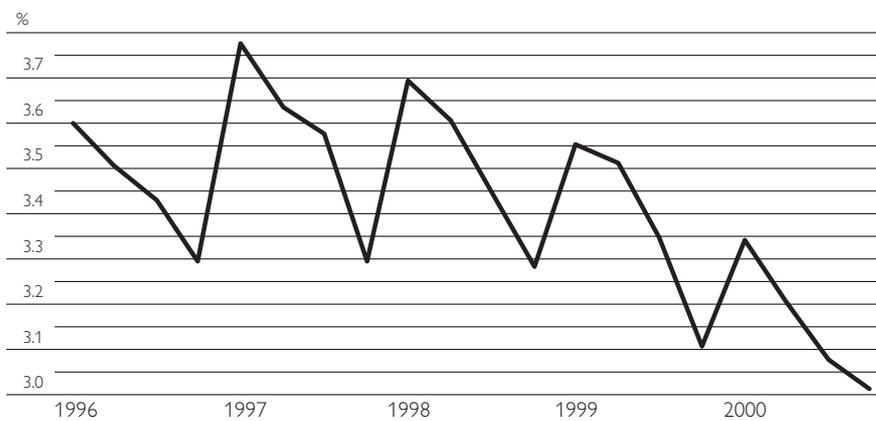


Source: OeNB.  
<sup>1)</sup> Austrian Banking Act amended.

For this reason, risk-weighted assets as a percentage of total assets<sup>1)</sup> declined slightly, by 0.3 percentage point, to 42.8%.

Austrian banks' need to carry out value adjustments with regard to claims on nonbanks has been declining continuously for years, reaching a new low of just over 3% in December 2000, compared to 3.11% in December 1999.

**Value Adjustments as a Percentage of Claims on Nonbanks**



Source: OeNB.

1) This ratio indicates whether credit institutions opted for high-risk or low-risk exposures.

# Balance of Payments in the First Three Quarters of 2000<sup>1)</sup>

The data covering the first three quarters of 2000 already indicate the overall trends in the Austrian balance of payments statistics for the full year of 2000.

- Deficits on goods and services widened considerably in the first two quarters and less markedly in the third quarter, driving up the deficit on the current account;
- Contrary to 1999, the income subaccount did not generate additional negative effects;
- The sharp increase in the sale of Austrian debt securities abroad – in particular of debt securities issued by banks and the government – impacted on the financial account.

## I Current Account

In the first three quarters of 2000, the deficit on the current account based on transactions widened by EUR 900 million on the year 1999 (see table 1), amounting to – EUR 4,810 million, as the deficit on the goods and services subaccount climbed by EUR 1,310 million to EUR 1,630 million. However, in the course of the year 2000, the increase in the current account deficit slowed down. The three subaccounts goods and services, income, and current transfers each accounted for approximately one third of the total current account deficit in the first three quarters of 2000.

On the year, the *euro area* as a whole also posted a higher current account deficit from January to September, which was mainly due to the increased deficit on goods and services.

Austrian imports of goods and services augmented more rapidly (by 14% or EUR 9,410 million) than exports, which, however, with an increase of 12% or EUR 8,100 million did very well, too. Buoyant economic activity in the entire euro area fostered the increase in imports and exports, with the imports being favored by price effects resulting from the higher exchange rate of the U.S. dollar and rising oil prices. Once the effects of the oil price development had started to ease significantly in July 2000, import growth rates also declined.

The following gives a more detailed insight into the subaccounts of the Austrian current account in the first three quarters of 2000.

### 1.1 Goods

In line with international conventions, the goods item of the current account is derived from the foreign trade statistics provided by Statistics Austria and not from the OeNB data based on transactions.

According to Statistics Austria's data, the goods deficit contracted considerably in the period under review; the data collected by the OeNB (merchandise payments) do not support this development.

<sup>1</sup> Based on transactions. Editorial deadline: February 9, 2001. As of 1999, the Austrian balance of payments figures published by the OeNB in "Focus on Austria" are presented in euro (irrevocable euro conversion rate EUR 1 = ATS 13.7603). For Austrian balance of payments statistics given in both euro and schilling, refer to the OeNB website at <http://www.oenb.at>; Focus on Statistics, chapter 7.

The figures for the first three quarters of 2000 show that goods exports augmented by 16 and goods imports by 14%. Merchandise payments increased by 14% on the exports side and by 16% on the imports side. The experience of the past few years shows that these two sets of statistics clearly differ more in terms of intra-year figures than in terms of all-year figures. In line with the balance of payments methodology, such discrepancies are booked under services, i. e. under the subaggregate unclassified transactions, thus impacting the result of the services balance, but not of the current account balance. Considering the data available, the aggregated result of the goods and services account seems to be the most reliable indicator of foreign trade developments. In the period under review, the deficit on goods and services widened by EUR 1,310 million to EUR 1,630 million.

*The following analysis of the breakdowns by geographical area and by commodity category is based on Statistics Austria data.*

Austria's merchandise exports and imports (see table 2) with the euro area in the first three quarters of 2000 were not as buoyant as trade with third countries. Both exports and imports expanded by some 10% each, which resulted in an overall deficit of EUR 6,050 million. The analysis shows that especially the trade gap vis-à-vis Germany widened (by EUR 1,000 million). At the same time, the highest export growth rates were recorded vis-à-vis Switzerland, the U.S.A. and Japan.

Merchandise trade with *third countries* was extremely dynamic in the period under review. Compared to 1999, merchandise imports and exports mounted by some 20% each, with exports to Eastern European countries again picking up markedly by just over 20% or EUR 1,600 million, while they had contracted slightly in the same period in 1999. Imports from Eastern European countries also surged (by approximately 30%); the higher energy prices in particular markedly drove up imports from the CIS as well as from OPEC countries. Imports from the U.S.A. and Japan also augmented notably.

A breakdown by *commodity categories* (see table 3) shows that virtually all categories posted solid export growth rates: Semimanufactured goods (+23%), raw materials (+20%), foodstuffs (+15%) and manufactured goods (capital goods and consumer goods approximately +14% each), the latter accounting for the largest share of the merchandise balance.

As for imports, raw materials outpaced all other categories with a growth rate of close to 50%. In the subcategory energy, growth even soared to 77%, largely as a result of high energy prices; in absolute terms, the additional costs incurred for the import of energy, which came to EUR 1,430 million, caused the widening of the current account deficit.

The import of semimanufactured goods was up 19% from 1999, the import of capital goods augmented by 14%, consumer goods by a rather modest 8% and foodstuffs by a mere 2%.

## 1.2 Services

The services subaccount reflects the discrepancies between foreign trade data provided by Statistics Austria and the merchandise payments data

collected by the OeNB, mentioned in section 1.1. The surplus on *services* diminished by EUR 1,920 million to EUR 690 million in the first three quarters of 2000. Travel remained the key item of the services subaccount.

### 1.2.1 Travel

Incoming tourism recorded a good winter season and first quarter 2000, after which growth abated, and in the summer, the number of foreign tourist bednights declined. In the third quarter, the number of foreign tourist bednights shrank by more than 4% to 28.8 million; thus, the summer high season (July to September) for the first time recorded fewer bednights than the winter peak season (January to March) with 29.1 million overnight stays. A comparison with the early 1990s gives an even clearer picture of the decline. The number of bednights in the third quarter was constantly above the 40 million mark between 1990 and 1993. Owing to the more than 10% decrease in August 2000, the number of bednights dropped by a total of 0.6% or 400,000 in the first nine months taken together (see table 5). The number of tourists from Germany – who traditionally account for the largest group of foreign tourists visiting Austria – plummeted in the period under review, with overnight stays dropping by almost 900,000. According to Statistics Austria, the number of guests from France and Italy also dwindled markedly, namely by 220,000 and 160,000, respectively. By contrast, significantly more tourists from the U.S.A. (+280,000) and the United Kingdom (+245,000) traveled to Austria, which is at least partly attributable to the fact that vacationing in Austria had become much cheaper for them given the low exchange rate of the euro. The same is true of the rising number of visitors from the Pacific Rim and Canada.

The decline in overnight stays was partly offset by the sustained trend towards high-quality vacations; travel receipts slightly increased also in the third quarter (by 1.8 after 5.0% in the second and 7.4% in the first quarter). Overall, *travel receipts* came to EUR 8,660 million, EUR 400 million (or 4.8%) more than in the same period in 1999 (see table 4). Receipts from international passenger transport, which are now no longer included in the travel account, augmented by 16.0% to EUR 1,250 million.

*Austrians' travel expenditures* picked up markedly in the first three quarters of 2000, mounting by 10.2% or EUR 670 million to EUR 7,180 million. Expenditures for international passenger transport rose by a solid 15% to EUR 650 million. On balance, the surplus on the travel account contracted by EUR 260 million to EUR 1,480 million.

### 1.2.2 Other Services

In the first three quarters of 2000, the balance on other services turned from a surplus of EUR 870 million to a deficit of EUR 790 million, mainly owing to unclassified transactions.

On the imports side, unclassified transactions ran extraordinarily high at EUR 6,890 million in the period under review; on the exports side, unclassified transactions amounted to EUR 3,820 million, resulting in a

deficit of EUR 3,070 million (against the EUR 1,052 million shortfall in the same period in 1999).

By contrast, the surplus on transport was up by EUR 160 million, amounting to EUR 1,140 million, while the deficit on royalties and license fees shrank by EUR 110 million, and the surplus on merchanting climbed by EUR 130 million.

### 1.3 Income

In the first three quarters of 2000, the deficit on income was down by EUR 240 million compared to the same period in 1999. At a surplus of EUR 410 million, income received from the *compensation of employees* remained almost unchanged year on year.

Within *investment income* (see table 6), broken down by the most important subaggregates, there was a net deficit on income from direct investment of EUR 800 million and a deficit on income from portfolio investment of EUR 1,920 million, while income from other investment posted a surplus of EUR 520 million.

The balance on *direct investment income* slightly improved, with Austrian direct investment enterprises abroad posting net revenues of EUR 890 million in the first three quarters of 2000, up by some EUR 290 million on the previous year. At the same time, foreign direct investment enterprises in Austria increased their revenues by EUR 250 million to EUR 1,690 million. However, owing to structural factors, the balance remains negative, even though the deficit slightly shrank to EUR 800 million. Unusually high profit distributions to foreign investors in the second quarter of 2000 drove down reinvested earnings.

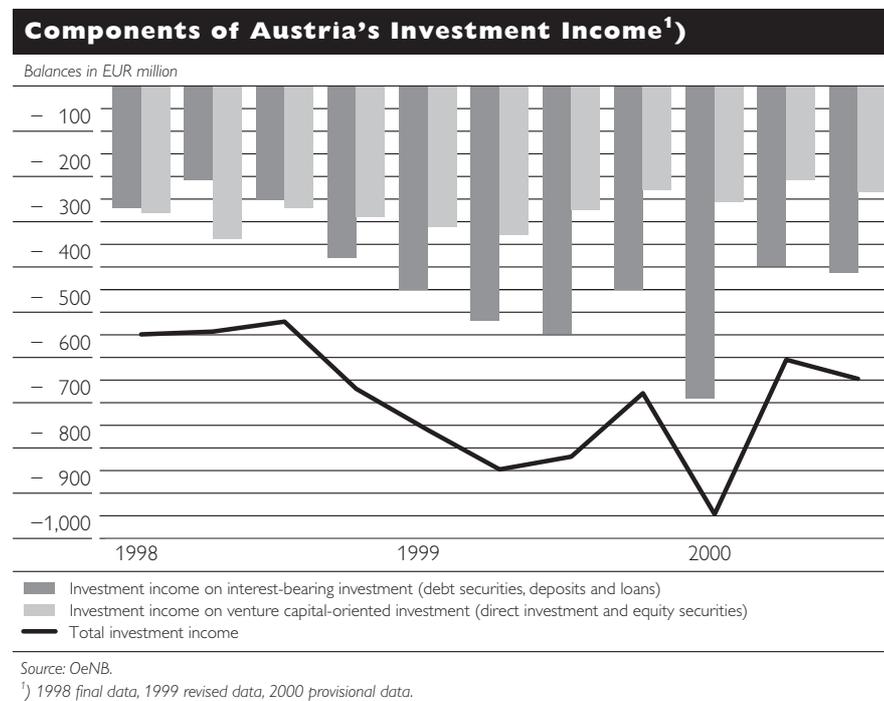
The deficit on *income from portfolio investment* also declined in the first three quarters of 2000 year on year. The net deficit on portfolio investment income of EUR 1,920 million can be largely traced to the high deficit on income derived from bonds and notes. In the first three quarters of 2000, Austria recorded interest income of EUR 2,920 million, whereas Austrian borrowers made interest payments of EUR 4,850 million. Domestic investors' income on foreign equity amounted to EUR 320 million, and foreign investors' income on domestic equity came to EUR 190 million, which resulted in a positive net balance. Income on money market instruments posted a deficit of EUR 120 million in the first three quarters of 2000.

*Income on other investment* recorded a surplus of EUR 520 million in the first three quarters of 2000, up by EUR 130 million compared to the same period in the previous year. This was mainly attributable to the fact that while the OeNB and the banks posted net revenues from other investment of EUR 600 million in the period under review, against EUR 440 million in the same period in 1999, the net deficit of nonbanks climbed from EUR 50 million in the first three quarters of 1999 to EUR 80 million in the period under review.

Within investment income, revenues from venture capital-oriented investment<sup>1)</sup> recorded a net deficit of EUR 700 million in the first

1 All income on investment in the form of equity capital and equity securities.

three quarters of 2000 (1999: –EUR 910 million) and revenues from interest-bearing investment<sup>1)</sup> a net deficit of EUR 1,500 million (1999: –EUR 1,510 million).



#### 1.4 Current Transfers

The most important item of this subaccount, general government transfers, posted a net deficit of EUR 1,150 million, slightly down from the deficit in the same period in 1999. Net outflows to the EU budget went down to EUR 990 million, compared to EUR 1,060 million in the first three quarters of 1999; Austria's contributions to the EU budget of EUR 1,660 million contrasted with receipts from the EU (excluding funds earmarked for infrastructural measures) amounting to EUR 670 million.

The deficit on private sector transfers also decreased slightly, from EUR 290 million to EUR 240 million.

#### 2 Capital Account

Capital transfers posted a deficit of EUR 280 million in the period under review, against EUR 210 million in the first three quarters of 1999. This was largely due to higher remissions of debt of the private sector and somewhat lower receipts from the EU earmarked for infrastructural measures.

1 Income on debt instruments (fixed-interest debt securities, deposits and loans, notwithstanding whether they are included in the categories direct investment, portfolio investment, other investment, or reserve assets).

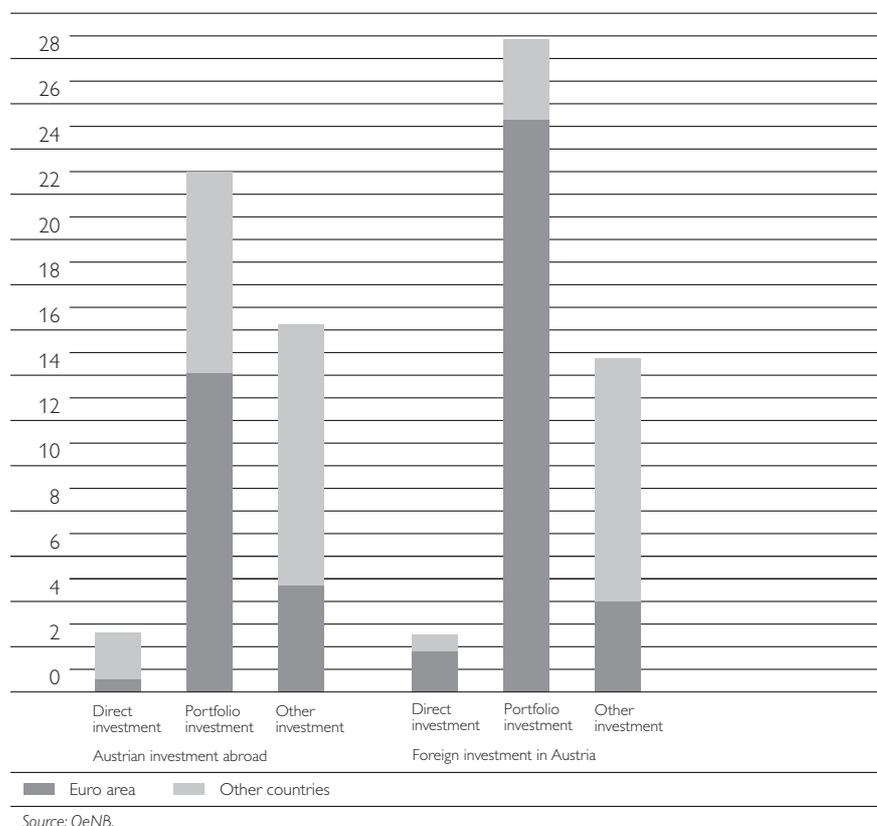
### 3 Financial Account

With capital inflows of EUR 4,900 million, the Austrian financial account closed in the first three quarters of 2000 at approximately the same level as in the corresponding period of 1999 (see table 7). However, cross-border net new investment rose sharply in this period year on year. Austrian investment abroad came to EUR 41,280 million (+40%), foreign investment in Austria amounted to EUR 46,180 million (+35%).

Broken down by capital flows vis-à-vis countries in and outside the euro area, the Austrian financial account from January to September 2000 provides the following picture: Austrian investors increased their claims against the *euro area* by EUR 19,970 million, whereas the liabilities of domestic debtors expanded by EUR 32,730 million (see table 8). While net external assets vis-à-vis the countries of the euro area reached approximately the amount of the period from January to September 1999, investment from the euro area augmented by a hefty 123%. On balance, Austria recorded net inflows from the euro area of EUR 12,760 million in the first three quarters of 2000.

#### Austria's Financial Account in the First Three Quarters of 2000 (Selected Net Subaccounts)

EUR billion



These inflows contrasted with net outflows to *non-euro area countries* amounting to EUR 7,870 million in the period under review. The Austrian investors' heightened interest in investment outside the euro area resulted in

an outflow of capital amounting to EUR 21,310 million from January to September 2000, double the value of transactions compared to the first three quarters of 1999. At the same time, cross-border investment inflows from non-euro area countries were on the decline, coming to only EUR 13,440 in the period under review, i. e. EUR 6,000 million less than in the corresponding period in 1999.

A breakdown of cross-border financial flows by *financing instruments* shows that Austrian *direct investment* abroad was slightly higher than foreign direct investment in Austria in the first three quarters of 2000. Austrian outward investment amounted to net outflows of EUR 2,640 million, whereas inward investment resulted in net inflows of EUR 2,540 million. As to *portfolio investment*, Austrian investors acquired foreign securities worth EUR 23,020 million, which roughly corresponds to the amount recorded in the first three quarters of 1999. At the same time, the sale of domestic securities to nonresidents mounted by almost 50%. The value of transactions of EUR 28,870 million in the first three quarters of 2000 already marked a 17% increase on the total value for 1999. This rise was largely attributable to the sale of Austrian debt securities, whose value of transaction reached EUR 27,340 million in the period under review. On balance, inflows exceeded outflows in the portfolio investment subaccount, while in the subaccounts *other investment* and *direct investment* net outflows surpassed inflows.

Broken down by *economic sectors*, the analysis of the Austrian financial account shows that in the first three quarters of 2000, banks (including the OeNB) recorded inflows of EUR 11,310 million, whereas nonbanks (general government and other sectors) accounted for outflows worth EUR 6,390 million. Banks invested in external assets to the amount of EUR 18,960 million in the first three quarters of 2000, at the same time, net new investment of nonresidents in this sector mounted by 68% compared to the same period in the previous year and reached EUR 30,270 million. The Austrian *general government* considerably augmented its investment in foreign assets compared to previous reporting periods. At the same time, the government's external liabilities increased more sharply than in the corresponding period in 1999; general government inflows amounted to EUR 9,530 million on balance. Owing to the *other sector's*<sup>1)</sup> activities abroad, external assets increased by EUR 18,770 million and external liabilities by EUR 2,850 million in the first three quarters of 2000.

A breakdown of financial flows by *interest-bearing* and *venture capital-oriented investment* shows that domestic investors acquired assets worth EUR 30,690 million, especially interest-bearing financial assets,<sup>2)</sup> in the first three quarters of 2000. The share of interest-bearing financial investment in Austria's total external assets dropped to 74%. By comparison, in the first three quarters of 1999, investment in interest-bearing

1 Including other financial institutions, insurance corporations and pension funds as well as enterprises and households.

2 Debt securities, deposits and loans, notwithstanding whether they are included in the categories direct investment, portfolio investment, other investment, or reserve assets.

financial assets had amounted to EUR 24,420 million or 82% of total external assets. At the same time, Austrian venture capital-oriented investment abroad<sup>1)</sup> increased on the corresponding 1999 period. With EUR 10,590 million net new investment doubled year on year, and its share in external assets rose from 18 to 26%.

The situation is somewhat different for inward investment in Austria. In the first three quarters of 2000, interest-bearing assets continued to appeal to nonresident investors, who spent EUR 42,230 million – significantly more than in the corresponding period in 1999 – on this type of financial asset. Their share in total inward investment in Austria thus amounted to 91%. On the other hand, the interest in venture capital-oriented assets was on the decline. In this category, net inflows of EUR 3,940 million were recorded in the period under review. Their share in total inward investment came to 9%, down from 12% in the first three quarters of 1999.

A breakdown by *maturity* shows that in the first three quarters of 2000 within interest-bearing investment, short-term and long-term financial instruments played an equally important part in the build-up of Austria's external assets and liabilities.

### 3.1 Direct Investment

After a brief dip in the first half of 2000, inward and outward direct investment picked up again in the third quarter. According to the OeNB's balance of payments statistics, Austrian direct investment abroad hit a new high of EUR 1,530 million, and foreign direct investment in Austria recorded an extraordinary EUR 1,240 million in the third quarter of 2000.

In the first three quarters, net *outward direct investment* came to EUR 2,640 million (+24%), thus surpassing the previous year's *total* by EUR 20 million; chances are high that 2000 will see a new high in outward direct investment. Net equity capital (including property) of EUR 1,880 million resulted from gross new investment of EUR 2,710 million and gross disinvestment of EUR 830 million. Since the operating performance of Austrian subsidiaries abroad had improved considerably over the past few years, reinvested earnings reached EUR 470 million in the first three quarters of 2000. The amount of loans granted by Austrian investors to their associated enterprises augmented by EUR 290 million. Thus, Austrian outward direct investment has been on the increase for five consecutive years now.

The current figures indicate that Austria strengthened its role as one of the leading investors in Eastern Europe in the year 2000. Almost 60% of new investment went to Central and Eastern European countries and only 30% to the EU (euro area: 22%). With an investment volume of EUR 600 million, the Czech Republic was the most important target country, followed by Germany (EUR 400 million), Poland (EUR 260 million) and Hungary (EUR 240 million). Sweden, another EU country, ranks in fifth place (EUR 230 million). Romania for the first time made it into the top ten target countries, overtaking the U.S.A.; Austrian direct investment in

1 Income on direct investment and equity securities.

both countries amounted to EUR 170 million each. Three-digit million outward investment from Austria was also recorded in the Netherlands, which ranks eighth.

Outward direct investment outpaced *inward direct investment*, with the latter increasing by 6.5%, in the first three quarters of 2000. At EUR 2,540 million, net capital inflows were even marginally below outward direct investment. In this context, however, it must be noted that the merger between Bayerische Hypo- und Vereinsbank AG and Bank Austria AG has not been included in the current statistics. Gross new investment of EUR 2,210 million contrasted with disinvestment of EUR 470 million. On balance, equity interests (including property) came to EUR 1,730 million. According to preliminary calculations, high profit distributions in the second quarter drove down reinvested earnings to EUR 680 million, while other claims of nonresident investors against their Austrian subsidiaries amounted to no more than EUR 130 million. Inward direct investment was – again – confined to relatively few countries: As usual, Germany was the leading investor, with inflows coming to EUR 1,480 million or almost 60% of total inward investment. The United Kingdom and – quite surprisingly – Luxembourg came in second and third, with inward direct investment amounting to EUR 260 million and EUR 210 million, respectively. Switzerland was the most important investor outside the EU in fifth place (EUR 170 million), followed by the U.S.A. and Sweden, which invested only EUR 90 million each.

### 3.2 Portfolio Investment

In the first three quarters of 2000, cross-border transactions within portfolio investment resulted in net capital inflows of EUR 5,860 million, which roughly corresponded to the net capital inflows recorded for the full year of 1998 (1999: net capital outflows of EUR 2,600 million). The corresponding gross values indicate that both Austrian investment in foreign securities and foreign investment in Austrian securities mounted compared to 1999, prolonging the uptrend in investment since 1998.

A regional analysis of portfolio investment shows that Austrian investors abroad have become more inclined to invest in securities from non-euro area countries, whose share climbed from 23% in 1999 (full year) to 39% in the first three quarters of 2000. 90% of domestic securities<sup>1)</sup> acquired by nonresidents in the first three quarters of 2000 were sold in the euro area, compared to 60% in 1999. A sectoral analysis of Austrians acquiring foreign securities shows that other financial institutions<sup>2)</sup> were the main investors

1 While for foreign direct investment in Austria and other inward investment it is possible to establish the identity of the foreign investors, in the case of portfolio investment one can only determine the country via which the transaction has been effected. This means that it is not possible to provide a current and/or completely reliable classification of creditors. Ongoing studies, however, show that the largest volume of Austrian securities sold to the euro area are government bonds sold to foreign banks in the course of tender or syndication offers. Since, in this case, the secondary market generated only a relatively small volume of cross-border transactions, the regional structure of the basic data derived from the reporting system on foreign exchange statistics can be regarded as sufficiently conclusive.

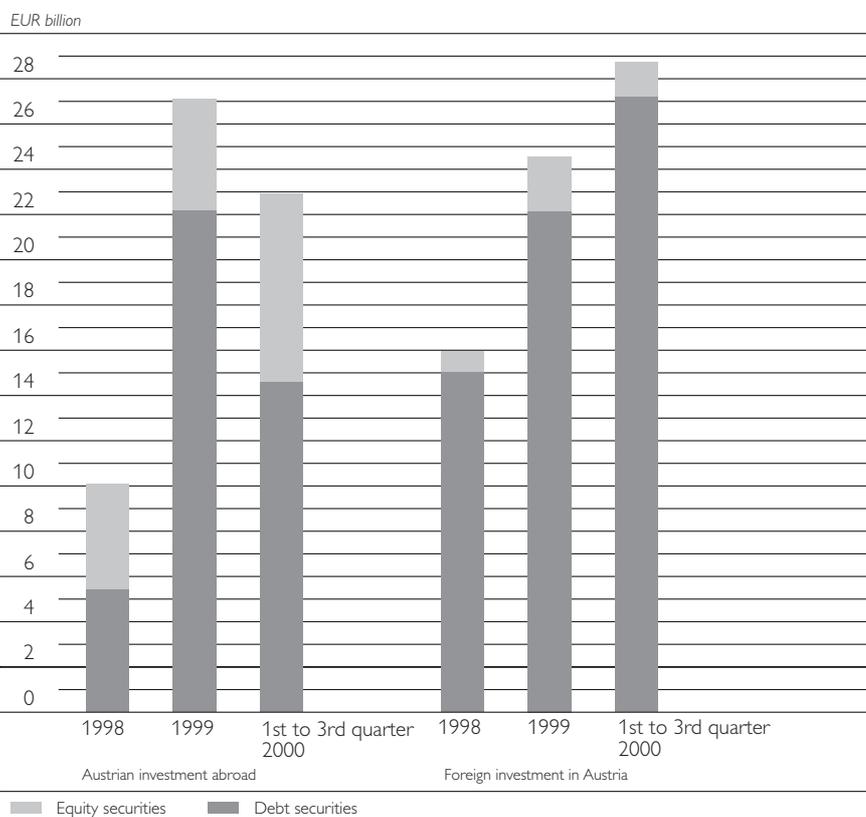
2 This economic sector comprises investment companies, insurance companies and pension funds.

(65%), followed by banks (20%) and the general government (15%), the latter having increased its share considerably compared to the full year of 1999 (1%). According to the breakdown by issuers of Austrian securities acquired by foreign investors, the banking sector augmented its share to 50%, general government to 45%. Throughout 1999, foreign investors acquired far more Austrian securities issued by the general government (60%) than by domestic banks (30%).

### 3.2.1 Portfolio Investment in Foreign Securities

In the first three quarters of 2000, Austrian investors purchased foreign securities worth EUR 23,020 million, compared to EUR 27,250 million in the entire year of 1999. A breakdown by type of securities indicates that domestic investors have been shifting their portfolios towards foreign shares. The 18% share of foreign securities and mutual funds shares in the full year of 1999 doubled in the first three quarters of 2000. In other words, domestic investors' interest in debt securities declined significantly. Within this category, Austrians halved their investment in foreign bonds and notes (EUR 10,710 million) compared to the full year of 1999. At the same time, they acquired money market instruments worth EUR 3,940 million (full year 1999: EUR 160 million).

#### Cross-Border Security Transactions - Net Investment by Financial Instruments<sup>1)</sup>



Source: OeNB.  
<sup>1)</sup> 1998 final data, 1999 revised data, 2000 provisional data.

In the first three quarters of 2000, Austrian investors – mainly institutional investors – purchased *foreign equity securities* worth EUR 8,360 million; the bulk of these acquisitions (80%) took place in the first half of 2000. *Foreign shares* accounted for EUR 4,040 million, this was almost 1.5 times the value recorded for the full year of 1999. Domestic investors preferred quoted shares of the finance, industry and technology sectors. Geographically speaking, the majority went for shares issued by enterprises based in the euro area and the U.S.A.

At EUR 4,290 million, investment in *foreign mutual funds shares* surpassed investment in foreign shares. Domestic mutual funds, which constitute the largest group among investors in this area, preferred foreign balanced funds and equity funds, which were integrated in their own funds-of-funds.

Compared to 1999, investment in *foreign bonds and notes* slumped, whereas investment in *short-term foreign debt securities* soared in the first three quarters of 2000. Austrian investors spent EUR 10,710 million on bonds and notes, this is – as already mentioned – only half the amount recorded for the full year of 1999. A regional analysis shows that domestic investors acquired *bonds and notes* issued by other euro area countries worth EUR 5,690 million, with Italian, German, Dutch and French issues – government bonds in particular – accounting for the bulk of investments. The most important target countries outside the euro area were the United Kingdom, Greece,<sup>1)</sup> the U.S.A. and Eastern European countries neighboring Austria. The majority of net new investments was made in euro-denominated securities. Domestic banks and other domestic financial institutions accounted for 43 and 55%, respectively, of investments in foreign securities.

Domestic investment in *money market instruments* shot up to EUR 3,940 million – many times the amount recorded in the same period in 1999 – a large part of which came from the central government. Geographically speaking, EUR 2,690 million were spent on short-term debt securities from the euro area, in particular from Germany, Ireland and the Netherlands. Outside the euro area, Austrian investment went chiefly to the United Kingdom and the U.S.A.

### 3.2.2 Portfolio Investment in Domestic Securities

Net capital inflows from the sale of Austrian securities abroad came to EUR 28,870 million in the first three quarters of 2000, up some 20% on the full year of 1999. A breakdown by categories of securities reveals that domestic bonds and notes continued to be the most attractive form of investment for nonresidents (about 80%). Money market instruments and shares accounted for some 10% each of Austrian securities sold to foreign investors.

In the first three quarters of 2000, *domestic equity securities* worth EUR 1,540 million (60% of full year 1999 sales) were sold to nonresident investors. *Domestic shares*, mainly from the banking sector, accounted for

<sup>1</sup> Greece became the twelfth member of the euro area on January 1, 2001.

EUR 430 million. This amount corresponds to only 50% of full year 1999 sales of shares, which is chiefly attributable to the fact that, on balance, nonresidents sold more Austrian shares than they bought in the second quarter of 2000. Foreign investors acquired *domestic mutual funds shares*, especially of equity funds and balanced funds, worth EUR 1,090 million in the first three quarters of 2000.

Foreign investors' interest in *Austrian debt instruments* continued to rise in the year 2000; the amount of debt securities sold increased by 23% in the first three quarters of 2000 compared to the full year of 1999. Euro-denominated new issues accounted for the bulk of total sales in *bonds and notes* of EUR 23,160 million. Issues denominated in Japanese yen and U.S. dollar apparently also appealed to foreign investors. A sectoral analysis of bonds and notes indicates that banks sold securities worth EUR 12,530 million and the general government sold securities worth EUR 11,040 million to foreign creditors.

### Government Bond Syndication and Tender Offers in the First Three Quarters of 2000<sup>1)</sup>

	ISIN	External transactions EUR million
5.5% Federal government bond 1999–2010/4	AT0000384938	3,086
5.5% Federal government bond 2000–2007/144A	AT0000384953	3,574
3.4% Federal government bond 1999–2004/3	AT0000384862	341
5.875% Federal government bond 1996–2006/7	AT0000383518	2,565
6.25% Federal government bond 1997–2027/6	AT0000383864	1,256
3.9% Federal government bond 1998–2005/3	AT0000384524	1,764
Total		12,586

Source: OeNB.

<sup>1)</sup> Transaction values: + = sale abroad.

The sale of *Austrian money market instruments* was also on the rise: Nonresidents invested EUR 4,180 million in the first three quarters of 2000, that was by 18% more than in the full year of 1999. An analysis by currency shows that foreign investors, on the one hand, sold euro-denominated domestic short-term debt securities and, on the other hand, acquired money market instruments denominated in U.S. dollar. According to a breakdown by issuers, the Austrian central government sold mostly short-term bonds, and Austrian banks mainly commercial paper and certificates of deposit to nonresident investors.

### 3.3 Other Investment

On the other investment subaccount, net inflows of EUR 4,210 million from January to September 1999 turned into net outflows of EUR 1,480 million in the period under review of 2000.

A breakdown by sectors shows that *nonbanks* (general government and other sector) recorded outflows of EUR 2,200 million on balance in the first three quarters of 2000. *Banks* (including the OeNB) accounted for net inflows of EUR 720 million, significantly less than in the same period in 1999 (EUR 6,750 million).

A regional breakdown of other investments illustrates that in the period under review, net outflows were recorded both vis-à-vis the *euro area* and vis-à-vis *non-euro area countries*. On balance, 47% of net new investment went to the euro area, 53% to countries outside the euro area in the first three quarters of 2000. Net capital outflows to the euro area shrank by approximately EUR 1 billion to EUR 690 million in the review period. Vis-à-vis non-euro area countries, net outflows of EUR 790 million were recorded in the like period. By contrast, in the analogous 1999 period, inflows from non-euro area countries had amounted to EUR 5,920 million.

### 3.4 Financial Derivatives

The financial derivatives position basically includes options, futures contracts and swaps, which are either based on capital products (e.g. foreign exchange assets, securities) or on interest rate products. On the one hand, transaction values refer to the buying and selling of securities-based financial derivatives and, on the other, to transactions resulting from option payments (including premiums) in the course of OTC deals and/or from variation margin payments for futures contracts and swap payments.

Financial derivatives posted inflows of EUR 370 million in the first three quarters of 2000, with interest rate financial derivatives accounting for the largest part (EUR 340 million). Like in the past, transactions under this item were largely determined by financial derivatives not based on securities, with swap operations of banks and the central government dominating this development.

### 3.5 Reserve Assets

In the first three quarters of 2000, official reserves contracted by EUR 260 million through transactions. Claims on nonresident banks and central banks augmented by EUR 600 million through transactions from January to September 2000, whereas securities within reserve assets, gold, and the reserve position in the Fund decreased. The transaction-induced decline by EUR 330 million in the securities items over the entire period under review can largely be traced to sales amounting to EUR 450 million in the third quarter. Sales worth EUR 280 million in July 2000 reduced Austria's gold reserves.

Despite the transaction-induced outflows between January and September 2000, reserve assets increased by EUR 1.3 billion to EUR 20.2 billion as a result of the euro exchange rate fluctuations.

**Annex**

Table 1

<b>Balance of Payments Summary</b>			
	1st to 3rd quarter 1999 <sup>1)</sup>	1st to 3rd quarter 2000 <sup>2)</sup>	Annual change
EUR million			
<b>Current Account</b>	-3,903	-4,808	- 905
<b>Goods, services and income</b>	-2,350	-3,420	-1,070
<b>Goods and services</b>	- 319	-1,631	-1,312
<b>Goods</b>	-2,927	-2,321	+ 606
<b>Services</b>	+2,608	+ 691	-1,917
Travel	+1,740	+1,476	- 264
Other services items	+ 869	- 786	-1,655
Transportation	+ 981	+1,137	+ 156
<i>thereof international passenger transport</i>	+ 514	+ 599	+ 85
Construction services	+ 195	+ 165	- 30
Financial services	+ 79	+ 80	+ 1
Royalties and license fees	- 351	- 240	+ 111
Other business services	+ 968	+1,027	+ 59
<i>thereof merchanting</i>	+ 757	+ 890	+ 133
Other services	+ 49	+ 112	+ 63
Unclassified transactions	-1,052	-3,067	-2,015
<b>Income</b>	-2,032	-1,789	+ 243
Compensation of employees	+ 396	+ 411	+ 15
Investment income	-2,428	-2,200	+ 228
<b>Current transfers</b>	-1,553	-1,388	+ 165
General government	-1,263	-1,149	+ 114
Private sector	- 290	- 239	+ 51
<b>Capital and financial account</b>	+4,441	+4,621	+ 180
<b>Capital account</b>	- 207	- 275	- 68
General government	+ 125	+ 114	- 11
Private sector	- 364	- 369	- 5
Acquisition/disposal of nonproduced, nonfinancial assets	+ 33	- 20	- 53
<b>Financial account</b>	+4,648	+4,896	+ 248
Direct investment	+ 248	- 103	- 351
Portfolio investment	-1,952	+5,855	+7,807
Other investment	+4,213	-1,482	-5,695
Financial derivatives	+ 273	+ 370	+ 97
Reserve assets <sup>3)</sup>	+1,866	+ 257	-1,609
<b>Errors and omissions</b>	- 538	+ 189	+ 727

Source: OeNB.

<sup>1)</sup> Revised data.

<sup>2)</sup> Provisional data.

<sup>3)</sup> OeNB: Gold and foreign exchange, reserve position in the Fund, SDRs, etc.; increase: - / decrease: +.

Table 2

**Merchandise Exports and Imports**  
**as Recorded in the Foreign Trade Statistics**  
**Goods by geographic area<sup>1)</sup>**

	1st to 3rd quarter 2000					
	Exports		Imports		Balance	
	Annual change	Share of total exports	Annual change	Share of total imports	Annual change	Annual change
%		%		EUR million		
EU	+11.1	60.8	+ 9.7	66.6	-5,510	- 136
Euro area	+10.5	54.2	+ 9.4	61.4	-6,046	- 265
thereof:						
Germany	+ 8.2	33.2	+11.4	41.0	-5,531	-1,007
Italy	+20.4	8.8	+ 6.6	7.3	+ 481	+ 507
France	+12.0	4.3	- 2.8	4.5	- 240	+ 304
Non-euro area countries	+21.9	45.8	+21.1	38.6	+2,157	+ 502
thereof:						
Switzerland						
and Liechtenstein	+31.9	7.1	+ 4.0	3.1	+1,896	+ 804
CEECs <sup>2)</sup>	+23.0	16.8	+30.5	13.1	+1,347	- 78
U.S.A.	+26.3	5.1	+15.3	5.4	- 386	+ 141
Japan	+25.5	1.3	+21.0	2.7	- 832	- 124
Total	+15.5	100.0	+13.6	100.0	-3,889	+ 236

Source: Statistics Austria.

<sup>1)</sup> Geographic areas as defined by WIFO.

<sup>2)</sup> Central and Eastern European countries: Albania, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovenia, Ukraine, Yugoslavia.

Table 3

**Merchandise Exports and Imports**  
**as Recorded in the Foreign Trade Statistics**  
**Goods by commodity category**

	Exports			Imports			Balance	
	1st to 3rd quarter 2000	Annual change		1st to 3rd quarter 2000	Annual change		1st to 3rd quarter 2000	Annual change
	EUR million	%		EUR million	%		EUR million	
Foodstuffs	2,423	+ 318	+ 15.1	2,688	+ 56	+ 2.1	- 265	+ 262
Raw materials	2,354	+ 397	+ 20.3	5,439	+1,784	+48.8	-3,085	-1,387
thereof: energy (SITC 3)	584	+ 175	+ 42.6	3,290	+1,428	+76.7	-2,706	-1,253
Semimanufactured goods	7,532	+1,413	+ 23.1	6,860	+1,076	+18.6	+ 672	+ 337
Manufactured goods	38,085	+4,595	+ 13.7	39,251	+3,522	+ 9.9	-1,166	+1,073
Capital goods	13,286	+1,644	+ 14.1	13,677	+1,638	+13.6	- 391	+ 6
Consumer goods	24,799	+2,951	+ 13.5	25,573	+1,885	+ 8.0	- 774	+1,067
Miscellaneous manufactured articles	53	x	x	99	x	x	- 46	x
Total	50,448	+6,761	+ 15.5	54,337	+6,525	+13.6	-3,889	+ 236

Source: Statistics Austria.

Table 4

<b>Travel and International Passenger Transport</b>				
	1st to 3rd quarter 1999 <sup>1)</sup>	1st to 3rd quarter 2000 <sup>2)</sup>	Annual change	
	EUR million		%	
<b>Travel</b>				
Receipts	8,261	8,660	+399	+ 4.8
Expenses	6,521	7,184	+663	+10.2
Balance	1,740	1,476	-264	-15.2
<b>International passenger transport</b>				
Receipts	1,076	1,246	+170	+15.8
Expenses	562	647	+ 85	+15.1
Balance	514	599	+ 85	+16.5
	1,000			%
Foreign tourist bednights	71,710	71,315	-395	+ 0.6

Source: Statistics Austria, OeNB.  
<sup>1)</sup> Revised data.  
<sup>2)</sup> Provisional data.

Table 5

<b>Foreign Tourist Bednights by Country of Origin</b>				
	1st to 3rd quarter 2000			
	Overnight stays	Annual change	Share	
	1,000	%		
Germany	45,027	-884	- 1.9	63.1
Netherlands	6,673	+165	+ 2.5	9.4
United Kingdom	2,730	+244	+ 9.8	3.8
Belgium, Luxembourg	2,005	- 87	- 4.1	2.8
Switzerland, Liechtenstein	2,420	+ 75	+ 3.2	3.4
Denmark	820	+ 1	+ 0.2	1.2
Italy	2,122	-164	- 7.2	3.0
France	1,336	-225	-14.4	1.9
Sweden	611	+ 43	+ 7.6	0.9
Spain	378	- 11	- 2.9	0.5
Poland	675	- 27	- 3.9	0.9
Hungary	618	+ 31	+ 5.3	0.9
Czech Republic	597	+ 4	+ 0.7	0.8
Croatia	212	+ 15	+ 7.5	0.3
Commonwealth of Independent States	302	+ 36	+13.5	0.4
Slovenia	171	+ 1	+ 0.3	0.2
Slovakia	124	+ 9	+ 8.1	0.2
U.S.A.	1,570	+280	+21.7	2.2
Japan	452	- 1	- 0.3	0.6
Other Countries	2,472	+ 99	+ 4.2	3.5
Total	71,315	-395	- 0.6	100.0
Memorandum item: Austrian tourists	26,523	+767	+ 3.0	x

Source: Statistics Austria.

Table 6

<b>Investment Income</b>	1st to 3rd quarter 1999 <sup>1)</sup>	1st to 3rd quarter 2000 <sup>2)</sup>	Annual change
	<i>EUR million</i>		
Net investment income <sup>3)</sup>	-2,428	- 2,200	+ 228
Investment income receipt	6,104	8,356	+2,252
Investment income payments	8,531	10,556	+2,025
Net direct investment income <sup>3)</sup>	- 841	- 805	+ 36
Income on direct investment abroad	600	888	+ 288
Income on direct investment in Austria	1,441	1,693	+ 252
Net portfolio investment income <sup>3)</sup>	-1,976	- 1,915	+ 61
Income on foreign equity securities	155	321	+ 166
Income on domestic equity securities	205	192	- 13
Income on foreign bonds and notes	2,054	2,922	+ 868
Income on domestic bonds and notes	3,940	4,852	+ 912
Income on foreign money market instruments	78	68	- 10
Income on domestic money market instruments	118	183	+ 65
Net other investment income <sup>3)</sup>	389	520	+ 131
Income on other investment, assets <sup>4)</sup>	3,217	4,157	+ 940
Income on other investment, liabilities	2,827	3,637	+ 810
Investment income on foreign interest-bearing investment <sup>5)</sup>	5,373	7,174	+1,801
Investment income on domestic interest-bearing investment <sup>6)</sup>	6,887	8,674	+1,787
Investment income on foreign venture capital-oriented investment <sup>7)</sup>	730	1,182	+ 452
Investment income on domestic venture capital-oriented investment <sup>7)</sup>	1,644	1,882	+ 238
<i>Memorandum item:</i>			
Financial derivatives based on interest rate contracts, net <sup>8)</sup>	254	336	+ 82

Source: OeNB.

<sup>1)</sup> Revised data.

<sup>2)</sup> Provisional data.

<sup>3)</sup> Income on outward foreign investment less income on inward foreign investment.

<sup>4)</sup> Income on deposits, credits and reserve assets.

<sup>5)</sup> Income on debt securities, deposits, loans and reserve assets.

<sup>6)</sup> Income on debt securities, deposits and loans.

<sup>7)</sup> Income on direct investment and equity securities.

<sup>8)</sup> Included in the financial account, financial derivatives.

Table 7

<b>Financial Account</b>				
	1998 <sup>1)</sup>	1999 <sup>2)</sup>	1st to 3rd quarter 1999 <sup>2)</sup>	1st to 3rd quarter 2000 <sup>3)</sup>
	<i>EUR million, net</i>			
<b>Financial account</b>	+ 5,531	+ 4,938	+ 4,648	+ 4,896
Assets	-16,049	-34,623	-29,627	-41,280
Liabilities	+21,580	+39,561	+34,275	+46,176
<b>Direct investment</b>	+ 1,609	+ 14	+ 248	- 103
Direct investment abroad	- 2,469	- 2,622	- 2,133	- 2,639
Equity capital	- 2,098	- 2,410	- 2,004	- 1,878
Reinvested earnings	- 347	- 368	- 343	- 469
Other capital	- 24	+ 156	+ 214	- 292
Direct investment in Austria	+ 4,078	+ 2,637	+ 2,381	+ 2,535
Equity capital	+ 3,191	+ 1,192	+ 1,220	+ 1,733
Reinvested earnings	+ 879	+ 1,377	+ 1,086	+ 676
Other capital	+ 7	+ 68	+ 75	+ 127
<b>Portfolio investment</b>	+ 5,902	- 2,603	- 1,952	+ 5,855
Portfolio investment in foreign securities	-10,116	-27,246	-21,355	-23,016
Equity securities	- 4,672	- 4,957	- 3,222	- 8,361
Bonds and notes	- 5,775	-22,131	-17,765	-10,710
Money market instruments	+ 331	- 158	- 367	- 3,944
Portfolio investment in domestic securities	+16,018	+24,643	+19,403	+28,871
Equity securities	+ 908	+ 2,409	+ 1,679	+ 1,535
Bonds and notes	+14,806	+18,699	+15,132	+23,160
Money market instruments	+ 304	+ 3,535	+ 2,593	+ 4,176
<b>Other investment</b>	+ 742	+ 5,643	+ 4,213	- 1,482
Assets	- 825	- 6,545	- 8,247	-16,224
Trade credits	+ 641	- 263	- 225	- 523
Loans	- 3,836	-11,668	- 9,015	- 7,377
Currency and deposits	+ 2,401	+ 5,453	+ 1,095	- 8,471
Other assets	- 30	- 67	- 102	+ 147
Liabilities	+ 1,566	+12,189	+12,460	+14,742
Trade credits	- 266	+ 97	+ 10	+ 127
Loans	+ 59	+ 1,776	+ 567	+ 653
Currency and deposits	+ 1,465	+ 9,809	+11,769	+14,091
Other liabilities	+ 308	+ 507	+ 114	- 129
<b>Financial derivatives</b>	+ 193	- 80	+ 273	+ 370
<b>Reserve assets<sup>4)</sup></b>	- 2,914	+ 1,963	+ 1,866	+ 257
<i>Memorandum item:</i>				
<i>Interest-bearing investment</i>	+ 8,022	+ 7,332	+ 5,870	+11,540
Assets	- 8,579	-27,254	-24,422	-30,691
Liabilities	+16,601	+34,586	+30,292	+42,231
<b>Breakdown by sectors</b>				
<b>OeNB and banks</b>	- 1,371	+ 7,268	+ 6,532	+11,309
Assets	- 6,485	-12,010	-11,497	-18,959
Liabilities	+ 5,113	+19,278	+18,029	+30,268
<b>General government</b>	+10,986	+14,908	+12,013	+ 9,533
Assets	- 397	+ 284	- 368	- 3,530
Liabilities	+11,384	+14,624	+12,380	+13,062
<b>Other sectors</b>	- 4,084	-17,239	-13,896	-15,920
Assets	- 9,167	-22,899	-17,763	-18,767
Liabilities	+ 5,083	+ 5,660	+ 3,867	+ 2,847

Source: OeNB.

<sup>1)</sup> Final data.

<sup>2)</sup> Revised data.

<sup>3)</sup> Provisional data.

<sup>4)</sup> OeNB: Gold and foreign exchange, reserve position in the Fund, SDRs, etc.; increase: - / decrease: +.

Table 8

**Financial Account by Region<sup>1)</sup>**

	Investment in/ from the euro area			Investment in/ from non-euro area countries		
	1999 <sup>2)</sup>	1st to 3rd quarter 1999 <sup>2)</sup>	1st to 3rd quarter 2000 <sup>3)</sup>	1999 <sup>2)</sup>	1st to 3rd quarter 1999 <sup>2)</sup>	1st to 3rd quarter 2000 <sup>3)</sup>
	<i>EUR million, net</i>					
<b>Financial account</b>	- 897	- 4,739	+12,761	+ 5,835	+ 9,387	- 7,865
Assets	-20,440	-19,417	-19,971	-14,183	-10,210	-21,309
Liabilities	+19,544	+14,678	+32,732	+20,017	+19,597	+13,444
<b>Direct investment</b>	+ 1,313	+ 1,249	+ 1,243	- 1,299	- 1,001	- 1,346
Direct investment abroad	- 422	- 379	- 576	- 2,200	- 1,754	- 2,063
Direct investment in Austria	+ 1,734	+ 1,628	+ 1,820	+ 903	+ 753	+ 715
<b>Portfolio investment</b>	- 5,665	- 5,315	+11,201	+ 3,062	+ 3,363	- 5,346
Portfolio investment in foreign securities	-21,080	-15,652	-14,122	- 6,166	- 5,703	- 8,894
Portfolio investment in domestic securities	+15,415	+10,337	+25,323	+ 9,228	+ 9,066	+ 3,548
<b>Other investment</b>	+ 3,140	- 1,704	- 690	+ 2,503	+ 5,917	- 792
Assets	+ 636	- 4,110	- 4,707	- 7,181	- 4,137	-11,517
Liabilities	+ 2,504	+ 2,406	+ 4,017	+ 9,685	+10,054	+10,725
<b>Financial derivatives</b>	+ 161	+ 876	+ 1,006	- 241	- 603	- 636
<b>Reserve assets<sup>4)</sup></b>	x	x	x	+ 1,963	+ 1,866	+ 257

Source: OeNB.

<sup>1)</sup> While for foreign direct investment in Austria and other inward investment it is possible to establish the identity of the foreign investors, in the case of portfolio investment one can only determine the country via which the transaction has been effected. This means that it is not possible to provide a current and/or completely reliable classification of creditors. Ongoing studies, however, show that the largest volume of Austrian securities sold to the euro area are government bonds sold to foreign banks in the course of tender or syndication offers. Since, in this case, the secondary market generated only a relatively small volume of cross-border transactions, the regional structure of the basic data derived from the reporting system on foreign exchange statistics can be regarded as sufficiently conclusive.

<sup>2)</sup> Revised data.

<sup>3)</sup> Provisional data.

<sup>4)</sup> OeNB: Gold and foreign exchange, reserve position in the Fund, SDRs, etc.; increase: - / decrease: +.



S T U D I E S

# Austrian Bond Market Developments

Friedrich Fritzer,  
Fabio Rumler<sup>1)</sup>

## I Introduction

The launch of Economic and Monetary Union (EMU) also marked the emergence of a single euro bond market<sup>2)</sup> unifying the capital markets of the euro area countries. With currency barriers to the cross-border trade of debt instruments dismantled within the euro area, bond markets have become increasingly integrated. For reasons of country-specific differences, however, a certain degree of market segmentation remains despite the common currency of issuance. Since the beginning of EMU, global trends feeding through to the European capital markets have, moreover, added to the momentum for change and presented new challenges for issuers as well as investors.

Bond markets have generally gained in importance. Bonds and notes have become more attractive to both debtors and investors. From among the issuers it is mostly the private sector, such as financial institutions and nonfinancial corporations, that increasingly uses the bond market for refinancing. At the same time, public debtors have cut back on new issuance to be able to meet their budget consolidation targets. Therefore, the private issuers' share of total bond market issuance has increased while that of public issuers has declined. On the supply side, institutional investors increasingly dominate the bond market.

An international comparison of yield developments since the beginning of EMU also shows an interesting trend. Yield differentials have generally tended to increase since the beginning of EMU, as exemplified by a comparison of the yield of Austrian ten-year federal bonds (or other ten-year sovereign bonds) with that of German government bonds, which serve as a benchmark in this maturity segment. This is a surprising trend, since EMU should have eliminated that part of the yield differential which reflected the exchange rate risk of internationally traded securities. However, yield differentials between comparable bonds issued by public bodies from different regions have been known to persist in other large integrated bond markets, for instance in the U.S.A., on account of different risk estimations and other factors, such as market liquidity or institutional factors.<sup>3)</sup> In the euro area, the increased prominence of such factors has obviously caused yield differentials to widen even as intra-area currency risks disappeared.

This study analyzes the question of whether the international trends described above are also fully manifest in the Austrian bond market. The new developments caused or, in part, only intensified by the establishment of EMU have induced us to analyze the present situation and the developments in the past two years of the Austrian bond market. We also

<sup>1)</sup> The authors express their thanks to Michael Andreasch, Ernest Gnan, Wolfgang Harrer, Eva Hauth, Ferdinand Klaban, Martin Scheicher, Martin Schürz and Walter Waschiczek.

<sup>2)</sup> This term denominates the bond market in the euro area as a whole and should not be confused with the term *eurobond market* – the market for bonds issued outside the borrower's own country.

<sup>3)</sup> The comparison between the European and the U.S. bond markets is lame, as there are essential differences in state organization. In the U.S.A. an integrated bond market has evolved with one central government as the most important issuer, while the European bond market is segmented even on the supply side, with several central governments serving as issuers.

investigate the special characteristics of the Austrian bond market and its position within the euro bond market and analyze the expected bond market outlook.

To begin with, an exact delimitation of the Austrian bond market proves to be somewhat difficult. The domestic bond market used to comprise all schilling debt securities issued in the financial market place of Austria and was thus rather easy to delimitate. But, given the single euro bond market, this task is much more complex today. The question of whether euro-denominated foreign issues of Austrian debtors are part of the Austrian bond market exemplifies the problem. In this paper we use a comprehensive definition of the Austrian bond market, including mainly debt securities issued in Austria, that is, by Austrian-based lead managers, but also euro-denominated Austrian debt instruments issued abroad. This, however, requires the use of different statistical sources that are not always compatible. The issuing statistics on the Austrian bond market for instance (see table 4.0.0, Focus on Statistics, OeNB), from which most statements in the first part of the paper are derived, do not include foreign issues of Austrian debtors. For banks, these data are only included in the issuing statistics of Austrian banks (see table 2.0.3, Focus on Statistics, OeNB). This study further draws on balance of payments statistics (data on the acquisition of domestic debt securities by nonresidents and the acquisition of foreign debt securities by residents) and on data on the structure of federal debt taken from the “Bericht über die Finanzschuld des Bundes” (report on federal debt). Using various statistics with different concepts and definitions somewhat restricts us in painting a consistent picture of the Austrian bond market. With the available data, however, it is the only possible solution for a comprehensive analysis.

Section 2 describes developments on the Austrian bond market in the past few years. Section 3 analyzes the essential supply trends in the past few years and the special characteristics of the Austrian bond market. Section 4 investigates demand developments and takes a close look at cross-border acquisitions of securities. Section 5 deals with two subjects specific to the Austrian bond market, namely the analysis of yield differentials over Germany and the econometric examination of potential spillover effects to the Austrian bond market caused by global integration. Section 6 summarizes the key statements of this paper.

## **2 Issuance in the Austrian Bond Market**

### **2.1 Issuance by Issuer**

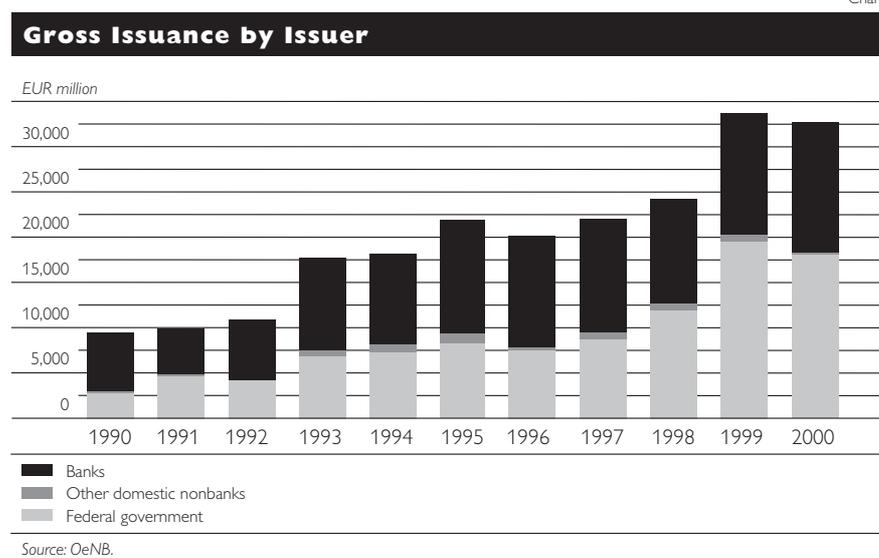
#### **2.1.1 Gross Issuance**

The bond market volume in Austria advanced with fast pace in the nineties. The number of bonds issued more than tripled between the beginning and end of the nineties. Chart 1 shows the constant rise in gross issuance on the Austrian bond market in the past eleven years. The slight reduction in gross issuance in 2000 is largely due to a small drop in federal government gross issuance in comparison with 1999.<sup>1</sup>) An analysis by issuer reveals that gross

<sup>1</sup> The issue of federal government bonds planned for November 2000 was canceled on account of positive budgetary developments.

issuance by the federal government, by other domestic nonbanks (non-financial corporations) and by banks picked up in the review period and that fairly recently the federal government replaced banks as the key issuer on the Austrian bond market. In comparison to rather moderate growth in the years before, gross issuance soared in 1999 and 2000. With the exception of the last months of 2000, it was solely the increase in gross issuance by the federal government that drove the bond market rally.

Chart 1



The surge in federal government gross issuance in the past few years may largely<sup>1)</sup> be attributed to intermediary funding programs pursuant to Article 65c Federal Budget Act under which the federal government has issued securities in its own name and relent the proceeds to private sector entities since 1998. The beneficiaries are companies of which the federal government either holds a majority or for which it assumes guarantor responsibilities, such as the federal railroad corporation ÖBB, the state holding company ÖIAG, the public sector road construction company ASFINAG and the rail infrastructure financing company SCHIG. Adjusted for intermediary funding, the federal government's share of total gross issuance in Austria appears to have grown somewhat less vigorously.<sup>2)</sup> It should also be noted that bonds are now virtually the federal government's sole source of financing (see also section 2.1.2 Net Issuance).

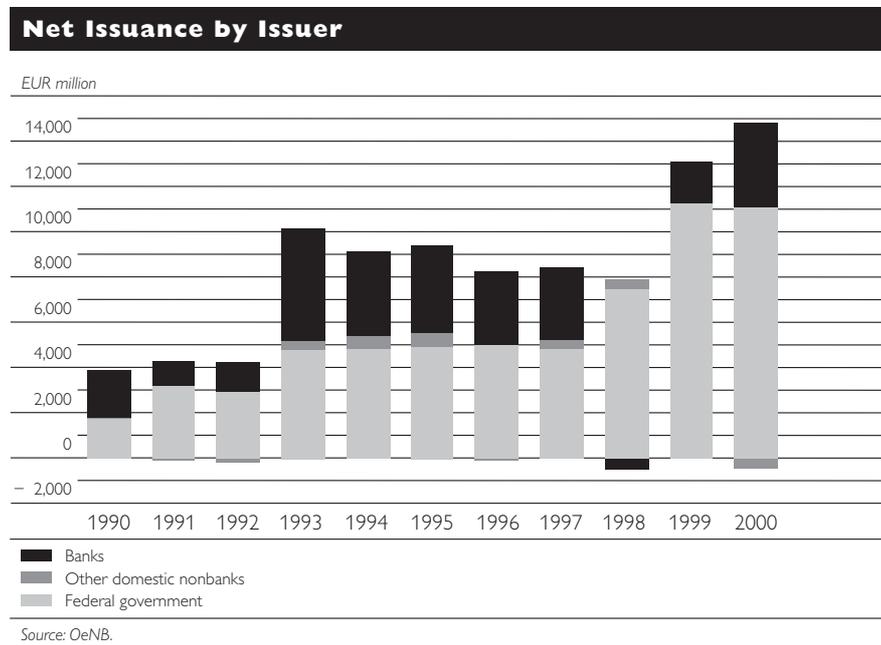
1 A surge of redemptions, which almost doubled when compared to 1998, also had a considerable impact on the expansion of gross issues in 1999.

2 Please note that the issuing statistics of the OeNB only include issues for which Austrian banks served as lead managers; they do not include any foreign issues by Austrian issuers. Recently, mainly those Austrian banks whose foreign issues are performing well have increasingly tapped foreign markets (see chapter 3.2). This and other reasons mentioned below have probably distorted the issuers' share structure in the issuing statistics in favor of the federal government.

### 2.1.2 Net Issuance

Net issuance, that is gross issuance minus redemptions, also picked up considerably in the period under review; the bulk of growth, however, occurred in two surges – first in 1993 and then in 1999 – after a rather moderate development in the years before (see chart 2). The shares of issuing groups varied considerably, but the federal government share was mostly above 50% and soared particularly in 1998 and 1999. At the same time, the share and volume of net issuance by banks receded and net issuance by other domestic nonbanks varied considerably and, at times, was even negative. This further confirms that the federal government continued to strengthen its position in the Austrian bond market in the past few years. When federal government issuance is adjusted for intermediary lending to private sector entities<sup>1</sup>) – which, strictly speaking, should be allocated to corporate borrowing – the volume of federal government net issuance still shows a slight upward trend; its share in total issues, however, has been declining since 1998 according to this calculation. In turn, net issuance by other domestic nonbanks would depict a more vigorous development than shown in chart 2. The decline of net issuance by banks observed in the past few years, on the other hand, may probably be attributed to an expansion of foreign currency issuance, which is not included in this statistics (see section 3.2).

Chart 2



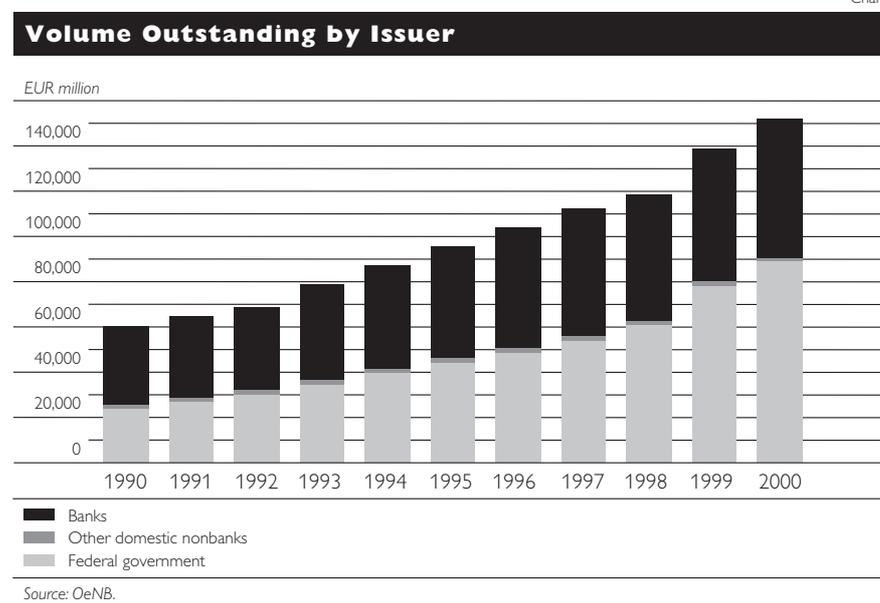
We have furthermore found that the OeNB issuing statistics do not confirm for Austria two of the international trends mentioned above – a slowdown in net issuance by the federal government under budget

<sup>1</sup> Of the federal government's overall net issuance, 22% in 1998 and 20% in 1999 was earmarked for private sector entities (compare Bericht über die Finanzschuld des Bundes 1999).

consolidation constraints and a rise of corporate borrowing in the bond market. The gradual conversion in recent years of some of the federal government's unsecured debt (loans) into securitized debt (mainly bonds)<sup>1)</sup> stands to offset any reduction in the supply of federal government bonds on account of lower federal borrowing requirements. But, given the current consolidation plans of the federal government, a scarcer supply of federal government bonds is to be expected for the future. Corporate issuance has been expanding in pace with total issuance on the Austrian bond market. Apart from a one-time jump reflecting the integration, from 1998, of federal government bonds issued under intermediary lending programs for private sector entities, the share of corporate issuance has remained relatively stable over the past few years.

All in all, the surge in Austrian gross and net issuance since the beginning of EMU is less a direct consequence of the new single euro bond market, but rather a sign of the long-term increase of the relative importance of the Austrian bond market. The funding structure of the most important issuers – federal government and banks – reveals that their financing volume on the bond market has expanded at the expense of other forms of financing. On a federal government level, this is corroborated by the above-mentioned shifting of federal debt from unsecured to securitized forms of debt, on a bank level by the fact that bond market issuance picked up more strongly than deposit-taking (see table 4).

Chart 3



### 2.1.3 Outstanding Volumes

Also with regard to the volume outstanding of bonds, the federal government increased its share in the Austrian bond market as its net

<sup>1</sup> In 1990 the ratio of securitized to unsecured federal government debt was still 2:1. By 2000, this ratio had risen to 5:1.

issuance volume soared. The federal government's bond volume finally even surpassed that of banks. Conversely, the share of corporate bonds in the outstanding amount (issued by other domestic nonbanks) remained more or less unchanged on the rather low level of about 3%, or at about 6% from 1998, adjusted for the volume of federal bonds issued under intermediary lending programs for private sector entities.<sup>1)</sup>

At the end of 2000, the amount of securities outstanding on the Austrian bond market topped EUR 160 billion, of which about EUR 90.9 billion are attributable to federal government bonds and slightly above EUR 62.9 billion to bonds issued by banks. Corporate bonds outstanding (not adjusted for public sector entities), by contrast, only equaled about EUR 3.5 billion. All together, the total volume outstanding on the Austrian bond market posted a continuous increase in the past eleven years, with an average annual growth rate of 10.2% (see chart 3).

## 2.2 Terms and Conditions

An analysis of the terms and conditions of nonregular issues included in the issuing statistics reveals the precise structure of debtors and maturities of domestic issues. The following statements relate to the years 1999 and 2000.

A breakdown of federal issues by maturity shows that federal government benchmark bonds with a ten-year maturity have the largest share in total federal issuance amounting to 47%. Chart 4 shows the combined 1999 and 2000 results for the shares of individual maturities in overall federal issuance (in order to reduce the effects of short-term fluctuations). The fact that the share of ten-year bonds picked up 43% in 1999 and 50% in 2000 (not represented in chart 4) illustrates the ongoing expansion of this maturity segment, likely to have been fueled by the announcement of the Austrian Federal Financing Agency (Österreichische Bundesfinanzierungsagentur, ÖBFA) that it intends to focus on issues of this maturity.<sup>2)</sup> In the past two years, the second most important maturity segment for federal bonds was a maturity of seven years with 23%, followed by a maturity of five years with 18%. Extremely long-term federal government bonds with a maturity of 15 and 30 years are of relatively little importance, with a share in total federal issuance of 4 and 8%, respectively.

As far as banks – the second most important issuers on the Austrian bond market – are concerned, only the largest Austrian bank, Bank Austria AG, and several regional banks significantly tapped the domestic bond market in the past two years.<sup>3)</sup>

In 1999 and 2000, the most important corporate issuer of nonregular issues was Telekabel Wien, which issued bonds in several tranches of a total

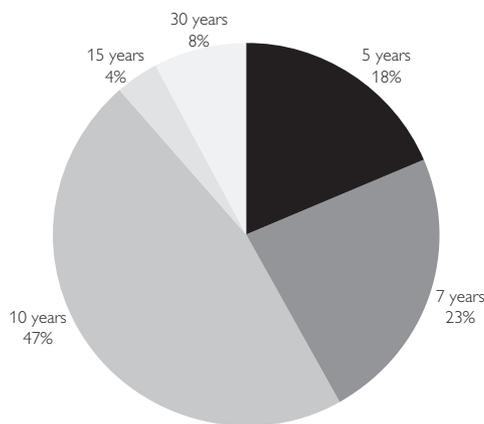
1 This figure equals about the share of volume outstanding of nonfinancial corporations in the entire bond market of the euro area (compare Bericht über die Finanzschuld des Bundes 1999).

2 Compare section 3.1.1 Raising the Attractiveness of Austrian Federal Government Bonds.

3 Please note that the statistics on terms and conditions of bond issues, on which the information stated in section 2.2 is based, only considers nonregular issues. This specification is of particular importance with regard to banks, which, as in 2000, use regular issues for 90% of their funding. An important fraction of corporate bonds are also excluded from the statistics due to this limitation.

Chart 4

### Federal Government Issuance in the Years 1999 and 2000 by Maturity



Source: OeNB.

amount of EUR 1.5 billion, but – with the exception of EUR 500 million – with a maturity of less than one year. Public infrastructure and insurance corporations also play an important role. So far, only few classical production enterprises are players on the Austrian bond market, such as Magna Fahrzeugtechnik and OMV, which issued bonds of EUR 29.5 million in September 1999 and EUR 24.0 million in November 1999, respectively.

### 3 Supply Conditions on the Austrian Bond Market

After the quantitative analysis of the issuer structure in chapter 2, this section presents a qualitative examination of certain developments on the supply side of the domestic bond market. Since the beginning of EMU, different trends have been observed in the various issuer groups, which have changed the profile of the Austrian bond market within the euro bond market.

#### 3.1 Government Bonds

The new EMU environment also had an impact on the market position of the federal government as most important issuer on the Austrian bond market. For the federal government, the implementation of the single euro bond market meant the loss of its monopoly position as best borrower on the financial market place of Austria. The underlying reason is that domestic investors may now substitute Austrian federal government bonds by unlimited amounts of bonds issued by other EMU governments, as investment restrictions to curb exchange rate risk, that is the prohibition of open foreign exchange positions, no longer apply. The fiercer competition on the new euro bond market prompted the Austrian government to initiate measures boosting the attractiveness of their bonds in order to grasp the opportunities offered by this broad and liquid market as soon as possible.

##### 3.1.1 Raising the Attractiveness of Austrian Federal Government Bonds

Improving the liquidity of Austrian government bonds is the most important factor in becoming more competitive with other sovereign issuers on the

euro bond market, as potential investors regard liquidity<sup>1)</sup> as a key parameter for the attractiveness of bonds. Furthermore, investors are prepared to pay a liquidity premium for liquid financial instruments, which lowers the funding costs for the federal government. ÖBFA, the Austrian Federal Financing Agency, has therefore adapted its debt management to the new EMU challenges by initiating the liquidity measures described below.

In general, issuers can basically influence the liquidity of their bonds by the issuing volume of a bond series, by the size of denomination and by the degree of concentration in large series. Liquidity may be directly increased by raising the volume outstanding per bond. Before 1997, issuing volumes usually amounted to between EUR 730 million and EUR 1,100 million and the individual issuing tranches were hardly ever amalgamated. Now, however, the federal debt management agency has taken to reopening (i. e. issuing an additional amount of) outstanding bonds on a large scale. In 1997, the Republic of Austria was, moreover, the first issuer of euro fungible foreign currency bonds (bonds in FRF, NLG, DEM, and ECU), which were redenominated in euro in 1999 and amalgamated with outstanding ATS bonds redenominated in euro of the same coupon and maturity. Despite these activities to promote liquidity, just three of Austria's federal government bonds – with original maturities of five, seven and ten years – topped a volume of EUR 5 billion at the end of 1999. While this is extremely high by Austrian standards, such amounts tend to be the bottom limit in the euro area.<sup>2)</sup>

Restructuring federal debt in favor of securitized forms of funding – see section 2.1.2 above – and stepping up intermediary funding by the federal government also raised the volume of federal government funds raised in the bond market and thus improved liquidity conditions. Buying back illiquid bonds outstanding and transforming them into series with a larger issuing volume was another measure to restructure the federal debt portfolio.<sup>3)</sup>

The federal government also initiated measures to widen the investor base in order to facilitate the sale of its bonds. The group of primary dealers – those dealers permitted at the auction procedure for government bond issues – was extended to include international participants. Currently 19 foreign and eight domestic banks are eligible primary dealers for Austrian federal government bonds.<sup>4)</sup>

Responding to capital market integration in the euro area, ÖBFA standardized its financial instruments according to international requirements by streamlining the range of instruments and adapting it to international practice. Thus, the following financial instruments were created at the beginning of 1999:<sup>5)</sup>

1 *Liquidity denotes the ability of the individual market participant to carry out transactions without triggering effects on market prices.*

2 *Compare Bericht über die Finanzschuld des Bundes (1999).*

3 *See ÖBFA press announcement of May 17, 1999.*

4 *See ÖBFA homepage at <http://www.oebfa.co.at>.*

5 *See ÖBFA homepage at <http://www.oebfa.co.at> and Bericht über die Finanzschuld des Bundes (1999).*

- the Auction procedure and Debt Issuance Program for euro denominated issues under Austrian law for bond tender and syndication procedures,
- the EMTN Program (European Medium Term Note) as standardized documentation for foreign currency funding of all kinds under English law, and
- the ATB Program (Austrian Treasury Bill) as standardized documentation equivalent to Commercial Paper issues with maturities of 7 to 365 days under English law.

Furthermore, government bonds are separated into their principal and coupon interest components and can also be traded as zero bonds or strips.

In addition to the described activities of the Austrian debt management agency, technological innovations in the field of trading and clearing systems as well as the participation in foreign futures exchanges also have a great impact on the liquidity of traded bonds. Similar to the trading system for Italian government bonds, a pan-European trading platform for government bonds of euro area countries – called Euro-MTS – was established in April 1999, where three Austrian government bonds have been traded since September 1999 as well. Euro-MTS is currently dealing 85 bonds, with a required minimum issuing volume of EUR 5 billion per series. The participation of Austrian government bonds in MATIF, the French exchange for bond futures, also raises liquidity. In addition to the standard instruments of French and German bond futures, a multi-issuer futures contract was also established at MATIF, which – besides bonds from other EMU member states – has also included Austrian benchmark bonds with a ten-year maturity as of August 1998.

### 3.2 Bank Bonds

The past few years have seen a vigorous growth of the Austrian bank bond market, tying in with a shift in banks' funding sources from their deposit intake to the direct issuance of securities. EMU considerably supported and advanced this trend. Austrian banks' direct domestic issues and, even more

Table 1

<b>Austrian Banks' Direct Domestic Issues<sup>1)</sup></b>				
	Domestic issues	Foreign issues	Total issues	Share of foreign issues in total issues
<i>End-of-period stocks in EUR billion</i>				
1996	51.5	24.4	75.8	32.2
1997	53.1	31.4	84.5	37.2
1998	52.9	36.4	89.3	40.7
1999	58.7	43.4	102.1	42.5
2000	65.4	57.2	122.6	46.7
<i>Growth rates</i>				
<i>%</i>				
1996 to 1998	2.9	49.1	17.7	
1999 to 2000	23.5	57.4	37.3	

Source: OeNB.  
<sup>1)</sup> Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.

strongly, their foreign issues have picked up at a stronger pace since 1999 than in the years before.

Between the end of 1996 and the end of 1998, the nominal amount of Austrian banks' direct domestic issues moved up 17.7%. From the beginning of 1999 until the end of 2000, the bank bond growth rate, at 37.3%, more than doubled the rate of the three previous years.

This pronounced development was mainly carried by the expansion of foreign issues. Between the beginning of 1996 and the end of 1998, foreign issues picked up by 49.1%, thus clearly surpassing domestic issue growth.<sup>1)</sup> Even after the beginning of EMU, foreign issues considerably outpaced the performance of domestic issues.

The elimination of exchange rate risk brought about by EMU might be one reason for the brisk trade with foreign bank issues. Furthermore, cross-border investments were facilitated and the range of institutional investors thus essentially broadened.

Table 2

### Ratio of Bank Issues to Euro Area Residents'

#### Deposits and Credit<sup>1)</sup>

	Credit to euro area residents		Bank issues		Deposits by Austrian residents		Bank issues	
	EUR billion	% of credit	EUR billion	% of credit	EUR billion	% of deposits	EUR billion	% of deposits
1997	194.3		43.5		150.2		56.3	
1998	204.4		43.7		158.8		56.2	
1999	214.3		47.6		164.9		61.9	
2000	230.4		53.2		167.7		73.1	

Growth rates			
	Credit	Deposits	Bank issues
	%		
1997 to 1998	5.2	5.5	5.7
1999 to 2000	12.7	5.6	37.3

Source: OeNB.

<sup>1)</sup> Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.

After the beginning of EMU, bank issue growth clearly outdistanced that of deposits and credit. Since the beginning of 1999, deposit development with a growth rate of 5.6% has been falling short of loan growth at 12.7%. From the beginning of 1997 until the end of 1998, Austrian banks' direct domestic issues corresponded to about 44% of loans and about 56% of deposits. Until the end of 2000, bank issues advanced to 53% of loans and 73% of deposits.

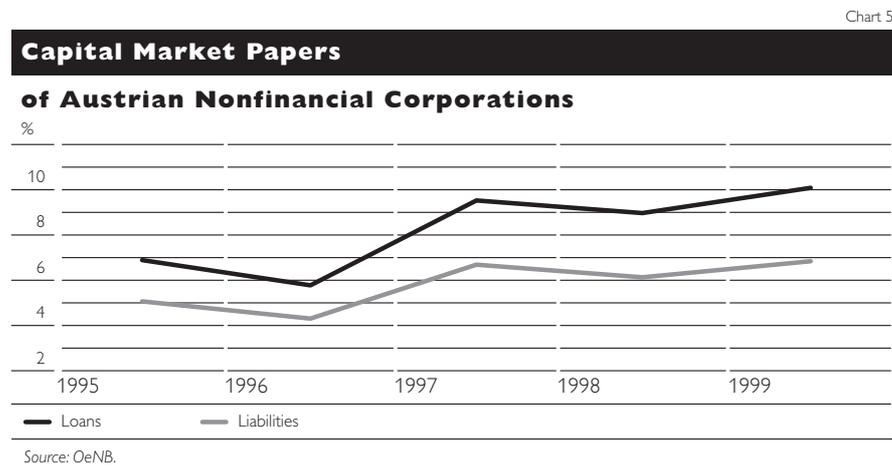
The fact that, between January 1999 and the end of 2000, bank issues posted a much more robust growth of 37.3% than deposits at 5.6%, suggests that recently bank bond issuance was not only determined by the expansion of lending business but also by the need to complement traditional deposit funding.

<sup>1</sup> The issuing statistics described in section 2.1 only include domestic issues and thus do not show this dynamic growth of foreign issues.

In the past few years, Austrian savers increasingly chose higher-yield forms of investment over bank deposits. Domestic mutual fund assets that amounted to about 22% of savings deposits in 1995 and had reached about 82% by 2000, are a clear indication of this development.

Therefore, the reason behind this surge of bank issues is probably the preference of investors for higher yields and more risk, which resulted in a decline of bank deposits and, at the same time, in a more pronounced engagement in higher-yield investments, such as mutual funds. The moderate deposit growth might at least have been one reason<sup>1)</sup> why Austrian banks stepped up capital market funding (asset securitization). Obviously, the start of EMU compounded this trend and, in addition, led to an expansion of direct foreign issues.

### 3.3 Corporate Bonds



The issue of capital market papers by Austrian corporations registered a slight increase in the past few years. Bonds increased from 6.8% of loans in 1995 to 10% of loans in 1999. On an international scale, however, the bond market is still of relatively little importance for Austrian corporate financing.

Table 3

**International Comparison  
of Securitized Debt Instruments as of December 1999**

	Austria	Germany	France	United Kingdom	Japan	U.S.A.
% of total issues						
Nonfinancial corporations	4.4	3.1	14.6	23.5	13.8	18.7
Financial institutions	45.4	65.4	37.4	42.4	13.9	29.6
General government	50.2	31.5	48.0	34.1	72.3	51.7

Source: BIS.

<sup>1</sup> Another reason for the strong expansion of foreign issues might be the surge in foreign currency lending.

In Austria and Germany, corporate bonds only came to 4.4 and 3.1%, respectively, of total issues outstanding at the end of 1999, whereas this ratio amounted to 18.7% in the United States. Even considering the fact that, since 1998, the federal government has been empowered to issue government bonds under intermediary funding programs for corporations of which it holds a majority or for which it has assumed guarantor responsibilities, and if this volume is allocated to corporate bonds, Austrian corporate bonds outstanding only amounted to 6% of total issues in 1999.<sup>1)</sup>

In Austria and Germany, bank bonds are rather frequently used to refinance lending, which equals an indirect tapping of capital markets by corporations with banks as intermediaries.

#### **4 Demand on the Austrian Bond Market**

On the demand side of European bond markets, the beginning of EMU had a considerable impact on investor behavior. The growing integration of financial markets in the euro area had favorable effects on the geographic diversification of investor portfolios and, therefore, also fostered a livelier international securities trade.

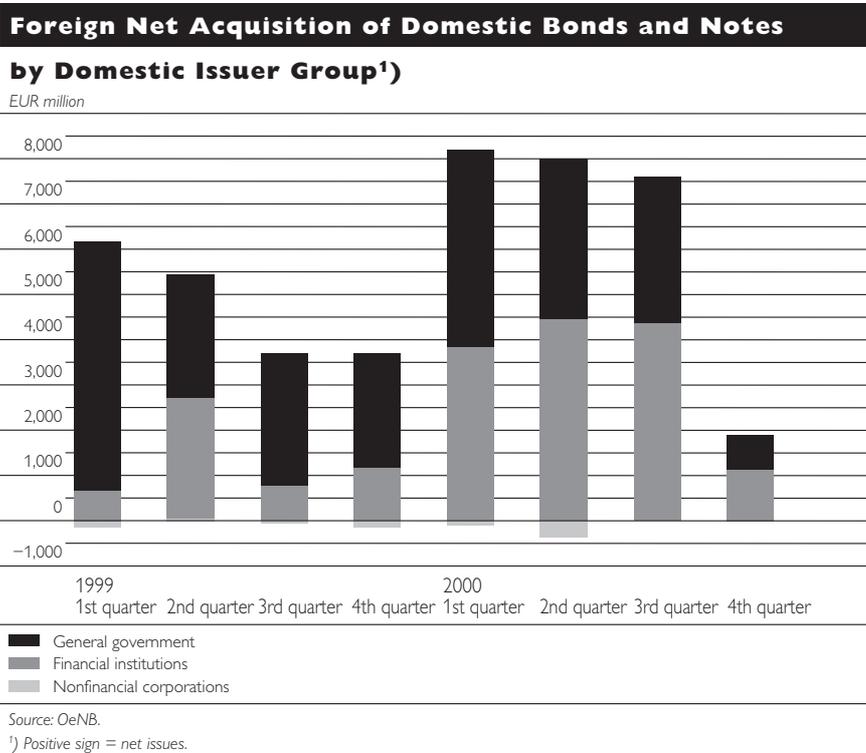
##### **4.1 Cross-Border Acquisition of Bonds and Notes**

On the Austrian bond market, the surging issuance of domestic debt securities to foreign investors in recent years has been a clear indication of this trend. Chart 6 shows acquisitions of domestic debt securities by foreign investors since the beginning of 1999. The data on which chart 6 is based have been taken from the balance of payment statistics and include foreign issues of domestic issuers as well as cross-border secondary trade. Unfortunately though, the balance of payment statistics does not give any information on the structural composition of foreign investors. But it is a safe guess that foreign (first) buyers of Austrian securities are mainly institutional investors and, in case of government bonds, primary traders.

Chart 6 mainly indicates a surge of foreign net issuance of domestic debt securities in 2000. A comparison between 1999 and 2000 shows that the foreign issue of domestic debt instruments climbed by more than one third from EUR 18.7 billion to EUR 25.2 billion. The issuer structure of securities traded abroad reveals a progressive shift from the government sector towards financial institutions as of the fourth quarter 1999.<sup>2)</sup> In 1999, foreign issuance of domestic debt instruments was still dominated by the government sector with a share of over 70% compared to less than 30% of financial institutions, whereas in 2000 the majorities were reversed, with financial institutions holding a share of 55%. This is mainly due to the fact already mentioned in section 3.2 that the foreign issues of domestic bank bonds advanced at a fast rate. The distinct slump of foreign issues of Austrian long-term securities in the fourth quarter of 2000 was largely caused by the federal government's cancellation of the issuance of government bonds planned for November – as a major part of federal

<sup>1</sup> See section 2.1 Issuance by Issuer.

<sup>2</sup> According to the SNA definition.



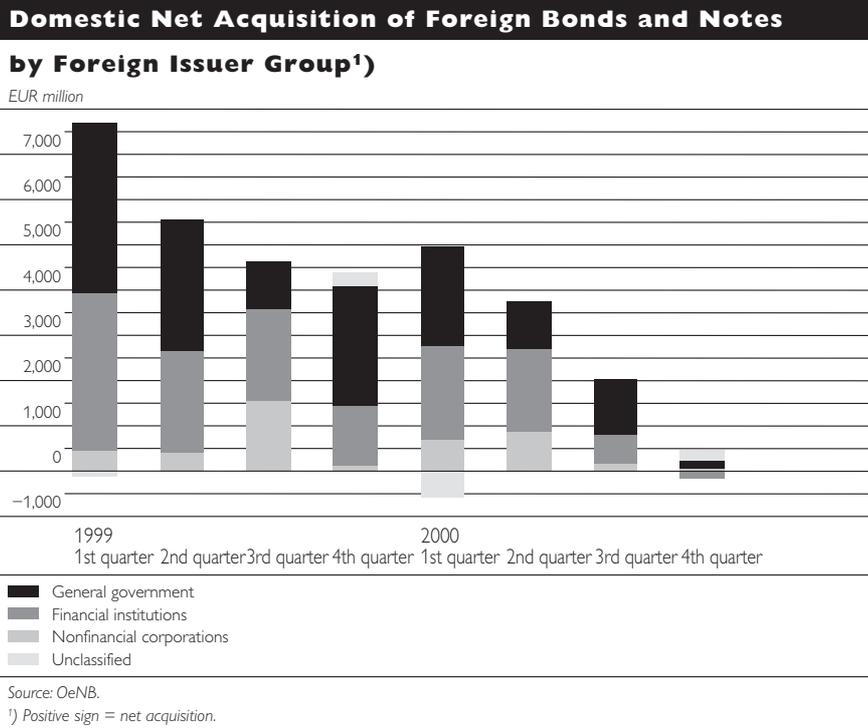
government bonds has for some years been issued abroad.<sup>1)</sup> The foreign net acquisition of Austrian corporate bonds, however, was very low most of the time, in some quarters even negative.

But the expanding acquisition of cross-border securities, especially in 2000, was only a one-sided affair with regard to the Austrian bond market. In contrast to the foreign acquisition of domestic debt securities, the domestic acquisition of foreign bonds and notes has been continuously retreating since the beginning of 1999. Chart 7 shows the net acquisition of foreign debt securities by foreign issuer group on a quarterly basis. The chart reveals a constant decline of the domestic acquisition volume of foreign debt instruments as of the first quarter of 1999. It is also evident that the share of the individual foreign issuer groups in total acquisitions has remained relatively stable year on year. In 2000, the issuer structure was as follows: about 43% of the domestically acquired foreign debt instruments were issued by foreign financial institutions, an almost equal 44% by foreign governments and about 16% by foreign corporations. The Austrian net acquisition from unclassified foreign issuers was, however, negative.

The reason for the decline in the Austrian acquisition of foreign debt securities is probably due to the fact that foreign issues are no longer of any

<sup>1)</sup> On the basis of the available statistics it is impossible to determine the exact ratio of federal government bonds issued abroad to total government issues, but according to the secretariat of the Federal Debt Committee it is probably around 80%.

Chart 7



significance on the financial market place of Austria.<sup>1)</sup> This leads to the assumption that the domestic net acquisition of foreign debt instruments almost exclusively reflects cross-border secondary trade, which is subject to short-term fluctuations.<sup>2)</sup> Conversely, foreign issues by domestic banks and the Austrian federal government have recently surged, a development which explains the great momentum of the sales of domestic debt instruments abroad – and counteracts the trend underlying domestic cross-border acquisition of securities.

Table 4

**Bond Exposure of Domestic Mutual Funds  
by Issuer Group<sup>1)</sup>**

	1995	1996	1997	1998	1999	2000
	%					
Banks	22.87	19.53	20.24	16.40	15.42	14.99
General government	48.21	49.23	43.50	46.30	34.79	28.41
Nonbank financial intermediaries	0.01	0.00	0.01	0.01	0.04	0.01
Domestic nonfinancial corporations	1.21	2.04	1.69	1.65	1.58	1.49
Foreign countries	27.69	29.20	34.56	35.65	48.17	55.10
	EUR billion					
Total debt instruments	18.85	24.71	32.16	40.90	52.21	55.06

Source: OeNB.  
<sup>1)</sup> Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.

- <sup>1)</sup> This could be a consequence of EMU since, as of 1999, foreign issuers of euro issues – in contrast to issuers of schilling bonds – do not have to choose Austria as country of issuance.
- <sup>2)</sup> The period under review is relatively short.

#### 4.2 Demand of Domestic Institutional Investors

The home bias of Austrian mutual funds and insurance companies with regard to their exposure to bonds tended to recede in recent years. The beginning of EMU and the concurrent elimination of currency risk are likely to have corroborated the trend towards a higher foreign exposure.

In the past few years, Austrian investors increasingly opted for higher-yield savings alternatives to bank deposits.<sup>1)</sup> The surge of domestic mutual fund assets is a direct consequence of this trend. At the end of 2000, they amounted to EUR 92.0 billion, whereas savings deposits declined slightly from the beginning of 1999 until the end of 2000 to EUR 111.5 billion.

The robust asset growth of domestic mutual funds also raised their importance as potential sources of demand on the Austrian bond market. In the past few years, Austrian mutual funds expanded their foreign bond holdings at the expense of their domestic bond allocation. Whereas federal government bonds still accounted for 48.2% of mutual fund assets in 1995, their share had plummeted to 28.4% by 2000. Debt instruments issued by domestic banks showed a comparatively slower decline from 22.9% in 1995 to 15% in 2000. The sharp reduction of the share of domestic debt securities might have been caused by the low liquidity<sup>2)</sup> of the Austrian market, the wider product range abroad, and the elimination of exchange rate risk by EMU.

The reduced share of domestic securities in mutual fund portfolios, however, has not exclusively been brought about by a geographic diversification of investors' portfolios, but also by a reallocation between various forms of investment.

Table 5

<b>Share of Financial Market Instruments</b>						
<b>in Domestic Mutual Fund Assets</b>						
	1995	1996	1997	1998	1999	2000
	%					
Debt instruments	87.70	87.21	84.71	79.03	69.71	63.93
Shares	12.20	12.68	15.06	18.19	21.76	21.84
Securitized derivative financial instruments	0.04	0.04	0.05	0.02	0.04	0.02
Mutual fund shares (domestic and foreign)	0.07	0.07	0.17	2.77	8.48	14.21

Source: OeNB.

In the past five years, the share of debt instruments in Austrian mutual fund assets plummeted, whereas that of shares picked up from 12.2 to 21.8% in the same period. The sharp drop in debt instrument yields is the most likely reason for this development, as investors in a low-yield environment are more willing to invest in riskier, but higher-yielding instruments.

As of December 2000, Austrian insurance corporations had invested EUR 8.4 billion in domestic debt instruments<sup>3)</sup> and were thus the second

1 Compare section 3.2 Bank Bonds.

2 Higher market liquidity also entails the possibility of portfolio reallocations at minimum cost.

3 This equals about one third of the amount invested on the Austrian bond market by domestic investment funds.

Table 6

<b>Debt Instruments of Insurance Companies<sup>1)2)</sup></b>						
	1995	1996	1997	1998	1999	2000
	%					
Banks	42.8	38.9	38.6	37.0	30.8	31.0
General government	44.1	40.6	37.0	31.9	22.3	16.9
Nonbank financial intermediaries	0.6	0.4	0.3	0.2	0.2	0.2
Domestic nonfinancial corporations	3.2	3.5	3.1	2.6	2.6	2.1
Abroad	9.3	16.5	21.1	28.3	44.1	49.9
	EUR billion					
Total debt instruments	11.0	12.8	14.2	14.8	15.1	16.9

Source: OeNB.

<sup>1)</sup> Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.<sup>2)</sup> 1995 to 1999: market values on the basis of balance sheets; 2000: market values on the basis 4th quarter 2000 reports.

most important institutional investor group on the Austrian bond market. With insurance corporations, we could also observe a strong expansion of foreign debt securities and, at the same time, a decline in debt instruments issued by the Austrian federal government and by domestic banks: the share of foreign debt instruments held by insurance corporations advanced from 9.3% in 1995 to 49.9% in 2000, whereas federal government issues fell from 44.1 to 16.9% and domestic bank issues from 42.8 to 31.0% during the same period.

Table 7

<b>Share of Financial Market Instruments in Domestic Pension Fund Assets</b>						
	1995	1996	1997	1998	1999	2000
	%					
Federal Treasury bills	0.4	0.3	0.3	0.7	0.4	0.0
Domestic debt instruments	9.2	5.2	5.1	3.6	0.2	0.4
Foreign debt instruments	2.4	1.8	1.2	0.9	0.5	0.5
Domestic mutual fund shares	59.0	77.2	76.7	81.1	82.1	89.6
Foreign mutual fund shares	3.6	4.0	5.5	4.9	6.0	6.1
Other assets	25.4	11.6	11.2	8.8	10.9	3.4

Source: OeNB.

Table 8

<b>Bond Exposure of Domestic Institutional Investors by Issuer Group<sup>1)2)3)</sup></b>						
	1995	1996	1997	1998	1999	2000
	%					
Banks	30.2	26.1	25.9	21.9	19.0	18.8
General government	46.7	46.3	41.5	42.5	31.9	25.7
Nonbank financial intermediaries	0.2	0.2	0.1	0.1	0.1	0.0
Domestic nonfinancial corporations	2.0	2.5	2.1	1.9	1.8	1.6
Foreign debt instruments	20.9	24.9	30.4	33.6	47.2	53.9
	EUR billion					
Total debt instruments	29.8	37.5	46.4	55.9	68.3	72.0

Source: OeNB.

<sup>1)</sup> Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.<sup>2)</sup> Insurance corporations: 1995 to 1999: market values on the basis of balance sheets; 2000: market values on the basis of 4th quarter 2000 reports. Pension funds: evaluation pursuant to Article 23 (1) Pension Fund Act.<sup>3)</sup> Institutional investors: mutual funds, insurance corporations and pension funds, without other domestic pension fund debt instruments.

Directly, pension funds hold relatively few debt instruments; domestic debt securities amounted to EUR 30.9 million and foreign debt instruments to EUR 40.8 million as of December 2000. The bulk of domestic pension fund assets are mutual fund shares; exposure to this category has considerably expanded in recent years. While the ratio of domestic mutual fund shares to total fund assets only came to 59% in 1995, it had climbed to about 90% by 2000.

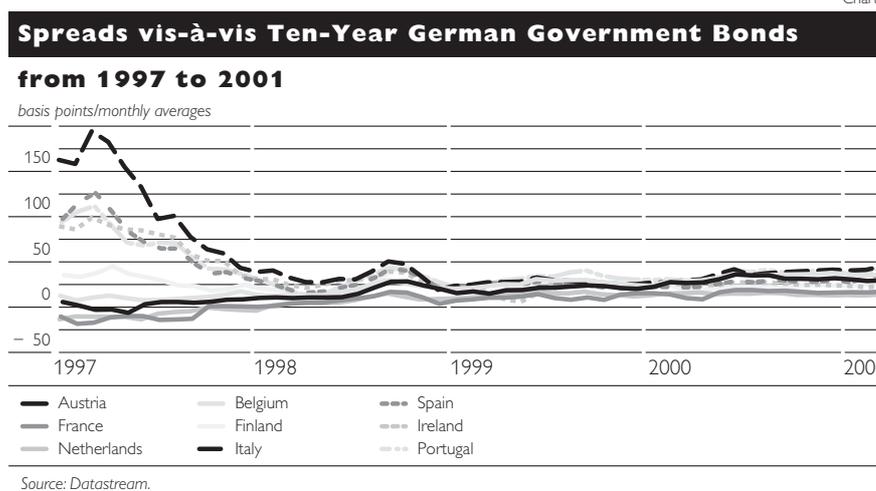
All in all, Austrian institutional investors experienced rather extensive reallocations from domestic to foreign debt instruments. Especially the share of Austrian federal government bonds declined – from 46.7% in 1995 it had plummeted to 25.7% by 2000. In the same period, the share of debt securities issued by domestic banks in institutional investors' fund assets posted reductions as well, though to a lesser degree. On the other hand, institutional investors considerably raised their foreign debt instrument holdings from 20.9% in 1995 to 53.9% in 2000.

## 5 The International Dimension of the Austrian Bond Market

### 5.1 Yield Spread Developments vis-à-vis Germany

Euro area yield developments reveal that the yield spread of comparable government bonds has not diminished because of EMU. While in 1997, before the beginning of EMU, a certain convergence of yields on long-term government bonds could be observed, the first year of EMU, and especially the year 2000, saw the yield gap between Germany and other euro area countries widen again (measured by ten-year government bonds). This trend particularly applies to Austria, whose ranking slumped from third best euro area country in 1997 to fourth last in the middle of 2000.

Chart 8



Chances are that, even after the establishment of EMU, bond markets remain segmented along national lines, as a result of which different yield levels may persist in the markets. For instance, institutional conditions, such as different payment and settlement systems, higher fees for cross-border transactions, and diverse tax systems, imply that the euro area cannot be

seen as a homogeneous investment market comparable to the United States. To an even bigger extent, however, yield differentials reflect the market's perception of credit risk and liquidity.<sup>1)</sup> Different interest rate levels on the euro area bond markets are thus mainly caused by dissimilar risk and liquidity premia, which vary with the weight of these two factors. In the short run, international yield differentials are also influenced by political changes, different expectations, uncertainties, etc.

Liquidity is certainly a very important factor in explaining yield differentials between various government bond markets. Measuring the liquidity<sup>2)</sup> of a market or the liquidity premia of individual securities is very difficult. Indicators such as the bid/ask spread or the volumes traded and outstanding of individual securities can be used as a proxy for liquidity. J. P. Morgan Chase suggests an innovative method for measuring liquidity,<sup>3)</sup> namely calculating so-called yield errors as daily deviations of actual yields from the figures in the underlying yield curve. The standard deviation of these yield errors is then used to measure the liquidity premium of a security. The advantage of this method over the other forms of measurement mentioned lies in its ability to depict short-term, and even daily, liquidity fluctuations. Furthermore, J. P. Morgan Chase determined that this measurement system shows strong international correlations – as common trends, such as supraregional financial crises, are reflected in the yield errors of all countries. This greatly limits the relevance of this method for explaining short-term yield differentials. A less short-term analysis of liquidity reveals that market sizes and thus also the relative market proportions are changing only very slowly, as the home country bias remains important in international portfolios.

Conversely, credit risk estimations<sup>4)</sup> are frequently and very quickly influenced by new information. Every new piece of information regarded as relevant for a country's credit rating, such as new budgetary figures, expectations of new government policies, new business cycle data, etc., may cause short-term changes in yield spreads.

In the following, we present an empirical analysis of the above-mentioned factors explaining international yield spreads with a special focus on the differential between Austrian and German benchmark bonds with ten-year maturity. First, we try to explain the spread by looking into short-term fluctuations of credit risk estimations for Austrian federal government bonds caused by political events, then we discuss liquidity and other factors in detail. It is, however, impossible to say for sure whether these incidents had a decisive effect on yield spreads vis-à-vis Germany, as international interest rate effects, which tend to accompany international financial crises, overshadowed the Austrian development. For an attempt at separating

1 See Danthine, Giavazzi and von Thadden (2000).

2 Liquidity denotes the ability of the individual market participant to carry out transactions without triggering effects on market prices.

3 See research note by J. P. Morgan Chase "Valuing Market Liquidity" of August 18, 1999.

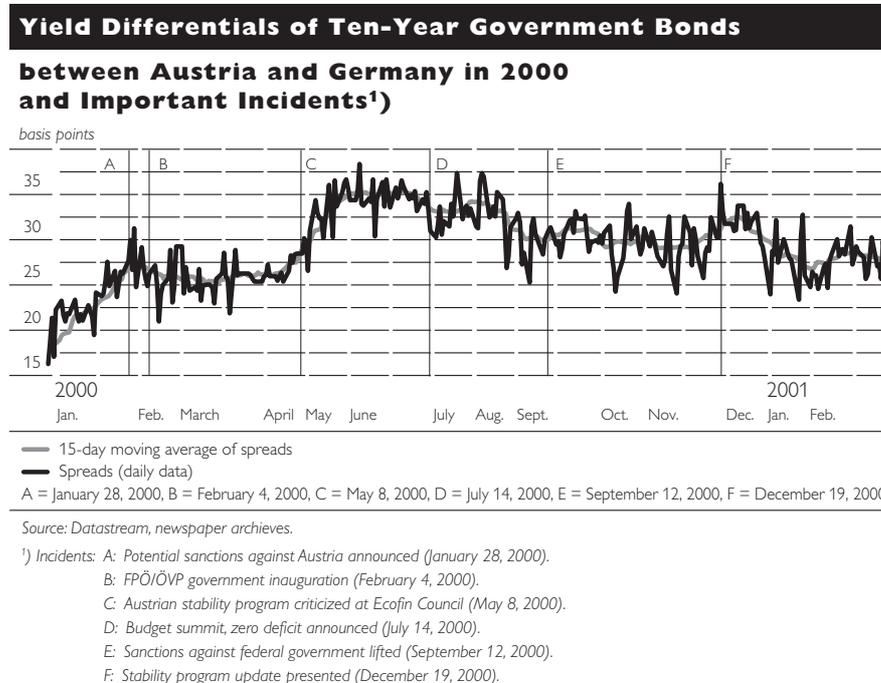
4 This statement does not refer to credit assessments by rating agencies, which are rather slow in reacting to new developments.

national from international yield development components by means of econometric procedures, see section 5.2 of this paper.

An analysis of the yield gap between Austrian and German ten-year government bonds reveals that the spreads have jumped threefold since the beginning of 1999, to about twice the level they used to be two years ago. A closer look at the development in 2000 shows a widening of spreads in February and in May by about 5 and 10 basis points, respectively, and a slight spread reduction in September and at the beginning of 2001 by about 5 basis points each.

The upward movements both coincided with incidents in Austria that were also noticed on an international scale. Chart 9 shows the yield spreads between Austria and Germany from January 2000 until March 2001 and, by way of illustration, also includes certain important political occurrences. The first rise at the end of January/beginning of February coincided with the formation of the new federal government; the chart states two events during this time – the announcement of “sanctions” against the new government (A) and the inauguration of the new government (B). At the Ecofin Council on May 8, 2000, the EU finance ministers harshly criticized the Austrian stability program for the slow consolidation progress it envisaged, namely the slowest among all EU member states. The days after this incident saw the last substantial rise of yield spreads vis-à-vis Germany until today.

Chart 9

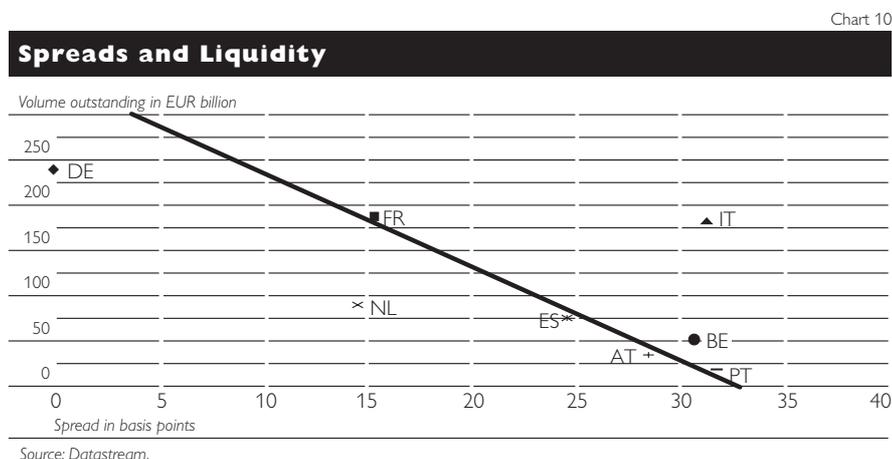


If internationally noticed, the decision to consolidate the budget deficit faster and aim at achieving a zero deficit within two years should – in line with this argumentation – have led to a decline in spreads. In actual fact, however, the downward movement of spreads, which began after the budget

summit in the middle of July, was subsequently again corrected upward. On September 12, 2000 – about a week after the publication of the “Wise Men’s Report” on Austria – the sanctions against the Austrian federal government were lifted (E). The narrowing of spreads in the second half of 2000 occurred exactly during this time – first reactions seem to have followed as soon as some information on the contents of the “Wise Men’s Report” became public at the beginning of September. Until the end of 2000, the spread subsequently remained on a level of about 30 basis points. Spreads seem to have edged downward again by almost 5 basis points as of the beginning of 2001.

All together, there might be a connection in 2000 between all substantial yield spread fluctuations of Austrian vis-à-vis German government bonds and political occurrences with a likely impact on domestic budgetary policy. The varying intensity of the reactions to these occurrences, however, is not easily explained. On the assumption that a connection exists, we observe that some incidents trigger a substantial reaction, others very little or none at all. A widening of the spread was invariably connected with a political incident, whereas all occurrences that would be expected to have caused a spread decline, such as the announcement of achieving a zero deficit within two years, did not trigger bond market reactions to the same extent. An explanation for this might be that either market participants did not consider the intended budget consolidation as convincing or sustainable enough or that it was not as noticeable an occurrence on an international scale as the earlier criticism of the Austrian federal government. This “asymmetric” pattern is the caveat of this approach.

If we try to explain yield spreads by the factor liquidity, our analysis should be extended to include several euro area countries, as liquidity can best be analyzed across countries. Therefore we compare the average spreads of the euro area countries vis-à-vis Germany to the volumes outstanding of ten-year government bonds in 2000. Using volumes outstanding as a measure of liquidity is somewhat controversial, but still the best approach for our investigation, given the scarcity of available



international data in this area. The simple line of regression depicted in chart 10 shows a connection between spreads and liquidity by illustrating that markets with a higher volume outstanding usually have narrower spreads to the German market.

Deviations from the general trend, such as in Italy or the Netherlands, reflect the fact that liquidity is not the only possible variable explaining interest rate spreads. For Italy, we may assume that government bond yields are greatly influenced by the country's rather low credit rating of AA. The Netherlands probably deviate from the general trend because, for some time now, they have largely been reorganizing outstanding bonds in order to enhance the liquidity of the remaining series – an approach that was rewarded with a narrower spread, as illustrated in chart 10. Please note that Austria's rather high average spread vis-à-vis Germany of about 30 basis points in 2000 is completely in line with the European trend and not at all exceptional – given the low volume outstanding of Austrian federal government bonds.

In addition to volumes outstanding, we also tested the liquidity measure suggested by J. P. Morgan Chase as a method explaining international yield differentials. A comparison of German and Austrian yield errors shows a strong correlation of the respective time series.<sup>1)</sup> Therefore, this method is no help in analyzing the yield spread between the two countries.

Stressing the important role of liquidity with regard to yield differentials, we would like to add that the liquidity of a market has become an increasingly important criterion for investors' behavior since the elimination of currency risk by EMU and especially since the Long-Term Capital Management (LTCM) crisis in 1998. A temporary rise of liquidity premia at the end of 1998 in the German, U.S. and UK bond markets known as safe havens, clearly confirms this statement.<sup>2)</sup> The overall importance of liquidity in explaining yield spreads has thus been growing in the past few years.

As a reaction to these changes, the federal government implemented a number of liquidity-enhancing measures in the context of its new debt management approach to make the Austrian bond market also attractive to international investors (compare section 3.1). Despite these endeavors it has not (yet) been possible to overcome the disadvantages of an – internationally speaking – narrow market and of the absence of a repo market and of a futures market. This is also illustrated by the fact that Austrian government bonds do not appear in most of the important benchmark indices, such as the J. P. Morgan Chase Government Bond Index and the Merrill Lynch Global Government Index. The extensive sample portfolios of the J. P. Morgan Chase Investment Bank do not contain a single Austrian private or government bond either. The absence of Austrian bonds in international investment indices and sample portfolios further hurts liquidity, as these indices have a considerable impact on the investment behavior of market participants, closing the vicious circle.

<sup>1</sup> The correlation coefficient for the period from 1997 to 2000 amounts to 0.8.

<sup>2</sup> Compare J. P. Morgan Chase (1999).

## 5.2 Spillover Effects to the Austrian Bond Market

Given the increasing financial market integration, the widening of yield spreads vis-à-vis Germany in the euro area since the beginning of EMU seems quite remarkable. Especially the single monetary policy in the euro area as of 1999 would have been expected to advance convergence of long-term interest rates. In this section we will analyze the question of whether and in how far the relation of the Austrian bond market with the German and international bond markets may have changed. We focus on the relations between the various bond markets, but explicitly consider interdependencies between the Austrian stock and bond market as well, as Austrian investors have extensively reallocated their assets from debt securities to stocks in recent years.<sup>1)</sup>

In our interdependence analysis, we do not investigate yield relations, but the transfer of the volatility of the international bond market and of the Viennese stock market to Austrian secondary market yields. We employ conditional volatility, which takes into account the empirical observation that times of hefty fluctuations of securities yields are alternated by more balanced phases.<sup>2)</sup>

The data basis contains daily data from March 1, 1990, until February 28, 2001, of the Austrian and German federal secondary market yields (with residual maturities of 9 to 10 years for Austria and 10 years for Germany), of the 10-year U.S. Treasury yield and of the ATX yield.<sup>3)</sup>

In order to determine whether the volatilities<sup>4)</sup> of the German and U.S. bond markets spill over into the Austrian secondary market yield, we applied the following test<sup>5)</sup>:

$$\pi_{t+k} = \sum_{i=1}^j \alpha_i \pi_{t+k-i} + \sum_{i=0}^j \beta_i Y_{t-i} + \varepsilon_t,$$

with  $\pi_{t+k}$  being the volatility of the Austrian secondary market yield in the period  $t+k$ ,

$Y_{t-i}$  the volatility of one of the financial market variables,

$\alpha_i, \beta_i$  the parameters to be estimated, and

$\varepsilon_t$  identically and normally distributed stochastic terms.

The volatility transfer was analyzed for different leads ( $k=1, 2, 3$  months).

1 Compare section 4.2 Demand of Domestic Institutional Investors.

2 For modeling time-related volatility we used GARCH models (Generalized Autoregressive Conditional Heteroscedasticity), as the GARCH(1,1) model specifications for the volatilities of secondary market yields and of the ATX yield prove to be compatible with data. For further results, please contact the authors.

3 Data sources: OeNB for the Austrian federal secondary market yield (residual maturity of 9 to 10 years); BIS for the German federal secondary market yield (residual maturity of 10 years) and for 10-year U.S. Treasuries; Datastream for ATX.

4 The daily data of historical volatility were aggregated to monthly data by means of arithmetic averages. The monthly data thus gained were used for all tests.

5 The null hypothesis reads  $\beta_0 = \dots = \beta_{12} = 0$ , that is, no volatility transfer of foreign bond markets or the Viennese stock market to the Austrian secondary market yield. The hypothesis tests were carried out employing a Wald test.

Table 9

<b>Spillover Effects to the Volatility of the Austrian Secondary Market Yield<sup>1)</sup></b>						
Run-up period in months						
	1		2		3	
	1990 to 1994	1995 to 2001	1990 to 1994	1995 to 2001	1990 to 1994	1995 to 2001
German government bonds	0.37	0.05 <sup>2)</sup>	0.41	0.40	0.31	0.61
U.S. Treasuries	0.00 <sup>2)</sup>	0.01 <sup>2)</sup>	0.02 <sup>2)</sup>	0.00 <sup>2)</sup>	0.17	0.01 <sup>2)</sup>
ATX	0.39	0.19	0.11	0.36	0.24	0.77

Source: OeNB.  
<sup>1)</sup> The stated figures are p values.  
<sup>2)</sup> Statistically significant spill over effects.

The results indicate that the transfer of fluctuations between bond markets has undergone some change in the course of the nineties. A statistically significant influence of the U.S. bond market on the Austrian bond market volatility can be seen in the first and the second half of the nineties. No statistically significant spillover effects to the Austrian bond market could be established for the German secondary market yield from 1990 to 1994 – quite in contrast to the period from 1995 until February 2001. These results suggest that, in addition to U.S. bond market factors, European determinants have had an increasing impact on Austrian interest rate developments in recent years.

## 6 Conclusions

The beginning of the third stage of EMU favored the further integration of European bond markets. On an international level, this development raised the general importance of bond markets – for issuers as a form of funding and for investors as an alternative to other financial markets. The following international bond market trends could be observed in the past few years: a shift in activity from public issuers (given budget consolidation constraints) to private issuers (such as banks and corporations), the dominance of international institutional investors and primary traders on the demand side, and the convergence of yields in the run-up to EMU.

Our analysis reveals that the international trends described in the introduction only partly fed through to the Austrian bond market. If we consider domestic issues alone, government issuance did not fall, but expanded further, thus strengthening the leading position of the federal government vis-à-vis banks. If we include Austrian issues abroad, we see that banks and, to a lesser degree, nonfinancial corporations posted much higher growth rates than the federal government (which increased its foreign currency issuance outside the euro area, though). For sure, this internationalization of Austrian issuers is a direct consequence of EMU, since all euro bonds are now considered domestic securities in the entire euro area and are fungible without limitations. The extent to which Austrian corporations use the bond market for funding is still very small and below international averages. The story is slightly different if federal bonds issued

under intermediary lending programs for private sector entities since 1998 are counted as corporate bonds.

In contrast to the United States and the United Kingdom and their capital-marked-based systems, in Austria bank-intermediated debt continues to be the preferred instrument of corporate finance, with Austrian financial intermediaries indirectly tapping the capital market as they issue securities directly. On the supply side, the reasons for the growing securitization of banks' liabilities can be found in a shift in investors' risk preferences and return goals and the concurrent declining trend in deposit funding as investors opt for higher-yield savings options. To fill the funding gap, banks have to expand the use of the capital market. The elimination of exchange rate risk by EMU broadened the investor base and intensified the demand side driven trend towards higher bank issuance. What is more, asset securitization as a tool of corporate finance is bound to grow as a result of implemented and planned stages of deregulation. The overall momentum of the substitution of bank loans by corporate bonds, however, will be determined by structural changes in the real economy, such as changing corporate sizes, and by the institutional environment.

The international geographic diversification of debt securities had its repercussions in Austria mainly in 2000 and largely in a surge of foreign acquisition of domestic bonds and notes. The domestic net acquisition of foreign debt instruments, on the other hand, has rather declined since 1999.

Austrian investment funds and insurance companies increased their foreign bond exposure at the expense of domestic government or bank issues. The high foreign exposure of investment funds and insurance companies was motivated, on the one hand, by the higher liquidity and more extensive range of products abroad and, on the other hand, by the comparatively low bond yields that fueled a reallocation of investment portfolios towards higher-yield and higher-risk instruments.

Counteracting the trend toward convergence in the run-up to EMU, yield differentials between Austrian and German government bonds were again slightly widening, especially in 2000. We try to explain the greater yield gap by means of the factors credit risk and liquidity, notably perceptions of the federal government's credit risk that fluctuate with political and economic occurrences and the heightened emphasis that international investors put on liquidity – with none of these two factors driving the spread rise on its own.

Reviewing current political incidents that might have influenced the national budget situation as possible candidates for the explanation of the yield spread reveals that while some occurrences – such as the imposition of sanctions on Austria by the other 14 EU member countries or the criticism of the domestic budget by the Ecofin Council – explain the widening of the spread, other incidents – such as the lifting of the sanctions or budget consolidation events – narrowed the yield spread. The presentation of the new stability program might have favored the small spread decline at the end of the year. Using liquidity – measured in relation to volume outstanding – as a possible explanation for the yield spread vis-à-vis Germany reveals that the spread is completely in line with European empirical data, given the,

internationally speaking, low volume outstanding of Austrian government bonds. We also determined that, from the point of view of investors and compared to other factors, the impact of liquidity has increased in the wake of EMU and the LTCM crisis.

The widening of the interest rate spread between Austria and Germany as of the beginning of 2000 begs the question whether there have been any changes with regard to the interdependency of international bond markets in the course of the nineties. Econometric tests showed that the Austrian interest rate development has increasingly been influenced by European factors in recent years.

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## Abbreviations

AMS	Arbeitsmarktservice Österreich (Austrian Public Employment Office)	GDP	Gross Domestic Product
ARTIS	Austrian Real Time Interbank Settlement	HICP	Harmonized Index of Consumer Prices
BWA	Bundes-Wertpapieraufsicht (Federal Securities Supervisory Authority)	IHS	Institut für Höhere Studien (Institute for Advanced Studies)
BWG	Bankwesengesetz (amendments to the Banking Act)	IIP	International Investment Position
CAD	Capital Adequacy Directive	IMF	International Monetary Fund
CEECs	Central and Eastern European Countries	NACE	Nomenclature générale des Activités économiques dans les Communautés Européennes (Statistical Classification of Economic Activities)
COICOP	Classification of Individual Consumption by Purpose	ÖCPA	Austrian Version of the Classification of Products by Activities
CPI	Consumer Price Index	OECD	Organisation for Economic Co-operation and Development
EC	European Community	OeKB	Oesterreichische Kontrollbank
ECB	European Central Bank	OeNB	Oesterreichische Nationalbank
EEA	European Economic Area	ÖNACE	Austrian Version of the Statistical Classification of Economic Activities
EEC	European Economic Community	RTGS	Real Time Gross Settlement System
EGVG	Einführungsgesetz der Verwaltungsverfahrensgesetze (Introductory Act to the Administrative Procedure Acts)	SDR	Special Drawing Right
EMU	Economic and Monetary Union	SNA	System of National Accounts
EQOS	Electronic Quote and Order Driven System	TARGET	Trans European Automated Real Time Gross Settlement Express Transfer System
ERM	Exchange Rate Mechanism	TEU	Treaty on European Union
ERP	European Recovery Program	WIFO	Österreichisches Institut für Wirtschaftsforschung (Austrian Institute of Economic Research)
ESCB	European System of Central Banks		
ESNA	European System of National Accounts		
EU	European Union	WWU	Wirtschafts- und Währungsunion
Eurostat	Statistical Office of the European Communities		

# 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
- Ø = Mean value
- = 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" and "Focus on Austria" issue no
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## Official Announcements Regarding the Foreign Exchange Law

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

DL 1/91	Promulgation of the new Official Announcements regarding the Foreign Exchange Law; general provisions 1. Issuance of new Official Announcements 2. Definitions 3. Fees	Sept. 24, 1991	4/1991
DL 2/91	Granting of general licenses 1. General license 2. Waiver of obligation to declare; release 3. Nonbanks 4. Banks not engaged in foreign business 5. Foreign exchange dealers 6. Exchange bureaus 7. Special banks and financial institutions 8. Provisions applying to both banks and financial institutions	Sept. 24, 1991	4/1991
DL 3/91	Reporting requirements 1. General provisions 2. Exemptions from the reporting obligation 3. General reports 4. Reports by banks 5. Reports by nonbanks and financial institutions 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 1/95	Repeal of the Official Announcement DL 1/93; SC Resolution 1022 (1995) Concerning the suspension of the sanctions of the United Nations against the Federal Republic of Yugoslavia	Dec. 21, 1995	4/1995
DL 1/96	Modification of Official Announcement DL 3/91	Sept. 3, 1996	3/1996
DL 1/99	Modification of Official Announcements DL 2/91 and DL 3/91 to the Foreign Exchange Act	Dec. 21, 1998	4/1998
DL 2/99	Abrogation of Official Announcement DL 3/93 Sanctions of the United Nations against Libya	April 30, 1999	1/1999
DL 3/99	Modification of Official Announcement DL 3/91 with respect to the Foreign Exchange Act	Dec. 16, 1999	3/1999

# Council Regulations of the European Communities

Published in the  
Official Journal  
of the  
European  
Communities

## **Minimum Reserve Regulations**

No 2531/98	Council Regulation (EC) concerning the application of minimum reserves by the European Central Bank	Nov. 23, 1998
No 2532/98	Council Regulation (EC) concerning the powers of the European Central Bank to impose sanctions	Nov. 23, 1998
No 2818/98	Regulation (EC) of the European Central Bank on the application of minimum reserves	Dec. 1, 1998

# List of Reports, Summaries, and Studies<sup>1)</sup>

Published in  
"Focus on Austria"

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

## **Oesterreichische Nationalbank and Selected Monetary Aggregates**

Official Announcements Regarding the Foreign Exchange Law and Minimum Reserve Requirements – see preceding page	
Calendar of Monetary Highlights	1/1999
Calendar of Monetary Highlights	2/1999
Calendar of Monetary and Economic Highlights	3/1999
The Possibilities and Limitations of Monetary Policy – Results of the OeNB's 27th Economics Conference	3/1999
Calendar of Monetary and Economic Highlights	4/1999
Calendar of Monetary and Economic Highlights	1/2000
Calendar of Monetary and Economic Highlights	2/2000
Calendar of Monetary and Economic Highlights	3/2000
The New Millennium – Time for a New Economic Paradigm? Results of the OeNB's 28th Economics Conference	
of the Oesterreichische Nationalbank	3/2000
Calendar of Monetary and Economic Highlights	4/2000
Calendar of Monetary and Economic Highlights	1/2001

## **Austrian Financial Institutions**

Money and Credit in 1998	1/1999
Money and Credit in the First Quarter of 1999	2/1999
Austria's Major Loans Register in 1998	2/1999
Money and Credit in the First Half of 1999	3/1999
Money and Credit in the First Three Quarters of 1999	4/1999
Money and Credit in 1999	1/2000
The Austrian Supervisory Risk Assessment System	1/2000
Money and Credit in the First Quarter of 2000	2/2000
Venture Capital in Austria	2/2000
Risk Analysis of a Representative Portfolio of International Assets	2/2000
Calculating the Thresholds for the Notification of Merger of Banks – The New Legal Situation	2/2000
Money and Credit in the First Half of 2000	3/2000
Money and Credit in the First Three Quarters of 2000	4/2000
Money and Credit in the Year 2000	1/2001

## **Interest Rates**

An International Comparison of Term Structures – Estimations Using the OeNB Model	1/1999
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## **Capital Market**

Austrian Stock Market Survey and Outlook	4/2000
Austrian Bond Market Developments	1/2001

## **Austrian Real Economy**

Economic Background	1/1999
Financial Assets and Liabilities of Enterprises and Households in the Year 1995 to 1997	1/1999

<sup>1</sup> For a comprehensive list of reports, summaries and studies hitherto published please refer to issue no. 4/1999 of "Focus on Austria."

Published in  
"Focus on Austria"**Austrian Real Economy (cont.)**

Economic Outlook for Austria from 1999 to 2001	2/1999
Economic Background	2/1999
Economic Background	3/1999
Financial Accounts in Accordance with ESA 95 – Financial Assets and Liabilities of the Sectors of the Austrian Economy; First Release of Data for the Years 1995 to 1997	3/1999
Economic Outlook for Austria from 1999 to 2001 Fall 1999	4/1999
Impact of the Recent Upturn in Crude Oil Prices on Inflation in Austria – A Comparison with Historic Supply Shocks Economic Background	4/1999 1/2000
Financial Accounts in Accordance with ESA 95 Financial Assets and Liabilities of the Sectors of the Austrian Economy Results for 1998	1/2000
Economic Outlook for Austria from 2000 to 2002 Spring 2000	2/2000
Economic Background	3/2000
Economic Outlook for Austria from 2000 to 2002 (Fall 2000)	4/2000
Economic Background	1/2001

**External Sector**

Balance of Payments in the First Three Quarters of 1998	1/1999
Austria's International Investment Position in 1997	1/1999
Special Survey on the Regional Allocation of Nonresident Securities Held by Residents as of December 31, 1997	1/1999
Balance of Payments for the Year 1998	2/1999
New Concept of the Austrian Balance of Portfolio Investment	2/1999
Austrian Outward and Inward Direct Investment at the End of 1997	2/1999
Balance of Payments in the First Quarter of 1999	3/1999
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Austrian Outward and Inward Direct Investment Results of the 1998 Survey and Development of Selected Indicators	4/2000
New Statistical Framework for the Portfolio Investment Position	4/2000
Balance of Payments in the First Three Quarters of 2000	1/2001

Published in  
"Focus on Austria"

**Economic and Monetary Union**

Harmonized Indices of Consumer Prices – Progress and Unresolved Problems in Measuring Inflation	2/1999
Economic Policy Co-operation in EMU: European Economic Policy Challenges	2/1999
Effects of the Euro on the Stability of Austrian Banks	3/1999
The Austrian Banks at the Beginning of Monetary Union – The Effects of Monetary Union on the Austrian Banking System from a Macroeconomic Perspective	3/1999

# *List of Studies*

## *on Focus on Austria Main Topics*

### **Focus on Austria 2/2000:**

#### **The Monetary Policy of the Eurosystem**

Monetary Policy and Monetary Policy Strategy in EMU:

New Framework – New Challenges

The Credibility of the Eurosystem

Monetary Growth during the Changeover to Economic  
and Monetary Union

Indicators for Assessing Price Changes

Estimate and Interpretation of the Taylor Rule for the Euro Area

Modification to the Monetary Policy Framework

and Structural Changes in the Austrian Money Market

in Stage Three of EMU

### **Focus on Austria 3/2000:**

#### **On a New Capital Adequacy Framework as Proposed by Basel and Brussels**

Regulatory Capital Requirements for Austrian Banks –

A Supervisory Tool Subject to Change

Supervisory Review

Credit Risk

Critical Evaluation of the Basel Committee's

and the European Commission's Proposals on the

Treatment of Other Risks in the New Capital Adequacy Framework

Interest Rate Risk in the Banking Book

# Publications

## of the Oesterreichische Nationalbank

<b>Periodical Publications</b>	Published
Statistisches Monatsheft	monthly
Focus on Statistics (English translation of "Statistisches Monatsheft")	<a href="http://www.oenb.at">http://www.oenb.at</a>
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
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
 <b>Other Publications</b>	
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 <sup>1)</sup>
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
Economic Consequences of Soviet Disintegration (Bergsten Conference Vienna 1992)	1993
Neuorientierung – Internationale Vermögensposition und Außenwirtschaftliche Investitionsbilanz Österreichs	1993 <sup>1)</sup>
Bankwesengesetz 1993	1994 <sup>1)</sup>

<sup>1</sup> Out of print.

**Other Publications (cont.)**

	Published
Internationale Vermögensposition 1992 – Die grenzüberschreitenden Forderungen und Verpflichtungen Österreichs	1994 <sup>1)</sup>
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 <sup>1)</sup>
Monetary Policy in Transition in East and West	1997
Die Auswirkungen des Euro auf den Finanzmarkt Österreich	1997 <sup>1)</sup>
Die Bank der Banken	1997
Die Zukunft des Geldes: Auf dem Weg zum Euro	
Grundlagen – Strukturen – Termine	1997
Geld & Währung	1997
Kompendium von Texten zur Wirtschafts- und Währungsunion	1997 <sup>1)</sup>
Nationalbankgesetz 1984 (as of January 1999)	1999
Information literature on banknote security	recurrently
Working Papers (for a list of the topics discussed in the papers, see below)	recurrently

**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

<sup>1</sup> Out of print.

**List of the Topics Discussed at the Economics Conferences  
(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
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- 1992 Zukunft regionaler Finanzmärkte in einem integrierten Europa
- 1993 Europäische Währungspolitik und internationaler Konjunkturverlauf
- 1994 Neue internationale Arbeitsteilung – Die Rolle der Währungspolitik
- 1995<sup>1)</sup> Die Zukunft des Geldes – das Geld der Zukunft
- 1996<sup>1)</sup> 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
- 1999 Möglichkeiten und Grenzen der Geldpolitik
- 2000 Das neue Millennium – Zeit für ein neues ökonomisches Paradigma?
- 2001 Der einheitliche Finanzmarkt – eine Zwischenbilanz nach zwei Jahren WWU

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**List of the Topics**

Published

**Discussed in the Working Papers**

No. 1 <sup>1)</sup>	Hat Böhm-Bawerk recht gehabt? Zum Zusammenhang zwischen Handelsbilanzpassivum und Budgetdefizit in den USA <sup>2)</sup>	1990
No. 2 <sup>1)</sup>	Ost- und Mitteleuropa auf dem Weg zur Marktwirtschaft – Anpassungskrise 1990	1991
No. 3 <sup>1)</sup>	Die Wirtschaft Österreichs im Vergleich zu den EG-Staaten – eine makroökonomische Analyse für die achtziger Jahre	1991
No. 4 <sup>1)</sup>	The Soviet Banking Reform	1991
No. 5 <sup>1)</sup>	Die Auswirkungen der Finanzmarkt- und Kapitalverkehrs- liberalisierung auf die Wirtschaftsentwicklung und Wirt- schaftspolitik in Norwegen, Schweden, Finnland und Großbritannien – mögliche Konsequenzen für Österreich <sup>2)</sup>	1991
No. 6 <sup>1)</sup>	Zwei Jahre G-24-Prozeß: Bestandsaufnahme und Perspektiven unter besonderer Berücksichtigung makroökonomischer Unterstützungsleistungen <sup>2)</sup>	1991
No. 7 <sup>1)</sup>	Die Finanzoperationen der öffentlichen Haushalte der Reformländer ČSFR, Polen und Ungarn: Eine erste quantitative Analyse	1991
No. 8 <sup>1)</sup>	Erfüllung der Konvergenzkriterien durch die EG-Staaten und die EG-Mitgliedswerber Schweden und Österreich <sup>2)</sup>	1992
No. 9 <sup>1)</sup>	Alternative Strategies For Overcoming the Current Output Decline of Economies in Transition	1992
No. 10 <sup>1)</sup>	Signaling a Hard Currency Strategy: The Case of Austria	1992
No. 11 <sup>1)</sup>	The Impact of the Opening-up of the East on the Austrian Economy – A First Quantitative Assessment	1993
No. 12 <sup>1)</sup>	The Scope for Regional Autonomy in Russia	1993
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No. 15 <sup>1)</sup>	Prospects for Growth in Eastern Europe – Some questions raised in the course of a macroeconomic forecasting exercise	1994
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No. 24	Exchange Rates and Monetary Policy in Central Europe – a Survey of Some Issues	1997

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<b>List of the Topics</b>		Published
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No. 33	Core Inflation in selected European Union Countries	1998
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No. 36	Heterogeneities within Industries and Structure-Performance Models	1998
No. 37	Estimation of the Term Structure of Interest Rates A Parametric Approach	1999
No. 38	On the Real Effects of Monetary Policy: Central Banker's View	1999
No. 39	Democracy and Markets: The Case of Exchange Rates	1999
No. 40	Central Banks in European Emerging Market Economies in the 1990s	2000
No. 41	Is there a Credit Channel in Austria? The Impact of Monetary Policy on Firms' Investment Decisions	2000
No. 42	Integration, Disintegration and Trade in Europe: Evolution of Trade Revolutions During the 1990s	2000
No. 43	The Bank, the States, and the Market: An Austro-Hungarian Tale for Euroland, 1867–1914	2001
No. 44	The Euro Area and the Single Monetary Policy	2001
No. 45	Is there an Asymmetric Effect of Monetary Policy over Time? A Bayesian Analysis Using Austrian Data	2001

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