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Editorial close: November 12, 2004

Oil Price Dampens Economic Outlook

Many industrialized countries and emerging market economies saw a robust upswing in the past quarters. The euro area also experienced an upturn, albeit on a somewhat more moderate scale, carried primarily by exports. Investment and consumer spending remained lackluster. Recently, the higher oil price slowed down economic activity markedly, directly impacting inflationary expectations. The inflation risk premia rose only slightly, though.

The stock markets in the U.S.A. and Europe have been moving sideways, with the effects of favorable corporate profitability trends apparently offsetting concerns over implications of the high oil price. Uncertainty, as measured by implied volatilities, has remained low. Likewise, the risk premia in corporate bond markets continued to be small, which is ascribable to improved corporate balance sheets and a strong demand for bonds.

Central and Eastern European Markets Develop on a Stable Path

The economic situation in the Central and Eastern European countries (CEECs), which play an ever greater role for Austrian business, has stabilized. Amid improved fundamentals in many CEECs, the yield differentials between U.S. dollar-denominated and euro-denominated government bonds and U.S. and European government bonds narrowed starting from April 2004. In some countries, the ratings of long-term foreign-currency debt instruments were upgraded.

Banking markets in CEE benefit from strong demand for banking products. Lending to the private sector either stayed at a high level or

accelerated. At the same time, the share of nonperforming loans contracted in most CEECs. The CEE banking markets have remained highly profitable, benefiting also the 11 Austrian banking groups operating in this region. Their subsidiaries already generate some 40% of the parent companies' operating incomes, which is partly attributable to the appreciation of the most important currencies in CEE. In many CEECs the current account deficit expanded at the same time, which points to a certain risk of depreciation for the coming months and, by extension, negative fallout for the contribution of the Austrian CEE-based subsidiaries to group operating profits.

Stability of Austrian Corporate Sector Increases

As in the euro area, the accelerating economic recovery in Austria in the first half of 2004 was driven primarily by exports, while investment activity and consumer spending rose at a subdued pace.

Improved equity ratios, higher profits and a more favorable financing climate had a positive impact on the stability of the corporate sector in Austria. The recent slowdown in investment demand also curbed financing needs, which the corporate sector increasingly meets by tapping the capital markets. Accordingly, businesses' exposure to market risks has been on the rise. The market capitalization of the Austrian stock exchange rose to 23% of GDP, which is still rather low compared with around 50% of GDP recorded for the euro area.

Households Step Up Acquisition of Financial Assets

In spite of the modest increase in real income, households expanded their financial assets considerably, again investing increasingly in securities, equities and insurances recently. If the valuation gains on securities of the first half of 2004 repeat themselves in the second half, they may together with the profits of 2003 cancel out the losses of the previous years. On the other hand, as the indebtedness of households rose again recently on balance, their financial position turned somewhat more fragile.

Growth of Austrian Banks' Earnings Accelerates

Both the business activity and profit performance of Austrian banks have been increasingly dynamic. This positive development is attributable

in particular to fee-based income as well as income from participating interests and supported by moderate cost increases. By international standards, the profitability of the Austrian banking industry is still comparatively low, though.

Austrian banks' risk profile has improved as well. The ratio of specific loan loss provisions to claims on nonbanks decreased slightly, with exposure to market risk remaining limited. The increased stability of the Austrian banking sector is reflected by its resilience to shocks as simulated in different scenarios and high capital adequacy ratios by historical standards.

Similarly, Austrian insurance companies posted favorable business and profit developments likewise increasingly carried by CEECs. The growth recovery of assets under pension fund management has continued in 2004.

R E P O R T S

Global Economic Developments and Financial Markets

Higher Oil Price Dampens Global Economic Growth

From mid-2003 to spring 2004, the economic situation improved in many industrialized countries and emerging market economies, which posted growth rates that were in part significantly above long-term averages. The inflation rates stayed at a relatively low level during that period, but price rises of a number of commodities increasingly exerted upward pressure on prices. The pronounced oil price hike observed in the second quarter of 2004 continued into the third quarter. Averaged out over the year, the oil price currently stands some 20% above the 2003 level. This oil price hike may be traceable above all to fears about a future supply crunch kindled by geopolitical risk factors and capacity constraints as well as to consistently higher demand, in particular from China. In many countries, the rallying oil price entailed a perceptible slowdown of economic activity. The monetary policy stance of numerous countries remained accommodative, as reflected either by low key interest rates, most notably in the U.S.A., the euro area and in Japan, or by interventions to curb the upward pressure on national currencies against the U.S. dollar, as was the case in some Asian countries. Many countries recorded relatively high budget deficits.

In the United States, consumer spending was buoyant thanks to rising disposable incomes, positive wealth effects, growing employment and improved consumer confidence but for the drag in the second quarter of 2004 traceable to the negative terms-of-trade effects of the higher

oil price. Amid low capital costs, high profits and positive sales prospects, fixed capital formation was dynamic until the second quarter of 2004. With defense spending significantly stepped up, government spending also contributed to the strong growth in demand. In Asia, exports were boosted by the dynamic investment activity in the U.S.A. and China. At the same time, domestic demand started to look up in many countries. Given its tremendous growth rates, China showed signs of overheating, with inflation on the rise, while in Japan, a much improved labor market spurred economic activity and the slight deflation persisted. Growth in the euro area trailed that in other economic areas and was mostly export-driven. Vibrant growth in export markets partly offset the marked appreciation of the euro in 2003, whereas investment and consumer spending remained rather weak in the euro area. Unemployment continued to be high and both employment growth and capacity utilization in the industrial sector were low. Inflation rose in the wake of the oil price rally, but has hardly spawned any second-round effects, i.e. effects on wage settlements, to date.

Most forecasts for the euro area, the U.S.A. and Asia envisage that although the oil price will have some dampening effect, economic growth will be relatively robust in 2005. The recent Consensus Forecast pegged growth in the euro area at 2% and in the U.S. at 3.5% and included a favorable inflationary outlook of 1.8% for the euro area and 2.3% for the United States. However, if the oil price stays at its current level or rises even further, these forecasts will have to be revised.

In determining the quantitative impact of the oil price on growth and inflation, a number of factors have to be taken into account: the trigger of the oil price surge, i.e. whether it was caused by increased demand or supply restrictions; the expected duration of the oil price spike; the oil intensity of consumption and production and their flexibility; the propensity to spend of the oil-producing countries; the capacity utilization of the economy at the time of the oil price shock and the labor market

situation; the development of nominal wages, including trade unions' wage demands, and lastly, the reaction of the financial markets (especially bond markets) and of monetary policy. Table 1 provides an overview of several estimates,¹ according to which a higher oil price puts a damper on growth and raises inflation, with the effects differing from region to region. It should be noted that these models forecast rather lesser effects, whereas in reality such effects could be more pronounced.

Table 1

Selected Estimates of the Impact of a Consistently 10% Higher Oil Price

	Average effect in the first years after the shock					
	GDP growth			Inflation		
	Euro area	U.S.A.	Japan	Euro area	U.S.A.	Japan
	<i>in percentage points</i>					
IMF	-0.05	-0.06	-0.01	+0.28	+0.18	+0.08
National Institute of Economic and Social Research (NIESR)	-0.15	-0.25	..	+0.04	+0.17	..
European Commission	-0.04	-0.05	-0.04	+0.05	+0.06	+0.02

Source: IMF, NIESR, European Commission.

In addition to the oil price, the U.S. current account deficit, which probably cannot be sustained in the long run, poses a risk. In the previous years, the monetary policy measures of several Asian central banks played a significant role in financing this deficit, which exists mainly vis-à-vis Asian countries. Abandoning this policy of accumulating liquid U.S. dollar-denominated reserves without it being offset by emerging private capital flows would considerably pressure these currencies to appreciate

against the U.S. dollar. Such adjustments could also impact the euro, even though it is difficult to identify precisely the potential repercussions on the monetary conditions of the euro area. Judged by the market reactions to the G-7 statement of September 2003, a cessation of the interventions by itself would lead to appreciation pressure on the euro against the U.S. dollar and depreciation pressure on the euro against the Asian currencies.² However, the effects on the exchange rates also hinge on the

¹ See also Schneider, M. 2004. *The Impact of Oil Price Changes on Growth and Inflation*. In: *Monetary Policy & the Economy Q2/2004*. OeNB. 27–36. The table shows the deviations from a benchmark solution of the simulation models.

² See also Greenspan, A. 2004. *Current Account*. Remarks before the Economic Club of New York. The Federal Reserve Board. March, 2. For another view, see Eichengreen, B. 2004. *Global Imbalances and the Lessons of Bretton Woods*. NBER Working Paper 10497.

macroeconomic conditions and on the monetary policy responses in the respective economies.

Key Interest Rates Are Raised in Some Countries, Inflation Risk Premia Rise Slightly

During the second and third quarter of 2004, the U.S. key interest rates, which had stayed at a very low level for a long period, were raised in three moves, by 25 basis points each, to 1.75%. Already in May 2004, the Federal Reserve signaled that it was set to remove policy accommodation at a measured pace. The U.S. money market rates thereafter took their cue from this indication. Key interest rates were raised also in other countries, such as the United Kingdom and Canada, following economic recovery and a growing inflationary threat. In the euro area, key interest rates remained at 2%. Analogous to developments in the U.S, the euro area encountered a slight steepening of the money market yield curve, which, however, started to reverse in June 2004.

In April, the U.S. and euro area long-term bond market rates rose sharply by some 100 and 50 basis points, respectively. This hike was triggered by strong U.S. labor market figures, which boosted business confidence and sparked expectations of a speedier tightening of key interest rates, and was amplified further by the rising oil price, which contributed to the increase in the inflation risk premia, or inflationary expectations, priced into indexed bonds. The yields reached a high in May to fall to close to 4% irrespective of the higher interest rate level in the money market.

The oil price surge seems to have triggered a revision of the outlook for economic growth. By contrast, the reduction in the implicit inflation risk premia or inflation expectations is likely to be ascribable to the relatively minor direct effects the oil price increase has so far had on inflation as well as the intact credibility of the central banks as guardians of price stability over the medium term. In this context, the interest rate hikes of the Fed may have played a positive, i.e. confidence-building, role. The U.S. and euro area stock markets have continued to move sideways since the beginning of 2004. By June the effects of favorable corporate news and of higher interest rates on both the short and the long end seemed to have balanced each other out. Thereafter, concerns over the repercussions of the higher oil price kept a lid on stock prices. Not least owing to the rapid rise of corporate earnings, the fundamental valuations, as measured by price/earnings ratios, came close to long-term means over the past quarters. Uncertainty in terms of implied volatilities remained at a low level. The risk premia in the corporate bond markets continued to be small, which is ascribable to companies' improved balance sheets and the strong demand for bonds.

In the currency markets, the euro moved sideways relative to most currencies and in particular to the U.S. dollar for quite some time, most likely driven by the uncertainty about the economic prospects for the U.S.A. and the euro area. Most recently, the euro appreciated substantially against the U.S. dollar due to the dollar's weakness.

Financial Flows into Emerging Markets

Bright Economic Prospects Contrast with Declining Net Capital Inflows

The economic outlook has brightened markedly for the emerging market economies (EMEs) over the course of 2004, which is due to mostly robust domestic demand, stepped-up export activity and – in some EMEs – higher commodity prices. The IMF revised upward its forecast for 2004 of real GDP growth in the EMEs from 6.1% to 6.6% and envisages a slightly less vibrant upswing for 2005 amid slower price growth. Boasting booming investments, Asia's EMEs are projected to continue to be the main global engine of growth, next to the United States, despite the spike in the oil price. By keeping their national currencies stable against the U.S. dollar, they manage to safeguard their competitiveness, with China intent on curbing its frenzied growth. The Russian economy is forecast to be

favoured by the high oil price. Europe's EMEs (including the new EU Member States and Turkey) are expanding by 5.5% in 2004, according to the IMF. This year's economic growth in Turkey has been astonishingly vibrant at 7% owing to economic reforms. Inflation has been on the decline, whereas the current account deficit has been widening. The IMF has extended considerable financial assistance to Turkey, which compares with still just a trickle of private capital inflows. In structural policy terms, Asia's EMEs put priority on reorganizing the financial industry and reforming the corporate sector. Latin America is preparing to improve the investment climate, and in the Middle East, efforts are under way to establish an institutional infrastructure to develop non-oil industries. In Africa, emphasis is placed on strengthening institutions and improving governance. All of these structural reforms in the EMEs serve to prepare the ground for the substantial trade liber-

Table 2

Private Capital Flows into Emerging Markets

and Developing Countries according to the IMF¹

	2001	2002	2003	2004	2005
	USD billion				
Net capital flows (IMF)	47.8	61.2	120.4	81.6	47.5
By instrument					
Direct investment	191.2	143.5	147.6	166.9	175.2
Portfolio investment	-91.3	-99.6	-11.0	-21.3	-23.4
Other flows	-52.0	17.3	-16.2	-64.0	-104.4
By region (country)					
Latin America (31)	22.2	1.4	0.0	-3.3	14.2
Europe (13)	12.1	55.3	51.5	53.2	49.3
CIS (12)	-1.7	-9.2	15.2	-19.2	-5.8
Middle East (14)	-7.9	-23.6	-14.0	-45.5	-32.5
Africa (46)	13.5	11.9	14.8	16.6	13.7
Asia (15)	9.6	25.4	52.8	79.8	8.6
Memorandum items					
Current account balance	89.7	145.0	235.3	285.7	269.2
Foreign reserve assets (- = increase)	-113.2	-197.1	-367.0	-350.1	-291.2
of which China	-47.4	-75.7	-117.2	-148.7	-96.7

Source: IMF (WEO).

¹ This table shows aggregated balance-of-payments data sets of 131 non-industrialized countries, including the 44 EMEs posting the largest volumes. Given repeated revisions of the national balances of payments, which also affect the data sets of previous years, the capital flows may differ substantially after such revisions.

Claims of BIS Reporting Banks on Central and Eastern Europe and Turkey as at End-March 2004

Countries of origin of the BIS reporting banks with the largest external positions vis-à-vis the individual regions

	Austria	Germany	Italy	France	Netherlands	Sweden	Belgium	United Kingdom	Europe ¹	U.S.A.	Japan
	% of GDP of the recipient country										
CEE plus Turkey	3.0	10.5	2.1	2.0	1.6	1.32	1.1	1.0	26.0	1.1	0.6
Central European EU Member States											
Poland	2.8	..	2.6	1.1	1.3	0.45	0.7	0.4	22.5	0.8	0.7
Slovakia	6.3	..	6.1	1.6	0.6	0.00	2.7	0.2	29.4	0.7	0.5
Slovenia	7.6	..	2.5	2.6	0.7	0.01	2.1	0.0	31.7	0.1	0.4
Czech Republic	7.0	..	0.8	1.5	1.1	0.03	3.9	0.0	23.5	0.5	0.4
Hungary	6.8	..	3.9	2.8	1.8	0.04	4.8	1.2	50.4	1.0	1.1
Other CEECs											
Bulgaria	0.8	..	3.6	1.3	1.0	0.01	0.2	0.3	23.5	1.3	0.2
Croatia	13.9	..	25.0	0.9	0.6	0.03	0.6	1.0	73.3	0.9	1.7
Romania	1.4	..	1.4	2.5	2.9	0.17	0.2	0.4	18.5	1.0	0.0
Russia	0.7	..	0.3	1.9	1.6	0.06	0.1	0.0	13.7	1.0	0.4
Turkey	0.2	..	1.0	2.3	1.8	0.13	0.6	0.0	16.5	1.4	0.8

Source: BIS, Eurostat, IMF, national sources and OeNB calculations.

Note: The claims shown here correspond to the "Consolidated international claims of BIS reporting banks" released by the BIS (BIS Quarterly Review September 2004, Table 9C). The BIS statistics cover cross-border claims denominated in all currencies as well as the claims held by subsidiaries – with the exception of Austria and the U.S.A. – which are denominated in a currency other than that of the recipient country.

¹ The column "Europe" comprises the countries of origin listed here as well as DK, GR, IE, PT, FI, ES, CH and NO.

alization agreed upon in the Doha Round of WTO negotiations.

The IMF predicts net capital inflows into the EMEs in 2004 to contract perceptibly year on year. The increasing net direct investment inflows are expected to be more than offset by net outflows in portfolio investment and other flows, such as bank loans, trade credits and derivatives. In several EMEs local capital markets helped to partly bridge the funding gap. The Asian EMEs, most notably China and India, have continued to attract the bulk of net capital inflows. Including the USD 45 billion of capital inflows that China used at the end of 2003 to recapitalize two state-run commercial banks and which are not part of table 2, net inflows into Asia's EMEs in 2004 seem to trail the 2003 figures by USD 18 billion. On the back of the policy of keeping the national currencies stable, the re-

serves of this region are expected to augment further by more than USD 230 billion to almost USD 1,500 billion or nine months' import cover, which would translate into eight times the short-term debt of the region. Even though the current account surpluses of the Asian EMEs are anticipated to shrink further in 2005, China's measures to cool the economy are likely to lessen the demand for foreign capital. Thus, the European EMEs would become the largest net capital importer among the EME regions. As their economic policy framework is now largely determined by the EU, Europe's EMEs are deemed less risky. The Commonwealth of Independent States (CIS) and the Middle East will continue to be net capital exporters given their persistently high energy export proceeds.

Claims of Austrian Banks Denominated in Foreign Currency on Central and Eastern Europe – An International Comparison

At the end of March 2004, the ten new EU Member States accounted for over 57%, and Central and Eastern Europe, including the CIS, for more than 75% of the Austrian banking sector's total foreign currency-denominated claims on EMEs and developing countries.

The Austrian banking sector took first place in an international ranking of foreign currency-denominated claims on the new Central European Member States as at the end of March 2004, provided the German banking sector, for which no disaggregated data are available, is factored out.

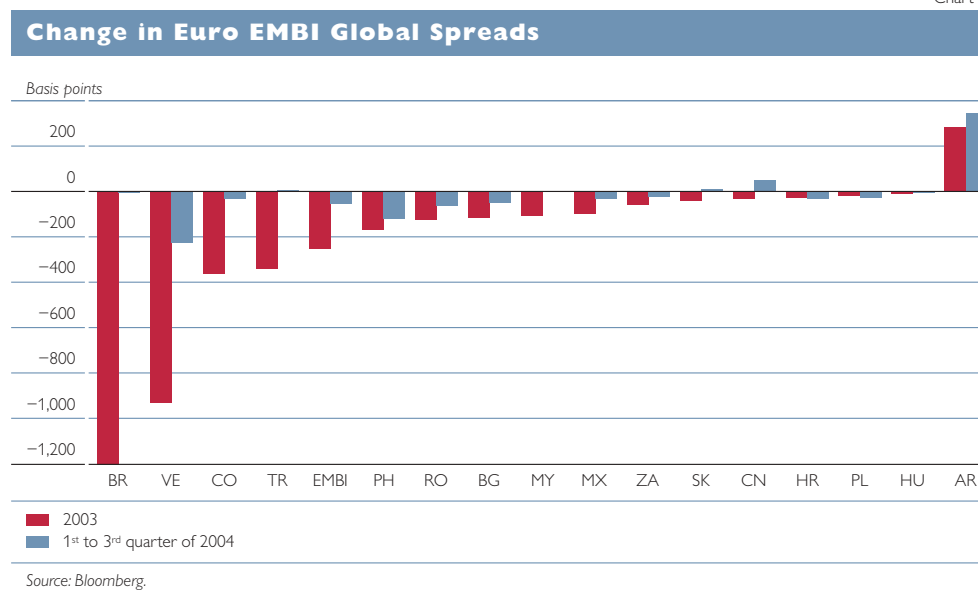
Central and Eastern Europe Eurobonds Weathered U.S. Interest Rate Reversal

Bonds issued by emerging market economies weathered the turnaround in the U.S. interest rate cycle at the middle of 2004. Following the temporary rise in the yield spreads of U.S. dollar-denominated and euro-deno-

minated government bonds vis-à-vis the U.S. and euro area benchmark bonds (measured by JP Morgan's EMBI Global index and euro EMBI Global index, respectively) between mid-April and mid-May 2004, the spreads have narrowed steadily ever since. At end-September 2004, the yield spreads of U.S. dollar-denominated government bonds came again close to the level of mid-April (400 basis points), while the spreads of euro-denominated government bonds recorded new lows (125 basis points). Since the beginning of 2004, investors have thus reaped nonannualized returns totaling 6.5% (EMBI Global) and 7.0% (Euro EMBI Global), respectively.

The Federal Reserve had alerted the markets to the upcoming tightening of interest rates, which supported this development. Furthermore, the mixed data on the U.S. economy released since then corroborated investors' expectations that the interest rate tightening would be rather measured and slower than they had originally feared. Beyond these common factors, the yield spreads bene-

Chart 1



fited from the fundamentals of many countries. In turn, the ratings of long-term foreign currency liabilities of several CEECs were upgraded.

Among the Central and Eastern European issuers, only *Romania* and *Bulgaria* posted an above-average contraction of spreads since early 2004 compared with the Euro EMBI Global index. The yield spreads of *Romanian* eurobonds shrank by 62 basis points to 99 basis points, which translated into a total return of 9.1%. The yield spreads of *Bulgarian* government bonds recently came to 81 basis points, having fallen by 52 basis points since the beginning of 2004; those of *Croatian* eurobonds narrowed by 32 basis points to 64 basis points

over the same period. This development is quite remarkable as the current account deficits had widened markedly in Bulgaria and Romania in 2003, remained at a high level in all three countries in 2003 (between 5.7% and 8.5% of GDP) and continued to expand in the first half of 2004. The good news includes the provisional conclusion of accession negotiation chapters between Bulgaria and the EU, the conclusion of all but four negotiation chapters with Romania and the granting of candidate status to Croatia. In the summer, the IMF approved stand-by arrangements with these three countries, and Bulgaria's and Romania's ratings were upgraded.

Table 4

Changes in Ratings of Long-Term Foreign Currency Debt as of early 2004

	Moody's			Standard & Poor's			Fitch		
	Rating	Since	Change	Rating	Since	Change	Rating	Since	Change
Bulgaria	Ba2	05. 06. 03	↑	BBB-	24. 06. 04	↑	BBB-	04. 08. 04	↑
Romania	Ba3	11. 12. 03	↑	BB+	14. 09. 04	↑	BB	18. 12. 03	↑
Russia	Baa3	08. 10. 03	↑	BB+	27. 01. 04	↑	BB+	13. 05. 03	↑
Slovakia	A3	12. 11. 02		BBB+	02. 03. 04	↑	A-	21. 09. 04	↑
Slovenia	Aa3	12. 11. 02		AA-	13. 05. 04	↑	AA-	07. 07. 04	↑
Turkey	B1	21. 12. 00		BB-	17. 08. 04	↑	B+	09. 02. 04	↑

Source: Bloomberg.

Among the five new Central European EU Member States, the *Czech Republic's* debut sovereign issue of ten-year eurobonds worth EUR 1.4 billion at the end of June 2004 deserves special mention. The yield spread stayed within the narrow range of 16 to 23 basis points over the previous months, which corresponds more or less with the yield spreads of Hungarian and Slovakian eurobonds and stands some 15 basis points below that of Polish eurobonds. Having contracted by a total of 221 basis points in

2003, the yield spreads of *Russia's* U.S. dollar-denominated government bonds³ increased by 41 basis points over the first nine months of 2004. Approximately until the end of June Russian spreads had moved in synch with the overall market. Negative news stories (for instance about the "Yukos affair," the mini banking crisis of June/July 2004 and the announcement of the German government in June to issue bonds secured by Russia's debt⁴) contrasted with the continued oil price rally and favorable funda-

³ EMBI Global because since March 1, 2004, no Euro EMBI Global data have been available for Russia.

⁴ This basically raises the supply of Russian debt instruments in the market.

mentals (high growth, subsiding inflation and a substantial current account surplus that showed no signs of let-up). As a consequence, the yield spread of Russian bonds has largely stayed stable at around 300 basis points since end-June, while the overall spread narrowed by close to 70 basis points.

The most serious risk factors for eurobonds in the months ahead include sharper-than-expected interest rate hikes in the U.S.A. and a persistently high oil price, which would drive up inflation, increase current account deficits and weaken growth in the oil-importing countries. The fact that the spreads are currently very close to historical lows would even amplify such effects.

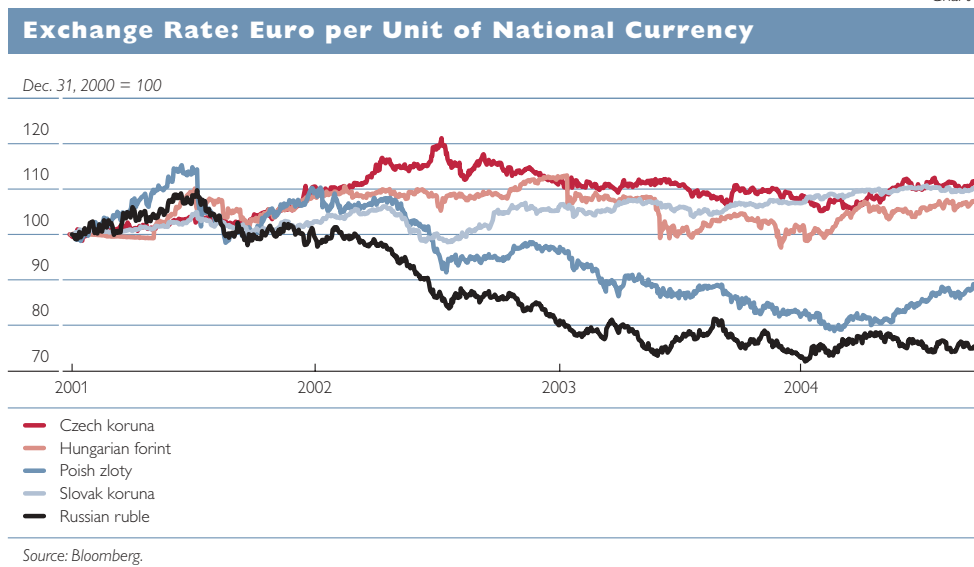
Currencies of Most CEECs Firmed Up

The currencies of most CEECs firmed up against the euro in the first nine months of 2004. In 2003, all currencies of that region had depreciated against the euro except for the *Slovak koruna*, which had already felt upward pressure then, and the *Bulgarian lev*, whose exchange rate was fixed

through a currency board arrangement in mid-1997. The *Polish zloty*, sliding the most the year before, posted the largest gain in 2004. Similarly, in 2004, the *Hungarian forint* made up more than half of the previous year's dip. The *Slovak koruna* continued to firm up against the euro (+2.8%). Since Slovenia's entering the Exchange Rate Mechanism II (ERM II) on June 28, 2004, which put a stop to its policy of devaluation, the *Slovenian tolar* has remained stable vis-à-vis the euro. Both the *Czech koruna* and the *Croatian kuna* appreciated against the euro (by 2.6% and 0.7%, respectively). By contrast, the *Romanian lev*, having depreciated around 14% against the euro in 2003, remained stable throughout the first nine months of 2004. The *Russian ruble* rebounded only modestly from its slide against the euro in 2003; in April 2004, it started to fade again slightly against both the euro and the U.S. dollar.

In the first half of 2004, the appreciation or stability of the currencies went hand in hand with a high or higher current account deficit, most

Chart 2



notably in *Bulgaria, Croatia, Romania* and *Hungary* and, to a lesser extent, also in the *Czech Republic*. This coincided with continued robust and partly accelerating growth of domestic demand, driven by dynamic credit growth and, in the case of Romania, also substantial gains in real wages. Moreover, the higher oil price took its toll on the current account balances of these countries. Croatia was in addition saddled with a pronounced decline in export growth of the sum of goods and services. In contrast, the current account balance improved considerably in *Slovakia* and slightly in *Poland* and *Slovenia*.

Bulgaria's net direct investment inflows entirely financed its excessively high current account deficit for the time being. The net direct investment inflows into *Croatia, Romania* and *Hungary* did not suffice to finance the deficits there, which augmented these countries' foreign debt. The considerable outflows of private capital from Russia in the second quarter of 2004 and the central bank interventions against the national currency seem to have contributed substantially to the weakening of the Russian ruble starting from April this year despite the sizeable current account surplus.

Of the countries for which data are publicly available (Czech Republic, Croatia, Hungary, Romania, Slovakia), only Slovakia's and Romania's central banks conducted noteworthy foreign exchange interventions. *Národná banka Slovenska* bought foreign exchange worth EUR 1.2 billion between January and August 2004, whereas *Banca Națională a României* acquired foreign exchange to the amount of EUR 1.4 billion. Since early 2004, *Národná banka Slovenska* has cut its key interest rate

in six steps by a total of 150 basis points to 4.5%, above all to ease the upward pressure on the koruna. For the same reason, the *Romanian central bank* also trimmed the key interest rate in four steps between July and early October 2004, by an overall 250 basis points, to 18.75%. Not least because of the Hungarian forint's firming up, *Magyar Nemzeti Bank* trimmed the key interest rate three times between March and September 2004, paring it down to the still relatively high level of 11.0%. *Hrvatska narodna banka*, in contrast, responded to Croatia's rising foreign debt by introducing in mid-July 2004 the requirement for banks to deposit 24% of their foreign liabilities' net increase over June 2004 in the form of an interest-free foreign currency deposit into a special account held with the central bank. Prior to Slovenia's entry into ERM II, *Banka Slovenije* cut its key interest rate by 200 basis points from January to June 2004; these interest rate decisions were taken against the background of a decline in inflation and the objective to decrease the interest rate differential vis-à-vis the euro area. As at end-September 2004, the spread between the three-month interbank rate in Slovenia and the euro area amounted to 195 basis points, compared with 400 basis points at the beginning of the year.

The nominal appreciation of *most CEE currencies* during the first nine months of 2004 coincided with accelerating price growth, except for *Slovakia, Romania* and *Russia*. As a result, the real appreciation against the euro, measured by consumer prices as of December 2003, was in part remarkable. In *most countries*, the nominal decline or very modest nominal growth in labor unit costs in

the industrial sector cushioned the negative impact of the real appreciation on competitiveness, though. This did not work for *Romania*, however.

Overall, the partly high current account deficits and their financing through new foreign debt pose a certain risk to the respective currencies in the coming months. Sharp exchange rate movements are relevant to Austrian banks, both with a view to the conversion into euro of subsidiaries' profit contributions and given the credit risk inherent in outstanding foreign exchange claims (see also the sections "Financial Flows into Emerging Markets" and "The Banking Sector in Central and Eastern Europe" in this issue). The high interest rate premium is likely to remain central to the stability or appreciation of the *Hungarian forint* until external imbalances are smoothed and the markets regain confidence in fiscal policy. In *Croatia*, the medium-term balance-of-payments outlook has been improving owing to the slowdown in loan growth, but the measures intended to rein in foreign debt could spark temporary downward pressure on the kuna.

Yield Spreads of Government Bonds Denominated in National Currencies Rise vis-à-vis Euro Area Benchmark Bonds

In the course of the first nine months of 2004, the yield spreads of ten-year government bonds denominated in national currencies expanded vis-à-vis the euro area's benchmark bonds in the *Czech Republic*, *Hungary* and *Poland* by up to 80 basis points. In contrast, the spreads of Slovakian government bonds remained largely unchanged over the same period. The development of yield spreads vis-à-vis the euro area thus contrasted

with the recovery of the respective currencies against the euro. By now the increased spreads have raised both the attractiveness of investments in these currencies and the pressure to appreciate.

The rise in inflation and in the inflation differential vis-à-vis the euro area that was observed for the *Czech Republic*, *Hungary* and *Poland* in the first half of 2004 seems to have left its mark on the yield spread. Since the pace of inflation in the *Czech Republic* and *Hungary* was less dynamic during a couple of months than anticipated by the markets and medium-term inflationary expectations decreased slightly at times, the yield spreads likewise narrowed somewhat in March and April 2004. In *Poland*, where the course of inflation clearly exceeded expectations following the country's EU accession and a robust economic recovery drove up inflationary expectations, the yield spreads were on a steady rise until the end of May 2004.

In the *Czech Republic* and *Poland*, the central banks' interest rate hikes in response to increasing inflation also led to a temporary widening of the yield spreads. In the light of the inflationary peak in the *Czech Republic*, *Hungary* and *Poland* in summer and expectations of a slide of inflation over the next few months, the negative effects of price growth on the yield spreads should subside.

Fiscal policy continued to wield considerable influence on the bond markets. A case in point is *Hungary*, where the medium-term budget outlook deteriorated further (first in May and once again in September) and thus contributed to the upward drive of the yield spreads starting in May. In *Poland*, chances are that the overall 2004 deficit will widen less

than expected year on year, which in turn may have favored the development of the yield differentials as from mid-August. In the *Czech Republic*, the convergence program of May 2004 included a slight downward revision of the deficit target for 2004, which translated into an even greater reduction on the 2003 deficit. On the other hand, Prime Minister Spidla's resignation at the end of July over irreconcilable economic policy differences within his own party entailed certain unease about budgetary developments over the medium term and thus weighed on the bond market. In 2004, the medium-term fiscal plans of the *Slovak* government have so far not seen any major revisions. The radical tax reform that took effect at the beginning of 2004 has not led to a deterioration of the budget position as feared.

The parliamentary elections coming up in *Poland* in 2005 and in the *Czech Republic*, *Hungary* and *Slovakia*

in 2006 represent a wild card in budgetary developments over the medium term, which may well sway yield spreads in the course of 2005. In all four countries the poll numbers do not look good for the incumbent parties, which could lead to some fiscal easing in the run-up to the parliamentary elections and a deviation from the convergence programs of May 2004. This could, by extension, cause markets to see the date for the introduction of the euro in these four countries slip further into the future. According to Reuters' quarterly market forecast of the euro adoption dates, the expected date of 2009 was moved to 2010 for Poland and Hungary between the beginning of 2004 and August; 2010 is also the date expected for the Czech Republic, while Slovakia is anticipated to be ready to introduce the euro already in 2009.

Concerns over budgetary discipline led to the downgrading of the

Chart 3

Yield Spreads of Ten-Year Government Bonds against Euro Area Benchmark Bonds



ratings of Poland's zloty-denominated debt (in May 2004 by Fitch from A+ to A) and the Czech Republic's koruna-denominated debt (in September 2004 by Standard and Poor's from A+ to A). In September 2004, Hungary was likewise warned by Standard and Poor's that a deterioration in its budget situation would trigger a downgrade of forint-denominated debt (currently rated A). While the same rating agency had alerted Poland of a potential further downgrade in April 2004 (since November 2003: A– with a negative outlook), it changed the outlook from negative to stable in September 2004, referring to the slightly better-than-expected fiscal performance.

The Banking Sector in Central and Eastern Europe⁵

High Credit Growth, Enhanced Portfolio Quality and Increasing Foreign Currency Share

The *economic environment* for banking in Central and Eastern Europe improved during the first nine months of 2004. All eight countries covered in this analysis except for Croatia posted accelerated economic growth owing in part to an uptick in investment activity. With the exception of Croatia and Poland, lending to the private sector (adjusted for inflation) picked up on the back of the economic recovery (Slovakia, Slovenia and the Czech Republic) or stayed at a very high level (Hungary, Bulgaria, Romania). In Poland, credit growth re-

mained subdued despite the upswing, primarily because companies either deferred investments (with import-intensive investments, this was also due to sharp exchange rate fluctuations) or relied on internal financing, while household loan demand continued to be strong. In Croatia, the monetary policy measures of early 2003 aimed at curbing credit growth proved very effective.

Even though the credit volume expanded, the share of *nonperforming loans*⁶ in total claims continued to decrease in most countries in 2003 and the first half of 2004. In general, refined risk management procedures and the cleaning of banks' balance sheets (write-off or transfer of nonperforming loans in the course of bank consolidations) seem to have helped improve the portfolio quality over the recent years. Hungary was an exception to this trend as its share of bad loans rose slightly in the first half of 2004. This was traceable to a downgrade in the ratings of claims on the corporate sector and of external claims. In Poland, much of the credit for the reduction of the share of nonperforming claims was due to regulatory modifications, which became effective in early 2004 and brought an easing of especially strict provisions on the classification of loans and of the rules on loan loss provisioning as well as greater recognition of guarantees in the classification process. The improvement of the financial position of many companies helped by stepped-up economic growth and the

⁵ This section reviews the development of the banking industry in Bulgaria, the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Croatia and – with certain restrictions given data problems – Romania. The section "Financial Intermediaries in Austria" analyzes the development of all subsidiaries of Austrian banks established in these countries.

⁶ Nonperforming loans are defined as "substandard," "doubtful" or "irrecoverable." The data do not lend themselves for a cross-country comparison given differences in the national classification systems and the breadth of coverage of claims.

pronounced decrease in real interest rates also contributed substantially to this development.

Even though the *open foreign currency positions* of Central and Eastern European banks are low,⁷ the relatively high share of foreign currency loans to domestic companies and households (excluding general government and banks) involves credit risk. This is ascribable to the fact that households and part of the corporate sector are not in a position to hedge against a depreciation of the local currency against the borrowing currency. As at July 2004, the share of foreign currency loans (as a percentage of total loans extended to domestic enterprises and households) was highest in Romania and Bulgaria, standing at 59.6% and 46.9%, respectively, but it was also considerable in Hungary (36.2%), Slovenia (30.9%) and Poland (26.9%). Croatia posted the lowest share (9.6%) of foreign currency loans. Especially in Croatia, but also in Slovenia, the overall exchange rate-related credit risk is, however, higher, because part of the loans denominated in the local currency (about one third in Croatia) are indexed to the exchange rate. During the first seven months of 2004, the share of foreign currency loans continued to expand in Romania (+4.2 percentage points), Slovakia (+4.1 percentage points), Slovenia (+3.8 percentage points), Bulgaria (+3.6 percentage points) and Hungary (+2.5 percentage points). By contrast, it shrank in the Czech Republic (−0.6 percentage point) and

Poland (−4.7 percentage points), which, however, also partly reflects a valuation effect.

The *decrease in the corporate income tax rates* in Poland, Slovakia, the Czech Republic and Hungary as of the beginning of 2004 has been one of the most important cross-country determining factors in the banking sector and should have a positive impact on banks' net profits. In the Czech Republic, the second stage of a three-stage reduction of the corporate income tax rate will take effect at the beginning of 2005. By contrast, in Hungary the tax burden on financial institutions will rise temporarily in the years 2005 and 2006. Another common factor, the *liberalization of services* (and the single European passport in banking), presents the banks in the new EU Member States with both a risk (stiffening competition on the home market) and an opportunity (provision of services in other EU Member States).

Largely Stable Profitability

Slovak banks managed to further improve their return on equity in the first half of 2004. The increase in total operating income was mainly attributable to markedly higher noninterest income, while the cost/income ratio improved slightly as well. The release of provisions likewise contributed to the increase in income more strongly than in the first half of 2003.

The boost in the profitability of *Hungarian banks* in the first half of 2004 was above all attributable to the expanded loan volume amid high

⁷ Official data on outstanding on-balance-sheet and off-balance-sheet positions show minor open positions for Bulgarian, Czech, Croatian, Hungarian and Polish banks (less than 1% of total assets except for Croatia, which has a long position of some 1.6% of total assets). Slovak banks posted an on-balance-sheet net short position of around 2% in March 2004, Slovenian banks an on-balance-sheet net short position of 1.3% at the end of 2003.

Table 5

Return on Equity

	2001	2002	2003	Q1 03	H1 03	Q1 04	H1 04
	%						
In Nominal Terms							
Bulgaria	18.9	14.6	14.8	24.0	20.8	18.9	18.5
Croatia	6.6	13.7	14.5	18.8	17.9	..	..
Poland	12.1	5.8	6.2	11.2	9.9	17.1	17.1
Slovakia	21.3	30.1	28.1	32.9	30.9	29.2	33.7
Slovenia	4.8	13.3	12.6	..	14.0	..	14.8
Czech Republic	16.6	27.4	23.4	24.4	22.7	21.5	22.5
Hungary	16.0	16.1	18.7	22.1	21.9	23.1	25.9
In Real Terms							
Bulgaria	10.7	8.3	12.2	23.2	19.8	11.8	11.1
Croatia	1.5	11.8	12.5	16.7	15.9	..	..
Poland	6.5	3.8	5.5	10.7	9.5	15.0	14.1
Slovakia	13.1	25.7	18.1	23.6	21.6	19.4	23.7
Slovenia	-3.5	5.4	6.5	..	7.4	..	10.7
Czech Republic	11.6	25.6	23.5	25.1	23.2	19.1	19.9
Hungary	6.3	10.4	13.4	16.6	16.9	15.2	17.5

Source: National central banks.

Note: Slovenia: before taxes, all other countries: after taxes. Linear annualization was used for quarterly and semiannual data. Nominal yield adjusted for consumer price inflation (period average).

interest margins. Especially noninterest income (in particular income from fees and commissions) augmented, but net interest income (in % of average assets) improved on 2003, too. The perceptible reduction in the cost/income ratio also boosted the income position. On the other hand, the doubling of loan loss provisions diminished total operating income to a greater extent than in the first half of 2003, which is likely ascribable to the rise in the share of nonperforming claims.

In spite of the solid nominal growth in net income, *Czech banks* showed a slightly lower nominal return on equity compared with the first half of 2003. The reason for this was the even stronger growth in equity capital. The current operating result (in % of average assets) improved primarily on the back of increased net interest income. At the same time, operating expenses augmented at a slightly slower pace than the operating result, and the expenses for loan loss provisions (including the write-off of receivables and the costs

of the transfer of receivables) lessened as well relative to the first half of 2003.

Polish banks succeeded in substantially improving their year-on-year nominal return on equity in the first half of 2004. First, they posted higher net interest income, which had benefited from lower interest expenses to nonfinancial corporations and households, the reduction in minimum reserve requirements effective as of October 2003 and the remuneration of minimum reserves as of May 2004. Second, their cost/income ratio improved slightly as well. Third, the requirements for loan loss provisions were eased, which, together with the brighter economy, helped clearly reduce the actual loan loss provisions year on year.

In the first half of 2004, *Slovenian banks* recorded a slight year-on-year increase in the nominal return on equity. According to preliminary data, total operating income (in % of average assets) was still affected by the slide of net interest income observable already for some time. This was,

however, offset by gains in noninterest income so that the current operating income (in % of average assets) remained broadly unchanged year on year. The marked reduction in the cost/income ratio contributed to the improved result for the first half of 2004, whereas loan loss provisions (in % of the current operating income) were up somewhat on the first half of 2003.

In the first half of 2004, the nominal return on equity of *Bulgarian banks* trailed the corresponding 2003 figure. This deterioration is due to the fact that in the first half of 2003, the release of provisions had resulted

in a net increase of income, while in the first half of 2004, banks were saddled with net expenses for loan loss provisions. The current operating income (in % of average assets) improved, however, owing especially to the rise in (net) interest income. The robust expansion of loans and the increase in the net interest margin favored this development. Furthermore, noninterest income also augmented pronouncedly year on year. With operating expenses growing less than operating income, the income/cost ratio improved significantly, to boot.

Table 6

Income and Expense Developments of the Banking Sectors up to the First Half of 2004

	2001	2002	2003	Q1 03	H1 03	Q1 04	H1 04
<i>As a percentage of average banking assets quarterly and semiannual data</i>							
Net Interest Income							
Bulgaria	4.2	3.9	4.7	4.4	4.6	4.7	4.9
Croatia	3.6	3.3	3.4	..	3.4	..	..
Poland	3.7	3.4	3.1	3.1	3.1	3.12	3.2
Slovakia	2.5	2.7	2.9	2.2	2.9	2.9	..
Slovenia	3.6	3.7	3.2	..	3.4	..	..
Czech Republic	2.5	2.4	2.1	2.1	2.1	2.2	2.2
Hungary	4.2	4.3	4.0	3.8	3.9	4.1	4.0
<i>As a percentage of current operating income</i>							
Current Operating Expenses							
Bulgaria	64.1	63.5	63.0	61.1	60.7	54.6	55.4
Croatia	65.6	59.3	57.3	..	54.5	..	..
Poland	62.4	63.5	68.6	65.5	66.4	65.3	64.8
Slovakia	65.7	57.9	64.6	56.7	58.9	55.0	56.6
Slovenia	65.2	59.7	62.5	..	63.1	..	57.8
Czech Republic	53.4	51.4	52.6	49.0	49.4	48.6	48.9
Hungary	66.7	64.7	60.1	56.3	57.6	50.2	49.8
Net Change in Loan Loss Provisions							
Bulgaria	-8.7	1.3	3.7	-19.3	-9.0	4.6	6.2
Croatia	13.7	6.6	7.0	..	8.6	..	..
Poland	18.9	22.9	15.1	11.9	11.2	2.9	7.1
Slovakia	-33.4	-9.8	-12.5	-5.1	-13.1	-23.0	-14.2
Slovenia	25.9	19.8	16.4	..	12.9	..	17.1
Czech Republic	22.8	9.3	0.8	18.6	16.1	13.5	11.1
Hungary	4.3	4.7	5.5	4.5	4.3	11.1	8.6

Source: National central banks

Note: The data are not comparable across countries. Linear annualization was used for subperiod data.

Stepped-up net interest income and an improved cost/income ratio helped boost the nominal return on

equity for *Croatian banks* in 2003. Less dynamic lending over the course of 2003 (no data available for the first

half of 2004), reduced noninterest income (even at current prices) and the slight increase in loan loss provisions (in % of the current operating income) kept a lid on the increase in the return on equity, though. In

2004, the continued decline in credit growth as of the beginning of the year and the tightening of the monetary policy stance as of July 2004 may adversely impact banks' profitability.

Banks

Business Activity and Profitability

Total Assets of Austrian Banks Remain on the Rise

The unconsolidated total assets⁸ of Austrian banks rose by 7.0% year on year, peaking at EUR 640.9 billion in August 2004, which confirmed the upward trend observed since mid-2003. Both growth in the total assets of the ten largest banks (excluding special purpose banks) and the median came to approximately 6% in August 2004, thus ranking slightly below the growth rate for the entire Austrian banking sector.

Foreign assets and liabilities contributed to this growth trend again; the former increased by 12.0% and the latter by 9.4% year on year, each rising to approximately EUR 197 billion.⁹ With assets growing by 8.9% to EUR 119.8 billion and liabilities by 10.8% to EUR 123.8 billion, domestic interbank business also had an important share in the growth of total banking assets. This mirrors the international trend toward more interbank business.

In August 2004 loans to domestic nonbanks posted a year-on-year increase of 3.2% and reached EUR 244 billion; in August 2003 the growth rate had amounted to 1.1%. This trend, which can also be observed on an international level, reflects improving economic conditions. On the liabilities side, domestic nonbank deposits grew by 4.5% year on year to EUR 204 billion, this

growth rate being slightly higher than in the previous year (4.3%).

In recent years, the European trend of reducing banking offices (head as well as branch offices) has also been observed in Austria. Between year-end 1997 and September 2004, the number of banking offices in Austria dropped from 5,686 to 5,252 (-7.6%). This means that currently one banking office serves around 1,500 inhabitants, a ratio which is still relatively high by European comparison. In the period from December 1997 to September 2004, the number of head offices decreased from 995 to 891 (-10.5%) and that of branch offices (excluding post offices) from 4,691 to 4,361 (-7.0%). In particular reductions in the joint stock bank, savings bank and Raiffeisen sectors were responsible for this decline.

Nominal Volume of Derivatives Declines after a Peak in August 2003

Following its high in August 2003, the nominal value of special off-balance sheet financial operations¹⁰ dropped from EUR 2,652 billion to EUR 1,825.9 billion in August 2004 (-31.2%) and was thus only 2.8 times as high as the total assets of all Austrian banks (in August 2003 it had been 4.4 times as high). In August 2004, interest rate contracts decreased by 31.9% year on year to EUR 1,575.4 billion, and foreign exchange derivatives shrank by 29.4% to EUR 232.5 billion. The fact

⁸ Unless specified otherwise, the figures in the text are given on an unconsolidated basis.

⁹ On the assets side, the higher share of external business can be related to Austrian banks' increasing activities in Eastern Europe, while on the liabilities side, it can be attributed to refinancing transactions for foreign currency loans.

¹⁰ Pursuant to § 22, Annex 2, Austrian Banking Act, these include: interest rate contracts, contracts concerning foreign exchange rates and gold, contracts concerning equities and other securities related contracts, precious metal contracts not including contracts concerning gold, commodities contracts not including contracts concerning precious metals, other forward transactions, futures, options purchased and similar transactions.

that the volume of derivatives trading had strongly expanded up until August 2003 and then started to decline owing to changes to the positions can be traced back to the activities of a single Austrian major bank. If one disregards this particular bank's volume, Austrian banks' derivatives business can be said to have experienced continuous year-on-year growth since 1999.

The Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2004¹¹ organized by the Bank for International Settlements (BIS) revealed that both of these business areas, for quite a while, have been strongly expanding in Austria and worldwide. The average daily turnover in over-the-counter (OTC) derivatives in Austria grew from USD 4.9 billion to USD 14.8 billion between April 2001 and April 2004. The share of Austrian banks in the global OTC derivatives market thus amounted to approximately 1% in 2004 (2001: 0.7%). The average daily turnover on the Austrian foreign exchange market has also risen, expanding from USD 8 billion in April 2001 to USD 13.3 billion in April 2004. This corresponds to an increase of Austria's global market share from 0.5% in 2001 to 0.6% in 2004. All in all, Austria's foreign exchange and OTC derivatives business experienced above-average growth levels by international comparison between April 2001 and April 2004. Nevertheless,

its role in worldwide foreign exchange and derivatives markets remains minor.

Austrian Banks' Profit Growth Accelerates

Similarly to most international banking markets, Austrian banks' profits continued to grow at an accelerating pace in the first half of 2004.¹² The operating profits of banks in Austria increased by 10.3% year on year in the first half of 2004, as income grew faster than costs. Operating income rose by 3.6%, operating expenses by just 0.5%.

Although the interest margin fell from 1.29% to 1.23% between the first half of 2003 and the first half of 2004, net interest income rose by 0.9%, a development which can be attributed to the fact that loans to nonbanks increased more strongly than customer deposits. The slight rise in net interest income could, however, not make up for the decline experienced since end-2002. While in some countries the strong growth of mortgage loans, favored by booming real estate prices, has more than compensated for falling interest margins,¹³ this has not been the case in Austria. This, however, also means that the Austrian banking sector is less vulnerable to real estate price shocks,¹⁴ which could negatively affect the above-mentioned banking markets through an increase in required risk provisions and deteriorating interest income.

¹¹ In 2004 this survey involved 1,208 banks in 52 participating countries. The OeNB selected 13 Austrian banks which account for 98% of the entire derivatives trading volume in Austria for this year's survey. It included an analysis of the turnover (nominal value of all new business transactions concluded over a specified period) in foreign exchange markets and over-the-counter (OTC) derivatives for April 2004. Exchange-traded derivatives were not taken into account.

¹² Cf. e.g. IMF Global Financial Stability Report, September 2004, pp. 69–71.

¹³ Cf. BIS 74th Annual Report, pp. 129–131.

¹⁴ Cf. IMF World Economic Outlook, Chapter II, September 2004.

Net fee income, the most important source of revenue next to net interest income, grew by 7.6% in the second half of 2004. In particular securities transactions, the most significant area of fee-based income, experienced a strong surge. Since end-2003 the increased demand in the securities market has thus also had an impact on banks' profits. Fee-based income from payment systems and lending has also been on the rise.

Income from securities and participating interests which are not included in the trading portfolio rose by 22%. In particular Austrian banks' income from foreign securities and participating interest soared, having increased by EUR 114 million or 81.8% since the first half of 2003.

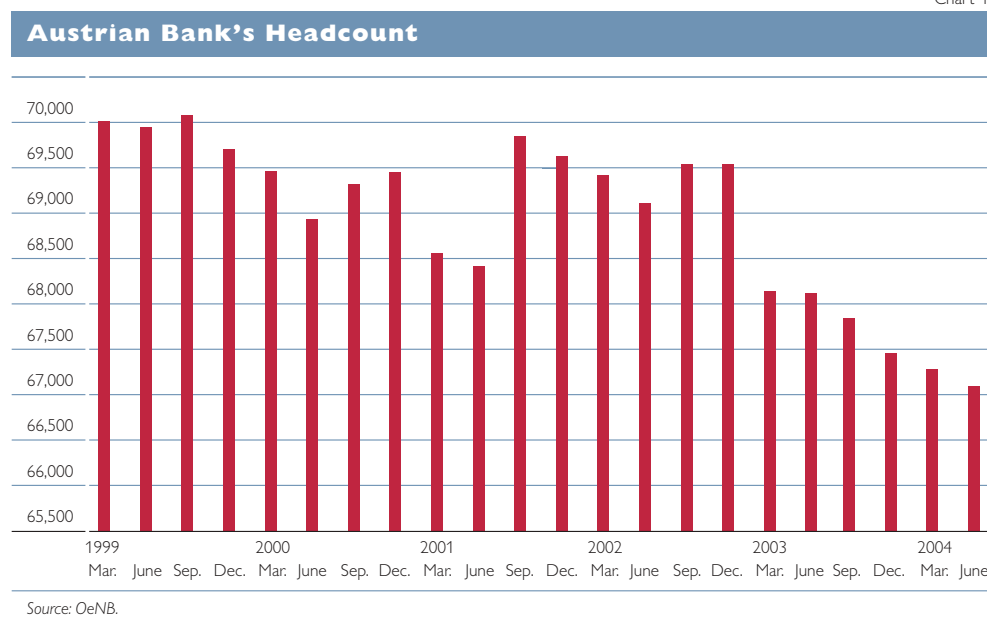
Following a pronounced upturn in 2003, net trading income has now dropped by 19.3%. Owing to a stock market boom and valuation gains in bond markets caused by interest rate cuts, the first half of 2003 saw exceptionally high profit growth. With a

share of 4% in total operating income, the significance of financial operations carried out on banks' own accounts remains small for Austrian banks. This also means that profit opportunities during upswings as well as risk exposure in times of adverse market movements are clearly limited.

An analysis of consolidated data confirms the positive development of Austrian banks' profits. Consolidated interest income – including income from securities and participating interests – increased by more than 8% year on year. At 17%, the growth of consolidated fee income also clearly accelerated. Despite a decrease in trading income, which was due to the very high level of trading income in the previous year, consolidated operating income rose by more than 9%.

Having declined in the previous quarters, costs increased only moderately. Staff costs grew by 0.6% year on year, while administrative expenses have remained more or less constant, their growth being negli-

Chart 4

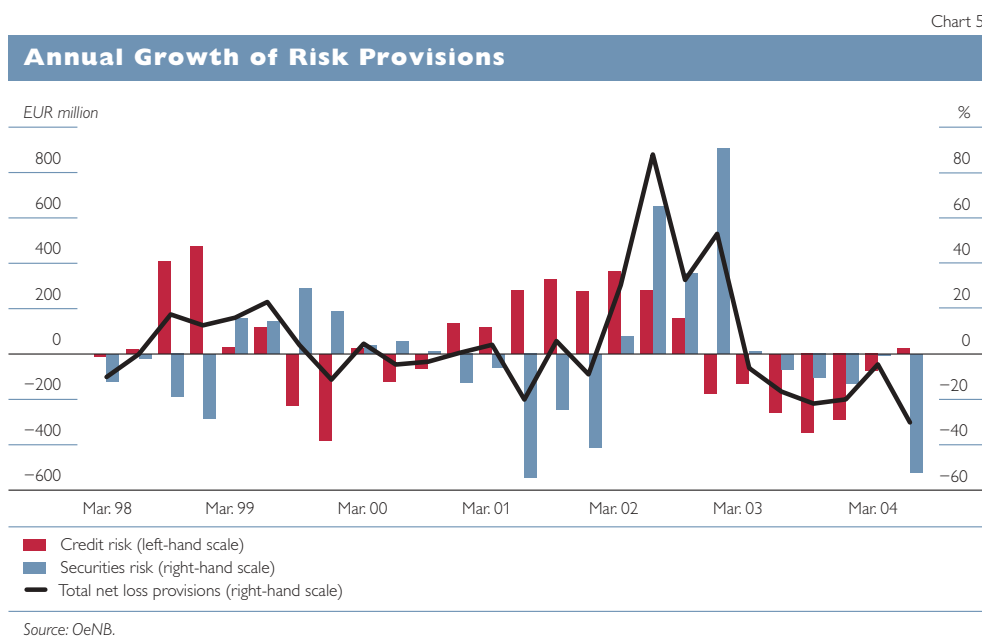


gible (0.2%). The headcount¹⁵ of the entire Austrian banking sector was cut by 1.5% between June 2003 and June 2004 (see chart 4), and wages and salaries were only slightly increased (+0.9%).

On a consolidated basis, expenses grew slightly year on year, which can be explained by the fact that Austrian banking groups have been expanding into CEE countries. Staff costs, administrative expenses and depreciation of fixed assets experienced

increases of between 5% and 7%. In relation to Austrian banks' total assets, however, these expenses decreased in comparison with the previous period.

While net credit risk provisions slightly expanded by 1.4%, loss provisions for securities were released. Through a one-off effect which materialized for some banks in the second quarter of 2004, the latter risk provisioning category showed an extremely positive development in comparison with the previous year (see chart 5).



Thanks to the favorable income and cost developments in the first half of 2004 and the above-mentioned special effects, which also had a beneficial impact, Austrian banks expect profits in the amount of EUR 2.8 billion for the entire year 2004, which would correspond to a year-on-year increase of more than one-third. On a consolidated basis, profits in the first half of 2004 have even risen by a little more

than half in comparison with results of the first half of 2003.

Despite these favorable developments, the profitability of Austrian banks remains humble by international standards owing to the fierce competition among Austrian banks, which results in low interest margins, and because of expenditures, which are relatively high by international comparison, in particular staff costs

¹⁵ "Headcount" refers to actual staff capacities, which means that part-time employees are only included proportionally to their working time.

and expenses caused by the dense network of banking offices. As far as the provision of banking services for Austrian businesses and households is concerned, this situation can be assessed positively. It is, however, necessary to continue raising profitability in order to strengthen Austria's position as a business location, to enable Austrian banks to react more flexibly to structural and cyclical changes, and to finance further expansion into CEE countries.

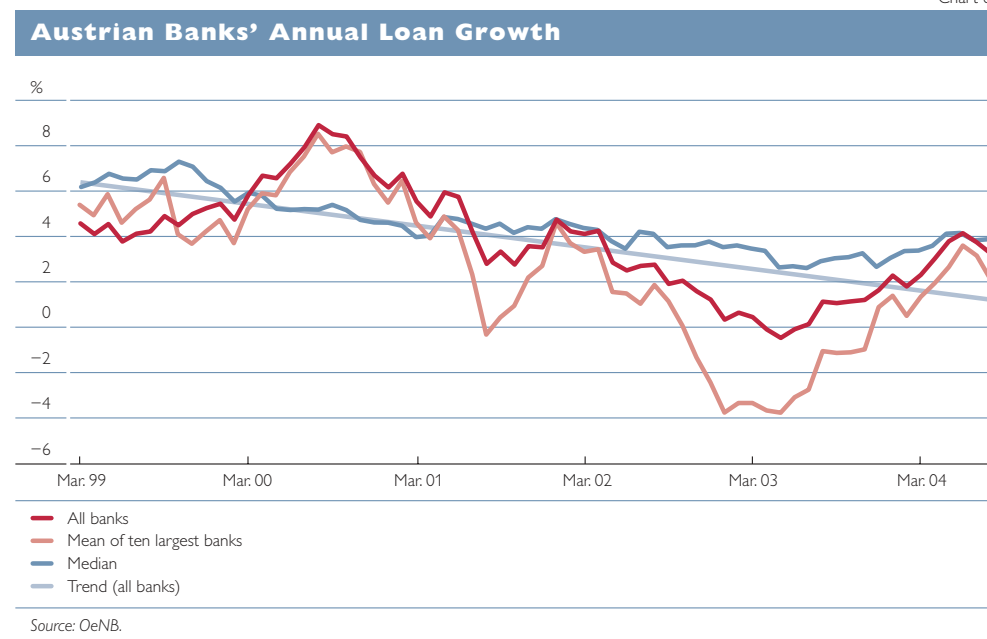
Credit Risk

Bank Lending Stabilizes

While loan growth was very subdued in 2003 owing to lackluster economic conditions, it turned positive in early

2004. In the past months, however, this upward trend has been subsiding a bit. Viewed over a longer period of time, i.e. the past three years, loan growth has remained below the average levels of the years 1999 and 2000 (see chart 6), when the loan growth rate sometimes exceeded 8%. While the annual loan growth rate of all Austrian banks still came to 4.1% in mid-2004, it dropped to 3.2% in August 2004. The loan growth levels of the ten largest Austrian banks (in terms of total assets) were similar to the entire banking sector, peaking at 3.6% in June 2004 and then declining to 2.1% in August 2004.

Chart 6



A breakdown by banking sectors shows that lending by building and loan associations has remained weak. At -0.9%, however, the decrease in lending was much less pronounced in August 2004 than it had been at the beginning of the year (-3.3%). Lending in the other banking sectors

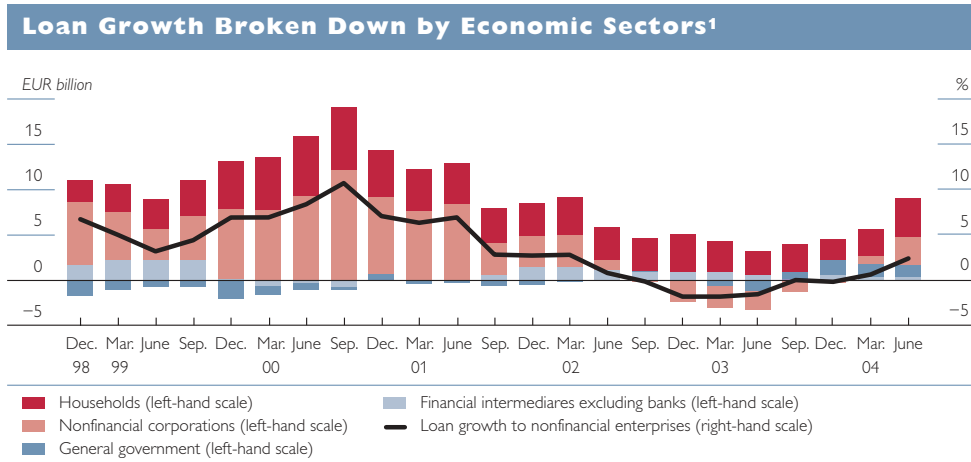
was within the normal range in the first half of 2004.

An analysis of loan growth by economic sector reveals that especially corporate lending picked up in the first half of 2004 following reluctant development in 2003. In May 2004 the annual growth of loans to non-

financial corporations was 2.4% (see chart 7), while at the end of 2003 loan growth had still been negative (−0.2%). Compared with the volume of new loans in other economic sectors, corporate borrowing still recorded the lowest growth rate,

however. With a 6.4% growth rate in May 2004, household demand¹⁶ for loans strongly increased in comparison with 2003, which reflects that consumer demand has somewhat recovered.

Chart 7



Source: OeNB.

¹ As the statistical reporting system for loans to nonfinancial corporations and households was changed in June 2004, the comparability of data relating to developments past June 2004 is limited. This means that currently only credit data up to May 2004 can be used for analysis.

With an annual growth rate of 5% in May 2004, loans to general government also experienced a marked year-on-year rise as the public sector relied more strongly on financing through bank loans. Loans to nonbank financial intermediaries grew by 2.5% in May 2004 year on year.

Credit Quality Remains Stable

For most Austrian banks, credit risk presents the most critical source of risk. The current credit risk exposure is assessed on the basis of the external auditor's annual prudential report for 2003 and intrayear analyses of specific loan loss provisions. Data re-

corded in the Major Loans Register are also used for this purpose, as credit quality assessment should particularly take into account large-volume loans.

Data from the external auditor's annual prudential report for 2003, which have been available since mid-2004, provide the framework for the assessment of credit quality and the associated credit risk of Austrian banks. The report distinguishes between *nonaccrual* and *nonearning* claims, *nonperforming* claims and *irrecoverable* claims on nonbanks.¹⁷ According to the report's results, Austrian banks' credit quality in

¹⁶ Growth in household borrowing can to a large part be attributed to foreign currency loans. For data-related reasons, repayment vehicles and accordingly 'hypothetical' installments could not be taken into account for the calculation of the loan volume.

¹⁷ *Nonaccrual* and *nonearning* claims are claims on nonbanks that are not expected to make payments in the near future. *Nonperforming* claims are claims that are expected to default, and *irrecoverable* claims are claims which have already defaulted at the time of data compilation.

Table 7

Credit Quality According to the External Auditor's Annual Prudential Report							
	1997	1998	1999	2000	2001	2002	2003
	As a percentage of total lending						
Nonaccrual and nonearning claims on nonbanks							
50% quantile (median)	0.11	0.19	0.16	0.12	0.10	0.11	0.13
Mean of ten largest banks	1.11	1.13	1.02	0.90	0.73	0.64	0.74
95% quantile	3.89	3.82	3.93	3.37	3.54	3.08	2.86
Nonperforming claims							
50% quantile (median)	2.28	2.43	2.30	2.44	2.34	2.30	2.23
Mean of ten largest banks	2.84	2.12	2.00	1.73	1.77	1.59	1.47
95% quantile	8.67	8.64	8.87	9.07	9.25	8.22	8.05
Irrecoverable claims							
50% quantile (median)	0.53	0.55	0.57	0.55	0.49	0.57	0.57
Mean of ten largest banks	0.40	0.43	0.46	0.44	0.42	0.60	0.63
95% quantile	4.17	4.15	4.11	4.01	4.04	3.83	3.91

Source: OeNB.

2003 was satisfactory on the whole; there were no developments that would have given cause for concern.

The average irrecoverable claims of Austria's ten largest banks (in terms of total assets), however, have been increasing in recent years. While the share of irrecoverable claims in total claims stood constantly at about 0.4% from 1997 to 2001, this percentage hovered around 0.6% in the past two years. This is an indicator of a minor deterioration of major banks' credit quality, as the share of nonaccrual and nonearning claims also grew slightly over the same period of time, rising from 0.64% in 2002 to 0.74% in 2003 (see table 7).

Also the 95% quantile's share of irrecoverable claims in the overall credit portfolio has increased, expanding from 3.8% in 2002 to 3.9% in 2003. The values for the median did not change significantly in comparison to the previous year.

Although irrecoverable claims have increased in the two above-mentioned categories, the overall develop-

ment of credit quality in 2003 gives no cause for concern.

Lower Level of Loan Loss Provisioning in the First Half of 2004

Since the external auditor's prudential report only contains annual data, in-trayear assessments of Austrian banks' credit quality must be based on the loan loss provisions as stated in banks' monthly reports to the OeNB. The ratio of specific loan loss provisions¹⁸ to claims on nonbanks is usually higher at the beginning of the year than toward the end owing to seasonal factors and is thus considered on a year-on-year basis. The majority of loan loss provisions result from claims on nonbanks. Loss provisions for loans to banks are usually low and are thus not taken into account in the following analysis.

In the first eight months of 2004 the ratio of specific loan loss provisions to claims on nonbanks improved slightly year on year. In August 2004 it was 3.3% as compared to 3.4% in August 2003. In particular the savings

¹⁸ Specific loan loss provisions for claims on nonbanks are included in banks' monthly reports; they show which risk provisions are in place for cases in which a borrower's solvency is doubtful.

bank, state mortgage bank and special purpose bank sectors reported lower ratios. In these sectors, the ratio stood at 3.7%, 2.0% and 0.7%, respectively in August 2004. By contrast, the ratio of specific loan loss provisions to claims on nonbanks in the Raiffeisen sector rose in 2004, reaching 4.3% in August 2004. In the joint stock bank sector, the picture was mixed. While at the beginning of 2004 the ratio of loan loss provisions to claims on nonbanks improved year on year, it deteriorated slightly in August 2004 and reached 2.8%.

For the purposes of the Major Loans Register of the Oesterreichische Nationalbank, banks have to report loans which exceed EUR 350,000, including their respective credit lines and the actual use thereof broken down by month and loan type. Moreover, banks have to indicate the value and total amount of collateral, the ratio of specific loan loss provisions to major loans as well as the internal credit ratings of the individual borrowers.

The risk and credit quality of major loans can be assessed through an analysis of collateral and specific loan loss provisions. The share of uncollateralized loans in total outstanding major loans was particularly high in the state mortgage bank sector. At 80.1%, it clearly exceeded that of other sectors, where the corresponding percentage ranged from 60% to 70% in June 2004. Measured against

uncollateralized loan volume, specific loan loss provisions, which are recorded in the Major Loans Register¹⁹, were highest in the Volksbanken sector (4.7%). In June 2004, this ratio, which is an indicator of the credit quality of uncollateralized loan volumes, was 2.5% for all Austrian banks, which meant a slight improvement in comparison with the previous year (2.6%).

Foreign Currency Loans Remain Popular with Households

In June 2004, the total amount of foreign currency loans to domestic nonbanks peaked at EUR 47.6 billion. Their share in all loans granted to Austrian nonbanks was 19.3%, an unprecedented percentage though only slightly above the monthly average of 18.5% recorded between June 2000 and June 2004.²⁰

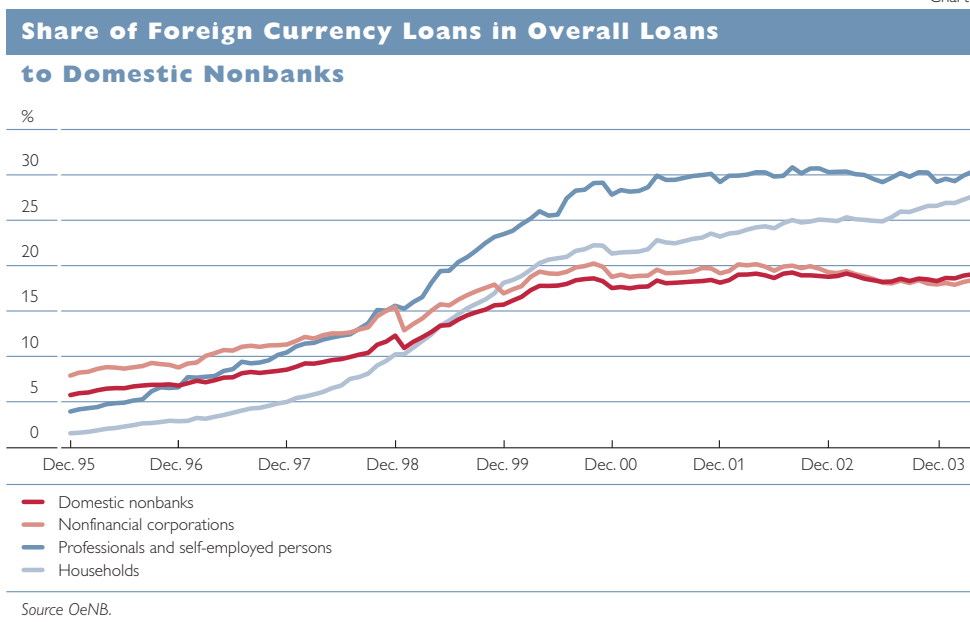
This development can once more be mainly attributed to household borrowing. After a period of stagnation in the first half of 2003, foreign currency loans for households experienced continuous growth again. In May 2004,²¹ 28.2% or EUR 19.5 billion of loans to domestic households were foreign currency-denominated. This marked increase led to a new peak in the period under review. A particularly high exposure to foreign currency loans was recorded among professionals and self-employed persons, where the share of foreign currency loans has been hovering around

¹⁹ The Major Loans Register records specific loan loss provisions for both claims on banks and nonbanks.

²⁰ As there is no information on repayment vehicles accumulated for paying these loans back, these figures represent an upper limit. What has to be considered, however, is that, although repayment vehicles in part reduce the credit risk of foreign currency loans, foreign exchange risk and the associated indirect credit risk is only reduced if the currency of the chosen repayment vehicle matches the currency in which the loan was issued.

²¹ As the supervisory reporting system for loans to nonfinancial corporations and households was changed in June 2004, the comparability of data relating to developments past June 2004 is limited. Therefore currently only credit data up to May 2004 can be used for analysis.

Chart 8



30% since mid-2001. At 18.3%, non-financial corporations' exposure to foreign currency loans has remained stable (see chart 8).

Nowadays the majority of foreign currency loans is denominated in Swiss francs. In August 2004 this was true for 87.2% of all foreign currency loans issued to nonbanks. As a consequence, the share of loans denominated in Japanese yen dropped to 6.7% in August 2004, close to the U.S. dollar's level (5%). This trend away from the Japanese yen and toward the Swiss franc is a welcome development with respect to financial stability, as the exchange rate of the euro against the Swiss franc is less volatile than that against the Japanese yen. Nevertheless, the absolute and

relative level of foreign currency borrowing should be monitored closely in the interest of financial stability.

Market Risk

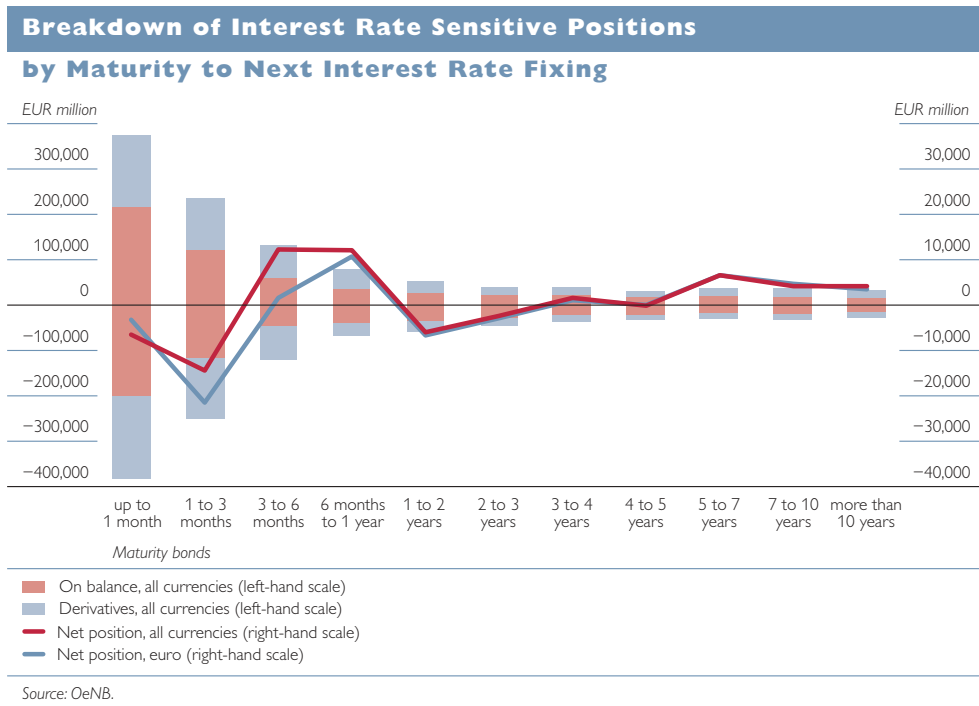
Interest Rate Risk Exposure Remains Moderate and Largely Limited to the Euro Area

Austrian banks' interest rate risk exposure resulting from maturity transformation remains moderate. In the aggregate, interest rate sensitive assets²² more or less equal liabilities within the same maturity bands; in other words, there is no danger of extraordinarily risky net positions arising within the individual maturity bands (see chart 9).²³

²² Including non-interest rate sensitive assets whose performance banks assess on the basis of market interest rates.

²³ This applies to the data of the interest rate risk statistics, which assign the positions in accordance with the next interest rate fixing to 13 maturity bands. These data do not comprise the trading book positions of banks running a so-called "large trading book." Derivatives are decomposed in synthetic assets and liabilities.

Chart 9



A breakdown of interest rate risk by currency reveals that the euro accounts for a large part of the exposure, as chart 9 also shows. In the maturity bands of more than six months, the net position comprising all currencies more or less equals the euro net position. The overwhelming amount of euro exposure corroborates the results of the stress tests for interest rate risk presented in this report's section on banks' risk-bearing capacity.

The Basel ratio for interest rate risk, which can be extracted from the data presented here, indicates the decline in a bank's value that would follow from an interest rate change in relation to its eligible regulatory capital. A parallel yield curve shift for the individual currencies by 200 basis points causes the average regulatory capital of Austrian banks to decrease by 10.9% for the first half

of 2004, compared with 10.1% at the beginning of the year. Since both this relatively high percentage and its increase are attributable to smaller banks, this development should not be regarded as a threat to systemic stability. After all, during the same period, the average of the Basel ratio for interest rate risk weighted by total assets shrank from 7.8% to 7.5%. Furthermore, the values are put into perspective when taking into account that the original level of the capital ratio was as high as 14.7% in August 2004.

Austrian banks' capital requirements for position risk of interest rate instruments of the trading book again increased slightly in the first half of 2004. The rise from EUR 470 million to EUR 515 million indicates an expansion of interest rate trading but still remained below historic highs.

Level of Equity Price Risk and Direct Exchange Rate Risk Increases but Remains Low

Banks stepped up their equity trading activities more strongly than interest rate trading. The capital requirement for equity position risk in the trading book went up from EUR 28 million to EUR 52 million in the first half of 2004. This value, however, is still below the historic high of EUR 110 million recorded in mid-1999. Despite stepped-up equity trading, the risk potential in equity trading continues to be small due to Austrian banks' limited exposure. Stress tests carried out for traded equity positions at the aggregate industry level support this conclusion.

Capital requirements for open foreign exchange positions indicate that Austrian banks' exposure to direct exchange rate risk increased only slightly in the first half of 2004, from EUR 55 million to EUR 66 million, which is still a little below the average of the last two years.

Payment Systems

The smooth functioning of payment systems is essential for financial stability. Hence, the European System of Central Banks is entrusted with payment systems oversight. In performing this task, which is set down in law at the national level through Article 44a Federal Act on the Oesterreichische Nationalbank, on January 1, 2004, the OeNB began to compile data on the type and volume of transactions processed through electronic payment systems as well as disturbances in these systems.²⁴

The following systems are subject to oversight by the OeNB: ARTIS, the payment system operated by the OeNB which links Austria to the pan-European central bank payment system TARGET, Wiener Börse AG's and Oesterreichische Kontrollbank AG's securities trading, clearing and settlement systems as well as 14 payment systems for processing retail payments. In addition, the OeNB is responsible for overseeing providers of infrastructure which is relevant to the smooth functioning of payment systems as well as Austrian banks' participation in international payment systems.

In the first half of 2004, a total of 183.4 million transactions were processed through Austrian systems (this amount equals around 24% of bilateral payments, i.e. interbank payments, in Austria²⁵). 1% of transactions were processed through ARTIS, 0.3% through securities trading, clearing and settlement systems and 98.7% through retail payment systems. Austrian banks processed around 3 million transactions through international payment systems.

In terms of value, the transactions processed through payment systems totaled EUR 4,279.8 billion in the period under review (this amount is about 2.8 times the value of bilateral payments settled in Austria). ARTIS accounted for 97.5% of transactions processed, securities trading, clearing and settlement systems for 2.1% and retail payment systems for 0.4%. Austrian banks processed transactions representing a value of EUR 578 billion through international payment systems.

²⁴ Defined as any system standstill exceeding 30 minutes during operating hours or any standstill due to system disruption during the last 30 minutes preceding settlement cut-off.

²⁵ Comparable data extracted from ECB, Blue Book 2003.

System disturbances observed in the first half of 2004 were of minor significance. All in all, the level of

system availability was very high in the period under review.

Table 8

Payment Systems (Period under Review: January to June 2004)¹

	Volume (million)	Value (EUR billion)	System disturbances
ARTIS	1.8	4,174.50	4
Securities trading systems	0.5	89.8	0
Retail payment systems	181.1	15.4	12
Participation in international payment systems	3	578	11
Interbank payments	763.3	1,511.60	..

Source: OeNB.

¹ Number and value of bilateral payments correspond to the average half-year figures of 2003.

Risks Incurred Through Business in Central and Eastern European Countries²⁶

CEECs Continue to Offer Growth Potential for Austrian Banks

Leading the way in investment in Central and Eastern Europe, Austrian banks started to expand into the region years ago; today, their subsidiaries hold substantial market shares in the region. As early as in the mid-1980s, the first Austrian banks ventured into the market. In the meantime, a total of 11 Austrian banks operate subsidiaries and branches in 14 CEECs. Domestic credit institutions have come to view the region as an “enlarged home market.” The major banks seek to further strengthen their foothold in the CEE market – first and foremost by expanding their branch networks, but there are also signs that they may be willing to make new acquisitions. The CEE markets still hold enormous growth potential, which is highlighted by the small share of personal loans

(7% of GDP). By comparison, the ratio of personal loans to GDP in the euro area is as high as 49%. In any case, business continues to flourish thanks to the bright economic environment and rising middle class incomes, which in turn boost demand for banking products (mortgage loans, private pension plans).

Business and Profitability Continue to Increase²⁷

Austrian banks’ business activities in the CEECs continue to expand at a stable rate, both in terms of total assets and profitability.

The aggregate total assets of Austrian banks’ subsidiaries in these markets came to EUR 89.3 billion at the end of June 2004, up 25.5% or EUR 18.1 billion against the previous year. By comparison, the increase recorded between June 30, 2002, and June 30, 2003, had amounted to 13% or EUR 8.1 billion. Since CEE comprises both new EU Member States²⁸ and countries that are due to

²⁶ This section covers developments in the 14 Central and Eastern European countries in which Austrian banks operated fully consolidated subsidiaries as at June 30, 2004.

²⁷ On the basis of quarterly reports on condition and income, which Austrian banking groups have submitted since early 2002. These reports comprise selected positions taken from the consolidated annual accounts of the parent banks and their fully consolidated subsidiaries abroad.

²⁸ The Czech Republic, Hungary, Poland, Slovenia, Slovakia.

join the EU in a second enlargement round²⁹ as well as other countries³⁰ and because growth dynamics in the region thus vary, it appears reasonable to differentiate accordingly when describing developments in the region: The new EU Member States accounted for 55% of total asset growth posted by Austrian subsidiaries in CEE between June 30, 2003, and June 30, 2004 (compared with 22% one year earlier). The countries joining the EU in the second round of enlargement, by contrast, contributed almost 62% (one year later: 23%) to total asset growth of EUR 8.1 billion between June 2002 and June 2003. Furthermore, total asset growth of the subsidiaries in the new Member States was 17.6% between June 30, 2003, and June 30, 2004, while the countries of the second round of enlargement recorded an increase of 37.7% and the other markets doubled their total asset growth rate (which had been very low, however).

At 33% year on year, Austrian CEE subsidiaries' claims on non-banks³¹ expanded more rapidly than total assets (+25%) in the first half of 2004. In the same period of the previous year, the growth rates were 23% and 13%, respectively.

The operating profits of Austrian subsidiaries in CEE went up 33% to EUR 855 million between June 30, 2003, and June 30, 2004. During the same period, the cost/income ratio improved from 62.6% to

58.9% (in the first half of 2002, it had been as high as 63.3%). This positive trend is essentially attributable to the fact that operating income increased more sharply than operating expenses. The subsidiaries accounted for 20% of their 11 parent banks' total assets and earned 40% of their operating profits.

Stepped-Up Competition

May Diminish Margins

International banking activities have facilitated and fostered the development of the CEE banking market, thereby enhancing stability in international banking. Furthermore, by contributing to the stability of banking systems, EU enlargement also adds to their sustainability. While for the time being, the operating income earned in these markets continues to make positive contributions to Austrian banks' business results, fiercer competition, especially in the new EU Member States, will drive down margins in these markets and local market conditions will increasingly resemble those in Austria.

Risk-Bearing Capacity

Capital Ratio Remains High

Austrian banks' capital ratios, a key indicator of banks' risk provisions, continued at a highly satisfactory level over the past few months. After reaching a high of 14.98% towards the end of 2003, the unconsolidated capital ratio³² of all Austrian banks

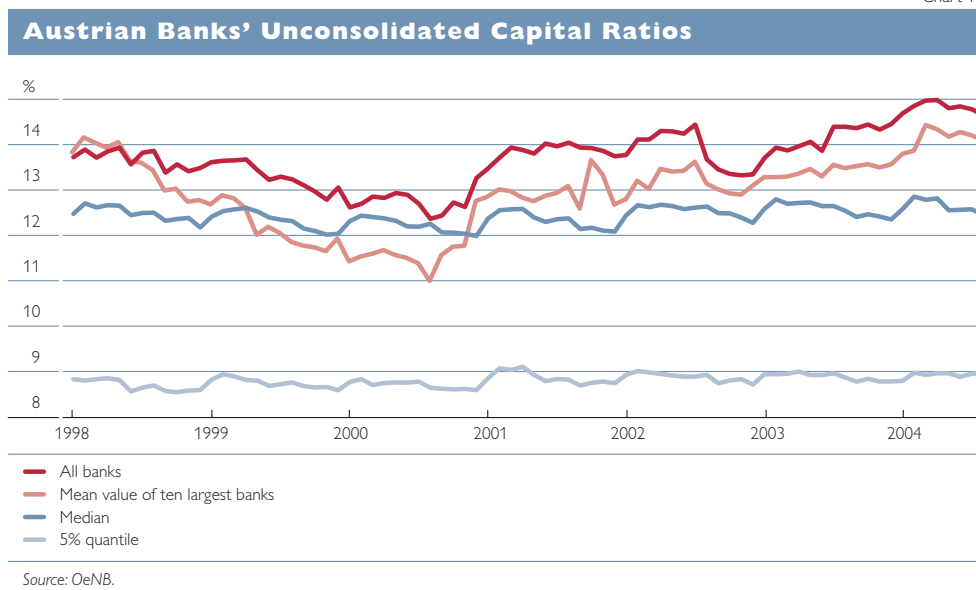
²⁹ Bulgaria, Croatia and Romania.

³⁰ Albania, Bosnia and Herzegovina, Belarus, Serbia and Montenegro, Russian Federation and Ukraine.

³¹ Loans extended by Austrian subsidiaries operating in CEE (indirect loans).

³² The capital ratio discussed in the following refers to the capital eligible as credit risk cover under the Austrian Banking Act (tier 1 capital plus tier 2 capital minus deductible items) as a percentage of the assessment base (according to Article 22 paragraph 2 Austrian Banking Act). The result of this calculation may differ from the capital ratios quoted in other OeNB publications, which usually also include tier 3 capital and are therefore obviously higher. However, as tier 3 capital is subordinated capital that may only be used as capital charge for market risk, it was not included here for the purpose of assessing capital adequacy primarily in relation to credit risk.

Chart 10



went down slightly in the first half of 2004. At 14.7% in August 2004, it still stood at a very high level, however, clearly above the required minimum capital ratio of 8% (see chart 10).

Especially the ten largest banks have tended to hold more capital. The mean capital ratio of the ten largest banks (in terms of total assets) also stood at record levels during the past few months compared with previous periods; in August 2004, it came to 14.1%. At 12.5% in August 2004, the capital ratio of the median was below that of the major banks.

Little has changed for the 5% quantile, which represent the banks with comparatively low capital ratios. In August 2004, the capital ratio of the

5% quantile came to 9%, which is in line with the long-term average. Put differently, by mid-2004, 95% of Austrian banks reported unconsolidated capital ratios of more than 9%.

Also, there is no evidence that capital adequacy levels differed substantially across sectors.

As to the core capital ratio, which by relating tier 1 capital (core capital) to the assessment base also provides information about banks' capital adequacy, the industry total of all Austrian banks was also comparatively high. Contrary to previous periods, Austrian banks' core capital ratio was continuously above the 10% mark in the first half of 2004.

All in all, Austrian banks have a strong risk-bearing capacity.

The European Supervisory Framework

Prudential supervision in the EU is currently based on the principle of national responsibility for banking supervision, the regulatory harmonization of certain minimum standards (in conjunction with the principle of mutual recognition) as well as bilateral and multilateral supervisory cooperation. This framework inter alia implies that banking groups which operate internationally are supervised by various supervisory institutions (which may pursue different approaches of supervision).

Against this background – in particular in light of the increase in cross-border activities, growing centralization of certain functions at group level and the upcoming introduction of more complex and more risk-sensitive capital adequacy requirements (Basel II) – in recent months major banks have repeatedly called for the establishment of a lead supervisor. The idea of a lead supervisor entrusted with key supervisory powers and responsibilities is based on the aim to facilitate a kind of one-stop shopping for banking groups and to reduce the costs of cross-border activities by applying the same supervisory rules to the entire group. For many, however, establishing a lead supervisor is only a possible intermediate step to the ultimate goal of creating a single European (banking) supervisory authority, which could, for example, be modeled along the lines of the European System of Central Banks.

Viewed from the perspective of regulation and financial stability, these alternative ideas, especially the concept of a lead supervisor, give rise to a number of questions as regards, for instance, the precise delimitation of powers (including liability), accountability, market proximity, the possibility of taking into account local data, ensuring a level playing field for all institutions in the same market, crisis management (e.g. the use of tax money, deposit insurance), etc. Furthermore, before taking a further step towards the centralization of prudential supervision it should be considered whether the Single Market has already been realized to an extent deemed sufficient both in banking and finance and as regards the general (legal) framework.

Supervisors and central banks have therefore suggested that, at least for the medium term, the established consolidated supervisor model should be refined: the tasks and responsibilities of the consolidated supervisor could be enhanced where necessary and cooperation among supervisors could be stepped up. Furthermore, the newly created Committee of European Banking Supervisors (CEBS), which performs the tasks of a so-called “level 3 Lamfalussy committee” for the banking sector, should play a key role and help ensure increased convergence of supervisory practices.

Stress Tests Confirm Austrian Banks' Adequate Resilience to Shocks

The OeNB's Financial Stability Report 7 for the first time presented the results of standardized stress tests for the quantitative assessment of the aggregate Austrian banking system's risk-bearing capacity as regards credit and market risk. The OeNB conducted these stress tests for the reference date June 30, 2004, applying the same methodology and the same stress scenarios as last time.³³ Table 9 provides a summary of the stress test results.

Most importantly, the results show that the negative impact of the shocks applied on the capital ratio of the entire banking system increased only slightly in the stress test for credit risk and remained broadly unchanged in the stress test for market risk in comparison with early 2004. The small increase in the potential loss due to credit risk is more than offset by banks' higher capital ratios, however. In other words, the Austrian banking system improved its shock resilience in the first half of 2004.

³³ For details on the methodology and scenarios applied, see the box “Stress Tests for the Quantitative Assessment of the Banking System's Risk-Bearing Capacity” in Financial Stability Report 7 (pp. 37–38).

Table 9

Stress Test Results for the Aggregate Austrian Banking System

	%			Capital ratio
Current capital ratio				14.84
Credit risk				
Domestic credit exposure				
Increase in the ratio of loan loss provisions to loans outstanding by		+30		13.88
Credit exposure in Central and Eastern Europe				
Increase in the ratio of loan loss provisions to loans outstanding by		+40		14.55
Foreign currency loans				
Appreciation of the Swiss franc against the euro by		+10		14.54
Appreciation of the Japanese yen against the euro by		+20		14.75
Accumulated credit risk				
Aggregate analysis of all three credit risk components ¹				13.23
Market Risk				
	Basis points			Capital ratio
Interest rate risk	short-term	medium-term	long-term	
EUR Upward parallel shift of the yield curve	130	130	130	14.36
USD Upward parallel shift of the yield curve	110	110	110	14.78
CHF Upward parallel shift of the yield curve	150	150	150	14.83
JPY Downward shift of the yield curve ²	-20	-40	-130	14.83
	%			Capital ratio
Equity price risk				
Crash of the Austrian stock market, ATX falling by		-30		14.69
International stock market crash, international stock indices falling by		-35		14.61
Exchange rate risk				
Worst case estimation ³ appreciation/depreciation of the euro by		±10		14.76

Source: Own calculations based on data reported to the OeNB.

¹ Increase in the ratio of loan loss provisions to loans outstanding by 30% for claims on domestic nonbanks in euro and by 40% for direct and indirect claims on CEE nonbanks as well as an appreciation of the Swiss franc by 10% and of the Japanese yen by 20%.

² The Japanese yen was assumed not to have undergone a parallel downward shift to avoid a scenario with negative interest rates.

³ Decline in absolute values of all banks' open foreign exchange positions in the twelve most important currencies (excluding CEE currencies).

Credit risk continues to have the largest influence on capital ratios. In the aggregate scenario, in which all three credit risk components – i.e. an economic slowdown in Austria and in the CEECs as well as increased credit risk in foreign currency loans due to an appreciation of the Swiss franc and the Japanese yen – materialize, the capital ratio drops by 1.61 percentage points. The impact is thus 0.23 percentage point higher than at the beginning of the year. Since the actual capital ratio rose by 0.40 percentage point to 14.84% in the first half of 2004, though, the capital ratio in the stress scenario only falls to 13.23% (against 13.06% at the beginning of the year).

Of the individual credit risk components, a slowdown of the

domestic economy has the largest impact (–0.96 percentage point), followed by a slowdown in the CEECs and the appreciation of the Swiss franc (around –0.3 percentage point each). The stress tests for foreign currency loans reflect the ongoing rebalancing of Japanese yen-denominated loans to Swiss franc-denominated loans observed in the first half of 2004. Accordingly, an appreciation of the yen currently affects the capital ratio much less severely than at the beginning of the year (reduction in the capital ratio by 10 basis points against 16 basis points in early 2004), whereas the appreciation of the Swiss franc has a somewhat larger effect (with the capital ratio declining by 30 basis points against 28 basis points at the beginning of the year).

Furthermore, the stress tests revealed that the interest rate risk within the euro area, or, more precisely, an upward shift of the yield curve, remained the component of market risk which is likely to cause the largest (if limited) losses. The imputed parallel shift by 130 basis points reduces the capital ratio of the aggregate Austrian banking system by 48 basis points. In an aggregate

scenario of stock market crashes (with international stock prices falling by 35% and domestic stock prices by 30%), the capital ratio drops by 38 basis points. The worst case scenario for direct exchange rate risk shows that the potential loss resulting from open foreign exchange positions remains limited, with the capital ratio falling by no more than 8 basis points.

New Austrian CAMEL Ranking of Banks

This box provides a first overview of the Austrian CAMEL ranking of banks, a key element of bank examination in Austria.³⁴ Already several years ago, some key elements of the Federal Reserve's rating system CAMEL, under which examiners assign a rating for each of the five components described below to derive a composite rating, were implemented in bank examination in Austria; this approach has now been reviewed and revised to allow a quarterly update of rankings. A ratio for each of the five areas outlined below is calculated for all banks on the basis of the reports provided by the banks; then, the banks are ranked according to these ratios. In a final step, the ranks of the banks for each component – based on the overall relevance and the distribution of the individual ratios – are weighted and added, which yields an average weighted composite rank. If certain ratios cannot be calculated (for instance because a new bank lacks data on the previous year) these ratios will be replaced by the corresponding median values of all banks. These more or less "neutral" values are used to ensure an undistorted assessment of such banks based on the remaining ratios. The table below shows the five components, the corresponding ratios and their weights in the Austrian CAMEL framework.

C	Capital	Solvency ratio	0.5
A	Asset Quality	Risk-weighted loans/total loans	2.0
M	Management	Profitability ratio: quarterly report 3 to quarterly report 5	1.0
E	Earnings	Annual result/core capital	2.0
L	Liquidity	Maturity transformation	0.5

The capital ratio is based on the data from the monthly report and calculates a type of solvency ratio by taking into account market risk. Asset quality is assessed by multiplying the loans as recorded in the Major Loans Register adjusted for collateral and specific loan loss provisions by the probabilities of default of the respective OeNB ratings and adding these together. The risk exposure thus obtained, which also covers the approximate amount of small loans recorded in the monthly reports, is then related to the total amount of loans. While all other indicators are updated on a quarterly basis, the ratio approximating the qualitative criterion of management quality can only be calculated on an annual basis, since it is defined as the percentage deviation between the projected income from ordinary activities according to the third quarterly report of a year and the actual income from ordinary activities. To reflect a bank's profitability, the annual result before risk provisions as reported quarterly is related to the core capital, which yields a return on equity ratio. Finally, liquidity is based on the report of residual maturities and serves as a measure of the transformation of capital lockup periods.

Austrian Major Banks' Ratings Remain Stable
Moody's Investors Service assigns not only conventional ratings for savings,

sight and time deposits and bank deposit ratings but also Bank Financial Strength Ratings (BFSR).³⁵ Unlike

³⁴ A detailed publication is scheduled for spring 2005.

³⁵ The ratings range from A to E, and + is used to further refine the rating.

deposit ratings, the BFSR reflects banks' individual fundamental financial strength, regardless of whether the banks rated are supported by third parties (e.g. parent banks, guarantees, etc.). The BFSR for the twelve Austrian banks rated by Moody's currently ranges between B– and C–. During the past one and a half years, two Austrian banks were upgraded in this category: Erste Bank der oesterreichischen Sparkassen AG (Erste Bank) in June 2004 and Kommunalcredit Austria AG in June 2003, both from C+ to B–.³⁶ The upgrading of Erste Bank is attributable mainly to the ongoing integration and cooperation with the savings bank sector, whereas the better rating of Kommunalcredit can be traced to its strategic positioning in the public sector and the extension of its product range.

Both rating categories – deposit rating and BFSR – are supplemented by the additional “outlook” rating, which can be either “positive,” “stable” or “negative.” The outlook rating reflects the medium-term perspective of deposit and BFS ratings. The BFSR outlook of the Austrian banks concerned is generally stable, except for the ones assigned to Raiffeisen Zentralbank Österreich AG and Raiffeisenlandesbank Oberösterreich AG, which are both negative. These negative outlook ratings can be attributed to the banks' strategic orientation and the risks resulting therefrom.

Furthermore, both the deposit rating outlook and the long- and short-term ratings were stable. The withdrawal of Bayerische Landesbank from Bank für Arbeit und Wirtschaft AG in June 2004³⁷ triggered the only downgradings in the long-term range, from A1 to A2 and from A2 to A3 (subordinate debt).

Austrian Banks' Stock Prices Outperform Dow Jones EURO STOXX Banks Index

The ATX Prime Market, which consists of 36 securities, includes three bank stocks (Bank Austria Creditanstalt AG, Erste Bank and Investkredit) with a joint market capitalization of EUR 16.9 billion as at September 30, 2004. Compared with the previous year, this amount increased by EUR 7 billion or 70%. The aggregate market capitalization of the ATX Prime index expanded by EUR 14.6 billion or 43.5% to EUR 48.2 billion between September 30, 2003, and September 30, 2004. Also, the surge of the Bank Austria Creditanstalt AG and Erste Bank stocks by 85% and 57%, respectively, between September 30, 2003, and September 30, 2004, was far more impressive than the performance of the Dow Jones EURO STOXX Banks³⁸ index, which recorded an 18% rise during the same period.

³⁶ B–: Bank Austria Creditanstalt AG, Erste Bank, Raiffeisenlandesbank Oberösterreich AG, Kommunalcredit Austria AG.

C+: Raiffeisen Zentralbank Österreich AG, Österreichische Volksbanken-AG, Bank für Arbeit und Wirtschaft AG, Österreichische Postsparkasse AG, Hypo Alpe-Adria-Bank AG.

C: Landes-Hypothekenbank Vorarlberg AG.

C–: Investkredit Bank AG.

³⁷ Moody's changed BAWAG's rating from Aa3 to A1 as early as at the end of 2003, arguing that the ownership situation was uncertain.

³⁸ The Dow Jones EURO STOXX Banks index comprises 48 European banks.

Other Financial Intermediaries

Insurance Companies

More Favorable Conditions Foster Business Activity and Profitability

The developments in the insurance industry observed in 2003 continued into 2004. The more favorable conditions, both in international financial markets and in individual European insurance markets, had a positive impact on the business activities of insurance companies. Across Europe, shares issued by insurance companies developed broadly in line with the market, with prices moving sideways, following the stronger upward trend that prevailed during the second half of 2003. By comparison, insurance company shares listed (in the prime segment) on the Vienna stock market developed positively, reflecting the positive development of profits on the one hand, and the momentum of Austrian shares on the other. Profitability benefited mainly from better financial results, the strong performance of Central and Eastern European markets and tighter cost management. Austrian insurance companies continue to consider Central and Eastern European markets to be growth markets. In the domestic market, life insurance business continued to be the most important segment in 2004, but premium income from the property insurance business is expected to have grown faster than the overall economy again, as in 2003.

Continued Uptrend for Investment in Foreign Debt Instruments

In the first half of 2004, insurance companies' assets (excluding reinsurance transactions) increased by EUR 3.1 billion to EUR 65.9 billion. As in 2003, this increase is essentially attributable to the rise in external

assets, notably investment in foreign debt instruments. Further reasons for the rise in total assets are, albeit to a lesser extent, the increase in domestic equities and other domestic securities as well as the increase in debt instruments issued by domestic credit institutions. In the first half of 2004, the foreign debt instrument holdings expanded by EUR 2.1 billion to EUR 15 billion, surpassing the results of June 2003 by EUR 3.2 billion. At EUR 16 billion, domestic equity securities and other domestic securities, which posted the second largest rise on the assets side (EUR 819 million), remain the most important balance sheet items. After a cumulative decline by EUR 498 million in the first two quarters of 2004, the loans hit a new record low in terms of value on the assets side since 1996 at EUR 6.7 billion. This is mainly traceable to a decline in lending to the public sector by EUR 519 million to a new low of EUR 5.3 billion. A more favorable investment climate prevailing since the first quarter of 2003 accounted for the decline in deposits of insurers' assets with Austrian banks; at EUR 1.7 billion they decreased by 51.8% year on year. Given that investments by insurance companies correspond to just 1.4% of the total assets of Austrian banks and as this share is trending downward, the insurance industry continues not to pose any contagion risk for the domestic banking sector.

With regard to the liabilities side of the balance sheet, insurance technical reserves accounted for the largest part of liabilities, widening by EUR 3.1 billion (from June 2003) and EUR 2.6 billion (from January 2004) respectively to EUR 58.7 billion as of end June 2004.

Solvency II

During the past few years, large claim payments, weaker capital markets as well as a reduced inflow of new capital (life insurance segment) entailed considerable changes in the conditions under which the insurance industry operates. At the beginning of 2000, the European Commission together with the EU Member States established the Solvency II project, which focuses on reforming the existing supervisory structure of the insurance industry. By mid-2003, the first project phase was concluded, which had been dedicated to define the framework for a new supervisory structure. The new supervisory framework is modeled on the rules and regulations adopted for the banking sector (Basel II); i.e. it is based on a three-pillar approach. This approach comprises financial requirements (first pillar), risk management, internal control procedures and supervisory review (second pillar) as well as regulations on market discipline (third pillar). Solvency II thus basically provides for capital requirements with respect to economic capital³⁹ (target capital) and minimum capital (minimum capital requirements) and set up solvency control levels at which the supervisory authority can or must intervene. As an alternative to the internal models for determining capital requirements, which the supervision reviewed and consequently approved, a risk-based standardized approach shall apply to smaller insurance companies. In this second and last phase, the project has gained particular momentum. The purpose of this stage is to clarify the actual design of the new system and to draft a framework Directive.

The main objectives of Solvency II are to review existing solvency regulations in light of current developments in the fields of risk management, actuarial theory and financial reporting as well as to establish a comprehensive, realistic solvency system that can better match the true risks of insurance companies. Other goals include the harmonization of supervisory frameworks and the creation of a level playing field which does not allow for regulatory arbitrage opportunities between the banking and the insurance industry. To secure coherence between the financial services industries, the general structure of the new system should be in line, to the extent necessary, with Basel II. The idea is that products which involve comparable risks should be supervised in the same way and be subject to the same capital and solvency requirements.

The new solvency system will lead to a paradigm shift in the insurance industry; they will not only impose additional requirements, but they are also expected to help achieve the desired objectives and to promote financial stability.

Pension Funds

Total Assets under Management by Pension Funds Increase

In the second quarter of 2004, 12 single-employer occupational pension funds and eight multi-employer occupational pension funds were active in Austria. In September 2004, two multi-employer occupational pension funds merged and one single-employer occupational pension fund was newly established. Total assets under management by pension funds augmented from EUR 8.56 billion in the second quarter of 2003 to EUR 9.56 billion in the second quarter of

2004, which corresponds to an increase of 11.7%. The pension funds outsourced asset management and asset allocation decision-making by investing in mutual funds shares (EUR 9 billion or 94.1% of total assets). Claims on pension funds amounted to approximately 3% of households' financial assets totaling EUR 311.3 billion.

With a view to securing benefits accrued by active and retired beneficiaries and to creating incentives for pension funds and their shareholders, a law was passed in 1990 which required pension funds to guarantee

³⁹ Depending on the respective corporate strategy, this may be economic capital, rating capital or solvency capital.

a minimum yield on pension contributions. This framework implied that pension funds had to top up contributions if the minimum yield was not reached. However, when an actual need for supplementary contributions materialized for the first time, the rules on the guaranteed minimum yield were amended. The amendment of the Austrian Pension Fund Act adopted as part of the budget trailer bill in 2003 abolished supplementary contributions for future pensioners and significantly reduced these contributions for current pensioners.⁴⁰ This amendment was made because pension funds had argued that they did not have sufficient own funds to cover the risks incurred.⁴¹ The 2003 amendment of the Austrian Pension Fund Act stipulates that only actual payouts (but not the assets themselves) are guaranteed under the guaranteed minimum yield provision. Furthermore, if the investment returns are below the guaranteed minimum yield, the initial averaging period (60 months) will be extended by successive periods of 12 months (Article 2 paragraph 3 of the Pension Fund Act), until active beneficiaries retire or until the investment returns increase to a level above the guaranteed minimum yield. Both active and retired beneficiaries thus face a potential financial loss, because credits initially guaranteed through a supplementary contribution regime were abolished. In addition, they also

forgo the interest they could have earned with those supplementary contributions. The extent of respective losses results from the positive difference between the respective investment return and the guaranteed minimum yield.

On the one hand, the 2003 amendment contributed to the stability of financial intermediaries because the latter are now transferring a larger degree of capital market risk to both active and retired beneficiaries, while earning steadily increasing returns, which after all are primarily dependant on the contributions and not on capital market developments. On the other hand, the 2003 amendment might have negative implications on financial stability, because such ad-hoc legislation creates moral hazard problems and has adverse implications for the reputation of financial governance.

With respect to the stability of financial intermediaries, proposals for waiving the minimum yield guarantee⁴² are generally welcome, as such guarantees have already proved unreliable and as associated administrative costs are eliminated.⁴³ However, unilateral adjustments, without the explicit agreement of the affected beneficiaries, must be avoided with a view to maintaining confidence both in financial intermediaries and the financial system.

⁴⁰ Federal Law Gazette No. 71/2003.

⁴¹ See the draft evaluation of the finance ministry on the federal law amending the Pension Fund Act (GZ. 040010/7-Pr.4/03) of March 28, 2003, Explanatory Notes – General Provisions.

⁴² See the draft evaluation of the finance ministry on the federal law amending the Pension Fund Act and the Company Pension Act (GZ. 23 3700/28-III/5/04) of June 30, 2004, Article 2 paragraph 1.

⁴³ The explanatory notes on the 2004 draft amendment of the Pension Fund Act thus suggest that waiving the minimum yield guarantee would diminish administrative costs. The only cost savings that will actually be passed on retrospectively are contributions to the minimum yield reserve, to be built up since 2003, which becomes irrelevant when beneficiaries opt out of the minimum yield guarantee (to be made possible by the current draft amendment to the Pension Fund Act).

In September 2004, market transparency was significantly increased by joint initiative of Austria's pension funds and the Oesterreichische Kontrollbank (OeKB). Henceforth, the OeKB will publish a quarterly report on average yields and yield volatilities of the various investment and risk-sharing groups in which pension fund members are grouped. Taking into account the long-term investment horizons, these performance indicators are calculated over several periods (six months, three, five and seven years). The indicators refer to five investment and risk-sharing groups reflecting different asset allocation

choices (i.e. the percentage invested in stocks). To enhance long-term financial stability, it would be advisable to further increase market transparency by publishing the corresponding measures for the various multi-employer occupational pension funds as well. The disclosure of such information, in addition to administrative costs and asset management costs, would enable interested parties to make informed decisions about private pension provision. This would help maintain Austria's economic interest in a sound occupational pension fund system.

Nonfinancial Corporations Economy Recovers Faster

The economy recovered faster in the first half of 2004 with real GDP having increased by 1.4% over the previous year. Exports rose sharply owing to the recovery of the global economy and the stabilization of the euro exchange rate. After gross fixed capital formation had risen by 5.3% in 2003 – mostly attributable to replacement investment – investment demand was significantly weaker in the first half of 2004; real gross fixed capital formation increased by a mere 1.5% over the same period of the previous year.

The continued export boom, however, should have a favorable effect on investment demand during the remainder of 2004. The WIFO Investment Survey for 2004 indicated that much. According to the survey, gross fixed capital formation is expected to surge in the manufacturing industry as well as the utility and power industries. In the manufacturing industry real investment growth is expected to come to 5.8%. Thus,

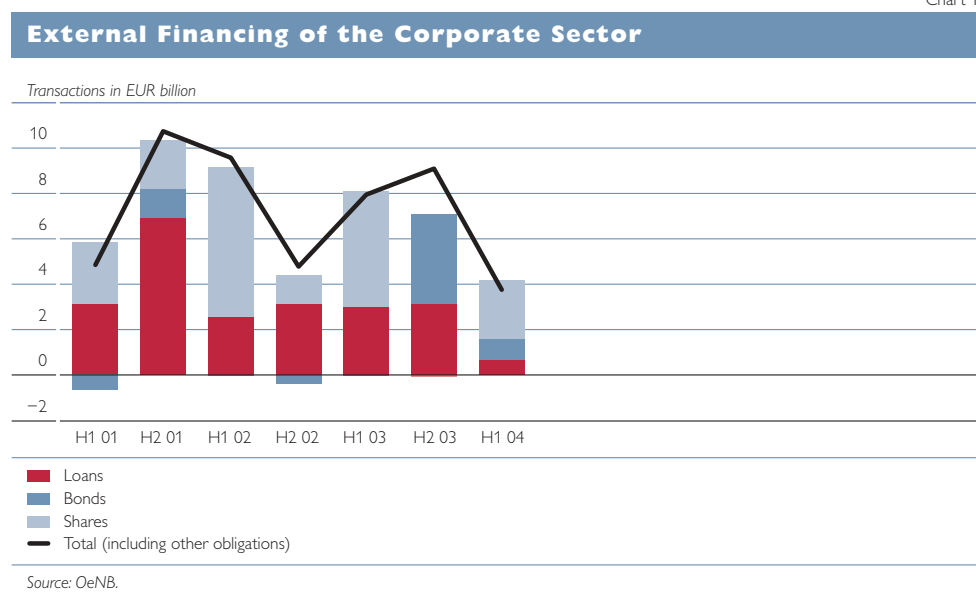
the growth rate is lower than in the boom years of the 1990s.

Equity Covers Most of External Financing Requirements

The soaring investment demand in 2003 also increased the need for financing in the corporate sector: The financial accounts statistics show that external financing – based on the fiscal balance of the corporate sector – increased again last year, after having declined sharply in 2002. In the first half of 2004, however, the need for financing was rather small; net borrowing at EUR 3.7 billion was lower than in the first half of 2003 (EUR 7.8 billion). According to first estimates in 2003, internal financing remained high owing to an increase in operating surpluses, but has slowed down somewhat since.

Companies met their extremely low requirement for funds in the first half of 2004 primarily by issuing securities. The proportion of loans in external financing decreased considerably. The figures shown in chart 11 include not only loans of

Chart 11

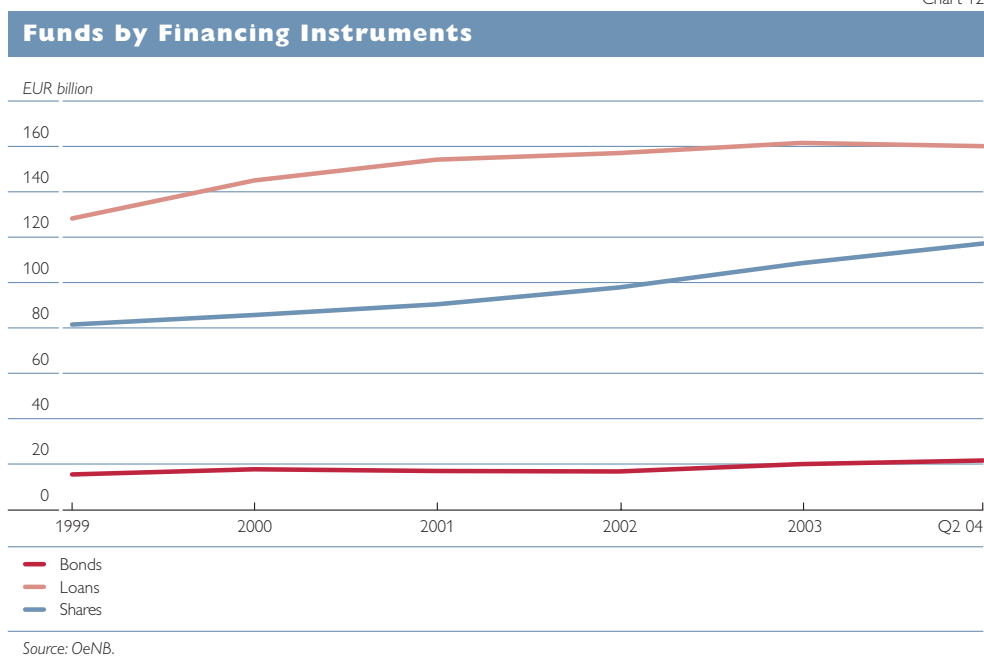


domestic banks but also those of other sectors as well as of foreign lenders.

By mid-2004, the equity ratio had reached 38%, which is some 4 percentage points higher than three years earlier. Compared to the first half of 2003, the proportion of listed stocks in equity capital as a whole climbed from 24.3% to 27.8%. As the corporate sector also issued an increasing

number of bonds, direct corporate borrowing from the capital market covered as much as 45% of external financing in mid-2004 (bonds: 7%, shares: 39%). The proportion of loans in external financing has been declining but still accounts for some 52% of external financing. The remaining 3% were other liabilities.

Chart 12



Fairly High Share of Capital Raised on the Stock Exchange

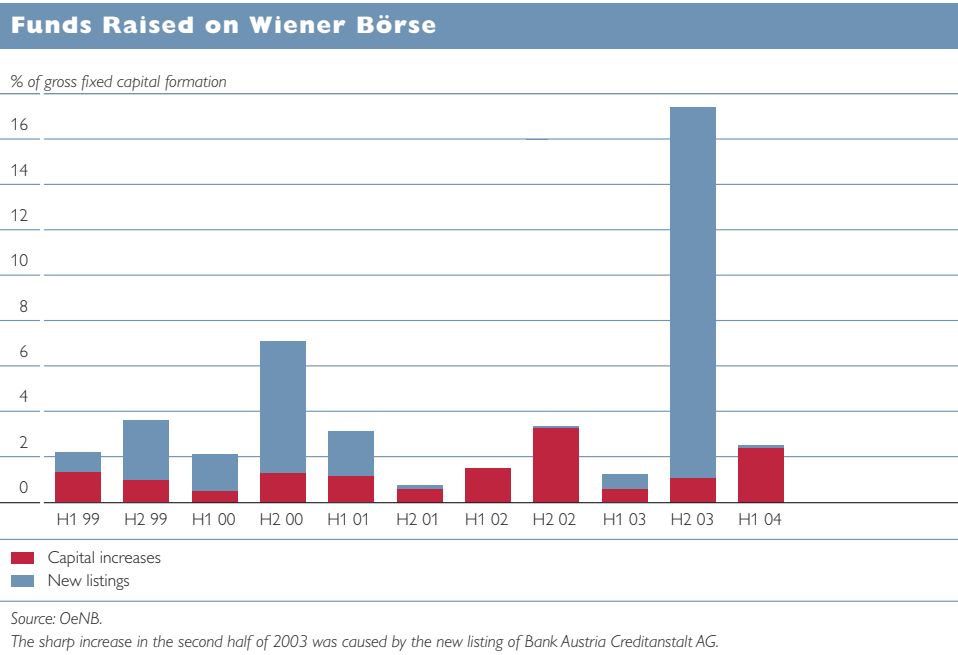
Even though in net terms the stock exchange contributed little overall to equity capital financing, its gross contributions to raising capital augmented in the first half of 2004. The reason for the discrepancy between the gross and net amounts is that stocks were delisted, which further reduced the number of companies listed on the Vienna stock exchange (Wiener Börse) to only 83 at the end of the

third quarter of 2004. (Three years earlier, at the end of September 2001, as many as 100 companies had been listed.)

In the first three quarters of 2004, 11 companies made rights issues against cash or contributions in kind and raised some EUR 800 million in this way.⁴⁴ In addition, there was one new listing to the amount of EUR 24.87 million. Capital increases in the first half year thus accounted for 2.4% of the gross fixed capital formation of the economy overall

⁴⁴ Real estate corporations listed on Wiener Börse accounted for some 40%.

Chart 13

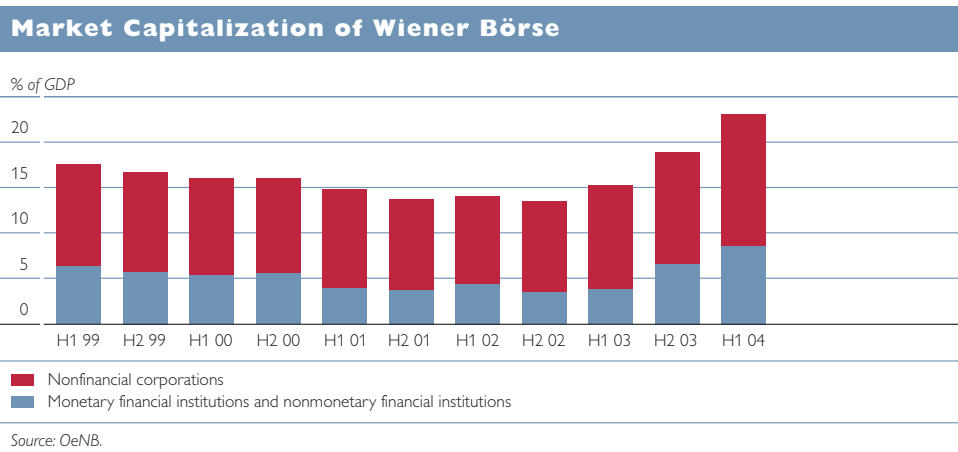


(see chart 13). While this is above the long-term average, it is still significantly lower than the average percentage in the euro area.

As a result of the capital increases but mainly owing to the substantially higher share prices – the ATX climbed 32% in the first three quarters, which is far more than most international stock exchange indices – market capitalization increased above average,

even though some stocks were delisted. At the end of September 2004 market capitalization amounted to about EUR 54.5 billion (23% of GDP), i.e. 20% up from early in the year. In spite of this increase, market capitalization remained fairly low by international standards, coming to approximately 50% of GDP in the entire euro area.

Chart 14

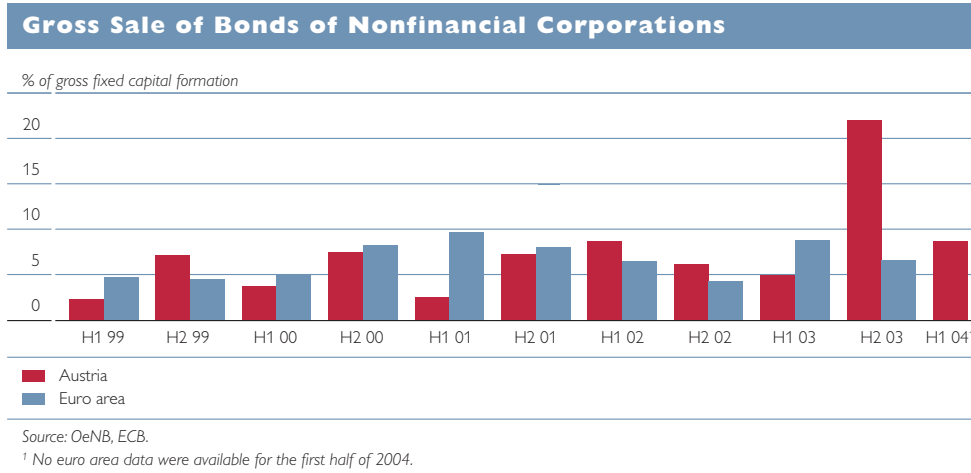


In June 2004, nonfinancial corporations accounted for just over 60% of overall market capitalization of Wiener Börse, with their share having dropped by 10% since mid-2003 mainly as a result of the new listing of Bank Austria Creditanstalt AG in July 2003. By contrast, in the euro area the share of nonfinancial corporations remained stable at three quarters of overall market capitalization.

Higher Share of Bonds in Corporate Funding
Bond issues in the first half of 2004 also accounted for a considerable

share of corporate funding. Even though bonds (domestic issues) accounted for only 7% of total funds, they accounted for more than 20% of the funds nonfinancial corporations raised in the first half of 2004. In this period, the net issuance volume accounted for some 4.3% of the gross fixed capital formation of the economy overall. While this was significantly below the 14% of the second half of 2003, it still exceeded the average since the first quarter of 2000 (2.1%) by far.⁴⁵

Chart 15



The Importance of Bond Issues for Corporate Funding in Austria

In the past few years the corporate bond market in Austria has developed considerably. While issuance activity used to be dominated by energy utilities and other quasi-public corporations, in recent years companies from other industries and, increasingly, smaller firms have also been issuing bonds. The securities database of the OeNB shows that at the end of 2003, a total of 160 companies had issued bonds worth between EUR 0.3 million and EUR 3.2 billion. In 2003, the funds raised by bond issues accounted for as much as 7% of all external financing in the corporate sector, which is a fairly high percentage compared with other countries in the euro area.

Data from the Major Loans Register show that in 2003, bond issues made up an average of about 52% of all external financing of the issuing companies. As a rule, bond issuance does not increase corporate debt but rather replaces bank loans as the borrowing instrument. By issuing bonds, a company may widen its creditor base beyond the range of banks. At the end of 2003, only just under 20% of all corporate bonds outstanding were held by (domestic) banks, some 70% by foreign investors.

⁴⁵ In the first three quarters of 2004 the Wiener Börse attracted six new listings of corporate bonds and there were two capital increases of existing bonds with a nominal value of EUR 366 million. Altogether, 64 corporate bonds were listed at the Wiener Börse.

Bonds are usually used for borrowing with a longer maturity than that of a bank loan. At the end of 2003, the original maturity of more than 80% of the bonds issued by Austrian corporations was more than five years. Unlike loans, where costs are basically proportional to the amount borrowed, costs related to a bond issuance are strongly degressive, owing to a number of one-off issuance costs. Therefore, this instrument is primarily an option for high-volume financing.

Bonds are less flexible than bank loans, as contract modifications (both by the creditor and the debtor) after issuance are virtually impossible; therefore, bonds require a level of creditworthiness of the issuer that is well above average. The fact that securities-based financing – unlike bank loans – is usually not secured by assets also suggests that, as a rule, it is available only to companies with a good credit rating.

Accordingly, there were only few defaults of corporate bonds in the past few years. This suggests that when they select bond issuers, at least the big issuing banks in Austria exercise a great sense of responsibility. So far, no speculative activities have been observed on the Austrian bond market. Owing to the stepped-up issuance of corporate bonds, the risk sensitivity of external financing has improved, as corporate bond prices usually reflect the inherent risk appropriately.

A detailed analysis of corporate bonds in Austria will be published in *Monetary Policy & the Economy Q4/2004*.

New Lending Volume Small

In the first half of this year, the corporate sector took out loans with Austrian banks with a net value of EUR 226 million, which is only a tenth of last year's reference value.⁴⁶ This decline is mainly attributable to the fact that a large number of short-term loans were repaid. A similar pattern was also observed in the first six months of 2001, 2002 and 2003.

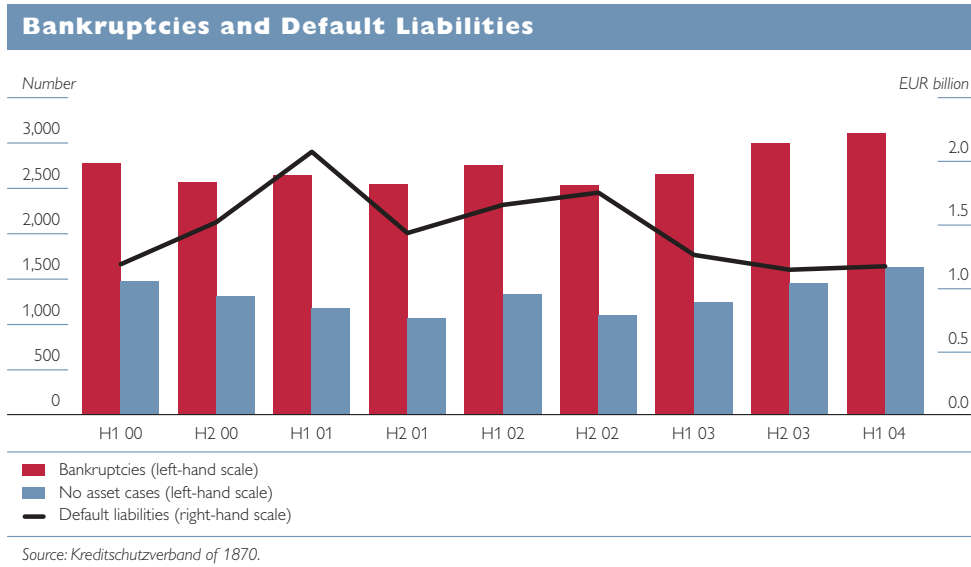
Corporate exposures (liberal professions excluded) started to decrease again in mid-year, after having grown for some months in the first half of 2004 in comparison to the previous year. This development corresponded to the Austrian results of the credit business survey, which found that in the third quarter of 2004 banks slightly tightened the standards for corporate exposures for the first time this year, after the favorable economic outlook had earlier led to a slightly relaxed lending policy.

More Bankruptcies

The credit information company Kreditschutzverband of 1870 (KSV) found that although companies' equity ratio was on the rise, the number of bankruptcies further increased in the first half of 2004 against the first half of 2003. In an analysis of the causes, the KSV cited a "lack of capital" as one of the main reasons for bankruptcy, even for the year 2003. The total number of bankruptcies climbed by 16.8%, the number of no asset cases even jumped by 31.6%, (chart 16). Estimated total liabilities dropped by 7.1% compared to the first half of 2003, but in light of the increasing number of no asset cases this cannot be considered a trend pointing toward a more solid financial situation of companies.

⁴⁶ The allocation of bank loans to sectors in the Financial Accounts is different from the allocation in the monthly report.

Chart 16



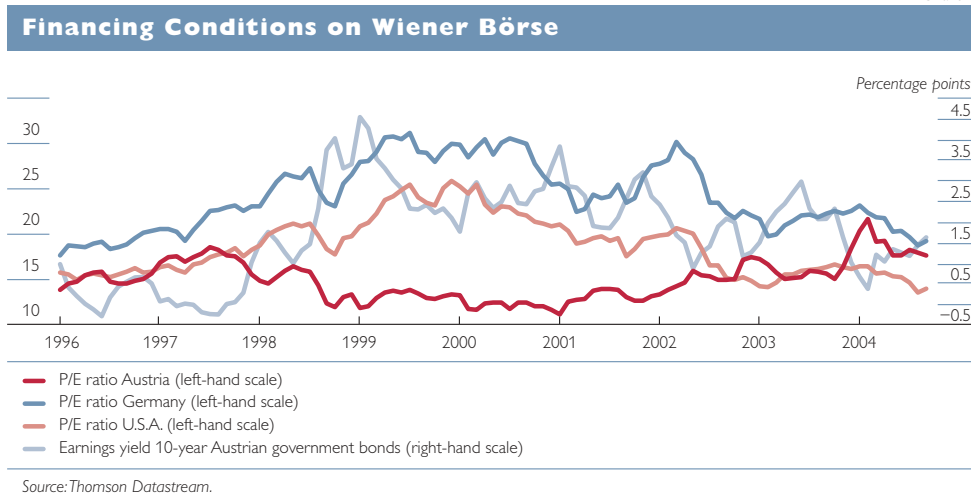
Financing Conditions Remain Good

The conditions for external financing continue to be favorable for Austrian companies in 2004. Financing conditions at the Wiener Börse remained good in a long-term comparison, even though they deteriorated slightly in the course of 2004. The price-to-earnings ratio at Wiener Börse dropped in the second and third quarters (despite rising share prices) and made financing through shares slightly more expensive. At the same time, the price-to-earnings ratio has come

closer to the reference values of other markets in a long-term comparison, after having been far lower for a long time. Since November 2003, it has also been above its ten-year average of 15.9.

Another indicator for the financing conditions at the stock exchange, but also for estimating the risk markup of financing through the stock exchange, is the difference between the earnings yield, i.e. the reciprocal of the price-to-earnings ratio, and the yield of government bonds. In

Chart 17

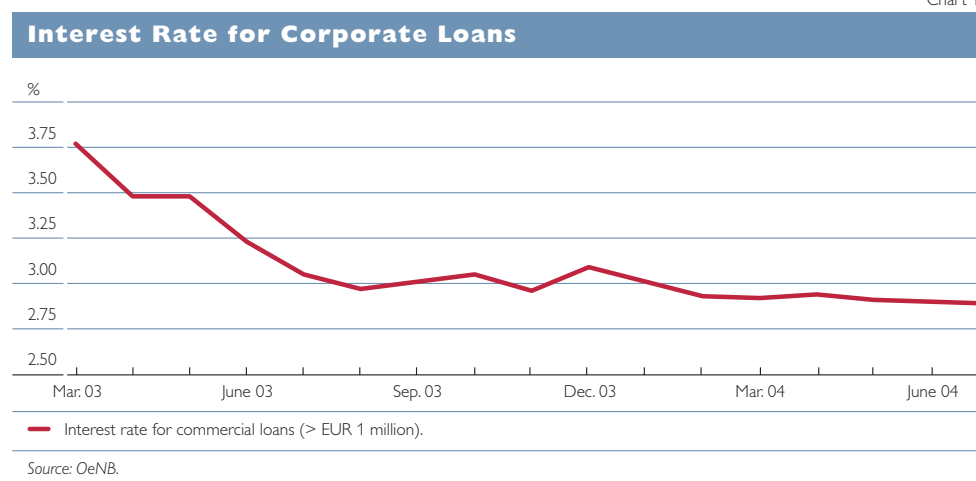


the first three quarters of 2004, this difference soared from 67 to more than 160 basis points, also owing to falling yields of government bonds. This suggests that in that period funding through shares became less attractive in relation to funding through loans or bonds.

Interest rates for corporate exposures also showed a favorable development. From the first half of 2003 to

the first half of 2004 lending rates dropped from an average 3.6% to 2.9% (see chart 18). The Austrian results of the credit business survey also suggest that the terms for corporate loans have been slightly eased in the course of this year. This affected mostly small and medium-sized enterprises, i.e. those enterprises that rely mostly on bank loans for external financing.

Chart 18



Households

Financial Investment Strengthened against the Background of a Subdued Income Outlook

According to the fall economic outlook of the OeNB, real income growth will be a mere 0.9% in 2004. In the first half of 2004, households strongly increased their financial investment in a year-on-year comparison; it reached about EUR 9.5 billion (chart 19). This fact reflects the ongoing uncertainty as to how the economy and income will develop.

In addition, there were structural changes in the composition of financial investment. While 2002 and the first half of 2003 saw a strong demand for liquidity in conjunction with a decline in tradeable investment, in

2004 all investment forms with the exception of cash holdings and deposits experienced a rise over the previous year. This shows, among other things, the increasing importance of the second and third pillars of pension provision. Moreover, owing to the steady increase in foreign currency loans, so-called repayment vehicles continue to be used.

After the striking valuation losses suffered in 2001 and 2002, households' financial assets had shown valuation gains amounting to EUR 2.4 billion as early as in 2003. In the first half of 2004, this trend continued with valuation gains of EUR 1.7 billion. Shares and mutual fund shares contributed to these increases. By contrast, the changes in the valuation of

Chart 19

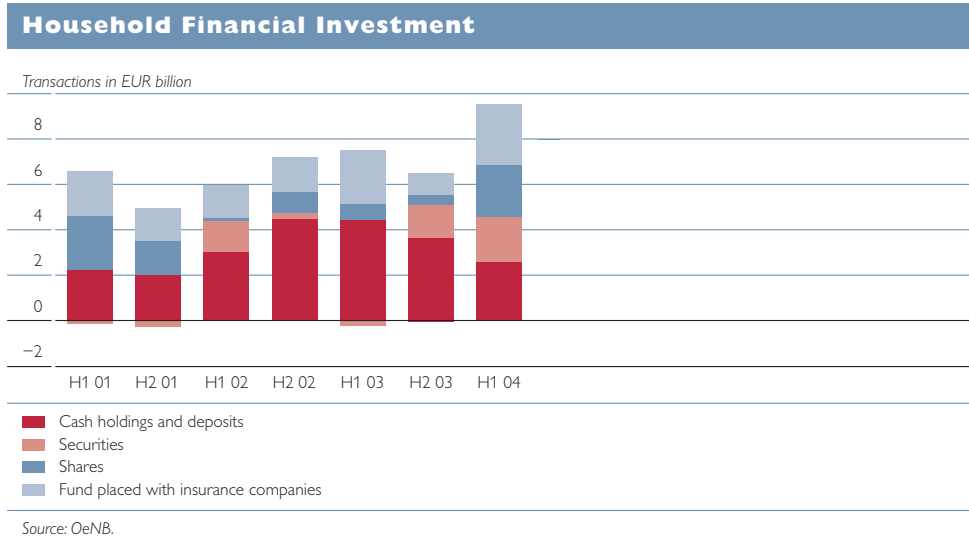
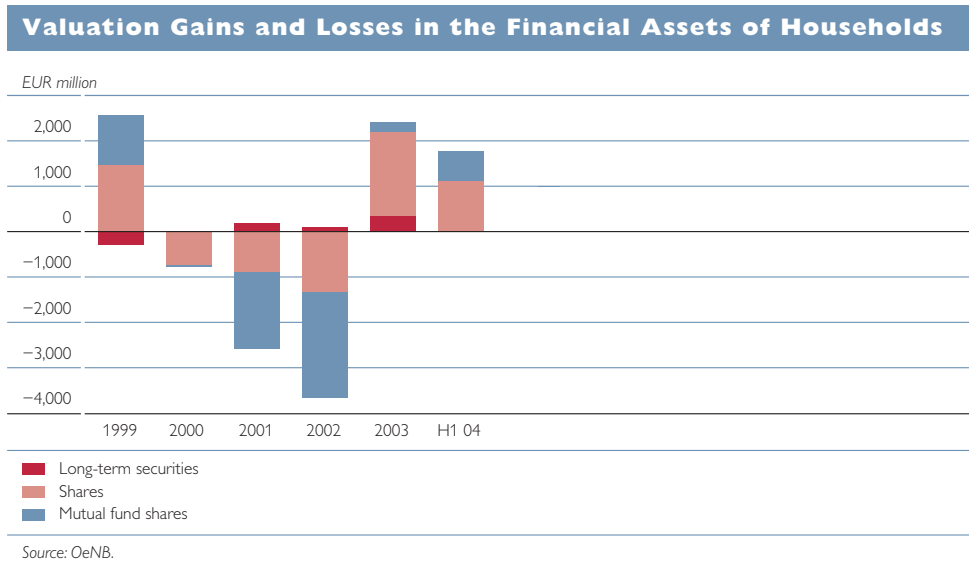


Chart 20



securities showed a slightly negative trend with a decline of EUR 16 million. If the trend of the first half of 2004 continues in the second half of the year, the valuation losses of 2001 and 2002 might be compensated for at the end of the year (chart 20).

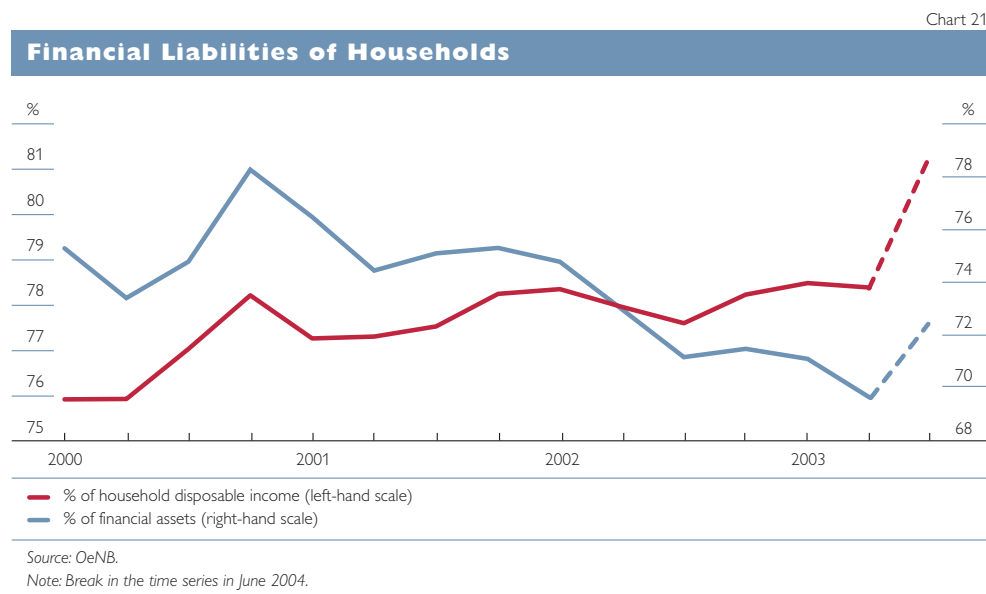
Increase in Borrowing and Debt

Increase in Lending to Households Accompanies More Relaxed Financing Conditions Households' borrowing volume came to EUR 3.6 billion in the first half of 2004, which is an increase of EUR 1 billion compared with the first half of 2003.⁴⁷ This rise was noticed espe-

⁴⁷ The growth of loans to households is distorted upwards to a certain extent, as foreign currency loans are often granted with a single, fixed maturity date. Please see the comment in the section "Banks" in the chapter "Financial Intermediaries in Austria."

cially in the second quarter. It has to be considered, however, that as of the reporting date of June 2004 considerable data revisions took place, which assume a volume of about EUR 1 billion and therefore make it difficult to interpret loan developments over time. An analysis of the first quarter of 2004 alone shows that borrowing declined from EUR 1 billion (2003) to EUR 0.8 billion. In the first half of 2004, household debt rose considerably in relation to the disposable income of households,

which reflects the extremely moderate development of household incomes. After the trend had reversed for more than two years, liabilities have again risen lately compared to the financial assets of households. They have not reached the levels of 2001 and 2002 though. However, by international standards, Austrian household debt measured in GDP is still low and was below the EU-15 average in 2002 (more recent data are not available).



Interest rates for loans to households remained at a low level. At the same time, the Austrian results of the Bank Lending Survey suggest that the financing conditions for households have been slightly relaxed.

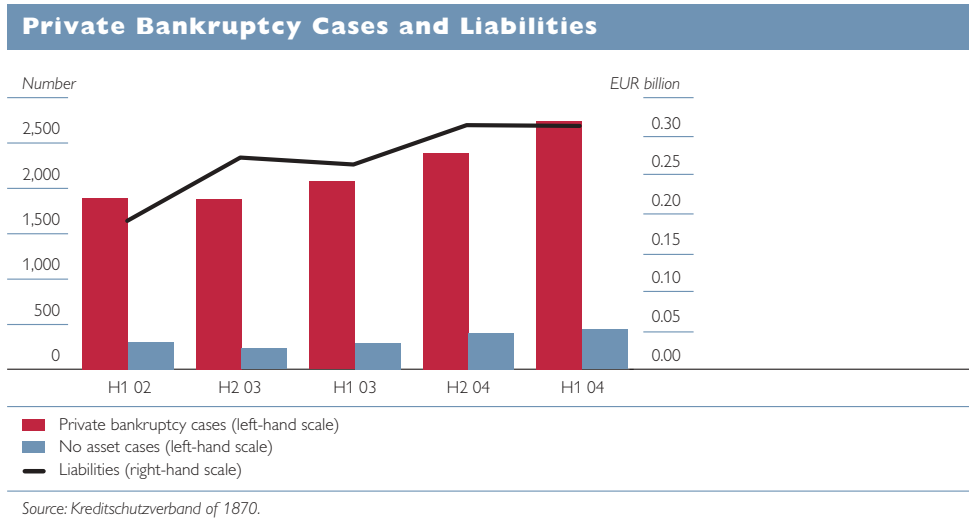
In parallel to the increase in household debt, the number of private bankruptcy cases rose in the first half of 2004. For this period, the KSV reported 2,379 debt regulation proceedings, i.e. private bankruptcies, which is an increase of 28.9% in a year-on-year comparison, as well as estimated default liabilities of EUR

0.31 billion (+19%) (chart 22). Not only the number of bankruptcy proceedings (and no asset cases) but also the amount of estimated liabilities rose in 2002 and 2003.

Trend toward Higher Home Loans

What did households take out loans for? Data from the financial accounts statistics show that home loans continued to post the highest share of new business in the first half of 2004 with a volume of EUR 2.2 billion. The Austrian results of the Bank Lending Survey also indicate that the banks

Chart 22



mainly considered the prospects of the housing market to be the decisive factor for the credit demand of households.

Moderate Rental Housing Cost Burden for Households

On the one hand, price trends on the real estate markets affect households' consumption and investment decisions via wealth effects.⁴⁸ On the other hand, real estate transactions are often financed through loans. Even if the HICP does not include housing prices, strong fluctuations can still have an effect on its subcomponents.⁴⁹

The demand for residential real estate will continue to rise owing to a number of factors: the increasing level of mobility, the growing trend toward one-person households, young adults' personal wishes to have bigger and better homes as well as growing internationalization. The domestic construction industry met this demand and expanded by 1.7% follow-

ing the rise in construction orders for infrastructure and residential construction projects in 2003. The growth rate for 2004 to 2006 is estimated at 2% a year. In 2002, however, the number of housing completions fell owing to a reduced number of building permits granted in the previous years (–8.6% after –14.7% in 2001, both figures compared to the same period of the previous year).

The cost of home ownership continued to rise slightly, while property rental cost (2003: 42.9% of dwellings) sank (chart 23). This might be the result of both the stronger increase of operating expenses for homeowners, which is not limited under any rent law, and the increasing shortage in the housing market.⁵⁰ Domestic real estate prices can be expected to rise further over the next few years owing to the increasing costs of building materials triggered by high oil prices.

⁴⁸ Real estate is not just one of the most important types of assets, it is also collateral. Consequently, price fluctuations have a strong impact on households' propensity to take out loans and to invest.

⁴⁹ In particular, they may have an impact on the rental cost component of the HICP.

⁵⁰ However, this is only a conjecture, as the sample is relatively small.

Chart 23

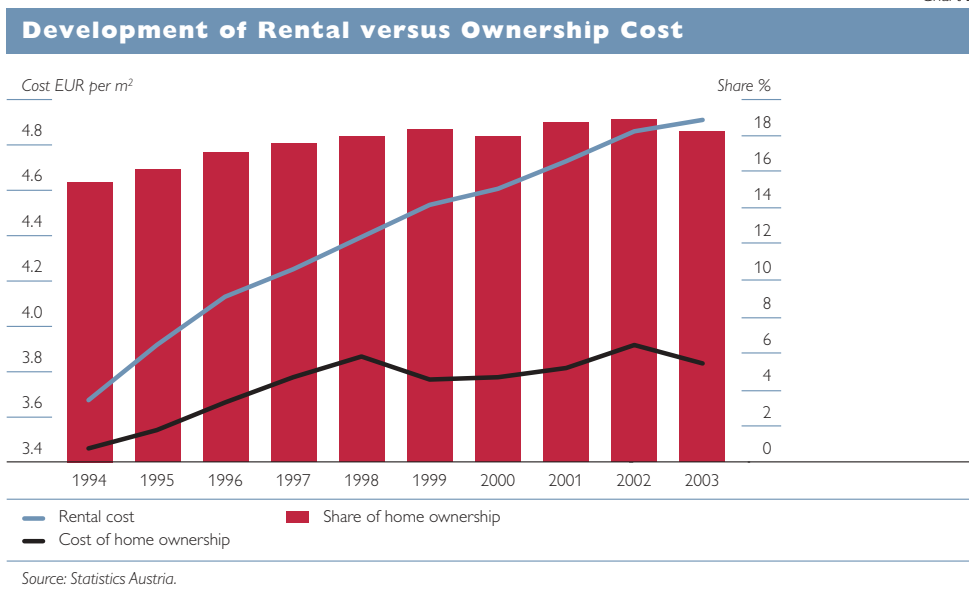
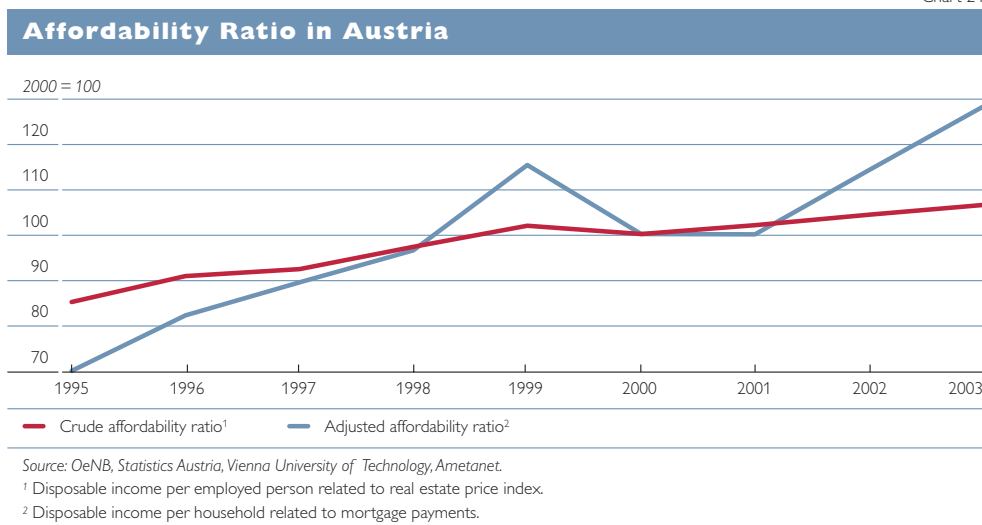


Chart 24



Rising Affordability Ratio Makes Real Estate Purchases More Affordable

The development of the affordability ratio shows that home ownership has become more affordable. For this ratio, households' disposable income, which is one of the major factors influencing the demand for real estate, is related to the real estate price

index. This crude affordability ratio has grown moderately since 1995. If the effects of low interest rates are taken into account, the adjusted affordability ratio (disposable household income related to the expenses for home loans)⁵¹ shows that affordability has gone up more significantly since 2000 (chart 24).

⁵¹ The annual payments of land acquisition tax and insurance are also considered. A calculation approach similar to that of the U.S. National Association of Realtors was used. Chosen assumptions: 80% of the selling price of an average owner-occupied dwelling is loan-financed, the average household income develops simultaneously to the disposable income per employed person, and the price development of the underlying owner-occupied dwelling is simultaneous to that of real estate prices.

Financial Education in Austria

Financial institutions, central banks and supervisory authorities have put special emphasis on educational measures to improve citizens' insufficient capability to tackle ever more complex financial issues. The OECD recently initiated a project to study the current level of measures for enhancing financial literacy in its member countries.

Economic policymakers have pressed for legislation (especially in the field of pensions) that has initiated a change from state support to more individual saving for retirement. This shift of securing against risks into the private sector requires more personal responsibility. Can people meet these demands for more responsibility?

General financial education imparts the knowledge of how to make sensible use of financial services. Its objectives range from the prevention of crises and the promotion of the capital market to the prevention of poverty. The economic policy significance of this topic is underscored by issues such as exclusion, i.e. the phenomenon that not everybody has access to financial services, as well as the particular risks for the lower income strata.

Compared to the situation in the U.S.A. and the United Kingdom, no attempts to introduce a broad financial general education have been made in Austria. However, there is a host of initiatives in Austria as well. The Austrian Federal Economic Chamber, for example, with the help of the Federal Ministry for Education, Science and Culture, has developed a multi-year educational program for students between the age of 10 and 19. Basic economic knowledge is taught under the name "Unternehmerführerschein" ("European Business Driving License"). In the school year 2003/04, 1,500 Austrian students already took part in this project. Regional educational programs and the voluntary cooperation of businesses and educational institutions in the form of "educational clusters" will aim at intensifying the collaboration between industry and schools. Nonprofit organizations such as debt counseling services have been reacting to the problems of insolvent households by putting an increased focus on preventive measures. The OeNB has also tried to take preventive action by promoting individual and systemic financial stability with its publications.

Development of the Financial Position of Nonfinancial Corporations and Households in the First Half of 2004

Banks continued to play a less significant role in financing and primary investment decisions of Austrian households and nonfinancial corporations in the first half of 2004. Corporate borrowing on the capital market (including unquoted shares) virtually equaled the entire external financing of corporations in this period, although banks have relaxed their lending policies somewhat. At the same time, three quarters of the growth of households' financial assets originated from (primary and nonintermediated) investments in the capital market (a consid-

erable share of which, however, was due to valuation gains). Thus, the real economy sectors' exposure to market risks has risen further.

The financial stability of the corporate sector increased in light of improved capital adequacy, higher profits and still relatively favorable financing conditions. Larger corporations both have and use a broad range of sources of financing. Consequently, the sources of funds are exposed to higher market risks, which is offset, however, by the corporations' continued high level of internal financing.

By contrast, the financial position of households became slightly more fragile despite the increase in the net lending, as in 2004, for the second time in a row, real income grew only

slightly and exchange losses on foreign currency loans were offset by valuation gains on market investment instruments. Although by and large, total household debt grew somewhat faster than household income in 2004, financial assets rose even more owing to a high saving ratio.

SPECIAL TOPICS

Credit and Deposit Interest Rate Margins in Four New EU Member States

Zoltan Walko
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Austrian banks' subsidiaries in Central and Eastern Europe deliver a higher contribution to their banking groups' overall pre-tax profit than their relative share in assets would suggest. One widespread explanation for this is that the margins between credit and deposit rates are higher in the Central and Eastern European countries than in Austria or the euro area. This paper presents an overview of the margins in four Central European new EU Member States and analyzes the major differences in the structure of deposit, lending and overall margins compared with the euro area and Austria.

Introduction¹

Austrian banks' subsidiaries located in Central and Eastern Europe deliver a higher contribution to their banking groups' overall pre-tax profit than their relative share in assets would suggest. One widespread explanation for this is that margins between credit and deposit rates are higher in the Central and Eastern European countries (CEECs) than in Austria or the euro area. At the same time, it is often claimed that these margins have already declined significantly.

This paper aims to present an overview of the margins in four Central European new EU Member States (the Czech Republic, Hungary, Poland and Slovakia, the so-called NMS-4), based primarily on a first systematic evaluation of the recently launched MFI (monetary financial institutions) interest rates statistics (MIR) published by the ECB and the national central banks of the EU Member States. First, we take a close look at the current level of interest margins in these countries, comparing them to those in Austria and in the euro area. Then, we analyze recent margin developments in the NMS-4 and sum-

marize the longer-term margin development in the euro area. Next, two methods are applied to decompose the overall margin (spreads) in order to get a better insight into their driving components. First, adjusted loan and deposit rate spreads in the NMS-4 against the euro area are derived by subtracting in particular the premia for sovereign and foreign exchange risk. Second, the average overall margins are decomposed into the average lending and deposit margins by using specific reference rates for alternative investments/financing, chosen on the basis of appropriate maturity. This is done both on an aggregated and disaggregated (by sector and maturity) level. The resulting lending and deposit margins are compared with the euro area average. This method provides a better understanding of the relative importance and development of business on the asset and on the liabilities side. Finally, these analyses facilitate a better assessment of potential future developments in these four countries' banking sectors, which will be highly relevant from the Austrian perspective.

¹ *The opinions expressed in this paper are those of the authors and do not necessarily represent the views of the Oesterreichische Nationalbank. We would like to thank Vanessa Redak for her valuable comments on this paper.*

NMS-4 Interest Rate Margins above Euro Area Average

In March 2004, average overall interest rate margins,² expressed as the difference between interest rates on loans to and deposits from nonfinancial corporations and households, ranged between 3.8 percentage points

and 6.5 percentage points in the NMS-4 (the Czech Republic, Hungary, Poland and Slovakia).³ By comparison, the euro area average was 2.4 percentage points (Austria: 2.2 percentage points), resulting in margin spreads of between 1.4 percentage points and 4.1 percentage points.

Table 1

Lending and Deposit Rates and Overall Margins, March 2004

	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average lending rate	5.9	14.9	9.5	7.7	4.5	5.1
Average deposit rate	1.9	9.9	3.0	3.9	2.3	2.6
Average overall margin	4.0	5.0	6.5	3.8	2.2	2.4
Household lending rate	8.2	15.7	12.0	8.6	5.3	5.6
Household deposit rate	2.0	9.7	3.0	3.4	2.4	2.7
Household overall margin	6.2	6.0	9.0	5.2	2.9	2.9
Nonfinancial corporate lending rate	4.3	14.1	7.1	7.1	4.2	4.5
Nonfinancial corporate deposit rate	1.6	10.8	2.9	5.1	2.1	2.5
Nonfinancial corporate overall margin	2.7	3.4	4.2	2.0	2.1	2.0

Source: ECB, OeNB, national central banks.

Recent Margin Developments in the NMS-4

Due to the short time series of both the MFI interest rate statistics (MIR) and the Polish interest rate statistics that resemble MIR, we cannot draw

far-reaching conclusions about the development of margins and margin spreads during the past few years.

On the basis of the MIR, the average overall margin (i.e. the weighted average of data for households and

² In this analysis we use the following terminology:

The term "margin" is used for the difference between interest rates in an individual country. The overall margin is defined as the difference between interest rates on loans and interest rates on deposits. The lending margin is defined as the difference between the interest rate on loans and a (specified) reference interest rate. The deposit margin is defined as the difference between the interest rate on deposits and a (specified) reference interest rate.

The terms "deposit rate spread," "loan rate spread" and "margin spread" are used for the difference between the respective interest rates or margins in individual countries and the respective average interest rates or margins in the euro area. Unless specified differently elsewhere, the term "average" refers to the weighted average of interest rates in business with nonfinancial corporations and households, weighted by the volumes of the stock of loans outstanding and the stock of deposits taken, respectively.

³ Our calculations for all countries except Poland in this analysis are based on the recently launched MFI (monetary financial institutions) interest rates statistics (MIR) published by the ECB and the national central banks of the EU Member States. For Poland we relied on the interest rate statistics published by the Polish central bank, which strongly resembles the MIR. Nevertheless, due to lacking data on some outstanding volumes, we could not calculate some (disaggregated and aggregated) lending margins and lending margin spreads for Poland. MIR statistics represent harmonized data with respect to coverage and definition. Nevertheless, some differences still exist in the range of publicly available indicators. In order to make cross-country comparisons possible, we therefore restricted our sample to deposits with agreed maturity as data for overnight deposits, deposits redeemable at notice and repurchase agreements were not available for several countries. For the same reason, we also excluded overdrafts from the interest rate statistics on loans. Since we are interested in the impact of interest rate margins on banks' profitability, we focus on interest rates on outstanding volumes rather than on new business volumes.

nonfinancial corporations) in the *Czech Republic* increased from 3.1 percentage points at the start of the time series in January 2001 to 4.0 percentage points in March 2004. This was caused by a sharper decline in deposit rates than in loan rates, especially in business with households, for which the overall margin rose by 1.4 percentage points. The overall corporate margin rose by 0.6 percentage point. Since January 2003, the average overall margin has declined by 0.1 percentage point, as the average loan rate has fallen slightly more strongly (−0.4 percentage point) than the average deposit rate (−0.3 percentage point). The magnitude of the decline was broadly equal for nonfinancial corporations and households.

By contrast, in *Poland*, the average overall margin tumbled from 7.9 percentage points at the start of the time series in March 2002 and a peak of about 8.5 percentage points in November 2002 to 6.7 percentage points in April 2004. Since January 2003 the average overall margin has declined by 0.3 percentage point, as interest rates on loans fell more strongly (−1.5 percentage points) than rates on deposits (−1.2 percentage points). This was attributable to a decline in the household overall margin (−1 percentage point), while the overall margin in the corporate sector remained stable.

For *Hungary*, the MIR statistics have been available only since the start of 2003. From January 2003 to April 2004, the average overall margin decreased by 0.9 percentage point to 5.0 percentage points, as the increase in deposit rates since the second half of 2003 outpaced the increase in lending rates. Thereby, the household overall margin declined significantly

more strongly (−3.2 percentage points) to 6.1 percentage points. This was primarily caused by the decline in interest rates on loans to this sector, which contrasted with the increase in other lending rates. The corporate overall margin narrowed by 1.3 percentage points.

Comparing the development during the 15-month period from January 2003 on in those three countries of the NMS-4 for which time series are available (i.e. the *Czech Republic*, *Hungary* and *Poland*), the following main features emerge.⁴ First, the overall margin decreased, albeit only slightly in the *Czech Republic* and *Poland*. The strongest decrease took place in *Hungary*, despite an increase in the general interest rate level. Second, the decrease in the overall margin resulted from a stronger downward or weaker upward movement of loan rates rather than from the respective movement of deposit rates.

What Does the Past Development in the EU-15 Tell Us?

Due to the lack of historical MIR statistics for the EU-15, it is difficult to draw firm conclusions about a potential systemic convergence of margins within the EU-15 or the euro area. A rough estimate can be made on the basis of the retail interest rate statistics, which was replaced by the MIR statistics. Nevertheless, the fact that the retail interest rate statistics had not been harmonized hinders cross-country comparisons. Moreover, due to differences in coverage and definitions between the MIR and the retail interest rate statistics, a direct comparison of the two is not possible, either.

⁴ For *Slovakia*, the MIR statistics cover the period since the beginning of 2004 only.

Retail interest rate data suggests that interest rate margins decreased in several EU countries in the course of the 1990s, when margins in peripheral countries like Greece or Portugal gradually approached the EU average. A study prepared by the ECB in 2000 comes to the conclusion that lending margins⁵ fell significantly in the EU-15 between 1997 and 2000, which represented the continuation of a longer trend observed throughout the 1990s. However, the widening of deposit margins often compensated for this effect. The article identifies the following factors which contributed to the decline in banks' overall margins from 1997 to 2000:

- the tightening of pricing conditions owing to increased competition and deregulation;
- the impact of falling interest rate levels (deposit rates cannot fall below zero);
- the flattening of the yield curve (bank loans tend to have longer maturities than deposits);
- the shift towards charging explicit fees for services connected with bank accounts (instead of incorporating them into interest rates);
- the securitization of loans (lower capital costs);
- the reduction of operating costs;
- fiscal or regulatory changes allowing banks to engage in more competitive pricing.

The above factors may have been or may in the future become relevant for the banking sector in the NMS-4. In addition, in these countries the gradual improvement in asset quality

may have already contributed to lower lending margins and will most likely continue to do so in the future.

Decomposition in Adjusted Loan and Deposit Rate Spreads

In the following, we decompose the average overall margins and margin spreads observed in the NMS-4 into several components. In a first step, we assess to what extent loan and deposit rates in the NMS-4 differ from those in the euro area and into which components these spreads can be decomposed.

We found that the *average loan rates* in the NMS-4 were between 5.9% (Czech Republic) and 14.9% (Hungary) in March 2004. Hence, they stood above the euro area average by between 0.8 percentage point (Czech Republic) and 9.9 percentage points (Hungary) in that month. The difference between the highest and the lowest value was thus 9 percentage points. These spreads against the euro area are supposed to compensate the investor for differences in (1) sovereign risk; (2) foreign exchange risk; (3) bank-related risk; (4) client-related risk and (5) other risks, for example liquidity risk.

On the basis of the difference between five-year local currency-denominated government bond yields in the NMS-4⁶ and the benchmark euro area government bond yield, we approximated the *risk premium for the combined sovereign and the foreign exchange risk* ("country-specific risks"). Obviously, bond yield spreads

⁵ The lending margin refers to the margin between the average lending rate and a reference rate, while the deposit margin is the margin between the average deposit rate and a reference rate.

⁶ The five-year maturity was chosen to roughly match the maturity of the average lending rates. Due to data unavailability in Slovakia, we used the three-year yield spread since August 2003 and the two-year yield spread for the period before.

are also affected by liquidity risk. Nevertheless, disentangling this component would go beyond the scope of this analysis, and in the following we leave this risk factor out of consideration.

Five-year yield spreads ranged between 0.4 percentage point (Czech Republic) and 6.0 percentage points (Hungary) in March 2004. Taking into account that the premium for pure sovereign risk (estimated by the spreads on sovereign eurobonds denominated in euro, Euro-EMBI Global) ranged between 15 and 45 basis points, the five-year yield spreads seem to mostly offset foreign exchange risk. Stripping this compensation for sovereign and foreign exchange risk off the average loan rate left us with *adjusted lending* rates between 5.3% and 5.9% in the Czech Republic, Poland and Slovakia. In Hungary this adjusted rate amounted to 8.9%.

We took the difference between the five-year swap rates and the five-year government bond yields⁷ as a proxy for *additional commercial bank-specific risks* compared with the sovereign risk in individual countries. Nevertheless, this comparison must be treated with some caution. For example in Hungary, the swap rate has been modestly below the bond yield since early 2003. Partly, this probably mir-

rors a difference in credit risk between Hungarian banks and the Hungarian sovereign, as a lot of Hungarian banks are subsidiaries of AAA-rated foreign banks. Partly, it may also be attributable to maturity mismatch, to different liquidity and price transparency as well as to calculation differences (day count) between the swap rate (spread) and the government bond yield (spread). In general, the differences between swap rates and government bond yields were very low in the NMS-4, ranging between -0.1 percentage point and +0.2 percentage point. Comparing these compensations for additional bank risks in the NMS-4 with that in the euro area (+0.2 percentage point) leaves us with the compensation for relative bank risk in the NMS-4 (compared with the euro area). Given that in Hungary, Poland and Slovakia the compensation for bank risk (compared with the sovereign risk) is zero or even negative, the relative compensation (compared with the euro area) is negative. Hence, stripping this factor off the adjusted (i.e. for sovereign and foreign exchange risk) lending rates leads to different results. In the Czech Republic, this adjustment leads to a roughly unchanged lending rate, while in the other three countries, this correction raises the adjusted lending rates modestly.

⁷ Due to data unavailability in Slovakia, we used the three-year yields and swap rates since August 2003 and the two-year yields and swap rates for the period before.

Table 2

Loan Rates Adjusted for Country-Specific and Bank Risk

	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average loan rate	5.9	14.9	9.5	7.7	4.5	5.1
Average loan rate spread against EU-12	0.8	9.9	4.4	2.7	-0.5	..
Average loan rate less sovereign and foreign exchange risk (five-year bond yield spread)	5.5	8.9	5.9	5.3	..	..
Average loan rate less sovereign and foreign exchange risk (five-year bond yield spread) against EU-12	0.5	3.8	0.8	0.3	..	..
Average loan rate less sovereign, foreign exchange and additional bank risk	5.5	9.1	6.1	5.6	..	..
Average loan rate less sovereign, foreign exchange and additional bank risk against EU-12	0.5	4.1	1.0	0.5	..	..

Source: ECB, OeNB, national central banks.

Through these adjustments we arrived at lending rates in the NMS-4 which are adjusted for sovereign risk, foreign exchange risk and (with some reservation) relative bank risk in the NMS-4. The *adjusted lending rates* ranged from about 5.5% in the Czech Republic, to the modestly higher level of 6.1% in Poland and to the significantly higher level of 9.1% in Hungary in March 2004. By comparison, the average loan rate in the euro area was 5.1%.

The resulting *adjusted lending rate spreads* should compensate for client-related risks, other country-specific factors (for example differences in financial supervision rules, tax treatment, etc.) or differences in market structure (for example the level of competition). Obviously, in Hungary, Poland and Slovakia the adjusted lending rate spreads are far less “impressive” than the unadjusted spreads. Thus, the differences between average lending rates in the NMS-4 and the euro area are to a large extent due

to the compensation for sovereign and in particular for foreign exchange risk. In the Czech Republic, the difference between unadjusted and adjusted spreads is smaller, but it still amounted to slightly less than half of the unadjusted spread.

The adjusted lending rate spreads amounted to between 0.5 percentage point and 1.0 percentage point in the NMS-4 in March 2004, with the exception of Hungary. The Hungarian spread had been relatively stable since the beginning of 2003, hovering mostly between 3.5 and 4 percentage points.⁸ At the same time, the quality of the banking portfolio in Hungary is relatively good compared with the other NMS-4, the market structure is less concentrated than in the Czech Republic and Slovakia (and roughly the same as in Poland) and there are no major legislative or supervisory factors which put Hungarian banks at a disadvantage compared with the other three countries. Therefore, the high adjusted lending rate spread

⁸ One factor that might partly explain the relatively high adjusted lending rate spread in Hungary in March 2004 is based on the fact that a (possibly sizeable) part of the outstanding volume of loans, which is taken as the basis for calculating the (weighted) average loan rate, consists of short-term loans and of long-term loans with variable interest rates. This fact combined with the marked inversivity of the yield curve in Hungary (as opposed to flat or upward sloping yield curves in the other countries in March 2004) may have contributed to a relatively higher adjusted lending rate (i.e. after adjustment by the five-year bond yield spread). However, this explanation does not help to explain the relatively higher adjusted lending rate in the first half of 2003.

may be related to the high absolute level of interest rates (which lowers the margin in relative terms) or signal excessive return potential. It may also result from the fact that government bond yields may not fully reflect domestic inflation expectations as they are influenced by the widespread participation of foreign investors in the Hungarian bond market. For these investors exchange rate expectations play a more important role than inflation expectations. By contrast, domestic inflation expectations can be assumed to dominate in banks' lending business. As a result, to the extent that the inflation risk premium exceeds the exchange rate risk premium, lending rates can be higher than government bond yields, pushing up adjusted lending rates.

Cross-country comparisons, should also take into account that our analysis focuses on *average* lending rates. This means that differences in the structure of the loan portfolio of individual countries with respect to the maturity structure along with differences in the

term structure, and to the weight of business with households and non-financial corporations have an impact on average loan rates and hence on cross-country differences in loan rates.⁹

Turning to the deposit side, *average deposit rates* in the NMS-4 ranged between 1.9% and 9.9% in March 2004. Hence, the average deposit rate in the Czech Republic was 0.8 percentage point below the euro area average, while in the other three countries the spread amounted to 0.3 percentage point and 7.3 percentage points, respectively.

The *adjusted deposit rates*, i.e. the rates after similar adjustments for sovereign risk, foreign exchange risk and relative bank risk premium as outlined above for the lending rates, were between -0.5% in Poland and 4.1% in Hungary in March 2004.

The resulting *adjusted deposit rate spreads* were negative in the Czech Republic, Poland and Slovakia, as the adjusted deposit rates were lower than the euro area average and positive in Hungary at 1.5 percentage points.

Table 3

Deposit Rates Adjusted for Country-Specific and Bank Risk						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average deposit rate	1.9	9.9	3.0	3.9	2.3	2.6
Average deposit rate spread against EU-12	-0.8	7.3	0.3	1.3	-0.3	..
Average deposit rate less sovereign, foreign exchange and additional bank risk	1.5	4.1	-0.5	1.8	..	..
Average deposit rate less sovereign, foreign exchange and additional bank risk against EU-12	-1.1	1.5	-3.1	-0.9	..	..

Source: ECB, OeNB, national central banks.

⁹ For example, the bias introduced by a maturity mismatch between five-year government bond yields across countries (as a measure for country-specific risks) can be aggravated if the yield curve is upward sloping in one country and downward sloping in the other. Similarly, the lengthening of the average maturity of the loan portfolio in one country compared with another country will have a different impact on the average loan rate and the average loan rate spread, depending on differences in the term structure. Nevertheless, we believe that even the analysis of the aggregated data gives a good impression of the true situation. The analysis of the disaggregated data (by individual loan categories and by sectors) would go beyond the scope of this stocktaking exercise. Moreover, the availability of data necessary for the calculation of disaggregated adjusted lending rates (in order to match the maturity of the loan portfolio with the maturity of the proxy for the country-specific and bank risks) would cause difficulties.

The relatively low or – in Poland – even negative adjusted deposit rates may be an indication of less fierce competition for deposits in the NMS-4 than in the euro area. Another explanation for relatively low adjusted deposit rates could be households’ preference for bank deposits, as opposed to “more sophisticated” forms of savings. Also, the structural liquidity surplus in the NMS-4 banking systems, supported by a greater weight of equity – and in some countries of net foreign liabilities – in banks’ overall liabilities, may be a reason for NMS-4 banks’ relatively relaxed attitude towards domestic deposits. Moreover, cross-country differences in the maturity structure of deposits together with differences in the term structures as well as differences in the weight of business with households and nonfinancial companies may cause differences in average adjusted deposit rates. Also, it should be noted that the adjustment of deposit rates for country-specific (i.e. sovereign and foreign exchange) risks introduces some bias as well. The reason for this is that the average maturity of deposits is shorter than the five years which are used for the approximation of the country-specific risk.

The *average overall margins* in the NMS-4 ranged between 3.8 percentage points (Slovakia) and 6.5 percentage points (Poland) in March 2004, resulting in a span of 2.7 percentage points between the maximum and the minimum.

These margins were above the euro area average of 2.4 percentage points, delivering average *overall margin spreads* between 1.4 percentage points (Slovakia) and 4.1 percentage points (Poland). The average overall margin spread can also be seen as the difference between the loan rate spread and the deposit rate spread. As average (adjusted) loan rate spreads were clearly higher than the mostly negative average (adjusted) deposit rate spreads across the NMS-4, we obtained positive average overall margin spreads of between 1.4 percentage points (Slovakia) and 4.1 percentage points (Poland). With the exception of Hungary, the adjusted deposit rate spreads contributed a larger part to the average overall margin spreads than the adjusted loan rate spreads, as the former were to a larger extent negative than the latter were positive.

Table 4

Summary of Adjusted Average Loan and Deposit Rates and Spreads

	CZ	HU	PL	SK
	<i>Percentage points</i>			
Average loan rate less sovereign, foreign exchange and additional bank risk	5.5	9.1	6.1	5.6
EU-12 average loan rate	5.1	5.1	5.1	5.1
Average deposit rate less sovereign, foreign exchange and additional bank risk	1.5	4.1	-0.5	1.8
EU-12 average deposit rate	2.6	2.6	2.6	2.6
Average overall margin	4.0	5.0	6.5	3.8
EU-12 average overall margin	2.4	2.4	2.4	2.4
Average loan rate less sovereign, foreign exchange and additional bank risk against EU-12	0.5	4.1	1.0	0.5
Average deposit rate less sovereign, foreign exchange and additional bank risk against EU-12	-1.1	1.5	-3.1	-0.9
Average overall margin against EU-12	1.6	2.6	4.1	1.4

Source: ECB, OeNB, national central banks, Bloomberg.

Table 5

Overall Margins and Margin Spreads by Economic Sectors						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average overall margin	4.0	5.0	6.5	3.8	2.2	2.4
Average overall margin spread	1.6	2.6	4.1	1.4	-0.2	..
Household overall margin spread	3.3	3.1	6.2	2.4	0.0	..
Nonfinancial corporate overall margin spread	0.7	1.4	2.2	0.0	0.1	..

Source: ECB, OeNB, national central banks.

Regarding the segmentation by sectors, the overall margin spreads were especially high in business with households, suggesting a potentially more competitive business environment with nonfinancial corporations.

Decomposition into Lending and Deposit Margin Spreads

An alternative way of looking at the overall margin (spread) is to decompose the average overall margin into the average lending margin and the average deposit margin. Subsequently, these margins can be compared with the euro area average. The reference rates used for the calculation of lending and deposit margins represent the return on alternative investment/financing. Therefore, we have chosen the reference rates in a way that their maturity roughly matches the maturity of the average lending rate and the average deposit rate.

Average lending margins, derived as the difference between the average

loan rate and the country-specific reference rate, varied more widely, between 2.3 percentage points and 5.9 percentage points in March 2004. The average lending margin was highest in Hungary and lowest in the Czech Republic. By comparison, in the euro area, it was 1.8 percentage points. Due to their construction, the average lending margins “neutralize” country-specific risk factors (like sovereign and foreign exchange risk) and relative bank risk factors.

The *lending margin spreads* take into account the spread between the reference rates both in the NMS-4 and the euro area. Thus, the fact that the lending margins in the NMS-4 were higher than in the EU-12 and lending margin spreads were hence positive in the NMS-4 may be explained by some of those factors which were identified for the decline of banks’ margins in the EU-15 cited above (for example, different intensity of competition, higher interest rate level, less widespread securitization).

Table 6

Average Lending Margins and Margin Spreads						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average lending margin	2.3	5.9	2.8	3.0	1.3	1.8
Average lending margin spread	0.5	4.1	1.0	1.1	-0.5	..

Source: ECB, OeNB, national central banks.

In addition, differences in the country-specific mismatches between the maturity structure of the average

loan portfolio and the reference rates as well as the already noted differences in the sectoral structure of the loan

portfolio and in the term structure, which might be reflected to various degrees in lending rates and in the reference rates, may provide some further explanation for the differences in the lending margin spreads among these four countries.

Therefore, we also looked into lending margins and lending margin spreads at a more *disaggregated* level. A comparison of the Czech, Hungarian and Slovak markets (due to lack

of data, disaggregation was not possible for Poland) showed that with a few exceptions lending margins in the NMS-3 were higher than in the euro area. Thus, the aggregated lending margin spread that was calculated on the basis of disaggregated data confirmed the above analysis based on the average lending margin spread, with Hungary showing the highest lending margin spreads.¹⁰

Table 7

Disaggregated Lending Margins and Margin Spreads

	CZ	HU	PL	SK	AT	EU-12
Percentage points						
Household loan for house purchase < 1y margin	3.1	4.2	..	1.6	3.1	2.8
Household loan for house purchase < 1y margin spread	0.3	1.3	..	-1.3	0.2	0.0
Household loan for house purchase 1-5y margin	4.2	5.3	..	3.2	1.4	2.1
Household loan for house purchase 1-5y margin spread	2.2	3.2	..	1.1	-0.7	0.0
Household loan for house purchase > 5y margin	2.2	5.1	..	2.1	1.0	1.4
Household loan for house purchase > 5y margin spread	0.8	3.8	..	0.7	-0.4	0.0
Household loan for consumption and other purpose < 1y margin	10.1	6.2	..	5.8	6.1	6.1
Household loan for consumption and other purpose < 1y margin spread	4.0	0.1	..	-0.3	0.1	0.0
Household loan for consumption and other purpose 1-5y margin	10.8	14.1	..	9.6	3.1	4.5
Household loan for consumption and other purpose 1-5y margin spread	6.3	9.6	..	5.1	-1.4	0.0
Household loan for consumption and other purpose > 5y margin	5.9	6.0	..	4.7	1.5	2.2
Household loan for consumption and other purpose > 5y margin spread	3.6	3.8	..	2.4	-0.7	0.0
Nonfinancial corporate loan < 1y margin	1.6	2.4	..	1.2	2.0	2.6
Nonfinancial corporate loan < 1y margin spread	-0.9	-0.2	..	-1.3	-0.5	0.0
Nonfinancial corporate loan 1-5y margin	1.3	4.2	..	2.6	1.8	1.3
Nonfinancial corporate loan 1-5y margin spread	0.1	3.0	..	1.3	0.6	0.0
Nonfinancial corporate loan > 5y margin	1.2	5.3	..	2.6	0.5	0.9
Nonfinancial corporate loan > 5y margin spread	0.2	4.4	..	1.7	-0.4	0.0

Source: ECB, OeNB, national central banks.

¹⁰ It should be noted that the relatively high average lending margin spread in Hungary in March 2004 might be partly explained by the marked inversivity of the reference yield curve (as opposed to flat or upward sloping yield curves in the other countries) combined with the fact that a (possibly sizeable) part of the outstanding volume of longer-term loans carries variable interest rates. Similarly, the same factors may contribute to explain the increase of the margins of the loans to the non-financial corporations with maturity.

In all three countries, the lowest lending margin spreads were observed for “loans to nonfinancial corporations with a maturity of less than one year,” which have a considerable weight in the banks’ loan portfolios (between 17% and 28%). Indeed, the lending margin spread on these loans was negative in all three countries.¹¹

Again in all three countries, the highest lending margin spread was observed for “loans to households for consumption and other purposes with a maturity between one and five years,” which also have a considerable weight in the banks’ loan portfolios (between 6.5% and 9%).

With respect to segmentation by maturity, margin spreads in lending to nonfinancial corporations increased with maturity, while margin spreads in household lending were the highest in the medium (between one and five

years) maturity range, with the exception of Hungarian household loans for house purchases, for which the longest maturity segment showed the highest spreads.

More generally, lending margins were higher in business with households than with nonfinancial corporations in particular in the Czech Republic and Hungary and to a lesser degree in Slovakia. As the difference between household lending margins and corporate lending margins was by far more accentuated in the NMS-3 than in the euro area average, household lending margin spreads also exceeded corporate lending margin spreads significantly. Indeed, in the Czech Republic and in Slovakia, the corporate lending margin was already more or less at the euro area level, implying a corporate lending margin spread close to zero.

Table 8

Aggregated Lending Margins and Margin Spreads						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Household lending margin (calculated from disaggregated data)	4.6	6.8	..	3.9	1.9	2.1
Nonfinancial corporate lending margin (calculated from disaggregated data)	1.4	3.9	..	1.9	1.1	1.5
Average lending margin (calculated from disaggregated data)	2.7	5.4	..	2.8	1.4	1.8
Household lending margin spread (calculated from disaggregated data)	2.5	4.7	..	1.8	-0.2	..
Nonfinancial corporate lending margin spread (calculated from disaggregated data)	-0.1	2.4	..	0.4	-0.4	..
Average lending margin spread (calculated from disaggregated data)	0.9	3.6	..	1.0	-0.5	..

Source: ECB, OeNB, national central banks.

Average deposit margins, derived as the difference between the average deposit rate and the country-specific reference rate, varied between -1.0 percentage point (Slovakia) and -3.2 percentage points (Poland) in the NMS-4. These negative deposit margins (i.e.

the average deposit rate is below the reference rate) contrasted with a zero margin in the euro area. This may be an indication of less fierce competition for deposits in the NMS-4 than in the euro area.

¹¹ In addition, in Slovakia the margin spreads for “loans to households for house purchase with a maturity of less than one year” and “loans to households for consumption and other purposes with a maturity of less than one year” were negative. However, these two types of loans have only a very small share in the overall volume of loans to households and nonfinancial corporations.

Table 9

Average Deposit Margin and Margin Spread						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Average deposit margin	-1.2	-1.7	-3.2	-1.0	-0.3	0.0
Average deposit margin spread	-1.1	-1.6	-3.2	-1.0	-0.3	..

Source: ECB, OeNB, national central banks.

However, as noted above in connection with the average lending margin, some residual specification bias in the construction of the reference rate may have remained in place, despite the country-specific selection of the reference rates.

Data disaggregation showed that deposit margins in the NMS-4 tended to be larger (i.e. more negative: deposit rates below the reference rate) than in the euro area. Thus, the aggregated deposit margin spread that was calculated on the basis of disaggregated data confirmed the above analysis based on the average deposit margin spread. In particular, Poland was confirmed as the country with the largest negative deposit margin and deposit margin spread.

Looking at table 10, the most striking observation is the positive deposit margins, in particular for long-term corporate deposits (in the Czech Republic, Slovakia, Austria

and the euro area) but also to a significant extent for long-term household deposits in Slovakia. On the basis of opportunity cost considerations, positive deposit margins can be regarded as a rather exceptional phenomenon. Apart from potential data issues involved, one possible explanation for the positive corporate deposit margins may relate to the fact that for most banks customer relationships are predominantly lending relationships. Thus, banks may be willing to incur losses (calculated on the basis of the opportunity cost concept) in the long-term deposit business with their corporate clients, as this may account for only a minor part of their overall customer relationships and help foster profitable relations in lending. For the euro area, one possible explanation for positive deposit margins of long-term corporate deposits may also be a possibly still underdeveloped cross-country interbank lending business.

Table 10

Disaggregated Deposit Margins and Margin Spreads						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Household deposit < 2y margin	-1.3	-1.5	-2.9	-2.1	-0.4	-0.2
Household deposit < 2y margin spread	-1.1	-1.4	-2.8	-1.9	-0.2	0.0
Household deposit > 2y margin	-0.8	-3.4	-3.1	0.7	0.1	0.1
Household deposit > 2y margin spread	-0.9	-3.4	-3.2	0.6	0.0	0.0
Nonfinancial corporate deposit < 2y margin	-0.7	-0.7	-3.0	-0.3	-0.2	0.0
Nonfinancial corporate deposit < 2y margin spread	-0.7	-0.6	-3.0	-0.3	-0.2	0.0
Nonfinancial corporate deposit > 2y margin	0.5	-3.6	-2.5	0.5	0.5	0.9
Nonfinancial corporate deposit > 2y margin spread	-0.4	-4.5	-3.4	-0.5	-0.4	0.0

Source: ECB, OeNB, national central banks.

Table 11

Aggregated Deposit Margins and Margin Spreads						
	CZ	HU	PL	SK	AT	EU-12
	Percentage points					
Household deposit margin (calculated from disaggregated data)	-1.0	-1.7	-2.9	-1.4	-0.2	0.0
Nonfinancial corporate deposit margin (calculated from disaggregated data)	-0.7	-0.8	-3.0	-0.3	-0.1	0.2
Average deposit margin (calculated from disaggregated data)	-0.9	-1.5	-3.0	-1.0	-0.2	0.0
Household deposit margin spread (calculated from disaggregated data)	-1.0	-1.7	-2.9	-1.3	-0.2	..
Nonfinancial corporate deposit margin spread (calculated from disaggregated data)	-0.9	-0.9	-3.1	-0.4	-0.3	..
Average deposit margin spread (calculated from disaggregated data)	-1.0	-1.5	-3.0	-1.0	-0.2	..

Source: ECB, OeNB, national central banks.

More generally, deposit margins were more negative in business with households than with nonfinancial corporations in particular in Hungary and Slovakia and to a lesser degree in the Czech Republic. This was true in particular for deposits with a maturity of less than two years, which account for the bulk of total deposits of both sectors in the NMS-4. As there was hardly any difference between household and corporate deposit margins in the euro area, the difference between the sectoral deposit margins in these three countries is reflected also in the deposit margin spreads. By contrast, in Poland, the two business lines offered roughly the same deposit margins and deposit margin spreads.

Turning again to the *overall margin*, the average overall margin can be calculated as the difference between the lending margin and the deposit margin. As the average lending mar-

gins were clearly positive throughout the NMS-4 and the euro area, while the deposit margins were negative in the NMS-4 and about zero in the euro area, we obtained positive average overall margins between 3.5 percentage points (Czech Republic) and 7.6 percentage points (Hungary).¹² With the exception of Poland, average lending margins delivered a larger contribution to the average overall margins than average deposit margins, as in the NMS-4 (except Poland) the former were to a larger extent positive than the latter were negative, and in the euro area average deposit margins were about zero. In Poland, the contribution of both components to the average overall margin was about equal.

However, the situation is different for *overall margin spreads* (calculated as the difference between average lending margin spreads and average deposit margin spreads) due to the

¹² It should be noted that the thus calculated average overall margins differ from the average overall margins described earlier as the difference between (adjusted) loan and deposit rates shown in tables 1 and 4. This is due to the difference in the reference rates which are used for the calculation of the lending and the deposit margins. More precisely, the difference between the average overall margin as the difference between average loan and deposit rates and the average overall margin as the difference between average lending and deposit margins is equal to the difference between the longer-term reference rate for the average loan rate and the shorter-term reference rate for the average deposit rate. Thus, in case of an upward sloped term structure this difference is positive (Czech Republic, Poland), while in case of an inverse interest rate curve it is negative (Hungary).

fact that in the euro area lending margins were clearly positive, while deposit margins were zero.¹³ In the Czech Republic and Poland, the average deposit margin spreads accounted for a larger portion of the average overall margin spreads than the average lending margin spreads, as the for-

mer were to a larger extent negative than the latter were positive. In Slovakia, the contribution of the two components was roughly equal, while in Hungary, the highly positive average overall margin spread stemmed primarily from the positive average lending margin spread.

Table 12

Summary of Lending and Deposit Margins and Margin Spreads

	CZ	HU	PL	SK	AT	EU-12
<i>Percentage points</i>						
Average loan rate	5.9	14.9	9.5	7.7	4.5	5.1
Reference rate for average loan rate	3.6	9.0	6.7	4.8	3.2	3.2
Average lending margin	2.3	5.9	2.8	3.0	1.3	1.8
Average deposit rate	1.9	9.9	3.0	3.9	2.3	2.6
Reference rate for average deposit rate	3.1	11.6	6.2	4.9	2.7	2.7
Average deposit margin	-1.2	-1.7	-3.2	-1.0	-0.3	0.0
Average overall margin (difference of lending margin and deposit margin)	3.5	7.6	6.1	4.0	1.6	1.9
Average lending margin spread	0.5	4.1	1.0	1.1	-0.5	..
Average deposit margin spread	-1.1	-1.6	-3.2	-1.0	-0.3	..
Average overall margin spread (difference of lending margin and deposit margin spread)	1.6	5.7	4.2	2.1	-0.2	..

Source: ECB, OeNB, national central banks.

**Main Findings of the
Decompositions**

The following picture emerges for margins and margin spreads in the NMS-4 in March 2004:

(1) Country-specific risk factors (sovereign risk, foreign exchange risk) account for a large portion of the overall average lending rate spread between the NMS-4 and the euro area. If the compensation for these risk components is left aside, the spread is far less impressive, except for in Hungary.

(2) The average deposit rate in the Czech Republic was below the euro

area average, and in Poland, it was close to the euro area average level. The extraction of the country-specific risk premium from the average deposit rate further enhanced the negative spread against the euro area in the Czech Republic and led to a negative spread in Poland and Slovakia as well. The relatively low or, in Poland, even negative adjusted deposit rates may be an indication of less fierce competition for deposits in the NMS-4 than in the euro area.

(3) In the NMS-4, the average overall margins were higher than in the euro area. With the exception of

¹³ Similar to what was stated in the previous footnote for the average overall margins, it should be noted that also the thus calculated average overall margin spread differs from the average overall margin spread described earlier and shown in table 4. The difference between the previous average overall margin spread and the average overall margin spread as the difference between lending and deposit margin spreads is equal to the difference between the country-specific difference between the loan reference rate and the deposit reference rate in the NMS-4 and the euro area-specific difference between the loan reference rate and the deposit reference rate in the euro area.

Hungary, the adjusted deposit rate spreads contributed a larger part to these average overall margin spreads than the adjusted loan rate spreads.

(4) This overall margin spread was particularly large in the business with households, suggesting a potentially more competitive business environment with nonfinancial corporations.

(5) Similarly, business with households in particular in the Czech Republic and Hungary and to a lesser degree in Slovakia (no data for Poland) offered higher lending margins and lending margin spreads (compared with the euro area) than the corporate business. Indeed, in the Czech Republic and in Slovakia, the corporate lending margin was already more or less at euro area level, implying a corporate lending margin spread close to zero. The spread in lending margins was the highest for “loans to households for consumption and other purposes with a maturity between one and five years.” On the other hand, the spread in lending margins for “loans to non-financial corporations with a maturity of less than one year,” which have a considerable weight in the loan portfolio (between 17% and 28%), was even negative.

(6) While the average deposit margins in the NMS-4 were negative (i.e. the deposit rates were lower than the reference rates), the average deposit margin in the euro area was about zero. This may be an indication of less fierce competition for deposits in the NMS-4 than in the euro area.

(7) In Hungary and Slovakia in particular and to a lesser degree in the Czech Republic, household deposit margins and margin spreads against the euro area were more negative than the corporate deposit Margins and margin spreads. The two business lines offered roughly the

same deposit margins and margin spreads in Poland.

(8) With the exception of Poland, the average lending margins delivered a larger contribution to the average overall margins than the average deposit margins. In Poland, the contribution of both components to the average overall margin was about equal.

(9) By contrast, in the Czech Republic and Poland, the average deposit margin spreads accounted for a larger portion of the average overall margin spreads than the average lending margin spreads, as the former were to a larger extent negative than the latter were positive. In Slovakia, the contribution of the two components was roughly equal, while in Hungary, the highly positive average overall margin spread stemmed primarily from the positive average lending margin spread.

(10) On the basis of disaggregated data, the dominance of the lending margin spread in Hungary as well as a slight dominance of the deposit margin spread in the Czech Republic could be confirmed. (Due to the lack of disaggregated data, this comparison could not be made for Poland.)

Overall, the analysis of the available data suggests that the margins were wider in the NMS-4 than in the euro area in particular in business with households on both the lending and the deposit side. This may be attributable to higher costs related to business with households in the NMS-4 than in the euro area, for example due to a more widespread use of labor-intensive banking services. On the other hand, lower competition in business with households in the NMS-4 compared with the euro area may offer an alternative explanation.

Other Factors Affecting Banks' Net Interest Income

Apart from the interest rate margins in business with nonfinancial corporations and households, the net interest margin (defined as net interest income as a percentage of average total assets or average total equity in a certain period) in the NMS-4 may also be affected by other factors. Thereby, specific factors in the NMS-4 on the asset side of commercial banks tend to reduce net interest income compared with the euro area average, while specific factors on the liability side tend to have a positive impact.

On the *asset side*, one specific feature of the NMS-4 banking sectors is that *claims on the general government* account for a higher percentage of total assets than on average in the euro area. While this share was around 10% in the euro area at the end of 2003, it ranged between 15% (Hungary) and 26% (Slovakia) in the NMS-4. In Poland and the Czech Republic, the share stood at around 20%. As lending to the general government tends to be less risky than lending to other sectors, and hence usually carries lower interest rates, this factor can be expected to lower net interest income in the NMS-4 compared with the euro area.

Another characteristic of the NMS-4 is the structural liquidity surplus in the money market. Therefore, central banks are generally liquidity absorbers. Since the interest rate on the liquidity-absorbing facilities mostly represents the benchmark or the floor for interbank interest rates, *investment in these central bank instruments* usually carries lower interest rates (albeit at practically no counter-

party risk) than business with other clients.

On the *liability side*, the difference in the *share of deposits of domestic residents other than the central government and monetary financial institutions* between the NMS-4 and the euro area is striking. While this share amounted to around 32% at the end of 2003 in the euro area, it ranged between 51% (Hungary) and 66% (Slovakia) in the NMS-4. As we pointed out above, the adjusted deposit rate spreads and deposit margin spreads in the NMS-4 can be identified as a major source of the overall margin spreads. The high share of domestic deposits in total liabilities multiplies this effect.

Similarly, the *share of capital and reserves* in total liabilities is significantly higher in the NMS-4 than in the euro area. While in the euro area this share amounted to 5.8% at the end of 2003, it stood at 8.9% in Hungary, 11% in the Czech Republic, 13.5% in Slovakia and around 16% in Poland. This enables commercial banks in the NMS-4 to finance interest-bearing assets by equity financing – a relatively cheap form of financing – which adds to their overall profitability.

Another question is whether and to what extent banks in the NMS-4 utilize the positive *interest rate differential* between local and foreign currency – in particular euro – interest rates. Borrowing in foreign currency and lending in local currency at higher interest rates would enhance profits, but also increase banks' exposure to foreign currency risk. Unfortunately, data on banks' *overall net FX position*¹⁴ are not readily available in all countries. Czech banks had a small overall

¹⁴ The overall net FX position comprises both the on-balance and the off-balance net FX position.

net short foreign exchange position¹⁵ (0.6% of total balance sheet liabilities) at the end of 2003. By contrast, data of the Hungarian central bank showed that Hungarian banks in the past tended to close their long balance sheet position by off-balance sheet items. Indeed, Hungarian banks maintained a small long (around 0.5% of total balance sheet liabilities) overall net foreign exchange position over the last year. Similarly, Polish banks tended to close their long balance sheet FX positions by short off-balance sheet items. Therefore, they had a minimum overall net long foreign exchange position of less than 0.1% of total balance sheet liabilities at the end of 2003. Hence, the general conclusion that banks in these countries take advantage of the interest rate differential by incurring higher exposure to foreign exchange risk cannot be drawn.

Concluding Remarks

In this analysis we found that country-specific risk factors, in particular related to foreign exchange risk, account for a significant part of the lending and deposit rate spreads between four new EU Member States (NMS-4) and the euro area. Moreover, we found that interest rate margins in the NMS-4 were indeed higher than in the euro area, contributing significantly to the favorable

relative net income development of banks. Margin spreads compared to the euro area were particularly high in business with households on both the lending and the deposit side.

We also found that in the NMS-4 (with the exception of Hungary), deposit margin spreads compared with the euro area delivered a larger contribution to the overall margin spreads than lending margin spreads. This may be taken as an indication that competition for (household) deposits is less fierce in the NMS-4 than in the euro area and also less fierce than in the lending business (to nonfinancial corporations). Nevertheless, owing to a potential specification bias, conclusions from deposit margins should be drawn with some caution.

However, as the deepening of financial intermediation will fuel banks' appetite for financial resources, while alternative forms of savings are likely to gain significance, a more competitive environment can be expected in the deposit business. Similarly, it can be anticipated that EU accession, which has pushed the door wide open for cross-border banking services, will increase competition during the next few years. Thus, it can be expected that interest rate margins in the NMS-4 will converge towards euro area levels over the medium to long term, in line with the developments that were observed for the EU-15.

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¹⁵ A short position is defined as excess liabilities over assets, a long position is defined as the opposite.

Banking Efficiency in Central and Eastern Europe

This paper analyzes cost and profit efficiency in Central and Eastern European countries, providing cross-country and time series evidence. A stochastic frontier analysis using a Fourier flexible form produces well-fitting cost and profit functions. Efficiency estimates indicate a generally low level of cost efficiency and an even lower level of profit efficiency. However, we also find some evidence of increasing cost efficiency and, to an even stronger extent, profit efficiency over time. Furthermore, we decompose the inefficiency values obtained from the cost and profit function estimates and thereby gain information about the level of banking efficiency across countries. Finally, we detect differences in efficiency across size and specialization and thereby provide an insight into the reasons for efficiency differences.

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Introduction

This paper intends to investigate the state and evolution of banking efficiency in Central and Eastern European countries (CEECs) with a focus on the banking sectors in the countries that have recently acceded or are in the process of accession to the European Union.² The swift changes in the financial system following the collapse of the centrally planned economic systems, its catching up with EU levels and the overall transition towards a market economy make the banking systems of these countries a distinct field of research.

The analysis of banks' efficiency levels continues to be important from

both a macroeconomic and a microeconomic point of view as is documented by its long tradition in literature.³ From the micro perspective, the issue of banking efficiency is crucial, given ever increasing competition. From the macro perspective, the efficiency of the banking sector influences the costs of financial intermediation and the overall stability of the financial markets.

In contrast to the huge block of literature on banking efficiency in OECD countries, only relatively few studies have dealt with transition economies in CEE. Most of them focus on cost efficiency and/or use

¹ The authors would like to thank the Foreign Research Division of the Oesterreichische Nationalbank and in particular Zoltan Walko for the provision of aggregate data for CEE markets as well as the participants of the Economic Studies Division Workshop 2/04, held at the Oesterreichische Nationalbank on July 23, 2004, for helpful comments. Much of the work was undertaken during Stefania Rossi's working visit at the Economic Studies Division of the Oesterreichische Nationalbank. Stefania Rossi is professor of Economics at the Faculty of Economics, University of Cagliari, Italy, and the Department of Economics, University of Vienna; Markus Schwaiger and Gerhard Winkler are members of staff of the Oesterreichische Nationalbank.

² In order to homogenize our sample, we excluded Malta and Cyprus because of their different levels of financial development as well as Turkey, whose banking sector has undergone very different developments recently. We will henceforth refer to the countries in our sample as Central and Eastern European countries (CEECs), with the Baltic States subsumed in this concept. Our sample therefore includes the following countries: the Czech Republic (CZ), Estonia (EE), Hungary (HU), Latvia (LV), Lithuania (LT), Poland (PL), Romania (RO), Slovakia (SK), Slovenia (SI).

³ For an overview see e.g. Berger and Mester (1997).

Table 1

The Banking Sector in the CEECs		
2003	Total assets	Total assets
	EUR billion	% of GDP
CZ	78	107
EE	6	76
HU	54	70
LT	6	33
LV	9	84
PL	111	65
RO	16	12
SI	22	87
SK	21	93

Source: OeNB, own calculations.

data from a single country.⁴ The purpose of this analysis therefore is to contribute to the existing literature by analyzing the effect of the consolidation and transition process in the CEECs on the cost *and* profit efficiency of these banking systems. We provide cross-country and time series evidence on cost *and* profit efficiency, employing recent data for banks in the CEECs in order to see whether significant variations in efficiency levels happened during the transition period before EU accession.

Before going into more detail on the data, the methodology employed and the results of our research in chapters 3 and 4, respectively, it is worthwhile putting the CEECs' banking systems as a research field into perspective in terms of its idiosyncrasies.

On the whole, the CEE banking market is relatively small. Its total assets (excluding Russia) are currently well below the total assets encountered in small Western European nations such as e.g. Austria (see table 1).⁵

At the same time, however, the CEE banking market has an enormous potential for growth. This is basically due to, first, the fact that the intermediation depth measured as banking assets over GDP stands at levels well below 100% – far away from the levels achieved in the EU-12 (266% in 2003 – see table 1) for instance⁶ – and second, higher GDP growth itself as GDP per capita levels will converge to EU averages in the long run.

A look at table 2 furthermore reveals that the CEE banking market is characterized by a relatively high degree of concentration. Another specific feature of the CEE banking market is the widespread presence of foreign ownership that has emerged over the last years.

These two aspects are the consequence of the intense process of restructuring and growth that has led the CEE banking sector to experience an unprecedented level of consolidation through merger and acquisitions. The acquisition spree by Western

⁴ See e.g. Kraft and Tirtiroglu (1998) on Croatia, Opiela (2000) and Nikiel and Opiela (2002) on Poland, or Taci and Zampieri (1998) on the Czech Republic. To our knowledge, few studies provide cross-country comparisons – Bonin et al. (2004), Green et al. (2004) and Weill (2003) analyze the effect of bank privatization on efficiency in selected Eastern European transition countries. Fries and Taci (2003) and Fries et al. (2002) also investigate the efficiency/performance of a sample of banks in transition economies. Zajc (2004) focuses on differences between foreign and domestic banks relying on the methodology of Claessens et al. (2001). Berglöf and Bolton (2002) as well as Fries and Taci (2002) deal with the effect of macroeconomic stabilization and institutional reform on the banking system. Buch (2000) compares interest rate spreads across three CEEs (Hungary, Poland and the Czech Republic). A well-structured overview of recent developments in CEE banking markets can be found in Balling et al. (2004).

⁵ The Austrian banking sector, as a point of reference, had total assets of EUR 605 billion on an unconsolidated basis as at the end of 2003 (Source: OeNB).

⁶ Along with sharply expanding total assets, our data furthermore document that loan and deposit ratios are increasing as well. This is an indication that the importance of the banking sector's intermediation role is definitely rising, albeit from a low original level.

Table 2

Banking Sector Characteristics in the CEECs

2003	Market share of the five largest banks %	ROE	CAR ¹
CZ	66	23.2	14.5
EE	98	16.3	12.5
HU	52	17.6	10.7
LT	82	11.9	13.2
LV	63	18.1	11.7
PL	52	6.2	13.7
RO	70 ²	18.3 ²	..
SI	66	3.7 ²	11.5
SK	72	27.9	21.7

Source: OeNB, own calculations.

¹ CAR: capital adequacy ratio.

² Data as of 2002.

financial institutions has created a segmented banking system in the accession economies, with a tier of foreign-owned private financial institutions and a second tier of banks still in government hands losing relative market share (Eichengreen and Ghironi, 2001).

Another characteristic of the CEE banking sector is its relatively high profitability (see table 2). However, our dataset also indicates the onset of a decrease in the comparatively high interest rate margins in the CEECs (see also Walko and Reininger, 2004), which mirrors tightening competition in these markets.⁷ Furthermore, table 2 shows that CEE banking systems are well endowed with equity. These high levels of equity⁸ together with, as a look at our data suggests, cost income ratios rising in some countries, are a direct consequence

of the expansion of the banking sector as a whole outlined above. Any expansion requires “raw materials,” which in the banking sector have to be provided in the form of equity and overhead costs for staff and infrastructure.

2 Data

Our dataset is composed of single-bank data for CEE markets – it consists of annual account data derived from the financial statements of banks made available through the BankScope database of Bureau van Dijk and Fitch/Ibca. We use data for the years 1995 to 2002 for the eight CEECs that joined the EU in the first wave of accession (the Czech Republic, Hungary, Poland, Slovakia, Slovenia and the three Baltic countries Estonia, Latvia and Lithuania) as well as for the two CEECs due to join in the second wave (Romania and Bulgaria). As (re-

⁷ Many factors in the CEECs have contributed to increasing competition among financial institutions, such as the institutional upgrading in all economic sectors after the collapse of the socialist regimes, the preparation of the new Member States for joining Economic and Monetary Union, or the privatization and concentration process outlined above.

⁸ Note that equity ratios are even rising over time.

liable) data on each bank are not available for every year, we obtained an unbalanced panel dataset.⁹ The distri-

bution of banks across countries is given in table 3.

Table 3

Distribution of Banks across Countries											
Countries	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK	Total
Number of banks	0	39	13	30	11	27	72	34	19	27	272

For lack of data we had to drop Bulgaria from our sample. Thus we obtained an unbalanced panel consisting of 1,070 observations, which refers to a sample of 272 banks belonging to nine CEECs (eight new EU Member States plus Romania). Taken together, the banks in our sample on average hold more than 80% of total banking assets in the respective countries. This leads us to the conclusion that our sample can be considered to be highly representative of the CEECs analyzed.

3 Methodology

3.1 Some Remarks on Efficiency Measurement

A production plan is called efficient if it is not possible to produce more with the same input or to reduce these inputs leaving the output unchanged. The duality theory (Beattie and Taylor, 1985, and Shephard, 1970) has shown that under given conditions (exogenous prices and optimal behavior of the producer) the property of the production function can be studied indirectly through cost or profit functions. However, observable production plans and cost/profit levels are not the result of perfectly rational and efficient-

decisions: factors such as errors, lags between the choice of plan and its implementation, inertia in human behavior and distorted communication may cause what is called X-inefficiency; this means that real data move away from the optimum production plan. This is why estimation techniques must include some filter device to get rid of the inefficiency component and isolate the theoretical frontier. Two classes of models have been proposed over time. Whereas deterministic models (Aigner and Chu, 1968; Afriat, 1972; Richmond, 1974) use the residuals of the production function as a measurement for inefficiency without controlling random noise, stochastic frontier models (Aigner et al., 1977; Stevenson, 1980; Jondrow et al., 1982; Battese and Coelli, 1988; Kumbhakar and Lovell, 2000) disentangle the error term in two components. The first one, U , accounts for the firm's inefficiency – e.g. factors that affect technical or allocative efficiency, which could be controlled by banks – distributed as a half normal (truncated below zero); the second one, V , corresponds to the random fluctuations distributed as a normal.

⁹ The raw data required substantial editing to obtain a reliable database for the analysis. In a thorough review process we concentrated on choosing the most appropriate accounting standards (we preferred financial statements using IAS over those using national standards and used consolidated balance sheets whenever they were available), on avoiding double counting of institutions and on converting all the values into a single currency (i.e. USD). Furthermore, we conducted several plausibility checks regarding the completeness and consistency of the individual profit and loss accounts and balance sheets.

According to the stochastic frontier approach, the total costs/profits (TC and TP) for the s -th firm at time t assume the following specification:

$$H_{st} = H(Y_{st}, P_{st}) + \varepsilon_{st} = H(Y_{st}, P_{st}) + U_{st} + V_{st} \quad (1)$$

where H is either TC or TP , Y is a vector of outputs of the firm; P is a vector of input prices; ε is the stochastic random noise. Following the Battese and Coelli (1988 and 1992) model, the predictions of individual bank cost/profit efficiency (EFF_H) may then be written as:

$$EFF_H_{st} = E(H_{st} | U_{st}, \varphi_{st}) / E(H_{st} | U_{st} = 0, \varphi_{st}) \quad (2)$$

where φ_{st} are the regression parameters.

3.2 Definition of Input and Output Variables

In modeling banks' cost function, one of the most debated questions is the

definition of the *inputs* and *outputs* of multi-product financial firms. The discussion concentrates particularly on the role of deposits, considering that they have both input and output characteristics. Literature suggests a range of different approaches to this issue. In modeling the cost/profit functions of CEE banks, we employ the *modified production approach*.¹⁰ Therefore we shape the functions using loans, deposits and other earning assets as outputs, and price of labor, price of capital and price of deposits as inputs (table 4).

We do not, however, account for their interbank market activities (this mainly refers to the different sorts of deposits from and with banks), since interbank market conditions should be approximately the same for all the banks.

We measure our variables in monetary flows taken from the annual accounts of CEE banks.

Table 4

Variables Used in the Cost Functions for CEE banks

Variables	Name	Description
Exogenous variables		
Output		
y_1	Loans	Loans (performing and nonperforming) with customers
y_2	Deposits	Deposits with customers
y_3	Other earning assets	Banks' investments in various types of securities (e.g. government securities, bonds, equity investments, CDS, T-bills, equity investment) not including deposits with banks
Input		
x_1	Labor	Total assets as a proxy for the number of employees due to lack of data
x_2	Capital	Adjusted value of fixed assets net of depreciation
x_3	Deposits	Customer deposits
Input prices		
w	Price of labor	Staff expenses/total assets
k	Price of capital	Cost of capital (operative costs associated with capital expenses/adjusted value of fixed assets net of depreciation)
d^*	Price of deposits	Total interest expenses/volume of customer deposits
Endogenous variables		
TC	Total costs	Operating expenses
TP	Total profits	Operating profit minus loan loss provisions

¹⁰ The modified production approach allows both the input and output characteristics of deposits to be considered. According to this approach the interest paid on deposits has to be accounted as input, while the volume of deposits is considered as output (see Berger and Humphrey, 1991, and Bauer et al., 1993). Note that we also conducted our estimations using the production approach, yielding, to the point of being comparable, similar results.

3.3 Cost/Profit Function

Specifications and Estimation

Methodology

In modeling the banks' cost/profit function¹¹ we use the Fourier flexible form (FF), since the empirically more widely used translog (TL) specification has one main pitfall as pointed out in White (1980) and Mitchell and Onvural (1996): it does not necessarily correspond to the second order Taylor approximation of the underlying function at an expansion point. The Fourier flexible (FF) form

combines the standard TL, nested in the FF, with the nonparametric Fourier form, i.e. the trigonometric terms. This theoretical improvement has been proved to give a better fit of the data than the TL (see McAllister and McManus, 1993; Mitchell and Onvural, 1996; Berger and Mester, 1997). It furthermore presents the well-known advantages of being a flexible form and of including, as a particular case, the Cobb-Douglas specification.

The FF representation gives:

$$\begin{aligned}
 \ln H_{st} = & [\alpha_0 + \sum_{i=1}^3 \alpha_i \cdot \ln y_{is} + \sum_{k=1}^3 \beta_k \cdot \ln p_{ks} + \frac{1}{2} \sum_{i=1}^3 \sum_{j=1}^3 \alpha_{ij} \cdot \ln y_{is} \cdot \\
 & \ln y_{js} + \frac{1}{2} \sum_{k=1}^3 \sum_{h=1}^3 \beta_{kh} \cdot \ln p_{ks} \cdot \ln p_{hs} + \sum_{i=1}^3 \sum_{k=1}^3 \delta_{ik} \cdot \ln y_{is} \cdot \ln p_{ks}] + \\
 & \sum_i \alpha_i \cos(y_i) + \sum_i b_i \sin(y_i) + \sum_k c_k \cos(p_k) + \sum_k d_k \sin(p_k) + \\
 & \sum_{ij} e_{ij} [\cos(y_i) + \cos(y_j)] + \sum_{ij} \int_{ij} [\sin(y_i) + \sin(y_j)] + \\
 & \sum_{ij} g_{ij} [\cos(y_i) - \cos(y_j)] + \sum_{ij} h_{ij} [\sin(y_i) - \sin(y_j)] + \quad (3) \\
 & \sum_{kl} i_{kl} [\cos(p_k) + \cos(p_l)] + \sum_{kl} l_{kl} [\sin(p_k) + \sin(p_l)] + \\
 & \sum_{kl} m_{kl} [\cos(p_k) - \cos(p_l)] + \sum_{kl} n_{kl} [\sin(p_k) - \sin(p_l)] + \\
 & V_{st} + U_{st}
 \end{aligned}$$

where H is again either total cost TC or total profits TP , y_i is the i -th output and p_k is the price of the k -th input. V_{st} is the error term accounting for random noise in the data, and U_{st} refers to technical inefficiency.

The restrictions in the form of the linear homogeneity conditions and

cost exhaustion are obtained by normalizing total costs/profits, the price of labor and the price of deposits by the price of capital. The symmetry conditions state that

$$\alpha_{ij} = \alpha_{ji} \quad \forall i, j (i, j = 1, \dots, n)$$

$$\beta_{ij} = \beta_{ji} \quad \forall i, j (i, j = 1, \dots, m).$$

¹¹ A distinction between cost and profit efficiency arises when markets are not perfect. In the case of CEE countries it certainly is a reasonable assumption to say that given our observation period (1995 to 2002) competitive markets did not occur in the banking industry. Therefore a profit efficiency analysis brings additional insights into the workings of the industry.

The linear homogeneity restrictions demand that:

$$\sum_{k=1}^3 \beta_k = 1; \sum_{k=1}^3 \beta_{kh} = 0, \text{ for all } h;$$

$$\sum_{k=1}^3 \delta_{ik} = 0, \text{ for all } i.$$

In the FF specification the trigonometric addends have rescaled coherently with our sample size.¹²

Using a three stage maximum likelihood procedure regression (3) is estimated by applying the stochastic frontier approach (Battese and Coelli, 1992).

4 Empirical Findings

Table 5 presents the FF stochastic cost and profit function estimates. The use of a common frontier has the advantage of allowing performance comparisons of banks across countries while having the disadvantage that it does not permit to determine whether divergence in inefficiency is due to environmental conditions or differences in the technology employed. The main results can be summarized as follows.

As for the cost function, all the output and input price coefficients are strongly significant.

The elasticity of production costs to the price of labor ($\beta_{p1} = 0.68$) is larger than the elasticity to the capital

price, 0.15 ($1 - \beta_{p1} - \beta_{p2} = 0.17$, due to the linear homogeneity conditions imposed). This means that banks can more easily control capital and deposit expenses than labor expenses when prices rise. For our sample this seems plausible, since at least in the short run, it is/was more difficult to cut labor expenses than capital costs. Looking at the outputs, all the variables present the expected positive sign.

Concerning the profit function, again all the output and input price coefficients have the correct sign and the expected magnitude.

Apart from the variable capturing the volume of deposits raised by the banks, all the coefficients are strongly significant. This, however, can easily be explained by the fact that the influence of deposits on profit is twofold and remains unclear. On the one hand, the more deposits a bank raises, the more costs it has to bear (mostly interest costs but also administrative costs). On the other hand, this effect is (partly) being overlapped and compensated by the fact that in general more deposits means more capital that can be transformed into loans (which raise profits); in particular deposits stemming from customers are usually cheaper than capital borrowed in interbank markets.

¹² Special attention must be paid to the choice of the rescaling form for the trigonometric terms in order to coherently fix their argument in the $0-2\pi$ range. The truncation point here has been chosen according to the rule of thumb expounded in Mitchell and Onvural (1996) that the number of parameters should be set equal to the number of observations raised to the power of two-thirds in order to obtain consistent and asymptotically normal estimates. However, as suggested in Gallant (1981), the effective number of the coefficients is corrected by reducing the number of the regressors to cope with the possible multicollinearity.

Table 5

Cost and Profit Fourier Functions Estimates – CEE banks

	Cost function		Profit function	
	Ln(TC)		Ln(TP)	
	Coefficient	t-ratio	Coefficient	t-ratio
Ln y ₁ (loans)	0.19	3.68*	0.12	2.3**
Ln y ₂ (deposits)	0.36	7.41*	0.07	1.53
Ln y ₃ (other earning assets)	0.21	6.34*	0.14	4.01*
Ln p ₁ (labor price)	0.68	10.95*	0.55	8.93*
Ln p ₂ (deposits price)	0.15	2.92*	0.2	4.05*
Ln y ₁ ²	0.08	4.37*	0.05	2.76*
Ln y ₂ ²	0.16	14.54*	0.06	3.58*
Ln y ₃ ²	0.01	10.38*	0.02	2.09**
Ln p ₁ ²	0.11	4.31*	0.01	0.29
Ln p ₂ ²	0.14	7.03*	0.01	0.42
Ln y ₁ y ₂	-0.07	-6.58*	-0.06	-4.33*
Ln y ₁ y ₃	0.03	2.82*	0.01	0.84
Ln y ₂ y ₃	-0.06	-6.54*	-0.02	-2.54*
Ln p ₁ p ₂	-0.11	-5.45*	0	-0.21
Ln y ₁ p ₁	0.02	1.58	0.01	0.8
Ln y ₂ p ₁	-0.07	-5.23*	-0.04	-2.45*
Ln y ₃ p ₁	0.01	0.71	0.04	3.57*
Ln y ₁ p ₂	-0.03	-2.26**	0.01	0.43
Ln y ₂ p ₂	0.11	9.09	0.03	2.05**
Ln y ₃ p ₂	-0.03	-2.45*	-0.03	-2.58*
sinq1q2	0.01	1.25	0	0.49
sinq1q3	0.01	1.26	0.01	0.52
cosq1q3	0	-0.12	0	-0.44
difsinq1q2	-0.01	-0.97	0	-0.12
difcosq1q2	0.01	0.47	-0.01	-0.49
difcosq1q3	-0.02	-1.82***	0.01	0.64
sinwkdbk	-0.08	-1.5	-0.04	-0.84
coswkdbk	-0.08	-1.46	-0.03	-0.57
difsinwkdbk	-0.08	-1.92**	0.02	0.53
difcoswkdbk	-0.06	-1.26	0.04	0.94
Constant	2.35	16.24*	10.38	46.36*
μ	-444.24		0.92	5.78*
η	0.05	4.58*	0.02	3.54*
γ	0.99			
σ^2	(0.000)		(0.026)	
δ_u^2	142.48		0.19	
	(0.48)		(0.017)	
δ_v^2	142.42		0.14	
	(0.48)		(0.017)	
δ_v^2	0.05		0.05	
	(0.002)		(0.002)	
Observations	1,070		1,105	
Number of banks	245		241	

The Table reports magnitude and t-statistics of the Maximum Likelihood estimates (e.g. 3) based on the Davidson-Fletcher-Powell Quasi-Newton algorithm, using the Battese and Coelli (1992) model estimated with Stata 8.1.

In parenthesis we report the standard deviation. The prefix "Ln" stands for natural logarithm; sum and dif, respectively, represent the sum and difference between trigonometric operators. Total costs, price of labor (p₁), and price of deposits (p₂) are normalized to the price of capital. Mixed products and squares of inputs and outputs represent the second order terms of the flexible form.

$$\gamma = \sigma_u^2 / \sigma_v^2;$$

$$\sigma = \sigma_u^2 / \sigma_v^2;$$

* Significant at 1% level; **Significant at 5% level; ***Significant at 10% level.

Overall we can say that firms operate far from the cost/profit efficient frontier, since μ is significantly different from zero. However, the fact that η is positive and significant suggests that both cost and profit efficiency increase over time.¹³

Decomposing the inefficiency values obtained from the cost and profit function estimates on the overall panel

according to the methodology outlined in chapter 3 yields information about the level of banking efficiency by country and by time. This analysis provides a first insight into the efficiency of the banking systems.

Tables 6 and 7 provide cost and profit efficiency estimates aggregated by country and by time.¹⁴

Table 6

Cost Efficiency Levels by Country and by Time Period

Sample	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Romania	Slovakia	Slovenia
Average	0.58	0.79	0.75	0.78	0.71	0.79	0.75	0.67	0.89
1995 to 2002	(0.19)	(0.10)	(0.17)	(0.09)	(0.15)	(0.16)	(0.14)	(0.19)	(0.07)
1995	0.47	0.78	0.71	0.75	0.64	0.78	0.55	0.63	0.87
	(0.17)	(0.11)	(0.18)	(0.06)	(0.15)	(0.19)	(0.00) ^a	(0.14)	(0.09)
1966	0.55	0.79	0.74	0.74	0.64	0.80	0.57	0.71	0.88
	(0.18)	(0.09)	(0.17)	(0.12)	(0.16)	(0.17)	(0.00) ^a	(0.15)	(0.08)
1997	0.56	0.79	0.75	0.75	0.66	0.79	0.91	0.65	0.89
	(0.22)	(0.10)	(0.16)	(0.1)	(0.16)	(0.16)	(0.00) ^a	(0.14)	(0.08)
1998	0.54	0.78	0.73	0.80	0.70	0.79	0.76	0.70	0.88
	(0.20)	(0.12)	(0.18)	(0.07)	(0.15)	(0.17)	(0.12)	(0.16)	(0.09)
1999	0.56	0.79	0.76	0.79	0.71	0.81	0.73	0.71	0.89
	(0.20)	(0.12)	(0.16)	(0.08)	(0.15)	(0.14)	(0.15)	(0.15)	(0.08)
2000	0.58	0.80	0.78	0.80	0.77	0.78	0.74	0.67	0.90
	(0.20)	(0.11)	(0.15)	(0.08)	(0.11)	(0.18)	(0.15)	(0.24)	(0.07)
2001	0.65	0.79	0.76	0.78	0.81	0.79	0.76	0.65	0.90
	(0.18)	(0.10)	(0.21)	(0.09)	(0.09)	(0.16)	(0.14)	(0.24)	(0.07)
2002	0.64	0.80	0.79	0.79	0.77	0.82	0.76	0.66	0.92
	(0.18)	(0.10)	(0.15)	(0.09)	(0.11)	(0.13)	(0.15)	(0.25)	(0.05)

Standard deviations are in parentheses.

^a Values due to only one data point.

¹³ According to the Battese-Coelli (1992) specification, the inefficiency of a bank varies over time according to $U_{st} = U_s^{\eta(t-T)}$; where U_s is the inefficiency term of bank s at time T (which is the last period considered) and η is a parameter to be estimated.

Therefore the U_{st} decreases over time t if $\eta > 0$, increases if $\eta < 0$ and stays steady if $\eta = 0$.

The Battese-Coelli (1992) specification implies that the disturbances are half normal distributed and μ is the truncation of a normal density function. Econometrically this means that if μ is significantly different from zero we reject the hypothesis that the distribution is half normal truncated and therefore efficiency is not the prevalent behavior of our bank sample.

¹⁴ Note that we also conducted mean tests not reported in this paper for the sake of brevity, which indicate that in most of the cases the levels of efficiency by country are statistically different.

Table 7

Profit Efficiency Levels by Country and by Time Period									
Sample	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Romania	Slovakia	Slovenia
Average	0.57	0.41	0.33	0.38	0.45	0.38	0.29	0.47	0.37
1995 to 2002	(0.17)	(0.08)	(0.08)	(0.08)	(0.13)	(0.08)	(0.13)	(0.12)	(0.12)
1995	0.55	0.41	0.31	0.33	0.40	0.34	0.24	0.47	0.34
	(0.15)	(0.03)	(0.08)	(0.07)	(0.13)	(0.07)	(0.11)	(0.16)	(0.05)
1966	0.53	0.43	0.32	0.35	0.44	0.36	0.25	0.47	0.34
	(0.17)	(0.10)	(0.08)	(0.08)	(0.14)	(0.07)	(0.11)	(0.14)	(0.05)
1997	0.56	0.41	0.33	0.38	0.46	0.38	0.32	0.49	0.34
	(0.18)	(0.11)	(0.08)	(0.08)	(0.14)	(0.08)	(0.17)	(0.12)	(0.05)
1998	0.55	0.38	0.33	0.39	0.47	0.39	0.27	0.47	0.35
	(0.15)	(0.06)	(0.08)	(0.08)	(0.14)	(0.09)	(0.13)	(0.09)	(0.05)
1999	0.57	0.38	0.33	0.39	0.48	0.37	0.27	0.45	0.38
	(0.17)	(0.06)	(0.08)	(0.08)	(0.14)	(0.07)	(0.13)	(0.10)	(0.10)
2000	0.57	0.40	0.32	0.40	0.45	0.39	0.27	0.47	0.39
	(0.19)	(0.06)	(0.09)	(0.08)	(0.11)	(0.08)	(0.12)	(0.12)	(0.09)
2001	0.59	0.40	0.34	0.40	0.43	0.41	0.30	0.48	0.40
	(0.21)	(0.06)	(0.08)	(0.08)	(0.09)	(0.09)	(0.12)	(0.12)	(0.09)
2002	0.61	0.40	0.35	0.41	0.49	0.41	0.33	0.47	0.38
	(0.21)	(0.06)	(0.07)	(0.08)	(0.14)	(0.08)	(0.13)	(0.11)	(0.04)

Standard deviations are in parentheses.

As expected, the overall results highlight the presence of inefficiency in the banking system of these countries: in general the efficiency values obtained for cost efficiency as well as for profit efficiency are fairly low, indicating that banks operate far from the efficient frontier.¹⁵ Furthermore nearly all the banking systems display a (slight) tendency to increase in efficiency (cost and profit) over time.¹⁶ We can further see that firms' expertise in exploiting their competitive advantages and thereby generating high profits is not as homogeneously developed as their ability to supply their services in a cost-saving way. This fact leads to profit efficiency scores well below cost efficiency scores. There are several reasons for this. As intermediation depth is still fairly low and demand for financial services of all kinds very high in CEE countries, one explanation lies

in banks' expansion efforts, which have absorbed enormous resources but have only partly paid off up to now, leaving profit efficiencies behind cost efficiencies. Furthermore, given the potential reward of maintaining/expanding market shares in a rapidly growing market, banks have little incentive to maximize profits by means of full utilization of their discretionary pricing power. As margins, although declining recently, are still comparatively high and profits therefore sufficient, they rather have incentives to keep their costs under control.

Inspecting the average efficiency scores by country enables comparisons among the performances achieved by the various banking systems examined and reveals that efficiency levels vary considerably across countries.

As far as cost efficiency is concerned, values range from 0.58

¹⁵ In our analysis we additionally took into account the efficiency levels when we truncate the distribution of the efficiency values at both tails at the 95% and 99% quantile, respectively, in order to eliminate the influence of the outliers. Results remained quite robust.

¹⁶ A clear indication of this tendency shows the value of η which is positive and significant in the estimate of the stochastic cost and profit functions (table 5).

(Czech Republic) to 0.89 (Slovenia). For its part, Slovenia has the most efficient banking system of all the countries selected. Its good performance despite the dominance of state-owned banks and the comparatively low market share of foreign-owned institutions may be due to the fact that the country itself has a relatively high branch density and credit growth has been weak over the last years. This would suggest that the costs to be incurred to finance future growth in this market are comparatively low. As for Estonia and Lithuania, part of the reasoning behind the good performance of the banking sector in terms of cost efficiency may be due to the fact that these two banking sectors are highly concentrated and virtually entirely in foreign hands. Considering this, it could be argued that foreign ownership pays in terms of efficiency. Alternatively, a simpler reasoning would suggest that some of the costs of the Estonian or the Lithuanian banking sector appear in the accounts of the parent enterprises. Concerning Poland, central bank data show that the country has fared relatively well in terms of loan loss reserves.¹⁷ As loan loss provisions are not part of the total costs (TC) this thought would imply that banks that manage their loan portfolios well also manage operating costs efficiently.

By contrast, Slovakia and the Czech Republic posted the worst cost efficiency performances (0.67 and 0.58, respectively). In both cases, the results again can be explained by the comparatively high loan loss reserves recorded over much of the observation period.¹⁸

In interpreting country differences, it should however be noted that these differences outlined above only show the cost side of the economics underlying the banking business. It could very well be the case that banks with relatively high cost “inefficiencies” supply a better service quality and are thus able to generate higher profits. If certain products are differently equipped with value-added services across banks/countries for example, their production will be more or less cost intensive but the potential yield they offer will differ, meaning that higher returns could very well offset higher costs. A comparison of cost efficiency scores with corresponding profit efficiency scores supports this argument. Regarding cost efficiency, Czech and Slovak banks obtained the worst results. At the same time and to some extent for the same reasons, Czech banks were the most efficient ones as regards their ability to maximize profits.

Conversely, the position of Slovenia, which turned out to be very cost efficient, changed completely when examining profit efficiency, where its performance is at the lower end. This may very well be due to the dominance of state-owned banks. Romania recorded the worst performance in terms of profit efficiency. The stage of economic development of Romania in comparison to the other countries in the sample may be one reason behind this.

To sum up, the results of the panel estimation yield evidence of wide differences among cost and profit inefficiency levels by country, with overall efficiency levels increasing over time.

¹⁷ For an overview of loan loss reserves in CEECs, see Boss et al. (2004).

¹⁸ See also chapter 1 in Boss et al. (2004).

In a final step we also study efficiencies across specialization and size.

As for specialization, we distinguish the following types of banks, thereby accounting for different fields of businesses, different legal structures and different normative goals of banks (bank holding companies; commercial banks; cooperative banks; investment banks; medium- and long-term credit banks; real estate and mortgage banks; savings banks; government credit institutions).

Additionally, we divide our data sample into three subgroups according to the size of banks, using the upper and lower quartile of distribution of total assets to create the following subsamples: large (total assets above USD 1,144.1 million), medium (total assets between USD 123.2 million and USD 1,144.1 million) and small (total assets below USD 123.2 million).

Tables 8 and 9 show the results.

Table 8

Cost and Profit Efficiency Levels by Bank Specialization								
Sample	Bank holding companies	Commercial banks	Cooperative banks	Investment banks	Medium- and long-term credit banks	Real estate/ mortgage banks	Savings banks	Governmental credit institutions
<i>Cost efficiency</i>								
Average 1995 to 2002	0.83 (0.15)	0.75 (0.17)	0.73 (0.23)	0.82 (0.02)	0.87 (0.01)	0.78 (0.18)	0.79 (0.06)	0.36 (0.08)
<i>Profit efficiency</i>								
Average 1995 to 2002	0.35 (0.08)	0.41 (0.13)	0.47 (0.15)	0.45 (0.01)	0.42 (0.01)	0.71 (0.16)	0.33 (0.16)	0.32 (0.05)

Table 9

Cost and Profit Efficiency Levels by Size			
Sample	Small	Medium	Large
<i>Cost efficiency</i>			
Average 1995 to 2002	0.74 (0.17)	0.72 (0.19)	0.78 (0.12)
<i>Profit efficiency</i>			
Average 1995 to 2002	0.41 (0.13)	0.42 (0.14)	0.38 (0.11)

The typology of banks seems to have an impact on inefficiency – all sorts of private-sector banks post better performances in terms of both cost and profit efficiency than governmental credit institutions. This result is not surprising and reflects the well-known fact that generally speaking state-owned banks fulfilling special tasks in a protected environment often do not work as efficiently as institutions exposed to market forces and

that privatization was used as a means of sorting out the problems that beset state-owned banks.

The results show that in terms of cost efficiency, it pays to be either small or large. Medium-sized banks tend to display lower cost efficiencies. A look at table 9 shows that this picture changes for profit efficiencies. These results indicate the need for further research in this direction.

Although our analysis can therefore give a first impression of the different efficiency levels in CEE markets, some important caveats should be considered in order to set all our results into perspective.

1. As we based our results on single cost and profit function frontiers to be able to study differences across countries, we must implicitly presuppose that in general, banks are comparable across countries, though legal regulations, the range of products, service levels, etc. may differ.
2. Although our estimations show a very high goodness of fit, which to some extent justifies the assumptions we made in chapter 1, we are aware that our investigation, as successful as it may be in giving important first insights, could fail to capture all relevant variables which should be included in the cost and profit functions and therefore also determine bank efficiency.

5 Conclusions

This paper attempts to investigate the cost and profit efficiency of banks in the CEECs over the period from 1995 to 2002. These years witnessed a large process of consolidation in the banking systems of these then EU accession economies.

Not surprisingly, our findings, based on the stochastic cost and profit functions, show a generally low level of cost and profit efficiency for banks in the CEECs. Conversely, the results also reveal a tendency of efficiency (both cost and profit) to increase over time. Comparing the efficiency scores obtained from the cost and profit estimates, banks in the former accession countries seem to be more efficient in controlling costs than in generating profits; this is reflected by the profit efficiency scores, which are far well below cost efficiency levels. Decomposing cost efficiency scores by country, we encountered large differences across countries. High concentration and foreign ownership seem to pay in terms of efficiency.

When the profit efficiency scores are taken into account, the order of the country ranking looks rather different: low cost efficiencies are often offset by high profit efficiencies and vice versa.

Finally, the size and typology of banks seem to have an impact on inefficiency. Our results suggest that in terms of cost efficiency it pays to be either small or large. Evidence also supports the view that governmental credit institutions show a poorer performance than more market-oriented banks, both in terms of cost and profit efficiency.

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Zoltan Walko

This paper gives a comprehensive overview of the financial sector in Bulgaria. While the primary focus lies on the banking sector as the main channel of financial intermediation, capital markets for Bulgarian assets are analyzed as well. After a brief description of the turbulent historical development of the banking sector, its main features today are presented. An in-depth analysis of the structure of assets and liabilities is then followed by an investigation of the role of foreign exchange. The present study confirms that the share of foreign currency-denominated domestic claims in total domestic claims on nonbanks has increased and that the share of foreign currency-denominated deposits in total domestic deposits of nonbanks has decreased. To explain these observations the study refers to the ongoing real appreciation process against the backdrop of the currency board arrangement which has been in place since mid-1997. Next, the development of profitability, capital adequacy and asset quality is explored. Finally, a special section is devoted to the role of Austrian banks in Bulgaria, which have a market share of about 11.5% and enjoy high profitability.

1 Introduction¹

Following the financial crisis during 1996–1997, the Bulgarian banking sector has gone through an impressive process of stabilization in recent years, which has involved the privatization of most banks, predominantly through foreign investors. This has led to a deepening of financial intermediation, although the share of banking assets in percent of GDP remains relatively modest by international and even Central and Eastern European (CEE) standards. Despite the intensified competition and smaller interest rate margins, return ratios have remained above those observed across the EU-15. Notwithstanding the shift in lending activity toward nongovernment borrowers and the intensification of domestic lending activity, Bulgarian banks are adequately capitalized, and the share of nonperforming assets has significantly declined. This environment also offers interesting business opportunities for Austrian banks. At the end of 2003, two Austrian banks were active on the Bulgarian market, with a combined market share of more than 10%. Although the assets held in Bulgaria represent

only a tiny proportion of Austrian banks' total assets in the CEE region, business in Bulgaria stands out in terms of profitability.

2 A Short History of the Bulgarian Banking System

Following major political changes, the Bulgarian banking system was transformed from a one-tier to a two-tier system comprising a central bank and several commercial banks at the end of 1989. Banks which had previously specialized in selected sectors were transformed into universal banks providing financial services to all sectors of the economy. At the same time, the 59 branches of the Bulgarian National Bank (BNB) were transformed into commercial banks. As the large number of state-owned commercial banks had proved to be inefficient, the government created the Bank Consolidation Company (BCC) to encourage the establishment of larger operating units through mergers. As a result, the total number of banks was reduced from 81 in 1992 to 42 in 1995. At the same time, policies discouraged foreign banks

¹ The author would like to thank Vanessa Redak, Thomas Reiningger and Helene Schuberth for their valuable comments on this paper. This study represents a follow-up on Barisitz (2001). See also his analysis of the Romanian financial sector (Barisitz, 2004).

from entering the Bulgarian market. It was not until 1994 that the first foreign investors entered the market, when the Greek Xios Bank and the Dutch ING bank set up branches in Sofia. By the end of 1995 two other banks had opened branches, and three foreign banks had received full banking licenses.

The legal system sluggishly adjusted to the new environment. The Law on the Bulgarian National Bank came into effect in June 1991, and in 1992 the Law on Banks and Credit Activity was passed. Although this latter law introduced a regulatory framework for commercial banking activities, regulatory controls remained limited, and banks operated in an environment without proper supervision.

Credit policies were often characterized by soft budget constraints (in particular with respect to traditionally large borrowers, i.e. the sizeable loss-making state enterprises that lacked reform), which finally resulted in an unprecedented boom in commercial credit to the nonfinancial sector. Coupled with inadequate laws, insufficient institutional capacity and limited (foreign) competition, this credit boom led to a surge in bad loans. By 1995 roughly 75% of all bank loans were classified as nonperforming (substandard, doubtful or loss).

Faced with this situation, the BNB increasingly provided liquidity to the market to prevent large banks from failing, finally losing control of money supply and inflation. This series of events culminated in a financial (i.e. currency and banking) crisis in 1996–1997, which included a brief period of hyperinflation several banks did not survive and reduced the number of banks to 30 by the end of 1996.

Having learnt from the crisis, Bulgarian policymakers reformed the laws on the BNB and on commercial banks to correct the shortcomings of earlier regulations. In mid-1997 a currency board arrangement was introduced, which imposed strict controls on money supply. Encouraged by the IMF and the World Bank, the Bulgarian authorities embarked on the privatization of the banking sector.

3 The Current Structure of the Banking System

These efforts have shown many positive results. By the end of 2003, around 98% of the total assets of the banking sector were in private ownership. In 1996 this share had only amounted to 18%. Privatization was mainly conducted through foreign investors: Foreign-owned banks (among them the country's five largest banks) accounted for around 85% of total banking assets at the end of 2003.²

Table 1

Banking Institutions							
	1997	1998	1999	2000	2001	2002	2003
Number of banks	34	34	34	35	35	34	35
Share of private banks in total assets (%)	32.8	39.4	53.4	80.2	80.1	83.5	98.0
Share of foreign banks in total assets (%)	18.0	32.3	44.7	73.3	75.0	72.0	86.0
Number of employees	..	..	..	..	22,266	21,616	20,997

Source: Bulgarian National Bank.

² The values for private and foreign ownership at end-2003 are approximative, calculated on the basis of end-2002 and mid-2003 values plus the share of DSK bank, which was sold to the Hungarian OTP in the second half of 2003.

Back in 1996 their share had only been 9.6%. Out of the banks held in majority foreign ownership in 2003, six were branches of foreign banks.

While the financial sector continues to be dominated by the banking sector, the nonbank financial sector comprises mostly pension funds and insurance companies.

The net asset value of the eight Bulgarian pension funds amounted to BGN 510 million (around EUR 260 million) at the end of 2003, which represented less than 3% of total banking sector assets. The funds almost exclusively invest domestically, with government securities, bank deposits and mortgage bonds being the most widely used investment vehicles.

At the end of 2003, 31 insurance companies operated in Bulgaria, and their total assets amounted to around BGN 800 million (EUR 410 million). Of these, 17 were foreign owned (including one branch), accounting for nearly 60% of total assets. As to the distribution of assets, a differentiation can be made between non-life and life insurance companies. The former invested mainly in fixed-income securities, had deposits with credit institutions or held cash, while the latter primarily invested in fixed-income securities, shares in affiliated undertakings and in participating interests as well as in real estate used for own purposes.

Table 2

Concentration and Competition							
	1997	1998	1999	2000	2001	2002	2003
Market share of three largest banks in total assets (%)	..	..	51.7	49.9	46.1	43.3	40.5
Market share of five largest banks in total assets (%)	..	..	62.3	60.4	56.6	55.3	52.9
Herfindahl-Hirschman Index	..	..	1,159	1,094	930	835	770
Interest rate spread (rate on new loans minus rates on new time and savings deposits)	11.3	10.7	9.8	10.9	10.7	9.8	8.6

Source: Bulgarian National Bank, OeNB calculations.

The changes in the ownership structure of banks have also contributed to increased competition in the Bulgarian banking system. At the end of 2003 there were 35 banks operating in the country. The three largest banks accounted for around 40% of total banking assets, while the share of the five largest banks was 53%, which is a lower share than in most new Central European EU Member States. Also the Herfindahl-

Hirschman³ index of banking sector assets provides evidence of an increase in competition over the past decade. The index value declined from 3,000 in 1993 to 1,159 in 1999 and further to 770 at the end of 2003.

The development of the interest rate spread (defined as the difference between interest rates on deposits of and loans to nonfinancial corporations and households) may serve as an indicator for the development of competi-

³ The Herfindahl-Hirschman index is calculated as the sum of the squared market shares (in percentage points) of individual banks. It can take values between close to zero and 10,000, with values below 1,000 suggesting a non-concentrated, values between 1,000 and 1,800 a moderately concentrated and values above 1,800 a highly concentrated market.

tion as well. This spread peaked during the financial crisis in 1996 at around 270 percentage points and fell to 10 percentage points by the late 1990s. Since then the spread has gradually narrowed and reached 8.6 percentage points by the end of 2003.⁴ When looking at the interest rate spread, however, it should be taken into consideration that its development may also be influenced by factors other than competition. In this context I would like to highlight the improvement in the quality of credit portfolios over the past few years, which has probably led to a decline in the required risk premium on loan rates. Furthermore, when considering the higher interest margins in earlier years, one should bear in mind that during periods with large amounts of bad loans the anticipated high net interest income was not actually received. Loan loss provisioning and the writing off of bad loans narrowed

the effective interest margin and dented banks' profitability.

4 The Structure of Bank Assets and Liabilities

While commercial banks' assets were bloated by uncollectible loans during the early phase of Bulgaria's banking history, the financial crisis of 1996–1997 erased much of these assets. The ratio of total banking sector assets⁵ in percent of GDP fell from 180% in 1996 to less than 50% one year later and further to 37.1% in 1998. Despite relative asset growth since then, financial intermediation has remained low in Bulgaria, with banking assets amounting to 52.6% of GDP at the end of 2003. This compared to more than 270% in the euro area, 81.2% in the ten new EU Member States and 75% in the eight Central and Eastern European new EU Member States.

Table 3

Structure of Claims on Domestic Sectors

	1997	1998	1999	2000	2001	2002	2003
<i>BGN million, end-of-period</i>							
Domestic claims on general government	2,168	1,543	1,233	1,099	1,378	1,958	2,051
Domestic claims on nonmonetary financial institutions	8	12	17	29	59	100	252
Domestic claims on nonfinancial companies	1,451	1,878	2,334	2,713	3,447	4,839	6,660
Domestic claims on households	167	476	522	618	934	1,385	2,502
Domestic claims	3,794	3,909	4,105	4,459	5,818	8,282	11,464
<i>% of GDP</i>							
Domestic claims	21.8	17.4	17.3	16.7	19.6	25.6	33.3

Source: Bulgarian National Bank, OeNB calculations.

⁴ For the average loan rate I used volume-weighted interest rates on new loans to nonfinancial corporations and households (excluding overdrafts). For the average deposit rate I used volume-weighted interest rates on new time and savings deposits (excluding overnight deposits).

⁵ In this paper the banking sector is defined as "other monetary financial institutions" (i.e. excluding the central bank). Total banking sector assets also comprise claims on domestic monetary financial institutions, including the central bank.

Total domestic claims (e.g. credits⁶, securities and repurchase agreements) – excluding interbank claims and claims on the central bank – represented 63% of total banking sector assets, or 33% of GDP, at the end of 2003. While the share of domestic claims in total assets remained nearly unchanged from 1997 (45%) to 2000 (43%), it then jumped by 20 percentage points to 63% in 2003. At the end of 2003, the bulk of domestic claims consisted of claims on nonfinancial corporations (58.1%). This share rose between 1997 (38.2%) and 2000 (60.8%) as banks started to restructure their portfolio away from claims on the general government. Since then claims on nonfinancial corporations have lost some terrain to claims on households. The latter accounted for 22% of total domestic claims at the end of 2003, compared to a meagre 4.4% in 1997. Thereby, lending to households has become the second-biggest business area for Bulgarian banks. Claims on the general government accounted for 18% of total domestic claims at the end of 2003, sharply down from the 57% seen in 1997. Claims on

nonmonetary financial institutions play a subordinate role for Bulgarian banks.

Credits to domestic clients (excluding credits to monetary financial institutions) accounted for about half of total banking sector assets at the end of 2003. Thus, credits to domestic sectors dominated domestic claims with a share of around 80%. The importance of domestic credits has been growing steadily since the financial crisis, when, at the end of 1997, they accounted for only 42% of total domestic claims. The bulk of domestic credit (71%) was directed toward nonfinancial companies. This share, however, has modestly declined over the past few years, as banks intensified their lending activity toward households, particularly during 2003. Credits to households now account for 27% of total domestic credits, compared to only 19% in 2000. Within this category, credits for house purchases have had a relatively stable share of around 16% to 17% of total credits to households since 1999. Credits to the general government and nonmonetary financial institutions play a negligible role.

Table 4

Structure of Credit to Domestic Sectors							
	1997	1998	1999	2000	2001	2002	2003
<i>BGN million, end-of-period</i>							
Domestic credit to general government	1	25	2	2	5	8	25
Domestic credit to nonmonetary financial institutions	8	11	17	24	52	92	123
Domestic credit to nonfinancial companies	1,427	1,811	2,281	2,645	3,389	4,774	6,575
Domestic credit to households	167	476	522	618	934	1,385	2,502
Domestic credit	1,603	2,323	2,822	3,290	4,380	6,259	9,225
<i>% of GDP</i>							
Domestic credit	9.2	10.4	11.9	12.3	14.7	19.4	26.8

Source: Bulgarian National Bank, OeNB calculations.

⁶ I use the term credit as a synonym for loan as opposed to claim, which includes credits/loans, securities and repurchase agreements.

Securities issued by domestic residents play a subordinate role for Bulgarian banks. Debt securities issued by the domestic sectors accounted for 18% of total domestic claims (or 11.5% of total assets, respectively) at the end of 2003. These securities were almost exclusively issued by

the general government (share of 97.5%). The weight of holdings of equity stakes in domestic corporations in total banking sector assets remained negligible (0.3%). The same holds for repurchase agreements with domestic clients, which had a share in total banking sector assets of 0.6%.

Table 5

Structure of Assets

	1997	1998	1999	2000	2001	2002	2003
	<i>BGN million, end-of-period</i>						
Domestic claims	3,794	3,909	4,105	4,459	5,818	8,282	11,464
Claims on monetary financial institutions (incl. central bank)	1,276	1,030	1,109	1,000	1,367	1,779	2,059
Foreign assets	2,417	2,460	2,904	4,082	4,665	3,803	3,003
Fixed assets	269	455	511	593	707	884	1,052
Other assets	704	456	228	228	296	407	520
Total assets	8,460	8,310	8,859	10,362	12,853	15,156	18,098
	<i>% of GDP</i>						
Total assets	48.5	37.1	37.2	38.7	43.3	46.9	52.6

Source: Bulgarian National Bank, OeNB calculations.

Claims on monetary financial institutions accounted for around 11% of total assets at the end of 2003. This share had fallen following the financial crisis until 2000 (9.7%), but has recovered since then, mainly thanks to claims on the central bank (mandatory reserves and cash).

Parallel to the strengthening of domestic lending activity, foreign assets have been playing a diminishing role in total banking sector assets since the end of 2000. Between the end of 2001 and 2003, they even fell in nominal terms, by almost 40%. At the end of 2003, they accounted for about 17% of total assets, compared to 7.5% in 1995, 15% in 1996, 29% in 1997 and nearly 40% in 2000.

On the liabilities side, deposits of domestic sectors accounted for two-

thirds of total liabilities⁷ at the end of 2003. Not surprisingly, households were the largest depositors with a share of 58% of total deposits. Nonfinancial corporations came in second to households in terms of deposit volume. However, their share declined from 45% in 1997 and 36% in 2000 to 32% in 2003. The share of the general government and of nonmonetary financial institutions in total deposits was around 10%.

Banks have generally maintained a negative net position⁸ against households over the past decade. Following the financial crisis banks' net position against households deteriorated in real terms (deflated by consumer prices) until 2002. In 2003 accelerating growth of credits to households has led to an improvement in the net

⁷ Total liabilities also comprise liabilities to domestic monetary financial institutions, including the central bank.

⁸ Net position is defined as claims less deposits, i.e. repurchase agreements, debt securities issued, credits received and equity are not taken into account on the liability side.

position in real terms by more than 5%. Banks maintained a positive net position toward nonfinancial corporations in all these years, apart from the period of 1997–1998, which followed a sharp contraction of lending activity to nonfinancial corporations in real terms during 1996–1997. This position has expanded rapidly in real terms since 2000, as robust economic growth has fueled credit demand by the corporate sector. Bulgarian banks have traditionally been net creditors to the general government as well. Nevertheless, mirroring the sound fiscal policies that have been in place to complement the currency board, this net position decreased substantially in real terms (by almost 60%) from

1997 to 2003, with a sharp decline from 1997 to 2000 being followed by a moderate increase between 2000 and 2003. The overall net position of the banking sector against all domestic sectors (excluding monetary financial institutions) has been dominated by the huge negative net position against households and has been negative since 1997. Nevertheless, increasing lending activity has recently led to an improvement and the negative net position narrowed by roughly 80% during 2002–2003.

As a combination of the huge stock of claims on and low liabilities to the central bank, banks have held a positive net position against the monetary authority.

Table 6

Structure of Deposits							
	1997	1998	1999	2000	2001	2002	2003
<i>BGN million, end-of-period</i>							
Deposits by general government	274	340	322	313	457	580	927
Deposits by nonmonetary financial institutions	150	168	161	141	203	237	312
Deposits by nonfinancial companies	2,107	2,078	2,169	2,337	2,905	3,410	3,884
Deposits by households	2,164	2,416	2,899	3,659	5,135	5,813	6,935
Deposits, total	4,696	5,002	5,551	6,451	8,699	10,040	12,058

Source: Bulgarian National Bank, OeNB calculations.

While the share of foreign assets in total assets rose only until 2000, the share of foreign liabilities in total liabilities has increased continuously over the past few years to slightly

more than 8% at the end of 2003 (1997: 2.2%). This increase took place primarily in the form of taken foreign currency deposits. The banks' net foreign asset position deteriorated

Table 7

Structure of Liabilities							
	1997	1998	1999	2000	2001	2002	2003
<i>BGN million, end-of-period</i>							
Deposits, total	4,696	5,002	5,551	6,451	8,699	10,040	12,058
Foreign liabilities	183	212	334	547	697	894	1,498
Repos	0	0	0	0	0	0	99
Debt securities issued	0	0	0	0	6	19	56
Liabilities to monetary financial institutions (incl. central bank)	374	410	367	459	557	788	707
Capital and reserves	795	1,135	1,283	1,493	1,637	1,922	2,270
Other liabilities	2,411	1,551	1,323	1,412	1,256	1,493	1,408
Total liabilities	8,460	8,310	8,859	10,362	12,853	15,156	18,098

Source: Bulgarian National Bank, OeNB calculations.

in nominal terms by more than 60% from 2001 to 2003, after having increased substantially from 1997 to 2001. Thus, on the banking sector's balance sheet, the recent narrowing of the negative net position against all domestic nonbanks (resulting from domestic credit growth significantly outpacing domestic savings growth) was matched by the decrease in the banking sector's positive net foreign asset position (resulting from a decrease in foreign assets and an increase in foreign liabilities).

5 The Role of Foreign Exchange

The financial crisis between 1996 and 1997 led to a sharp loss of confidence in the local currency in Bulgaria. The share of foreign currency-denominated assets⁹ in total banking sector assets jumped from 38% at the end of 1995 to 68.5% at the end of 1996. Since then this share has gradually decreased, to 64.6% in 1997, 58.2% in 2000 and 49.3% in 2003. This development was based on the opposite movements of the two main sub-components. *First*, as already mentioned above, foreign assets as a share of total assets increased up to 2000 and fell sharply thereafter. *Second*, foreign currency-denominated

domestic claims on nonbanks as a share of total domestic claims on nonbanks peaked in 1996 at 69.8% (40% of total assets). Then, their share fell to 58% (26% of total assets, respectively) in 1997 and further to 33% (14% of total assets, respectively) in 2000. From 2000 to 2003, however, the share of foreign currency claims in domestic claims on nonbanks rose to 43% (27% of total assets, respectively), in contrast to the sharply falling share of foreign assets.

Looking at different sectors at the end of 2003, 55% (2000: 42%) of total claims on nonfinancial companies and 77% (2000: 71%) of total claims on nonbank financial institutions were denominated in foreign currencies. On the other hand, less than half (43%) of claims on the general government and only 9% of claims on households were denominated in foreign currencies. Nevertheless, the share of foreign currencies in total claims on households has risen rapidly over the past few years (2000: 3%, 1998: 0.8%). The share of foreign currencies in interbank claims has remained high over the past few years and stood at nearly 70% at the end of 2003. In contrast, claims on the central bank are dominated by the local currency.

Table 8

The Role of Foreign Exchange

	1997	1998	1999	2000	2001	2002	2003
	% of total, end-of-period						
Domestic foreign exchange credit	51.8	39.2	40.0	35.9	36.0	42.2	43.2
Domestic foreign exchange claims	58.2	42.0	39.9	33.3	35.1	41.4	43.1
Foreign exchange assets	64.6	57.9	56.7	58.2	57.6	53.4	49.3
Foreign exchange deposits	54.4	52.0	53.2	54.2	56.9	53.2	47.9
Foreign exchange liabilities	40.8	41.7	41.7	42.6	47.3	46.5	44.9

Source: Bulgarian National Bank, OeNB calculations.

⁹ This item consists of foreign currency-denominated foreign assets, foreign currency-denominated claims on domestic nonbanks and against monetary financial institutions and foreign currency-denominated other assets.

On the liabilities side, foreign currency-denominated liabilities¹⁰ accounted for 44.9% of total liabilities at the end of 2003. After increasing to 47.3% in 2001, this share has decreased despite the further rise in the share of foreign liabilities in total liabilities mentioned above, as the share of foreign currency-denominated deposits of nonbanks in total domestic deposits of nonbanks has sharply fallen from 56.9% in 2001 to a low of 47.9% in 2003.

Thus, the banking system maintained a positive net foreign currency asset position of about 4.5% of total assets, equivalent to 2.3% of GDP in 2003, representing a significant decline from 24% (44% of GDP) in 1996 and 16% (6% of GDP) in 2000. Nevertheless, this on-balance sheet position must not be confused with banks' overall net open foreign currency position, as it may be counterbalanced by off-balance sheet items. According to data provided by the central bank, Bulgarian banks had a net short foreign currency position of 4.9% of the capital base at the end of 2003 (or 0.3% of GDP), suggesting limited exposure of banks to foreign currency risk.

The significant role of foreign exchange in the banking sector may be explained by the Bulgarian exchange rate regime, which is based on a currency board. This type of regime eliminates short-term exchange rate fluctuations and sharply reduces the risk of changes in the exchange rate over the medium term. With the currency risk being perceived as relatively

low, cheaper financing in foreign currencies is attractive for domestic entities. At the same time, investments in assets denominated in Bulgarian lev and thus also lev-denominated deposits on the banks' liabilities side are attractive, as they receive higher interest returns. The positive interest rate differential compared to the euro can, among other things, be explained by higher inflation rates in Bulgaria due to the catching-up process (note: in the case of a nominally fixed exchange rate, the equilibrium real appreciation takes place through higher inflation). In addition, the large share of foreign currencies may also be interpreted as a sign of confidence in the sustainability of the currency board arrangement.

Even though there is little risk of a change in the exchange rate of the lev against the euro and the banking sector's open foreign exchange position is small, the indirect foreign exchange risk should not be completely neglected. About 20% of foreign currency credit to nonfinancial corporations and 15% of foreign currency credit to households were denominated in currencies other than the euro at the beginning of 2004. Since households in particular are unlikely to be hedged against foreign currency risk, large movements in the exchange rate of the euro against other currencies may have an impact on their ability to service their foreign currency liabilities. Therefore, the dynamics of foreign currency lending to households and the currency composition need further monitoring.

¹⁰ This item consists of foreign currency-denominated foreign liabilities, foreign currency-denominated liabilities toward domestic nonbank and toward monetary financial institutions and other foreign currency-denominated liabilities.

6 Asset Quality

Despite the expansion of credit activity and the shift to more risky assets, the asset quality of Bulgarian banks has improved over the past several years. While nonperforming assets accounted for 14% of total risk exposure¹¹ in 1997, their share decreased to 4.2% by the end of 2003. At the same time, the share of standard assets rose by roughly the same amount from 83.3% to 92.7%, while the share of watch assets rose by 0.4 percentage point to 3.1%. This improvement came primarily on the back of a fall in the share of loss assets from 10.6% to 2.5%. The share of substandard and doubtful assets has decreased by less than one percentage point each since 1997. This development reflected partly the writing off of unrecoverable assets and partly an improvement in the efficiency of banks' risk control mechanisms, more so-

phisticated prudential supervision and improved corporate governance.

However, as the International Monetary Fund (IMF) pointed out in its Financial System Stability Assessment in August 2002, these ratios of classified assets were distorted significantly downward by including deposits in foreign banks into total risk exposure. According to the IMF's calculations from March 2002, the adjustment for this factor would push the share of watch loans and nonperforming loans (i.e. substandard, doubtful and loss loans) from 6% to 13%. On the other hand, the IMF's correction to derive at internationally comparable levels does not put into doubt the significant improvement in credit quality. It should be noted that deposits in foreign banks, the main component of total foreign assets, have sharply fallen from 2001 to 2003, when they were lower than in 1997.

Table 9

Asset Quality							
	1997	1998	1999	2000	2001	2002	2003
	% end-of-period						
Standard assets ratio	83.3	87.3	88.3	91.7	92.3	93.5	92.7
Watch assets ratio	2.7	3.5	3.8	2.9	3.2	2.9	3.1
Substandard assets ratio	2.0	2.2	1.1	1.4	1.1	1.0	1.1
Doubtful assets ratio	1.5	0.6	1.2	0.9	0.9	0.5	0.7
Loss assets ratio	10.6	6.3	5.5	3.0	2.5	2.1	2.5
Reserves and provisions ratio	..	..	..	6.3	4.9	4.1	3.9

Source: Bulgarian National Bank, OeNB calculations.

In addition to the more favorable composition of assets, Bulgarian banks have also provisioned relatively well. Reserves and provisions amounted to 3.9% of total risk exposure at the end of 2003 and hence covered slightly more than 90% of nonperforming assets (according to national

methodology). However, this coverage ratio represented a decline from 117% in 2000.

In addition, increased lending activity toward nonfinancial corporations and households may further increase the risk potential over the next couple of years. After an increase in

¹¹ Nonperforming assets are defined as substandard, doubtful and loss assets. Classified assets are defined as watch assets plus nonperforming assets. Total risk exposure is defined as claims on banks and other financial institutions, claims on nonfinancial institutions and other customers and other balance sheet exposures to be categorized according to risk classes.

the share of nonperforming assets during 2003 (particularly in loss loans), further developments need to be monitored closely, in order to see whether 2003 represented a temporary hiccup or the start of a sustained deterioration linked to the increase in the overall volume of more risky assets.

7 Capital Adequacy and Liquidity

The capital adequacy ratio (CAR) of the Bulgarian banking system has gradually fallen over the past several years. Based on the overall capital base it fell from a peak of 41.3% in 1999 to 22.0% by end-2003; based on the primary capital base (~ core capital) it declined from a peak of 30.3% to 14.4% during the same period. Nevertheless, the current ratio is still significantly above the required level of 12% (based on the overall ratio), and both ratios are higher than registered during the pre-crisis years. The decline in the CAR was caused by a stronger increase in the total risk component (~ risk-weighted assets)

than in the primary capital base throughout these years. This process has likely been determined by the shift in banking sector assets from less risky lending to the general government and the central bank toward more risky lending to the private sector. Moreover, the high CARs of the years immediately following the financial crisis were affected by banks' extremely risk-averse behaviour and sub-optimal return on invested funds.

The liquidity position of Bulgarian banks has remained satisfactory over the past few years, with liquid assets accounting for around 20% of total assets. Developments in 2003 were particularly favourable, with the ratio rising to 22.1%, as liquid assets grew more strongly than total assets (27.1% vs. 18.4% year on year). On the other hand, however, the credit-to-deposit ratio increased between 2002 and 2003, reaching 76.5% at the end of 2003 (from slightly above 50% during 1999–2001), reflecting the strong acceleration in credit growth, which exceeded the growth rate of deposits.

Table 10

Capital Adequacy and Liquidity							
	1997	1998	1999	2000	2001	2002	2003
	% end-of-period						
Capital adequacy ratio total	28.9	37.3	41.3	35.5	31.1	25.2	22.2
Capital adequacy ratio primary	21.4	29.7	30.3	24.9	21.6	17.0	14.5
Liquid assets/total assets	..	..	27.9	20.5	22.0	24.3	28.8
Credits-to-deposits ratio	34.1	46.4	50.8	51.0	50.4	62.3	76.5
	% of capital base						
Open foreign exchange position	..	..	4.6	-5.4	-6.8	-3.8	-4.7

Source: Bulgarian National Bank, OeNB calculations.

8 The Profitability of the Banking System

The profitability of the Bulgarian banking system has remained broadly stable over the past few years. Return on assets in nominal terms hovered between 2% and 3%, while return

on equity was roughly between 15% and 20%. Inflation narrowed these values, so that return on assets deflated by consumer price inflation was negative until 2002 and could break even only in 2003. Return on equity in real terms ranged between

8% and 15%, with the value for 2003 (15.1%) being in line with the Central European average. Over the past couple of years net profits have also benefited from a decline in the tax burden. While tax payments had accounted for 34% of gross profits in 1999, the burden had continuously fallen to 22.4% by 2003.

Following a decline between 2000 and 2002, net interest income (in percent of average total assets) improved in 2003, despite a further narrowing

of the interest rate spread. This suggests that strong credit expansion and the resulting improvement in the net position of the banking system toward domestic sectors¹², which was accompanied by a deterioration in the net foreign assets position, compensated for the decreasing difference between credit and deposit rates, as the interest rate spread on local currency assets significantly exceeded that on foreign currency assets.

Table 11

Profitability Indicators							
	1997	1998	1999	2000	2001	2002	2003
	%						
Net interest income/total assets average	..	4.4	4.6	4.6	4.3	3.9	4.7
Operating income/total assets average	..	4.0	10.3	10.5	7.8	7.1	7.2
Cost income ratio	13.8	140.1	56.7	49.9	64.1	63.5	63.0
Net costs of loan loss provisioning/operating income	57.3	-111.3	6.6	8.6	-8.7	1.3	3.7
Return on assets	..	1.7	2.5	3.1	2.7	1.9	2.0
Return on assets deflated by CPI	..	-14.3	-0.1	-6.6	-4.4	-3.6	-0.3
Return on equity	..	13.0	16.6	19.8	19.2	14.4	15.0
Return on equity deflated by CPI	..	-4.8	13.6	8.6	10.9	8.2	12.4

Source: Bulgarian National Bank, OeNB calculations.

Given the development of net interest income and the relatively worse performance of noninterest revenues, operating income (in percent of total average assets) deteriorated between 1999 and 2002 and stabilized at around 7% in 2003. The share of net interest income in total operating income rose from 45% in 1999 to 65% in 2003. During the same period, operating costs grew more strongly than operating income, leading to a deterioration in the cost-to-income ratio from 56.7% (1999) to 62% (2003).

Loan loss provisioning has contributed to gross profits both positively and negatively since 1999. After large reserves were created in 1999–2000

(6.6% and 8.6% of operating income, respectively), a (net) dissolution of reserves in the magnitude of almost 9% of operating income was recorded in 2001. In 2002 and 2003 additional reserves of around 1% of operating income were first allocated and then dissolved.

9 Austrian Banks in Bulgaria

In December 2003, two large Austrian banking groups were present in Bulgaria, both through 100%-owned subsidiaries. The total volume of assets controlled by these two banking groups amounted to around EUR 1 billion, which gave them a market share of 11.4%.

¹² Including monetary financial institutions, which inter alia include the Bulgarian central bank.

Given that only these two Austrian banks are present in the country, subsidiaries in Bulgaria play a rather limited role for the Austrian banking system as a whole. The two Bulgarian subsidiaries account for only 1.5% of the combined weighted¹³ assets of Austrian banks' subsidiaries in the CEE region, thus taking 10th place out of 13. Their share in total claims on bank and nonbank customers was modestly higher at 1.8%. Business in Bulgaria, however, is rather profitable, as the two subsidiaries there accounted for 2.0% of combined after-tax earnings of Austrian subsidiaries in the CEE region (place 8). This combination of a weak asset position and a strong return position puts Bulgarian subsidiaries in a comfortable third place among all Austrian subsidiaries in the CEE region in terms of return on assets, following Belarus and the Russian Federation.

10 Capital Markets

According to data provided by the European Central Bank (ECB), the Bulgarian debt securities market amounted to EUR 5.8 billion at the end of 2002, which represented around 35% of 2002 GDP. According to capital market information provided by Bloomberg¹⁴, outstanding debt of Bulgarian issuers amounted to EUR 6.8 billion at the beginning of May 2004. This represented about 38% of 2003 GDP. In any case, this ratio is significantly below the euro area average of 115% of GDP.

Regarding the issuer structure, ECB data reveal that the government was by far the largest issuer, accounting for 99.4% of the total outstanding volume, followed by monetary finan-

cial institutions (0.5%) and other corporations (0.1%). According to Bloomberg, the central government accounted for 95.6% of total outstanding debt securities and local governments for 2.9%, while the share of banks and other financial institutions was 1.5%.

Regarding the currency structure, outstanding debt was primarily denominated in currencies other than the Bulgarian lev, which accounted for only 13.5% of total outstanding debt in December 2002. This high share of foreign currencies, and in particular of the U.S. dollar, can be explained by the huge volume of Brady bonds. Also, according to Bloomberg data, about half of the eurobond volume issued in recent years (November 2001 and April 2002) was denominated in U.S. dollars, while the other half was issued in euro. Bloomberg data show that about 15% of the total outstanding volume of debt securities at the beginning of May 2004 was denominated in Bulgarian leva, around 19% in euro and the rest in U.S. dollars. About 17% of the euro-denominated bonds and 4% of the U.S. dollar-denominated bonds and, hence, 7% of all foreign currency-denominated bond volumes were issued on the domestic market, reflecting the importance of foreign currencies in domestic financial transactions.

Regarding the maturity structure, foreign currency debt was almost exclusively long-term, with maturities of over ten years. In contrast, ECB data for the end of 2002 show that only slightly more than half (54.8%) of local currency debt was constituted by long-term bonds (maturity of more

¹³ *I.e. weighted by the Austrian owner's percentage share in the subsidiary's total equity.*

¹⁴ *Bloomberg database.*

than five years), while the rest represented shorter-dated bonds (37.7%) and money market securities. According to Bloomberg, the outstanding volume-weighted average life to maturity amounted to 9.9 years in May 2004. Foreign currency-denominated debt was longer-dated, with an average life to maturity of almost 8 and 12 years for euro and U.S. dollar denominations, respectively, while debt denominated in the local currency had a relatively short maturity of 3.6 years.

Similar to the issuer structure, secondary market trading of outstanding debt has concentrated on government debt (99.7% in 2002). However, overall trading volumes were low, with average daily turnover volumes accounting for only 0.25% of the outstanding total in 2002.

With regard to the investor structure, the government debt market is dominated by domestic private banks. According to data by the Bulgarian central bank from March 31, 2004, domestic banks held 70% of government securities issued domestically for budget deficit financing, which are predominantly denominated in Bulgarian lev. Insurance companies and pension funds held 15%, while other domestic nonbank financial institutions, companies and individuals had a combined share of 13%. Nonresident investors and state-owned banks held less than 1% of the outstanding volume each.

Similarly, private banks, insurance companies and pension funds were the major investors in the so-called ZUNK bonds, which are foreign currency-denominated government securities issued domestically for structural reforms (private banks: 51%, insurance companies and pension funds: 33%). Other domestic

nonbank financial institutions, companies and individuals held 14%, state-owned banks 1.7% and nonresidents 0.8% of these securities.

Equity market capitalization amounted to a meagre EUR 200 million on average in 2003, which represented about 1.2% of GDP. Equity market turnover in 2003 was less than EUR 100 million.

11 Summary

After the severe financial crisis of 1996–1997, the Bulgarian banking system has undergone fundamental changes. Over the past few years, the banking system has been almost completely privatized, with foreign investors having gained a dominating position. This has led to a more competitive environment and promoted financial intermediation. The financial sector continues to be dominated by the banking sector, which is also the main investor in domestically issued government securities. While the degree of financial intermediation remains low in Bulgaria compared to the euro area or the five new Central European EU Member States, lending activity has been invigorated over the past few years.

Banking sector assets are increasingly dominated by claims on domestic sectors, with the share of lending to the private sector in total domestic claims having risen at the cost of the share of lending to the general government since 1997. Since 2000, the rise in the share of private sector lending has been exclusively fueled by the markedly increased amount of lending to households. Within domestic claims, credits predominate, while securities and repurchase agreements continue to play a subordinate role.

Parallel to increased domestic lending activity the banking sector's

net external position has deteriorated in recent years, as domestic savings have not kept up with the expansion of lending activity. Foreign currencies have been playing an increasingly important role in domestic lending in Bulgaria since 2000, while the share of foreign currency-denominated deposits in total deposits of nonbanks has declined since 2001. This may be explained by the positive interest rate differential toward the euro area and the concurrent expectations of a stable exchange rate, which signal confidence in the sustainability of the currency board arrangement.

Credit expansion has led to an improvement in the banking sector's net position toward domestic sectors and has compensated for the decreasing difference between credit and deposit

rates, keeping banking profitability stable over the past few years. The profitability of Bulgarian banks thus compares well with the Central European average. Despite a decline in the capital adequacy ratio on the back of a stronger increase in risk-weighted assets than in the capital base, Bulgarian banks seem to be well capitalized. Similarly, the share of nonperforming assets has declined significantly since the financial crisis, although strong credit expansion, in particular of credits to households, still warrants close monitoring over the next few years. Overall, in line with the IMF's appraisal of 2002, the Bulgarian banking system may be characterized as "stable, generally well supervised, strongly capitalized, profitable and risk-averse."

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The ongoing consolidation trend across diverse financial sectors, the establishment of new types of financial institutions and globalization strategies have led to the creation of financial conglomerates in the European Union which offer their services across the globe. If such a group should find itself in a situation of financial distress, the risk of cross-border contagion might even arise in a worst-case scenario. Hence, to safeguard stability, it is crucial for financial conglomerates to be properly supervised.

With its diverse aims and its sectoral approach, the EU legislation applicable to financial institutions heretofore was not suited to providing adequate supervision of financial conglomerates.

Directive 2002/87/EC now provides for an adequate supervisory regime for financial groups with cross-sectoral financial activities, establishing supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate. In addition, the directive aims to reduce differences between the existing EU provisions governing sectoral supervision and to eliminate any loopholes.

Background

Increasing financial market integration in the last decade and the related blurring of the traditional distinction between banking and investment sectors on the one hand and the insurance sector on the other have set in motion an intensive discussion about how to ensure sound supervision and the stability of the European financial system. Given the differences in the aims of the various sectoral EU provisions and in sectoral developments, sectoral legislation alone is insufficient to ensure the adequate supervision of the increasingly integrated financial sectors.

Against this background, at the end of 1999 the European Commission initiated the drafting of a directive on the supplementary supervision of financial conglomerates jointly with the Mixed Technical Group (MTG)¹. The intensive preparatory work of the Joint Forum² was key in the suc-

cessful submission of a directive proposal by April 2001 in line with the tight schedule established by the Financial Services Action Plan (FSAP)³. At the end of 2002, the European Parliament and the Council of the European Union adopted Directive 2002/87/EC on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate by way of codecision.

This directive represents the first comprehensive implementation of international recommendations on the supervision of financial conglomerates that were agreed by the G-10.⁴

Bankassurance and Assurebanking

Cooperative ventures between banks and insurance companies date back to the 1980s and have produced various types of groups, especially in the past decade. This process has been

¹ *The Mixed Technical Group (MTG) was set up by the Banking Advisory Committee, the Insurance Committee and the High Level Securities Supervisors Committee. These bodies are the predecessors of the committees established for the financial services sector within the Lamfalussy committee structure.*

² *The Joint Forum on Financial Conglomerates (Joint Forum) is an international intersectoral group made up of representatives of the Basel Committee on Banking Supervision, the International Association of Insurance Supervisors and the International Organization of Securities Commissions. For more information, please refer to: Joint Forum (1999a to c; 2001a and b).*

³ *On May 25, 1999, the Council of the European Union approved the Financial Services Action Plan with the objective of integrating the Single Market for financial services by 2005.*

⁴ *ZBB-Dokumentation (2003), p. 238.*

supported above all by deregulation measures, greater competition and demographic developments, all of which have helped create a new type of financial service provider on the global market. Epithets such as “bank-assurance” (denoting a financial group in which banks predominate) and “assurebanking” (insurance-dominated financial group) apply to the new “Allfinanz” financial service providers who may be classified as belonging to one of three business models depending on their complexity or structure: cooperative sales ventures, cross shareholdings or completely integrated groups in which banks and insurance companies have merged.⁵

The bulk of the cross-sectoral merger and acquisition (M&A) activities in Europe took place from 1999 to 2001, albeit mainly at the national level. The entire volume of national and international M&As of banks and insurance companies came to some EUR 72.3 billion in this period (national M&As accounted for EUR 56 billion of this total) and covered 15 large mergers.⁶ These mergers include e.g. the Allianz and Dresdner Bank merger in 2001, involving a transaction volume of EUR 22.3 billion, and the acquisition of Scottish Widows Fund & Life Assurance Society by Lloyds TSB Group in 2000, involving a transaction volume of EUR 12 billion. The individual other intersectoral M&A transaction volumes during this period ran to between EUR 1.2 billion and EUR 2.9 billion. The tension on international financial

markets, which began in 2001 and culminated in March 2003, put many financial intermediaries under – partly substantial – pressure to turn a profit. The decline in intersectoral M&A transaction volumes by EUR 3.5 billion in 2002 and 2003 clearly reflects these pressures.

The situation in the United States is entirely different. Until the end of the 1990s, legislation stipulated a strict separation of commercial and investment banking activities on the one hand and of banks and insurance companies on the other. This structure was long based on the Glass-Steagall Act enacted in 1933, and not until the passage of the Gramm-Leach-Bliley (GLB) Act in 1999 did a new era begin. GLB now allows for financial holding companies (FHCs)⁷ to provide any type of financial service. Contrary to expectations, however, the expected flurry of M&As between banks and insurance companies has not occurred in the U.S.A. As disparate insurance legislation from state to state remains a barrier to mergers of insurance companies and banks, the merger of Citicorp and Travellers Group to Citigroup remains the single largest U.S. intersectoral merger to date.

Motives and Challenges for Management

The exploitation of potential synergies of both costs and profits may be one motive for mergers across sectors.⁸ In addition, the income components of the different group enter-

⁵ Hülsen et al. (2003), p. 120.

⁶ Dierick (2004).

⁷ To be accorded the status of a financial holding company, an enterprise has to fulfill certain criteria, among others sufficient capitalization. The Federal Reserve Board is in charge of supervising financial holding companies.

⁸ However, there is little agreement on whether the potential synergy effects of conglomerates in fact boost profits, and in practice, economies of scale frequently cannot be achieved. Moreover, in the past a growing process of deconglomeration was observed in the nonfinancial sector (see Van Lelyveld and Schilder, 2002).

prises may combine to produce more stable and less volatile revenues. At the same time, mergers may strengthen the risk-bearing capacity of financial conglomerates, but may also involve contagion risk – the risk that problems in one type of financial establishment spread to another part of the financial sector – which could trigger novel and unprecedented risks that need to be adequately monitored by management.

The integration of bank and insurance company risk management – and hence the integration of all risk into the overall management process – faces group management with new challenges. Until now, heterogeneous financial groups have not had at their disposal fully comprehensive risk management procedures that are suited to capturing and monitoring all risk involved in the banking and insurance business.

Challenges for Supervisors and Consequences for Supervisory Practice

Under a single roof, heterogeneous financial groups unite a broad range of banking, investment and insurance operations, each subject to quite different types of risks. In this context, the accelerated establishment of heterogeneous financial groups in recent years has increasingly focused the supervisory authorities' attention on

improving and better coordinating the supervisory regime applicable to banks and insurance companies. Consequently, the need to establish suitable supervisory provisions for cross-sectoral financial groups arose, as the differences between the existing sectoral supervisory provisions in the EU left some gaps⁹ in the supervisory system, which may jeopardize the financial system. The implementation of the directives on the supervision of credit institutions on a consolidated basis and of insurance groups during the mid- to end-1990s already provided for the supervision of homogeneous financial groups.¹⁰

Directive 2002/87/EC goes one step further by providing for the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate. The progressive harmonization of sectoral supervisory provisions in connection with this legislation helps further reduce the deficits in the supervisory regime. The supplementary supervision directive primarily pursues the following objectives:

- Prevention of multiple gearing of own funds instruments and of any inappropriate intragroup creation of own funds by means of debt issues by the parent company (capital leveraging).

⁹ The existing legislation does not cover certain types of financial groups (e.g. horizontal groups). Multiple gearing is covered only by sectoral standards or provisions. Identical supervisory issues are handled differently in different sectors. One and the same financial group may be subject to several directives, or to none at all.

¹⁰ These directives are Council Directive 92/30/EEC of 6 April 1992 on the supervision of credit institutions on a consolidated basis (now codified in Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions), Directive 98/78/EC of the European Parliament and of the Council of 27 October 1998 on the supplementary supervision of insurance undertakings in an insurance group and Council Directive 93/6/EEC of 15 March 1993 on the capital adequacy of investment firms and credit institutions. For implementation in Austria, compare Article 30 Austrian Banking Act and Article 86a Insurance Companies Supervision Act in connection with Articles 86c to 86l.

- Greater cooperation and more exchange of information between the authorities responsible for supervision.
- Limits on intragroup transactions and risk concentration within a financial group, appropriate internal control mechanisms and adequate risk management processes.

Financial Conglomerates Act

In Austria, the Financial Conglomerates Act represents the transposition of the supplementary supervision directive into national law. This Act enters into force on January 1, 2005, and defines a financial group with cross-sectoral financial activities as a financial conglomerate pursuant to the Financial Conglomerates Act if the criteria specified in Article 2 item 14 (definition) and Article 3 (threshold for identifying a financial conglomerate) Financial Conglomerates Act apply.

In principle, financial conglomerates must meet all of the following conditions:

- Financial conglomerates are groups of companies including credit institutions or investment firms as well as insurance undertakings.
- At least one of the entities in the group must be within the insurance sector¹¹ and at least one must

be within the banking or investment services sector¹².

- The parent undertaking or at least one subsidiary undertaking in the relevant group is a regulated entity pursuant to Directive 2000/87/EC.¹³
- The activities of the entities within the group must occur in the financial sector¹⁴ (where there is no regulated entity pursuant to Directive 2000/87/EC at the head of the group) and the aggregated activities are significant.

In Austria, three heterogeneous financial groups are likely to fall within the scope of the Financial Conglomerates Act: Raiffeisen Zentralbank Österreich AG, Grazer Wechselseitige Versicherung AG and Wüstenrot AG.

Supplementary Supervision

The Financial Conglomerates Act contains a number of quantitative and qualitative provisions for the supplementary supervision of regulated entities within a financial conglomerate; these apply above all to capital adequacy, intragroup transactions, risk concentration and the fit and proper character of management.

As the competent supervisory authority, the Austrian Financial Market Authority (FMA) is obligated to determine whether a heterogene-

¹¹ Insurance undertakings, reinsurance undertakings or insurance holding companies pursuant to Directive 98/78/EC Article 1 subparagraph i.

¹² Credit institutions, financial institutions or ancillary banking services undertakings pursuant to Directive 2000/12/EC Article 1 items 5 and 23 and investment firms or financial institutions pursuant to Directive 2000/12/EC Article 1 item 5.

¹³ Credit institutions, insurance undertakings or investment firms.

¹⁴ In this context, the financial sector comprises the banking or investment services sector as well as the insurance sector. This distinction serves to differentiate between financial conglomerates and industrial or trade conglomerates. A group is considered to have its activities in the financial sector if the ratio of the balance sheet total of the regulated and nonregulated financial sector entities in the group to the balance sheet total of the group as a whole exceeds 40%.

ous financial group – one comprising entities within the banking and/or investment services sector and within the insurance sector – represents a financial conglomerate pursuant to the Financial Conglomerates Act.¹⁵ Supplementary supervision at the financial conglomerate level applies to all regulated entities in the group and is exercised via the FMA-licensed parent undertaking at the head of the group. However, if a nonregulated parent undertaking is at the head of the group (in the case of a mixed financial holding company), the supervisory authority addresses the FMA-regulated financial sector entity with the highest balance sheet total. Moreover, the Oesterreichische Nationalbank (OeNB) plays an important role in the supervision of financial conglomerates, as pursuant to Article 70 paragraph 1 item 3 of the Austrian Banking Act (on-site examination) it is responsible for assessing the proper limitation of market and credit risk of credit institutions or groups of credit institutions within financial conglomerates.

Capital Adequacy

Article 6 Financial Conglomerates Act provides for three methods to calculate capital adequacy requirements for a financial conglomerate;¹⁶ these methods are designed to prevent multiple gearing in a financial conglomer-

ate. The FMA may also permit financial conglomerates to apply a combination of these methods. Which method the financial conglomerate subject to supplementary supervision will have to apply is at the FMA's discretion to decide.

Financial conglomerates' capital adequacy is determined without prejudice to the existing sectoral rules for the calculation of supplementary capital adequacy requirements. In addition, the calculation of regulatory capital must extend to nonregulated financial sector entities and mixed financial holding companies, for which notional solvency (regulatory capital) requirements are to be calculated. Also, cross-sectoral participations and items referring to such participations must be deducted from capital. The own funds of the financial conglomerate must then correspond to at least the solvency requirements the financial entities in the conglomerate must fulfill.

Risk Concentration and Intragroup Transactions

The supervisory authority must take into account the specific group structure, degree of complexity, risk management structure and system of internal control mechanisms of the financial conglomerate when defining what type of risks¹⁷ and intragroup transactions¹⁸ regulated entities must

¹⁵ Pursuant to Article 4 Financial Conglomerates Act, however, financial companies themselves are responsible for identifying whether they represent a regulated entity within the meaning of Article 5 Financial Conglomerates Act. If they find this provision to apply, they must report this circumstance to the FMA immediately.

¹⁶ The accounting consolidation, deduction and aggregation, and book value and/or requirement reduction methods.

¹⁷ See Article 2 paragraph 19 Financial Conglomerates Act. In principle, risk concentration is defined as all exposures with a default risk borne by entities within a financial conglomerate that are large enough to threaten the solvency or financial position in general of the regulated entities within the financial conglomerate. For more information, please refer to Joint Forum (1999c).

¹⁸ See Article 2 paragraph 18 Financial Conglomerates Act. Intragroup transactions are all transactions by which regulated entities within a financial conglomerate rely either directly or indirectly upon other undertakings within the same group for the fulfillment of an obligation. See Joint Forum (1999b).

report and when determining appropriate thresholds.¹⁹

Supervisors may in particular monitor the possible risk of contagion within the financial conglomerates (the risk that a problem in one part of a financial conglomerate could spread to other parts), the risk of a conflict of interests, the risk of circumvention of sectoral rules (regulatory arbitrage), and the risk that a general overview of the overall level or volume of exposure might be lacking.

Moreover, a key aspect of the supplementary supervisory provisions is the requirement that risk management sufficiently capture intragroup transactions and risk concentration at the level of the conglomerate to identify the possible risk of contagion at an early stage and to prevent any such contagion. To this end, risk management must be adequate at the conglomerate level, and appropriate internal control mechanisms pursuant to Article 11 Financial Conglomerates Act must be in place. Guaranteeing that adequate internal management strategies indeed comprise efficient internal control mechanisms and risk management processes²⁰ requires that the conglomerate subject to supplementary supervision reviews these strategies and measures at regular intervals.

Third Country Supervision and Equivalence

In some instances, the geographical scope of Directive 2002/87/EC goes beyond EU borders. If the parent undertaking of financial conglomerates subject to supplementary supervision is located outside the European

Union and its supervision is equivalent to that provided by the Directive, the provisions of the Financial Conglomerates Act are not applicable. In any other case, the supplementary supervision provisions of the Directive shall apply *mutatis mutandis*.

Determining whether equivalent provisions on the supplementary supervision of financial conglomerates apply in the nonmember country is at the discretion of the responsible coordinator, who may consult with the other EU supervisory authorities in charge.

In addition, the coordinator must take into account the general guidance provided by the Financial Conglomerates Committee assisting the European Commission pursuant to Article 21 paragraph 5 Directive 2002/87/EC.

Finally, close cooperation and exchange of information between the supervisory authorities of the countries involved are indispensable for the recognition of regulatory equivalence.

Concluding Remarks

Capital Reduction

As the legislation now also obliges nonregulated financial entities to fulfill notional capital requirements and to deduct cross-sectoral participations and items referring to such participations from capital, the implementation of Directive 2002/87/EC will entail a reduction of own funds in financial conglomerates.

Financial Stability

From the macroprudential perspective, it is crucial for the OeNB and other national central banks to be familiar with the extent and thus the

¹⁹ Van Cauter (2003).

²⁰ ZBB-Dokumentation (2003), p. 241.

systemic relevance of the links between banks and insurance companies in order to maintain financial stability. Establishing regular and systematic monitoring²¹ and a regular exchange of information about such heteroge-

neous financial groups between the central banks and the supervisory authorities at the European level represents a key step toward further enhancing financial stability in Europe.

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²¹ *Dierick (2004).*

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Cutoff date for data: November 12, 2004.

Conventions used in the tables:

× = For technical reasons no data can be indicated

.. = Data not available at the reporting date

Revisions of data published in earlier volumes are not indicated.

Discrepancies may arise from rounding.

International Environment

Table A1

Exchange Rates								
Period average (per 1 EUR)	2000	2001	2002	2003	2001	2002	2003	2004
	Year				1 st half			
U.S. dollar	0.9240	0.8956	0.9449	1.1309	0.8982	0.8970	1.1044	1.2273
Japanese yen	99.53	108.73	118.06	130.96	108.03	116.22	131.08	133.04
Pound sterling	0.6095	0.6219	0.6288	0.6919	0.6235	0.6211	0.6854	0.6735
Swiss franc	1.5577	1.5104	1.4672	1.5207	1.5307	1.4694	1.4919	1.5531
Czech koruna	35.609	34.051	30.804	31.847	34.544	31.081	31.548	32.450
Hungarian forint	260.05	256.42	242.57	253.51	261.69	243.51	247.21	256.05
Polish zloty	4.0070	3.6689	3.8559	4.3987	3.6310	3.6649	4.2699	4.7300
Slovak koruna	42.603	43.293	42.673	41.485	43.416	42.597	41.502	40.320
Slovenian tolar	206.7	218.1	226.3	233.8	216.3	223.5	238.0	238.2

Source: Thomson Datastream.

Table A2

Key Interest Rates								
End of period, %	2000	2001	2002	2003	2004			
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30
Euro area	4.75	4.50	3.25	3.25	2.75	2.00	2.00	2.00
U.S.A.	6.50	3.25	1.25	1.25	1.25	1.25	0.75	1.25
Japan	0.50	0.25	0.10	0.10	0.10	0.10	0.10	0.10
United Kingdom	6.00	5.25	4.00	4.00	4.00	3.75	3.75	4.50
Switzerland ¹	3.00–4.00	2.75–3.75	1.25–2.25	0.75–1.75	0.25–1.25	0.00–0.75	0.00–0.75	0.00–1.00
Czech Republic	5.25	5.00	4.75	3.75	2.75	2.25	2.00	2.25
Hungary	11.75	11.25	9.75	9.00	8.50	9.50	12.50	11.50
Poland	19.00	15.50	11.50	8.50	6.75	5.25	5.25	5.25
Slovak Republic	8.00	7.75	7.75	8.25	6.50	6.50	6.00	4.50
Slovenia ²	11.85	11.16	8.00	8.75	8.25	6.50	6.00	4.00

Source: Eurostat, Thomson Datastream, national sources.

¹ SNB target range for three-month LIBOR.² Until January 2003: official interest rate; since February 2003: interest rate on 60-day tolar bills issued by Banka Slovenije.

Table A3

Short-Term Interest Rates								
Three-month rates, period average, %	2000	2001	2002	2003	2001	2002	2003	2004
	Year				1 st half			
Euro area	4.39	4.26	2.94	2.33	4.67	3.40	2.53	2.07
U.S.A.	6.53	3.78	1.41	1.22	4.77	1.91	1.29	1.21
Japan	0.29	0.16	0.08	0.09	0.24	0.10	0.09	0.08
United Kingdom	6.10	4.97	3.96	3.69	5.44	4.07	3.67	4.32
Switzerland	3.08	2.94	0.69	0.33	3.32	1.54	0.41	0.28

Source: Thomson Datastream.

Table A4

Long-Term Interest Rates								
Ten-year rates, period average, %	2000	2001	2002	2003	2001	2002	2003	2004
	Year				1 st half			
Euro area	5.44	5.03	4.92	4.16	5.09	5.20	4.06	4.24
U.S.A.	6.03	5.01	4.60	4.00	5.15	5.07	3.76	4.29
Japan	1.76	1.34	1.27	0.99	1.33	1.42	0.70	1.45
United Kingdom	5.33	5.01	4.91	4.58	5.04	5.21	4.35	4.98
Switzerland	3.93	3.38	3.20	2.66	3.47	3.52	2.49	2.82

Source: Thomson Datastream.

Table A5

Corporate Bond Spreads								
Period average, percentage points	2000 Year	2001	2002	2003	2001 1 st half	2002	2003	2004
Euro corporate bond spreads against euro benchmark	1.00	1.17	1.20	0.3544	1.05	0.98	0.64	-0.14
U.S. dollar corporate bond spreads against U.S. dollar benchmark	4.26	5.48	5.50	4.5716	5.97	4.71	5.39	2.89

Source: Thomson Datastream.

Table A6

Stock Indices ¹								
Period average	2000 Year	2001	2002	2003	2001 1 st half	2002	2003	2004
Euro area: EURO STOXX	423.94	336.29	259.97	231.29	366.83	300.56	198.90	250.68
U.S.A.: S&P 500	1,426.55	1,193.78	995.34	964.85	1,254.66	1,101.28	899.27	1,128.22
Japan: Nikkei 225	17,161.59	12,114.46	10,119.31	9,312.89	13,364.98	10,978.07	8,361.43	11,273.46
Austria: ATX	1,128.08	1,157.84	1,183.94	1,303.80	1,177.64	1,252.53	1,209.65	1,834.31
Czech Republic: PX50	552.10	411.17	437.64	556.98	448.38	434.15	505.08	770.53
Hungary: BUX	8,744.54	6,899.95	7,759.55	8,383.61	7,150.77	8,113.94	7,772.15	10,655.10
Poland: WIG	18,984.72	14,376.07	14,440.59	17,073.89	15,575.34	15,264.01	14,479.40	23,356.53
Slovak Republic: SAX16	346.80	242.93	186.02	165.08	262.93	217.41	149.45	183.10
Slovenia: SBI20	1,720.34	1,888.94	2,846.88	3,373.41	1,784.35	2,513.95	3,220.32	4,341.10

Source: Thomson Datastream.

¹ EURO STOXX: December 31, 1986 = 100, S&P 500: December 30, 1964 = 100, Nikkei 225: March 31, 1950 = 100, ATX: January 2, 1991 = 1000, PX50: April 6, 1994 = 100, BUX: January 2, 1991 = 100, WIG: April 16, 1991 = 100, SAX16: September 14, 1993 = 100, SBI20: January 3, 1994 = 100.

Table A7

Gross Domestic Product								
Annual change in %, period average	2000 Year	2001	2002	2003	2001 1 st half	2002	2003	2004
Euro area	3.5	1.6	0.9	0.4	2.0	0.7	0.5	1.7
U.S.A.	3.8	0.3	2.5	2.8	0.7	1.8	3.0	4.9
Japan	2.8	0.4	-0.4	2.6	2.3	-1.6	2.5	4.9
Austria	3.4	0.8	1.4	0.9	1.3	0.7	0.7	1.3
Czech Republic	3.9	2.6	1.5	3.1	3.1	1.8	2.9	3.8
Hungary	5.2	3.8	3.5	2.9	4.1	3.1	2.6	4.1
Poland	4.0	1.0	1.4	3.8	1.5	0.7	3.0	6.5
Slovak Republic	2.0	3.8	4.4	4.2	3.2	4.0	3.9	5.4
Slovenia	3.9	2.7	3.4	2.3	2.8	3.2	2.1	4.2

Source: Eurostat, national sources.

Table A8

Current Account								
% of GDP	2000 Year	2001	2002	2003	2001 1 st half	2002	2003	2004
Euro area	-0.2	0.4	1.2	0.5	-0.9	0.4	-0.1	0.6
U.S.A.	-4.1	-3.8	-4.5	-4.8	-3.9	-4.2	-4.9	-6.6
Japan	2.5	2.1	2.8	3.1	2.1	3.2	3.0	3.9
Austria	-2.6	-1.9	0.5	-0.4	-1.9	1.4	0.6	1.0
Czech Republic	-4.9	-5.4	-5.7	-6.2	-5.4	-3.9	-3.6	-4.2
Hungary	-8.7	-6.2	-7.1	-8.9	-8.6	-6.5	-9.3	-10.2
Poland	-6.0	-2.9	-2.7	-2.0	-4.0	-3.5	-2.8	-2.7
Slovak Republic	-3.4	-8.4	-8.1	-0.9	-8.0	-7.8	-1.3	-2.7
Slovenia	-2.8	0.2	1.4	0.1	-0.3	1.0	-0.5	-0.3

Source: Eurostat, national sources.

Note: Due to seasonal fluctuations, the comparability of half-year figures with yearly figures is limited. The half-year figures for the U.S.A. are based on seasonally adjusted nominal GDP data.

Table A9

Inflation								
Annual change in % period average	2000 Year	2001	2002	2003	2001 1 st half	2002	2003	2004
Euro area	2.1	2.3	2.3	2.1	2.5	2.3	2.1	2.0
U.S.A.	3.4	2.8	1.6	2.3	3.4	1.3	2.5	2.3
Japan	-0.7	-0.6	-0.9	-0.3	-0.6	-1.2	-0.2	-0.2
Austria	2.0	2.3	1.7	1.3	2.3	1.7	1.4	1.7
Czech Republic	3.9	4.5	1.4	-0.1	4.5	2.7	-0.4	2.2
Hungary	10.0	9.1	5.2	4.7	10.3	5.8	4.3	7.1
Poland	10.1	5.3	1.9	0.7	6.6	2.7	0.4	2.6
Slovak Republic	12.2	7.2	3.5	8.5	7.1	4.1	7.7	8.1
Slovenia	8.9	8.6	7.5	5.7	9.1	7.8	6.1	3.7

Source: Eurostat, OECD, WIIW.

Financial Intermediaries in Austria

Table A10

Total Assets and Off-Balance-Sheet Operations¹									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Total assets	562,700	567,250	587,741	587,611	573,349	591,867	605,107	636,035	
of which: total domestic assets	404,908	413,701	431,415	426,245	418,141	419,571	430,888	441,250	
total foreign assets	157,792	153,548	156,326	161,366	155,208	172,296	174,219	194,785	
Interest rate contracts	611,150	677,098	946,631	1,022,741	1,144,431	2,204,721	1,853,494	1,891,262	
Foreign exchange derivatives	160,650	164,435	157,512	202,939	240,542	298,475	305,447	255,755	
Other derivatives	15,184	5,727	5,737	7,554	3,814	4,304	15,173	17,374	
Derivatives total	786,984	847,259	1,109,880	1,233,235	1,388,787	2,507,501	2,174,114	2,164,391	

Source: OeNB.

¹ Data on off-balance-sheet operations refer to nominal values.

Table A11

Profitability								
End of period, EUR million	2001 June 30	2002	2003	2004	2000 Dec. 31	2001	2002	2003
Interest receivable and similar income	14,245	11,858	10,604	10,334	27,508	26,814	23,426	20,732
Interest payable and similar charges	10,876	8,339	7,107	6,804	20,773	19,725	16,345	13,674
Net interest income	3,369	3,518	3,497	3,530	6,735	7,089	7,081	7,058
Income from securities and participating interests	781	828	812	990	1,817	1,959	1,771	1,719
Net fee-based income	1,568	1,514	1,553	1,671	3,203	3,062	3,012	3,188
Net profit/loss on financial operations	250	197	384	310	487	521	570	618
Other operating income	638	629	591	584	1,282	1,423	1,284	1,292
Operating income	6,606	6,685	6,837	7,085	13,523	14,054	13,718	13,875
Staff costs	2,294	2,380	2,368	2,382	4,479	4,681	4,781	4,740
Other administrative expenses	1,512	1,524	1,508	1,511	2,930	3,151	3,139	3,108
Other operating charges	419	425	386	407	940	974	851	873
Operating expenses	4,564	4,686	4,645	4,666	9,004	9,476	9,502	9,468
Operating profit/loss	2,043	2,000	2,192	2,418	4,520	4,577	4,216	4,407

Source: OeNB.

Table A12

Expected Annual Profit/Loss									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Projected operating profit/loss for the year	4,395	3,848	4,533	4,002	4,177	3,929	4,374	4,506	
Projected operating profit/loss on ordinary activities	2,876	2,794	3,151	2,021	2,065	2,278	2,686	3,354	
Projected annual surplus	2,324	2,252	2,688	1,514	1,439	1,777	2,146	2,819	

Source: OeNB.

Table A13

Claims on Domestic Nonbanks									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	May 31 ¹	
Nonfinancial corporations	128,104	129,489	131,593	130,519	129,091	128,476	128,846	129,743	
Households	59,222	61,243	62,805	64,831	67,115	67,425	69,346	71,023	
General government	28,727	28,798	28,275	28,724	28,333	27,501	29,950	29,412	
Other financial intermediaries	10,459	11,108	11,893	12,309	12,771	12,908	13,392	13,193	
Total	226,512	230,638	234,566	236,383	237,310	236,309	241,534	243,371	

Source: OeNB.

¹ Due to changes in the reporting system in June 2004, the analysis of developments in loans to nonfinancial corporations and households does not go beyond May 2004. The data are currently being revised and will be available for analysis from the publication of Financial Stability Report 9 onwards.

Table A14

Foreign Currency-Denominated Claims on Domestic Nonbanks									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	May 31 ¹	
Nonfinancial corporations	23,983	24,775	25,167	25,333	24,833	23,225	23,047	23,795	
Households	12,611	13,801	14,555	15,625	16,766	16,761	18,430	20,000	
General government	1,904	1,692	1,362	1,682	1,395	1,567	1,237	1,590	
Other financial intermediaries	1,114	1,326	1,336	1,342	1,466	1,394	1,412	1,498	
Total	39,613	41,594	42,420	43,983	44,459	42,948	44,125	46,883	

Source: OeNB.

¹ Due to changes in the reporting system in June 2004, the analysis of developments in loans to nonfinancial corporations and households does not go beyond May 2004. The data are currently being revised and will be available for analysis from the publication of Financial Stability Report 9 onwards.

Table A15

Foreign Currency-Denominated Claims on Domestic Non-MFIs									
End of period, share in % ¹	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Swiss franc	60.7	53.2	52.1	51.4	56.8	72.4	81.6	86.0	
Japanese yen	33.9	40.7	42.3	42.2	37.7	21.6	12.2	7.1	
U.S. dollar	4.2	5.2	5.2	6.0	5.0	5.2	5.0	5.6	
Other foreign currencies	1.3	0.9	0.4	0.3	0.4	0.7	1.2	1.3	

Source: OeNB, ECB.

¹ The indicated figures refer to claims of monetary financial institutions (MFIs, ESA definition) on domestic non-MFIs. Given the differences in the definition of credit institutions according to the Austrian Banking Act and of MFIs according to ESA and differences in the number of borrowers, comparability to "Claims on Domestic Nonbanks" is limited. Figures do not add up to 100.0% for every year due to rounding errors.

Table A16

Specific Loan Loss Provisions for Claims on Nonbanks									
End of period, % of claims	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Specific loan loss provisions	2.9	3.2	3.1	3.4	3.3	3.5	3.3	3.4	

Source: OeNB.

Table A17

Market Risk¹									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Interest rate risk Capital requirement for the position risk of interest rate instruments in the trading book	853.3	587.8	394.1	427.2	415.3	420.6	470.2	514.8	
Exchange rate risk Capital requirement for open foreign exchange positions	71.4	96.9	64.0	70.3	80.4	81.8	54.9	66.1	
Equity price risk Capital requirement for the position risk of equities in the trading book	60.4	43.8	28.5	33.6	20.5	25.4	28.4	52.4	

Source: OeNB.

¹ The calculation of capital requirements for market risk combines the standardized approach and internal value-at-risk (VaR) calculations. The latter use previous day's values without taking account of the multiplier. Capital requirements for interest rate instruments and equities are computed by adding up both general and specific position risks.

Table A18

Liquidity Risk									
End of period, %	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Liquidity of the first degree: 5% quantile of liquidity ratio ¹	6.1	12.4	5.9	11.5	6.1	7.1	4.5	4.3	
Liquidity of the second degree: 5% quantile of liquidity ratio	26.3	26.4	27.3	27.3	26.1	28.2	25.2	25.7	

Source: OeNB.

¹ The liquidity ratio relates liquid assets to the corresponding liabilities. Article 25 of the Austrian Banking Act defines a minimum ratio of 2.5% for liquidity of the first degree (cash ratio) and of 20% for liquidity of the second degree (current ratio). The 5% quantile indicates the liquidity level surpassed by 95% of banks on the respective reporting date and is thus an indicator of poor liquidity.

Table A19

Solvency									
End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Total tier 1 capital (core capital)	24,652	26,930	27,440	28,368	26,861	28,181	29,704	31,564	
Total tier 2 capital (supplementary capital)	12,659	13,512	13,492	14,159	13,485	14,170	14,941	16,059	
Tier 3 capital	1,575	1,251	2,413	2,197	2,324	771	803	764	
Eligible capital as a percentage of risk-weighted assets Capital adequacy ratio ¹	13.3	14.0	13.7	14.2	13.3	13.9	14.5	14.8	

Source: OeNB.

¹ In this context, the capital adequacy ratio refers to the capital eligible as credit risk cover under the Austrian Banking Act (i.e. tier 1 capital plus tier 2 capital minus deduction items) as a percentage of the assessment base. As tier 3 capital is subordinated capital that may only be allocated against market risk, it was not included here so as to produce a conservative capital adequacy assessment.

Table A20

Assets Held by Austrian Insurance Companies¹

End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Cash, overnight deposits	719	531	757	764	681	1,246	869	753	
Other deposits at Austrian banks	332	483	1,425	678	947	2,371	1,237	991	
Domestic debt securities	8,245	7,840	7,712	7,600	7,736	8,488	9,101	9,175	
Equity securities and other domestic securities	11,847	12,599	13,127	14,616	15,043	14,648	15,204	15,987	
Loans	11,147	10,455	8,769	8,518	8,055	7,441	7,303	6,733	
Domestic equity interests	2,257	2,293	2,511	2,784	3,308	3,550	3,588	3,682	
Real estate	3,428	3,443	3,494	3,804	3,553	3,526	3,573	3,438	
Foreign assets	11,248	13,074	14,397	14,959	15,709	15,597	17,261	19,209	
Custody account claims on deposits on reinsurers	1,805	..	1,854	..	2,042	..	2,148	..	
Other assets	3,105	3,085	3,426	3,310	3,329	3,734	3,549	4,068	
Total assets	54,134	..	57,471	..	60,403	..	63,833	..	

Source: OeNB.

¹ Semiannual data exclusive of reinsurance transactions.

Table A21

Assets in Austrian Mutual Funds

End of period, EUR million	2000		2001		2002		2000		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Domestic securities	34,908	35,154	36,068	36,471	35,952	34,653	34,309	35,405	
of which: Federal Treasury bills and notes	424	25	27	28	28	..	..	..
debt securities	24,302	23,828	23,235	22,975	22,519	20,743	19,436	19,058	
equity securities	10,182	11,301	12,806	13,468	13,405	13,910	14,873	16,347	
Foreign securities	51,210	56,697	57,324	60,701	60,712	66,706	69,435	75,708	
of which: debt securities	30,336	32,944	34,717	40,498	43,200	48,531	48,952	53,022	
equity securities	20,874	23,753	22,607	20,203	17,513	18,175	20,482	22,686	
Other assets	5,856	4,936	5,341	5,018	6,047	5,774	7,274	7,529	
Total assets	91,973	96,787	98,733	102,190	102,712	107,133	111,018	118,642	
of which: foreign currency	22,415	24,789	24,346	24,157	22,455	22,376	22,178	24,328	

Source: OeNB.

Table A22

Assets Held by Austrian Pension Funds

End of period, EUR million	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
Domestic securities	7,070	7,171	7,245	7,128	7,200	7,744	8,280	8,793	
of which: Federal Treasury bills and notes	0	0	0	0	0	0	0	0	
debt securities	31	35	63	67	57	56	48	125	
mutual fund shares	7,030	7,127	7,163	7,032	7,125	7,641	8,168	8,623	
other securities	9	9	19	30	18	47	64	45	
Foreign securities	523	586	534	401	353	425	405	460	
of which: debt securities	41	40	49	44	44	47	44	15	
mutual fund shares	478	526	451	315	279	350	330	417	
other securities	4	20	34	43	30	29	31	28	
Deposits	95	92	164	118	171	164	224	76	
Lending	71	69	39	32	42	67	66	79	
Other assets	89	68	67	121	110	161	143	147	
Total assets	7,848	7,986	8,049	7,800	7,876	8,562	9,117	9,555	
of which: foreign currency	302	339	303	188	195	233	212	236	

Source: OeNB.

The Real Economy in Austria

Table A23

Financial Investment of Households¹

Transactions, EUR million	2000	2001	2002	2003	2000	2001	2002	2003
	Year				2 nd half			
Currency and deposits	2,717	4,314	7,604	8,166	x	2,059	4,529	3,706
Securities (other than shares)	1,830	-327	1,607	1,208	x	-232	236	1,410
Shares other than mutual fund shares	1,957	1,143	705	1,062	x	951	416	321
Mutual fund shares	4,000	2,894	483	859	x	749	602	257
Insurance technical reserves	4,072	3,398	2,949	3,300	x	1,442	1,508	944
Total financial investment	14,576	11,422	13,346	14,595	x	4,969	7,291	6,638

Source: OeNB.

¹ Including nonprofit institutions serving households.

Table A24

Household Income, Savings and Credit Demand

	2000	2001	2002	2003	2004
	Year				
Year-end, EUR billion					
Net disposable income	127.67	130.88	134.68	136.57	138.62 ¹
Savings	10.71	9.81	11.10	11.47	11.61 ¹
%					
Saving ratio ²	8.4	7.5	8.2	8.4	8.4 ¹
Year-end, EUR billion					
Loans to Households	59.22	62.81	67.12	69.35	..

Source: Statistics Austria; national accounts broken down by sectors.

¹ WIFO forecast of September 2004.² Saving ratio = savings / (disposable income + increase in accrued occupational pension benefits).

Table A25

Financing of Nonfinancial Corporations

Transactions, EUR million	2000	2001	2002	2003	2000	2001	2002	2003
	Year				2 nd half			
Securities other than shares	2,116	600	-410	3,910	x	1,272	-388	3,930
Loans	16,054	10,534	5,683	5,935	x	7,156	3,148	3,047
Shares and other equity	x	4,881	7,850	5,015	x	2,161	1,239	-74
Other accounts payable	x	41	1,216	1,982	x	384	774	2,104
Total debt	17,471	16,056	14,339	16,842	x	10,973	4,773	9,007

Source: OeNB.

Table A26

	Insolvency Indicators								
	2000		2001		2002		2003		2004
	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	Dec. 31	June 30	
<i>End of period, EUR million</i>									
Default liabilities	2,674	2,070	3,503	1,652	3,422	1,258	2,440	1,169	
Number of defaults	2,567	1,458	2,939	1,423	2,864	1,415	2,957	1,469	

Source: Kreditschutzverband von 1870.

Table A27

<i>Median, %</i>	Selected Financial Ratios of the Manufacturing Sector			
	2000	2001	2002	2003
	Year			
Self-financing and investment ratios				
Cash flow, as a percentage of turnover	7.98	7.35	7.47	6.95
Cash flow, as a percentage of investment	187.64	181.18	194.62	183.87
Reinvestment ratio ¹	67.65	69.23	70.28	77.78
Financial structure ratios				
Equity ratio	10.18	11.03	13.90	17.94
Risk-weighted capital ratio	15.32	16.46	19.45	24.11
Bank liability ratio	46.67	46.47	42.94	38.76
Government debt ratio	10.66	9.78	9.49	8.86

Source: OeNB.

¹ Investment x 100 / credit write-offs. This table is based solely on the financial ratios of the manufacturing sector reported to the OeNB. Therefore, the figures presented here may deviate from those presented in the statistics section of the OeNB website.

NOTES

Abbreviations

ACH	automated clearing house	GNP	gross national product
APSS	Austrian Payment System Services GmbH	GSA	GELDSERVICE AUSTRIA Logistik für Wert- gestionierung und Transportkoordination GmbH (Austrian cash services company)
ARTIS	Austrian Real Time Interbank Settlement (the Austrian RTGS system)	HICP	Harmonized Index of Consumer Prices
A-SIT	Secure Information Technology Center – Austria	IBAN	International Bank Account Number
ASVG	Allgemeines Sozialversicherungsgesetz – General Social Security Act	IBRD	International Bank for Reconstruction and Development
A-Trust	A-Trust Gesellschaft für Sicherheitssysteme im elektronischen Datenverkehr GmbH	IDB	Inter-American Development Bank
ATM	automated teller machine	IFES	Institut für empirische Sozialforschung GesmbH (Institute for Empirical Social Research, Vienna)
ATX	Austrian Traded Index	Ifo	Ifo Institute for Economic Research, Munich
BCBS	Basel Committee on Banking Supervision (BIS)	IGC	Intergovernmental Conference (EU)
BIC	Bank Identifier Code	IHS	Institut für Höhere Studien und Wissenschaftliche Forschung – Institute for Advanced Studies, Vienna
BIS	Bank for International Settlements	IIF	Institute of International Finance
BOP	balance of payments	IIP	international investment position
BSC	Banking Supervision Committee (ESCB)	IMF	International Monetary Fund
CACs	collective action clauses	IRB	internal ratings-based
CEBS	Committee of European Banking Supervisors (EU)	ISO	International Organization for Standardization
CEE	Central and Eastern Europe	IWI	Industriewissenschaftliches Institut – Austrian Institute for Industrial Research
CEECs	Central and Eastern European countries	IT	information technology
CESR	Committee of European Securities Regulators	JVI	Joint Vienna Institute
CIS	Commonwealth of Independent States	LIBOR	London Interbank Offered Rate
CPI	consumer price index	M3	broad monetary aggregate M3
EBA	Euro Banking Association	MFI	monetary financial institution
EBRD	European Bank for Reconstruction and Development	MRO	main refinancing operation
EC	European Community	MÖAG	Münze Österreich AG – Austrian Mint
ECB	European Central Bank	MoU	memorandum of understanding
Ecofin	Council of Economic and Finance Ministers (EU)	NCB	national central bank
EEA	European Economic Area	ÖBB	Österreichische Bundesbahnen – Austrian Federal Railways
EFC	Economic and Financial Committee (EU)	OeBS	Oesterreichische Banknoten- und Sicherheitsdruck GmbH – Austrian Banknote and Security Printing Works
EIB	European Investment Bank	OECD	Organisation for Economic Co-operation and Development
EMS	European Monetary System	OeKB	Oesterreichische Kontrollbank (Austria's main financial and information service provider for the export industry and the capital market)
EMU	Economic and Monetary Union	OeNB	Oesterreichische Nationalbank (Austria's central bank)
EONIA	Euro OverNight Index Average	OPEC	Organization of the Petroleum Exporting Countries
ERM II	Exchange Rate Mechanism II (EU)	ORF	Österreichischer Rundfunk – Austrian Broadcasting Corporation
ERP	European Recovery Program	ÖBFA	Austrian Federal Financing Agency
ESA	European System of Accounts	ÖNACE	Austrian Statistical Classification of Economic Activities
ESAF	Enhanced Structural Adjustment Facility (IMF)	PE-ACH	pan-European automated clearing house
ESCB	European System of Central Banks	PISA	Programme for International Student Assessment (OECD)
ESRI	Economic and Social Research Institute	POS	point of sale
EU	European Union	PRGF	Poverty Reduction and Growth Facility (IMF)
EURIBOR	Euro Interbank Offered Rate	RTGS	Real-Time Gross Settlement
Eurostat	Statistical Office of the European Communities	SDR	Special Drawing Right (IMF)
FATF	Financial Action Task Force on Money Laundering	SDRM	Sovereign Debt Restructuring Mechanism (IMF)
Fed	Federal Reserve System	SEPA	Single Euro Payments Area
FFF	Forschungsförderungsfonds für die Gewerbliche Wirtschaft – Austrian Industrial Research Promotion Fund		
FMA	Financial Market Authority (for Austria)		
FOMC	Federal Open Market Committee (U.S.A.)		
FSAP	Financial Sector Assessment Program (IMF)		
FWF	Fonds zur Förderung der wirtschaftlichen Forschung – Austrian Science Fund		
GAB	General Arrangements to Borrow		
GATS	General Agreement on Trade in Services		
GDP	gross domestic product		

SPF	Survey of Professional Forecasters	UNO	United Nations Organization
STEP2	Straight-Through Euro Processing system offered by the Euro Banking Association	VaR	Value at Risk
STP	straight-through processing	WBI	Wiener Börse Index
STUZZA	Studiengesellschaft für Zusammenarbeit im Zahlungsverkehr G.m.b.H. – Austrian Research Association for Payment Cooperation	WEF	World Economic Forum
S.W.I.F.T.	Society for Worldwide Interbank Financial Telecommunication	WIFO	Österreichisches Institut für Wirtschaftsforschung – Austrian Institute of Economic Research
TARGET	Trans-European Automated Real-time Gross settlement Express Transfer	WIIW	Wiener Institut für internationale Wirtschaftsvergleiche – The Vienna Institute for International Economic Studies
Treaty	refers to the Treaty establishing the European Community	WKO	Wirtschaftskammer Österreich – Austrian Federal Economic Chamber
UNCTAD	United Nations Conference on Trade and Development	WTO	World Trade Organization

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.

Irrevocable euro conversion rate: EUR 1 = ATS 13.7603.

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annual

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Conference on European Economic Integration (Conference Proceedings)

annual

(formerly East-West Conference)

This series, published by a renowned international publishing house, reflects presentations made at the OeNB's annual central banking conference on Central, Eastern and Southeastern European issues and the ongoing EU enlargement process.

For further details see ceec.oenb.at

Newsletter of the Economic Analysis and Research Section

quarterly

The English-language Newsletter of the Economic Analysis and Research Section is only published on the Internet and informs an international readership about selected findings, research topics and activities of the Economic Analysis and Research Section of the OeNB. This publication addresses colleagues from other central banks or international institutions, economic policy researchers, decision makers and anyone with an interest in macroeconomics. Furthermore, the Newsletter offers information on publications, studies or working papers as well as events (conferences, lectures and workshops).

For further details see hvw-newsletter.oenb.at

Publications on Banking Supervision

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Throughout 2004–05 the following guidelines will be published:

Rating Models and Validation

www.oenb.at/de/img/rating_models_tcm14-22933.pdf

Best Practices in Risk Management for Securitized Products

Credit Approval Process and Credit Risk Management

Techniques of Credit Risk Mitigation (working title)

Securing Credit Risk in (working title)

- Poland
- Croatia
- Slovakia
- Slovenia
- Czech Republic
- Hungary

You may find these guidelines at www.oenb.at.

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Guidelines on Market Risk II

The second series on market risk is the Structured Products Handbook. The first part of the handbook deals with structured bonds whose payoff properties depend on interest rate movements, and the following two parts focus on products whose payoff characteristics are shaped by equity prices and foreign exchange rates.

Structured Products Handbook

www.oenb.at/en/img/phb_internet_tcm16-11173.pdf

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