Austrian Financial Intermediaries Benefit from the Benign Economic Climate

Investment in Central and Eastern Europe Fuels Banks' Total Asset and Profit Growth

Total Asset Growth Slows Down Somewhat

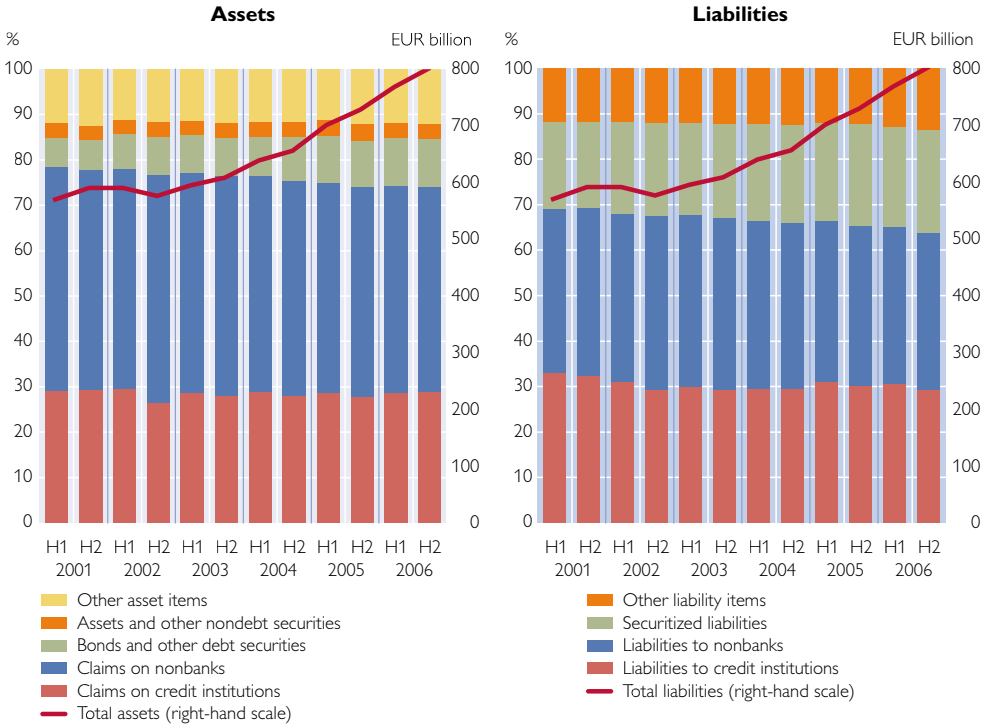
2006 witnessed a slight slowdown in growth in the unconsolidated total assets of the Austrian banking sector. Despite continued dynamic expansion (+9.9%), growth was not as high as in 2005 (+11.1%). By end-2006, unconsolidated total assets amounted to EUR 798 billion, with Austria's five largest banks[1] accounting for 43.8% of this sum. On a year-on-year basis, this group's total assets augmented by 9.0%, leaving its market share essentially unchanged.

Consolidated total assets, coming to EUR 928 billion as at December 2006, grew by 9.5% year on year.

External business remained the engine for growth in unconsolidated total assets – 36.9% of all assets were invested abroad in 2006. External liabilities accounted for 32.5% of total liabilities. External assets and liabilities grew by 19.4% and 10.5%, respectively, in 2006. On the assets side, claims on foreign banks and nonbanks rose by 21.7% and 16.9%, respectively, whereas on the liabilities side, external liabilities to banks and

Chart 12

Balance Sheet Structure of the Austrian Banking Sector (Unconsolidated)



Source: OeNB.

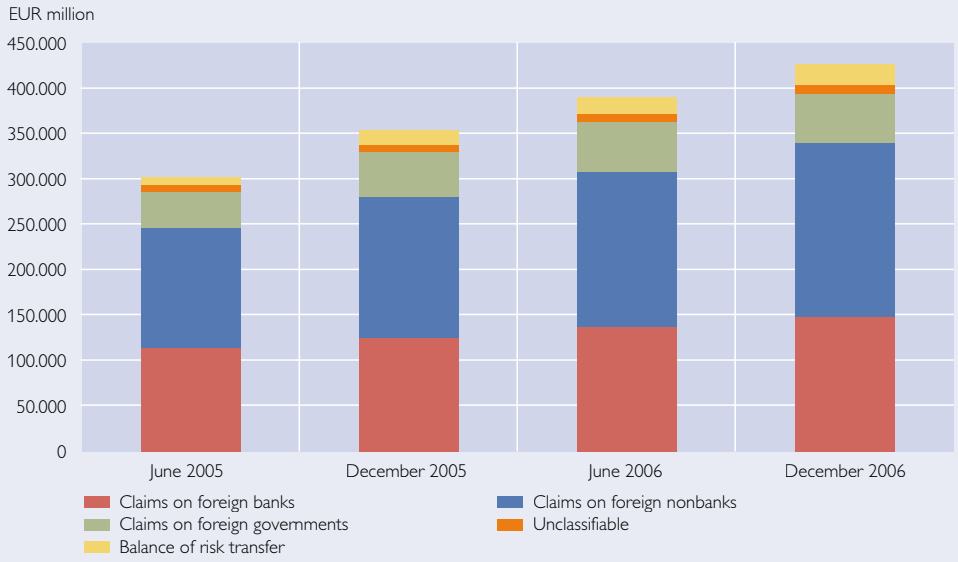
[1] *Bank Austria Creditanstalt AG (BA-CA), Bank für Arbeit und Wirtschaft und Österreichische Postsparkasse AG (BAWAG P.S.K.), Erste Bank der oesterreichischen Sparkassen AG (Erste Bank), Österreichische Volksbanken AG (ÖVAG) and Raiffeisen Zentralbank AG (RZB).*

Austrian Banks' External Assets

Given the internationalization of Austrian banks, which has been growing for years, and the related rise in external assets, country risk has become an increasingly important issue. In June 2005, Austrian banks for the first time submitted a detailed report on their external assets in the context of the residual maturity and risk statistics. This reporting requirement extends to banks with external assets in excess of EUR 100 million at year-end, and reporting is carried out at the highest possible level of consolidation. External assets are reported on a country-by-country basis and are allocated to the following sectors: banks, nonbanks, government and an "unclassifiable" category. In addition, risk transfer payments are reported (comprising guarantees, collateral and other transfer payments which are also related to equity interests and include off-balance-sheet transactions). Taking account of these risk transfer payments makes it possible to determine the ultimate country risk arising from external assets and the balance of risk transfer.

Chart 13

Development of Austrian Banks' External Assets from June 2005 to December 2006



Source: OeNB.

The consolidated external assets of Austrian banks climbed by 19.4% year on year, reaching EUR 404.7 billion at end-2006 (see chart 13). Growth in external assets was induced primarily by investments in and loans to nonbanks (+23.8%). The growth of external assets was highest in Central and Eastern Europe (CEE) as well as the Commonwealth of Independent States (CIS) which amounts to EUR 43.6 billion in absolute terms on a year-on-year basis, followed by Western Europe, where external assets augmented by EUR 20 billion in absolute terms. As at end-2006, Austrian banks' risk exposure increased by around 5.6% or EUR 22.6 billion, with Western Europe (+EUR 16.8 billion) and CEE and CIS countries (+EUR 5.0 billion) accounting for the bulk of this increase. It is evident that risk exposure is on balance being reduced particularly in countries whose ratings have deteriorated (noninvestment grade status), and that further increases in risk exposure are visible in countries that are rated as good or very good (investment grade).

[1] *External assets include, inter alia, loans to foreign borrowers as well as participating interests in enterprises abroad and investment abroad.*

[2] *Country risk indicators are provided by rating agencies that carry out complex assessments of a country's economic and political situation. The OeNB quantifies the risk inherent in external assets using the country risk ratings assigned by recognized rating agencies (Moody's, S&P, Fitch).*

nonbanks increased by 6.7% and 28.8%, respectively.

As for domestic business, claims on banks augmented by 6.2% in 2006, while claims on nonbanks continued to rise, posting the second-highest increase year on year since 1996 at 5.0%. The liabilities side reveals a similar picture: Liabilities to domestic banks increased by 6.7% (2005: 4.5%), whereas nonbank deposits registered somewhat more modest growth at 4.7%. In 2006, growth in direct domestic issues – albeit strong at 15.5% – did not reach the very high 2005 level of 22.7%. This area saw, above all, an increase in the number of bonds issued (17.8%) and of other securitized liabilities (13.4%).

After stagnating in early 2006, specific off-balance sheet transactions (derivatives business) grew by 10.2% in 2006 as a whole and amounted to EUR 1,660 billion by year-end.[2]

Austria's high banking density relative to the euro area declined slightly in 2006, following a long-term trend. The number of bank branches fell by 47 to 5,150 (–6% compared with 2000 when there were still 5,479 branches). The number of mergers across all sectors rose from 9 in 2005 to 13 in 2006, continuing the consolidation trend.

International Business Continues to Spur Growth

Whereas domestic profit growth slackened in 2006, CEE business fueled the Austrian banking sector's still dynamic profit growth.

In 2006, operating profit generated by the consolidated sector rose[3] by 18.9% to EUR 9.2 billion, reflecting buoyant CEE business growth. Despite robust growth in total assets, operating profit margins[4] widened slightly from 0.92% in 2005 to 1.0% in 2006. Moreover, the cost/income ratio decreased further from 63.3% in 2005 to 61.5% in 2006. At +13.4%, operating income grew much faster than operating costs (+10.2%). The key income driver was interest income, which accounted for more than one-half (59.3%) of total income growth. Lending and deposit taking in CEE was highly profitable, contributing substantially to income growth on a consolidated basis. Fee income was a slightly less significant growth driver, accounting for around 40% of total income growth. The growth contribution of trading income (a less significant component in the Austrian banking sector) came to some 2.4%, which was almost offset by a decline in other income to the same degree. Staff costs and administrative expenses accounted for two-thirds and one-third of growth in total operating expenses, respectively.

In 2006, credit risk provisions consumed 27.5% of operating profit, somewhat less than in 2005 (30%). At +62.8%, annual profits rose almost twice as fast as they did in 2005. However, net profits also reflected, inter alia, the disposal proceeds from

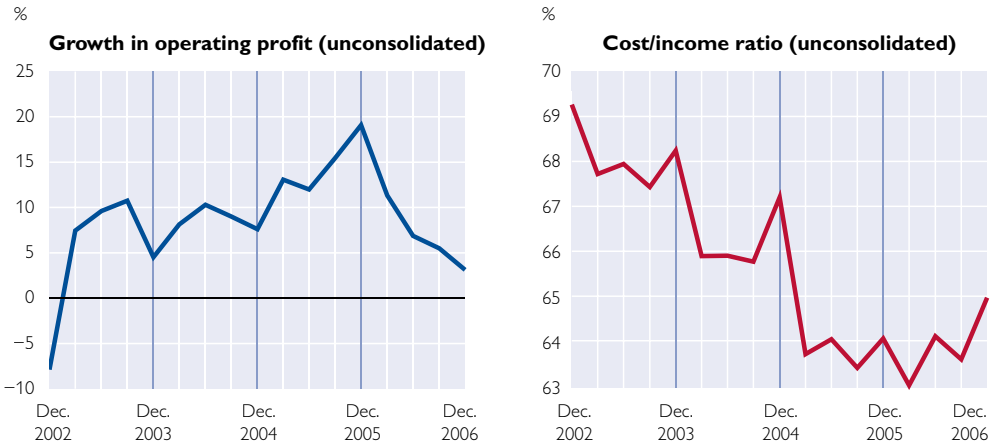
[2] *As the reported data is based on nominal values, it is not possible to make a clear statement about the riskiness of the derivatives business.*

[3] *The consolidated overall results may be slightly distorted, given that the aggregated data cover individual financial statements as well as group financial statements drawn up in compliance with the Commercial Code or the International Accounting Standards.*

[4] *Operating profit relative to total assets (consolidated).*

Chart 14

Operating Profit and Cost/Income Ratio



Source: OeNB.

Bank Austria Creditanstalt's participating interests in Poland and Croatia as a result of restructuring within the UniCredit group, raising the consolidated return on assets (ROA) from 0.63% in 2005 to 0.94% in 2006.[5]

Profit Growth in Domestic Business Slows Down

After improving steadily since 2002, profit growth in domestic business slowed in 2006. In unconsolidated business, which mirrors this growth, operating profit in 2006 rose by a mere 3% on the previous year, compared with 19% in 2005 (see chart 14). As a result, 2006 posted the lowest profit growth in domestic business since 2002. Furthermore, the unconsolidated cost/income ratio – following its historical low at 64.1% in 2005 – deteriorated somewhat, rising to 65.0% in 2006. At +6%, growth in unconsolidated operating income lagged behind growth in operating expenses (+7%) in 2006 for the first time since 2002.

Although unconsolidated net interest income rose by 1.1% year on year owing to robust lending growth in recent years, the interest margin narrowed by a further 9 basis points to 1.01% between end-2005 and end-2006. In addition, interest rates for new business do not indicate that the interest margin will widen in the future. The gap between interest rates for euro-denominated loans and deposits[6] has largely been just below 1% since mid-2006.

Weaker growth in domestic business is also attributable to the slowdown in unconsolidated net fee income growth in 2006, which rose by a mere 9% (2005: 16%). In addition, Austrian banks – after downsizing staff in recent years – significantly expanded employment measured in full-time equivalents (FTE)[7] in 2006, which is reflected in staff costs. After

[5] *Excluding these disposal proceeds by BA-CA, the ROA of domestic business in 2006 would be around the 2005 levels.*

[6] *Interest rates are calculated on the basis of the volume-weighted average of interest rates for all euro-denominated loans and deposits of households and nonfinancial corporations.*

[7] *Part-time employees are included on a pro rata basis.*

FTE employment had been cut from around 69,700 to some 65,400 between 2000 and 2005, it rose to about 66,500 in 2006. Some of this new employment is likely to be used for international business and, in particular, for the major banks' CEE business, but Austria's small banks have also taken on new staff as a result of the thriving economy.

Although CEE business continues to generate dynamic profit growth on the whole and some domestic cost increases may be attributable to international business, the improved profitability of domestic business in recent years must be further strengthened and deepened.

Sustained High Lending Growth

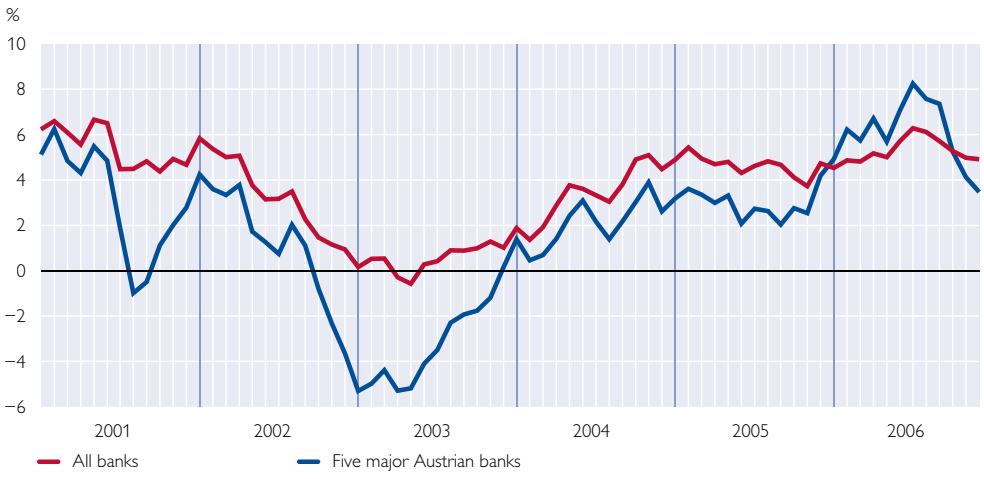
Although growth in lending to domestic households and nonfinancial corporations by banks operating in Austria slowed to 4.9% year on year in the fourth quarter of 2006, it still remains dynamic in historical terms. At just above 6%, corporate lending grew much faster than household lending, which expanded by more than 3%. In view of the ECB's increase in key interest rates in 2006, this development reflects the continued benign economic climate.

An analysis of Austria's five largest banks[8] reveals a far steeper slowdown in growth (especially for one of them), confirming the overall picture that the lending cycles of major banks are subject to sharper fluctuations.

An analysis of lending growth by individual banking sectors (excluding special purpose banks) shows robust annual growth in lending by Raiffeisen credit cooperatives (+6.6%) and mortgage banks (+7.2%) in 2006. By contrast, lending by joint stock banks (+2.8%) and savings banks (+1.9%) grew at a slower-than-average pace in 2006. Growth in lending by building and loan associations (+3.5%) followed the trend in general household lending growth.

Chart 15

Growth in Claims on Domestic Households and Nonfinancial Corporations



Source: OeNB.

[8] *BA-CA, BAWAG P.S.K., Erste Bank, ÖVAG and RZB.*

Share of Foreign Currency Loans To Households Remains High Despite Slight Decline

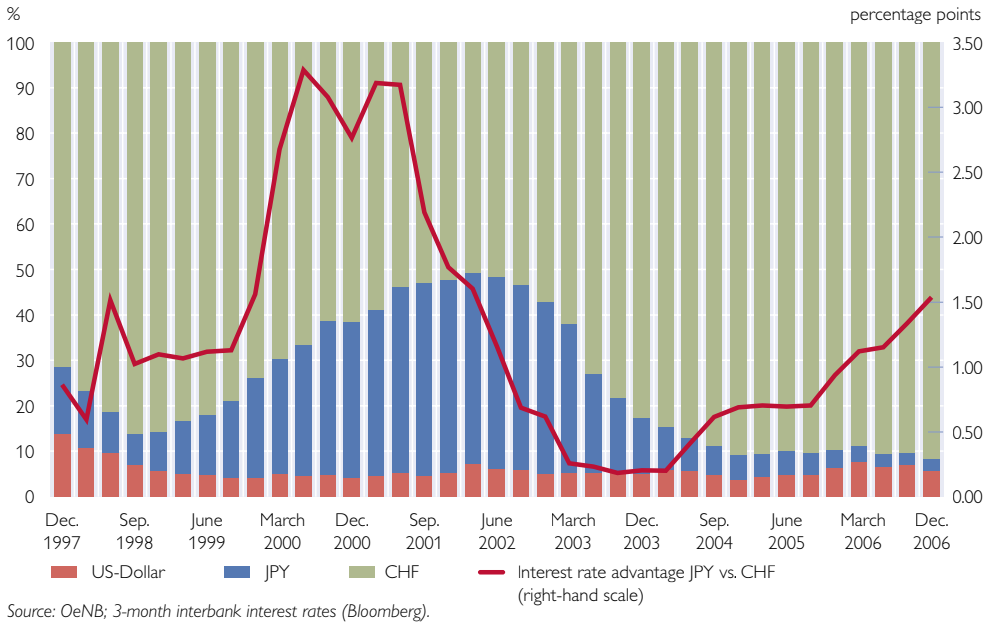
Despite a widening interest rate advantage of the Swiss franc and, above all, the Japanese yen over the euro in the money markets, foreign currency loans were somewhat less popular particularly in the second half of 2006. The volume of foreign currency loans issued to domestic nonbanks declined, as did their share as a percentage of total loans issued. At end-2006, EUR 52 billion in foreign currency loans was outstanding, which is equivalent to a share of 18.7% of total loans issued. This was primarily ascribable to the sustained trend of declining foreign currency corporate financing since 2002. Just a little less than 10% of corporate loans are denominated in foreign currency. Unlike in the past, the share of foreign currency loans to households failed to offset this decline, as households acted somewhat more cautiously, too, with the share of foreign currency loans to households shrinking slightly in 2006, albeit from a high level. Almost one-third of total household loans are still denominated in a foreign currency.

The Swiss franc remains the dominant foreign currency with a share of 91%. Only 3% of foreign currency loans were denominated in Japanese yen. Despite the long sustained widening of the yen's interest rate advantage over the franc (see chart 16), yen-denominated loans are currently stagnating at a low level. This also reflects an increase in borrowers' risk awareness.

In view of the still high share of foreign currency loans to households, in particular, the OeNB intends to continue highlighting the risks associated with foreign currency loans to both banks and borrowers.

Chart 16

Foreign Currency Lending by Austrian banks – Shares of Currencies



Source: OeNB; 3-month interbank interest rates (Bloomberg).

Foreign Currency Lending by Austrian Banks in Central and Eastern Europe

Foreign currency lending is not restricted to the domestic market, as this type of financing is also very popular in Central and Eastern Europe. Austrian banks' heavy investment in the CEE region means that, in addition to their foreign currency exposure at home, they are also subject to foreign currency exposure abroad. Foreign currency loans can be issued directly from Austria or indirectly via subsidiary banks based in the CEE region. In the Financial Stability Report 12, an attempt at an initial estimate of this exposure was made. Thanks to an OeNB survey of the largest Austrian banks in the region, empirical results on Austrian banks' foreign currency lending in CEE countries are now available.

The survey found that total foreign currency loans to nonfinancial corporations and households issued via subsidiaries amounted to EUR 39.7 billion as at June 2006.[1] This is equivalent to a share of foreign currency loans of 51.5% in relation to the total number of loans issued by the surveyed banks' subsidiaries. OeNB data show that foreign currency loans worth EUR 22.7 billion were issued directly from Austria.[2] Since these almost entirely involve euro-denominated corporate loans (issued to subsidiaries of Austrian companies, inter alia), the risk profile of direct loans differs considerably from that of loans extended indirectly via subsidiary banks.

In the context of rapid credit expansion in the CEE region, foreign currency lending grew particularly quickly, although the latest data indicate a slowdown in this growth. The key countries in the area of foreign currency financing by Austrian subsidiary banks are Hungary and Croatia, which account for some 37% of foreign currency loans issued indirectly via Austrian banks' subsidiaries. The Czech Republic plays a major role in the area of direct loans. Regarding currency allocation, the euro is clearly dominant, but CHF-denominated loans are already of major importance in some countries – especially in Poland, Hungary and Croatia.

Austrian banks account for a disproportionately high share of foreign currency lending in the national banking markets. Among other factors, this is likely to be attributable to their management experience of foreign currency loans in domestic business. For a definitive risk assessment of this exposure, however, the existence of natural hedges must also be taken into account (e.g. export revenues for nonfinancial corporations or foreign currency income for households). Given that reliable data on the existence of such hedges are not available, Austrian banks' foreign currency lending in the region requires close observation.

[1] *This amount includes EUR 2.1 billion in euro-denominated foreign currency loans in Slovenia which can no longer be classified as foreign currency loans on account of Slovenia's accession to the euro area.*

[2] *This amount also includes EUR 2.3 billion in euro-denominated foreign currency loans in Slovenia.*

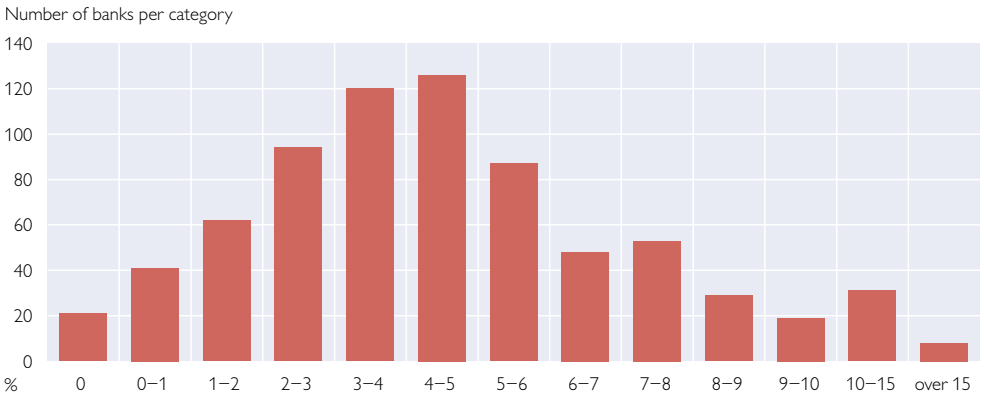
Credit Quality: Banks Still Expect Falling Default Rates

A continued improvement in lenders' assessment of credit quality is inferable from loss provisions for loans extended by banks operating in Austria. On an unconsolidated basis, the ratio of specific loan loss provisions to claims on domestic and foreign nonbanks dropped by 0.21 percentage point year on year, coming to 2.86% at end-2006.[9] This is the sharpest decrease in the ratio since it began declining in 2003. Thus, no trend reversal is discernible in banks' recently increasingly optimistic assessment of expected losses in their loan portfolio.

[9] *Data source: Banks' monthly balance sheet reports.*

Chart 17

Distribution of Banks with Respect to the Ratio of Specific Loan Loss Provisions for Claims on Nonbanks (end-2006)



Source: OeNB.

As before, a sectoral breakdown of specific loan loss provisions shows marked differences at end-2006. Volksbank (4.68%)[10] and Raiffeisen (3.66%) credit cooperatives posted traditionally high values, followed by savings banks (3.30%) and joint-stock banks (3.04%). By contrast, state mortgage banks (1.35%) as well as building and loan associations (0.47%) exhibited values that were well below average. Savings banks and state mortgage banks posted the strongest year-on-year declines in specific loan loss provision ratios for claims on nonbanks (0.26 percentage point, respectively), followed by Raiffeisen credit cooperatives (0.25 percentage point). Joint-stock banks and building and loan associations witnessed a decline of 0.14 and 0.02 percentage point, respectively, whereas Volksbank credit cooperatives registered a rise of 0.12 percentage point.

Chart 17 presents the distribution of banks operating in Austria with respect to their ratio of specific loan loss provisions for claims on nonbanks as at end-2006. To avoid distortions, banks with claims on nonbanks worth less than EUR 10 million are not included.[11] The median of this distribution is 4.31%, with most banks situated in the range between 4% and 5%. It is apparent from this that many smaller banks have higher ratios of specific loan loss provisions than the aggregate Austrian banking system. The eight banks with ratios exceeding 15% are all small banks, whose claims on nonbanks together account for a mere 0.14% of the aggregate banking system. For large and medium-sized banks, ratios of specific loan loss provisions are lower than that of the aggregate banking system: The 30 largest Austrian banks in terms of claims on nonbanks posted an aggregate ratio of specific loan loss provisions of 2.34%, more than one-half percentage point below that of the banking sector as a whole.

[10] *The definition of Volksbank credit cooperatives does not include Investkredit Bank AG and Kommunalkredit AG, which are classified as special purpose banks.*

[11] *These number 123 banks in all, which together account for less than 0.1% of total claims on nonbanks.*

Risks from Exposure to the Leveraged Buyout Market

Having started from a low base, Austrian banks have significantly increased their credit exposures for financing leveraged buyouts (LBOs) in recent years. The associated stability risk is, however, comparatively low. This finding emerged from a survey of three Austrian banks operating in this area, which was conducted by the OeNB within the framework of the Banking Supervision Committee (BSC) of the European System of Central Banks (ESCB). This initiative was prompted by dynamic growth in the LBO market, the recent sharp rise in financial leverage also via recapitalizations[1] and fiercer competition among the banks involved.

In general, an LBO is the takeover of a company by external financial investors, with the transaction being largely financed by debt. The investment horizon usually ranges between five and ten years, during which the investor endeavors to increase the value of the company, e.g. by restructuring, expansion or changes to its financial structure.

The survey results showed that the activities of the surveyed Austrian banks in the LBO segment are very strongly focused on lending. At end-June 2006, their total exposure including investment in LBO funds amounted to EUR 1.9 billion. Compared with EU banks surveyed, their LBO credit exposure was below the median value of 15% of tier 1 capital. The fact that LBO loans are almost entirely senior loans and that most were issued via syndicate business limits the risk arising from LBO financing activities. The banks surveyed also use various risk management tools, perform stress tests and stipulate enhanced borrower transparency.

On the basis of the survey's findings, the risks arising from these banks' LBO activities for financial stability in Austria appear to be low. Still, the performance of the LBO market and the banks' risk management will continue to be monitored closely, as will developments in the credit risk transfer market, which has contributed substantially to growth in the LBO market.

[1] *The enterprise acquired by financial investors distributes a special dividend, which is financed by raising debt.*

Market Risk: Flattening of the Yield Curve Accompanies the Reduction in Interest Rate Risk in the Banking Book

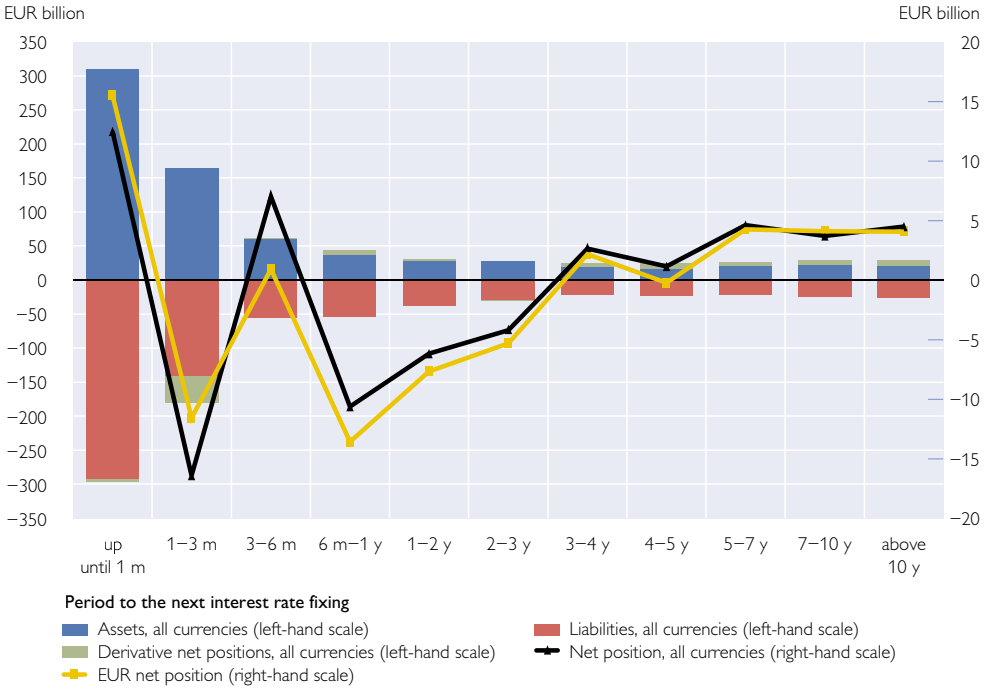
Banks' trading portfolio positions are subject to market risk, i.e. to possible changes in value owing to fluctuations in risk factors such as interest rates or stock prices. Further market risks arise for banks via the interest rate risk in the banking book and the foreign currency risk from open foreign exchange positions.

At end-2006, 27 banks operating in Austria were engaged in substantial securities trading and were thus subject to the relevant regulatory capital requirements. At the level of the banking system, the share of regulatory capital requirements to cover market risk in the securities trading book as a percentage of total capital requirements was 4.0% on average in 2006, only slightly down by 0.1 percentage point compared with 2005. This low share highlights the limited risk inherent in Austrian banks' trading portfolio relative to the loan portfolio. As in the past, interest rate instruments accounted for by far the largest share of these capital requirements, coming to between EUR 700 million and EUR 800 million in 2006 (as at year-end: EUR 737 million), with historically relatively small fluctuations. Capital requirements for equity positions fluctuated during the year, ranging between EUR 85 million and EUR 115 million (year-end: EUR 101 million).

Given a rising yield curve, banks can generate structural profit contri-

Chart 18

Breakdown of Interest Rate-Sensitive Positions by the Period to the Next Interest Rate Fixing (end-2006)



Source: OeNB.

butions by performing positive maturity transformation, which involves funding long-term assets with short-term liabilities. This additional possibility of generating revenue is accompanied by an additional risk in the form of the interest rate risk in the banking book. Chart 18 presents the aggregate Austrian banking system's assets and liabilities according to the period to the next interest rate fixing.[12]

The resulting interest rate risk profile reveals a positive maturity transformation for the aggregate Austrian banking system. However, this transformation is less pronounced than it was in early 2006, which suggests that banks have responded to the flattening of the yield curve that occurred during the year, and especially to that of the euro area, reducing the interest rate risk in the banking book commensurate with the lower structural profit potential. This is supported by the trend in the asset-weighted average of the Basel ratio for the interest rate risk[13] of all banks operating in Austria. After a modest decline from 6.6% to 6.3% in the first half of the year, this indicator fell to a historical low of 5.6% at year-end.

Recently, the foreign currency risk arising from open foreign ex-

[12] *This analysis is based on supervisory data from the interest rate risk statistics. Included in the description are all interest rate-sensitive on- and off-balance sheet positions as well as non-interest rate-sensitive on-balance sheet positions whose performance is assessed on the basis of market interest rates.*

[13] *This is the ratio of a bank's estimated present value loss of positions reported in the interest rate risk statistics, which arises in the event of a parallel 200 basis point shift in the yield curves of all currencies relative to the bank's eligible capital.*

change positions – measured by regulatory capital – has declined somewhat. After increasing modestly to EUR 102 million in the first half of 2006, capital requirements declined to EUR 75 million in the second half of the year.

New EU Legal Framework for Cashless Payments

Following intensive negotiations, the European Parliament and the Ecofin Council adopted the Directive on payment services in the internal market in spring 2007. With this Payment Services Directive (PSD) – which was developed as part of the SEPA project[14] – the EU aims at creating a single legal framework for cashless payments (credit transfers, direct debits, credit card payments, etc.) within the internal market. Basically, the Directive's provisions aim at increasing transparency and strengthening the rule of law (standardized disclosure requirements, execution times, liability, etc.); in addition, the Directive created a new payment service provider category, the so-called payment institution, and laid down a set of prudential requirements for the different scopes of their activities. The Member States are to transpose the PSD into national law by November 1, 2009.

The Directive focuses primarily on electronic payments as an alternative to the relatively expensive cash payments. In this respect it has to be stressed that in Austria the volume of electronic payments has developed quite dynamically to date. The OeNB-operated large-value payment system ARTIS/TARGET,[15] the various small-value payment systems (used for transferring customer payments) and the international payment systems used by Austrian banks have all reported consistent rises in both the volume and value of transactions processed in recent years (ARTIS payments, for example, increased by about 25% in volume and by around 40% in value compared with the first half of 2004). Only securities settlement systems saw an interruption of this trend in the second half of 2006, which can be attributed to a temporary fall in the price of securities at the Vienna stock exchange in May and June 2006.

In the second half of 2006, a total of 37 system disturbances[16] was reported for the payment and securities settlement systems overseen by the OeNB, which is slightly less than in the second half of 2005 (40 system disturbances). Access to ARTIS was interrupted once, and access to an international payment system was unavailable three times for an Austrian bank. The other system disturbances were temporary disruptions (between 35 minutes and 6 hours) during the business hours of one card payment system, one electronic money system and three smaller infrastructure providers, which handle only around 0.1% of all customer payments. However, none of these disturbances had a negative impact on the Austrian finance system.

[14] *SEPA: Single Euro Payments Area.*

[15] *ARTIS: Austrian Real-Time Interbank Settlement; TARGET: Trans-European Automated Real-time Gross settlement Express Transfer.*

[16] *System disturbance is defined as unavailability of the payment system for more than 30 minutes during business hours or within the last 30 minutes before settlement cut-off.*

Potential Regulatory and Supervisory Reforms of Banks' Liquidity Risk Management

In 2006, the Basel Committee for Banking Supervision set up a working group on liquidity risk management (Liquidity Group). Already in 2005, the European Commission had announced a study on banks' liquidity management practices and a comparison of national supervisory requirements. A joint task force of the Commission and the European System of Central Bank (ESCB) is to present its results in fall 2007. The banking industry has itself called for reforms in this area: Both the European Banking Federation (EBF) and the International Institute of Finance (IIF), for instance, have published working papers on the topic.

How to explain the current interest in reforming liquidity management? First, despite a number of reforms to regulate the banking sector (e.g. Basel II, EU Financial Services Action Plan) this area has largely been neglected up until now. Second, studies on the structure of banks' short- and medium-term financing show that banks' liquidity risk has increased and that risk management has become more complex.[1] In this context the following questions arise:[2]

(1) How to reform liquidity regulations so that they accommodate the varying liquidity risks of individual institutions and at the same time guarantee an efficient supervision? (2) Since liquidity regulations are not harmonized within the EU and supervision of subsidiaries is subject to the host country principle, the question arises whether liquidity regulations should be harmonized and whether the liquidity supervision of subsidiaries should be made subject to the home country principle.

Since banks' liquidity risk management might impact on the tasks of central banks, the OeNB engages in these reform discussions at all levels. Liquidity problems of individual banks could result in negative external effects, which in turn could affect the liquidity and efficiency of the money market and thereby make it more difficult for central banks to fulfill their essential tasks.[3] Therefore, from the OeNB's point of view, an adequate regulatory framework would have to meet two basic requirements: It should be able to internalize negative external effects, and it should be flexible enough to provide for appropriate liquidity risk management at individual institutions.

[1] *Basel Committee on Banking Supervision – Joint Forum. 2006. The Management of Liquidity Risk in Financial Groups. Basel: BIS. May; ECB – European Central Bank. 2002. Developments in Banks' Liquidity Profile and Management. Frankfurt/Main. May; ECB – European Central Bank. 2006. EU Banking Structures. Frankfurt/Main. October.*

[2] *European Banking Federation – EBF. 2006. Supervision of Banks' Liquidity Management. Discussion Paper W6298IEW. Brussels; International Institute of Finance – IIF. 2007. Principles of Liquidity Risk Management. Washington D.C.; Basel Committee on Banking Supervision – Joint Forum. 2006. Basel.*

[3] *Schmitz, S. W. and A. Ittner. 2007. Why is Liquidity Risk Management a Concern for Central Banks? Central Banking Vol. XVII. No. 4, 32–40.*

Central and Eastern European Countries Still Gaining Importance for the Austrian Banking Market[17]

According to the business segment reports of the six major Austrian banks active in Central and Eastern Europe[18], total assets in this segment have grown to around EUR 188 billion on a consolidated basis, thus accounting for 20.3% of the Austrian banking system's consolidated total assets in December 2006. Pretax profits before adjustment for special factors improved as well to around

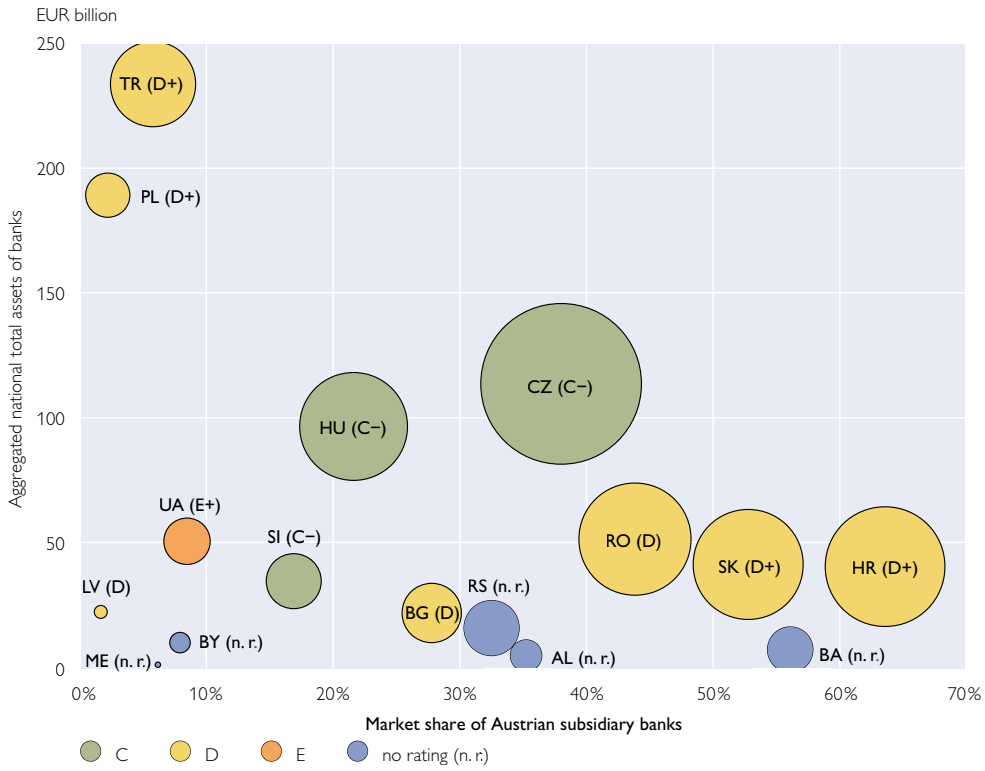
[17] *Mainly on the basis of quarterly reports on condition and income submitted by Austrian banking groups since early 2002. These reports contain selected items from the consolidated annual reports of parent banks and their fully consolidated subsidiaries abroad. Additional sources, like annual reports or market research data, supplement the analysis where indicated.*

[18] *BA-CA, BAWAG P.S.K., Erste Bank, Hypo Alpe Adria International, ÖVAG and RZB.*

Chart 19

Market Share of Austrian Subsidiary Banks in CEE[1]

Extrapolation 2007



Source: BankScope, national central banks, OeNB, Moody's.

[1] *Because of the size of the Russian banking sector (around EUR 413 billion as at December 2006) the chart does not show Russia, where at the end of 2006, Austrian subsidiary banks held a market share of around 3.8%.*

Note: The chart shows the individual countries according to the Austrian subsidiary banks' market share (x scale) and the aggregated total assets of the national banking industry (y scale). The size of the circle corresponds to the total exposure of Austrian banks vis-à-vis the respective country. The countries are colored according to Moody's average bank financial strength (BFS) rating (A–E).

EUR 2.8 billion, as a result of which the CEE segment made up already 38.7% of the consolidated pretax profit of all Austrian banks at the end of 2006.

In total, 11 Austrian banks with 62 fully consolidated subsidiaries operated in this market as at December 31, 2006. 29 of these subsidiaries are situated in the new EU Member States which joined in 2004 (NMS-2004[19]), 8 in EU Member States which joined in 2007 (NMS-2007[20]), 20 in other Southeastern European countries (SEECs[21]) and 5 in the Commonwealth of Independent States (CIS[22]). In addition, there is the Turkish joint venture of the Italian UniCredit Group, which, following the restructuring of the banking group's CEE

[19] *NMS-2004: the Czech Republic (CZ), Hungary (HU), Latvia (LV), Poland (PL), Slovakia (SK) and Slovenia (SI).*

[20] *NMS-2007: Bulgaria (BG) and Romania (RO).*

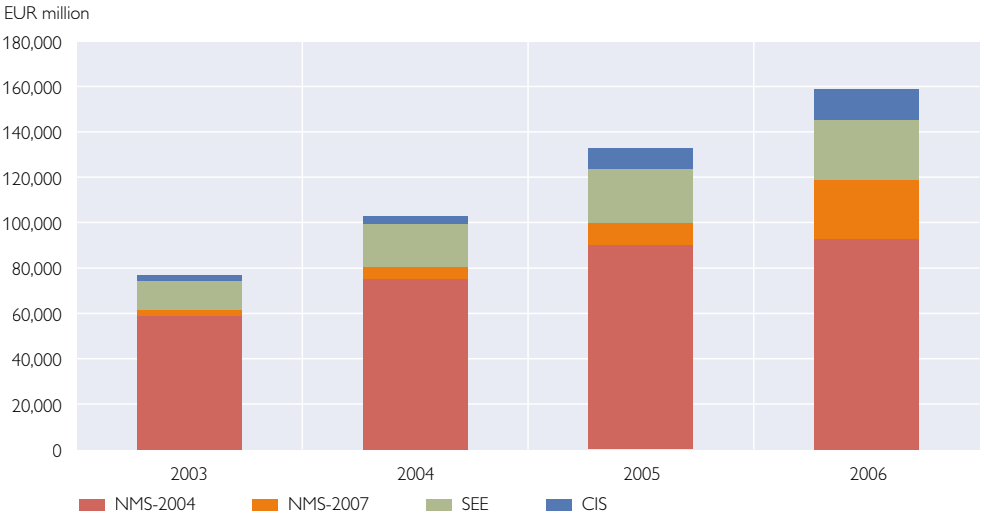
[21] *SEE: Albania (AL), Bosnia and Herzegovina (BA), Croatia (HR), Montenegro (ME) and Serbia (RS).*

[22] *CIS: Russia (RU), Ukraine (UA) and Belarus (BY).*

Chart 20

Total Assets of CEE Subsidiary Banks

As on December 31, 2006



Source: OeNB.

segment, is now being supervised by the Austrian bank BA-CA, and seven other banks in seven CEECs,[23] which were not considered in the end-of-December-2006 reports as the restructuring had not been formally finalized when the accounts were closed for 2006. Together with these subsidiaries Austrian banks hold already around 14.5% of the total CEE banking industry (see chart 19) or, excluding Russia and Turkey, even around 23.7%.

A look at the data reported by the fully consolidated subsidiary banks in CEE shows a clear focus on the new EU Member States. With 58.5% (NMS-2004) and 16.4% (NMS-2007) of the aggregated total assets as at the end of 2006, a total of around EUR 118.9 billion have been generated within the EU (see chart 20); 16.6% (about EUR 26.3 billion) in SEE countries and 8.5% (about EUR 13.5 billion) in CIS countries. Accordingly, these figures correspond to a total increase of 19.3% against 2005. The decline of the growth rate by 10.3 percentage points is attributable to the above-mentioned restructuring of the BA-CA,[24] the effects of which could neither be offset by the dynamic growth in CEE nor by new purchases. In this respect, major differences between the individual groups of countries become apparent. Rapid growth of the NMS-2007, for example, is mainly attributable to the fact that Erste Bank reported its Romanian subsidiary bank BCR for the first time.

The same effects can be observed as regards aggregated operating profits of CEE subsidiary banks, which increased by 14.0% to around EUR 2.8 billion in 2006 (see chart 21),

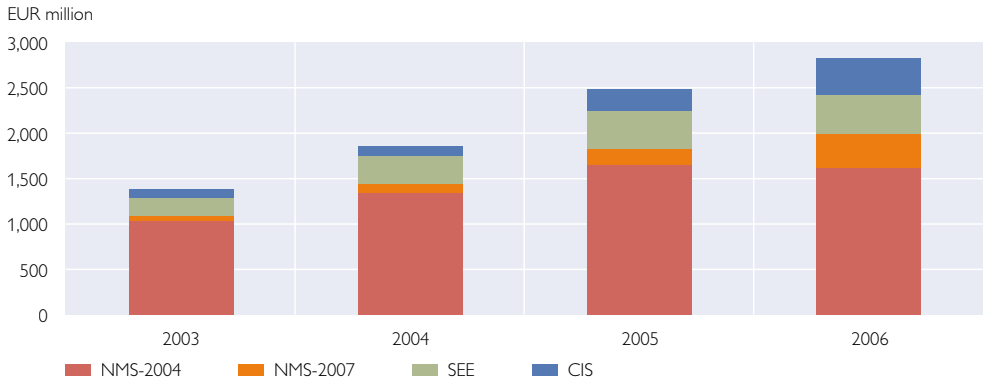
[23] *Bulbank (BG), Zivnostenska (CZ), Zagrebacka (HR), UniCredit (LV), UniCredit Romania (RO), IMB (RU) and Unibanka (SK).*

[24] *More precisely the fact that the internal group sale of the Polish BPH and the Croatian Splitska Banka was not timed with the purchase of the eight banks mentioned earlier.*

Chart 21

Operating Profits of CEE Subsidiary Banks

As on December 31, 2006

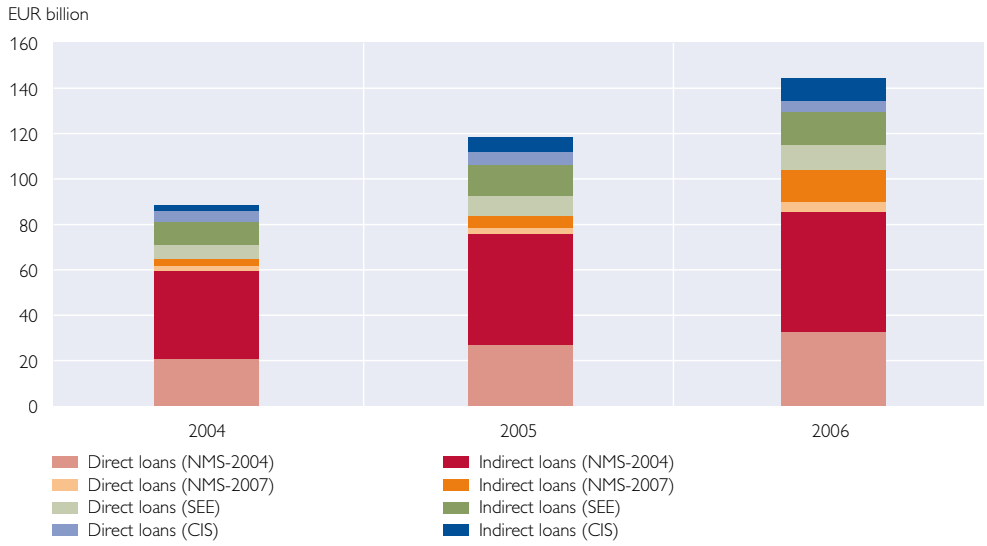


Source: OeNB.

Chart 22

Credit Exposure to CEECs

As on December 31, 2006



Source: OeNB.

57.1% of which can be attributed to the NMS-2004, 13.4% to the NMS-2007, 15.2% to other SEE countries and 14.2% to members of the CIS. Despite similar growth rates of their total assets (around 20%), non-EU subsidiary banks recorded more dynamically growing operating profits (28.2%) than their EU-based counterparts (8.9%). Yet higher returns also imply significantly higher risks.

In December 2006, the cost/income ratio[25] of the fully consolidated CEE subsidiary banks remained at the

[25] *Ratio of administrative costs to operating income before deduction of net risk provisioning in the lending business.*

level of 56.7% observed in December 2005. While subsidiary banks within the EU saw their cost/income ratios improving by 1.6 percentage points to 56.3%, the ratio deteriorated on average by 4.5 percentage points to 57.6% in non-EU countries, thereby offsetting the positive trend; recent purchases of the latter being one reason for this development. Yet once the integration process will be completed, cost/income ratios are expected to fall again.

As regards indirect credit exposure[26] of Austrian banks vis-à-vis CEE, the new EU Member States hold a unique position at 73.2% of the total credit volume of EUR 91.7 billion (NMS-2004: 57.9%, NMS-2007: 16.3%), which corresponds to a growth rate of 24.7% (see chart 22). This is contrasted by SEE countries, where loan growth only seemed to stagnate[27], as they currently report an indirect credit volume of EUR 14.8 billion, and by CIS countries where growth was above 50% amounting to EUR 9.8 billion.

In 2006, the growth of existing subsidiary banks together with the increasing volume of direct lending[28] added yet again to the rising exposure in CEE.[29] Similar to subsidiary bank data, loans to EU Member States account for the larger share of the total lending volume of EUR 52.5 billion (see chart 22). With a total growth rate of 19.1% (disregarding upward outliers) direct lending amounted to 62.1% in NMS-2004 and 7.9% in NMS-2007. About the same amount of direct lending goes to borrowers from the CIS (around EUR 4.8 billion) and more than twice the amount to SEE (around EUR 11.0 billion). A considerable share of credit exposure was denominated in another currency than the respective national currency.[30]

Stress tests simulating the effects of extreme shocks to the Austrian banking system are a valuable tool to quantify the risk of the CEE banking markets for Austria. The goal of these tests is to establish the resilience of the Austrian banking system to an extreme deterioration of the loan quality of the foreign subsidiary banks. The scenario that is used goes deliberately beyond historic worst case scenarios, as currently dynamic markets feature only low NPL quotas[31] (NPLs above the total sum of loans to nonbanks). Furthermore, it is assumed that a shock would hit all countries of the region at the same time. The results of these tests show that the Austrian banking sector would even be able to absorb a shock multiplying the current NLP volume at many subsidiary banks. In this scenario, the banking system's consolidated capital ratio would fall from

[26] *Loans given out by subsidiary banks in other countries.*

[27] *Indirect loans granted by SEE subsidiary banks increased by around 6% year on year. Yet the sale of Splitska Banka distorts this result; adjusted for loans granted by this bank in 2005, the growth rate amounts to about 23%.*

[28] *Loans granted by Austrian banks to borrowers resident in other countries.*

[29] *Contrary to the examination of indirect loans, the examination of direct loans comprises all countries of the respective region (i.e. also those without local subsidiaries). Consequently, the SEE region also includes Macedonia and all 12 member countries of the CIS.*

[30] *See above, box on 'Foreign Currency Lending by Austrian Banks in Central and Eastern Europe'.*

[31] *NPL: Non-performing loan.*

11.61% to 10.66% at the end of 2006; i.e. it would still remain well above the statutory 8% threshold, even though particularly one bank, which had operated close to the minimum capital requirement, would drop below this 8% threshold. Moreover, the good performance of Austrian subsidiary banks in CEE serves as an additional buffer that could absorb adverse developments.[32] As the capital figures at year end had to be reported in January, they did not yet reflect banks' profits for 2006 and their good performance in CEE; current capital figures including these are higher however. Yet banks which are particularly exposed to CEE should take into consideration their rapid asset growth in their capital adequacy policies.

The region's fast loan growth, also in the foreign currency sector, constitutes a considerable challenge to banks' risk management as banks have to prevent the accumulation of hidden credit risks. Yet the fact that the exposure of Austrian banks is mostly concentrated to CEECs within the EU limits particularly legal, institutional and therefore also economic risks.

Banks in Central and Eastern Europe: Strong Credit Growth Continues

Interrelated with robust real economic growth in most of the analyzed countries, growth (adjusted for inflation) of domestic credit to private nonbanks accelerated or stabilized at a relatively high level. Recent credit growth rates typically reached between 17% and 25% year on year in most countries and even reached almost 50% in Romania. The sole exception to this trend was Hungary where real growth of domestic credit to private nonbanks dropped to 15% in the fourth quarter of 2006 as a result slower growth in foreign currency credit together with a moderation in domestic demand. Given the dynamic development of domestic credit to private nonbanks, the annual increase in lending in relation to GDP[1] also rose in all countries including Hungary in the second half of 2006.[2] During the same period, Bulgaria also saw increased credit activities, although credit growth remained markedly below the high levels of 2005.Despite the measures taken over the past few years by their respective central banks to limit credit growth, it gathered momentum in Romania and Croatia. At the beginning of 2007, the Croatian National Bank tightened its measures by introducing new credit ceilings, whereas the Bulgarian and Romanian central banks loosened selected (administrative) borrowing constraints as of January 2007, which has been attributed pertly to their EU accession, partly to the success or increasing ineffectiveness of these measures.

[1] *Measured as the nominal change in outstanding loans compared with the same quarter of the previous year in percent of GDP of the respective four quarters.*

[2] *At the same time, growth of cross-border loans to private nonbanks picked up in the second half of 2006 in most countries except in Poland (stable low growth) and Hungary (markedly declining growth). Compared with the growth of domestic loans, the increase of external loans was particularly relevant for Bulgaria and Croatia.*

[32] *For a detailed description of the CEE stress tests see Boss, M., G. Krenn, C. Puhr and M. Schwaiger (2007) "Stress Testing the Exposure of Austrian Banks in Central and Eastern Europe" in this volume.*

Slovenia was the only country in which the high and/or accelerating growth of domestic loans led to a more pronounced decline (4% of GDP) in banks' net external asset position in 2006. In Poland, the Czech Republic, Romania and Croatia this position fell only between 0.5% and 1.5% of GDP, while it went up slightly in Hungary and picked up strongly in Bulgaria and Slovakia (by 4% and 10% of GDP respectively). As regards Bulgaria, this development can mainly be attributed to the rise in external assets, which might partly reflect loan transfers to foreign parent banks. At the end of 2006, banks' net external assets stood between −5% and −20% of GDP in Slovenia, Croatia, Hungary and Slovakia, was balanced in Romania and reached between 2.5% and 10% of GDP in Bulgaria, Poland and the Czech Republic.

The declining share of foreign currency loans in outstanding lending to businesses and households in Hungary, Croatia and Romania as well as the stabilization of this share in Bulgaria have mitigated the risks. In the first three countries measures taken by their respective central banks may have promoted this trend (e.g. recommendations for improving credit risk management in Hungary; assigning higher risk weights for foreign currency loans to unhedged borrowers and applying more comprehensive reporting requirements in Croatia; limiting foreign currency loans to unhedged loan borrowers in percentage points of banks' equity in Romania − this measure has already been lifted again). In Hungary, currency turbulences in May and June 2006 seem to have made banks and borrowers more aware of the risk related to foreign currency loans, whereas these became increasingly popular in Poland and Slovenia in 2006. In Poland this trend was primarily linked to housing loans, while in Slovenia it was promoted by the introduction of the euro. At the end of 2006, the foreign currency share in outstanding loans to businesses and households stood between 45% and 50% in Bulgaria, Romania and Hungary, was very high in Slovenia (more than 60%) and Croatia (70% including loans indexed to foreign currencies) and reached 30% in Poland. With the exception of Slovenia, this development constitutes a risk to the financial stability as unfavorably developing exchange rates together with increasing foreign interest rates could have a negative impact on borrowers' solvency, particularly since households and small and medium-sized enterprises (SMEs) might not be adequately covered against such risks.

In 2006, nominal and real banking sector profitability in CEE reached the highest levels in Poland, the Czech Republic and Hungary. Polish, Slovakian and Bulgarian banks were able to increase their nominal return on equity, while the indicator decreased in the Czech Republic, Hungary, Croatia and Romania. As a result of continuous strong expansion of credit to businesses and households, the capital adequacy ratios continued to decline in all countries; in Croatia they also declined as a consequence of tightened provisions for the calculation of risk-weighted assets. Yet capital adequacy ratios still remained at a double-digit level and constituted adequate buffers against a broad range of risk according to the IMF's and NCBs' stress tests. However, the resilience to shocks has not been put to any "real life" test (strong economic recession or permanent substantial depreciation of the currency) in the recent past. Moreover, since loans grow robustly, information on the portfolio quality has to be interpreted more cautiously (strongly expanding denominator, "young" portfolios, limited data on borrowers' loan history, strong competition to gain new customers). In Hungary, for example, authorities reckon that due to unfavorable economic conditions the need for loan loss provisioning will rise in 2007, which − together with the expected declining demand for loans and the increasing competition among financial service providers both in the lending and deposit business − might have a negative impact on the banks' performance.

Nominal Return on Equity (after Tax)

%

	2003	2004	2005	2006	H1 05	H1 06
Bulgaria	**14.8**	**16.6**	**18.4**	**20.2**	18.6	18.1
Croatia	**14.5**	**16.1**	**15.6**	**12.7**	14.5	14.7
Poland	**5.5**	**17.4**	**24.0**	**27.2**	21.2	28.0
Romania	**17.7**	**17.7**	**15.1**	**12.1**	19.7	14.2
Slovak Republic	**10.5**	**12.3**	**13.4**	**15.7**	14.6	16.4
Slovenia	**8.2**	**8.7**	**11.1**	. .	. .	. .
Czech Republic	**23.4**	**23.1**	**24.9**	**22.2**	29.3	24.8
Hungary	**18.7**	**23.8**	**23.2**	**21.6**	27.3	23.1

Note: Based on profit after tax.

Net Interest Income

% of annual average bank assets

	2003	2004	2005	2006	H1 05	H1 06
Bulgaria	**4.7**	**4.9**	**4.5**	**4.2**	4.4	4.3
Croatia	**3.3**	**3.0**	**2.9**	**2.7**	3.0	2.8
Poland	**3.1**	**3.2**	**3.1**	**3.2**	3.1	3.2
Romania	**4.7**	**4.8**	**3.5**	**3.3**	3.7	3.2
Slovak Republic	**2.9**	**2.9**	**2.2**	**2.4**	2.2	2.2
Slovenia	**3.2**	**2.8**	**2.5**	. .	2.7	. .
Czech Republic	**2.1**	**2.3**	**2.2**	**2.3**	2.3	2.2
Hungary	**4.0**	**4.3**	**4.1**	**3.6**	3.9	3.7

Operating Costs

% of annual average bank assets

	2003	2004	2005	2006	H1 05	H1 06
Bulgaria	**4.5**	**4.2**	**3.6**	**3.4**	3.5	3.5
Croatia	**2.6**	**2.3**	**2.2**	**2.1**	2.2	2.1
Poland	**3.9**	**3.7**	**3.7**	**3.3**	3.7	3.3
Romania	**6.9**	**6.1**	**5.4**	**5.0**	5.3	5.0
Slovak Republic	**2.6**	**2.4**	**2.1**	**2.1**	2.1	2.0
Slovenia	**2.9**	**2.7**	**2.5**	. .	2.4	. .
Czech Republic	**1.9**	**1.9**	**1.8**	**1.8**	1.8	1.7
Hungary	**3.4**	**3.3**	**3.1**	**2.7**	2.8	2.6

Net Change in Loan Loss Provisions

% of annual average bank assets

	2003	2004	2005	2006	H1 05	H1 06
Bulgaria	**0.3**	**0.7**	**0.8**	**0.3**	0.9	0.4
Croatia	**0.3**	**0.3**	**0.2**	**0.2**	0.2	0.2
Poland	**0.9**	**0.4**	**0.2**	**0.2**	0.3	0.2
Romania	**0.6**	**0.7**	**0.5**	**0.6**	0.2	0.3
Slovak Republic	**−0.5**	**0.2**	**−0.1**	**0.2**	0.0	0.1
Slovenia	**0.8**	**0.7**	**0.7**	. .	0.8	. .
Czech Republic	**0.0**	**0.4**	**0.5**	**0.5**	0.3	0.4
Hungary	**0.3**	**0.5**	**0.3**	**0.4**	0.1	0.4

Nonperforming Loans

% of total loans

	2003	2004	2005	2006	H1 05	H1 06
Bulgaria	**4.2**	**3.6**	**2.8**	**2.2**	2.8	2.7
Croatia	**5.1**	**4.6**	**4.0**	**3.2**	4.3	3.6
Poland[1]	**21.2**	**14.7**	**11.0**	**7.3**	13.2	9.4
Romania	**8.3**	**8.1**	**8.3**	**8.0**	8.2	8.4
Slovak Republic	**9.1**	**7.0**	**3.7**	**3.3**	4.7	3.7
Slovenia	**6.5**	**5.5**	**4.7**	. .	5.3	. .
Czech Republic	**5.0**	**4.1**	**4.0**	**3.8**	4.3	3.8
Hungary	**2.7**	**2.7**	**2.5**	**2.5**	2.6	2.4

[1] *The nonperforming loans for Poland comprise nonperforming loans in the narrow sense as well as so-called irregular claims.*

Source: NCBs.
Note: Data are not comparable between countries. Intrayear data are annualized linearly.

Capital Ratio Declines Slightly

A credit institution's risk-bearing capacity is largely determined by its capital ratio, i.e. the amount of capital it holds in relation to risk-weighted assets. In the first quarter of 2006 the consolidated capital ratio for all Austrian banks grew by 1 percentage point against the previous quarter, reaching 12.7%. In the course of the year, however, it slightly declined and ultimately came to 11.6% at the end of the fourth quarter (see chart 23), which broadly corresponds to the comparable value of the previous year.

The rise in the capital ratio recorded in early 2006 was mainly attributable to the acquisition-driven capital increase of one major bank. The relevant acquisition was entered into the books in the fourth quarter of 2006, which reduced not only the capital ratio of the involved bank but, given the bank's size, also that of the entire banking sector. Accordingly, the average capital ratio of the five largest banks dropped to 10.1% in the last quarter of 2006, which actually corresponds to the value recorded in the same quarter of 2005. By international comparison, the average capital ratio of Austria's largest banks was lower than the average value calculated for a representative sample of major banks in the euro area.[33] However, this was to a large part attributable to the low capital ratio of one large Austrian bank which hit the news last year[34] and which was recently taken over by new owners. Furthermore, one has to take into consideration that retained earnings for 2006, which were particularly high in the case of large banks operating in Central and Eastern Europe, were not yet included in the capital ratios reported at year-end.

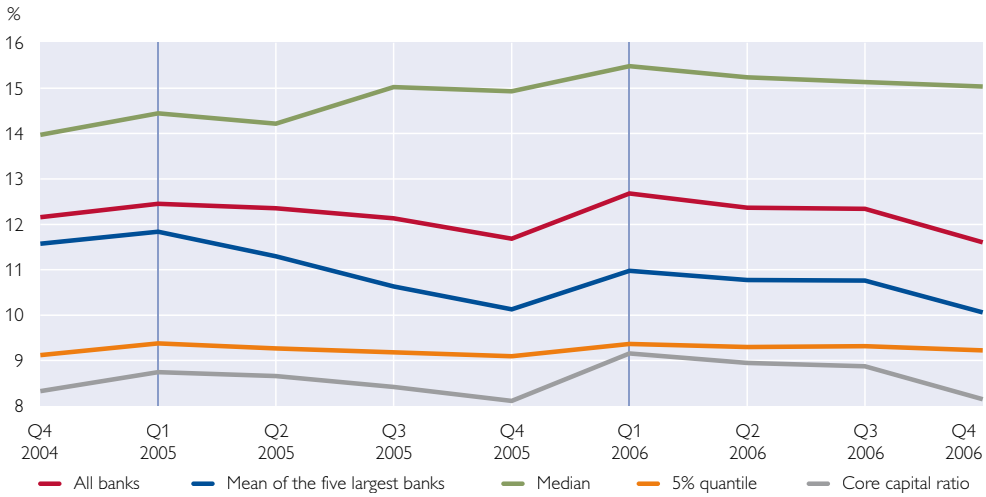
The median capital ratio of all Austrian banks also slightly deteriorated in the course of 2006, but still reached 15.0% at the end of the

[33] *Based on a representative sample of large banks operating in the euro area, the December 2006 ECB Financial Stability Review lists an average capital ratio of 11.3% for mid-2006.*

[34] *See related box in Financial Stability Report 11 (page 45).*

Chart 23

Austrian Banks' Consolidated Capital Ratio



Source: OeNB.

fourth quarter of 2006. In other words, the majority of Austrian banks continued to record solid capital ratios. The overall sound capital adequacy of Austrian banks is also confirmed by the core capital ratio, i.e. tier 1 capital (core capital) in relation to risk-weighted assets. At end-2006 the consolidated core capital ratio of all Austrian banks was 8.1%.

To sum up, the capital ratio of Austrian banks may have declined slightly, but is still satisfactory.

Austrian Banking Sector's Resilience to Shocks Remains Satisfactory

Financial stability analysts rely on stress tests to quantitatively assess the risk-bearing capacity of a financial system under hypothetical crisis scenarios. In this context, the OeNB has developed the Systemic Risk Monitor (SRM), a software for quantifying the systemic risk in the Austrian banking sector and for conducting corresponding stress tests.

Within the framework of a Monte Carlo simulation, the SRM yields a multitude of different scenarios which outline the possible development of relevant risk factors[35] over the following quarter. Based on each scenario, the profit/loss for every bank is calculated; the calculated values are then aggregated to assess the profit/loss for the entire banking system, thus establishing a loss distribution for the entire banking system. The 95% quantile of this distribution represents the amount of loss which is not exceeded in 19 out of 20 cases (95% probability).[36]

Table 5 summarizes the results of selected stress tests and of a simulation without a crisis scenario carried out on the basis of end-2006 data and presents the results in the format in-

[35] *In particular, these include macroeconomic risk factors (e. g. GDP growth) as well as market risk factors (e. g. interest rates, exchange rates and stock market indices).*

[36] *For details on the methodology underlying the SRM see Boss, M., G. Krenn, C. Puhr and M. Summer. 2006. Systemic Risk Monitor: A Model for Systemic Risk Analysis and Stress Testing of Banking Systems. In: OeNB. Financial Stability Report 11. 83–95.*

Table 5

Results of Selected SRM Stress Tests for End-2006

%

	Total risk		Credit risk		Market risk		Contagion risk	
	Mean	95% quantile	Mean	95% quantile	Mean	95% quantile	Mean	95% quantile
Simulation without crisis scenario	−2.1	1.1	−1.9	0.6	−0.3	1.5	0.1	1.6
Doubling of domestic borrowers' default probability	−1.1	2.2	−1.0	1.2	−0.3	1.5	0.2	1.6
Increase in euro area interest rates by 120 basis points	−0.3	2.9	−1.9	0.5	1.5	3.2	0.1	1.6
Appreciation of the euro by 10%	−2.8	0.8	−1.9	0.5	−1.0	1.5	0.1	1.6
Depreciation of the euro by 10%	−1.4	2.2	−1.9	0.5	0.3	2.9	0.1	1.6

Source: OeNB.

Note: Values denote the mean and the 95% quantile of the loss distribution in the relevant risk category relative to eligible capital for the first quarter of 2007. Loss from credit risk was adjusted for provisions related to claims on domestic and foreign nonbanks as well as on foreign banks; loss from contagion risk in the Austrian interbank market – which corresponds to the credit risk vis-à-vis domestic banks – was adjusted for provisions related to claims on domestic banks. Correspondingly, total risk was adjusted for total loss provisions.

troduced in December 2006 (Financial Stability Report 12). While sensitivity stress tests typically calculate the impact of a particular crisis scenario on the capital ratio, the format of presentation used here is supposed to indicate whether losses established with SRM simulations (with or without crisis scenarios) are sufficiently covered by capital, taking into consideration existing risk provisions.

The table displays the mean value and the 95% quantile of the loss distribution related to credit, market and contagion risk in the domestic interbank market for the entire Austrian banking sector over one quarter, as well as the sum of these three risk categories, i.e. total risk relative to eligible capital. Existing risk provisions were deducted from the calculated losses.[37]

The simulation without a crisis scenario yields a mean value of –2.1% for total risk. This means that existing risk provisions at end-2006 (EUR 10.74 billion) surpassed the losses expected to arise in a quarter from credit, market and contagion risk in the interbank market (EUR 9.45 billion) by EUR 1.29 billion, which corresponds to 2.1% of total eligible capital[38]. With regard to credit risk, existing provisions for loans to nonbanks and foreign banks exceeded losses expected to arise from these claims by a value corresponding to 1.9% of eligible capital. The mean value of the loss distribution related to contagion risk in the interbank market, by contrast, is higher than the relevant risk provisions, though just by 0.1% of eligible capital. In the case of market risk, no risk provisions were taken into consideration; thus, the value listed can be interpreted as an expected profit in the amount of 0.3% of capital. In the 95% quantile, the losses arising from all risk categories surpass existing loss provisions; in the simulation without a crisis scenario, however, losses never exceeded loss provisions by more than 2% of eligible capital.

[37] *See notes to table 5.*

[38] *The SRM analyzes unconsolidated capital, as group structures of domestic banks are implicitly taken into account by the model.*

In all stress tests, total expected losses based on the assumed crisis scenarios are lower than allocated risk provisions as at end-2006. Even if one assumes a doubling of domestic borrowers' default probability, the related risk provisions still exceed the mean value of the loss distribution related to credit risk by 1% of capital. An upward shift in the yield curve by 120 basis points produces an expected loss from market risk in the amount of 1.5% of capital. The stress tests for exchange rate risk, as in previous tests, yield an expected loss in the event of a euro depreciation, which, at 0.3% of eligible capital, is low. All in all, the capital ratio of the Austrian banking system remained clearly above the regulatory minimum requirement of 8% in all listed scenarios.

Currently, the model framework of the SRM does not allow the stress testing of two risk categories which are significant for the Austrian banking sector, i.e. indirect credit risk of foreign currency loans and credit risk arising from claims in Central and Eastern European countries. Due to this, the year-end 2006 data were subjected to sensitivity stress tests, which are described in greater detail in previous issues of the Financial Stability Report. The sensitivity stress test for indirect credit risk of foreign currency loans yields a reduction of the capital ratio by 0.25 percentage point for the Swiss franc and 0.03 percentage point for the Japanese yen. A new scenario for analyzing credit exposure to Central and Eastern Europe, introduced in the previous Financial Stability Report, is presented in detail in this issue ("Stress Testing the Exposure of Austrian Banks in Central and Eastern Europe" – see special topics).

Overall, the satisfactory shock resilience of the Austrian banking sector was again confirmed on the basis of the end-2006 data.

Moody's New Assessment Method Changes Austrian Banks' Ratings

The OeNB's financial stability analysis is primarily based on supervisory reporting, which is complemented by market data, e.g. valuation of stock prices and ratings. In addition to long-term deposit ratings we particularly focus on Moody's bank financial strength ratings (BFSR) in the following.

Following turbulent changes in the ratings of two major Austrian banks in the first two quarters of 2006, the ratings of these two institutions[39] as well as the ratings of the other large Austrian banks remained unchanged until the end of the first quarter of 2007. The review process of Hypo Alpe Adria's BFSR has since been completed, confirming the rating of D–. At the same time, the review of BAWAG P.S.K.'s ratings was reopened by Moody's after the sale to the consortium led by th U.S. investment fund Cerberus.

At the beginning of the second quarter of 2007, however, there were two major changes in ratings: First, the phasing-out period for state guarantees for state mortgage banks agreed between Austria and the EU expired on April 1, 2007. As a conse-

[39] *As reported in Financial Stability Report 12, between January and May 2006, Moody's gradually downgraded BAWAG P.S.K.'s BFS rating from C+ to E+. The long-term deposit rating was downgraded from A2 to A3 in March 2006. The downgrading of Hypo-Alpe-Adria Bank's BFS rating was also reported.*

Table 6

Ratings of Selected Austrian Banks

As of May 14, 2007

	Deposit-Rating		BFSR[1]	
	LT[2]	Outlook		Outlook
BA-CA	Aa2 (+3)	stable	C+ (−1)	stable
BAWAG P.S.K.	A3	under review	E+	under review
Erste Bank	Aa3 (+1)	stable	C (−1)	stable
Hypo Alpe-Adria	A2 (−3)	stable	D−	stable
Hypo Tirol	Aa1 (−1)	stable	C	stable
Investkredit	A1 (+1)	stable	C (+1)	stable
Kommunalkredit	Aa2 (+1)	stable	B−	stable
Kontrollbank	Aaa	stable	..	..
ÖVAG	Aa3 (+2)	stable	C	stable
RZB	Aa2 (+2)	stable	C (−1)	stable
RLB OÖ	Aa3 (+1)	stable	C (−2)	stable
Hypo Landesbank Vorarlberg	Aa1 (−1)	stable	C	stable

Source: Moody's.

[1] *Bank Financial Strength Rating.*
[2] *Long-term Deposit Rating.*
Note: Values in brackets denote changes caused by the phasing out of state guarantees and the introduction of JDA by Moody's (see text).

quence, the three affected credit institutions (Hypo Alpe Adria, Hypo Tirol and Vorarlberger Landes- und Hypothekenbank) were assigned "non-guarantee" ratings for long-term liabilities, which led to a downgrading of their ratings (see table 6).

Second, the fact that Moody's adjusted its assessment methods led to changes in ratings. Moody's introduced Joint Default Analysis (JDA), with a view to placing greater emphasis on external support for banks through their own group or the government. When the first JDA ratings were published, the ratings of long-term liabilities improved internationally (not just for Austrian banks), while BFSRs were downgraded slightly (see table 6). Owing to the introduction of JDA, the ratings of Austrian banks' long-term liabilities improved in two-thirds of all cases, while for the other banks no deteriorations were recorded. In the BFSR segment, two upgradings compare with four downgradings. Moody's assessment of Austrian banks' subsidiaries did not change significantly, neither with respect to long-term liabilities nor with regard to the BFSR.[40]

Given the fact that rating changes published by other agencies were not nearly as pronounced as those published by Moody's, it is safe to assume that the latter primarily reflect Moody's new rating methods rather than marked improvement/deterioration of the environment of the Austrian banking system or of individual banks.

Stock Prices of Major Austrian Banks Rise Steadily

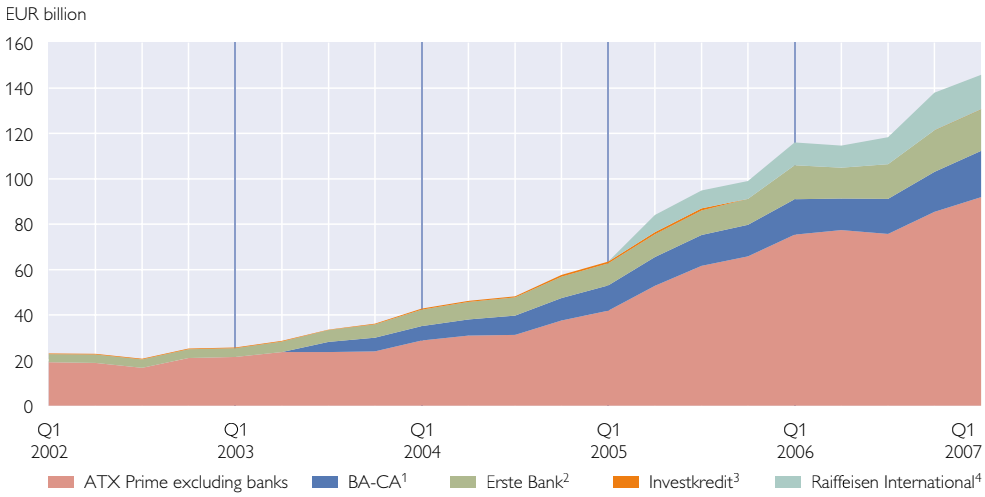
After the market turbulences of early summer 2006, when emerging markets stocks came under pressure worldwide and virtually all stocks listed in the ATX Prime segment declined as a consequence, the Austrian stock market saw three quarters

[40] *See Financial Stability Report 12 of December 2006.*

Chart 24

Market Capitalization of Austrian Banks Listed in ATX Prime

As of March 31, 2007



Source: Wiener Börse AG.

[1] *Relisted on July 9, 2003.*
[2] *Including capital increases on June 12, 2002, and January 27, 2006.*
[3] *Delisted at end-2005 after its takeover by ÖVAG.*
[4] *IPO on the Vienna stock exchange on April 25, 2005.*

marked by positive development and only minor stock market corrections. The market capitalization of the three banks listed in the ATX Prime[41] increased by 26.1% between September 30, 2006, and March 31, 2007, reaching EUR 53.8 billion; year-on-year growth came to 32.6% (see chart 24). Additional momentum was provided by UniCredit's announcement that it planned to repurchase BA-CA's remaining free float of stock at Wiener Börse AG under a squeeze-out. The solid growth of the market capitalization of listed banks was mirrored by overall market developments. Thus, the share of bank stocks in the total market capitalization of the ATX Prime only grew by one percentage point over the past half year, reaching 36.1%.

Following abrupt price changes in May and June 2006, the implicit volatilities of the at-the-money call options[42] of banks listed in the ATX abated in the second half of 2006. So far, the development of implicit volatilities in 2007 has been primarily characterized by the effects of the stock market correction in February, although implicit volatilities have since returned to the level of the second half of 2006. All in all, however, the solid performance of the ATX and of the bank stocks listed in the ATX has shown to imply a higher implicit volatility against, for instance, the Dow Jones EURO STOXX 50 or the Dow Jones EURO STOXX Financial Services Index.

[41] *BA-CA, Erste Bank and Raiffeisen International.*
[42] *Source: Datastream, Bloomberg.*

Less Dynamic Growth of Insurance Companies' and Mutual Funds' Business

Favorable Economic Environment Supports Insurance Sector

Austrian Insurance Companies Record Subdued Premium Growth

Favorable developments in the real economy and in financial markets – combined with the absence of major claims events – had a positive impact on the financial situation of both primary insurers and reinsurers in Europe. The continued uptrend in international stock markets yielded higher investment results. According to preliminary estimates, the solvency of the European insurance sector may have improved slightly. Given the improvement of risk management systems, risk-adequate pricing and stable economic framework conditions, the overall outlook for European insurance companies remains positive.

Austrian insurance companies' business developed less dynamically in 2006 than in previous years, with insurance premium income across all business lines growing by 1.9% (against 9.6% in 2005).[43] This significantly slower expansion is basically attributable to low premium growth (only 0.8%) in the life insurance sector. The decrease in one-off payments in this segment was compensated only by a 36% rise in state-subsidized personal pension plans (to EUR 619 million). Despite sluggish growth, life insurance remained the most important business line, accounting for slightly over 46% of total premiums written in the insurance sector. The share of nonlife insurance and health insurance in total premiums went up slightly to 44.7% and 9.2%, respectively, which is attributable to the relatively strong growth by 2.8% in each of the two categories in 2006. Overall claim payments by insurance companies climbed by 10.4% in 2006; maturing life insurance policies accounted for 60% of this increase, while the remaining 40% were attributable to payments for snow damage. The Austrian Association of Insurance Companies expects the volume of insurance premiums to augment by 3.9% in 2007. In the first quarter of 2007, storm-induced insured damage came to EUR 200 million – a figure that will have an impact on Austrian insurance companies' claim payments throughout the current year.

The market indicators for Austrian insurers have shown a slightly positive development. At the end of the first quarter of 2007, the rating outlook for the large Austrian insurers was stable. The stock prices of insurance companies listed on the prime market segment of Wiener Börse AG remained largely unchanged between December 2006 and May 2007. Compared with the MSCI Europe Insurance Index, stock price developments were below average in the period under review. During the stock market correction of end-February 2007, some Austrian insurance company stocks recorded substantial losses – a phenomenon that was in line with developments in CEE markets.

Aside from shocks in the financial markets and the higher frequency of major claims events, continued lower

[43] *Source: Austrian Association of Insurance Companies, March 2007.*

long-term interest rates and inadequate risk pricing in the face of tough competition also pose risks to the profitability and stability of the insurance sector.

Risk of Contagion Remains Low

In 2006, total assets[44] of Austrian insurance companies went up by EUR 5.8 billion to EUR 82.5 billion. At 7.5%, the annual growth rate was clearly lower for 2006 than for the two previous years, but still slightly above the average rate observed over the past five years (7.4%). The increase in assets can be attributed to a large extent to domestic equity securities and other domestic securities (+EUR 2.4 billion or +11.1%), foreign debt securities (+EUR 2.1 billion or +11.7%) and domestic debt securities (+EUR 0.9 billion or +10.0%). The trend toward increased investment abroad continued, causing the share of external assets in total assets to climb to 34.8%. At end-2006, debt securities accounted for 37.8% of invested assets, while domestic and foreign equity securities and other securities as well as domestic participations had a 40.1% share.

The total exposure of insurance companies to domestic banks went up by 6.1% to EUR 11.2 billion (13.6% of total assets) in 2006, with debt securities issued by domestic banks accounting for the lion's share (EUR 8.4 billion). This item went up by 10.1%. Lending to domestic banks expanded further, going up by EUR 0.1 billion to EUR 0.5 billion in 2006. The share of insurance companies' investments with domestic credit institutions in Austrian banks' consolidated total assets remained unchanged at slightly above 1.2%. Owing to a positive business and profit performance and the moderate level of exposure, the risk of contagion between the banking and insurance sectors is still low.

Mutual Funds Exhibit Slower Growth

While the European mutual funds market continued to benefit from the generally favorable financial market conditions, it expanded at a less dynamic pace than in 2005 (+22.9%) with assets under management[45] going up by 15.0% to EUR 7,574 billion in 2006. Part of this development can be traced to the strong decline in some stock prices in May and June 2006. As a consequence, investors in equity funds exhibited a lower risk appetite, which caused partly high capital outflows in this segment in the second quarter of 2006. The subsequent recovery in the second half of 2006 helped improve investors' confidence, raising the contribution of net capital inflows to 8 percentage points. It was thus even slightly higher than the contribution of price gains at 7 percentage points. While all fund categories recorded net inflows, fixed income and money market funds saw net outflows in the fourth quarter of 2006.

[44] *Excluding reinsurance business; based on quarterly reports (OeNB insurance statistics).*

[45] *Here, mutual funds comprise undertakings for collective investment in transferable securities (UCITS) and non-UCITS. Source: The European Funds and Asset Management Association (EFAMA).*

New Investment in Austrian Mutual Funds Remains Subdued

The capital invested in Austrian mutual funds (excluding investments in funds of funds) advanced by 5.9% to EUR 140.8 billion (net) in 2006 – a clearly weaker pace than recorded in the year before or across Europe. Around 90% of this capital increase was attributable to price gains. Net inflows decreased by two-thirds year on year and reached EUR 4.5 billion, and price gains declined by one-half, coming to EUR 7.1 billion. Distributions climbed by almost 11% to EUR 3.8 billion in 2006. The third and fourth quarters of 2006 even saw net outflows. Weaker growth may be attributable to general market conditions on the one hand and to the increasing importance of structured products which might be seen as competing with mutual funds, on the other. At 4.4%, the capital-weighted average total performance of all Austrian mutual funds was significantly lower in 2006 than in the previous year (10.1%). Mutual funds' performance was characterized, to a substantial degree, by the merely marginal price gains in fixed income funds (+0.9%), which operated in an environment of rising interest rates and a weaker exchange rate of the U.S. dollar against the euro. Equity funds, alternative funds and balanced funds saw an above-average performance, augmenting by 12.8%, 9.8% and 5.0%, respectively. Fixed income, real estate and money market funds, by contrast, only recorded a below-average performance in 2006.

Share of Austrian Stocks in Capital Invested Reaches Record High

A breakdown of retail funds by individual categories shows that while fixed income funds continued to play a dominant role (52.6%), their importance has decreased somewhat since 2003. By contrast, the share of equity funds in the volume of retail funds grew from around 16% to 20.5%, partly on the back of price gains. The holdings of domestic stocks and equities continued to grow (not least owing to their performance at Wiener Börse AG) and accounted for a share of 2.8% in the overall capital invested in mutual funds in 2006, thus reaching its highest level since the introduction of the OeNB's mutual fund statistics in 1998. As the second most important category of funds, balanced funds accounted for 20.9% of capital invested in retail funds, while the remaining categories (money market funds, alternative funds and real estate funds) accounted for just below 6% of capital invested in retail funds.

Low Returns on Severance Funds

In Austria, nine severance funds were licensed to manage severance claims in the fourth quarter of 2006. Their total assets came to EUR 1.2 billion, up 59.6% against the comparable period of 2005 (fourth quarter). In 2006, vested rights to future severance payments climbed from EUR 696 million to EUR 1.1 billion (+61.8%). Eligible capital, by comparison, went up by 2.6% from EUR 21.76 million to EUR 22.3 million and thus exceeds capital requirements calculated at EUR 3.7 million. The capital invested in severance funds is mainly managed by capital management companies. EUR 781 million (i.e. 69.4% of investment groups' assets or 93.9% of indirect investment) were invested in euro-denominated mutual fund shares. At end-2006, the number of employers that had signed severance fund agreements came to 345,914,[46] up by 21.6% from the previous year (284,531 agreements). As measured by the number of agreements with employers, the three largest providers control a market share of 75.2%, thus securing a high market concentration also in 2006 (2004: 74.5%; 2005: 75%). In 2006, severance fund agreements established around 4.5 million vesting periods for 2.1 million people. This corresponds to a rise by 37.7% and 20.7%, respectively, against 2005. The number of vesting periods not assigned to any severance fund went down from 115,134 in 2005 (2004: 215,728) to 54,508 for 51,574 persons. Severance funds' real investment yields came to 2.1% in 2006 (3.5% in nominal terms), after having stood at 2.5% in real terms (nominal: 4.6%) in 2004 and 3.2% (nominal: 5.5%) in 2005.[47] Taking into account the costs of capital management, real investment yields came to around 1.4% in 2006. To sum this up, yields clearly fell below the legislator's expectations of an average of around 6% in the long-run (in nominal terms and adjusted for all costs).[48] Upon termination of an employment contract (with the exception of the cases laid down under Article 14 paragraph 2 Federal Act on Corporate Staff Provision) the prospective beneficiaries may opt for a lump-sum payment of their severance claims, for further investment of the respective assets in the severance fund of their former employer or for a rollover of the assets into their new employer's severance fund. In view of current yields and possible spending needs, up to now around half of prospective beneficiaries have decided against further investment in severance funds, which means that in 2006 severance funds had to make payments of more than EUR 23 million.[49]

[46] *Source: Main Association of Austrian Social Security Institutions.*

[47] *Source: Severance funds platform; OeNB.*

[48] *Source: Vienna Economic Chamber. 2006. www.wkw.at/docextern/ArbeitundSoziales/Extern/Arbeitsrecht/AbfertigungNeu/AbfertigungskassenKostenvergleich.doc and Federal Law Gazette 100/2002.*

[49] *Source: Severance funds platform.*