

Romania: Selected Issues and Statistical Appendix

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ROMANIA

Selected Issues and Statistical Appendix

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Approved by European Department

April 10, 2006

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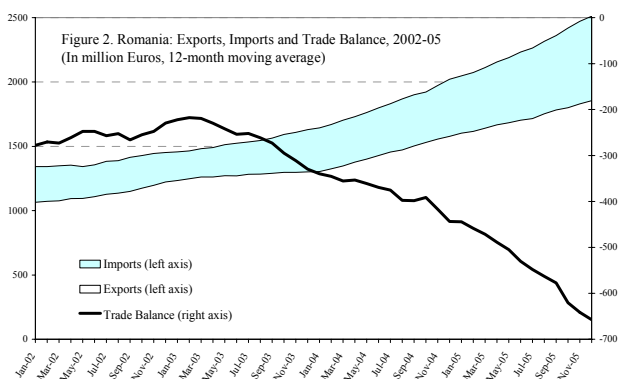
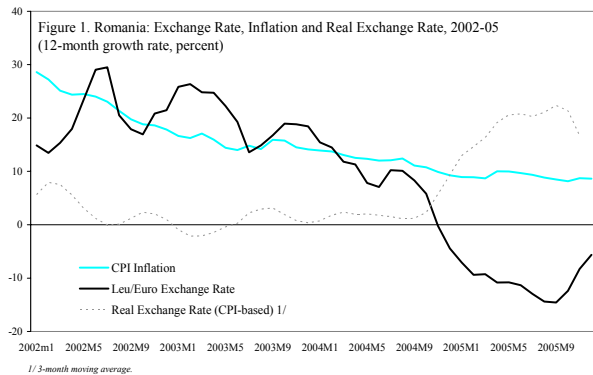
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I. COMPETITIVENESS¹

1. This paper assesses Romania's external competitiveness, by reviewing recent developments in a range of standard indicators and estimating equilibrium real exchange rates. The results suggest that, although Romania's historical cost advantage vis-à-vis trading partners has eroded since end-2004, on account of a strong real exchange rate appreciation, some undervaluation still remains. Furthermore, the evidence suggests that the recent weak output and export performance in some of the traditional exporting sectors mainly reflects the transition towards higher value-added products. And strong import growth is partly driven by the rapid process of capital accumulation, over improved prospects of economic growth. Going forward, further real appreciation is expected, as part of the convergence process to EU living standards and continued strong capital inflows. In this context, the ability of Romania's traditional export sectors to cope with the new environment will depend on Romania's capacity to boost productivity gains, and contain inflationary pressure, and the speed of real appreciation. These findings point also to the need for further enterprise restructuring, and policies to promote reform and a business-friendly environment.

A. Background

2. **The widening of the current account deficit, and the sharp appreciation of the real exchange rate since end-2004 have raised concerns about Romania's external competitiveness.** While Romania has historically benefited from a competitive edge vis-à-vis neighboring countries, the recent capital account liberalization and the exchange rate policy shift at end-2004 led to a strong real appreciation in a reduced period of time, driven mostly by a sharp nominal appreciation and a slowdown in disinflation. The appreciation of the leu has been accompanied by a widening of the trade and current account deficit. As a result, the issue of external competitiveness has presented a challenge for policy makers. The authorities perceive a strong trade-off between tightening monetary policy, aimed at resuming disinflation, and preserving external



¹ Prepared by Gustavo Adler and Andrew Tiffin.

competitiveness, as higher domestic interest rates could exacerbate capital inflows and put further pressure on the exchange rate.

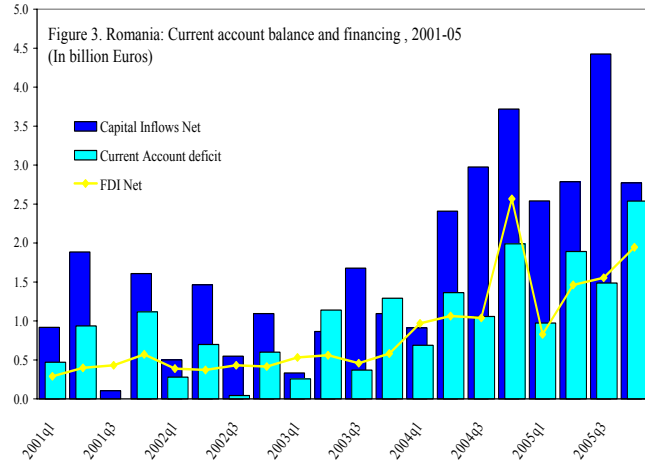
3. **Assessing Romania's external competitiveness, like in other transition economies, is challenging.** Besides the well-known difficulties of estimating equilibrium exchange rates, several factors have recently affected Romania's external balances. Disentangling their effect from a potential exchange rate misalignment is not trivial. Some of these factors are:

- *Capital account liberalization and consumption smoothing:* Romania's capital account liberalization in 2005 was followed by strong capital inflows and coincided with a rapid domestic credit expansion. The later contributed to a pick up in investment and a sharp acceleration of consumption growth, leading to a strong increase in imports of both capital and consumption goods. While large imports of capital goods arguably reflect the normal process of convergence through capital accumulation, abundant imports of consumption goods could result from intertemporal consumption smoothing over improved growth prospects (due to the upcoming EU accession) and easing credit constraints, but also could be driven by a potential exchange rate misalignment. Disentangling both effects presents a challenge.
- *Climbing the quality and technological ladder:* As in other transition economies, the process of capital accumulation has led to a marked transformation of Romania's production and exporting structure, shifting away from production of traditional low-tech products towards higher valued-added goods. The underperformance of traditional exports can, thus, be partially explained by the re-allocation of resources associated to this transformation process.
- *Productivity gains:* Increasing relative prices of non-tradable goods have been partially the result of strong productivity gains in the tradable sector, a phenomenon previously observed in other transition economies (Balassa-Samuelson effect). In this context, standard measures of the real exchange rate based on consumer prices do not reflect changes in external competitiveness but the effect of differential productivity gains across sectors on relative prices.
- *Changing International Environment:* Simultaneous to this transformation process, Romania's external trade has been affected by fast growing commodity prices (minerals and fuels) in recent years, and by the abolition of textiles quotas at end-2004.

B. Stylized Facts

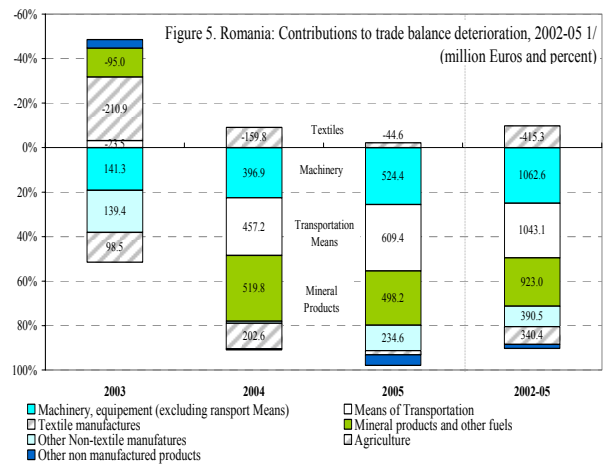
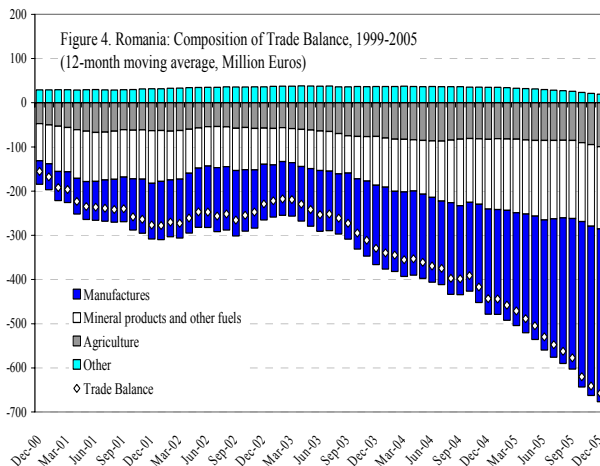
4. **Following a period of relative stability in the external accounts, Romania's trade deficit started to widen in 2003.** After the 1998-99 exchange rate adjustment –engineered to correct an exchange rate misalignment– trade and current account deficits fluctuated around

6 percent and 5 percent of GDP respectively until 2003. Since then, however, import growth has outpaced exports growth – 24 percent and 19 percent on average respectively- leading to a trade deficit of 10 percent of GDP and a current account deficit of 8.7 percent of GDP in 2005. External imbalances were financed by large capital inflows, which also allowed for large reserve accumulation and a sharp appreciation of the currency since end-2004. The latter has contributed to containing the current account balance (measured against GDP) despite the fact that the deficit increased by 20 percent in euro terms during 2005.



5. The widening trade deficit is mainly explained by accelerating imports of machinery and mineral products.

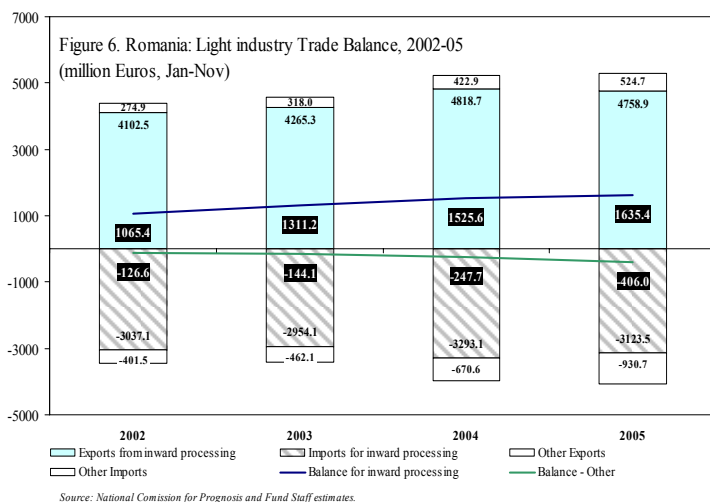
Despite the abolition of global textile quotas in 2004, the recent severe floods and the shock of energy prices, 73 percent of the trade balance deterioration since 2002 is explained by non-textile manufactures, of which, 31 percent is the effect of fast growing imports of machinery and equipment (Figure 5). Transport means account for another 31 percent of the trade balance deterioration, proving that imports of durable goods—including a strong contribution of car imports—have played a central role in the widening of external imbalances. The worsening of the trade deficit was also helped by minerals and fuels, mostly driven by high international prices, which accounted for 27 percent of the widening balance. Interestingly, the latter suggests that, despite the strong export growth of minerals and fuels, there is no ‘Dutch disease’ phenomenon in Romania, as the economy is a net importer of minerals and fuels. The analysis of trade balances alone, however, conceals significant differences in import and export performance across sectors.



1/ For trade balance of goods.

6. **A shift toward higher-quality exports and lower imports of intermediate goods have offset the impact of the abolition of global quotas on textiles trade.** While the latter led to a marked contraction of textile output, the value of net textile exports only suffered a slowdown during 2005 (Figure 5). The limited impact is explained by the large import

component of inputs for textile production, as well as a quality upgrading of exported goods. The value of imports of intermediate goods for inward-processing industries (which account for most of the sector production) fell by 5 percent, more than offsetting the 1 percent fall in exports during 2005. Although part of this gap was covered by a reduction of inventories, the latter suggests that any further contraction of the textile industry will have limited effect on the external accounts. In addition, an increase in export prices—mainly explained by a quality improvement of exported goods— helped to offset the 4 percent fall in export volumes.



7. **While imports of machinery and equipment have been strong, they have been outpaced by imports of cars and mineral products.** Imports of machinery grew

by 20 percent, driven by acceleration in private sector investment, while imports of transportation means grew by 45 percent, and mineral imports grew by 29 percent on average, since 2002. When compared to other transition economies, the share of machinery in Romania's total imports remains low at about 25 percent, while other transition economies have seen shares increased to 40-45 percent in the years preceding EU accession (Table 1). Imports of wood products and furniture also experienced a considerable expansion in the last years, mainly driven by the pick up in construction activity.

Table 1. Imports of Machinery 1/
(Percent of total imports)

	1995	2000	2004
Hungary	23.6	43.4	44.5
Czech Republic	30.4	31.7	32.9
Poland	25.6	26.8	25.2
Romania 2/	22.1	25.0	23.4
Bulgaria	12.6	16.9	18.5
Lithuania	16.1	15.8	19.3

Source: COMTRADE

1/ Excluding cars.

2/ Romania's share was about 25 percent in 2005.

8. **Turning to exports, performance has been mixed across sectors, and the composition has shifted away from low-and medium-tech products.** Among main exported goods, the following performances are most noticeable:

- Exports of mineral products and common metals—representing ¼ of total exports of goods—grew by 30 percent and 21 percent respectively, on average, during 2002-05, mostly driven by high international prices. However, while the volume growth of

mineral products has accelerated during 2005, metals have fallen sharply despite continuously increasing prices.

- Exports of transport means and machinery also showed healthy growth rates of 30 percent and 20 percent respectively, on average during 2002-05. While the latter have slowed down to 19 percent, the former has accelerated to 49 percent during 2005. This strong export performance in high-tech products has taken place despite strong domestic demand for cars and machinery.
- Similarly, exports of food products grew by 20 percent during 2005, after underperforming for several years, and exports of agriculture products grew by a healthy 33 percent despite the severe floods of last year.
- Among the underperformers, textiles continued the declining trend during 2005. Exports of wood products, on the other hand, had nil growth last year, although industrial production remained strong, pointing to sustained domestic demand growth.

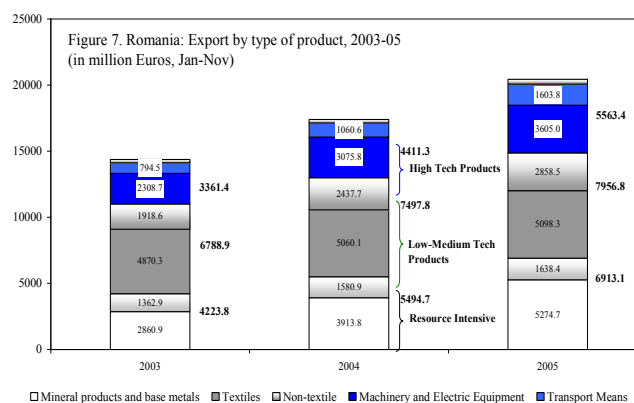
Table 2. Romania: Export performance of main products, 2002-05

	(in percent)								
	Share	Value 1/				Volume			
	2005	2002	2003	2004	2005	2002	2003	2004	2005
		Growth rates							
Total Exports of Goods	100.0	15.4	6.4	21.3	17.5	10.6	7.8	10.2	4.4
Mineral products	11.0	41.4	-11.5	23.8	79.0	29.9	-12.8	11.5	23.4
Chemical products	4.5	-8.9	13.5	32.8	29.0	-5.2	26.5	9.9	14.0
Plastics, rubber and related products	3.9	46.7	34.2	39.6	21.9	34.1	15.5	32.8	6.5
Wood products and wickerwork	3.8	11.7	7.1	17.7	0.4	16.1	22.1	12.9	-13.9
Textiles and articles thereof	18.9	11.7	6.6	6.5	-0.2	9.1	5.2	3.8	-4.0
Footwear, hats, umbrellas	5.8	12.9	2.8	-2.8	4.4	6.0	-0.1	0.8	-1.7
Metals	14.8	11.7	6.5	44.9	12.8	22.7	8.7	3.3	-8.4
Machinery, electric and equipment	17.7	22.4	9.1	32.8	18.7	8.7	14.4	22.7	19.6
Transport means	8.0	24.2	7.9	33.9	49.4	-10.2	20.0	8.4	15.2
Furniture	4.9	15.4	10.8	16.9	7.2	6.0	4.6	11.8	1.5

Source: National Bank of Romania

1/ In Euros.

- The mixed performance across sectors resulted in a shift in the structure of exports from low-medium to high tech products. This shift resembles the experience of other transition economies,² although in the case of Romania this pattern has been accompanied by a simultaneous shift towards resource-intensive



□ Mineral products and base metals □ Textiles □ Non-textile ■ Machinery and Electric Equipment ■ Transport Means

Source: National Commission for Prognosis and Fund staff estimates.

² See Schadler and others (2006).

products, on account of high international commodity prices. While low-medium tech exports accounted for 47 percent of total exports in 2003, their share fell to 39 percent in 2005. Meanwhile, the share of high tech products increased from 23 percent to 27 percent in the same period.

- The slow-down in Romania's export growth from 2004, however, seems to be in line with developments in other transition economies (Table 3). With the exception of Latvia, most transition economies have experienced a substantial slowdown in non-oil exports, both in value and volumes, suggesting that Romania's export slowdown may not relate to the recent real

exchange rate (RER) appreciation but to other exogenous factors. Despite this common pattern, however, Romania's penetration in the EU market has slowed-down significantly since end-2004, while other transition economies have shown continued growth in the share of EU imports, pointing to a deterioration of Romania's competitive position relative to neighboring countries.

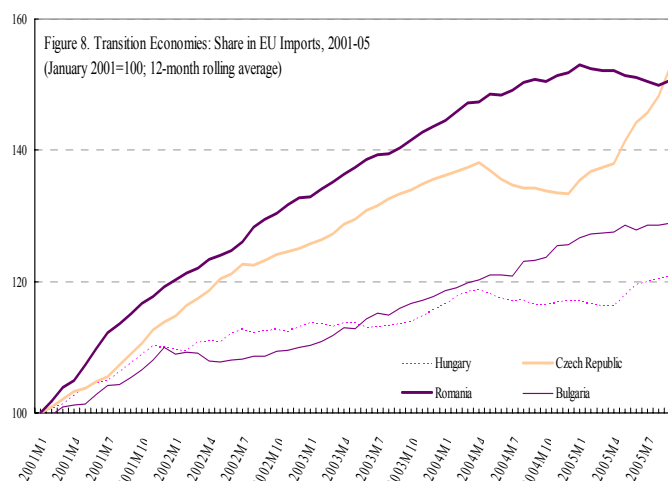


Table 3. Export performance in selected transition economies, 1995-2005
(annual average growth rates)

	Values 1/						Volumes					
	Total Exports of goods			Non-oil exports			Total Exports of goods			Non-oil exports		
	1995-2003	2004	2005	1995-2003	2004	2005	1995-2003	2004	2005	1995-2003	2004	2005
Bulgaria	5.4	31.7	18.6	5.2	27.2	14.5	6.5	8.7	4.1	6.8	5.8	3.4
Czech Republic	10.8	37.2	21.4	10.8	37.2	21.4	11.2	23.1	11.1	11.2	23.1	11.1
Hungary	14.6	28.9	13.4	14.6	28.7	13.1	15.9	17.5	7.3	16.0	17.9	7.6
Latvia	11.1	33.3	26.9	11.1	33.3	26.9	9.8	11.1	22.5	9.8	11.1	22.5
Poland	11.8	34.2	16.6	11.8	34.2	16.6	8.8	14.0	8.6	8.8	14.0	8.6
Romania	10.6	31.7	19.8	11.4	32.8	20.3	11.0	10.2	4.4	12.0	10.2	4.1
Slovak Republic	12.4	27.1	15.0	12.3	25.1	12.3	9.3	13.6	10.7	9.3	13.0	11.1
Slovenia	5.5	24.8	6.4	5.5	24.8	6.4	7.2	12.8	8.1	7.2	12.8	8.1
Ukraine	6.6	40.8	4.5	6.6	40.8	4.5	3.1	18.2	-5.7	3.1	18.2	-5.7

Source: World Economic Outlook and Fund staff estimates.
1/ In US dollars.

- Finally, exports of services—accounting for 15 percent of total exports—grew by 35 percent in euro terms during 2005, after several years of growing at about 8 percent. The impressive performance of exports, however, was outpaced by imports of services, which grew by 40 percent last year. The result was a doubling of the trade deficit in services from 2004. Still the service balance only accounted for 5 percent of the total trade deficit in 2005.

9. **The evidence of mixed export performance across sectors makes the assessment of Romania's competitiveness particularly challenging.** While traditional export sectors—mostly specialized in low-tech products—have seen a marked deterioration, production and exports of higher value-added goods have showed healthy growth. In addition, large imports of durable goods (capital and consumption goods) partially reflect the catch-up process. The following section looks into traditional indicators of external competitiveness, in search for further evidence on external competitiveness.

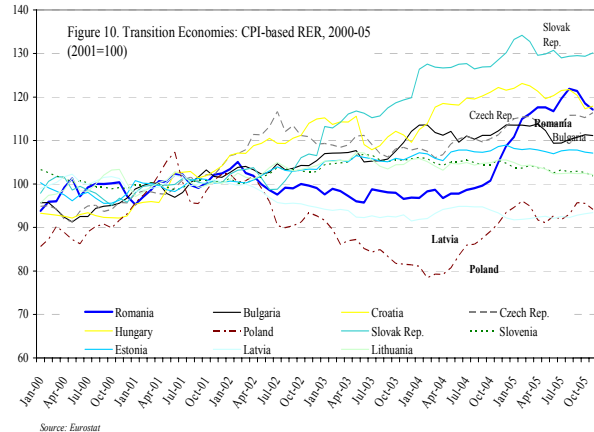
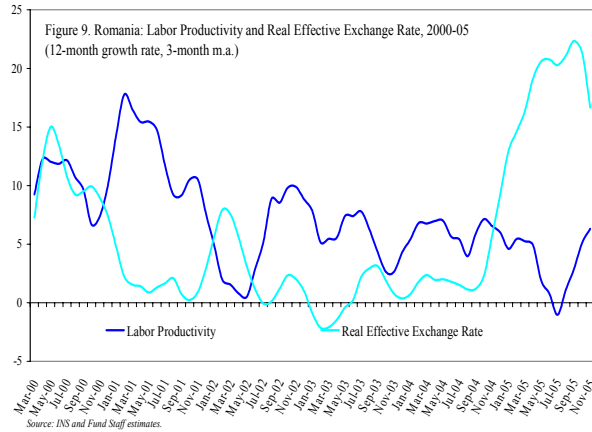
C. Competitiveness Indicators

10. **External competitiveness is difficult to define.** By definition, exchange rate misalignments are not possible in the long run, and therefore a competitiveness problem simply refers to the country's ability to sustain a certain level of income. In the short-run, however, an appropriate level of competitiveness is associated with the value of the real exchange rate, which, in conjunction with other domestic policies, ensures adequate profitability in the production of tradable goods and, thus, ensures both internal and external balance. However, market distortions that temporarily push the exchange rate away from its equilibrium value can create macroeconomic imbalances in the short-run that lead to undesired boom-bust cycles. As the paper is mostly concerned with this form of short-term external imbalances, we focus on recent developments of the real exchange rate (RER), and indicators of profitability in the tradable sector.

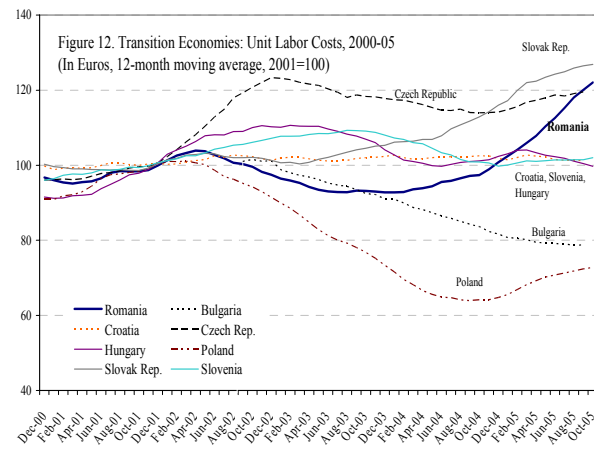
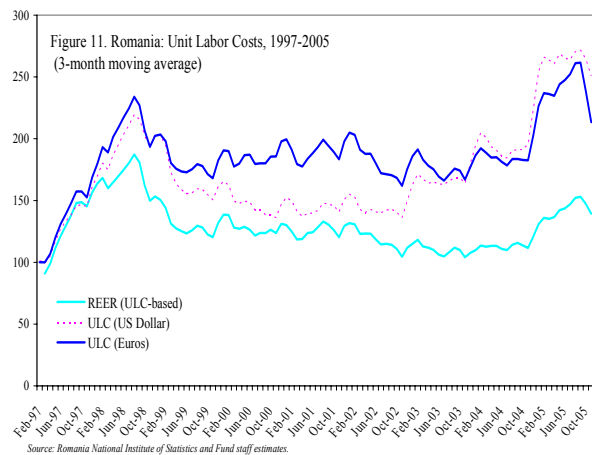
11. **Romania's RER has appreciated sharply since end-2004, after a prolonged period of stability.** Following the 1998-99 currency adjustment, and up until end-2004, the NBR used the exchange rate as an implicit nominal anchor, guiding the rate of depreciation to broadly match its disinflation goals, while allowing some real appreciation to reflect productivity gains. However, since the exchange rate policy shift at end-2004—the NBR has allowed greater exchange rate flexibility—the appreciation of the RER has largely exceeded productivity gains (Figure 7). The trade-weighted CPI-based RER (also called real effective exchange rate) appreciated by 23 percent from September 2004 to September 2005, allowing the real exchange rate to reach the levels prevailing before the 1998-99 currency crisis. This sharp appreciation reverted somewhat at end-2005, before renewed pressure on the exchange rate in early 2006.

12. **When compared to other transition economies, Romania's real exchange rate shows a relative improvement during 1999-2004,** on account of faster appreciation in neighboring countries (Figure 8). Between 1999 and 2004, Romania's RER remained fairly stable, while other EU-transition economies saw their currencies appreciate by 10-25 percent in real terms. However, the sharp appreciation of the leu since end-2004 has offset most of the previous relative improvement, except against the Slovak currency. CPI-based measures of the real exchange rate, however, tend to overestimate the degree of erosion in competitiveness as the basket of goods and services used includes non-tradable goods and thus does not control for the Balassa-Samuelson effect. Furthermore, comparing CPI-based RERs across countries may be misleading to the extent that the degree of openness varied across them as the size of the non-tradable sector would determine the magnitude of the

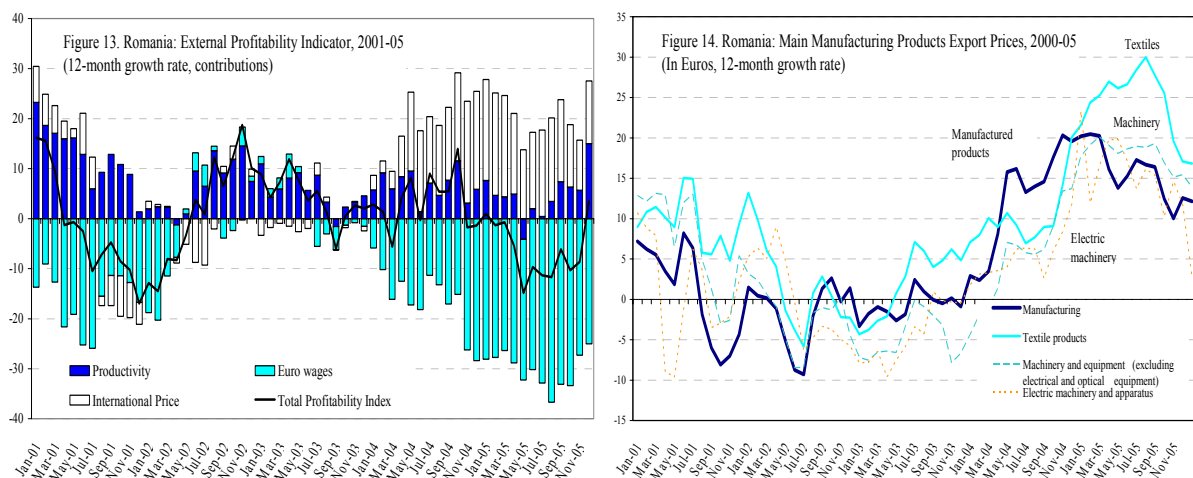
Balassa-Samuelson effect. A refined measure of competitiveness is the manufacturing unit labor cost (ULC), a proxy for the costs of producing tradable goods in the economy.



13. **Manufacturing ULCs have behaved similar to the CPI-based RER, confirming an erosion of Romania’s competitive margins.** ULCs remained fairly stable during 1999-2004. Since then, however, they have increased sharply both in Euro and US dollar terms, exceeding the levels of pre-1999 currency crisis (Figure 9). The ULC-based real effective exchange rate—Romania’s ULC relative to weighted average of ULC in trading partner countries—shows a similar pattern, although the degree of appreciation is somewhat smaller and Romania’s relative ULC remains below the 1998-99 pick level. When compared to potential competitors for the EU market, the evidence also shows that much of the cost advantage has eroded, on account of the recent sharp appreciation (Figure 10). Furthermore, Romania’s ULC displays the sharpest movement in a short period of time, comparable only to developments in Czech Republic during 2001-02. However, while manufacturing ULCs provide a refined measure of competitiveness, they do not account for output price effects. Increasing unit labor costs may result from pass-through of increasing export prices. In such case, ULCs would not reflect an erosion of competitiveness.



14. **Romania’s external profitability deteriorated during 2005, on account of high real wage growth and lower productivity gains.** The external profitability index—a refined measure of profitability in the export sector—is defined as total revenues over total labor costs of the manufacturing sector, using export prices and wages in foreign currency.³ Variations of the index can be decomposed in productivity gains, external price effects and real (foreign currency) wage growth. The index for Romania shows that the profitability of the manufacturing sector has deteriorated since end-2004 on account of high real wage growth (both nominal growth and exchange rate appreciation) and lower productivity gains, although the trend has reverted partly due to the currency depreciation at end-2005 (Figure 11). The deterioration of the profitability indicator is worrisome, as this measure tends to overestimate profitability when capital/labor ratios are increasing, as it is expected in any transition economy. However, the sharp increase in real wages and the slowdown in productivity gains have been offset by fast growing export prices suggesting a quality upgrading of exported goods. This pattern is visible across most manufactured products, and particularly strong in the textile industry. Nonetheless, there seems to be evidence of a recent slowdown in export price growth (Figure 12), suggesting that, should high real wage growth and low productivity gains continue, external profitability could deteriorate rapidly.



15. **While recent trends in competitiveness indicators suggest that Romania has lost some of its historical advantage, this evidence should be interpreted with caution.** The discussion so far has focused on variations of several indexes over time, only providing information on recent trends but no information on levels. In the next section, we investigate

³ The profitability index is defined as $\frac{(P/E)Y}{(W/E)L}$, where P is the non-domestic producer price index, E is an index tracking the leu/euro exchange rate, W is the index of gross wages, Y is the industrial output index—adjusted by working days—and L is labor employment. All variables refer to the manufacturing sector.

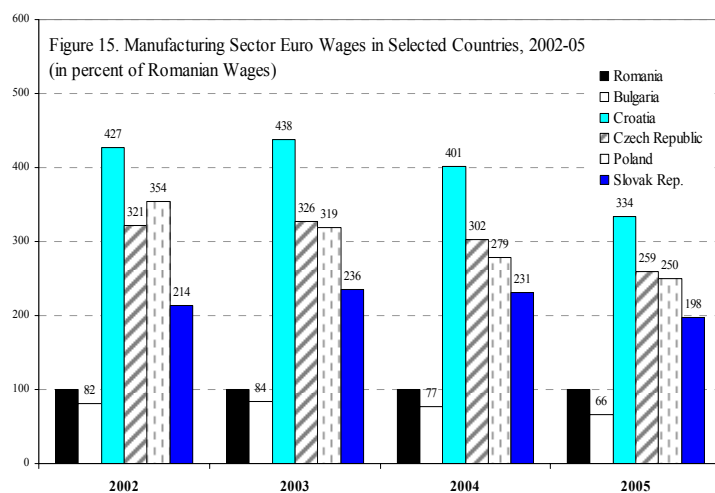
estimates of comparable measures of competitiveness across countries, to assess Romania's exchange rate level.

D. Equilibrium Real Exchange Rates

16. **Presenting a precise estimate of a country's equilibrium real exchange rate is somewhat challenging.** This is particularly the case for transition economies, which are subject to substantial and continuing structural changes, as well as strong transitory capital inflows and market rigidities. As a result, researchers have opted for various forms of equilibrium RER estimations. As a first step, we can look at simple price-indicators, such as implicit purchasing-power-parity (PPP) exchange rates and relative wages.

17. **Simple price-based measures suggest that Romania's exchange rate remains undervalued.** Looking at Romania's implicit PPP exchange rate, and similar indicators such as the Big Mac index, the currency appears to be undervalued by as much as 24-47 percent in real terms. However, neighboring transition economies are also generally undervalued, and often show more pronounced undervaluations: Bulgaria's currency is 38-64 percent undervalued, while Ukraine's Hrv is undervalued by 53-76 percent. While PPP-indicators constitute the simplest method to estimate the equilibrium RER, there exists considerable literature suggesting that such

measures do not perform well in estimating the degree of misalignment for most countries, owing to the slow reversion of the actual RER to a constant level (as implied by the PPP assumption).⁴ Alternatively, we can compare relative wages as a proxy for competitiveness. Romania's wages remain very low compared to other transition economies, although the gap has been reduced recently. Simple wage comparisons, however, can be misleading as productivity levels and factor intensities differ across countries.



18. **An alternative way to assess the degree of exchange-rate misalignment is to use cointegration techniques.** By estimating the long-term relationship between the real exchange rate and an economy's fundamentals, and then projecting the equilibrium values for those fundamentals, we can arrive at an estimate of the equilibrium real RER. However, cointegration analysis is based on the premise that a stable long-term relationship between

⁴ See Rogoff (1996).

those fundamentals and the exchange rate actually exists, and that this relationship can be derived from historical data. Unfortunately such an assumption is somewhat heroic for transition economies where structural shifts reduce the predictive power of historical data, and undermine the robustness of econometric results.

19. **An alternative approach, based on a cross-country framework, is used in this paper.** Drawing from the previous work by Halpern and Wyplosz (1997), Krajnyak and Zettlemeyer (1998), and Tiffin (2004), we estimate equilibrium exchange rates using a large cross-country panel. Following their methodology, U.S. dollar wages in the manufacturing sector serve as a proxy for real exchange rate—these data are easily available and, unlike RER indices, have the advantage of being comparable across countries.

20. **Although cross-country panel-data analysis has advantages over a time-series analysis for transition countries, such results should still be interpreted with caution.** Since countries within the sample are likely to be heterogeneous, and some country-specific factors cannot be controlled for, any estimated relationship can best be seen as outlining the *average* relationship across countries. In other words, the estimated equilibrium exchange rate for a given country is the best available prediction, assuming that the countries in the sample are, on average, in equilibrium and that the country in question is “typical” in all dimensions except for those that are controlled for.

21. **The model estimates the equilibrium level of dollar wages as a function of various income and productivity measures.** The equilibrium wage, therefore, represents the dollar wage that is consistent with internal and external macroeconomic balance. If the *actual* dollar wage were less than the estimated *equilibrium* level, it would suggest that the wage rate is “overly” competitive and that, by extension, the real exchange rate is undervalued. Our approach allows us to control for differences in the level of development and productivity across countries, as measures of the real exchange rate are typically affected by income as well as productivity differentials (Balassa-Samuelson effect). As an identifying assumption, again, we assume that the countries in our large cross-country sample are on, average, in equilibrium. The regression, therefore, provides an estimate of the equilibrium wage that a country can “afford” given its fundamentals.

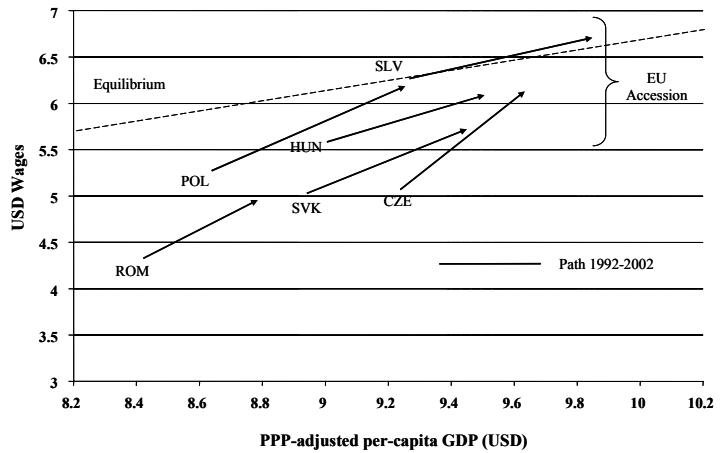
22. **The data cover the period 1990-2002, and extend across 85 countries.** For the dependent variable, we use the average monthly wage in the manufacturing sector. Wage data in local currencies were obtained from the ILO *International Statistics Yearbook*, and then converted into US dollars using the annual average exchange rate from the *IFS*. For independent variables, the model follows Krajnyák and Zettlemeyer (1998) and includes data for: purchasing-power-parity-adjusted GDP per capita, obtained from the *WEO*; the share of agriculture in GDP as a general measure of development, taken from the World Bank’s *World Development Indicators (WDI)* database; and the gross secondary-school enrollment rate as an indicator of human capital, also from the *WDI*. To test for robustness, we also include various institutional indicators, such as: the rule of law; the level of corruption; the degree of government effectiveness; and the quality of regulation—all obtained from the World Bank’s Governance Database.

23. **The estimated equation** is written below as (1). Individual countries are represented by the index $i=1...N$, whereas the time dimension is represented by $t=1...T$. The independent variables $x_j, j=1...3$, denote the economic determinants of equilibrium wages, and *OECD* is a dummy variable that is included as a further indicator of overall development. The error term includes μ_i , which captures any unmeasured country-specific effects. The variables *cec* and *fsu* are time-varying dummy variables that identify Central European transition countries, and members of the former Soviet Union, respectively.

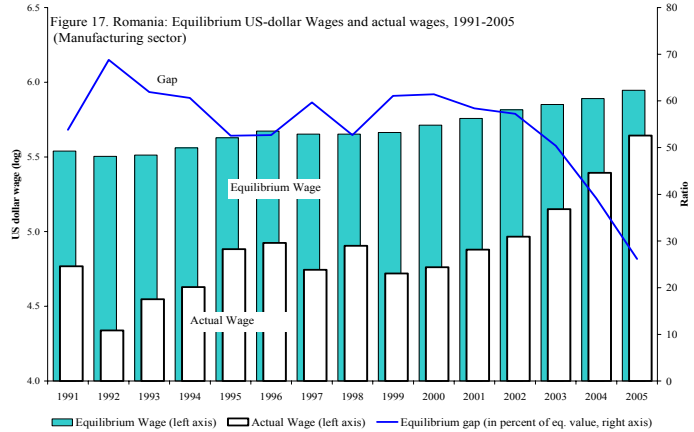
$$wage_{i,t} = a_0 + \sum_{j=1}^3 a_j x_{ji,t} + a_4 OECD + \sum_{k=1}^T b_k cec_{i,t} + \sum_{l=1}^T c_l fsu_{i,t} + \mu_i + \varepsilon_{i,t} \quad (1)$$

24. **The independent variables are generally significant and have the expected sign—** higher levels of per-capita GDP are associated with higher dollar wages (i.e., real exchange rates), whereas less-developed countries with a higher agricultural share typically have lower dollar wages. Our results also show that, for much of the 1990s, the transition countries were out of equilibrium with wages below what we estimate that they could afford, given their underlying characteristics. However, the extent of undervaluation seems to have been falling throughout most of the period, as the countries slowly moved toward equilibrium.

Figure 16. Equilibrium and Actual Dollar Wages, 1992-2002 (in logs)



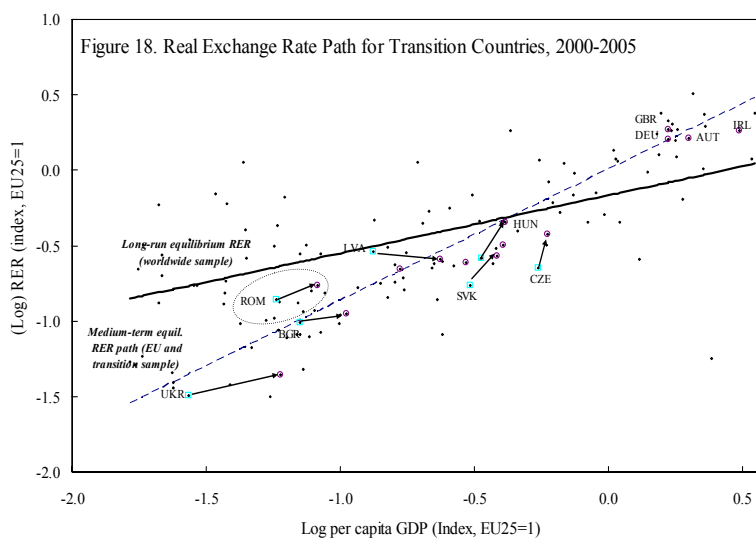
25. **For Romania, the results suggest that the leu's undervaluation has been significantly reduced in recent years.** While Romania's wages stood below 40 percent of their equilibrium value during most of the 1990s, much of the gap has been reduced in recent years, with US dollar wages reaching about 74 percent of equilibrium. Therefore, the results suggest that, even after controlling for income and productivity differentials, Romania's exchange rate still remains undervalued.



26. **As an alternative approach, the robustness of the findings can be checked by using the gap between the actual and implicit PPP exchange rates as a measure of misalignment.** Using data from 133 countries over 2000-05, the exchange-rate gap (measured against the EU average) is regressed against a PPP-adjusted measure of per capita income (again compared to the EU average). Conceptually, this exercise is analogous to the equilibrium wage regression above, in that it is again regressing a measure of the real exchange rate against an indicator of productivity and development. As before, the identifying assumption is that, on average, the countries from the worldwide sample are in equilibrium. The regression line, therefore, represents a country's expected (equilibrium) exchange rate gap, given its income and productivity.

27. **The results suggest, once again, that Romania's currency is still somewhat undervalued.** Figure 18 below plots the above regression line. As illustrated, most transition countries are undervalued when compared to the worldwide benchmark. This is similar to the wage-based finding, and suggests that transition countries may have specific features that tend to keep prices below international standards. One interpretation is that transition countries, as a legacy of communist central planning, suffer from persistent market-unfriendly institutions and barriers that prevent factor prices from reflecting their marginal product. Part of the undervaluation, therefore, may reflect an underlying structural disequilibrium, which will be unwound only slowly over time.

28. **To control for this transition effect, we consider a regression using a subset of countries that includes only transition countries and EU countries.** The developed EU countries are included as they represent the relevant upper-end of the convergence process. The estimation provides the steeper regression line in the figure below, and can be interpreted as an equilibrium benchmark that is conditioned explicitly on a country's degree of "transition"—i.e. it represents the exchange rate we would expect for a country engaged in slow, but fundamental, convergence with the European Union. For 2000-05, transition countries have generally moved along this line as they converged with the EU.



29. **Romania and other transition economies show undervalued exchange rates relative to the world-wide benchmark.** When compared to the EU-transition group, however, Romania's exchange rate is greater than expected. One interpretation is that, compared to other transition countries with the same low level of income, especially the CIS countries, Romania has been relatively more successful in building the foundations of a modern market economy. If this is the case, there is little cause for alarm—the fact that Romania's RER is close to the worldwide benchmark is an appropriate equilibrium outcome. Alternatively, if this is not the case, then the results suggest that Romania's currency is perhaps slightly higher than we would expect given the country's income and degree of transition. Under this interpretation, Romania may indeed face a competitiveness challenge from some of its lower-cost neighbors, indicating a pressing need for further productivity-enhancing structural reform.

E. Conclusions

30. **On the basis of the above analysis, it appears that, on balance, while Romania's cost advantage has eroded over the past two years, some real undervaluation remains.** Recent evidence of widening external imbalances, output contraction in some manufacturing sectors, and a sharp real exchange rate appreciation during 2005 have raised concerns about Romania's exchange rate level. Also rapidly-increasing labor costs point to a significant erosion of Romania's historical cost advantage, mostly on account of rapid wage growth and slowing productivity gains—although some of this cost deterioration has been offset by a process of quality improvements that has resulted in higher export prices. Still, while Romania's competitiveness seem to have deteriorated recently, estimates of potential exchange rate misalignment suggest that Romania's currency remains undervalued relative to a world-wide benchmark.

31. **Mixed export performance across sectors, on the other hand, point to a shift in the structure of output and exports away from low-tech products towards higher value-added goods.** This suggests that the recent slowdown in overall exports reflects a structural change similar to the one observed in other transition economies. In addition, strong import growth is mostly driven by increased investment in durable goods, a typical and appropriate trend for a country in the process of catching with Western Europe. Thus, on balance, it appears that recent developments in Romania's external sector have been mostly driven by a rapid transformation process, and not by an exchange rate misalignment—econometric evidence suggests that some undervaluation remains. Going forward, further real appreciation is expected, as part of the convergence process to EU living standards and reflecting also continued strong capital inflows. In this context, the ability of traditional exporting sectors to cope with the transition process will mainly depend on Romania's capacity to boost productivity gains, and contain inflationary pressures and the speed of real appreciation. The former will require further enterprise restructuring and policies to promote a business-friendly environment, while the latter will require a consistent fiscal and monetary policy mix.

Table 4. Romania. Industrial Output, 2000-05 1/
(growth rate, in percent)

	2000	2001	2002	2003	2004	2005
INDUSTRY – TOTAL	4.1	8.6	4.4	3.3	4.3	2.2
MINING AND QUARRYING	3.9	5.6	-5.3	-0.3	1.6	-0.3
Coal mining and preparation	27.0	11.3	-7.4	4.7	-4.5	-1.0
Hydrocarbons extraction and annex	-4.7	3.3	-7.4	-6.3	6.3	1.8
Metalliferous ores quarrying	-4.6	17.1	-0.6	4.3	-14.8	-22.5
Other extraction activities	10.9	-5.8	13.9	17.1	7.9	3.4
MANUFACTURING	5.4	10.1	6.4	3.9	5.3	2.7
Food and beverages	5.1	20.4	12.2	5.3	-5.6	3.6
Tobacco products	-4.3	24.1	-9.9	-4.9	9.8	-7.6
Textile products	-4.7	1.7	3.2	40.7	2.3	-10.8
Clothing products	16.6	17.7	4.3	1.6	-5.2	-16.0
Leather goods and footwear	16.6	5.0	4.6	3.4	-3.2	-12.0
Wood and wooden products processing (exc. furniture)	11.7	-14.3	-8.8	9.7	39.9	22.8
Pulp, paper and paper products	10.1	11.2	10.1	0.0	-3.5	5.1
Publishing houses, polygraphy, recording and copying	47.4	44.5	-13.8	17.3	15.4	15.6
Petroleum, coal coking and treatment of nuclear fuels	1.2	9.5	15.3	-9.5	5.6	13.8
Chemical substances and products	2.0	-8.5	2.7	5.6	33.6	3.5
Rubber and plastics products	6.0	16.4	8.4	29.6	8.9	-6.7
Construction materials manufacturing	1.0	2.1	3.5	-0.2	16.2	-2.3
Metallurgy	23.1	13.6	21.7	-19.0	12.7	2.3
Metallic constructions and metal products	4.8	-1.3	0.5	-1.6	-1.5	1.2
Machinery and equipment	8.9	16.3	0.0	-7.5	6.0	-1.2
Electric machinery and apparatus	3.4	13.7	4.1	9.8	14.6	2.0
Radio, TV and communication	-17.6	11.3	-12.2	17.4	11.7	-36.9
Medical precision, optical,	26.0	23.9	2.6	19.0	-10.7	-11.5
Means of road transport	-23.6	-6.5	10.1	16.7	23.1	35.0
Means of transport not included road transport	-2.7	-0.9	-5.0	20.0	-7.2	1.6
Furniture and other industrial	4.9	10.5	14.7	4.6	-11.4	17.3

Source: National Institute of Statistics of Romania and Fund staff estimates.

1/ Adjusted by working days.

Table 5. Romania: Trade Composition, 2001-05

	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
	In million euros					Share				
Exports (fob)	12722.0	14675.0	15614.0	18934.7	22249.6	100.0	100.0	100.0	100.0	100.0
Agriculture and Food Products	485.3	457.2	497.6	587.4	671.3	3.8	3.1	3.2	3.1	3.0
Live animals and animal products	146.4	152.6	188.3	200.8	194.9	1.2	1.0	1.2	1.1	0.9
Vegetable origin products	202.5	186.1	170.8	206.9	275.6	1.6	1.3	1.1	1.1	1.2
Animal oils and fats	27.9	10.1	27.7	64.1	62.1	0.2	0.1	0.2	0.3	0.3
Food products, beverages and tobacco	108.5	108.4	110.8	115.6	138.7	0.9	0.7	0.7	0.6	0.6
Mineral products	878.8	1242.3	1099.3	1361.5	2437.3	6.9	8.5	7.0	7.2	11.0
Manufactures	10418.9	11907.9	12843.8	15672.4	17698.1	81.9	81.1	82.3	82.8	79.5
Chemical products	561.3	511.3	580.5	771.2	994.9	4.4	3.5	3.7	4.1	4.5
Plastics, rubber and related products	258.3	378.9	508.4	709.8	864.9	2.0	2.6	3.3	3.7	3.9
Undressed leather, dressed, leather and furs	160.3	182.9	188.4	198.7	201.9	1.3	1.2	1.2	1.0	0.9
Wood products and wickerwork	591.9	661.1	708.1	833.2	836.4	4.7	4.5	4.5	4.4	3.8
Woolpulp, paper	117.1	132.2	134.3	152.9	129.8	0.9	0.9	0.9	0.8	0.6
Textiles and articles thereof	3328.1	3717.9	3964.6	4224.2	4215.1	26.2	25.3	25.4	22.3	18.9
Footwear, hats, umbrellas	1096.7	1237.8	1272.3	1236.8	1290.8	8.6	8.4	8.1	6.5	5.8
Common metals	1694.7	1893.4	2016.8	2922.6	3295.3	13.3	12.9	12.9	15.4	14.8
Machinery, electric and equipment	1875.4	2294.8	2502.7	3323.7	3944.8	14.7	15.6	16.0	17.6	17.7
Transport means	667.7	829.2	894.8	1198.0	1789.8	5.2	5.7	5.7	6.3	8.0
Optical equipments	67.5	68.3	72.8	101.3	134.4	0.5	0.5	0.5	0.5	0.6
Other	938.9	1067.6	1173.3	1313.5	1442.9	7.4	7.3	7.5	6.9	6.5
Imports (fob)	16045.0	17427.0	19569.0	24257.9	30138.2	100.0	100.0	100.0	100.0	100.0
Agriculture and Food Products	1246.6	1147.8	1415.4	1582.0	1865.4	7.8	6.6	7.2	6.5	6.2
Live animals and animal products	289.5	288.1	240.9	359.4	611.4	1.8	1.7	1.2	1.5	2.0
Vegetable origin products	346.2	271.7	549.5	500.8	403.0	2.2	1.6	2.8	2.1	1.3
Animal oils and fats	34.8	64.9	50.9	47.8	53.9	0.2	0.4	0.3	0.2	0.2
Food products, beverages and tobacco	576.1	523.2	574.1	674.0	797.1	3.6	3.0	2.9	2.8	2.6
Mineral products	2304.2	2225.4	2423.5	3255.3	4670.0	14.4	12.8	12.4	13.4	15.5
Manufactures	11932.3	13418.3	14996.5	18526.5	22389.6	74.4	77.0	76.6	76.4	74.3
Chemical products	1256.7	1466.3	1555.8	1923.8	2244.5	7.8	8.4	8.0	7.9	7.4
Plastics, rubber and related products	782.7	956.1	1158.3	1416.7	1792.3	4.9	5.5	5.9	5.8	5.9
Undressed leather, dressed, leather and furs	526.1	606.7	616.8	607.3	651.9	3.3	3.5	3.2	2.5	2.2
Wood products and wickerwork	113.2	144.9	166.4	220.6	296.1	0.7	0.8	0.9	0.9	1.0
Woolpulp, paper	356.3	408.8	461.3	515.3	594.8	2.2	2.3	2.4	2.1	2.0
Textiles and articles thereof	2582.2	2865.4	2912.3	3061.3	3076.1	16.1	16.4	14.9	12.6	10.2
Footwear, hats, umbrellas	261.9	285.0	292.2	299.9	332.3	1.6	1.6	1.5	1.2	1.1
Common metals	1175.1	1285.8	1504.0	2029.7	2675.7	7.3	7.4	7.7	8.4	8.9
Machinery, electric and equipment	3635.2	3985.9	4684.9	5768.5	7121.2	22.7	22.9	23.9	23.8	23.6
Transport means	824.7	989.3	1209.2	2241.9	3073.0	5.1	5.7	6.2	9.2	10.2
Optical equipments	418.3	424.2	435.3	441.4	531.8	2.6	2.4	2.2	1.8	1.8
Other	561.9	635.5	733.6	894.0	1213.2					

Source: Romania National Institute of Statistics and Fund staff estimates.

Table 6. Romania: Export and Import Performance, by product, 2002-05

	(growth rates)											
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
	Value				Volume				Price deflator			
Exports (fob)												
Live animals and animal products	4.2	23.4	6.7	-3.0	-2.9	29.5	4.3	-18.9	7.0	-6.1	2.4	15.9
Vegetable origin products	-8.1	-8.3	21.1	33.2	4.6	-42.2	40.2	70.4	-12.7	34.0	-19.0	-37.2
Animal oils and fats	-63.9	175.5	131.2	-3.1	-71.2	249.5	116.2	-8.4	7.3	-74.1	14.9	5.3
Food products, beverages and tobacco	-0.1	2.2	4.4	20.0	-11.0	7.9	16.7	26.9	10.9	-5.7	-12.3	-6.9
Mineral products	41.4	-11.5	23.8	79.0	29.9	-12.8	11.5	23.4	11.5	1.3	12.3	55.6
Chemical products	-8.9	13.5	32.8	29.0	-5.2	26.5	9.9	14.0	-3.7	-13.0	22.9	15.0
Plastics, rubber and related products	46.7	34.2	39.6	21.9	34.1	15.5	32.8	6.5	12.6	18.7	6.8	15.4
Undressed leather, dressed, leather and furs	14.1	3.0	5.4	1.6	-6.9	8.9	2.4	-11.6	21.0	-5.9	3.1	13.2
Wood products and wickerwork	11.7	7.1	17.7	0.4	16.1	22.1	12.9	-13.9	-4.4	-15.0	4.7	14.3
Woolpulp, paper	12.9	1.6	13.8	-15.1	21.2	9.5	8.1	-35.3	-8.3	-7.9	5.7	20.2
Textiles and articles thereof	11.7	6.6	6.5	-0.2	9.1	5.2	3.8	-4.0	2.6	1.4	2.7	3.8
Footwear, hats, umbrellas	12.9	2.8	-2.8	4.4	6.0	-0.1	0.8	-1.7	6.9	2.9	-3.6	6.0
Stone product, cement, ceramics	10.2	0.2	-0.2	-2.2	14.5	16.1	-0.2	-6.4	-4.4	-15.8	0.0	4.1
Common metals	11.7	6.5	44.9	12.8	22.7	8.7	3.3	-8.4	-10.9	-2.2	41.6	21.2
Machinery, electric and equipment	22.4	9.1	32.8	18.7	8.7	14.4	22.7	19.6	13.7	-5.3	10.1	-0.9
Transport means	24.2	7.9	33.9	49.4	-10.2	20.0	8.4	15.2	34.4	-12.0	25.5	34.2
Furniture	15.4	10.8	16.9	7.2	6.0	4.6	11.8	1.5	9.4	6.2	5.1	5.7
Imports (fob)												
Live animals and animal products	-0.5	-16.4	49.2	70.1	19.3	-2.3	26.1	38.3	-19.8	-14.1	23.1	31.8
Vegetable origin products	-21.5	102.3	-8.9	-19.5	-34.9	217.3	-26.5	-40.5	13.3	-115.0	17.7	21.0
Animal oils and fats	86.3	-21.5	-6.0	12.7	100.1	-25.4	-14.1	13.1	-13.8	3.8	8.1	-0.4
Food products, beverages and tobacco	-9.2	9.7	17.4	18.3	-11.2	15.8	11.5	-2.3	2.0	-6.1	5.9	20.6
Mineral products	-3.4	8.9	34.3	43.5	19.0	8.0	12.2	3.9	-22.4	0.9	22.1	39.6
Chemical products	16.7	6.1	23.7	16.7	6.2	36.6	5.0	6.4	10.5	-30.5	18.6	10.3
Plastics, rubber and related products	22.1	21.1	22.3	26.5	23.8	30.7	18.3	16.7	-1.6	-9.6	4.1	9.8
Undressed leather, dressed, leather and furs	15.3	1.7	-1.5	7.3	15.5	14.0	6.3	8.1	-0.1	-12.3	-7.9	-0.8
Wood products and wickerwork	28.0	14.8	32.6	34.2	50.0	-9.9	47.1	49.2	-22.0	24.7	-14.5	-15.0
Woolpulp, paper	14.7	12.9	11.7	15.4	23.7	21.3	11.8	17.0	-9.0	-8.4	-0.1	-1.6
Textiles and articles thereof	11.0	1.6	5.1	0.5	8.4	3.9	13.2	3.8	2.6	-2.3	-8.1	-3.3
Footwear, hats, umbrellas	8.8	2.5	2.6	10.8	11.0	-3.5	11.8	18.5	-2.2	6.0	-9.2	-7.7
Stone product, cement, ceramics	18.9	16.6	27.6	34.0	21.8	21.6	31.7	41.1	-3.0	-5.1	-4.1	-7.1
Common metals	9.4	17.0	35.0	31.8	9.4	10.1	11.7	11.4	0.0	6.8	23.3	20.4
Machinery, electric and equipment	9.6	17.5	23.1	23.4	14.7	30.9	23.7	16.1	-5.0	-13.3	-0.6	7.4
Transport means	20.0	22.2	85.4	37.1	8.1	-4.2	64.9	34.8	11.9	26.4	20.5	2.3
Furniture	15.9	13.2	15.5	33.0	11.3	15.0	21.9	54.7	4.5	-1.8	-6.4	-21.6

Source: Romania National Institute of Statistics and Fund staff estimates.

REFERENCES

- Cady, John, 2002, "The Equilibrium Real Exchange Rate of the Malagasy Franc: Estimation and Assessment," IMF Working Paper 03/28 (Washington: International Monetary Fund).
- Chobanov, Dimitar, and Piritta Sorsa, 2004, "Competitiveness in Bulgaria: An Assessment of the Real Effective Exchange Rate," IMF Working Paper 04/37 (Washington: International Monetary Fund).
- Feyzioglu, Tarhan, 2003, "Estimating the Equilibrium Real Exchange Rate: An Application to Finland," IMF Working Paper 97/109 (Washington: International Monetary Fund).
- Halpern, Laszlo, and Charles Wyplosz, 1997, "Equilibrium Exchange Rates in Transition Economies," *Staff Papers*, International Monetary Fund, Vol. 44, pp. 430-61.
- Krajnyák, Kornélia, and Jeromin Zettlemeyer, 1998, "Competitiveness in Transition Economies: What Scope for Real Appreciation," *Staff Papers*, International Monetary Fund, Vol. 45, pp. 309-62.
- Lipschitz, Leslie, Timothy Lane and Alex Mourmouras, 2002, "Capital Flows to Transition Countries: Master or Servant?" IMF Working Paper 02/11 (Washington: International Monetary Fund).
- MacDonald, Ronald, and Luca Ricci, 2003, "Estimation of the Equilibrium Real Exchange Rate for South Africa," IMF Working Paper 03/44 (Washington: International Monetary Fund).
- Mathisen, Johan, 2003, "Estimation of the Equilibrium Exchange Rate for Malawi," IMF Working Paper 03/104 (Washington: International Monetary Fund).
- Rogoff, Kenneth, 1996, "The Purchasing Power Parity Puzzle," *Journal of Economic Literature*, Vol. 34, pp. 647-68.
- Schadler, Susan, Paulo Drummond, Louis Kuijs, Zuzana Murgasova, and Rachel van Elkan, 2004, *Adopting the Euro in Central Europe. Challenges of the Next Step in European Integration*, IMF Occasional Paper No. 234 (Washington: International Monetary Fund).
- Schadler, Susan, Ashoka Mody, Abdul Abiad and Daniel Leigh, 2006, "*Growth in the Central and Eastern European Countries of the European Union: A Regional Review*", IMF Occasional Paper (to be published Washington: International Monetary Fund).
- Spatafora, Nikola, and Emil Stavrev, 2003, "The Equilibrium Real Exchange Rate in a Commodity Exporting Country: The Case of Russia," IMF Working Paper 03/93 (Washington: International Monetary Fund).
- Tiffin, Andrew, 2005, "Ukraine—*Competitiveness, Convergence, and the Equilibrium Real Exchange Rate*" IMF Staff Country Report No. 05/20 (Washington: International Monetary Fund).

II. CREDIT GROWTH: DEVELOPMENTS AND PROSPECTS⁵

A. Introduction

32. **One of the most prominent features of Romania's recent economic environment has been the rapid pace of private-sector credit growth.** Over the past five years, annual credit growth has ranged between 30 to 50 percent in real terms, and credit is still growing strongly—as of February 2006, real y/y credit growth stood at around 49 percent, of which lei-denominated (real) credit growth was 69 percent, and foreign exchange-denominated credit growth was 30 percent. This phenomenon is not unique to Romania. Most economies throughout the Central and Eastern European (CEE) region have experienced similar lending flows, with the result that the ratio of private-sector credit to GDP has increased markedly for almost all of these countries, albeit from a relatively low base.

33. **This chapter outlines the key features of credit growth in Romania, placing recent developments within a broader regional context.** Romania, like many neighboring countries, is in the midst of a profound transition. After decades of often misdirected development, the key goal of these countries is to bring living standards in line with those of Western Europe. Success is not guaranteed,⁶ and will require a determined macroeconomic and structural policy effort on the part of the authorities.

34. **Catch-up growth in Romania, as in other countries, will entail dramatic change, and part of this process will involve the expansion of Romania's underdeveloped financial sector.** Indeed, recent credit developments are linked in part to a broader region-wide issue—the large-scale inflow of foreign savings. These funds will play a key role in accelerating Romania's convergence with the EU. However, with a bank-dominated, underdeveloped financial system, large-scale inflows will also have clear implications for the pace of credit growth. Section B of this chapter examines Romania's recent credit-growth experience within a broader regional framework. From the experience other CEE countries, rapid lending growth appears to be part of an ongoing process of financial development, in which a growing banking sector not only reflects the increased availability of resources, but also helps ensure that these resources are channeled efficiently. Moreover, the empirical evidence suggests that this process is far from complete.

35. **However, rapid change is not without risk.** Moving quickly to a new equilibrium, although welcome, may often entail increased macroeconomic and financial-sector vulnerabilities. Section C describes in detail some of the key features of Romania's recent credit growth, highlighting areas in which rapid growth may be making Romania more susceptible to macroeconomic and financial shocks. Section D summarizes the authorities'

⁵ Prepared by Andrew Tiffin.

⁶ See Section III, *Real Convergence Prospects*.

recent policy response to these potential risks, and analyzes their likely impact. Section E provides some conclusions.

B. Credit Growth and Convergence

36. **Romania's recent credit growth is broadly comparable to the experience of other CEE countries.** As outlined in Cottarelli and others (2003), most countries in Central and Eastern Europe have experienced extended periods of rapid lending growth (30-50 percent) as they moved closer to the European Union. More recently, growth rates have been particularly high in the Baltic countries, Hungary, and Bulgaria; whereas in Poland, private-sector credit growth has eased from the relative high levels recorded previously. Romania, in contrast, is a relative latecomer—Cottarelli (2003) classifies Romania as a “sleeping beauty,” given that growth did not start to take off in Romania until after 2002.⁷

37. **As in most CEE countries, however, the stock of credit in Romania is still very small by worldwide standards**—at end-2005, total credit to the private sector stood at 20.9 percent of GDP, compared to a Euro-area average of around 95 percent. In this context, the recent expansion of private-sector credit may simply reflect a “normal” process of financial deepening, in which the stock of credit (as a proportion of GDP) naturally expands to meet the developing needs of a market economy. And as in other countries, this process has been accelerated by a familiar pattern of financial-sector liberalization, fiscal consolidation and, especially, capital inflows.

38. **Therefore, the question of whether or not Romania's credit growth is a matter of concern, is related to the issue of what an appropriate credit stock should be for a country like Romania.** This issue has been taken up by a number of recent studies⁸ that have attempted to estimate equilibrium credit-to-GDP ratios for transition countries. Drawing on the methodology of Schadler and others (2005) (Box 1), and using recently-revised Eurostat data, Table 1 below presents some updated results from this analysis. As illustrated, Romania's credit ratio is still somewhat below that of other CEE countries, and significantly short of equilibrium—compared to an estimated equilibrium ratio of about 54-60 percent, the credit/GDP ratio for Romania is still only around 21 percent.

⁷ Bulgaria, Croatia, Estonia, Hungary, Latvia, Poland, and Slovenia are classified as “early birds” with rapid credit growth starting in the mid- to late-1990s; whereas Bosnia & Herzegovina, Serbia, and Lithuania are classified as “late risers” with growth starting before 2002. Other “sleeping beauties” include Albania, the Czech Republic, Macedonia FYR, and the Slovak Republic.

⁸ See Cottarelli and others (2003); Schadler and others (2005).

Table 1. Credit to GDP Ratios in transition countries, 2002-2005.
(In percent)

	2002			2002			2005 1/		
	Actual	Predicted 2/ Schadler, et al. (2005)	Deviation 3/ Schadler, et al. (2005)	Predicted 2/ Cottarelli, et al. (2005)	Deviation 3/ Cottarelli, et al. (2005)	Actual	Predicted 2/ Schadler, et al. (2005)	Deviation 3/ Schadler, et al. (2005)	
Czech Republic	29.0	80.6	-51.6	69.3	-40.3	34.0	88.6	-54.6	
Hungary	33.6	79.7	-46.2	70.5	-36.9	46.7	80.2	-33.5	
Poland	28.7	65.9	-37.2	70.4	-41.7	29.6	72.0	-42.4	
Slovak Republic	30.2	84.0	-53.8	59.9	-29.7	31.9	80.4	-48.5	
Slovenia 4/	36.4	85.3	-48.9	63.8	-27.4	45.5	90.3	-44.9	
Average CECs	31.6	79.1	-47.6	66.8	-35.2	37.5	82.3	-44.8	
Estonia	39.0	62.9	-23.9	85.4	-46.4	67.3	77.5	-10.2	
Latvia	30.5	76.7	-46.1	76.7	-46.2	54.1	78.0	-23.9	
Lithuania	15.2	58.0	-42.8	68.1	-52.9	30.7	77.0	-46.3	
Average Baltics	28.3	65.9	-37.6	74.2	-45.2	50.7	77.5	-26.8	
Romania 4/	11.8	53.8	-42.0	58.0	-46.2	20.9	59.9	-39.0	
Euro area	94.9	98.5	-3.6	...	...	...	...	...

Sources: Eurostat; IMF, *International Financial Statistics*; Cottarelli, Dell'Ariccia, and Vladkova-Hollar (2003);

Schadler, Drummond, Kuijs, Murgasova, and van Elkan (2005); and IMF staff calculations.

1/ Data for 2Q05.

2/ Equilibrium value predicted based on estimates of the long-term cointegrating relationship.

3/ Deviation of the actual from the predicted level.

4/ For 2002, Eurostat data for local currency long-term government debt is unavailable for Slovenia and Romania. The predicted credit ratio in the VECM is based on the average real 10-year government bond yield in the other CECs.

5/ Data for end-2005.

Box 1. Estimation of Equilibrium Credit-to-GDP Ratios

Following the model of Schadler and others (2005), the equilibrium relationship is estimated within a vector error-correction model (VECM) that includes three variables. The key variable under study is (i) the ratio of nominal bank loans to the non-government sector relative to GDP (credit ratio). Second, (ii) the long-run real interest rate on government bonds (rlti) serves as a proxy for the cost of credit, where the 10 year government bond is deflated by annual inflation 3 years ahead. Deflating by contemporaneous inflation during a period of sustained disinflation would likely have biased downward measured real interest rates. Finally, (iii) the log of purchasing power-adjusted per capita income ($\ln(\text{ppsinc})$) represents the overall financial health of households and corporations—this can be viewed as a proxy for a borrower’s ability to service debt and take on new loans, and accords with actual bank lending practices where, given imperfect information, banks rely on observable measures of repayment ability. Without such market imperfections, the importance of this variable in predicting credit might be reduced.

Given that many transition countries are likely to have been persistently out of equilibrium over the entire sample period, including such countries in the sample would likely bias the estimated results. So, the model’s data sample is taken from the original 11 members of the euro-area as well as Greece. Euro-zone data are taken from the following sources: bank loans to the nongovernment sector are from the ECB; 10-year government bond yields, HICP inflation, nominal GDP, and per capita GDP measured in PPS are from Eurostat. While some empirical studies of credit volume use indicators of financial liberalization and banking sector competition, these are not available as time series for the countries included in the Schadler (2005) framework. Moreover, these and other supply-side factors are likely to influence the dynamic adjustment in credit, rather than the equilibrium credit to GDP ratio.

Based on the maximum eigenvalue and trace tests, there is a single cointegrating relationship between the three variables that is significant at the 1 percent level:

$$\text{creditratio} = 32.52 \ln(\text{ppsinc}) - 1.85 \text{rlti}.$$

This estimated long-run relationship indicates that the credit ratio is positively related to per capita income and negatively related to the real rate of interest. The coefficient on the income term can be interpreted as a semi elasticity: where a 10 percent increase in per capita income raises the credit to GDP ratio by about 3 percentage points in the long run. A rise in the real interest rate by 1 percentage point lowers the equilibrium credit ratio by nearly 2 percentage points. Applying this model out of sample to the set of transition countries provides an estimate of their long-term equilibrium credit ratio—the credit stock to which these countries will eventually converge as they move closer to the EU. Detailed results and discussion of the methodology are outlined in Schadler and others (2005), Annex 5.2.

39. **Similar to other countries in the region, the stock of credit in Romania has closed steadily on its predicted long-term value.** The rate at which most transition countries have approached equilibrium has been relatively modest, although the Baltics have progressed somewhat more rapidly over the past few years. And while Romania is indeed a “late riser”—as the current stock of credit is significantly below that displayed by other countries—this difference in part reflects Romania’s relatively low income level (and lower equilibrium level of credit).

40. **This longer-term structural view of credit growth has significant policy implications, as lending will most likely continue to grow as Romania converges with the EU.** When interpreting the dramatic growth rates of recent years, and when considering

the optimal pace of credit growth in the future, the authorities should keep in mind that credit developments will partly reflect an underlying process of financial deepening. This process, in turn, has two key dimensions. Over the medium term, Romania is moving from one state in which the economy (or some sectors) are financially underserved, to a new state in which the depth of financial services will better correspond to the economy's fundamentals (representing movement toward an equilibrium level of credit). At the same time, the equilibrium level of financial depth will itself evolve as Romania gets richer.

41. **Indeed, there is a significant literature suggesting that financial development and longer-term economic growth are closely intertwined.** In principle, the direction of causality may run in both directions. As the economy grows, the demand for financial services also expands, prompting an eventual supply response. On the other hand, a more developed financial sector will also help ensure an efficient allocation of resources, boosting investment, productivity, growth, and welfare. Overall, there is a significant body of theoretical and empirical research that supports the latter view.⁹ In this light, efforts to unnecessarily constrain the expansion of credit, if successful, may risk damaging Romania's longer-term growth prospects.

42. **Unfortunately, however, rapid credit growth may entail substantial shorter-term risks.** In terms of macroeconomic stability, rapid credit growth can facilitate the expansion of excess aggregate demand—potentially adding to inflationary pressures, and perhaps prompting a widening of external imbalances. In terms of financial stability, rapid credit growth may place undue strain on banks' ability to assess risk, leading to poor lending decisions, falling asset quality, and potential overexposure to financial risks. Moreover, macroeconomic and financial risks are often interrelated. On the one hand, macroeconomic instability (in the form of inflation or external imbalances) can contribute to financial instability, especially when banks and borrowers are exposed to interest and exchange-rate risk. On the other hand, a vulnerable financial system may add to macroeconomic instability, as markets often react suddenly when adjusting investment portfolios or currency holdings, with significant effects on the real economy.

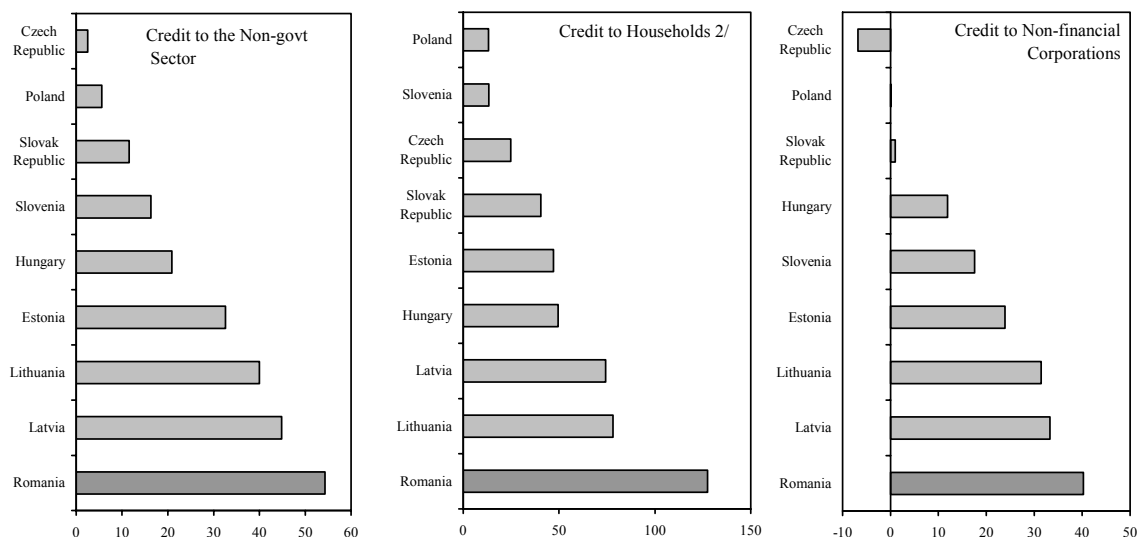
43. **In this context, policy makers will often face a difficult dilemma.** There is no simple way to determine whether an observed rate of credit growth is a cause for concern, especially against a background of ongoing structural change. However, a necessary starting point for any policy response should be a comprehensive assessment of credit growth, with a particular focus on the evolution of potential macroeconomic imbalances as well as any adverse trends in the overall resilience of the financial system. This is the topic of the next section.

⁹ See IMF (2005).

C. Recent Developments

44. **Credit growth over the past few years has reflected a dramatic increase in the demand for new loans, particularly in the household sector.** Indeed, growth rates for household lending in Romania are relatively high by regional standards (Figure 1). With an increased level of overall confidence and an improved ability to service debt, this sector has started to address its longstanding demand for durables and real estate. And more recently, households' willingness to take on debt has been boosted further by a significant increase in incomes, combined with a drop in personal taxes and falling domestic interest rates. However, it should be noted that these high growth rates reflect, in part, a comparatively small initial level of household lending. As illustrated in Table 2, the stock of total credit extended to households has risen steadily since 2000, from a low level of ½ percent of GDP to the current level about 7½ percent (36 percent of total credit).

Figure1: Growth of Credit to the Non-government Sector, 2002-05 1/
(Average year-on-year percent change)



Sources: National central banks; and International Financial Statistics, IMF.

1/ Data starting in 2004 for Slovak Republic.

2/ Includes credits to non-profit institutions serving households (NPISH), except for Latvia, Lithuania, and Slovenia, where credit to NPISH is included under credit to non-financial corporations.

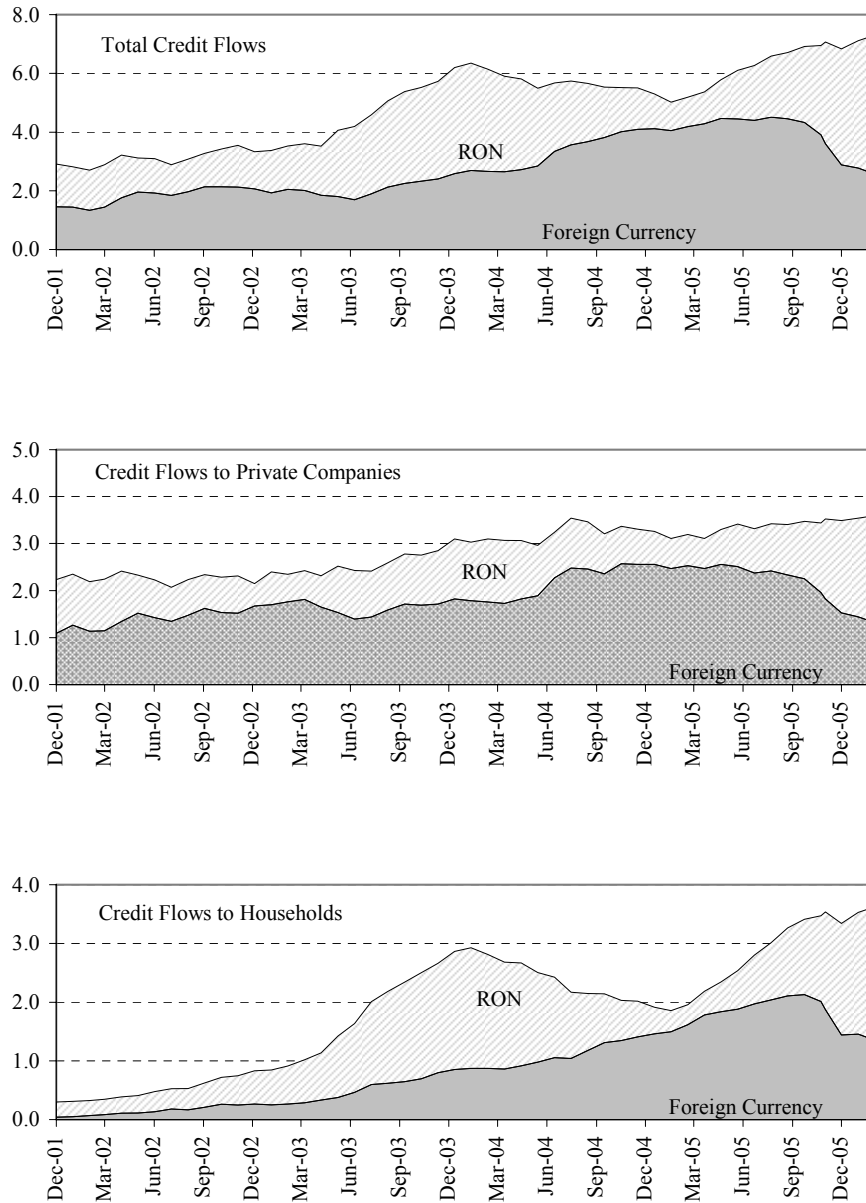
Table 2. Romania: Basic Economic Indicators, 2000-05
(Annual percent change, unless otherwise indicated)

	2000	2001	2002	2003	2004	2005	Average
GDP growth	2.1	5.7	5.1	5.2	8.3	4.1	5.1
Inflation (end of period)	40.7	30.3	17.8	14.1	9.3	8.6	20.1
Current account balance (percent of GDP)	-3.7	-5.5	-3.3	-5.8	-8.5	-8.7	-5.9
Budget balance (percent of GDP)	-4.0	-3.2	-2.6	-2.2	-1.0	-0.8	-2.3
Real credit growth (percent, y/y, deflated by CPI)	7.9	28.0	32.4	56.8	40.5	44.7	35.1
In local currency	-5.4	20.0	19.1	77.4	11.2	56.8	29.8
In foreign currency (in €)	15.8	33.2	40.4	38.1	60.5	34.8	37.1
Credit flows in percent of GDP	0.6	2.9	3.3	6.2	5.6	6.8	4.2
By currency: local	0.8	1.5	1.3	3.6	1.0	4.0	2.0
By currency: foreign currencies	-0.2	1.5	2.1	2.6	4.2	2.9	2.2
By borrower: households	0.1	0.3	0.8	2.9	1.9	3.5	1.6
By borrower: companies	0.4	2.6	2.5	3.4	3.3	3.3	2.6
Credit stock in percent of GDP (year-end)	9.3	10.1	11.8	15.9	17.5	20.9	14.3
By currency: local	3.8	4.1	4.4	7.1	6.9	9.4	5.9
By currency: foreign currencies	5.5	6.1	7.4	8.8	10.6	11.6	8.3
By borrower: households	0.5	0.7	1.4	3.9	5.0	7.5	3.2
By borrower: private companies	7.5	8.0	8.9	10.5	11.2	12.4	9.7
By borrower: SOEs	1.4	1.4	1.5	1.5	1.3	1.1	1.4
Share of foreign currency deposits as percent of total	47.0	49.3	44.7	42.5	41.2	34.7	43.2
Share of household loans in total loans	5.7	6.8	11.7	24.8	28.4	35.7	18.8
Share of foreign currency loans as percent of total	59.5	59.8	62.7	55.4	60.8	55.3	58.9
Credit stock by sector (share of total)							
Industry	53.4	51.6	48.4	43.7	40.8	34.9	45.5
Agriculture	3.7	3.3	2.7	3.2	2.8	2.7	3.1
Services	35.7	38.0	41.3	40.5	39.4	41.9	39.5
Construction	4.9	4.2	4.2	4.4	5.3	5.3	4.7
Public administration and other	2.3	2.9	3.4	8.3	11.7	15.2	7.3
Number of banks and bank branches	41	41	39	38	39	39	...
Private	37	38	36	35	36	36	...
Domestic	8	6	4	7	6	6	...
Foreign	29	32	32	29	30	30	...
o/w: foreign bank branches	8	8	8	8	7	6	...
State-owned	4	3	3	3	3	3	...
Share of assets of largest 10 banks in total assets	...	...	...	80.4	80.3	79.9	80.2
Capital adequacy ratio	23.8	28.8	24.6	20.0	18.8	20.2	22.7
NPL Ratio	6.4	3.9	2.8	8.3	8.1	8.3	6.3
Return on assets	1.5	3.1	2.7	2.4	2.5	1.9	2.3
Return on equity	12.5	21.8	18.8	18.2	19.3	15.4	17.7
Liquid Assets/Total Assets	...	...	78.6	62.7	63.6	61.8	66.7

Sources: National authorities; and IMF staff estimates.

45. **Lending in Romania has also been facilitated by a ready supply of credit, reflecting buoyant capital inflows, which have been channeled in large part through the banking system.** These inflows have in turn reflected high global liquidity, low worldwide interest rates, and increased investor confidence associated with Romania's impending accession to the European Union.

Figure 2. Romania: Credit Flows, 2002-05
(percent of GDP, rolling 12-month basis)



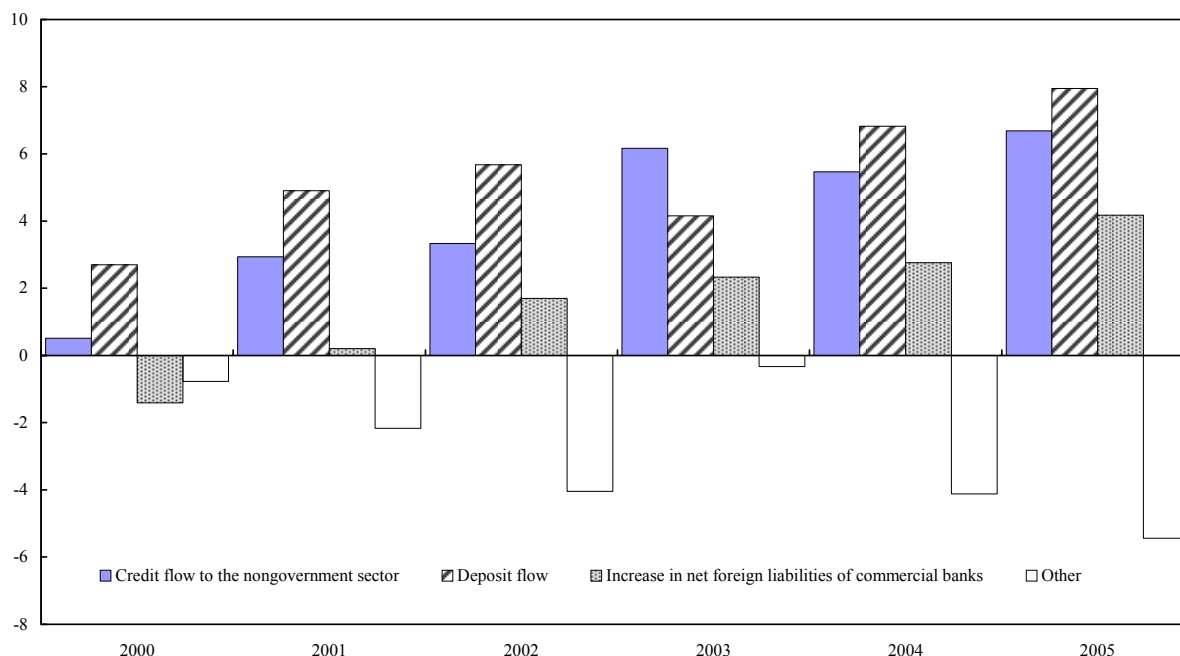
Source: National Bank of Romania; IMF staff calculations

46. **The currency composition of credit flows has varied over the past few years, but a significant and rising portion of credit has been denominated in foreign currency (Figure 2).** Again, this is especially evident in the evolution of household credit. For consumer loans to households, about 32 percent of the end-2005 credit stock was denominated in foreign currency, whereas the corresponding fraction for household mortgage lending was about 88 percent. In comparison, the foreign-exchange share is about 61 percent for lending to private companies. Demand for foreign exchange-denominated loans has been supported in large part by a steady, or appreciating, nominal exchange rate; combined with the fact that, until recently, real interest rates on local currency loans have been relatively high.

47. **The banks that have been extending loans in Romania are generally well funded, and have financed the recent credit expansion through a mix of deposit mobilization and a fall in their net foreign assets.** Deposit growth has been rapid, owing to rising household incomes and buoyant expectations, but has been supplemented significantly by direct borrowing from foreign parent banks. Moreover, figure 3 below illustrates that the banking system has a considerable excess supply of funds, particularly in local currency, which they have generally placed at the central bank—the return from holding funds at the central bank dropped significantly toward the end of 2005, as the NBR scaled back its effective sterilization rate, but the demand for local-currency loans has yet to fill the gap.

Figure 3

Romania: Credit and Bank Liabilities
(In percent of GDP)



48. **Looking at potential macroeconomic risks, the expansion of credit in 2005 mirrored a marked increase in aggregate demand and inflationary pressures.** For the most part, this reflected a sharp boost in private consumption—supported by lower taxes, higher wages, and a downward trend in interest rates. As outlined in the main Staff Report, y/y inflation in 2005 stood at 8.6 percent; higher than the authorities’ target of 7.5 percent (with a +/- 1 percent band). This result would have been even more disappointing without the mitigating impact of a nominal appreciation over the course of the year. Excess demand pressures have also impacted the current account deficit, which widened to 8.7 percent of GDP in 2005 compared to 8.5 percent in 2004. This imbalance is slightly above the estimated sustainable deficit for Romania, which is about 8 percent of GDP, and so raises the concern that Romania may be increasingly vulnerable to sudden shifts in foreign investor sentiment.

49. **As for financial-sector vulnerabilities, Romania’s banking system seems relatively sound.** As illustrated in Table 2, financial-soundness indicators (FSIs) suggest a healthy and robust financial system—rates of return on equity and capital adequacy ratios are high and non-performing loan (NPL) ratios remain moderate.¹⁰ Banks are also very liquid and appear well positioned to absorb the direct impact of interest-rate and exchange-rate movements. Moreover, Romania’s banking system is dominated by foreign-owned institutions, which are able to provide substantial financial support in the event of problems, and which are also able to provide significant transfers of credit-assessment and portfolio-management skills.

50. **However, the substantial share of foreign-denominated lending raises the possibility of an indirect risk to the financial sector.** While NBR stress tests suggest that the banking system’s direct exposure to adverse exchange-rate movements is limited, they still face an indirect exposure through their loan portfolios. Many companies, and most households, that have taken on foreign currency-denominated loans do not receive foreign-currency income—receiving instead income that is denominated in local currency. This mismatch has not been readily apparent in an environment of a steady or appreciating currency. But potentially adverse movements in the future could impact borrowers’ ability to service their foreign-currency debt. Such indirect exposures are difficult to assess, and in a climate of rapid credit growth, there is the possibility that banks may not be appropriately pricing or provisioning for this risk. It is this feature of the financial sector that has raised the most concern among the authorities.

¹⁰ The reported NPL ratio includes loans that have been classified as substandard, doubtful, and loss.

D. Policy Responses: Measures and Impact

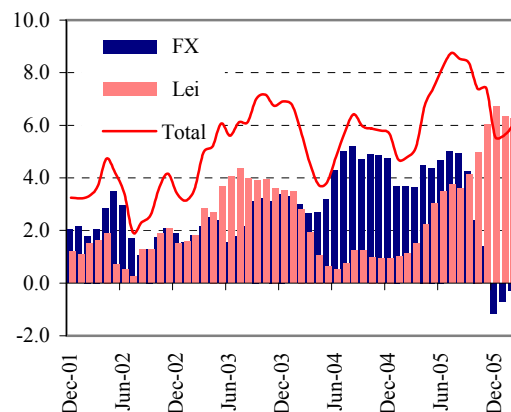
51. **Over the course of 2005, the authorities put into effect a series of prudential-style measures aimed at addressing credit-related risks.** These measures were primarily introduced to help reduce the currency-mismatch risk associated with excessive foreign-currency lending. As outlined in Table 2, at end-2004 the total ratio of foreign-currency deposits to lei deposits stood at around 40:60. The corresponding ratio for forex loans, on the other hand was the reverse; i.e. a ratio of 60:40. The measures, therefore, focused mainly on limiting banks' foreign-currency exposure to unhedged borrowers, as well as increasing the coverage and level of required reserves on foreign-currency liabilities. *The key measure in this regard was a requirement limiting credit institutions' overall foreign-exchange lending to unhedged borrowers to less than 300 percent of the banks' own funds* (Box 2).

52. **In addition, the authorities tightened loan classification norms for credit institutions, explicitly requiring banks to consider foreign-currency risk when classifying their loans to individuals.** In effect, the new norms introduced in September 2005 required banks to downgrade the classification of unhedged borrowers, regardless of their financial position or collateral. This latter measure had an immediate impact on reported NPL figures and provisioning requirements, as many foreign-currency loans that had previously been classified at satisfactory were automatically reclassified as substandard; from a level of 8.1 percent at end 2004, the NPL ratio increased to 9.4 percent in September 2005. However, in the final quarter of 2005 the banks rapidly managed to bring the ratio back down to 8.2 percent, by shifting their household-lending portfolios toward local-currency loans.

53. **Over the short run the measures have had a significant effect, especially on the currency composition of credit growth.** The 300-percent limit on exposure to unhedged borrowers had an immediate impact. From a total of 39 banks, 13 exceeded the exposure limit when the new measures were introduced. Over the immediate run these banks, representing 43 percent of total foreign-exchange loans at that time, were forced to sharply curtail their lending in foreign exchange. The impact of higher foreign-currency reserve requirements, however, has perhaps been less immediate. Typically, the full effect of reserve-requirement shifts is felt only after a 3-4 month lag. So, the impact of the end-2005 reserve-ratio hikes may spill over into the first half of 2006. Following the introduction of the measures, the y/y growth rate in foreign currency credit fell from 56 percent in September 2005 down to 30 percent in February 2006.

Figure 4. Romania: Credit Flows, 2001-06

(In percent of GDP, seasonally adjusted, annualized 3-month moving average)

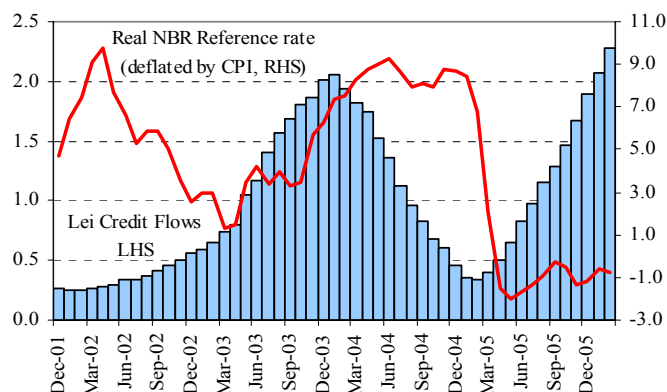


Source: Staff estimates.

54. In terms of credit flows, the measures have resulted in a dramatic switch away from foreign-currency loans in favor of local-currency lending.

This impact can be seen in the 12-month (moving average) flows shown in Figure 2, where forex-denominated flows start to fall after September 2005. It is even more apparent from a chart of 3-month flows. From a peak of 5.1 percent of GDP in August 2005, the three-month annualized flow of foreign-currency lending dropped to -1.7 percent by end-December.

Figure 5. Lei credit flows to households, 2002-06

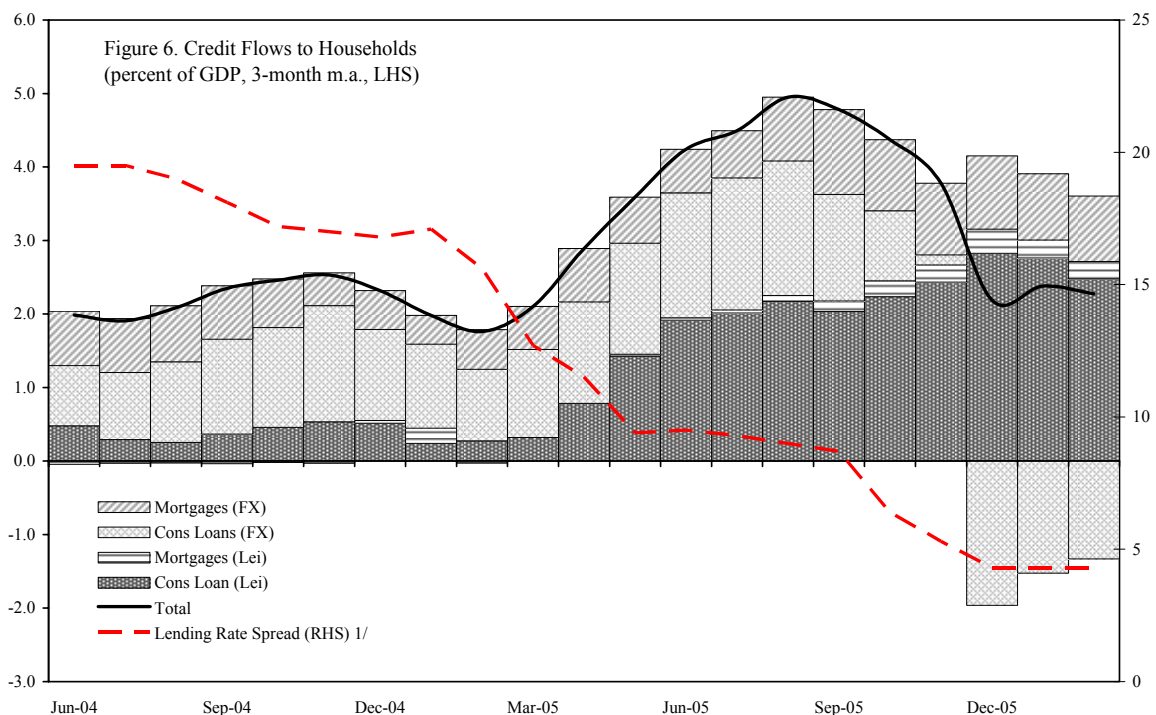


Local-currency credit flows, on the other hand, increased from 3.7 percent of GDP to 7.0 percent over the same period. The net effect was a fall in the overall flow of credit, from 8.9 percent of GDP to 5.3 percent in December. It should be noted also that the shift in borrowing toward local-currency credit was also assisted by a monetary loosening over the course of 2005, which has resulted in a drop in real lei interest rates, and a narrowing of the gap between local- and foreign-currency rates.

55. The impact has been most marked on the composition of consumer lending. As illustrated in figure 6 below, the surge in household credit flows throughout the early part of 2005 was driven in large part by a rapid expansion of local-currency consumer loans. In contrast, the expansion of foreign-currency consumer lending was relatively steady. Following the introduction of the credit measures, however, this pattern has reversed. Lei-denominated flows have remained broadly steady or have increased slightly, whereas the fall in household lending has chiefly reflected a contraction in foreign-currency consumer credit. Compared to the wide swings in consumer credit flows, mortgage lending to households has remained relatively stable—although even in this sector the new credit measures have prompted a switch into local-currency lending.

Box 2: Credit-Related Measures.

- (September 2004). The reserve requirement for foreign-currency liabilities with maturity less than 2 years was increased from 25 percent to 30 percent. The requirement on liabilities with maturity greater than 2 years remained at zero.
- (February 2005). The 30-percent reserve requirement on foreign-currency liabilities was extended to liabilities with maturity greater than 2 years, if contracted after 24 February 2005.
- (July 2005). The reserve requirement was extended to all foreign currency-denominated liabilities, regardless of their maturity or contract date. The measure was implemented in two stages:
 - i) For the 24 July – 23 August maintenance period, a 15 percent ratio applied to foreign-currency liabilities with maturities greater than two years, which were raised before 23 February 2005.
 - ii) For the 24 August – 23 September maintenance period, the full 30 percent ratio applied to these liabilities.
- (August 2005). To encourage a switch away from foreign-currency credit, the reserve requirement on RON-denominated liabilities, with maturities less than 2 years, was lowered from 18 percent to 16 percent.
- (August 2005). Regulations on limits to household-lending risk were tightened. The new regulations set a monthly debt-service ceiling equal to 40 percent of the net monthly income of the borrower, and covered the sum of all commitments (mortgage, real-estate, consumer loans, and other similar contracts). Moreover, the monthly debt service ceilings for consumer and real-estate credits were limited to 30 and 35 percent of monthly net income, respectively.
- (September 2005). For credit institutions granting foreign exchange-denominated loans, exposure to unhedged borrowers was limited to 300 percent of the creditor's own funds. In this context, only borrowers with foreign currency income (natural hedge) were considered to be hedged.
- (December 2005). The reserve requirement for foreign-currency liabilities was increased to 35 percent from 30 percent.
- (January 2006). The reserve requirement for foreign-currency liabilities was increased from 35 percent to 40 percent.



Source: NBR; IMF staff calculations

1/ Spread between RON-denominated loan rates and EUR-denominated loan rates to households.

56. **Looking forward, however, the effectiveness of these measures may ease over time.** Demand for credit remains strong, so lenders have a continued incentive to find alternate channels for funding. In discussions with staff, local banks generally pointed out that the measures would be mostly ineffective in halting foreign-currency credit to large corporate borrowers, as these could easily borrow directly from foreign banks, often with the assistance of the banks' local subsidiaries or branches. As for lending to other clients, they noted that the impact of the 300-percent ceiling would likely diminish as the banks adjusted their strategy to the new environment. For example, of the 13 banks that had been constrained initially by the new measures, five had already turned to their owners by end-2005 for an increase in capital so that they could resume foreign-currency lending. This process was cumbersome, and could take a number of months. But eventually, local banks predicted that lending would most likely resume—although it was agreed that higher foreign-exchange reserve requirements would make this particular line of business more expensive, and that lower local-currency interest rates would continue to make lei-denominated loans increasingly attractive for borrowers. It should be noted in this context that, although monthly foreign currency-denominated flows had turned sharply negative in the final quarter of 2005, they had become positive once again by February 2006.

57. **As for Romania’s macroeconomic risks, a key question is whether these measures will also help restrain the growth of excess demand**—i.e. whether the measures will help curtail the overall pace of lending, rather than just its currency composition, and whether a lower level of credit growth can be relied upon to ease pressure on prices and the current account. This has been a recent research topic within the Fund (Hilbers and others, 2005).

58. **Evidence suggests that prudential-style credit measures, by themselves, are generally not well suited to deal with macroeconomic stability issues.** This is borne out by the recent experience of Bulgaria and Croatia, where similar credit measures have been mostly ineffective in stemming those countries’ widening external imbalances (Box 3). The conclusion also has more general empirical support, as shown in Table 3 below which examines the relationship between demand and bank credit growth across a broader set of countries. The table shows a series of fixed-effects regressions covering five CEE countries¹¹ over 2000-04. On its own, household lending growth has a significant impact on private consumption (Model 1). However, when the model is augmented to control for disposable income, the coefficient for bank lending becomes statistically insignificant (Model 2). This suggests that it is current *income* flows that are the more important determinant of consumption growth, rather than loan supply. Indeed, when we start with a specification that includes income only (Model 5), and then add a measure of lending growth, the explanatory power of the model actually decreases. Looking at a different set of models that examine the impact of total private-sector lending on total domestic demand, loan growth does appear statistically significant (Models 6-10), even controlling for income. However, the coefficient is small and dominated by that for disposable income—the differences between the two sets of models may suggest that bank lending may be more important in shaping the pace of investment growth, rather than consumption. In sum, therefore, there is reason to doubt the efficacy of prudential-style measures as stabilization instruments. Excess aggregate demand, as mirrored by rising incomes, is often associated with an increase in credit demand—and in a world of open capital flows and porous financial markets, this demand has typically been accommodated by an elastic supply of funds, from various sources. It does not follow, therefore, that isolated prudential-style efforts to restrict the supply of bank loans will necessarily help limit aggregate demand. In practical terms, experience has shown that, in the face of continued and growing demand, funding will tend to find its way to those who want it. And from a policy perspective, stemming this process would require an unwieldy and comprehensive regulatory regime that would likely become more and more distortionary over time.

59. **Therefore, in addressing the macroeconomic risks posed by excess demand, the first-best approach is generally to tackle the key causes of demand directly, using more traditional macro instruments such as fiscal and incomes policy, as well as monetary policy.** From the experience of other countries, there appear limits as to what prudential-style

¹¹ These include the Czech Republic, Slovakia, Slovenia, Lithuania and Estonia.

policies can do in the absence of an appropriate monetary- and fiscal-policy framework. Moreover, to the extent that foreign-currency lending has been encouraged by historically stable exchange rates, increased exchange-rate flexibility can reduce perceptions of low currency risk and help produce a more appropriate credit mix. For example, increasing the flexibility of the exchange rate and allowing domestic interest-rate differentials to narrow helped reduce foreign currency-denominated bank lending in Poland in the early 2000s.

Table 3: Determinants of Demand Growth, 2000-04

Dependent Variable	Real Growth in Private Consumption					Real Growth in Total Domestic Demand				
	1	2	3	4	5	6	7	8	9	10
Constant	5.64 (3.5) ***	1.7 (1.9) *	5.62 (3.3) ***	1.77 (1.9) *	1.81 (2.3)	6.52 (4.3) ***	3.72 (2.2) **	6.69 (3.9) ***	3.89 (2.0) *	4.03 (2.1) *
Household loans real growth	0.04 (2.3) **	0.01 (0.7)				0.05 (4.8) **	0.03 (6.6) ***			
Private-sector loans real growth			0.07 (2.1) **	0.01 (0.3)				0.08 (3.6) ***	0.03 (2.3) *	
Disposable income growth		0.81 (6.7) ***		0.82 (8.3) ***	0.85 (6.6) ***		0.55 (2.2) **		0.59 (2.3) *	0.69 (2.5) **
Adj. R-square	0.55	0.72	0.54	0.71	0.73	0.48	0.52	0.45	0.49	0.51
N	25	23	25	23	23	25	23	25	23	23

Note: t-statistics in parentheses indicate *** significant at 1 percent level; ** significant at 5 percent level; and * significant at 10 percent level.
Source: IMF. *Republic of Slovenia, Selected Issues 2005. (IMF Country Report 05/254)*

60. Furthermore, undue reliance on credit measures may risk slowing the development of a sound and efficient financial system. As noted earlier in this chapter, financial development and long-term economic growth are closely related, so the authorities should be wary of depending too heavily on measures that attempt to limit the supply of particular types of credit—these are often distortionary, with unintended and undesirable side effects, such as impeding competition and encouraging circumvention through non-bank and foreign institutions. This latter phenomenon, in which lending shifts to other non-bank channels (that are less well-supervised) can occur very quickly, and was a particular feature in Croatia. The authorities have taken steps to address this issue in Romania (Box 4), but any measures that focus primarily on the banking system risk generating incentives for regulatory arbitrage.

Box 3. The Impact of Credit Measures in Croatia and Bulgaria

Croatia:

In January 2003, faced with booming credit and a mounting external imbalance, the central bank (CNB) introduced a number of direct measures to limit the supply of credit—banks with lending growth greater than 4 percent per quarter were obliged to purchase an amount of CNB bills, at penalty rates, equal to twice the amount of excess loans. The CNB also increased the minimum liquid foreign-exchange asset requirement on bank's foreign-exchange liabilities to discourage foreign borrowing. While domestic bank credit did decelerate in 2003, it became clear that enterprises were easily able to switch their borrowing from domestic to foreign banks (local banks typically directed their corporate customers to their parent banks abroad). Enterprises also increased the use of leasing and other forms of financing. Consequently, external borrowing in 2003 was about 2½ times higher than in 2002, and the share of foreign debt in financing corporate investment rose sharply. Although the current account deficit fell in 2003 owing to a bumper tourism season, import growth remained strong and the trade balance deteriorated further. The measures were dropped in the beginning of 2004. Credit growth did not bounce back immediately, suggesting that some of the fall in credit growth in 2003 may have been driven by a fall in credit demand, rather than restrained supply, but external debt continued to increase. In 2004, the CNB introduced a 24-percent, unremunerated marginal reserve requirement (MRR) on new bank borrowing from abroad. Faced with a further increase in bank foreign liabilities, the CNB raised the MRR in two steps to 40 percent in the first half of 2005. The CNB then added a second 55-percent tier and closed some loopholes in January 2006. Evidence on the effectiveness of the latest measures is not yet available.

The credit limits also had a negative impact on financial-sector development, as they encouraged the rapid growth of unsupervised and unregulated leasing companies, and reduced the transparency of banking statistics—banks engaged in a number of activities designed to circumvent the limits, such as asset swaps, collateralization, and accelerated write-offs of nonperforming loans.

Bulgaria:

Facing surging credit flows, in 2004 the central bank (BNB) introduced a number of liquidity-draining measures, such as tightened reserve-requirement provisions. When credit growth continued, however, the BNB announced in March 2005 that banks with lending growth greater than 6 percent per quarter, from a fixed base, would be subject to an unremunerated deposit requirement equal to twice the excess credit expansion. Initially scheduled to last only 12 months, this restriction has been extended until end-2006.

The effect of these measures was limited—Bulgaria's open capital account has permitted large businesses to access credit abroad, while allowing domestic banks to redirect their credit to households. The measures have also contributed to the rapid growth of partially-unsupervised non-bank intermediation. On the whole, financial flows to the private sector were little changed year on year. Household credit rose as a share of total bank lending, and firms increasingly financed themselves through bonds, leasing and capital inflows.

In terms of macroeconomic stability, at the time of the first review it had been expected that the measures would help bring down the current account deficit. Instead, continued excess demand has caused the deficit to more than double, from 5.8 percent in 2004 to 11.8 percent in 2005, and the data for January 2006 show a further deterioration to 12.8 percent.

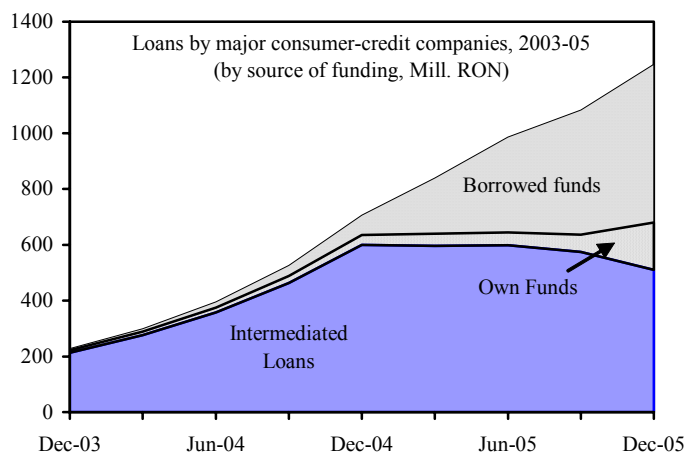
It should be noted that, for both of these countries, it is difficult to assess the precise impact of the credit measures, as it is impossible to know what *would* have happened had they not been put in place. However, on the basis of available experience, it appears that their effectiveness so far in restraining domestic demand has been somewhat disappointing.

Box 4. The Non-Bank Financial Sector in Romania

The Romanian authorities' efforts in 2005 to restrict the activities of banking institutions raised the concern that credit flows would simply be redirected through the less-regulated non-bank sector, which has been reported to be growing rapidly. Although comprehensive and consistent data on the size and activities of the non-bank sector are not yet available, there does not seem to have been a dramatic shift to this sector as yet.

Growth in the leasing sector in 2005, although healthy, was less than in 2004 and broadly in line with general credit demand. According to the two main leasing organizations—the Romanian Leasing Association (ASLR) and the Association of Banks' Leasing Divisions (ALB)—the value of total leased assets increased by 45 percent in 2005 from about 1.3 to 2.0 billion euros (2.½ percent of GDP). Growth in 2004 was somewhat higher, at 75 percent, but from a lower base of around 830 million euros. These figures are only approximate, however, as the two associations do not include all leasing companies.

Similarly, the 2005 growth rate for lending by the main consumer finance companies was substantial, at about 75 percent, but this reflects a relative small base. As shown in the chart, credit trends in 2005 were broadly in line with 2004, although there was a marked shift away from loans in which the finance companies served as intermediaries for banks, in favor of loans where the finance companies offered loans on their own account.



Source: National Bank of Romania

Looking forward, the authorities have taken steps to prevent a large-scale shift in resources to the non-bank sector; by moving this sector under the supervisory and regulatory authority of the NBR. Pending passage of the appropriate legislation, the NBR in January 2006 passed a long-anticipated emergency ordinance requiring all non-bank credit institutions to register with the central bank. In order to be included in the registry, these institutions must be incorporated as joint stock companies with share capital of at least EUR 200,000. They must also submit detailed financial information to the NBR and set up specific provisions for credit risk. It is anticipated that, on receiving this information, the NBR will establish a two-tier supervisory regime, with larger, more systemically-important institutions receiving greater scrutiny. The details of these regulations are still being discussed. However, it is envisaged that the NBFIs will be subject to most of the same core requirements as the banking sector; including the 300-percent limit on foreign-exchange lending to unhedged borrowers, as well as the 40-percent ceiling on household debt service as a percent of monthly income. The new system should be in place by mid-2006.

61. **Ideally, therefore, prudential-style measures should be aimed primarily at addressing specific financial-sector risks**—ensuring that the risks associated with credit growth are managed appropriately by lenders. Indeed, this should be the case regardless of the rate of credit growth. However, to the extent that rapid lending growth is also associated with concerns about macroeconomic risk, the experience of other countries suggests that prudential-style measures can play a potentially useful role, but only *in support of* more traditional macroeconomic instruments, as part of a comprehensive policy response. Looking forward, therefore, the effectiveness of recent efforts to limit the financial and macroeconomic risks associated with recent credit growth will depend on the authorities overall policy package—the credit measures adopted in 2005 appear to have helped ease a worrying trend of increased foreign-currency lending, but their impact on excess demand may be more limited. This latter issue will require the use of more traditional instruments, including a coordinated tightening of interest rates, and fiscal and incomes policies.

E. Conclusion

62. **Over the past few years, credit growth rates in Romania have been among the highest in the region.** This chapter has noted that rapid lending growth has been fairly typical within most CEE countries as they moved closer to Western Europe, and that the high growth rates of recent years reflects the fact that Romania is a relative latecomer to this process. In a broad sense, credit growth should be welcome, as it reflects an underlying process of financial deepening that promises to help raise longer-term growth and living standards. Moreover, based on the experience of other countries in the region, this growth is likely to continue well into the foreseeable future.

63. **However, while rapid credit growth may be a predictable part of the convergence process, recent developments have raised concerns about increased financial-sector and macroeconomic vulnerabilities.** Looking first at the financial-sector, Romania's banking system seems sound, liquid, and well positioned to absorb the direct impact of interest- or exchange-rate movements. But, the growing proportion of foreign currency-denominated lending suggests a substantial and increasing exposure to indirect risk, as adverse currency movements in the future may impact the ability of unhedged borrowers to meet their obligations. This type of risk is often hard to assess, and the authorities' recent credit measures have addressed the problem directly—the measures appear to have prompted a significant switch away from foreign-currency loans in favor of local-currency credit.

64. **In tackling macroeconomic risks, prudential-style credit measures cannot be a substitute for more traditional stabilization instruments.** The experience of other countries suggests that such measures, by themselves, are not very effective in stemming the consequences of excess demand. Instead, stabilization will require a more comprehensive response, including a coordinated tightening of interest rates, and fiscal and incomes policies.

REFERENCES

- Backé, Peter, and Tina Zumer, 2005, "Developments in Credit to the Private Sector in Central and Eastern European EU Member States: Emerging from Financial Repression—A Comparative Overview," *Focus on European Economic Integration 02/05*, (Vienna, Oesterreichische Nationalbank).
- _____, Balázs Égert, and Tina Zumer, 2005, "Credit Growth in Central and Eastern Europe: Emerging from Financial Repression to New (Over) Shooting Stars?," Mimeo.
- Cottarelli, Carlo, Giovanni Dell’Aricca, and Ivanna Vladkova-Hollar, 2003, "Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and the Balkans," IMF Working Paper 03/213 (Washington: International Monetary Fund).
- Duenwald, Christoph, Nikolay Gueorguiev, and Andrea Schaechter, 2005, "Too Much of a Good Thing? Credit Booms in Transition Countries: The Cases of Bulgaria, Romania, and Ukraine," IMF Working Paper 05/128 (Washington: International Monetary Fund).
- Hilbers, Paul, Inci Otker-Robe, Ceyla Pazarbasoglu, and Gudrun Johnsen, 2005, "Assessing and Managing Rapid Credit Growth and the Role of Supervisory and Prudential Policies," IMF Working Paper 05/151 (Washington: International Monetary Fund).
- International Monetary Fund, 2005, *World Economic Outlook, 2005* "Are Credit Booms in Emerging Markets a Concern," (Washington).
- Kraft, Evan, and Ljubinko Jankov, 2005. "Does Speed Kill? Lending Booms and their Consequences in Croatia," *Journal of Banking & Finance*, Vol. 29, pp. 105-21.
- Neagu, Florian, Angela Mărgărit, Mihai Copaciu, Irina Racaru, Romulus Mircea, and Arpad Andrassy, 2006, "Creditul neguvernamental în România: Perspective și implicații," *Case Study No.15* (Bucharest, National Bank of Romania).
- Schadler, Susan, Paulo Drummond, Louis Kuijs, Zuzana Murgasova, and Rachel van Elkan, 2005, *Adopting the Euro in Central Europe: Challenges of the Next Step in European Integration*, IMF Occasional Paper No. 234 (Washington, International Monetary Fund).

III. REAL CONVERGENCE PROSPECTS¹²

Ten myths of transition?

Higher real incomes are seen as the key goal of European Accession. However, the “catching-up” process has been slower than many thought, and Romania is now experiencing many of the pressures seen earlier in the new member states that joined the European Union in 2004. Policymakers have been tempted to see the growing macroeconomic imbalances as a natural part of the convergence process rather than a result of weak economic management. However, the experience of the early accession states suggests that while transition may bring its own problems, the principles of sound economic management cannot be set aside. This paper looks at ten commonly held views or “myths” about the convergence process that may have “colored” economic thinking and policy in Romania.

65. **Over the past decade, the states acceding to the European Union have made considerable progress in the transition to competitive market economies.** However, even in the new member states (NMS) real income levels remain well below those of the original 15 members of the European Union. The rate of convergence has been affected by many country-specific factors but, in most countries, common features of the transition have been consumption booms financed by rapid credit growth, a sharp take-off of investment, strong real appreciation driven by capital inflows, and widening current account deficits. Many policy makers in central and eastern Europe countries have seen these pressures as a reflection of the strength of the transition process, and the pull of the European Union, rather than the growth of unsustainable imbalances between investment and national savings. On the other hand, the experience of the transition states does not appear to be that different from growth spurts seen in other emerging market economies. The patterns are similar to the rapid expansion in Brazil that followed the “Real Plan” and preceded the 1998 financial crisis, or the investment and consumption boom that led up to the Mexican peso crisis of 1994. The experience of the early accession states (Greece, Ireland, Portugal, and Spain) cautions against overstating the impact of accession. The catch-up process in these countries took a long time and stable macroeconomic policies were key for fostering sustained economic growth.

66. **Romania and Bulgaria initially lagged the earlier accession states but are now experiencing many of the same trends, with strong consumption and investment growth and widening external imbalances.** The proximity of EU accession, privatization and structural reforms, the setting up of functioning markets and progress in macroeconomic stabilization have been crucial for this. A common view is that the widening macroeconomic deficits reflect the impact of these structural changes. The macroeconomic imbalances are

¹² Prepared by Graeme Justice and Anca Paliu.

“nothing to worry about” and the inflow of capital and investment will justify the surge in spending, with rapid economic growth bringing about the anticipated improvement in incomes. Another, more cautious view, is that these imbalances are a reflection of a transition process that has not always been well-managed, that the catch-up process cannot be achieved by one-off spurts in growth rates, and that failure to adequately address growing current account deficits will raise the balance of risks for these economies. A comparison of the experience of Romania with that of the NMS helps to provide some perspective on where the country stands in terms of convergence as well as the management of the transition to EU membership.

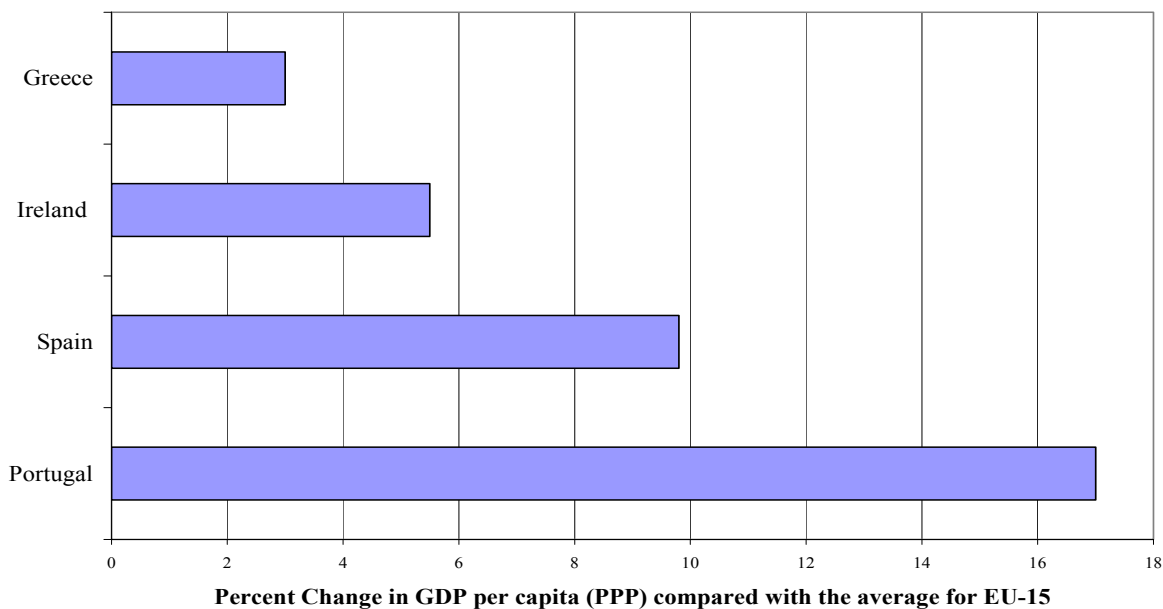
Myth 1: EU accession will lead to a rapid improvement in incomes?

One of the lessons of past accessions is that the “catch-up” takes a long-time and will continue well after accession. Transition does not somehow prevent the risk of “stop-go” boom and bust. Sustained macroeconomic policies are needed to achieve real convergence.

67. **The transition experience of the 10 new member states of the European Union has been too short to make an assessment of the speed of the catch-up process, with the overall trends heavily influenced by short-term macroeconomic developments.** Previous accessions (Greece, Ireland, Portugal, and Spain) are not directly comparable as the starting conditions and economic structures were different from central and eastern Europe. Nevertheless, income levels in the four countries were well below the EU average at the time of accession, and have shown a significant catching-up (Figure 1). The convergence process for these countries took many years with the GDP per capita of Portugal, the best performer, gaining 17 percentage points compared with the EU average only 10 years after accession. In the case of Greece, relative income levels actually fell initially, suggesting that overall macroeconomic performance is an important determinant of sustained real income growth. In Ireland, the rapid acceleration in real incomes came later, many years after accession.

68. **The experience of these countries suggests that Romania, which has a much lower real income level, faces a “marathon” rather than a short “sprint” in its convergence to EU living standards.** Narrowing the gap in incomes is obviously seen by the authorities as an important goal in its own right and as an element for reinforcing the population’s ownership of often harsh reforms. However, raising hopes of quick gains in per capita incomes may be self-defeating as the population may be encouraged to spend beyond its means, resulting in higher consumer indebtedness and an unsustainable boom in consumption. Arguments that large public sector wage hikes as seen in 2004 and 2005 are needed to “catch-up” should therefore be treated with caution. Unrealistic expectations of rapid income growth from EU accession will only fuel demand pressures and increase the risk of “stop-go” development.

**Figure 1. Catch-up: Previous Accessions
(10 years after accession)**



Myth 2: The EU is the appropriate “benchmark” for economic and structural policies for Romania and accession will of itself lead to rapid growth in real incomes?

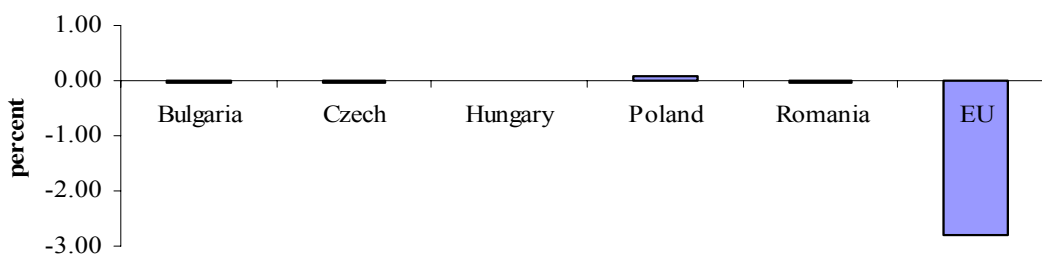
The experience of the NMS has been mixed, and weaker than that of many other emerging markets. The pull of EU accession can only do so much, with performance depending on the strength of reforms and overall macroeconomic policies.

69. **EU accession has been important in promoting reforms, but should not be seen as a panacea.** Over the last decade, the NMS have made considerable progress in establishing competitive market economies and macroeconomic stabilization. However, despite difficult structural reforms, living standards have been slow to catch-up, with markedly different performance among the group.

70. **The Romanian economy is thought to be comparable in structure with the larger new member states such as Poland, Hungary and the Czech Republic.** It is interesting that while these NMS have made headway compared with the Euro area, their purchasing power as a share of world GDP has been static or even declining (Figure 2). The explanation is the weaker performance of the Euro area and the much more rapid growth of other emerging markets. The transition process for the acceding states has naturally been EU centric, but Romania may be well advised to look at how it is performing relative to other more dynamic emerging economies as, ultimately, real income growth will depend on success in building competitive markets and structural reforms. Many important areas such as labor market reform and macroeconomic policy are not touched by the EU acquis, and Romania should be aware that it is joining an economic bloc that has been held back by slow

progress in key structural reforms. While EU accession has given Romania an important boost, the future pace of convergence will depend more on the vigor with which structural reforms are pursued in Romania and on its own macroeconomic performance than on accession. Indeed, recovery in real incomes in Romania only started in the early 2000s when more stable macroeconomic policies took hold.

Figure 2. Percentage change in GDP per capita, 1994-2005
Percent of world GDP per capita, PPP terms



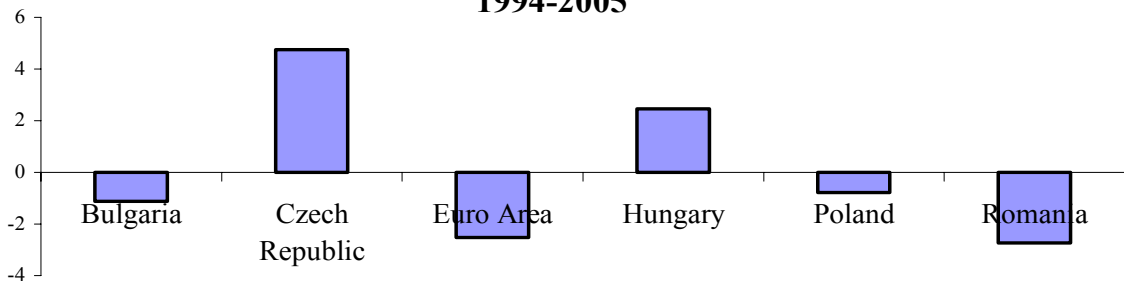
Myth 3: Consumption booms in transition countries are the result of “optimal” decisions by individuals about higher future incomes?

Data on real income convergence suggest that booms may be partly the result of overly optimistic assumptions about the impact of EU entry. The boom in consumption has been sharper in Romania, a late starter, than many other NMS.

71. **The experience of many emerging markets suggests that strong GDP growth leads to expectations of higher incomes and a boom in private consumption (lower private savings).** Such a boom in consumption is likely to be higher when households are not constrained from borrowing and the liberalization of the capital account leads to greater liquidity. Generally, current account imbalances resulting from increased consumption are less likely to be sustainable than deficits resulting from higher investment, as investment is expected to lead to future export growth. Detractors argue that “permanent income” decisions by consumers are “optimal” given the prospect of higher future earnings, and that the decline in private savings will be transitory and should recover when future incomes improve.

72. **Not surprisingly, the experience of many countries that had high growth rates and consumption booms, such as Chile in 1979-81, does not bear out such optimism.** In the case of Chile, overly optimistic expectations about future growth and incomes, combined with a loosening of liquidity constraints from capital account liberalization, resulted in a crisis despite a strong fiscal position.

Figure 3. Percentage change in Gross Private Savings, 1994-2005



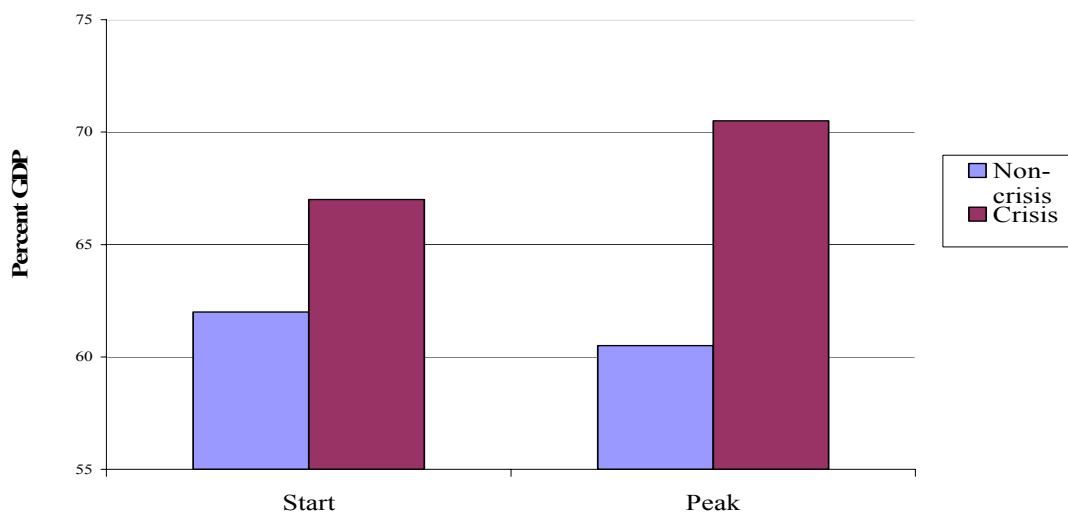
73. **The experience of the NMS has been mixed over time and is difficult to generalize as a “boom” with savings falling in some countries and increasing in others** (Figure 3). In Hungary, strong growth in the mid-1990s was actually accompanied by higher household savings with the current account improving. Subsequently, savings deteriorated in the period 2001-2005, complicating demand management. Poland also saw an improvement in savings during the boom in the mid-1990s, with much of the deterioration of the current account in 1997-1999 due to higher investment. After a fall in savings and investment in the 2000 period there has been some recovery. In the Czech Republic, there was a fall in savings during the mid-1990s boom followed by a recovery and some recent slippage in 2003-2004. In comparison, the decline of savings by 4 percentage points of GDP in Romania since 2002 has been comparatively sharp. The strong consumption boom has also appeared at a relatively early stage in the economic recovery before the impact of stronger investment has taken hold. Hilbers and others (2005) have compared crisis and noncrisis countries facing consumption booms financed by rapid credit growth (Figure 4). The analysis indicates that those countries that were not able to moderate consumption growth before credit peaked were more likely to face crisis, suggesting a more proactive role for demand management policies.

Myth 4: Credit booms in transition economies reflect low financial intermediation and will correct themselves?

Evidence from the NMS suggests credit booms are linked to the level of financial intermediation, but recent work has raised the question of “how fast is too fast.” Experience elsewhere suggests that perceptions about the stability of the policy stance are important in determining whether a boom will end in a soft or hard landing, regardless of the degree of financial intermediation.

74. **Strong consumption growth in central and eastern Europe has been partly financed by rapid increases in bank credit to the private sector.** In the past few years, real growth rates of credit to the private sector (both business and households) were often in the range of 30-50 percent a year. Improved household confidence has come at a time when bank privatization, competition by banks for market share prior to EU entry, and diminishing opportunities for attractive asset placements elsewhere have increased banks willingness

Figure 4. Private Consumption during Credit Booms



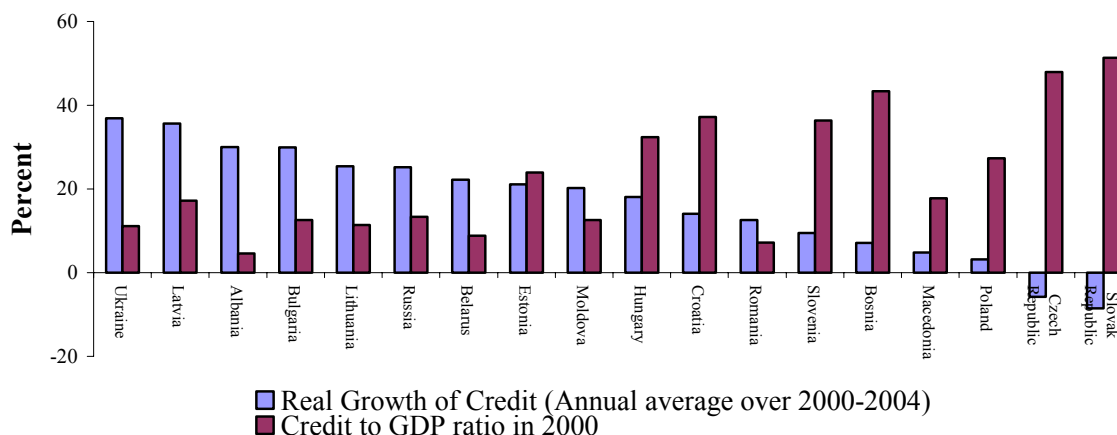
Source: Hilbers and others (2005)

to lend to the region. The degree of initial financial intermediation differed considerably between the accession countries, with bank credit to the private sector at over 50 percent of GDP in 2000 in the Slovak Republic and below 5 percent in Albania. Figure 5 shows that the fastest rates of real credit growth since 2000 have been associated with the lowest levels of financial intermediation, providing support for the “catching-up” hypothesis. The level of financial intermediation has been closely associated with the level of direct investment. Countries with the highest financial intermediation like the Czech and Slovak Republics have also shown the highest levels of investment. On this basis, it has often been argued that credit booms are a natural part of real convergence, promoting growth, and will slow of their own accord as the “equilibrium credit to GDP ratio” is reached.¹³

75. **Obviously, successful real convergence depends not only on the size and efficiency of financial intermediation but also on potential macroeconomic and prudential risks.** Both Romania and Bulgaria experienced a decline in private sector credit in the late 1990s reflecting bank sector restructuring, with bank lending to the private sector falling to 15 percent of GDP in Bulgaria and 7 percent in Romania. In the last 2 to 3 years, both countries have experienced credit booms raising the question of “how fast is too fast.”

¹³ Cottarelli, Dell’Ariccia, and Vladkova-Hollar (2005) calculate an equilibrium credit to GDP ratio for Romania of 58 percent compared with 18 percent at end-2004.

Figure 5. Financial Depth and Real Growth of Credit



Duenwald, Gueorguiev and Schaechter (2005) argue that the credit booms in both countries have contributed importantly to widening macroeconomic imbalances and heightened external vulnerabilities. Hilbers and others (2005) stress that, notwithstanding the initial level of financial intermediation or rates of GDP growth, about three-fourths of credit booms have been associated with a banking crisis and almost seven-eighths with a currency crisis.

Table 1. Bank Credit to the Private Sector during Credit Booms

	Start of boom	End of boom	Duration
Crisis countries			
Argentina	1990	1995	6
Brazil	1993	1998	6
Mexico	1987	1994	8
Philippines	1988	1998	11
Uruguay	1992	2002	11
Ecuador	1993	1999	7
Early EU accession countries			
Greece	1995	ongoing	9
Ireland	1995	ongoing	9
Portugal	1987	ongoing	17
Spain	1998	ongoing	6
NMS and acceding countries			
Hungary	1994	ongoing	10
Latvia	1997	ongoing	7
Lithuania	1998	ongoing	6
Romania	2003	ongoing	3
Bulgaria	1998	ongoing	6

Source: Hilbers and others (2005).

76. **The experience of the NMS does not suggest that credit growth will automatically slow.** On average, credit booms in the NMS have lasted about 6 years suggesting that Romania may face continuing pressures even following EU accession. While credit to GDP ratios in Poland and Czech Republic have fallen slightly over 2002-2004, Hungary and the Baltics continue to show high average annual increases. Interestingly, Hilbers and others (2005) show that credit booms are still ongoing in the early EU accession states, suggesting that they can be sustained over time if accompanied by the right policies (Table 1). Even in crisis countries, booms have been sustained for many years until the crisis hit often due to a change in sentiment about the sustainability of the policy stance. This suggests that expectations are important and that prudent macroeconomic and financial policies will be crucial if Romania is to maintain macroeconomic stability during what is likely to be a lengthy transition process. When credit growth is rapid it is often difficult to disentangle macro risks from prudential ones, with deterioration in prudential indicators often a lagging indicator of a crisis. A prudent macroeconomic stance is therefore important to help limit the scope for a slippage in credit quality.

Myth 5: Current account deficits are a normal part of transition?

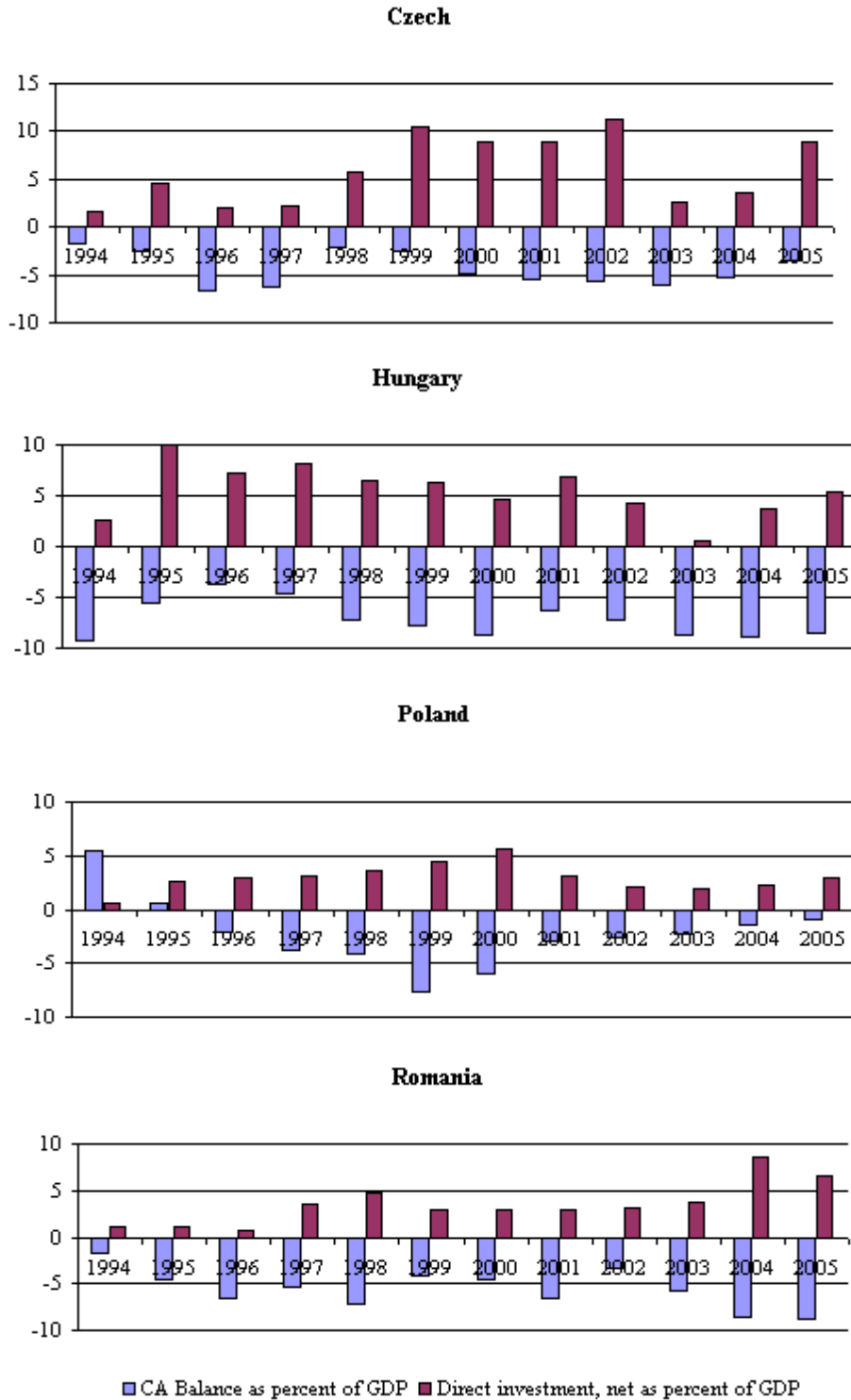
All NMS experienced widening current account deficits. However, disciplined fiscal policies are critical to ensure domestic savings do not get too far out of line with investment. The financing of the deficits is likely to become more volatile over time as capital markets develop.

77. **All the new member states posted sizable current account deficits, leading to the view that widening deficits are a natural part of the transition process.** Convergence via a higher rate of investment is seen to require higher foreign savings given low private savings and weak financial sectors (Schadler and others (2006)). The financing of the current account deficits in the NMS was largely covered by inflows of FDI, portfolio investment being constrained by illiquid and inefficient capital markets. This benign view of growing current account imbalances rests heavily on an implied economic consistency that suggests that the financing of such deficits is sustainable over the longer-term given higher expected growth rates. Such a view rests heavily on the assumption that disciplined fiscal policies will not allow the domestic savings rate to diverge from the investment rate over time. Moreover, the assumption that FDI will continue to fund the deficits in a non-debt creating way becomes more questionable over time. The privatization process has slowed in most NMS, and the development of financial markets will stimulate the emergence of more volatile sources of funding such as portfolio investment.

Figure 6 compares the pattern of current account deficits and direct investment flows in Romania with that of Hungary, Poland, and the Czech Republic. Romania's experience in terms of coverage of the current account deficit with direct investment is similar to in Poland and the Czech Republic in the early 2000s. Both these countries showed a sharp fall-off in direct investment prior to accession as investors had already established themselves in the local markets. It is to be noted that the fall in direct investment in Hungary and the Czech Republic was not associated with improved current account performance. Instead, there was

a shift to potentially more volatile capital inflows, suggesting that widening imbalances can eventually lead to pressures on demand management policies, whatever the initial source of finance.

Figure 6. Current Account Balance and Direct Investment, net



Myth 6: Current account deficits that reflect higher investment are not risky?

The experience of the NMS suggests that current account deficits resulting from investment are more sustainable than those based on consumption, but much depends on where the investment is going.

78. **Transition countries running a high current account deficit because of high investment rates rather than consumption are regarded as less at risk (Zanghieri (2004)).** High investment should lead to an improvement in the productive capacity of the country and potentially higher exports. The experience of the ten NMS states has differed considerably, suggesting that certain types of investment may be more sustainable than others. Investment rates in the Czech Republic did not translate into the same growth rates as in Poland, indicating that high investment does not automatically increase productive capacity. For example, investment in real estate financed from abroad may actually increase the risk of speculative “bubbles.” Moreover, FDI aimed at exploiting the domestic market will have different current account implications than FDI aimed at export and regional markets. FDI may even add to balance of payments pressures due to higher direct foreign borrowing, as many foreign-owned companies have easy access to foreign banks through their headquarter operations.

Table 2. Imports of Machinery (excluding cars)
Percent of total

	1996	2000	2004
Hungary	23.6	43.4	44.5
Czech Republic	30.4	31.7	32.9
Poland	25.6	26.8	25.2
Romania	22.1	25.0	23.4
Bulgaria	12.6	16.9	18.5
Lithuania	16.1	15.8	19.3

Source: COMTRADE

79. **Romania and Bulgaria are increasingly expected to attract new investment with the prospect of EU accession imminent.** However, the two countries have shown very different trends in the composition of the pick-up in domestic demand. In Romania, the initial pick-up in domestic demand from 2003 was largely driven by consumer spending, with gross domestic investment only increasing slightly from 21.8 percent of GDP in 2003 to 22.3 percent in 2004, and to 22.9 percent in 2005. In Bulgaria, domestic demand has largely been driven by investment with the rate of growth of investment nearly double that of consumption. A very rough indicator of the degree of investment activity is the share of machinery (excluding cars) in imports. This increased dramatically in Hungary in the second half of the 1990s from 24 percent in 1996 to 45 percent in 2004 (Table 2). The Czech Republic also registered a steady increase in the share of machinery imports, while Poland showed little change. The share of machinery in Romania’s imports increased in the late 1990s, but has actually fallen since 2000. This compares with a sharp pick-up in

machinery imports in Bulgaria, albeit from a lower base. The pattern for Romania is consistent with the overall trends in investment, with much of the recent surge being driven by privatization, banking, retail and real estate. Greenfield investment is only beginning to take hold.

Myth 7: Capital surges reflect high marginal productivity and are not a cause for concern?

The experience of the NMS suggests that achieving low inflation early is key to avoiding capital volatility.

80. **Romania and Bulgaria are facing strong capital inflows following the liberalization of their capital accounts.** Such flows are seen as intrinsic to the convergence process. However, the NMS responded to capital flows in different ways. Central banks face what has been coined by Lipschitz and others (2002) as the “Tosovsky Dilemma” after the former Czech National Bank Governor. If the monetary authority sets too high an interest rate reflecting the high marginal productivity of capital, foreign capital will pour into the country putting pressure on the exchange rate. On the other hand, if the monetary authority attempts to dampen these inflows by setting interest rates at a level below capital productivity they will depress saving below investment, fueling inflation and widening the current account deficit. Lipschitz and others (2002) illustrate the potential size of the inflows needed to equate the marginal productivity of capital assuming no risk premium and other obstacles to capital (Table 3). For Romania, with high capital scarcity, the marginal productivity of capital was estimated at 14 times that of Germany with a potential capital flow of over 600 percent of GDP. While these calculations are fairly simplistic they serve to highlight the potential magnitude of the problem facing the National Bank of Romania compared with its peers.

Table 3. Capital Scarcity and Potential Capital Flows

	GDP per worker 1/	Relative marginal product of capital 2/	Potential inflows 3/
Romania	26.9	13.8	634
Bulgaria	22.9	19.1	753
Czech Republic	53.6	3.5	275
Hungary	55.7	3.2	259
Poland	38.6	6.7	425

Source: Lipschitz and others (2002).

1/ In percent of German GDP per worker, average 1994-1999.

2/ Cobb-Douglas production function.

3/ In percent of pre-flow GDP.

The main policy conclusion drawn by economists is that open capital markets reduce the independence of action for monetary policy requiring more reliance on fiscal policy as the main instrument of stabilization. In stark contrast, Arvai (2005) finds that most NMS used monetary and exchange rate policies as the main instruments to counteract excessive capital inflows, whereas fiscal policy was rarely adopted. FDI was the largest component of capital inflows (\$134 billion) to the NMS (excluding Cyprus and Malta) over 1995-2003, with interest-sensitive portfolio investments relatively low (\$28 billion), and other investments (trade and financial credits) about \$41 billion. Arvai finds that the pace of deflation was the major determinant for portfolio inflows as most of the monetary authorities decided to maintain positive real interest rates to fight inflation and encourage savings. The Czech Republic managed to achieve low inflation by 1999 and virtually eliminated the interest rate differential with the Euro zone. Hungary and Poland with slow disinflation and high public debt were the most vulnerable to surges in portfolio flows, with nominal interest rates converging to Euro zone levels only recently.

Myth 8: Real exchange rate appreciation reflects economic fundamentals and will not undermine the basic competitiveness of the economy?

The experience of the NMS suggests the real exchange rate can overshoot and pressures can last many years.

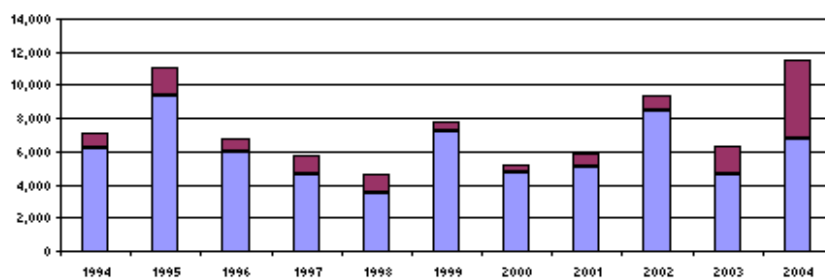
81. **Real appreciation pressures in Romania appear to have eased, following the rapid real appreciation of the leu after the liberalization of the capital account in April 2005.** Policymakers are now asking:

- Is the process over? The capital account is largely liberalized and much of the undervaluation of the exchange rate has been eroded, or
- are appreciation pressures likely to continue for a few more years resulting in potentially costly adjustment?

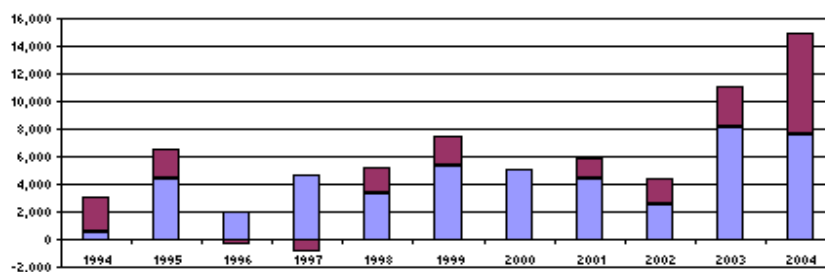
Among Romania's forerunners, strong real appreciation in the Czech Republic and Poland slowed in the early 2000s, but continued in Hungary through 2004 (Figure 8). Several studies suggest that the strong real appreciation in these countries in the 1990s cannot be

Figure 7. Composition of Capital Flows, 1994–2004
US dollars millions

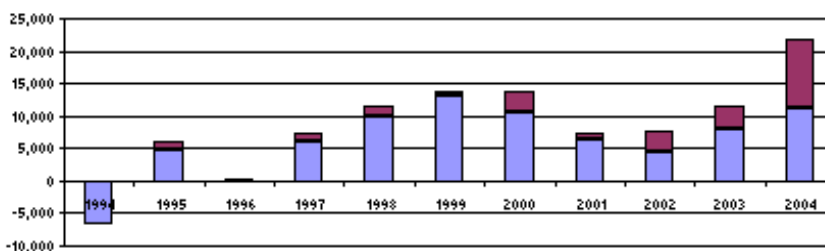
Czech Republic



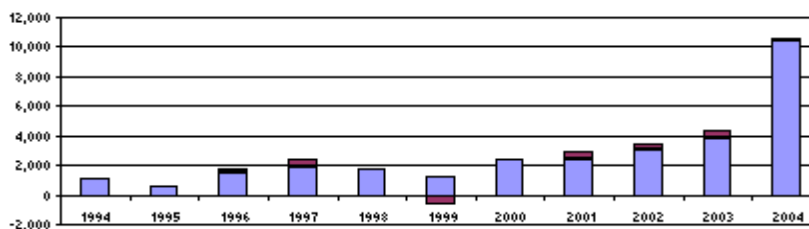
Hungary



Poland



Romania

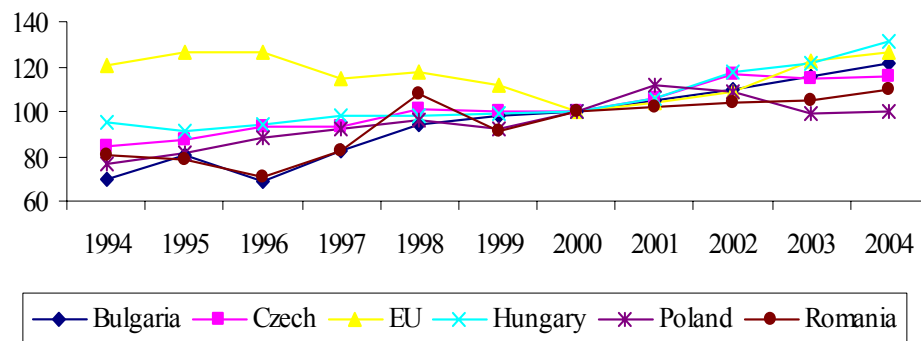


■ Equity and Debt Securities, liabilities
 ■ Direct Investment in re.econ and Other Investment, liabilities

Source: World Economic Outlook, and staffs' calculations.

fully explained by increasing productivity in the tradable goods sector (the so-called Balassa-Samuelson effect). Foreign direct investment has been seen as the main culprit. If this is the case, FDI may result in future net export gains, and justify real appreciation. Bulir and Smidkova (2005), for example, show that fundamentals explain about 60 percent of the real appreciation in the Czech Republic, Poland and Hungary. They attribute the rest to overly optimistic expectations about the speed of real convergence, the temporary impact of privatization flows and the psychological effect of EU enlargement.

Figure 8. Real Effective Exchange Rate, 1994-2004
CPI-based index 2000=100



82. **Strong capital inflows in these three countries contributed to a move to more flexible exchange rate arrangements.** After 1999, the Czech Republic received increasing amounts of FDI, which it largely sterilized. Poland and Hungary attracted large amounts of interest sensitive inflows in addition to sizable FDI. Both countries preferred to allow substantial appreciation rather than heavy intervention. At the same time, interest rate policy in these countries became more active. In the Czech Republic low inflation was achieved relatively quickly, whereas in Hungary and Poland the disinflation process was slower leading to persistent portfolio inflows. In Poland, low single digit inflation was achieved in 2002 and in Hungary in 2005, with large interest rate sensitive inflows accompanying tight monetary policies. The pattern of real appreciation largely followed these policy changes (Figure 8).

83. **For Romania, the real appreciation pressures from capital inflows started late compared with its forerunners.** The Balassa-Samuelson effect is thought to have contributed to earlier real appreciation and is expected to continue as the economy is still undergoing structural reforms. With the concentration of capital inflows on FDI and trade and financial credits, Romania looks more like Poland in 1999, Hungary in 2000 or the Czech Republic in the mid-1990s before disinflation was achieved. On the other hand, the influence of “non-fundamentals” in Romania such as privatization proceeds, the pull of EU accession and optimistic assumptions about real convergence are likely to be short-lived given the late start and imminent EU accession. In the NMS, there was a drop-off in FDI just

before accession as by that time investors had already established themselves in the markets. Future FDI is now expected to depend more on the overall perception of investors of the strength of the economies and the stability of macroeconomic policies. In Romania, the opening up of the government debt market may give some additional boost to capital inflows but the size of the market is small, and the January 2006 liberalization has been effectively delayed. The portfolio market is also underdeveloped and will only assume greater importance for capital inflows in the medium-term. With an expected shift in the composition of capital away from FDI to portfolio flows, the importance of interest rate sensitive flows will only increase, suggesting that the speed of disinflation will be key for Romania to avoid the experience of Poland and Hungary.

Myth 9: EU accession will bring about rapid structural changes in the economy and productivity improvements.

The experience of the NMS has been positive but growth has been unbalanced and economic structures slow to change.

84. **What can Romania reasonably expect from the experience of its forerunners in terms of convergence with the economic structures of the EU-15?** For the countries of central and eastern Europe membership of the European Union has been seen as the key to higher productivity and structural change. The existing literature on the growth and convergence prospects is largely optimistic about the advantages of economic integration with the EU (Schadler and others, 2005). During the first ten years after reforms, the CEEC-8¹⁴ experienced a boom in economic activity with productivity and real wages growing by 8 percent annually (Berns (2004)). Most models, however, suggest that convergence is a long-term process. Recent European Commission estimates indicate that, assuming an average growth rate in the NMS of 1.5 percent above the EU average, it will take 25 years for these countries to reach the current level of income in the EU. In addition, growth in real wages has been imbalanced both regionally and in terms of labor skills. In Hungary, the level of GDP per head in the most prosperous regions is about 2 ½ times that in the least prosperous regions. FDI has tended to increase wages for high skill younger workers. Medium-skilled manufacturing workers have seen much less improvement, and the benefits for low skill workers have been in terms of employment not real wages (Geishecker, 2004).

85. **Low wages in Romania correspond broadly to lower labor productivity as a result of lagging behind the other CEEC-8 in the 1990s in terms of restructuring, stabilization policies, and the development of physical infrastructure.** One reason is differences in the sectoral composition of output. In Romania, the share of agriculture, which has low productivity, was 12 percent of GDP in 2003, compared to about 4 percent in the NMS. Angeloni and others (2005) show that EU integration cannot be expected to result in rapid structural transformation of the central and eastern European economies unless

¹⁴ CEEC-8 comprises the NMS, excluding Malta and Cyprus.

accompanied by more vigorous and targeted structural reforms (Table 4). The share of employment by sector in the NMS hardly changed between 1995 and 2003, and remains substantially different from that in the more advanced economies (EU-15 and U.S). The authors show that the lack of structural convergence is a key determinant of slow real income convergence.

Table 4. Structural Change? Output Composition of Employment, 1995-2003

	New Member States		EU-15	USA
	1995	2003	2003	2003
Agriculture	17.4	16.7	4.6	1.6
Construction	6.6	6.1	7.1	5.6
Manufacturing	22.9	20.7	18.1	14.6
Energy	2.8	2.8	0.1	0.7
Services	50.3	53.7	70.1	77.5

Source: Angeloni and others (2005)

86. **The experience of the NMS suggests that the impact of strong FDI on productivity, while positive, may not bring as rapid a transformation as hoped.** Much of the benefit of accession has already been anticipated by investors and international companies have already made substantial inroads into the domestic markets. Geishecker (2004) shows that foreign-owned firms were quick to establish themselves in central and eastern Europe. Indeed, by 2002 foreign penetration of industry in Romania, at 33 percent, was the same as that for the Czech Republic and Poland a year earlier, although significantly below the 45 percent penetration in Hungary (Table 5). For non-manufacturing, Geishecker's estimates indicate a dominating role for "horizontal" FDI in the region, with future growth depending largely on the growth of the domestic market rather than geared for export. By the time of EU accession all economic sectors in the NMS had been largely opened up to foreign investment, with most horizontal FDI going into services, dominated by banking, retail, telecommunications, and real estate.

87. **Romania's labor cost advantages will remain for some time, but indications from earlier accessions suggest that FDI will not result in significant wage catch-up in the low-skilled sectors.** Most studies confirm that convergence is a long-term phenomenon, and much will depend on how efficiently Romania uses rapid growth to spur reforms and restructure the economy. Interestingly, Halpern and Wyplosz (1997) show that in both developed and emerging countries a 10 percent decline in the size of agriculture relative to industry can increase euro wages by 1-2 percent. In Romania, the efficient use of EC structural and cohesion funds by increasing investment in physical infrastructure and pushing reforms in agriculture will therefore be an important factor for raising living standards.

Table 5. Share of Foreign Firms in Employment by Industry in 2001
(percent)

	Czech Rep.	Hungary	Poland	Romania (2002)
Food and beverage	22	38	30	27
Tobacco	97	95	79	25
Textiles	24	33	20	40
Clothing	21	36	33	38
Tanning	17	52	26	45
Wood	25	22	34	28
Paper	45	44	53	35
Publishing	33	20	45	20
Coke and petroleum	31	100	41	56
Chemicals	27	58	29	20
Rubber and plastic	47	49	47	59
Non metallic minerals	37	37	40	27
Basic metals	28	42	10	54
Fabricated metals	30	25	20	20
Machinery n.e.c.	21	41	18	15
Office machinery	86	33	25	31
Electrical machinery	58	76	54	53
Radio and TV sets	66	83	58	54
Medical equipment	38	41	26	18
Motor vehicles	70	69	68	36
Transport equipment	8	22	14	31
Furniture	23	26	47	17
Recycling	18	37	26	24
<i>Manufacturing</i>	<i>34</i>	<i>45</i>	<i>33</i>	<i>33</i>

Source: Geishecker (2004)

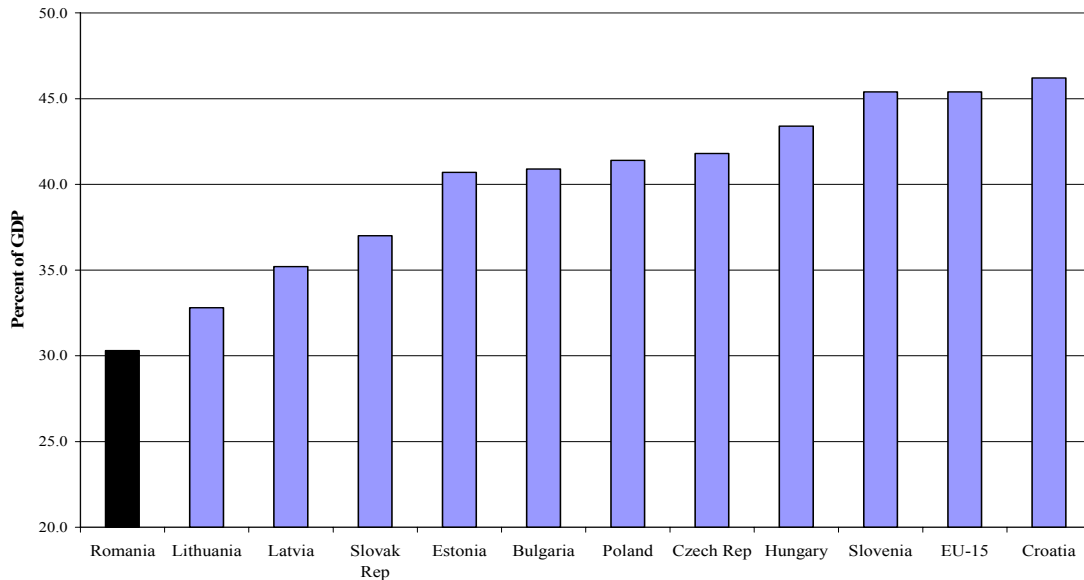
Myth 10: Large budget deficits are part of transition and are needed to fund investment?

There is little relation been deficits and investment in the NMS. The lax fiscal policies in the NMS compared to other emerging markets may reflect a particular view of the trade off between real and nominal convergence. The main problem in Romania is low revenues.

88. The fiscal accounts of the NMS deteriorated markedly in the period to EU entry.

There were no macroeconomic conditions connected with accession to the EU, with an implicit notional trade-off between “real” and “nominal” convergence. In particular, there was a common view that budget deficits could be “tolerated” as they are instruments for financing investment and growth during transition. As such, there was something of a “coincidence between populist pressures in these countries for higher deficits and EU institutions...which favored a slow process of entry to the Eurozone” (Coricelli, 2005). Romania faces particular challenges as it enters the race for real convergence, given its low revenue base compared with the NMS (Figure 9). Pressures to preserve recent tax cuts combined with spending demands related to EU accession have made it even harder to use fiscal policy as a tool for macroeconomic management.

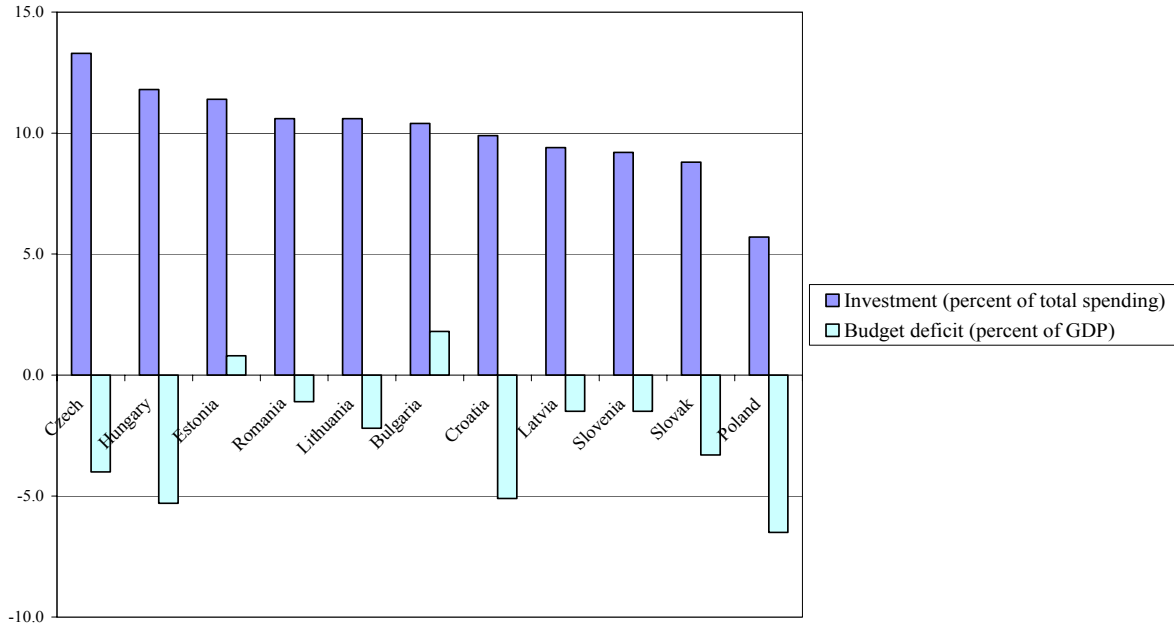
Figure 9. Revenue as a Percent of GDP, 2005



89. **A comparison between the low deficit transition countries such as the Baltics and Slovenia and other larger high deficit countries, such as Hungary and the Czech Republic, suggest that high deficits cannot be attributed to EU convergence as they have all been subject to the same transition process.** There is no clear correlation between the size of budget deficits and public investments, contrary to what is often heard as justification for high deficits in NMS (Figure 10). The difference in size of the countries suggests political economy factors may be important, as well as the stronger constraints facing small open economies.

90. **Perhaps one explanation is that low debt-to-GDP ratios in the NMS compared with the EU-15, have been seen as justifying higher deficits.** However, NMS debt should be seen as emerging market debt and subject to the same volatilities and risks. Debt ratios in Latin America are of similar magnitudes, for example. NMS still have underdeveloped financial markets and debt to M2 ratios are closer to those of the EU-15, and in the case of Poland and Hungary are higher. NMS also show higher volatility of revenues to GDP during the transition process, while expenditures have shown rigidity, suggesting a greater vulnerability to shocks in general. The debt ratio for Romania remains low, but much will depend on the future direction of policy.

**Figure 10. Share of investment and budget deficits, 2004
(Percent)**



So “Myths” or “Not?” Pressures reflect transition, but policies have too as well.

91. **The prospect of EU accession has undoubtedly spurred market reforms in the acceding states of central and eastern Europe.** Romania is now seeing some of the benefits with strong inflows of investment and rapid growth. However, the experience of the early accession states suggests that real convergence is a slow process and should be carefully managed. Even with strong growth it will take Romania many decades to reach EU income levels. Set against such prospects is the current optimism misplaced? Are policy makers wrong to believe that macroeconomic imbalances resulting from transition will correct themselves over time? We have shown that there is a mix of “myth and reality” in many of the notions concerning the transition. Certainly, many of the pressures are a direct result of the transition process. However, these pressures will remain for several years and sustained economic growth will depend on how successfully governments are able to manage the transition. Past experience suggests that prudent macroeconomic policies are essential to ensure smooth real and nominal convergence and to minimize the inevitable risks in what will inevitably be a “long march” to EU income levels.

REFERENCES

- Angeloni, Ignazio, Flad, Michael, Mongelli, Francesco Paolo, 2005, “*Economic and Monetary Integration of the New Member States: Helping to Chart the Route*”, *European Central Bank*, IMF Occasional Paper No. 36 (Washington: International Monetary Fund).
- Arvai, Zsofia, 2005, “Capital Account Liberalization, Capital Flows, and Policy Responses in the EU’s New Member States”, IMF Working Paper 05/165 (Washington: International Monetary Fund).
- Berns, Rudolfs, 2004, “Economic Growth and Sectoral Adjustments in Central and Eastern European Countries”, Stockholm School of Economics, February 2004.
- Bulir, Ales, Smidkova, Katerina, 2005, “Exchange Rates in the New EU Accession Countries: What have we learned from the Forerunners?” IMF Working Paper 05/27, (Washington: International Monetary Fund).
- Coricelli, Fabrizio, 2005, “Fiscal Policy and the Adoption of the Euro for the new EU members”, paper for the Conference: “Europe after the Enlargement”, Warsaw, April 8-9, 2005, University of Siena and CEPR.
- Cottarelli, Carlo & Dell’Ariccia, Giovanni & Vladkova-Hollar, Ivanna, 2003, “Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and in the Balkans”, IMF Working Paper 03/213, (Washington: International Monetary Fund).
- Duenwald, Christoph, Gueorguiev, Nikolay, Schaeter, Andrea, 2005, “Too Much of a Good Thing? Credit Booms in Transition Economies: The Cases of Bulgaria, Romania, and Ukraine”, IMF Working Paper 05/128, (Washington: International Monetary Fund).
- European Commission, 2001, “Real Convergence in Candidate Countries-Past Performance and Scenarios in the Pre-Accession Economic Programmes”, Directorate General for Economic and Financial Affairs, November 2001.
- Geishecker, I. , 2004, “Foreign Direct Investment in the New Central and Eastern European Member Countries” Paper prepared for the project “Industrial Restructuring in the Accession Countries”, commissioned by EU DG Employment, Contract No. VC/2003/0367.
- Halpern, Lazlo and Wyplosz, Charles, 2002, “Catching-Up: The Role of Demand, Supply and Regulated Price Effects on Real Exchange Rates for Four Accession Countries”, ONB Focus on Transition Vol. 2, 2002.

Hilbers, Paul, Otker-Robe, Inci, Pazarbasioglu, Ceyla, Johnsen, Gudrun, 2005, "Assessing and Managing Rapid Credit Growth and the Role of Supervisory and Prudential Policies", IMF Working Paper 05/151, (Washington: International Monetary Fund).

Lipschitz, Leslie, Lane, Timothy, Mourmouras, Alex, 2002, "The Tosovsky Dilemma: Capital Surges in Transition Countries", IMF Finance and Development, September 2002, Vol. 39, No. 3. (Washington: International Monetary Fund).

Schadler, Susan, Mody, Ashoka, Abiad, Abdul, Leigh, Daniel, 2006, "*Growth in Central and Eastern European Countries of the European Union: A Regional Review*", IMF Occasional Paper (to be published Washington: International Monetary Fund).

Zanghieri, Paolo, 2004, "Current Account Dynamics in new EU members: Sustainability and Policy Issues", CEPII, No. 2004, July 2004.

IV. THE FISCAL IMPACT OF EU ACCESSION¹⁵

A. Introduction

92. This paper attempts to estimate the fiscal impact of EU accession on the Romanian budget. On the assumption that Romania accedes to the European Union on January 1, 2007, the country will be eligible for important financial resources from the EU budget through Structural and Cohesion Funds, resources allocated through the Common Agricultural Policy (CAP) and the Internal Policies facility. The rate of disbursement of these funds will depend to a large extent on the strength of the administrative capacity that Romania has put in place, including rules and procedures for sound financial management. While the post-accession funds will be phased over time, the impact on the budget will be smoothed as Romania will continue to receive delayed disbursements through pre-accession financial instruments (Phare, ISPA, and SAPARD).¹⁶ At the same time, the budget will need to assure considerable additional cofinancing and the payment of Romania's contribution to the EU budget.

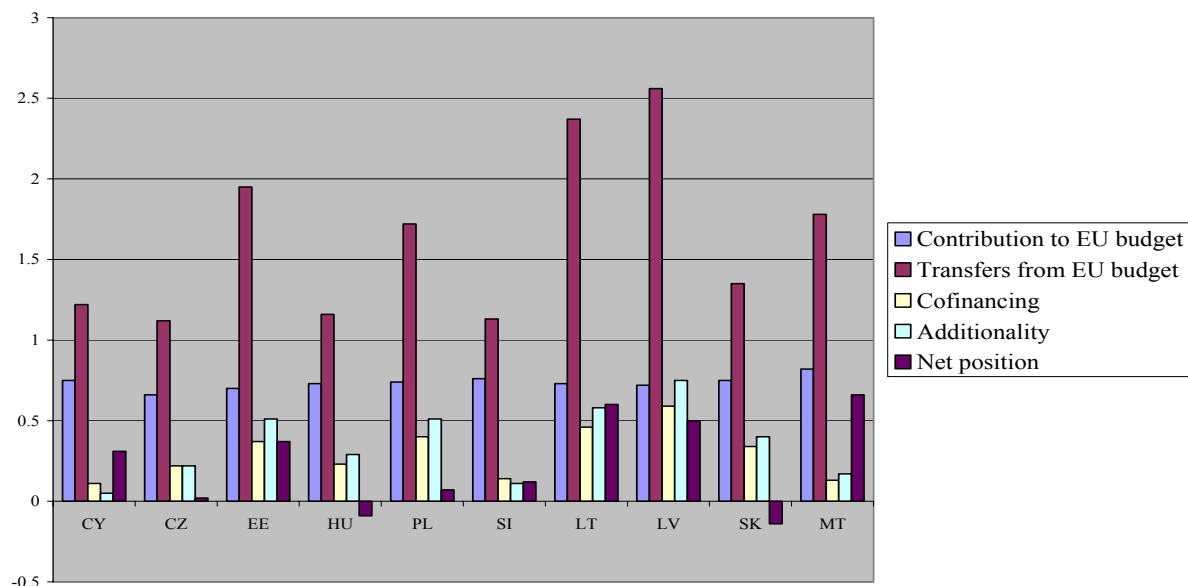
93. **Most of the existing new member states Pre-accession Economic Programs (PEPs) contain some calculations of the fiscal impact of accession with very different methodologies and results.** The Czech PEP estimated an increase in the budget deficit of 0.3 to 1 percent of GDP. The Slovak and Hungarian PEPs also concluded that there will be a small negative budgetary impact in the first year of accession. In contrast, the Polish and Slovenian PEPs concluded that EU accession will have a positive impact on the budget. A particular difficulty with these estimates has been to calculate the counterfactual situation, with cofinancing and additionality of payments posing particular problems.

94. **It is too early to make an overall assessment, but Hallet (2004) of the European Commission Directorate-General for Economic and Financial Affairs presents one of the more systematic attempts to calculate the direct budgetary impact of EU accession for the new member states taking into account payments to the EU budget, transfers from the EU budget to the NMS, as well as cofinancing and additionality requirements.** These estimates suggest the overall budgetary impact is small (Figure 1), which he uses to counter the argument that "accession itself triggers substantial additional public expenditure in the new member states." Even where there is a negative impact as in Hungary and Slovakia he cautions that "higher deficits are only one way to finance higher expenditure, the alternatives being higher taxation or expenditures cuts elsewhere." However, the estimates are heavily dependent on assumptions regarding the take-up and absorption capacity of the countries concerned.

¹⁵ Prepared by Graeme Justice.

¹⁶ ISPA: Instrument for Structural Policies for Pre-Accession; SAPARD: Special Accession Programme for Agriculture and Rural Development.

**Figure 1. New Member States: Fiscal Impact of Accession in 2004
Percent of GDP**



B. Indicative EU Financial Package for Romania

95. **The relation between the pre-and post-accession financial instruments is shown in Table 1.**¹⁷ In order to assist the accession states to carry out reforms required for membership, the EU provides three main types of financial instruments prior to accession. The Phare program principally involves institution building measures as well as measures designed to promote economic and social cohesion. The ISPA programme deals with large-

Table 1. Link between Pre-Accession and Post-Accession Funds

<i>Pre-accession instrument</i>	<i>Post-accession instrument</i>
Phare: Economic and Social Cohesion	European Regional Development Fund (ERDF) European Social Fund (ESF)
Phare: CBC Neighborhood Programs	Objective European Territorial Cooperation
ISPA	Cohesion Fund (CF)
SAPARD	European Fund for Agriculture and Rural Development

Source: Delegation of the European Commission, Romania.

¹⁷ Table 1 does not show new post-accession facilities, such as that for fisheries.

scale environment and transport investment support. The SAPARD programme supports agricultural and rural development. Given the lags between the allocation of funds, contracting and disbursement, Romania will continue to receive disbursements from the 2006 allocation of these funds in 2009 and 2010. Pre-accession financing expected from the three instruments from 2005 to 2009 is shown in Table 2. The estimated take-up of funds in 2005 of €602 compares with an initial allocation of €952 million. Committed funds can continue to be drawn down after accession. However, uncommitted funds under pre-accession programs will be lost following accession. Almost €700 million of SAPARD funds remain uncommitted, for example.

Table 2. Pre-Accession Financing from the EU Budget, 2005–09
(€ millions)

	2005 Est.		2006		2007		2008		2009	
	EU budget	Co-finance	EU budget	Co-finance	EU budget	Co-finance	EU budget	Co-finance	EU budget	Co-finance
<i>Total</i>	602	96	1006	330	1063	255	687	177	580	103
Phare	263	22	306	98	404	74	278	80	233	46
ISPA	152	25	439	88	375	86	278	75	236	57
SAPARD	187	49	261	144	284	95	131	22	111	0

Source: Romania Ministry of Public Finance, February 2006.

96. **The post-accession financial package for Romania of €11.3 billion for 2007 to 2009 was broadly confirmed at the European Council in December 2005, but remains indicative pending on the outcome of final negotiations with the European Parliament regarding the new EU financial perspective** (Table 3). The commitments are divided between structural operations of €6 billion, agriculture including rural development funds of €4 billion, and internal policies, including institution building funds of €0.8 billion. The Commission distinguishes between commitments and payments appropriations. Appropriations for commitments cover legal obligations made in that year regardless of the period over which the programs will be implemented. Appropriations for payments are the amounts allocated for the current year but not necessarily disbursed.

97. **Despite the considerable financial assistance available to Romania under the post-accession program, actual disbursements in the first years of accession will be considerably lower.** The size and phasing of the payments are dependent on numerous rules as well as the absorption capacity of the country, especially given the decentralized management of the programs. There are also different cofinancing requirements depending on the nature of the programs. Decentralized institutions need to be accredited for the use of funds, trained in procurement rules and financial management, project documentations preparation, and evaluation techniques. In general, procedures are more difficult than for pre-accession funds, and there is significant potential for underutilization of the available resources.

Table 3. Indicative Financial Package for Romania, 2007–09
(€ millions, 2004 prices)

	2007	2008	2009	2007-2009
Agriculture	826	1454	1728	4,008
<i>Market measures</i>	249	244	239	732
<i>Direct payments</i>	0	440	528	968
<i>Rural development</i>	577	770	961	2,308
Structural operations	1,399	1,972	2,603	5,974
<i>Structural fund</i>	933	1,314	1,735	3,982
<i>Cohesion fund</i>	466	658	868	1,992
Internal policies	270	265	260	796
<i>Existing policies</i>	244	248	252	744
<i>Institution building</i>	26	17	8	52
Lump-sum payments	297	132	131	560
TOTAL (commitments)	2,792	3,823	4,722	11,338
Total (payments)	1,421	2,352	2,995	6,768

Source: European Commission communication of 10 February 2004 and Accession Treaty for Bulgaria and Romania, published in the OJ L157 of June 21, 2005.

C. Outline of the Financial Package

Agriculture and rural development

98. **The Commission has decided to gradually introduce the system of direct payments to farmers at a level equivalent to 25 percent of the EU level in 2007, 30 percent in 2008 and 35 percent in 2009.** Annual increases of 10 percent would then bring the level of direct payments to 100 percent by 2016. This was because of concerns that immediate full integration into the system of direct payments would not give farmers the right incentives to restructure. No payments would actually be made in 2007 due to the fact that reimbursements from the EU budget for expenditure incurred by member states on direct payments in any given year is made from the budget of the following year. Applying the 2 percent deflator used by the Commission would imply that for Romania to be eligible for CAP direct payments in 2008 national pre-financing would have to be €440 million in 2007 (0.4 percent of GDP).¹⁸ There is no cofinancing for the direct payments. On the other hand, rural development support is also to be phased in over a 3 year period with an average cofinancing rate of 25 percent.

¹⁸ Note that allocations were initially made at 2004 prices. The Commission uses a 2 percent annual deflator to calculate allocations in current prices. All financial estimates in this paper are taken from the European Commission unless otherwise stated. The GDP estimates are based on the National Commission for Prognosis forecast (for consistency with the computation of Romania's contribution to the EU budget.)

Structural actions

99. **The use of Structural funds is based on the concept of “additionality.” The main idea is that the funds should not replace existing expenditure plans, so that the EU makes a real impact on structural spending in Romania.** The Cohesion fund is not subject to the rule of additionality. The principle of additionality is meant to be verified with ex ante, midterm and ex post evaluations. The ceiling for the rate of contribution by the European Regional Development Fund and European Social Fund for all operational programmes is 85 percent. The *minimum* Romanian co-financing rate is therefore 15 percent, but may be higher. Monitoring of co-financing requirements is not strict and sanctions do not apply. Disbursement is based on the principle of N+3, where N is the first year, with a 7 percent upfront payment for Structural Funds and 10.5 percent for the Cohesion Fund.

Internal policies

100. **Full participation of Romania in the Community’s internal policies is expected from accession.** Additional funds have therefore been allocated for the first three years of accession to support administrative and judicial capacity. No cofinancing requirements are attached to these funds.

Lump-sum payments

101. **In order to help Romania to finance actions at the new external borders of the Union for the implementation of the Schengen acquis and external border control and to improve cash-flow in national budget, Romania is to receive an additional allocation of €560 million for the period 2007–09, in the form of lump-sum payments under the temporary cash-flow and Schengen Facility.** The Commission considered that Romania should not find itself in a net budgetary position on accession which is worse than in the year before accession when it benefited from pre-accession funds. However, this is not binding and depends on a different definition of the net budgetary impact than used in this paper.

102. **The impact of EU accession on the budget is the result of the contribution to the EU budget, cofinancing, pre-financing of the direct payments under the CAP, and the additionality of Structural funds.** The contribution to the EU budget is currently estimated at €1,343 million in 2007 or about 1.3 percent of GDP. It is partly financed by the redirection of customs revenues to the EU budget, by VAT based resource, but there are also payments related to the UK rebate and other expenditures based on the GNI of each member state. However, this figure which is included in the 2005 Preaccession Economic Programme is probably an overestimate. Romania should expect a lower contribution (possibly 0.8 percent of GDP), following the discussion in the Advisory Committee for Own Resources (ACOR) in May 2006. This is due to a ceiling (as a percent of Community GNI) envisaged in the Agreement on the Financial Perspective 2007-2013 (lower than the initial Commission proposal) and a lower estimated level for custom duties and agricultural levies.

103. **Table 4 presents estimates of cofinancing requirements based on the various funding rules.** The table is based not on commitments or allocations, but on projected financing, which is much lower in the case of cohesion fund.

Table 4. EU Cofinancing Requirements, 2007–09
(€ millions, current prices; unless otherwise stated)

	2007		2008		2009		2007-2009	
	Payts.	Cofin	Payts.	Cofin	Payts.	Cofin	Payts.	Cofin
Rural development	334	84	563	141	944	236	1841	461
Market measures	264	0	264	0	264	0	792	0
Direct payments	0	0	438	0	526	0	964	0
Structural funds	476	95	837	167	909	182	2,222	444
Cohesion fund	15	3	126	25	287	57	428	86
<i>Total Post-Accession</i>	<i>1,089</i>	<i>182</i>	<i>2,228</i>	<i>333</i>	<i>2,930</i>	<i>475</i>	<i>6,247</i>	<i>991</i>
(Percent GDP)	1.06	0.18	1.93	0.29	2.31	0.37		
<i>Pre-accession funds</i>	<i>1,063</i>	<i>255</i>	<i>687</i>	<i>177</i>	<i>580</i>	<i>103</i>	<i>2,330</i>	<i>535</i>
(Percent GDP)	1.03	0.25	0.59	0.15	0.46	0.08		

Source: EC communication of 10 February 2004, and Fund staff estimates.

Note. Figures for co-financing under structural and cohesion funds are computed based on an average co-financing rate of 20 percent and for rural development on an average rate of 25 percent. Private co-financing is excluded.

104. **The overall impact on the budget of EU accession in 2007 is presented in Table 5.** While the overall impact of EU funding is likely to be highly positive over time, the initial impact in 2007 is about even as a percentage of GDP, with a small loss of about 0.1 percent of GDP. It should be noted that Table 5 presents the *global* impact on the national budget, thus including, besides the direct flows, also the national supplementary effort for EU funds absorption (co-financing, pre-financing, additionality). A different definition of the net balance was used when closing the accession negotiations (the net balance in relation to the EU budget is based only on the *direct* flows between the community budget and the national budget).

105. **Another way to look at the numbers is that ongoing pre-accession disbursements offset the initial delays in disbursement of post-accession funds.** The estimates are based on European Commission estimates of cash disbursements under the various programs given the prevailing rules and procedures. They do not build in delays due to problems related to capacity and absorption. The estimate of additionality is particularly subjective, as it is difficult to estimate the counterfactual case. The experience of the new member states is that the take-up rate of post-accession funds is very low in the first year of membership (as little as 20 percent of available funds) and Romania will have to move quickly to put the necessary systems in place to ensure that it does not become a net contributor to the EU budget in the first year of accession.

Table 5. Direct Impact on the Budget of EU Accession, 2007
(Percent of GDP)

	Pre-accession	Post-accession	Total Impact
Contribution to EU budget		-1.3	-1.3
EU transfers (excl. Internal)	1.0	1.1	2.1
Cofinancing	-0.2	-0.2	-0.4
Pre-financing direct payts.		-0.4	-0.4
Additionality		-0.5	-0.5
Internal policies funds		0.1	0.1
Lump-sum payments		0.3	0.3
<i>Total</i>	<i>0.8</i>	<i>-0.9</i>	<i>-0.1</i>

Source: EC communication of 10 February 2004; and Fund staff estimates and projections.

106. **This is of particular concern because the projections for 2006 and 2007 in the PEP assume a doubling of the disbursement of pre-accession EU transfers compared with 2005, even setting aside the new post-accession funds.** Absorption capacity will therefore be of paramount importance, and a potentially much higher negative impact is possible if Romania is not able to increase its ability to manage the far higher inflow of funds. Some improvements have been made. The management capacity for the increase in pre-accession funding is now monitored by the Joint Monitoring Committee with the help of a benchmarking system. The government also introduced a Joint Action Plan in the summer of 2005, which hopefully will improve the administrative capacity for the sound financial and program management of EU funds.

D. Conclusions

107. **The above estimates indicate that European Accession will place an extra burden on the Romanian budget in 2007, compared with 2006, of almost 1 percent of GDP.** If pre-accession funds are included, the overall impact is small, so that net position relative to the EU is more or less neutral in 2007. The estimates carry a number of uncertainties, as many of the modalities are not yet worked out. The contribution to the EU budget may be lower, and the estimates of cofinancing are conservative given the imprecise wording of the agreements. On the other hand, the capacity to absorb uncommitted pre-accession funds as well as the additional funds that will become available on accession will be a major determinant of the overall impact, with the risks on the downside. Other factors affecting the estimates such as additionality are highly subjective, but the above projections attempt to keep to the spirit of the agreement; for example, by assuming that post-accession funds will not be used to substitute for financing of existing projects.

REFERENCE

Hallet, Martin, (2004), "Fiscal Effects of Accession in the New Member States", European Economy Economic Papers No. 203, May 2004 (European Commission).

Table 1. Romania: GDP by Origin, 1995-2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 1/	2005 2/	
	(in million new lei, at current prices)											
Total	7214	10892	25293	37379	54573	80377	116769	151475	197565	246372	287186	
Agriculture, forestry, fishery	1427	2095	4553	5377	7281	8901	15618	17308	22849	31473	25665	
Industry 3/	2371	3618	7809	9821	13534	21948	32305	42610	49490	61964	70002	
Construction	476	707	1323	1903	2738	3929	6233	8789	11483	14785	18536	
Services	2604	3988	9722	16610	25336	37213	51926	68594	91580	111355	138782	
Other 4/	336	484	1885	3668	5685	8386	10687	14175	22163	26795	34202	
	(Shares of GDP, in percent)											
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Agriculture, forestry, fishery	19.8	19.2	18.0	14.4	13.3	11.1	13.4	11.4	11.6	12.8	8.9	
Industry 3/	32.9	33.2	30.9	26.3	24.8	27.3	27.7	28.1	25.0	25.2	24.4	
Construction	6.6	6.5	5.2	5.1	5.0	4.9	5.3	5.8	5.8	6.0	6.5	
Services	36.1	36.6	38.4	44.4	46.4	46.3	44.5	45.3	46.4	45.2	48.3	
Other 4/	4.7	4.4	7.5	9.8	10.4	10.4	9.2	9.4	11.2	10.9	11.9	

Sources: National Institute of Statistics of Romania and Fund staff estimates.

1/ Semi-final data.

2/ Provisional data

3/ Including electric and thermal energy, gas and water.

4/ Net taxes

Table 2. Romania: GDP by Expenditure, 1995-2005
(in percent)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 1/	2005 2/
GDP	7.1	3.9	-6.1	-4.8	-1.1	2.1	5.7	5.1	5.2	8.4	4.1
Domestic Demand	7.2	5.9	-6.0	-0.2	-3.7	4.3	8.4	3.9	8.4	12.1	8.3
Household consumption	13.0	8.0	-3.7	0.6	-2.5	-0.8	6.9	5.3	8.5	14.1	9.8
Government consumption	1.1	1.9	-7.5	4.5	-2.5	12.3	3.6	3.0	7.5	5.0	4.4
Gross fixed investment	6.9	5.7	1.7	-5.7	-4.8	5.5	10.1	8.2	8.6	10.8	13.0
of which: non government	4.8	7.1	3.0	-8.6	-6.5	7.7	10.9	8.3	8.1	13.1	14.1
of which: government	30.8	-7.1	-11.8	29.3	10.1	-11.2	3.6	8.1	13.2	-10.6	1.0
Increase in stocks (contribution) 3/	-2.4	-0.6	-3.4	0.0	-0.8	2.2	1.6	-1.6	0.1	0.5	-1.1
External Demand (contribution)	-0.2	-2.3	0.5	-4.6	2.8	-2.3	-3.1	0.9	-3.6	-4.5	-5.0
Exports of goods and services	17.0	2.0	11.4	-1.7	10.5	23.4	12.1	17.5	8.4	13.9	7.6
Imports of goods and services	16.3	8.7	7.5	11.3	-1.5	27.1	18.4	12.0	16.0	22.1	17.2
Domestic Demand	105.6	108.4	107.1	108.0	104.8	105.6	107.8	105.7	107.5	109.1	110.4
Household consumption	67.3	69.1	73.6	74.9	73.2	68.9	68.8	67.8	64.9	66.6	66.9
Government consumption	14.0	13.5	12.8	15.4	15.6	17.3	16.4	16.2	20.8	20.2	20.8
Gross fixed investment	21.4	23.0	21.2	18.2	17.7	18.9	20.7	21.3	21.4	21.6	23.1
of which: non government	19.3	21.0	19.6	16.3	15.6	17.0	18.7	19.3	19.3	19.9	21.5
of which: government	2.1	2.0	1.6	1.9	2.1	1.9	1.9	2.0	2.1	1.7	1.6
Increase in stocks 3/	2.9	2.9	-0.5	-0.4	-1.6	0.6	1.9	0.4	0.4	0.7	-0.4
External Demand	-5.6	-8.4	-7.1	-8.0	-4.8	-5.6	-7.8	-5.7	-7.5	-9.1	-10.4
Exports of goods and services	27.6	28.1	29.2	22.6	28.0	32.9	33.3	35.4	34.7	35.9	33.0
Imports of goods and services	-33.2	-36.6	-36.2	-30.6	-32.9	-38.5	-41.1	-41.1	-42.2	-45.0	-43.4
Domestic Demand	7.3	6.3	-6.5	-0.2	-4.0	4.5	8.9	4.2	8.8	13.0	9.1
Household consumption	8.2	5.4	-2.5	0.4	-1.9	-0.6	4.8	3.7	5.7	9.2	6.5
Government consumption	0.1	0.3	-1.0	0.6	-0.4	1.9	0.6	0.5	1.2	1.0	0.9
Gross fixed investment	1.4	1.2	0.4	-1.2	-0.9	1.0	1.9	1.7	1.8	2.3	2.8
of which: non government	0.9	1.4	0.6	-1.7	-1.1	1.2	1.8	1.5	1.6	2.5	2.8
of which: government	0.5	-0.2	-0.2	0.5	0.2	-0.2	0.1	0.2	0.3	-0.2	0.0
Increase in stocks (contribution) 3/	-2.4	-0.6	-3.4	0.0	-0.8	2.2	1.6	-1.6	0.1	0.5	-1.1
External Demand (contribution)	-0.2	-2.3	0.5	-4.6	2.8	-2.3	-3.1	0.9	-3.6	-4.5	-5.0
Exports of goods and services	4.2	0.6	3.2	-0.5	2.4	6.6	4.0	5.8	3.0	4.8	2.7
Imports of goods and services	-4.4	-2.9	-2.7	-4.1	0.5	-8.9	-7.1	-4.9	-6.6	-9.3	-7.7

Sources: National Institute of Statistics of Romania and Fund staff estimates.

1/ Semi-final data.

2/ Provisional data

3/ Includes statistical discrepancy.

Table 3. Romania: Investment by Sector, 1993-2004
(In millions of redenominated lei, at current prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Industry	141.1	295.2	540.2	918.7	1977.2	2756.8	3717.2	4939.4	8173.6	10463.4	13394.0	17992.4
Construction	7.8	43.1	67.9	131.0	367.6	422.7	576.7	1067.3	1318.3	1774.3	3423.9	4154.7
Agriculture and forestry	19.6	152.9	142.0	242.7	289.0	408.8	593.3	988.1	1297.7	3167.9	2093.7	2468.1
Transport	31.7	75.0	71.1	128.6	233.3	347.3	532.5	1065.1	2070.1	2041.9	3170.0	3254.8
Telecommunications	13.4	30.0	36.8	76.1	301.6	458.9	940.4	1241.6	2863.9	1671.5	1227.4	2207.2
Trade	27.3	67.9	114.4	207.1	386.8	722.0	768.9	1497.1	2465.4	3354.6	5383.3	6931.1
Education	1.7	6.7	10.9	29.5	71.0	76.8	58.8	8.3	71.8	229.9	196.3	184.7
Health and social assistance	2.1	4.3	10.5	16.6	35.6	58.1	45.7	17.5	30.3	252.1	286.7	326.7
Public administration and defense	5.6	29.2	57.8	80.9	270.3	228.7	442.4	535.6	620.3	882.0	1168.3	1638.8
Financial sector	8.1	31.1	47.2	83.1	207.1	300.2	387.0	558.2	554.5	1058.5	1665.0	1414.3
Other	23.9	65.1	200.7	180.2	274.2	271.2	332.0	580.5	953.9	2277.3	3642.6	4297.2
Investment in the national economy	282.2	800.5	1299.6	2094.5	4413.5	6051.5	8394.8	12498.7	20419.5	27173.5	35651.2	44869.9
<i>Of which:</i>												
State sector	195.9	469.3	689.9	1070.5	2008.4	2167.0	2535.8	3242.1	4753.9	7536.5	8961.8	9263.7

Source: National Institute of Statistics of Romania.

Table 4. Romania: Saving and Investment Balance, 1995-2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004 1/	2005 2/
Income and prices											
Nominal GDP (in millions of redenominated lei)	7,214	10,892	25,293	37,379	54,573	80,377	116,769	151,475	197,565	246,372	287,186
Nominal GDP (in billions of US dollars)	35.5	35.3	35.2	42.1	35.7	37.1	40.2	45.8	59.5	75.5	98.6
Saving and investment balances (In billion new lei)											
Total domestic saving	13439	19142	34148	36246	62126	113990	173695	242940	285793	323422	352721
Net factor receipts and transfers from abroad	274	965	2489	3659	3085	12668	25065	34967	31213	17885	48965
Total national saving	13714	20107	36638	39905	65212	126658	198759	277907	317007	341307	401686
Non-government	12331	19638	37784	46498	69926	134432	199790	268554	294043	299300	348711
Government	1383	469	-1147	-6593	-4714	-7774	-1031	9353	22964	42008	52974
Total investment	17510	28160	52171	66334	87741	156491	263448	328397	431668	549998	651808
Non-government	13708	22478	40065	52803	72726	132009	226899	279533	364935	482158	576295
Government	3802	5682	12106	13530	15015	24482	36549	48864	66733	67840	75513
Savings - investment balance	-3796	-8053	-15534	-26428	-22529	-29833	-64689	-50490	-114661	-208691	-250122
Non-government	-1377	-2840	-2281	-6305	-2800	2423	-27109	-10979	-70893	-182858	-227584
Government	-2419	-5213	-13253	-20123	-19729	-32256	-37580	-39511	-43769	-25832	-22539
Foreign saving	3796	8053	15534	26428	22529	29833	64689	50490	114661	208691	250122
Saving and investment balances (In percent of GDP)											
Total domestic saving	18.6	17.6	13.5	9.7	11.4	14.2	14.9	16.0	14.5	13.1	12.3
Net factor receipts and transfers from abroad	0.4	0.9	1.0	1.0	0.6	1.6	2.1	2.3	1.6	0.7	1.7
Total national saving	19.0	18.5	14.5	10.7	11.9	15.8	17.0	18.3	16.0	13.9	14.0
Non-government	17.1	18.0	14.9	12.4	12.8	16.7	17.1	17.7	14.9	12.1	12.1
Government	1.9	0.4	-0.5	-1.8	-0.9	-1.0	-0.1	0.6	1.2	1.7	1.8
Total investment	24.3	25.9	20.6	17.7	16.1	19.5	22.6	21.7	21.8	22.3	22.7
Non-government	19.0	20.6	15.8	14.1	13.3	16.4	19.4	18.5	18.5	19.6	20.1
Government	5.3	5.2	4.8	3.6	2.8	3.0	3.1	3.2	3.4	2.8	2.6
Savings - investment balance	-5.3	-7.4	-6.1	-7.1	-4.1	-3.7	-5.5	-3.3	-5.8	-8.5	-8.7
Non-government	-1.9	-2.6	-0.9	-1.7	-0.5	0.3	-2.3	-0.7	-3.6	-7.4	-7.9
Government	-3.4	-4.8	-5.2	-5.4	-3.6	-4.0	-3.2	-2.6	-2.2	-1.0	-0.8
Current Account Deficit	5.3	7.4	6.1	7.1	4.1	3.7	5.5	3.3	5.8	8.5	8.7

Sources: National Institute of Statistics of Romania and Fund staff estimates.

1/ Semi-final data.

2/ Provisional data.

Table 5. Romania: Employment in Agriculture, 1995-2004 1/
(In thousands of persons, end of year, unless otherwise indicated)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total employment in agriculture	3187	3249	3322	3296	3419	3523	3456	2971	2842	2592
Private farms	2926	3000	3156	3143	3314	3448	3401	2921	2801	2547
State farms (public and mixed)	261	249	166	153	105	75	55	50	41	45
Agro processing (average)	231	219	213	214	187	169	160	163	162	161
Memorandum items:										
Total employment in economy	9493	9379	9023	8813	8420	8629	8563	8329	8306	8238
Employment in agriculture (percent of total)	33.6	34.6	36.8	37.4	40.6	40.8	40.4	35.7	34.2	31.5

Sources: National Institute of Statistics of Romania.

1/ Including self-employed workers.

Table 6. Romania: Output of Main Agricultural Products, 1993-2004
(In thousands of tons, unless otherwise indicated)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Grains, total	15,493	18,184	19,883	14,200	22,107	15,453	17,037	10,478	18,871	14,357	12,964	24,403
<i>Of which:</i>												
Wheat and rye	5,355	6,187	7,709	3,164	7,186	5,208	4,683	4,456	7,764	4,441	2,496	7,867
Maize	7,987	9,343	9,923	9,608	12,687	8,623	10,935	4,898	9,119	8,400	9,577	14,542
Sunflower seeds	696	764	933	1,096	858	1,073	1,301	721	824	1,003	1,506	1,558
Sugar beet	1,776	2,764	2,655	2,848	2,726	2,361	1,415	667	876	955	765	673
Potatoes	3,709	2,947	3,020	3,591	3,206	3,319	3,957	3,470	3,997	4,078	3,947	4,230
Field vegetables	2,766	2,476	2,783	2,647	2,354	2,754	2,996	2,478	2,826	2,807	3,301	3,657
Fruit	2,183	980	917	1,632	1,416	1,036	936	1,301	1,553	952	2,089	1,744
Grapes	1,339	1,033	1,314	1,431	1,179	874	1,117	1,295	1,122	1,077	1,078	1,230
Livestock production												
Meat (live weight)	1,935	1,852	1,846	1,868	1,705	1,672	1,521	1,414	1,415	1,604	1,699	1,561 1/
Milk (in millions of hectoliters)	47.3	53.6	56.8	57.2	56.2	54.3	52.6	51.6	53.2	55.1	57.7	59.8
Eggs (in millions)	5,633	5,407	5,567	5,783	5,271	5,331	5,668	5,711	6,001	6,432	6,641	7,381
Wool (in tons)	26,011	25,141	24,323	23,165	22,120	19,967	18,983	17,997	16,880	16,659	16,879	17,505
Honey (in tons)	9,936	9,820	10,435	11,157	10,543	10,198	11,153	11,746	12,598	13,434	17,409	19,150
Memorandum items:												
Agricultural area												
Total (in thousands of hectares)	14,793	14,798	14,797	14,789	14,794	14,802	14,731	14,857	14,852	14,837	14,717	14,711
<i>Of which:</i>												
Irrigated	3,102	3,104	3,110	3,096	3,089	3,085	3,084	3,082	3,081	3,077	3,077	3,077
Per capita output												
Wheat and rye (in kg.)	235	272	340	140	319	231	209	199	347	204	115	363
Potatoes (in kg.)	163	130	133	159	142	148	176	155	178	187	182	195
Meat (in kg.)	85	82	81	83	76	74	68	63	63	75	78	74
Milk (in liters)	208	236	250	253	249	242	234	230	237	253	266	276

Source: National Institute of Statistics of Romania.

1/ Starting with 2004, the data refers to the "Weight of animals slaughtered in the agricultural holdings and slaughter houses".

Table 7. Romania: Industrial Production Index, 2000-05
(Index 2000=100)

	2000		2001		2002		2003		2004		2005	
	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change
January	85.3	-7.9	96.0	3.3	98.6	0.2	103.6	-1.0	104.4	-2.7	114.0	-5.5
February	93.8	10.0	100.7	4.9	102.1	3.5	104.0	0.4	111.2	6.5	115.7	1.5
March	105.2	12.2	111.9	11.1	110.8	8.5	114.9	10.5	125.8	13.1	131.3	13.5
April	96.6	-8.2	106.6	-4.7	113.0	2.0	115.3	0.3	115.9	-7.9	126.3	-3.8
May	102.7	6.3	116.2	9.0	112.2	-0.7	120.1	4.2	126.4	9.1	121.3	-4.0
June	104.5	1.8	109.9	-5.4	114.3	1.9	123.1	2.5	127.1	0.6	126.2	4.0
July	102.6	-1.8	109.5	-0.4	118.9	4.0	126.5	2.8	129.1	1.6	121.1	-4.0
August	100.9	-1.7	108.4	-1.0	114.6	-3.6	113.8	-10.0	121.2	-6.1	123.9	2.3
September	103.5	2.6	109.2	0.7	119.4	4.2	121.7	6.9	128.7	6.2	132.2	6.7
October	104.2	0.7	116.2	6.4	124.9	4.6	126.8	4.2	129.8	0.9	132.0	-0.2
November	107.7	3.4	116.0	-0.2	122.6	-1.8	120.9	-4.7	132.2	1.8	134.3	1.7
December	92.9	-13.7	98.4	-15.2	104.6	-14.7	107.3	-11.2	120.6	-8.8	123.2	-8.3
Year Average	100.0	...	108.3	...	113.0	...	116.5	...	122.7	...	125.1	...

Source: National Institute of Statistics of Romania, and Fund staff estimates.

Table 8. Romania: Number of Employees by Sector and Type of Ownership, 2000-04 1/

	2000			2001			2002			2003			2004		
	Private Sector 2/			Private Sector 2/			Private Sector			Private Sector			Private Sector		
	Total employees (1000s)	Total employment in sector (%)	Total 3/ in sector (%)	Total employees (1000s)	Total employment in sector (%)	Total 3/ in sector (%)	Total employees (1000s)	Total employment in sector (%)	Total 3/ in sector (%)	Total employees (1000s)	Total employment in sector (%)	Total 3/ in sector (%)	Total employees (1000s)	Total employment in sector (%)	Total 3/ in sector (%)
Total economy	4,646.3	2,090.6	100.0	4,613.1	2,267.4	100.0	4,614.7	2,426.5	100.0	4,655.0	2,632.3	100.0	4,652.7	2,695.6	100.0
<i>Of which:</i>															
Industry	1,913.0	1,003.7	48.0	1,923.8	1,138.8	50.2	1,911.3	1,226.3	50.5	1,854.3	1,282.5	48.7	1,807.5	1,308.6	48.5
Agriculture and forestry	163.6	56.9	2.7	150.6	67.6	3.0	140.5	63.4	2.6	138.7	72.3	2.7	139.4	69.6	2.6
Transport and telecommunications	368.2	89.2	4.3	353.1	92.9	4.1	344.8	111.3	4.6	341.4	127.8	4.9	323.4	135.3	5.0
Construction	313.5	228.6	10.9	291.3	219.9	9.7	305.5	241.5	10.0	332.8	267.8	10.2	328.0	260.5	9.7
Trade	581.6	506.8	24.3	602.2	532.8	23.5	385.5	526.0	21.7	624.7	576.6	21.9	639.5	587.0	21.8
Other	1306.4	205.4	9.8	1292.1	215.4	9.5	1,327.1	258.0	10.6	1,363.1	305.3	11.6	1,414.9	334.6	12.4

Source: National Institute of Statistics of Romania.

1/ Excludes self-employed workers.

2/ Data were recalculated by including the exclusively foreign capital units into private sector.

3/ Distribution by sector of private employees.

Table 9. Romania: Gross Average Wages, 2000-05

		Economy-wide				Public				Economy-wide				Public			
		Industry	Agriculture	Admin. 1/		Industry	Agriculture	Admin. 1/		Industry	Agriculture	Admin. 1/		Industry	Agriculture	Admin. 1/	
		(nominal, in new lei)				(Nominal, 12-month growth rate)				(Real, 12-month growth rate 2/)							
2000	January	226.3	234.7	156.5	273.4	44.2	49.0	48.1	32.5	-8.0	-5.0	-5.5	-15.5				
	February	227.7	237.3	162.7	274.5	43.8	48.6	50.5	34.6	-7.7	-4.6	-3.4	-13.6				
	March	248.9	256.1	171.6	274.3	40.7	37.1	42.6	25.5	-5.6	-8.0	-4.3	-15.8				
	April	283.8	283.6	174.2	309.5	52.2	48.4	37.6	40.0	2.2	-0.3	-7.6	-6.0				
	May	267.6	268.3	176.1	353.0	45.8	43.2	36.3	65.1	1.3	-0.5	-5.3	14.7				
	June	278.9	276.2	189.7	385.0	46.0	37.5	42.1	75.3	3.6	-2.4	0.9	24.4				
	July	284.9	293.4	207.3	371.8	41.0	35.8	43.7	56.1	-2.4	-6.0	-0.5	8.0				
	August	290.9	305.5	207.9	355.7	42.9	41.0	45.4	53.6	-1.7	-3.0	0.0	5.6				
	September	299.0	298.1	212.3	399.8	46.5	38.3	51.8	66.6	1.1	-4.5	4.8	15.0				
	October	311.5	314.1	222.8	419.0	49.7	43.5	53.7	62.3	4.8	0.4	7.5	13.6				
	November	335.0	332.9	226.3	466.1	50.7	37.7	54.7	88.2	6.6	-2.6	9.4	33.1				
	December	397.6	390.7	272.9	771.1	55.3	43.8	76.8	94.5	10.4	2.2	25.6	38.2				
2001	January	362.2	352.6	246.3	519.6	60.0	50.2	57.4	90.1	14.4	7.4	12.5	35.9				
	February	341.2	344.7	237.4	458.8	49.9	45.3	45.9	67.1	7.1	3.8	4.2	19.4				
	March	371.7	388.7	251.8	492.4	49.4	51.8	46.7	79.5	6.5	8.2	4.6	27.9				
	April	432.2	444.2	287.4	538.8	52.3	56.6	65.0	74.1	10.8	14.0	20.0	26.6				
	May	417.5	437.8	291.0	561.9	56.0	63.2	65.3	59.2	13.6	18.8	20.3	15.9				
	June	428.1	430.5	297.6	584.1	53.5	55.9	56.9	51.7	13.1	14.9	15.6	11.8				
	July	443.6	471.3	302.0	580.1	55.7	60.6	45.7	56.0	18.1	21.9	10.5	18.4				
	August	445.0	470.3	310.0	575.1	53.0	54.0	49.2	61.7	15.6	16.3	12.7	22.2				
	September	442.4	453.1	297.3	600.6	48.0	52.0	40.0	50.2	12.8	15.8	6.7	14.5				
	October	453.4	465.5	331.3	611.6	45.6	48.2	48.7	46.0	11.3	13.3	13.7	11.6				
	November	472.0	479.8	319.6	615.6	40.9	44.1	41.3	32.1	7.8	10.3	8.1	1.1				
	December	530.0	536.1	340.3	705.4	33.3	37.2	24.7	-8.5	2.3	5.3	-4.3	-29.8				
2002	January	514.5	480.2	347.2	939.1	42.1	36.2	41.0	80.7	10.5	5.9	9.6	40.6				
	February	477.9	472.7	334.8	648.6	40.0	37.1	41.1	41.4	10.1	7.8	10.9	11.1				
	March	509.1	506.3	347.8	660.9	37.0	30.3	38.1	34.2	9.5	4.1	10.4	7.3				
	April	558.5	563.4	361.0	689.3	29.2	26.8	25.6	27.9	3.9	2.0	1.0	2.9				
	May	532.9	532.3	358.6	653.2	27.7	21.6	23.2	16.2	2.5	-2.4	-1.0	-6.6				
	June	532.7	539.3	351.3	662.9	24.4	25.3	18.0	13.5	0.3	1.0	-4.8	-8.5				
	July	549.9	572.8	359.4	663.6	23.9	21.5	19.0	14.4	0.7	-1.2	-3.3	-7.0				
	August	547.0	562.9	357.0	652.4	22.9	19.7	15.1	13.4	1.3	-1.4	-5.1	-6.5				
	September	540.4	547.2	367.1	661.5	22.2	20.8	23.5	10.2	2.0	0.8	3.1	-8.0				
	October	557.1	555.3	374.1	734.3	22.9	19.3	12.9	20.1	3.4	0.4	-5.0	1.1				
	November	570.5	553.2	381.3	764.5	20.9	15.3	19.3	24.2	1.9	-2.8	0.6	4.7				
	December	652.2	632.3	424.8	881.6	23.1	18.0	24.9	25.0	4.4	0.1	6.0	6.1				
2003	January	652.0	588.6	435.8	1200.6	26.7	22.6	25.5	27.8	8.7	5.1	7.6	9.6				
	February	605.4	577.3	417.7	843.9	26.7	22.1	24.7	30.1	9.0	5.1	7.3	11.9				
	March	633.9	609.8	417.0	864.9	24.5	20.4	19.9	30.9	6.3	2.9	2.4	11.8				
	April	688.6	667.2	429.3	901.3	23.3	18.4	18.9	30.8	6.3	2.1	2.5	12.8				
	May	652.1	631.3	419.6	928.8	22.4	18.6	17.0	42.2	7.0	3.7	2.3	24.3				
	June	647.6	629.5	426.5	947.8	21.6	16.7	21.4	43.0	6.6	2.4	6.5	25.4				
	July	672.2	670.4	439.5	881.5	22.2	17.1	22.3	32.8	6.5	2.0	6.5	15.7				
	August	664.8	657.1	435.1	855.6	21.5	16.7	21.9	31.1	6.5	2.3	6.8	14.9				
	September	676.4	673.5	435.2	915.3	25.2	23.1	18.6	38.4	8.0	6.2	2.3	19.4				
	October	687.4	669.0	452.7	1016.1	23.4	20.5	21.0	38.4	6.6	4.1	4.5	19.5				
	November	702.1	667.3	447.9	1081.8	23.1	20.6	17.5	41.5	7.5	5.3	2.6	23.6				
	December	806.9	748.5	474.2	1200.5	23.7	18.4	11.6	36.2	8.4	3.7	-2.2	19.3				
2004	January	800.6	703.5	518.8	1523.4	22.8	19.5	19.0	26.9	7.8	4.9	4.5	11.4				
	February	748.4	716.3	485.7	1060.4	23.6	24.1	16.3	25.6	8.7	9.1	2.3	10.5				
	March	806.6	781.6	505.4	1106.1	27.2	28.2	21.2	27.9	12.5	13.4	7.2	13.1				
	April	829.3	808.8	507.1	1093.7	20.4	21.2	18.1	21.3	7.0	7.7	5.0	7.8				
	May	800.8	782.5	490.8	1049.4	22.8	23.9	17.0	13.0	9.3	10.3	4.1	0.6				
	June	803.6	784.4	504.8	1114.9	24.1	24.6	18.3	17.6	10.8	11.2	5.6	5.0				
	July	812.6	812.1	548.0	1093.4	20.9	21.1	24.7	24.0	7.8	8.1	11.2	10.7				
	August	810.1	811.9	518.5	1079.8	21.9	23.5	19.2	26.2	8.4	9.9	6.0	12.3				
	September	821.4	835.3	545.6	1122.8	21.4	24.0	25.4	22.7	9.3	11.6	12.8	10.4				
	October	839.3	804.0	569.2	1201.2	22.1	20.2	25.7	18.2	10.2	8.5	13.5	6.7				
	November	867.8	827.5	551.2	1322.4	23.6	24.0	23.1	22.2	12.5	12.8	12.0	11.2				
	December	973.4	913.4	577.2	1470.0	20.6	22.0	21.7	22.4	10.4	11.7	11.4	12.1				
2005	January	951.0	838.0	633.0	1886.0	18.8	19.1	22.0	23.8	9.0	9.3	12.0	13.6				
	February	875.0	823.0	596.0	1312.0	16.9	14.9	22.7	23.7	7.4	5.5	12.7	13.6				
	March	920.0	881.0	620.0	1342.0	14.1	12.7	22.7	21.3	5.0	3.7	12.9	11.6				
	April	973.0	927.0	626.0	1380.0	17.3	14.6	23.5	26.2	6.7	4.2	12.2	14.7				
	May	942.0	917.0	641.0	1357.0	17.6	17.2	30.6	29.3	7.0	6.6	18.8	17.6				
	June	944.0	925.0	641.0	1387.0	17.5	17.9	27.0	24.4	7.1	7.5	15.8	13.4				
	July	957.0	945.0	651.0	1355.0	17.8	16.4	18.8	23.9	7.7	6.4	8.7	13.3				
	August	963.0	959.0	645.0	1315.0	18.9	18.1	24.4	21.8	9.2	8.5	14.3	11.9				
	September	965.0	974.0	641.0	1325.0	17.5	16.6	17.5	18.0	8.3	7.5	8.3	8.8				
	October	974.0	943.0	652.0	1485.0	16.1	17.3	14.6	23.6	7.3	8.5	5.9	14.3				
	November	1017.0	978.0	662.0	1611.0	17.2	18.2	20.1	21.8	7.8	8.7	10.5	12.0				
	December	1121.0	1084.0	706.0	1608.0	15.2	18.7	22.3	9.4	6.0	9.2	12.6	0.7				

Source: National Institute of Statistics of Romania.

1/ Includes Public administration and defence; social insurance of public sector.

2/ Deflated by CPI.

Table 10. Romania: Population, Labor Force, and Employment, 1995-2004
(In thousands of persons; end of year, unless otherwise indicated)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Population	22656	22582	22526	22489	22456	22431	21833	21773	21713	21659
<i>Of which:</i>										
Working age 1/	13228	13283	13328	13365	13378	13437	13758	13426	13541	13599
<i>Of which:</i>										
Labor force 2/	9513	9049	8927	8869	8578	8669	8427	8148	8033	7868
Nonworking age	9428	9299	9198	9124	9078	8994	8075	8347	8172	8060
<i>Of which:</i>										
Labor force 3/	979	987	977	968	972	967	963	942	932	929
Total employment 4/	9493	9379	9023	8813	8420	8629	8563	8329	8306	8238
<i>Of which:</i>										
In the state and cooperative sector 5/ (in percent)	49.3	48.5	42.5	38.2	33.3	29.6	27.4	26.1	24.4	23.8
Total unemployed	998	658	881	1025	1130	1007	827	761	659	558
Percent of labor force	9.5	6.6	8.9	10.4	11.8	10.5	8.8	8.4	7.4	6.3
<i>Of which:</i>										
Receive benefits (in percent)	7.4	4.6	6.6	8.1	9.1	7.8	6.5	3.8	3.3	2.6
Recipients of unemployment benefits	774	462	656	793	872	752	608	344	298	227
Civilian labor force (total)	10491	10037	9904	9838	9550	9636	9389	9090	8964	8796
Labor force										
Participation rate in percent 6/	71.9	68.1	67.0	66.4	64.1	64.5	61.2	60.7	59.3	57.9

Source: National Institute for Statistics of Romania.

1/ Includes women aged 16 - 57 and men aged 16 - 62.

2/ Working age and able to work population (excluding working age persons with permanent incapacity to work and working age pensioners), population under vocational training and other categories of population.

3/ Active population not of working age = employees under and over working age who work + other persons under and over working age who work.

4/ Excluding military personnel and staff of public organizations, but including nondependent and public sector employment.

5/ State and cooperative sector includes the following type of ownership: public, mixed, co-operative and community.

6/ Working age labor force as a proportion of population of working age.

Table 11. Romania: Consumer Prices, 2000-05
(percentage change in the CPI)

		Non-Food				Non-Food			
		Total	Food	Goods	Services	Total	Food	Goods	Services
		Month inflation rate				12-month inflation rate			
2000	January	4.6	6.8	2.4	3.3	54.3	42.3	59.9	89.8
	February	2.3	3.1	1.3	2.0	53.4	43.2	56.7	88.5
	March	1.8	2.4	1.2	1.7	47.0	40.0	45.7	82.5
	April	4.4	2.3	5.3	8.9	46.4	36.2	48.0	86.3
	May	1.8	1.9	1.9	1.5	42.2	34.6	45.8	62.7
	June	3.0	3.7	3.0	0.8	40.3	38.9	40.0	46.7
	July	4.4	5.2	3.9	3.1	44.8	47.9	41.8	42.7
	August	1.8	1.2	2.1	2.7	45.9	49.6	41.6	44.3
	September	2.9	3.0	3.1	2.1	45.4	48.8	41.9	43.1
	October	2.8	3.1	2.3	3.0	43.9	48.3	40.1	38.0
	November	2.9	2.9	3.5	1.5	42.4	47.6	37.7	36.7
	December	2.6	3.0	2.4	1.6	41.6	46.1	37.6	37.1
2001	January	3.7	3.8	2.2	7.0	40.3	41.9	37.3	42.0
	February	2.2	3.1	1.3	2.4	40.3	41.9	37.3	42.5
	March	2.0	2.5	1.8	1.4	40.5	42.0	38.1	42.2
	April	2.6	3.2	2.4	1.5	38.2	43.3	34.4	32.5
	May	1.7	1.9	1.8	1.4	38.0	43.3	34.2	32.3
	June	1.6	2.0	1.2	1.4	36.1	40.9	31.8	33.2
	July	1.3	0.1	2.0	2.8	32.1	34.1	29.4	32.8
	August	2.2	0.7	3.9	2.5	32.7	33.4	31.7	32.6
	September	1.9	1.4	2.3	2.5	31.5	31.4	30.6	33.1
	October	2.4	1.8	2.6	3.7	31.0	29.7	31.0	34.0
	November	2.8	1.2	4.8	1.9	30.8	27.6	32.7	34.5
	December	2.2	2.6	1.4	2.9	30.3	27.1	31.4	36.3
2002	January	2.3	2.5	2.4	1.7	28.6	25.5	31.6	29.5
	February	1.2	0.7	1.6	1.4	27.3	22.6	32.0	28.3
	March	0.4	0.5	0.0	1.1	25.2	20.2	29.7	27.8
	April	2.0	2.3	1.6	2.5	24.4	19.1	28.6	29.0
	May	1.9	2.3	1.4	1.8	24.6	19.6	28.1	29.6
	June	1.2	1.5	0.8	1.3	24.1	19.0	27.6	29.4
	July	0.5	-1.0	1.5	2.0	23.1	17.7	27.0	28.3
	August	0.8	0.3	1.0	2.0	21.4	17.2	23.5	27.7
	September	0.6	0.1	1.1	0.9	19.8	15.7	22.0	25.7
	October	1.6	0.9	2.4	1.6	18.8	14.7	21.8	23.2
	November	2.6	2.2	3.0	2.5	18.6	15.8	19.7	23.9
	December	1.5	2.7	0.7	0.5	17.8	15.8	18.8	21.0
2003	January	1.3	1.5	1.1	1.1	16.6	14.7	17.3	20.3
	February	0.9	1.7	0.8	-1.3	16.3	15.9	16.4	17.1
	March	1.1	1.3	1.0	0.8	17.1	16.8	17.6	16.7
	April	1.1	1.3	0.6	1.6	16.0	15.6	16.4	15.8
	May	0.5	0.3	0.7	0.7	14.4	13.3	15.6	14.5
	June	0.8	1.2	0.6	0.5	14.0	13.0	15.4	13.6
	July	1.2	1.1	1.5	0.6	14.8	15.4	15.4	12.0
	August	0.3	-0.7	0.6	2.1	14.2	14.2	14.9	12.1
	September	2.1	0.2	4.5	1.4	15.8	14.4	18.8	12.7
	October	1.5	1.1	1.0	3.9	15.8	14.6	17.1	15.3
	November	1.4	2.1	0.7	1.6	14.5	14.5	14.5	14.2
	December	1.2	1.8	0.5	1.1	14.1	13.5	14.4	14.9
2004	January	1.1	0.4	1.8	1.2	13.9	12.3	15.2	15.0
	February	0.6	0.8	0.5	0.5	13.7	11.3	14.8	17.1
	March	0.5	0.7	0.3	0.5	13.0	10.6	14.0	16.8
	April	0.6	0.3	0.7	1.0	12.5	9.6	14.1	16.1
	May	0.3	0.0	0.5	0.6	12.3	9.3	13.9	16.0
	June	0.6	0.4	0.6	1.2	12.0	8.4	13.9	16.8
	July	1.3	0.8	2.1	0.3	12.1	8.1	14.6	16.4
	August	0.6	0.2	0.6	1.4	12.4	9.1	14.6	15.6
	September	0.9	0.7	1.0	1.4	11.2	9.6	10.8	15.6
	October	1.2	0.9	1.5	1.4	10.8	9.4	11.3	12.8
	November	0.6	0.9	1.0	-0.7	10.0	8.1	11.6	10.3
	December	0.6	1.1	0.4	-0.4	9.3	7.4	11.5	8.7
2005	January	0.8	0.4	1.3	0.6	8.9	7.4	10.9	8.0
	February	0.6	0.5	0.0	2.5	8.9	7.1	10.4	10.2
	March	0.3	0.3	0.3	0.2	8.7	6.6	10.4	9.8
	April	1.8	0.0	3.6	1.5	10.0	6.3	13.6	10.4
	May	0.3	0.1	0.2	1.0	10.0	6.4	13.2	10.8
	June	0.3	0.4	-0.1	1.2	9.7	6.4	12.4	10.8
	July	1.0	0.2	1.7	0.7	9.3	5.9	12.0	11.3
	August	0.1	0.0	0.3	0.0	8.9	5.6	11.7	9.8
	September	0.6	0.2	0.7	1.2	8.5	5.1	11.4	9.5
	October	0.9	1.2	0.0	2.2	8.1	5.4	9.7	10.4
	November	1.2	1.2	1.2	1.2	8.7	5.8	9.9	12.6
	December	0.6	1.1	0.2	0.3	8.6	5.8	9.7	13.3

Source: National Institute of Statistics of Romania.

Table 12. Romania: Industrial Producer Prices, 2000-05

		PPI	Extractive industry	Processing industry	Energy production	Monthly PPI inflation
		(2000=100)				(in percent)
2000	January	85	84	85	82	3.5
	February	87	85	87	83	2.2
	March	89	90	89	83	2.4
	April	91	93	92	84	2.9
	May	93	94	94	84	1.8
	June	97	98	97	93	4.4
	July	102	104	101	108	5.0
	August	105	106	104	113	2.9
	September	108	110	107	116	3.5
	October	112	112	112	118	3.5
	November	115	112	115	118	2.3
	December	118	112	118	118	2.8
2001	January	122	112	123	120	3.4
	February	126	119	127	121	3.4
	March	128	123	130	121	1.9
	April	131	133	132	124	2.0
	May	134	144	134	128	2.4
	June	137	153	136	129	1.7
	July	140	154	138	143	2.4
	August	143	161	140	156	2.4
	September	146	167	143	157	1.7
	October	148	169	145	161	1.6
	November	150	170	147	167	1.5
	December	152	167	148	171	1.2
2002	January	155	171	151	177	2.1
	February	157	173	153	182	1.2
	March	160	175	155	186	1.8
	April	163	176	158	199	2.1
	May	167	182	161	202	2.0
	June	169	183	163	202	1.3
	July	172	184	165	221	2.3
	August	175	184	168	223	1.3
	September	177	185	171	224	1.4
	October	180	188	173	226	1.4
	November	181	189	175	226	0.9
	December	184	191	178	226	1.3
2003	January	188	203	182	231	2.5
	February	193	210	186	232	2.4
	March	195	211	190	232	1.5
	April	198	210	193	232	1.5
	May	199	203	195	232	0.6
	June	200	203	195	232	0.1
	July	202	204	197	233	1.0
	August	204	208	199	234	1.0
	September	210	215	203	259	3.1
	October	213	217	207	262	1.6
	November	217	218	211	264	1.7
	December	219	218	214	265	1.1
2004	January	224	219	218	279	2.4
	February	226	221	220	280	0.9
	March	228	223	222	280	0.9
	April	235	228	229	283	2.8
	May	238	230	233	283	1.3
	June	240	237	235	283	1.1
	July	244	241	238	302	1.7
	August	248	248	242	303	1.6
	September	252	249	245	305	1.3
	October	256	256	249	306	1.6
	November	256	256	250	308	0.2
	December	254	243	248	309	-0.9
2005	January	257	268	249	318	1.2
	February	255	262	247	320	-0.7
	March	257	264	249	320	0.7
	April	264	297	254	323	2.5
	May	265	296	255	325	0.5
	June	265	297	256	325	0.2
	July	267	298	257	335	0.7
	August	270	310	259	336	1.2
	September	272	305	262	337	0.7
	October	277	324	265	339	1.7
	November	279	322	267	342	0.7
	December	278	319	267	343	-0.2

Source: National Institute of Statistics of Romania.

Table 13. Romania: Private Ownership in Selected Sectors, 1995-2004
(In percent)

	1995	1996	1997	1998	1999	2000	2001	2002	2003 1/	2004 2/
Agriculture	89.0	90.1	96.8	96.3	96.7	98.6	97.8	98.3	98.9	99.2
Industry	29.9	38.5	42.1	46.0	53.7	68.4	76.0	80.6	84.7	84.8
Construction 3/	57.8	69.3	76.6	79.3	81.9	91.7	94.7	102.7	110.0	109.7
Services	58.1	66.7	71.5	76.1	76.6	71.6	68.4	67.6	68.1	67.8
Total private sector share of GDP	45.3	54.9	60.6	61.4	63.7	65.6	68.0	69.4	70.4	70.8

Source: National Institute of Statistics.

1/ Semi-final data.

2/ Provisional data.

3/ During 2002-2004 the enterprises from the public sector had a negative gross value-added due to registered losses.

Table 14. Romania: Ownership Structure of the Enterprise Sector, 1994-2004
(Number of Units)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	636,270	681,519	819,504	862,429	959,830	1,044,702	1,105,703	1,159,152	955,615	1,027,617	1,133,169
Private companies	421,676	440,603	548,873	582,411	626,324	661,165	695,043	739,929	787,051	855,938	952,559
State-owned companies	6,951	5,160	3,004	1,991	2,218	2,224	2,224	2,208	2,264	2,292	2,333
Régies autonomes 1/	446	346	281	275	183	153	154	146	140	147	144
Mixed - owned companies (state + private)	2,221	5,189	7,811	9,160	8,908	8,950	8,321	8,304	8,477	8,505	8,529
Co-operative companies	4,176	4,357	4,505	4,652	4,160	5,037	5,093	5,232	5,294	5,344	5,368
Family businesses 1/	38,346	63,367	82,533	90,944	120,043	128,265	133,610	142,537	152,389	155,391	164,236
Self-employed 1/	162,454	162,497	172,497	172,996	197,994	238,908	261,258	260,796	246,223	265,611	246,406
Foreign investors (from total)	38,697	43,487	48,330	53,203	63,255	71,318	79,614	82,424	89,911	97,229	107,398

Source: Data provided by the Romanian authorities (Trade Register).

1/ National Institute of Statistics - Statistical Business Register.

Table 15. Romania: Summary of Consolidated General Government (Old Classification), 1993-2004 1/
(In million of New Lei)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total revenue (incl. grants)	670	1,554	2,264	3,160	7,239	11,100	17,384	25,110	35,174	44,901	56,673	70,700
Current	665	1,548	2,258	3,144	7,180	11,087	17,334	24,995	35,111	44,764	56,431	70,191
Tax	627	1,404	2,080	2,926	6,700	10,399	16,403	23,505	32,670	41,817	53,248	66,645
Direct tax	433	1,003	1,412	1,952	4,425	6,347	10,081	14,197	19,754	24,835	30,131	38,119
Profits	75	191	281	355	1,078	1,107	1,704	2,033	2,221	3,019	4,417	6,484
Wages & Salaries 2/	133	322	458	666	1,395	1,858	2,831	2,700	3,720	4,166	5,354	7,122
Social security	214	460	588	819	1,767	2,994	4,719	8,656	12,511	16,187	18,615	22,424
Other direct tax	12	29	84	113	185	388	828	808	1,302	1,464	1,745	2,089
Indirect tax	194	401	669	973	2,275	4,052	6,321	9,308	12,916	16,981	23,118	28,526
VAT	73	227	378	536	1,168	2,249	3,247	5,044	7,360	10,450	13,636	16,547
Customs	27	56	104	167	335	574	785	870	904	936	1,288	1,624
Excises	74	78	105	149	429	843	1,696	2,064	2,729	3,243	6,041	7,965
Other indirect tax	20	41	81	122	343	386	594	1,330	1,922	2,352	2,153	2,390
Nontax	38	143	178	219	480	687	931	1,490	2,441	2,948	3,183	3,546
Capital 3/	5	6	6	15	58	13	30	83	39	68	152	386
Grants	0	0	0	0	0	0	20	32	25	69	89	123
Total expenditure	677	1,664	2,506	3,681	8,564	13,112	19,357	28,335	38,932	48,852	61,060	73,423
Current	579	1,376	2,084	3,078	7,186	11,539	17,783	25,528	35,179	43,849	54,226	65,538
Goods and services	234	592	908	1,287	2,677	4,274	6,880	10,040	13,929	18,085	23,450	28,966
Wages and salaries	133	324	469	657	1,234	1,867	2,626	4,389	5,817	7,356	9,089	11,761
Other	100	269	438	631	1,443	2,407	4,254	5,650	8,112	10,729	14,361	17,205
Interest	19	67	99	184	966	1,745	2,880	3,897	4,461	4,535	4,023	3,073
Subsidies and transfers	326	716	1,077	1,607	3,543	5,521	8,024	11,590	16,789	21,229	26,753	33,499
Subsidies	137	191	297	473	636	621	930	1,758	2,429	2,990	4,357	5,073
Transfers	190	525	780	1,134	2,906	4,900	7,094	9,832	14,360	18,239	22,397	28,427
Capital	84	273	380	568	1,211	1,353	1,502	2,448	3,655	4,886	6,623	7,799
Lending minus repayments	14	16	42	35	167	220	72	359	98	117	212	86
Overall balance	-7	-111	-242	-521	-1,325	-2,012	-1,973	-3,226	-3,758	-3,951	-4,388	-2,723

Sources: Ministry of Finance, and Fund staff estimates.

1/ Starting with 2002, including revenues and expenditures of the National Administration of Roads (AND).

2/ In the period 1993-99, tax revenue includes a 7 percent tax on payroll earmarked for the Health Fund.

3/ Excluding privatization receipts.

Table 16. Romania: Summary of Consolidated General Government (Old Classification), 1993-2004 1/
(In percent of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total revenue (incl. grants)	33.4	31.2	31.4	29.0	28.6	29.7	31.9	31.2	30.1	29.6	28.7	28.7
Current	33.2	31.1	31.3	28.9	28.4	29.7	31.8	31.1	30.1	29.6	28.6	28.5
Tax	31.3	28.2	28.8	26.9	26.5	27.8	30.1	29.2	28.0	27.6	27.0	27.1
Direct tax	21.6	20.1	19.6	17.9	17.5	17.0	18.5	17.7	16.9	16.4	15.3	15.5
Profits	3.8	3.8	3.9	3.3	4.3	3.0	3.1	2.5	1.9	2.0	2.2	2.6
Wages & Salaries 2/	6.6	6.5	6.4	6.1	5.5	5.0	5.2	3.4	3.2	2.8	2.7	2.9
Social security	10.7	9.2	8.2	7.5	7.0	8.0	8.6	10.8	10.7	10.7	9.4	9.1
Other direct tax	0.6	0.6	1.2	1.0	0.7	1.0	1.5	1.0	1.1	1.1	1.0	0.8
Indirect tax	9.7	8.1	9.3	8.9	9.0	10.8	11.6	11.6	11.1	11.2	11.7	11.6
VAT	3.6	4.6	5.2	4.9	4.6	6.0	6.0	6.3	6.3	6.9	6.9	6.7
Customs	1.3	1.1	1.4	1.5	1.3	1.5	1.4	1.1	0.8	0.6	0.7	0.7
Excises	3.7	1.6	1.5	1.4	1.7	2.3	3.1	2.6	2.3	2.1	3.1	3.2
Other indirect tax	1.0	0.8	1.1	1.1	1.4	1.0	1.1	1.7	1.6	1.6	1.1	1.0
Nontax	1.9	2.9	2.5	2.0	1.9	1.8	1.7	1.9	2.1	1.9	1.6	1.4
Capital 3/	0.2	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.2
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total expenditure	33.8	33.4	34.7	33.8	33.9	35.1	35.5	35.3	33.3	32.3	30.9	29.8
Current	28.9	27.6	28.9	28.3	28.4	30.9	32.6	31.8	30.1	28.9	27.4	26.6
Goods and services	11.7	11.9	12.6	11.8	10.6	11.4	12.6	12.5	11.9	11.9	11.9	11.8
Wages and salaries	6.7	6.5	6.5	6.0	4.9	5.0	4.8	5.5	5.0	4.9	4.6	4.8
Other	5.0	5.4	6.1	5.8	5.7	6.4	7.8	7.0	6.9	7.1	7.3	7.0
Interest	0.9	1.4	1.4	1.7	3.8	4.7	5.3	4.8	3.8	3.0	2.0	1.2
Subsidies and transfers	16.3	14.4	14.9	14.8	14.0	14.8	14.7	14.4	14.4	14.0	13.5	13.6
Subsidies and bonuses	6.8	3.8	4.1	4.3	2.5	1.7	1.7	2.2	2.1	2.0	2.2	2.1
Transfers	9.5	10.5	10.8	10.4	11.5	13.1	13.0	12.2	12.3	12.0	11.3	11.5
Capital	4.2	5.5	5.3	5.2	4.8	3.6	2.8	3.0	3.1	3.2	3.4	3.2
Lending minus repayments	0.7	0.3	0.6	0.3	0.7	0.6	0.1	0.4	0.1	0.1	0.1	0.0
Overall balance	-0.4	-2.2	-3.4	-4.8	-5.2	-5.4	-3.6	-4.0	-3.2	-2.6	-2.2	-1.1
GDP (in millions of RON)	2,004	4,977	7,214	10,892	25,293	37,379	54,573	80,377	116,769	151,475	197,565	246,372

Sources: Ministry of Finance, and Fund staff estimates.

1/ Starting with 2002, including revenues and expenditures of the National Administration of Roads (AND).

2/ In the period 1993-99, tax revenue includes a 7 percent tax on payroll earmarked for the Health Fund.

3/ Excluding privatization receipts.

Table 17. Romania: Summary of Consolidated General Government (New Classification), 2004-05 1/

	2004	2005	2004	2005
	Preliminary		Preliminary	
	(In millions of RON)		(In percent of GDP)	
Total revenue	74,045.4	86,964.4	30.1	30.3
Current revenue	71,944.5	84,835.4	29.2	29.5
Tax revenue	66,834.1	78,379.8	27.1	27.3
Corporate income tax	7,443.6	7,793.0	3.0	2.7
Profit	6,483.9	6,533.9	2.6	2.3
Capital gains and other	959.7	1,259.1	0.4	0.4
Personal income tax	7,182.7	6,881.9	2.9	2.4
Salaries, dividends, etc	7,122.7	6,748.3	2.9	2.3
Other (local) taxes	60.0	133.6	0.0	0.0
Property tax	1,757.8	1,880.2	0.7	0.7
VAT	16,547.2	22,537.8	6.7	7.8
Excises	7,996.3	9,079.4	3.2	3.2
Other indirect taxes	1,489.5	1,052.3	0.6	0.4
Customs	1,751.1	2,186.9	0.7	0.8
Other tax revenue	78.2	11.5	0.0	0.0
Social contributions	22,587.7	26,956.8	9.2	9.4
Nontax revenue	5,110.4	6,455.6	2.1	2.2
Capital revenue	457.9	449.8	0.2	0.2
Grants	1,643.0	1,679.2	0.7	0.6
Total expenditure	76,628.7	89,218.3	31.1	31.1
Current	69,758.8	81,630.8	28.3	28.4
Personnel	11,806.1	15,470.4	4.8	5.4
Goods and services	18,066.7	21,484.5	7.3	7.5
Interest	3,133.8	3,007.6	1.3	1.0
Subsidies	5,515.9	6,462.6	2.2	2.3
Transfers	30,495.5	34,283.3	12.4	11.9
Other expenditure	740.8	922.5	0.3	0.3
Reserve fund	0.0	0.0	0.0	0.0
Capital	6,784.0	7,551.3	2.8	2.6
Net lending	85.9	36.2	0.0	0.0
Overall balance	-2,583.2	-2,253.9	-1.0	-0.8
Memorandum item:				
GDP	246,372	287,186		

Source: Ministry of Finance and Fund staff estimates.

1/ Data according to the new classification are only available since 2004.

Table 18. Romania: Consolidated General Government Expenditures by Function, 1993-2004 1/

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total expenditures	677	1,664	2,506	3,681	8,564	13,112	19,357	28,335	38,932	48,852	61,060	73,423
	(in millions of New Lei)											
General public services	32	52	92	76	175	373	558	1,230	1,758	2,287	3,176	3,931
Defense affairs	42	119	153	206	588	849	842	1,320	1,795	2,204	2,646	3,420
Public order and safety affairs	25	79	111	161	286	548	762	1,607	2,047	2,624	3,377	4,367
Education affairs	64	155	247	388	826	1,215	1,637	2,499	3,705	4,796	5,804	7,153
Health affairs	55	153	208	303	642	1,105	1,893	3,095	4,632	5,719	7,258	8,028
Recreational, cultural affairs	5	18	38	59	134	212	268	460	608	792	1,145	1,501
Social security and welfare	181	450	673	968	2,418	3,931	5,880	7,789	11,418	14,955	18,164	23,643
Housing and community services	35	89	146	208	444	620	931	1,516	2,218	2,801	4,426	4,445
Environment	0	0	0	0	16	28	65	112	255	355	299	325
Industry	82	128	174	236	274	269	407	650	881	1,288	1,692	1,713
Agriculture, forestry, fishing	59	123	166	267	365	451	509	921	1,140	1,264	1,852	2,988
Transportation and communication	38	115	171	242	591	877	1,549	2,139	3,058	4,029	5,319	7,326
Other economic affairs and services	26	79	88	162	369	202	259	263	370	462	845	1,057
Research affairs	0	34	39	46	76	105	102	152	259	298	363	433
Other expenditures	15	6	102	176	502	649	985	930	727	946	1,282	789
Interest payments	19	67	99	184	858	1,677	2,712	3,651	4,061	4,035	3,411	2,304
	(in percent of GDP)											
Total expenditures	33.8	33.4	34.7	33.8	33.9	35.1	35.5	35.3	33.3	32.3	30.9	29.8
General public services	1.6	1.0	1.3	0.7	0.7	1.0	1.0	1.5	1.5	1.5	1.6	1.6
Defense affairs	2.1	2.4	2.1	1.9	2.3	2.3	2.3	1.5	1.6	1.5	1.3	1.4
Public order and safety affairs	1.2	1.6	1.5	1.5	1.1	1.5	1.4	2.0	1.8	1.7	1.7	1.8
Education affairs	3.2	3.1	3.4	3.6	3.3	3.2	3.0	3.1	3.2	3.2	2.9	2.9
Health affairs	2.7	3.1	2.9	2.8	2.5	3.0	3.5	3.9	4.0	3.8	3.7	3.3
Recreational, cultural affairs	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.6	0.6
Social security and welfare	9.1	9.0	9.3	8.9	9.6	10.5	10.8	9.7	9.8	9.9	9.2	9.6
Housing and community services	1.8	1.8	2.0	1.9	1.8	1.7	1.7	1.9	1.9	1.8	2.2	1.8
Environment	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Industry	4.1	2.6	2.4	2.2	1.1	0.7	0.7	0.8	0.8	0.9	0.9	0.7
Agriculture, forestry, fishing	2.9	2.5	2.3	2.4	1.4	1.2	0.9	1.1	1.0	0.8	0.9	1.2
Transportation and communication	1.9	2.3	2.4	2.2	2.3	2.3	2.8	2.7	2.6	2.7	2.7	3.0
Other economic affairs and services	1.3	1.6	1.2	1.5	1.5	0.5	0.5	0.3	0.3	0.3	0.4	0.4
Research affairs	0.0	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Other expenditures	0.7	0.1	1.4	1.6	2.0	1.7	1.8	1.2	0.6	0.6	0.6	0.3
Interest payments	0.9	1.4	1.4	1.7	3.4	4.5	5.0	4.5	3.5	2.7	1.7	0.9
GDP (in millions of RON)	2,004	4,977	7,214	10,892	25,293	37,379	54,573	80,377	116,769	151,475	197,565	246,372

1/ Starting with 2002, including revenues and expenditures of the National Administration of Roads (AND).

Source: Ministry of Finance and Fund staff estimates.

Table 19. Romania: NBR Refinancing Practices, 1995-2005

		Total amounts		Of which				Litigious Debtors 3/	Directed Credit to Agriculture 4/	Shares in Total NBR Credit				Directed Credit to Agriculture	
		due by banks to NBR	Total Credits	Directed Lines 1/	Auction	Overdraft	Troubled Banks 2/			Directed Lines	Auction	Overdraft	Troubled Banks		
		(In billions of lei)							(In percent)						
1995	Q1	2,074	2,074	1,284	790	0	0	...	1,468	61.9	38.1	0.0	0.0	70.8	
	Q2	2,145	2,145	1,119	825	186	14	...	1,136	52.2	38.5	8.7	0.7	53.0	
	Q3	2,790	2,790	1,341	1,050	398	0	...	1,635	48.1	37.6	14.3	0.0	58.6	
	Q4	3,679	3,679	1,505	1,010	288	875	...	2,180	40.9	27.5	7.8	23.8	59.3	
1996	Q1	3,707	3,707	1,342	950	73	1,342	...	2,072	36.2	25.6	2.0	36.2	55.9	
	Q2	4,413	4,413	1,938	485	256	1,734	...	1,918	43.9	11.0	5.8	39.3	43.5	
	Q3	5,030	3,163	2,783	380	0	0	1,867	2,041	88.0	12.0	0.0	0.0	64.5	
	Q4	8,024	6,153	3,838	2,315	0	0	1,871	3,159	62.4	37.6	0.0	0.0	51.3	
1997	Q1	5,439	3,554	3,254	300	1	0	1,885	2,355	91.5	8.4	0.0	0.0	66.2	
	Q2	3,801	1,917	1,917	0	0	0	1,885	1,640	100.0	0.0	0.0	0.0	85.5	
	Q3	2,720	836	836	0	0	0	1,885	765	100.0	0.0	0.0	0.0	91.6	
	Q4	2,516	632	632	0	0	0	1,885	580	100.0	0.0	0.0	0.0	91.8	
1998	Q1	2,471	586	586	0	0	0	1,885	534	100.0	0.0	0.0	0.0	91.1	
	Q2	2,441	556	556	0	0	0	1,885	504	100.0	0.0	0.0	0.0	90.6	
	Q3	2,452	556	556	0	0	0	1,896	504	100.0	0.0	0.0	0.0	90.6	
	Q4	2,470	556	556	0	0	0	1,914	504	100.0	0.0	0.0	0.0	90.6	
1999	Q1	7,187	5,237	555	0	0	4,682	1,950	503	10.6	0.0	0.0	89.4	9.6	
	Q2	7,628	5,678	555	0	0	5,123	1,950	503	9.8	0.0	0.0	90.2	8.9	
	Q3	2,466	516	516	0	0	0	1,950	503	100.0	0.0	0.0	0.0	97.5	
	Q4	4,250	2,433	503	0	0	1,930	1,817	503	20.7	0.0	0.0	79.3	20.7	
2000	Q1	3,509	1,853	503	0	0	1,350	1,656	503	27.1	0.0	0.0	72.9	27.1	
	Q2	5,298	3,618	3,618	0	0	0	1,680	0	100.0	0.0	0.0	0.0	0.0	
	Q3	5,876	4,128	3,543	0	0	585	1,748	0	85.8	0.0	0.0	14.2	0.0	
	Q4	7,907	6,159	4,947	0	0	1,212	1,749	0	80.3	0.0	0.0	19.7	0.0	
2001	Q1	8,862	7,114	5,010	0	0	2,104	1,749	0	70.4	0.0	0.0	29.6	0.0	
	Q2	5,269	4,985	4,985	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q3	5,181	4,897	4,897	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q4	4,942	4,659	4,658	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
2002	Q1	4,643	4,359	4,359	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q2	4,618	4,334	4,334	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q3	3,751	3,467	3,467	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q4	3,104	2,820	2,820	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
2003	Q1	3,094	2,810	2,810	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q2	2,758	2,473	2,473	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q3	2,738	2,453	2,453	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q4	2,094	1,810	1,810	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
2004	Q1	2,084	1,800	1,800	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q2	1,745	1,461	1,461	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q3	1,745	1,461	1,461	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q4	1,107	823	823	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
2005	Q1	1,092	808	808	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q2	752	468	468	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q3	752	468	468	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	
	Q4	452	168	168	0	0	0	284	0	100.0	0.0	0.0	0.0	0.0	

Sources: National Bank of Romania; and Fund staff estimates.

1/ Direct lines of credit for various sectors of the economy, at subsidized interest rates.

2/ NBR special credits to banks in trouble.

3/ Refinancing credits granted and guarantees paid by the NBR in the name of Dacia Felix and Credit Bank.

4/ Including all NBR credits to Banca Agricola.

Table 20. Romania: Balance Sheet of the National Bank of Romania, 1995-2005
(In millions of redenominated lei, end of period)

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		
	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	December	
Assets	1,276.0	1,596.9	3,616.5	4,192.7	6,972.9	8,281.8	9,961.6	13,623.7	14,337.5	17,725.1	21,403.8	20,400.8	24,759.4	30,960.1	45,912.9	54,142.5	63,685.7						
Foreign assets	283.9	564.7	2,650.8	2,520.7	4,545.5	5,800.1	8,787.2	12,748.2	15,361.7	19,768.9	24,474.7	24,456.8	30,803.1	36,058.4	46,786.6	53,635.9	66,578.3						
Gold	201.1	342.9	899.8	1,015.5	1,762.9	1,780.1	2,384.9	2,387.0	2,966.1	2,967.9	3,953.5	3,954.0	4,596.8	4,962.2	4,301.4	4,386.3	5,370.8						
Convertible FX	82.8	219.8	1,751.0	1,505.2	2,782.6	4,020.0	6,402.3	10,361.3	12,395.5	16,801.0	20,521.2	20,502.9	26,206.3	31,462.2	42,485.2	49,249.7	61,207.5						
Other	...	...	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Claims on government	352.0	0.0	327.1	914.2	2,141.2	2,003.9	1,617.6	1,454.0	841.5	703.3	234.8	0.6	0.5	0.6	0.0	0.1	0.0						
State budget	329.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Treasury bills	...	...	84.3	389.8	0.0	3.3	0.0	0.0	165.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
T-bills in foreign currency	...	...	0.0	0.0	457.3	202.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Other claims on central government	22.1	0.0	242.8	524.4	1,683.9	1,797.7	1,617.6	1,454.0	675.8	703.3	234.8	0.6	0.5	0.6	0.0	0.1	0.0						
Claims on DMBs	451.5	882.2	525.1	553.2	438.3	293.5	404.5	289.0	143.2	114.5	28.4	28.4	28.4	28.4	28.4	28.4	28.4						
Refinancing credits	367.8	802.4	251.6	247.0	438.3	293.5	404.5	289.0	143.2	114.5	28.4	28.4	28.4	28.4	28.4	28.4	28.4						
Memo: litigious debtors	...	...	188.5	191.4	195.0	168.0	174.9	174.9	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4						
FX deposits with DMBs	83.6	79.8	273.5	306.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Other assets (net)	272.2	150.0	113.4	204.6	-152.1	184.3	-847.7	-867.5	-2,008.9	-2,861.6	-3,334.1	-4,085.0	-6,072.6	-5,127.3	-902.1	478.0	-2,921.0						
Liabilities	1,276.0	1,596.9	3,616.5	4,192.7	6,972.9	8,281.8	9,961.6	13,623.7	14,337.5	17,725.1	21,403.8	20,400.8	24,759.4	30,960.1	45,912.9	54,142.5	63,685.7						
Reserve money	469.1	787.7	1,058.7	1,909.0	3,598.2	4,417.7	5,148.5	5,918.6	6,779.1	7,579.4	8,019.1	9,170.5	9,841.5	12,117.1	13,704.8	17,402.0	22,211.9						
Currency outside NBR	395.1	590.2	962.7	1,229.7	1,864.6	2,278.7	2,806.5	3,170.6	3,995.6	4,269.5	5,277.2	5,801.8	6,517.5	7,308.8	8,246.3	10,478.7	12,732.2						
DMB current accounts at NBR	73.9	197.5	96.0	679.3	1,733.6	2,138.9	2,342.0	2,748.1	2,783.6	3,310.0	2,741.8	3,368.6	3,324.0	4,608.3	5,458.5	6,923.4	9,479.7						
Deposit auctions	...	...	679.2	222.3	266.2	40.4	971.5	1,484.7	2,785.9	4,298.4	6,603.0	4,627.3	7,181.5	9,278.4	16,123.7	19,887.7	23,224.4						
NBR FX liabilities to DMBs	126.0	113.1	392.6	442.7	1,379.7	1,297.0	1,539.8	2,014.0	2,683.3	3,206.3	4,324.4	4,716.6	5,704.2	6,635.2	9,396.5	11,037.0	16,509.0						
Foreign liabilities	288.9	709.4	1,367.8	1,597.0	1,419.5	1,673.7	1,940.9	2,152.8	1,634.7	1,523.9	1,429.6	1,525.9	1,769.7	1,676.3	1,523.2	1,320.5	843.1						
Government deposits	380.0	-27.5	67.0	2.3	284.7	788.0	299.1	2,046.9	838.9	1,647.1	995.8	712.8	1,190.7	1,962.5	5,132.8	5,502.9	3,942.6						
Deposits	...	...	0.0	0.0	0.0	538.3	197.6	1,813.3	407.5	1,411.9	311.7	233.7	1,088.8	1,129.9	2,457.4	2,289.2	1,570.0						
General account of Treasury	...	...	67.0	2.3	284.7	249.7	101.6	233.6	431.4	235.2	684.2	479.0	101.8	832.6	2,675.4	2,372.6	1,570.0						
Capital accounts	12.0	14.1	51.2	19.4	24.6	65.0	61.7	6.7	-384.3	-530.0	31.9	-352.2	-928.1	-709.3	31.9	-1,007.6	-3,045.3						
Capital and reserves	12.0	14.1	19.3	19.4	24.6	24.6	41.1	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9						
Profits	0.0	0.0	31.8	0.0	0.0	40.3	20.6	-25.2	-416.2	-561.9	0.0	-384.1	-960.0	-741.2	0.0	-1,039.5	-3,077.2						
Gold revaluation deposits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

Sources: National Bank of Romania; and Fund staff estimates.

Table 21. Romania: Commercial Banks' Specific Provisions, 1995-2005

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		
	December	December	December	December	December	December	December	December	December	December	June	December	June	December	June	December	June	December	June	December	June	December	
Actual provisions made by banks	178.5	251.4	731.3	1,620.8	1,005.6	999.8	264.2	348.5	278.8	239.5	201.3	297.0	294.9	444.8	444.8	510.9	510.9	510.9	510.9	510.9	549.4	549.4	685.0
Provisions needed according to NBR	255.0	421.8	1,000.1	2,195.0	979.3	1,058.8	264.2	348.5	278.8	239.5	201.3	297.0	294.9	444.8	444.8	510.9	510.9	510.9	510.9	510.9	549.4	549.4	685.0
Remaining gap	76.5	170.4	268.8	574.2	-26.3	59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(in millions of redenominated lei)																							
Memorandum items:																							
Non-performing loans and interest arrears, gross	779.3	1,149.9	2,107.5	3,914.8	2,103.8	3,414.4	372.0	419.5	358.7	376.7	376.9	2,190.4	2,347.4	2,778.1	3,165.8	3,762.3	4,765.0						
of which: with guarantees or collateral	513.8	718.8	1,068.2	1,698.5	1,145.9	2,162.6	13.9	7.2	6.5	13.8	8.9	1,785.8	1,914.0	2,178.1	2,503.3	2,895.1	3,838.0						
Non-performing loans and interest arrears, net	265.5	431.1	1,039.3	2,216.3	957.9	1,251.8	358.1	412.3	352.2	362.9	368.0	404.6	433.4	600.0	662.5	867.2	927.0						
(In percent)																							
Ratio of provisions made to provisions needed	70.0	59.6	73.1	73.8	102.7	94.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio of provisions made to gross portfolio	22.9	9.4	18.2	24.2	16.9	15.4	3.7	4.0	2.6	1.8	1.2	1.5	1.0	1.4	1.3	1.2	1.2	1.0	1.0	1.0	1.2	1.2	1.2

Source: National Bank of Romania.

1/ Beginning with October 1, 2000, Regulation no. 2/2000 requires a monthly classification of loans and investments.

2/ The figures for December 2005 are calculated based on the prudential reports submitted by banks before the conclusion of banks' balance sheet.

Table 22. Romania: Foreign Assets and Liabilities of the Banking System, 1994-2005
(In millions of U.S. dollars, end of period)

NBR 1/	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005	
	June	December	June	December	June	December	June	December	June	December	June	December	June	December	June	December	June	December	June	December	June	December	June	December
Foreign assets	1,612	1,371	1,633	3,358	2,272	2,458	2,843	3,463	4,726	5,090	6,000	6,975	6,809	9,416	10,989	15,272	18,358	21,977						
Convertible foreign exchange	1,016	1,036	1,081	1,158	904	932	940	946	947	948	949	949	949	1,375	1,375	1,374	1,373	1,372						
Gold	536	278	542	2,208	1,374	1,530	1,906	2,520	3,781	4,142	5,051	6,026	5,860	8,041	9,614	13,898	16,985	20,605						
Participation in foreign banks and other	60	57	5					
Nonconvertible Fx, net	1,651	1,371	1,966	1,927	1,880	1,616	1,694	1,539	2,186	1,505	1,836	1,808	1,956	2,514	2,732	4,610	5,248	6,395						
Foreign liabilities	1,421	1,051	682	716	519	452	536	471	409	417	355	427	462	595	501	424	342	271						
Use of fund resources					
Short term	100	0	114	0	100	100	100	100	0	0	0	0	0	0	100	100					
Medium and long term					
Reserve Requirement in Fx	1,111	1,065	294	294	294	269	269	0	0	0	0	0	0	0	0	0					
Other Fx Liabilities to DMB (domestic)					
Fx Liabilities to Ministry of Finance					
Net foreign assets (broad definition) 2/	191	320	951	2,542	1,753	1,892	2,307	2,892	4,217	4,573	5,545	6,548	6,347	8,821	10,488	14,748	17,916	21,706						
Net foreign assets (program definition) 3/	191	320	951	2,542	1,457	1,136	1,700	2,298	3,526	3,724	4,588	5,257	4,919	7,071	8,506	11,515	14,224	16,394						
Commercial Banks																								
Foreign assets	1,545	1,310	1,618	1,674	1,574	1,250	1,363	1,546	1,367	1,605	1,330	1,228	1,282	1,118	1,099	1,788	2,292	686						
Convertible foreign exchange	1,551	1,316	1,627	1,688	1,579	1,252	1,367	1,547	1,370	1,612	1,335	1,190	1,246	1,078	1,064	1,804	2,397	1,454						
Liquid	1,494	1,245	1,552	1,610	1,493	1,161	1,270	1,453	1,280	1,519	1,238	1,086	1,134	953	937	1,653	2,260	1,361						
Other	57	71	75	78	86	91	97	94	90	93	97	104	112	125	127	151	137	93						
Nonconvertible foreign exchange, net	-6	-6	-9	-14	-5	-2	-4	-1	-3	-7	-5	38	36	40	35	-16	-105	-768						
Foreign liabilities	678	790	1,226	1,135	801	610	523	505	563	654	882	999	1,380	2,204	3,083	4,908	6,483	7,993						
Short term	273	212	604	267	188	221	226	225	275	371	512	491	702	1,160	1,588	2,032	1,814	2,684						
Medium and long term	405	578	622	867	613	389	297	280	288	283	370	508	678	1,044	1,495	2,876	4,669	5,309						
Net foreign assets	867	520	392	539	773	640	840	1,041	804	951	448	229	-98	-1,086	-1,984	-3,120	-4,191	-7,307						
Excluding nonconvertible and other Fx assets	816	455	326	475	692	551	747	948	717	865	356	87	-246	-1,251	-2,146	-3,255	-4,223	-6,632						
Banking System																								
Net foreign assets	1,058	840	1,343	3,081	2,526	2,532	3,147	3,933	5,021	5,524	5,993	6,777	6,249	7,755	8,504	11,628	13,725	14,399						
Excluding nonconvertible and other Fx assets	1,007	775	1,277	3,017	2,445	2,443	3,054	3,840	4,934	5,438	5,901	6,655	6,101	7,570	8,342	11,493	13,693	15,074						

Sources: National Bank of Romania; and Fund staff estimates.

1/ Gold is valued at US\$407 per ounce. All foreign currencies other than the U.S. dollar are converted in dollars at their end-1999 exchange rates, which are US\$1.00415 for the euro and US\$1.486 for the SDR.

2/ Treats only liabilities to nonresidents as Foreign liabilities.

3/ Treats liabilities to nonresidents and foreign exchange liabilities to DMBs as foreign liabilities.

Table 23. Romania: Stock Market Indicators, 1995-2005
 Bucharest Stock Exchange
 (Quarterly averages unless otherwise indicated)

	Number of trading days	Number of companies listed at end-quarter	Market capitalization (mill. US\$)	Number of transactions per trading day	Daily turnover (US\$)	Standard deviation of daily turnover
1995	5	9	100	75.8	192,875	97,157
1996						
Q1	14	13	99	346.1	238,697	171,681
Q2	23	13	54	216.5	48,793	38,811
Q3	24	13	53	196.2	22,046	12,570
Q4	23	17	61	140.7	12,446	5,222
1997						
Q1	29	25	92	1,528.0	220,117	192,814
Q2	55	44	618	4,298.6	1,427,315	1,257,553
Q3	66	62	707	2,573.3	1,566,343	778,047
Q4	57	75	632	2,750.0	1,116,893	559,456
1998						
Q1	62	92	785	2,548.2	1,235,012	813,501
Q2	63	104	652	2,464.8	1,095,174	542,752
Q3	66	113	330	1,602.6	432,955	277,733
Q4	64	126	357	1,366.5	305,684	172,849
1999						
Q1	63	126	275	1,434.4	394,163	555,813
Q2	64	127	300	992.9	178,935	150,626
Q3	66	126	434	985.6	193,458	166,917
Q4	60	126	317	3,084.3	314,997	427,274
2000						
Q1	63	127	345	2,987.9	356,927	253,960
Q2	64	125	379	2,126.1	593,210	2,522,690
Q3	65	123	437	1,523.7	195,957	178,343
Q4	59	114	427	1,246.5	240,245	326,290
2001						
Q1	63	113	610	1,271.9	566,624	1,583,459
Q2	62	106	762	1,031.3	633,407	1,672,706
Q3	65	70	1,232	1,644.1	500,177	1,607,656
Q4	57	65	1,228	1,872.5	430,660	659,229
2002						
Q1	62	65	1,294	1,703.5	368,186	223,895
Q2	61	65	1,851	2,825.5	723,518	389,259
Q3	66	65	2,980	2,946.9	902,249	707,442
Q4	58	69	2,172	3,620.2	1,505,614	2,589,196
2003						
Q1	61	63	2,818	2,109.7	1,084,295	1,724,530
Q2	57	63	3,185	1,928.6	1,324,289	2,356,167
Q3	66	63	3,320	1,571.8	1,493,231	4,833,663
Q4	57	62	3,710	1,516.3	1,178,523	856,301
2004						
Q1	63	58	4,911	1,953.8	1,984,293	1,025,731
Q2	64	60	6,094	2,377.4	2,912,254	2,172,941
Q3	66	60	6,144	2,788.7	1,835,010	692,328
Q4	60	60	11,938	2,842.9	5,099,835	692,328
2005						
Q1	64	61	13,526	5,382.4	13,072,284	3,624,102
Q2	60	61	13,278	3,274.1	5,309,194	6,430,431
Q3	65	63	17,209	4,031.5	8,737,044	2,462,027
Q4	58	64	18,185	6,007.4	15,487,146	6,795,098

Source: Bucharest Stock Exchange.

Table 24. Romania: Monetary Survey, 1994-2005

(End of period, in millions of new lei, unless otherwise stated)

	1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		
	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	QI	QII	
Net foreign assets 1/	137	117	1711	3038	4587	7732	9481	9304	9865	15144	15666	18707	18429	21400	21277	22737	23027	31055	32279	33271	35228	39485	35678	40930	44925
(millions of U.S. dollars)	777	455	-12	2029	590	889	551	948	865	87	6411	6001	6985	7570	8342	10112	10112	11493	12550	13693	15185	15074	12550	13693	15185
Of which: Commercial banks	816	455	326								-216	-246	-668	-1251	-1147	-2146	-2766	-3255	-4138	-4223	-6384	-6632	-4138	-4223	-6384
Net domestic assets 2/	928	1711	3038	4587	7732	9481	9304	9865	15144	15666	18707	18429	21400	21277	22737	23027	31055	32279	33271	35228	39485	35678	40930	44925	
Total credit	918	1740	3145	4661	7992	10134	11289	14324	20022	21532	24640	24218	30123	32439	34614	35464	36518	39001	41460	46213	54664	60673	39001	41460	46213
Credit to government, net	-30	96	461	1061	2083	4362	3788	2499	2059	1734	2193	-1959	-165	100	-65	-532	-3884	-5244	-4296	-7496	-8799	-6009	-4296	-7496	-8799
Of which: Bank rehabilitation bonds				802	817	342	734	1631	756	592	204	173	100												
Net credit to non-government	948	1644	2684	3588	5909	5772	7501	11825	17963	19798	22447	26178	30288	32503	35146	39348	41762	43297	48956	55012	60673	60673	43297	48956	55012
Of which: Foreign currency credit	205	486	900	1965	3481	3328	4460	7072	11290	12088	12955	14758	16784	18146	20533	23950	25276	26175	29413	32476	32762	32762	26175	29413	32476
(percent of total)	22	30	37	55	59	58	59	60	63	61	58	56	55	56	58	61	61	61	60	60	59	54	60	60	60
(millions of U.S. dollars)	1160	1885	2453	2451	3179	1823	1720	2238	3370	3642	3918	4479	5149	5426	6134	7183	8730	9207	9840	10977	10542	10542	9207	9840	10977
Other items, net	9	-29	-107	-62	-260	-653	-1985	-4460	-4878	-5866	-5933	-5790	-8723	-11162	-11877	-12437	-5463	-6722	-8189	-10985	-15179	-15179	-6722	-8189	-10985
Broad Money	1065	1828	3033	6215	9253	13411	18506	27051	37371	36945	38850	41447	46074	48146	50660	56741	64462	67957	74201	80153	86332	86332	67957	74201	80153
Currency outside banks	220	376	538	920	1153	1737	2574	3564	4558	4587	5253	5814	5798	5777	6890	7670	7465	7886	9582	10341	11386	11386	7886	9582	10341
Deposits	845	1452	2495	5295	8100	11674	15932	23488	32813	32358	33596	35813	40276	42369	43770	49071	56497	60171	64619	69812	74946	74946	60171	64619	69812
Of which: Lei deposits	609	1039	1787	3527	5080	6927	8446	11909	18132	17727	18327	19711	23160	23160	25674	29239	33533	37148	39254	44223	49063	49063	37148	39254	44223
Sight	269	382	688	1113	1199	1365	2218	3090	4620	3790	4489	4844	6045	5513	6363	7331	8332	8712	10134	12041	14788	14788	8712	10134	12041
Time	340	657	1129	2413	3882	5382	8228	8820	13512	13936	13899	14827	17115	17115	19311	21918	24701	28456	29120	32182	34275	34275	28456	29120	32182
Foreign currency deposits	236	413	709	1768	3020	5047	7486	11578	14681	14652	15289	15962	17116	18321	18097	19832	23464	23023	25365	25389	25383	25383	23023	25365	25389
(millions of U.S. dollars)	1335	1603	1756	2204	2758	2765	2887	3664	4382	4409	4625	4844	5251	5628	5406	5948	8702	8702	8098	8486	8649	8649	8098	8486	8649
NBR balance sheet	325	469	788	1059	1909	3598	5148	6779	8019	8414	9170	9410	9842	10920	12117	13413	13705	13520	17402	22701	22212	22212	13520	17402	22701
Reserve money	240	395	590	963	1230	1865	2806	3996	5277	5077	5802	6378	6518	6303	7509	8302	8246	8508	10479	11214	12732	12732	8508	10479	11214
Currency outside NBR	85	74	198	96	679	1734	2342	2784	2742	3357	3369	3052	3324	4617	4608	5111	5459	5012	6923	11487	9480	9480	5012	6923	11487
Bank lei deposits at NBR																									
Net foreign assets (program definition) 3/	-7	-43	-169	926	442	1344	5205	11767	17611	17492	16239	20134	23048	24425	28472	34474	33471	37626	42517	49197	50949	50949	37626	42517	49197
(millions of U.S. dollars)	-39	-165	-420	1154	404	846	2008	3724	5257	5270	4919	6110	7071	7304	8506	10340	11515	13235	14224	16629	16394	16394	13235	14224	16629
Net domestic assets	331	512	957	133	1467	2054	-56	-4988	-9592	-9078	-7068	-10724	-13206	-13505	-16355	-21060	-19766	-24106	-25115	-26496	-28737	-28737	-24106	-25115	-26496
NBR refinancing 4/	233	358	802	252	245	438	791	495	310	309	276	274	209	208	175	175	1107	365	331	331	331	331	365	331	331
Memorandum items:																									
CPI inflation (12-month rate)	0.0	27.8	56.9	151.4	40.6	54.8	40.7	30.3	17.8	17.1	14.0	15.9	14.1	13.1	12.0	11.1	9.3	8.7	9.7	8.5	8.6	8.6	8.7	9.7	8.5
Exchange rate (Lei per U.S. \$)	177	258	404	802	1095	1826	2593	3160	3350	3319	3301	3295	3260	3344	3347	3334	29067	28429	29891	29585	31078	31078	28429	29891	29585
Real annual broad money growth	47.2	34.4	5.8	-18.5	5.9	-6.4	-1.9	12.2	17.3	14.6	13.3	12.7	8.1	15.2	16.4	23.2	28.0	29.9	33.5	30.2	33.3	33.3	29.9	33.5	30.2
Real annual credit growth 5/	33.2	48.3	15.2	-41.2	20.5	-7.6	9.9	25.6	32.4	33.7	41.8	51.4	56.8	52.2	46.8	43.6	40.5	41.9	46.4	47.8	44.7	44.7	41.9	46.4	47.8
Velocity:																									
Velocity of broad money	5.54	4.54	4.62	5.13	4.49	4.66	4.98	4.78	4.37	5.16	5.03	4.88	4.58	4.88	4.99	4.81	4.42	3.98	4.11	3.85	3.63	3.45	4.11	3.85	3.63
Velocity of broad lei money	7.11	5.87	6.03	7.17	6.66	7.47	8.36	8.36	7.20	8.54	8.28	7.94	7.28	8.19	7.49	6.79	6.25	6.21	5.85	5.33	4.93	4.93	6.21	5.85	5.33
Ratio of foreign currency deposits to broad money	22.1	22.6	23.4	28.4	32.6	37.6	40.4	42.8	39.3	39.6	39.3	38.5	37.1	39.1	35.7	35.0	36.4	33.9	34.2	31.9	30.0	30.0	33.9	34.2	31.9

Sources: National Bank of Romania; and Fund staff estimates.

1/ Only liquid convertible foreign assets and gold are included. Gold is valued at US\$407 per ounce. All foreign currencies other than the U.S. dollar are converted in dollars at their end-1999 exchange rates, which are US\$ 1.2615 per euro and US\$1.486 per SDR.

2/ Equal to broad money minus net foreign assets.

3/ Includes liabilities to DMBs in foreign exchange.

4/ Includes credit to the Deposit Guarantee Fund.

5/ Weighted average of real lei credit and U.S. dollar foreign-currency credit (at constant euro/dollar exchange rate). Adjusted for write-offs.

Table 25. Romania: Balance of Payments, 2000-05 1/

(In millions of Euros)

	2000	2001	2002	2003	2004	2005 Prel.
Current account	-1,493	-2,488	-1,623	-3,060	-5,099	-6,891
Trade account	-1,867	-3,323	-2,752	-3,955	-5,323	-7,806
Exports	11,273	12,722	14,675	15,614	18,935	22,255
Imports	-13,140	-16,045	-17,427	-19,569	-24,258	-30,061
Services and Income account, net	-563	-444	-483	-1,133	-2,748	-2,743
Receipts	2,269	2,783	2,903	2,998	3,232	5,244
Of which: Interest	249	367	277	219	230	522
Payments	-2,832	-3,227	-3,386	-4,131	-5,980	-7,987
Of which: Interest	-580	-690	-705	-720	-773	-1,152
Unrequited transfers (net)	937	1,279	1,612	2,028	2,972	3,658
Capital account 2/	2,509	4,518	3,609	3,970	9,995	12,526
Direct investment and capital transfers (net) 3/	1,432	1,692	1,610	2,134	5,639	5,792
Medium- and long-term (net)	1,824	2,012	1,912	1,160	1,274	1,806
Receipts	2,961	3,637	4,353	3,300	3,711	4,511
Payments	1,138	1,625	2,442	2,140	2,437	2,705
Credit extended (net)	-84	161	464	144	789	407
Bilateral clearing agreements	-9	7	8	9	25	0
Net foreign assets of commercial banks (increase, -)	-508	49	745	1,031	1,190	2,322
Short-term (net) 2/	-654	646	-384	523	2,268	4,521
Overall balance	1,015	2,030	1,986	910	4,896	5,635
Financing	-1,015	-2,030	-1,986	-910	-4,896	-5,635
Net foreign assets NBR (increase, -)	-1,015	-2,030	-1,986	-910	-4,896	-5,635
of which: IMF net	18	-56	8	110	-138	-121

Sources: National Bank of Romania; and Fund staff estimates.

1/ Excludes transactions in transferable rubles.

2/ Including errors and omissions.

3/ Including portfolio investment.

Table 26. Romania: Composition of Exports, 1993-2005

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 Prel.
	(In percent of total)												
Live animal and animal products	3.3	3.6	2.1	1.9	2.4	1.1	1.4	1.2	1.2	1.0	1.2	1.1	0.9
Vegetable products	1.2	1.0	2.6	4.6	1.9	2.2	2.9	1.1	1.6	1.3	1.1	1.1	1.2
Fats and animal or vegetable edible oil:	1.3	0.8	1.0	0.9	1.5	0.8	0.6	0.2	0.2	0.1	0.2	0.3	0.3
Foodstuffs, beverages, tobacco	1.0	1.1	0.9	1.3	1.2	1.1	0.7	0.7	0.9	0.7	0.7	0.6	0.6
Mineral products	11.7	11.6	9.2	8.6	7.6	6.1	5.9	7.9	6.9	8.5	7.0	7.2	11.0
Chemicals	7.0	7.9	9.1	8.5	6.6	4.0	3.9	5.0	4.4	3.5	3.7	4.1	4.5
Plastic, rubber, and articles	1.7	2.3	2.6	2.4	2.2	2.1	2.1	2.2	2.0	2.6	3.3	3.7	3.9
Wood products, cork, and wattles	3.6	3.6	3.3	3.6	4.0	4.6	5.8	5.4	5.4	5.4	5.4	5.4	5.4
Textiles and textile articles	16.0	18.8	19.8	21.4	23.0	26.0	25.9	24.1	26.2	25.3	25.4	22.3	18.9
Footwear	3.3	5.0	5.4	6.2	6.4	7.3	8.0	7.6	8.6	8.4	8.1	6.5	5.8
Articles of stone, cement, ceramics, glass, etc.	2.0	1.8	1.9	1.9	1.8	1.9	1.9	1.6	1.5	1.4	1.4	1.1	0.9
Basic metals and articles thereof	19.6	17.3	18.2	15.7	18.5	19.1	15.5	16.0	13.3	12.9	12.9	15.4	14.8
Machinery, appliances, and electrical equipment	9.0	8.4	8.3	8.3	8.7	9.5	11.4	14.1	14.7	15.6	16.0	17.6	17.7
Transport equipment	8.3	6.4	5.4	5.4	5.3	5.1	5.3	4.9	5.2	5.7	5.7	6.3	8.0
Other	11.0	10.4	10.2	9.3	8.9	9.1	8.6	7.9	7.8	7.5	7.8	7.2	6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Romania's National Institute of Statistics.

Table 27. Romania: Direction of Trade, 1996-2005

(In percent of total)

	1996		1997		1998		1999		2000		2001		2002		2003		2004		2005 Prel.	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
Developed countries	62.2	61.6	64.8	62.7	72.2	66.3	72.2	68.5	70.3	64.2	74.4	65.1	74.5	65.0	74.0	63.7	85.2	75.9	82.2	73.7
<i>Of which:</i>																				
Austria	2.1	3.1	2.1	2.7	3.0	2.9	2.9	2.9	2.4	2.5	3.0	2.8	3.0	3.3	3.2	3.5	3.1	3.5	3.1	3.7
France	5.7	4.9	5.5	5.7	5.9	6.9	6.2	6.7	7.0	6.1	8.1	6.3	7.6	6.4	7.3	7.3	8.5	7.1	7.4	6.7
Germany	18.4	17.6	16.8	16.4	19.6	17.4	17.8	17.1	15.7	14.7	15.6	15.2	15.6	14.9	15.7	14.8	15.0	14.9	14.0	14.0
Italy	17.1	15.3	19.5	15.8	22.0	17.4	23.3	19.6	22.4	18.7	24.9	19.9	20.7	20.7	24.2	19.5	21.2	17.2	19.2	15.5
Switzerland	0.5	1.7	0.5	1.3	0.6	1.1	0.7	1.2	0.6	1.2	0.5	1.1	0.5	0.9	0.6	0.9	0.6	1.0	0.7	1.0
United Kingdom	3.1	2.9	3.5	3.4	3.7	3.4	4.9	4.2	5.3	4.1	5.2	3.5	5.8	3.8	6.7	3.3	6.6	3.3	5.4	2.9
Czech Republic I/	2.4	3.8	3.8	4.1	3.8	4.2	3.7	3.5	3.7	3.0	3.1	3.2	4.3	3.0	3.5	2.3	2.8	2.9	4.1	2.8
Slovak Republic I/	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.7	2.2	1.0	2.3
Hungary I/	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.3	1.0	0.4	1.1
Poland I/	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.8	3.2	4.1	3.3
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.3	2.5	1.5	2.9
Developing countries	37.8	38.4	35.2	37.3	27.8	33.7	27.8	31.5	29.7	35.8	25.6	34.9	25.5	35.0	26.0	36.3	14.8	24.1	17.8	26.3
<i>Of which:</i>																				
Bulgaria	0.9	0.6	0.7	0.5	0.9	0.4	1.6	0.5	2.8	0.7	1.8	1.0	1.3	0.8	1.6	1.0	1.9	1.1	2.7	1.0
China	1.1	1.0	0.5	1.1	0.3	1.5	0.4	1.4	0.8	1.3	0.8	1.6	1.5	2.1	1.6	2.7	0.8	3.2	0.7	4.1
Czech and Slovak Republics	0.5	1.2	0.5	1.5	0.4	2.5	0.3	2.5	0.4	2.4	0.6	2.7	0.6	2.9	0.8	3.3	.....	.....	.....	.....
Hungary	2.1	2.5	2.2	3.1	2.6	4.6	3.2	4.0	3.4	3.9	3.3	3.9	3.1	3.6	3.5	3.6	.....	.....	.....	.....
Poland	0.5	0.7	1.2	0.8	1.0	1.2	1.4	1.5	1.0	1.5	0.9	1.8	0.8	1.9	1.0	2.3	.....	.....	.....	.....
Russia	2.0	12.5	3.0	12.0	1.0	9.0	0.6	6.8	0.9	8.6	0.7	7.6	0.3	7.1	0.3	8.3	0.5	6.8	0.8	8.3
Ukraine	0.8	1.6	1.1	1.2	0.6	1.4	0.7	1.0	0.9	1.5	0.4	2.1	0.3	1.9	0.4	2.3	0.3	2.7	0.6	1.3
Moldova	1.2	0.7	1.5	0.6	1.6	0.5	1.2	0.4	1.4	0.3	1.0	0.3	0.8	0.3	0.8	0.3	0.9	0.2	1.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Bank of Romania.

I/ From 2004, the 10 new members of the EU were excluded from developing countries and added to developed countries, since the EU belongs to the developed countries group.

Table 28. Romania: Composition of Imports, 1993-2005

(In percent of total)

	1993	1994	1995	1996	1997	1998	1999	1998	2000	2001	2002	2003	2004	2005 Prel.
Live animals and animal products	1.0	1.4	1.3	0.6	0.6	1.8	1.2	1.6	1.1	1.8	1.7	1.2	1.5	2.0
Vegetable products, cereals	7.3	2.0	1.5	1.5	1.5	1.9	2.1	2.3	2.1	2.2	1.6	2.8	2.1	1.3
Foodstuffs, beverages, and tobacco	6.1	5.5	5.7	5.3	3.8	4.4	3.9	4	3.6	3.6	3.0	2.9	2.8	2.6
Mineral products	28.7	26.8	24.2	23.5	21.3	14.3	11.9	17.8	14.4	14.4	12.8	12.4	13.4	15.6
Chemicals	7.8	7.9	9.0	8.6	8.3	8.7	9.2	9.0	8.2	7.8	8.4	8.0	7.9	7.5
Plastic, rubber, and articles	3.1	3.2	3.8	3.9	3.9	4.3	4.5	4.4	4.5	4.9	5.5	5.9	5.8	6.1
Crude hides and skins, leather, furs, etc.	1.7	2.1	2.1	2.3	2.5	2.6	2.9	2.4	2.8	3.3	3.5	3.2	2.5	2.1
Textiles and textile articles	10.1	11.4	11.8	11.7	13.9	15.4	18.4	13.8	16.3	16.1	16.4	14.9	12.6	10.1
Footwear	0.7	0.9	1.0	1.1	1.4	1.7	1.8	1.7	1.7	1.6	1.6	1.5	1.2	1.1
Basic metals and articles thereof	4.3	4.9	5.3	6.2	5.9	6.7	6.6	6.2	6.8	7.3	7.4	7.7	8.4	8.9
Machinery, appliances, and electrical equipment	17.6	20.4	20.6	21.9	23.0	23.0	23.5	22.1	24.7	22.7	22.9	23.9	23.8	23.4
Transport equipment	4.3	4.7	3.9	3.6	3.4	4.1	4.0	3.3	4.3	5.1	5.7	6.2	9.2	10.2
Other	7.3	8.8	9.8	9.8	10.5	11.1	10.0	11.6	9.5	9.3	9.6	9.4	8.7	9.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Romania's National Institute of Statistics.

Table 29. Romania: Foreign Exchange Market Transactions, 2000-05
(In millions of U.S. dollars)

		Total Volume	Daily Average Volume	Total Volume between banks
2000	January	1,753.0	87.7	1155.2
	February	1,668.6	79.5	1047.7
	March	2,091.1	90.9	1391.2
	April	1,900.9	95.0	1275.2
	May	1,901.6	86.4	1217.0
	June	1,637.7	74.4	939.1
	July	1,731.6	82.5	1060.0
	August	1,975.3	85.9	1197.1
	September	2,472.3	117.7	1678.9
	October	2,055.9	93.5	1264.5
	November	1,878.9	85.4	1100.0
	December	1,733.1	96.3	894.8
2001	January	1,605.8	76.5	916.0
	February	1,466.1	73.3	813.1
	March	1,922.3	87.4	1193.1
	April	1,894.2	94.7	1160.0
	May	2,014.7	91.6	1196.1
	June	1,817.5	86.6	1067.7
	July	2,503.7	113.8	1608.8
	August	2,278.5	99.1	1412.8
	September	1,868.0	93.4	1033.7
	October	2,806.9	122.0	1873.7
	November	2,060.9	93.7	1208.0
	December	2,543.1	149.6	1576.9
2002	January	2,433.6	105.8	1570.4
	February	2,431.9	121.6	1688.8
	March	2,426.2	115.5	1610.5
	April	3,063.6	139.3	2072.7
	May	2,450.1	129.0	1569.7
	June	2,876.5	143.8	1977.5
	July	3,458.7	150.4	2314.2
	August	3,487.1	158.5	2471.7
	September	2,808.2	133.7	1758.6
	October	3,821.9	166.2	2628.5
	November	3,070.6	146.2	1900.8
	December	3,027.8	159.4	1745.0
2003	January	3,006.2	150.3	1901.3
	February	3,203.7	160.2	2157.5
	March	3,225.1	153.6	2032.5
	April	2,841.8	135.3	1585.0
	May	3,197.3	152.3	1834.1
	June	2,517.6	119.9	1134.3
	July	3,861.0	167.9	2395.5
	August	3,965.1	188.8	2567.5
	September	3,718.6	169.0	2225.6
	October	3,973.3	172.8	2323.6
	November	3,406.4	170.3	1902.5
	December	3,842.7	192.1	1927.9
2004	January	4,014.3	200.7	2306.7
	February	5,147.8	257.4	3499.7
	March	6,686.3	290.7	4509.5
	April	5,264.5	250.7	3382.1
	May	5,650.9	269.1	3639.9
	June	5,343.3	242.9	3144.4
	July	7,169.5	325.9	4684.5
	August	6,646.7	302.1	4332.6
	September	7,411.7	336.9	4725.3
	October	6,875.8	327.4	4149.0
	November	10,354.9	470.7	6999.7
	December	9,541.6	433.7	5952.1
2005	January	9,613.7	457.8	6533.1
	February	9,723.3	486.2	6321.8
	March	9,011.0	391.8	5445.0
	April	7,114.4	338.8	4005.0
	May	5,164.5	245.9	2148.0
	June	6,095.3	290.3	2703.1
	July	7,506.3	375.3	3216.5
	August	16,498.6	678.5	6897.9
	September	13,805.7	627.5	4666.1
	October	10,264.9	488.8	4138.2
	November	11,449.2	520.4	4364.1
	December	14,229.7	711.5	3165.5

Source: National Bank of Romania.

Table 30. Romania: Exchange Rate Against the U.S. Dollar, 1995-2005

		(Lei per U.S. dollar)	
		End of Period	Period Average
1995		2,578.0	2,033.26
1996		4,035.0	3,082.60
1997		8,023.0	7,167.94
1998		10,951.0	8,876.60
1999		18,255.0	15,333.81
2000		25,926.0	21,708.72
2001		31,597.0	29,060.79
2002		33,500.0	33,055.43
2003		32,595.0	33,200.07
2004		29,067.0	32,636.57
2005	1/	3.108	2.914
2002	January	32,184	32,052
	February	32,599	32,233
	March	32,887	32,766
	April	33,445	33,102
	May	33,533	33,491
	June	33,477	33,392
	July	32,888	32,979
	August	33,215	33,094
	September	33,055	33,116
	October	33,524	33,242
	November	33,569	33,545
	December	33,500	33,654
2003	January	33,130	33,448
	February	33,121	32,884
	March	33,189	33,135
	April	33,214	33,703
	May	32,156	32,502
	June	33,014	32,616
	July	32,793	32,677
	August	34,140	33,359
	September	32,952	33,799
	October	33,901	33,157
	November	33,523	34,109
	December	32,595	33,013
2004	January	32,376	32,572
	February	32,251	32,073
	March	33,440	32,646
	April	33,865	33,923
	May	33,391	33,758
	June	33,473	33,570
	July	34,104	33,395
	August	33,900	33,613
	September	33,340	33,621
	October	32,057	32,881
	November	29,013	30,677
	December	29,067	28,910
2005	January	28,855	29,076
	February	27,473	28,244
	March	28,429	27,570
	April	27,931	28,041
	May	29,278	28,508
	June	29,891	29,695
	July	2.916	2.961
	August	2.875	2.851
	September	2.959	2.865
	October	3.026	2.993
	November	3.102	3.097
	December	3.108	3.084

Source: Data provided by the Romanian authorities.

1/ After June 2005, 1 RON = 10,000 ROL

Table 31. Romania: Stock of Foreign Capital, 2000-05
(Cumulative from 1991)

Country	Foreign Capital 1/						Number of Foreign Investors					
	2000	2001	2002	2003	2004	2005 Prel.	2,000	2,001	2002	2003	2004	2005 Prel.
Total	6,045,283	7,841,964	9,101,849	10,501,682	12,722,782	15,871,826	77,334	82,424	90,609	97,229	99,861	111,579
European Union	3,800,997	4,566,619	5,391,275	6,353,796	9,637,716	11,984,078	27,863	31,233	36,542	40,401	53,906	59,846
Austria	316,028	532,100	556,790	595,063	1,663,159	2,305,582	1,893	2,084	2,523	2,785	3,201	3,578
Belgium	46,533	53,626	51,922	65,035	76,723	79,631	772	872	1,073	1,165	1,353	1,494
Denmark	7,067	9,925	13,115	18,307	20,403	25,324	177	189	234	261	297	327
France	489,143	666,064	655,245	1,067,964	1,511,138	1,501,694	2,081	2,294	2,825	3,150	3,645	4,060
Finland	7,568	1,186	1,576	1,966	1,756	10,394	43	46	50	54	65	57
Germany	651,710	751,993	882,505	880,328	1,090,504	1,514,838	8,453	9,121	10,231	10,954	12,129	12,898
Greece	181,867	231,141	291,511	318,093	335,556	607,984	1,819	1,991	2,351	2,555	2,926	3,164
Ireland	23,785	26,798	24,540	24,045	16,597	22,662	112	118	173	198	267	338
Italy	779,125	517,464	546,376	624,525	711,008	922,325	9,048	10,634	12,450	14,157	16,905	18,747
Luxembourg	116,338	169,409	160,848	196,780	271,474	301,280	138	156	194	218	261	318
Netherlands	764,038	1,122,153	1,570,115	1,858,921	2,102,092	2,635,582	1,178	1,332	1,566	1,743	2,021	2,288
Portugal	23,394	3,966	114,609	62,962	6,894	11,950	42	58	74	92	123	158
Spain	72,561	142,256	145,044	157,151	174,921	222,398	355	406	518	629	866	1,214
Sweden	57,755	81,747	105,493	108,951	111,354	112,402	630	669	738	782	831	851
United Kingdom	264,085	256,791	271,586	373,705	565,495	641,812	1,122	1,263	1,479	1,658	1,957	2,203
Poland	...	...	...	...	14,943	11,928	...	...	...	...	249	271
Hungary	...	...	...	...	347,077	441,857	...	...	...	...	5,010	5,631
Malta	...	...	...	...	5,989	5,201	...	...	...	...	31	42
Czech Republik	...	...	...	...	9,556	10,578	...	...	...	...	234	267
Cyprus	...	...	...	...	590,572	585,600	...	...	...	...	1,356	1,712
Slovakia	...	...	...	...	931	1,655	...	...	...	...	99	120
Latvia	...	...	...	...	65	66	...	...	...	...	6	12
Estonia	...	...	...	...	6	6	...	...	...	...	7	9
Lithuania	...	...	...	...	332	354	...	...	...	...	15	22
Slovenia	...	...	...	...	9,171	10,975	...	...	...	...	52	65
Other countries	2,244,286	3,275,345	3,710,574	4,147,886	3,085,066	3,887,748	49,471	51,191	54,067	56,828	45,955	51,733
of which:												
Korea, Rep. of	248,580	260,097	245,313	218,365	217,366	57,837	68	75	76	82	86	91
U.S.A.	366,853	624,162	708,214	704,323	888,366	794,117	2,975	3,207	3,512	3,800	4,203	4,411
Turkey	225,527	260,574	368,350	418,741	455,254	488,147	6,689	7,280	8,224	8,666	9,226	8,989
Switzerland	173,775	200,094	251,992	308,139	398,112	444,297	927	1,002	1,152	1,252	1,395	1,515
Canada	58,397	68,174	70,227	59,968	58,465	57,395	695	664	823	893	1,026	1,111
Syria	60,506	54,849	54,585	62,742	67,281	66,228	4,604	4,830	5,183	5,259	5,365	4,975
Israel	29,623	28,155	26,632	28,428	31,537	37,045	1,735	1,887	2,339	2,566	2,948	3,281
Hungary	139,673	189,769	223,677	264,526	...	...	2,988	3,595	3,978	4,392	...	...
Cyprus	469,757	535,005	432,210	504,914	...	...	797	755	1,021	1,144	...	...
Lebanon	39,743	37,535	39,924	45,817	49,884	49,796	2,866	2,817	3,221	3,304	3,410	3,132
China	46,377	44,842	53,297	103,624	160,576	196,706	6,806	7,334	8,101	8,210	8,460	8,155
Iraq	40,974	45,855	44,277	51,974	55,153	49,053	5,043	5,138	5,675	5,778	5,848	5,064
Liechtenstein	39,560	39,125	47,774	59,389	67,677	74,929	140	134	147	151	159	163
Iran	16,609	17,315	17,633	20,426	22,731	19,726	2,270	2,289	2,538	2,591	2,661	2,408
Britain Islands	41,308	82,616	117,796	123,432	343,921	379,977	110	108	163	190	209	228
Bulgaria	9,261	8,735	10,008	10,290	11,748	11,164	351	355	450	514	587	609
Egypt	9,666	10,118	8,854	10,451	11,794	11,076	1,120	1,136	1,242	1,275	1,308	1,173
Rep. of Moldova	10,882	12,537	13,055	13,402	15,138	16,722	973	1,134	1,398	1,592	1,934	2,163
Australia	16,630	15,611	9,919	10,067	10,714	9,237	345	314	377	399	440	474
Saudi Arabia	696	758	1,560	2,062	2,362	2,130	73	82	98	112	120	113
Panama	16,865	15,756	16,076	17,798	17,809	17,592	109	102	112	115	122	124
Yugoslavia	18,135	18,000	21,534	22,696	22,710	22,629	626	656	707	728	749	725
Poland	7,327	7,179	5,990	7,962	...	...	153	173	202	221	...	...

Source: Data released by The National Trade Register Office and processed by the National Commission for Economic Forecasting.

1/ In thousands of U.S. dollars.

Table 32. Romania: Outstanding External Debt in Convertible Currencies, 1993-2005

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	(In millions of U.S. dollars, end of period)												
Medium- and long-term	3,357	4,597	5,482	7,208	8,585	9,406	8,793	10,504	12,068	15,604	20,005	24,967	28,941
<i>Official creditors</i>	3,123	4,245	4,962	6,229	7,053	7,696	6,891	7,784	8,525	10,399	13,239	14,914	14,547
Multilateral Institutions	2,059	2,712	2,788	2,720	3,392	3,704	3,852	4,333	4,541	5,394	6,508	7,063	6,783
Of which: IMF	1,041	1,313	1,039	651	642	535	456	453	386	426	599	443	261
Public and Publicly guaranteed guaranteed credits 1/ Of which: China	1,064 137	2,174 89	2,174 57	3,509 36	3,661 15	3,992 28	3,039 24	3,451 23	3,984 0	5,005 0	6,731 0	7,851 0	7,764 0
<i>Commercial creditors</i>	212	352	520	979	1,532	1,710	1,902	2,720	3,543	5,205	6,766	10,053	14,394
Trade-related credits	212	290	415	485	438	307	204	125	55	61	52	43	70
Commercial banks 2/	0	4	57	160	204	431	357	422	583	953	1,398	3,411	6,666
Non-guaranteed public	0	58	48	334	890	972	1,341	2,173	2,905	4,191	5,316	6,599	7,658
Ex-CMEA banks	22	0	0	0	0	0	0	0	0	0	0	0	0
Short-term	1,776	1,818	1,282	1,833	1,554	838	758	751	980	1,282	2,493	4,909	7,260
<i>Of which:</i>													
Documents in transit	85	62	172	475	471	232	160	148	160	170	222	314	...
Letters of credit	431	504	546	410	258	151	128	161	148	206	166	189	...
Total	5,133	6,415	6,764	9,041	10,139	10,244	9,551	11,255	13,048	16,886	22,498	29,876	36,201

Source: Romanian authorities. The figures do not include the disputed obligation to Sweden dated 1928.

1/ Includes guaranteed supplier credits, guaranteed credits from private banks, bonds issued in 1996 and 1997 and syndicated loans.

2/ Revised data (includes financial credits received from commercial banks and bonds issued by Romanian companies bought by foreign commercial banks).

Table 33. Romania: Currency Composition of Medium- and Long-Term External Debt, 1993-2005

(In percent; end of period)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
U.S. dollars	31.4	39.3	42.5	47.5	52.1	53.1	58.0	57.2	58.0	47.7	38.0	32.3	28.2
Swiss francs	4.0	1.8	1.6	0.9	1.1	2.7	2.7	2.2	2.7	1.4	1.1	1.1	0.8
Deutsche marks	4.8	4.8	11.1	11.9	14.4	16.1	15.2	12.2	9.4	0.0	0.0	0.0	0.0
SDRs	31.0	28.6	19.0	9.0	7.5	5.7	5.2	4.4	5.2	2.8	3.0	1.8	0.9
Pounds sterling	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.9	0.9
French francs	3.5	4.4	4.5	3.9	3.8	4.1	3.7	2.4	1.7	0.0	0.0	0.0	0.0
ECU 1/	16.1	14.4	14.7	11.3	9.3	7.7	6.8	14.3	16.9	47.7	54.9	61.2	64.1
Other currencies	9.1	6.7	6.6	15.4	11.7	10.5	8.2	7.1	5.9	0.1	2.4	2.7	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Data provided by the Romanian authorities.

Table 34. Romania: Summary of Export Restrictions, 1995-2005 1/
(Products subject to export quotas)

1995	1996	1997	2001	2002	2003-04
Grains and Technical Crops Wheat for seeds and common wheat (2 pos.) (500,500 tons initially, but changed) Maize and maize hybrids (6 pos.) (total 1,008,830 tons) Sunflower for seeds (1 pos.) (382 tons) Raw sunflower oil (1 pos.) (10,000 tons) Other Agriculture Raw sheep skins and hides (4 pos.) (315,000 pcs.) Cattle hides (2 pos.) (200,000 sq. m.) Sheep skins without hair (7 pos.) (185,000 pcs.) Non-Ferrous Minerals, Fuels Copper and copper-based alloys (3 pos.) (10,100 tons) Aluminum-based alloys (1 pos.) (10,000 tons) Refined lead (1 pos.) (4,000 tons) Zinc (1 pos.) (5,000 tons) Wood and Wood Products Coniferous timber (7 pos.) Beech tree timber and other timber (7 pos.) Semi-processed and different wood products (excl. furniture) (10 pos.)	Grains and Technical Crops Wheat for seeds and common wheat (2 pos.) (1,310,000 tons) Maize and maize hybrids (6 pos.) (1,024,000 tons) Sunflower seeds (1 pos.) (2,000 tons) Raw sunflower oil (1 pos.) (75,000 tons) Other Agriculture Raw sheep skins and hides (4 pos.) (320,000 pcs.) Raw cattle hides (2 pos.) (300,000 sq. m.) Sheep skins without hair (7 pos.) (250,000 pcs.) Raw wool (2 pos.) (4,000 tons in sem. II only) Non-Ferrous Minerals, Fuels Products made of copper alloys (1 pos.) (100 tons) Aluminum-based alloys (1 pos.) (10,000 tons) Refined lead (1 pos.) (4,000 tons) Zinc (1 pos.) (8,000 tons) Wood and Wood Products Coniferous timber (8 pos.) Beech tree timber and other timber (6 pos.) Semi-processed and different wood products (excl. furniture) (9 pos.)	Grains and Technical Crops Wheat and wheat hybrid (6 pos.) Barley (1 pos.) Flour (2 pos.) Sunflower seeds for crops (1 pos.) Raw sunflower oil (1 pos.) Bread (1 pos.) Wheat's extraction (1 pos.) Soya beans' extraction (1 pos.) Sunflower's extraction (1 pos.) Other Agriculture Snails, other than sea snails (1 pos.) Raw cattle and horse skins and hides (7 pos.) (2,500 tons) Raw sheep skins and hides 4 (pos.) - (1,530 tons) Other raw skins and hides (1 pos.) (700 tons) Other cattle skins (2 pos.) (2,735 tons) Sheep skins without hair (2 pos.) (564 tons) Raw wool (2 pos.) (4,000 tons) Ferrous metals Iron and steel trash (3 pos.) (250,000 tons) Non-ferrous minerals, metals, fuels Copper trash (1 pos.) - 3,000 tons) Copper and copper based alloys, copper products (3 pos.) (4,200 tons) Aluminum based alloys (2 pos.) (10,000 tons) Lead, lead alloys (2 pos.) (6000 tons) Zinc (1 pos.) (10,000 tons) Wood and wood products Coniferous timber (9 pos.) (972,000 m3) Beech tree timber and other timber (9 pos.) (310,000 m3)	Sunflower seeds for a three months period starting with September 25, 2001 Not-processed or semi-processed wood products sold on the domestic market exclusively, during March 15 - December 31, 2001. Export licenses issued by March 15, 2001 remained valid until expiring date. (Government Decisions 295/2001 and 444/2001)	Not-processed or semi-processed wood products sold on the domestic market exclusively, during January 1 - April 30, 2002. (Government Decision 1052/2001)	Wheat and Meslin temporary suspension of exports from August 3, 2003 till July 1, 2004 (Government Decision 864/2003)
Wood products: 1 pos = 1,000 m2 1 pos = 10,000 m3 1 pos = 2,000 m3					

Source: Foreign Trade Department, National Bank of Romania.
1/ There were no restrictions in 1998, 1999, 2000, and 2005.

Table 35. Romania: Energy Prices, 1995-2005 1/
(In domestic currency)

Units	1995				1996			1997			1998			2000	2001	2002	2003	2004	2005 3/
	Jan.	Feb.-Apr.	May-Sep.	Oct-Dec.	Jan.-June	July-Nov.	Dec.	1997	Jan.-Apr.	May-Dec.	1999	2000	2001						
Liquid bottled gas 2/ (Households)	4,100	4,758	6,565	6,639	6,639	10,647	11,112	27,667	33,977	34,793	69,222	130,363	149,356	168,179	195,603	248,604	30,93		
Premium gasoline Households	452	494	600	742	742	989	991	2,764	3,599	4,175	8,153	11,414	15,216	20,703	25,146	28,360	3,27		
Enterprises	287	316	380	474	474	612	612	1,423	1,305	1,207	1,846	3,462	5,585						
Diesel fuel Households	355	377	432	497	497	679	680	2,256	2,902	3,191	5,316	8,477	13,225	15,896	18,870	24,674	3,03		
Enterprises	237	249	270	316	316	431	429	1,282	1,356	1,225	1,683	3,226	5,323						
Light fuel type P Households	295,540	314,706	361,882	361,882	361,882	566,948	566,948	1,747,478	2,045,948	2,150,510	3,453,940	7,870,265	12,734,620	17,109,795	20,106,369	21,168,009	2,183,35		
Enterprises	273,140	289,451	338,382	338,382	338,382	494,755	534,748	1,461,454	1,851,786	1,771,899	2,505,663	3,848,636	5,738,949						
Heating oil (light) Households	229,770	249,193	293,890	295,830	295,830	485,250	486,920	1,205,310	1,521,790	1,600,540	2,880,610	5,457,240	8,937,300	10,466,370	14,966,760	20,621,850	2,580,00		
Enterprises	127,160	139,593	172,065	172,000	172,000	269,457	270,000	651,719	859,753	812,502	1,190,571	2,687,605	3,369,683						
Crude oil	113,448	124,521	149,713	179,097	179,097	315,638	315,948	863,238	966,110	918,992	1,586,038	3,293,931	5,191,144						
Natural gas Enterprises and population	50,886	50,886	50,886	50,886	50,886	81,232	81,639	394,875	471,250	515,475	801,835	1,002,294	1,320,427						
Enterprises	...	...	...	...	...	...	...	608,333	712,500	714,700	854,713	991,553	1,193,805				
Used as fuel	34,000	34,000	38,640	40,000	40,000	62,850	63,000	188,330	230,000	316,250	749,310	1,215,480	2,083,600	3,274,140	3,950,740	5,472,350			
Coal (lignite) Households	38,990	39,262	41,486	44,167	44,167	58,496	61,781	142,933	267,088	291,251	391,910	596,144	794,897	1,074,925	1,352,466	1,564,559	181,11		
Enterprises	19,740	19,726	22,053	26,250	26,250	35,839	35,992	88,773	106,751	107,098	170,653	232,147	300,333						
Electricity Households	40	40	45	46	46	73	73	161	187	321	...	...	...			
Enterprises	78	78	84	88	88	137	140	365	436	430	553	746	1,033						
Enterprises and population	71	72	78	81	81	127	127	325	385	400	568	792	1,091						

Source: National Institute of Statistics of Romania.

1/ Delivery prices for households include VAT from July 1, 1993. Delivery prices for enterprises exclude VAT.

2/ 12.5 kg. bottles, delivered for households.

3/ The data for 2005 are expressed in re-denominated lei (RON). A lei (RON) equals 10000 old lei (ROL).

Table 36. Romania: Energy Bill, 1996-2005

	Natural Gas (Tera Joule) 1/		Electric Power (thousand kw hours)		Mineral Fuel (thousand tons)		Crude Petroleum (thousand tons)		Petroleum Products (thousand tons)		TOTAL In thousand of U.S. dollar
	Quantity	Value 2/	Quantity	Value 2/	Quantity	Value 2/	Quantity	Value 2/	Quantity	Value 2/	
1996 Exports f.o.b.	0	0	0	0	490	32664	0	0	2944	563361	596025
1996 Imports c.i.f.	271195	611900	749	16707	4843	324074	7156	1036932	3219	400583	2390196
1997 Exports f.o.b.	0	0	556	13058	418	24699	0	0	2659	480025	517782
1997 Imports c.i.f.	185716	448075	777	17489	5462	370189	6245	838301	3915	456764	2130818
1998 Exports f.o.b.	0	0	337	11055	378	19274	0	0	3001	362882	393211
1998 Imports c.i.f.	179684	350406	724	26709	4014	245870	5974	550767	2716	256780	1430532
1999 Exports f.o.b.	...	...	2,237	72,578	291	21,193	...	...	1,957	320,489	414,260
1999 Imports c.i.f.	121,712	198,588	1,412	46,075	2,730	161,522	4,294	478,192	1,513	166,842	1,051,219
2000 Exports f.o.b.	...	...	1,530	46,717	245	36,541	...	...	2,520	659,570	742,829
2000 Imports c.i.f.	3,229	301,090	836	23,137	3,205	199,391	4,642	822,528	1,216	210,086	1,556,230
2001 Exports f.o.b.	...	...	2,077	62,316	225	36,466	...	...	2,852	608,337	707,119
2001 Imports c.i.f.	1,932	324,270	767	21,230	3,971	284,833	5,544	954,170	2,372	357,133	1,941,635
2002 Exports f.o.b.	...	...	3,290	100,464	224	41,152	...	...	4,387	955,892	1,097,508
2002 Imports c.i.f.	2,607	379,803	436	11,192	4,541	262,567	5,711	1,069,043	1,558	242,629	1,965,234
2003 Exports f.o.b.	...	...	3,046	78,834	190	41,991	...	...	3,606	1,035,572	1,156,396
2003 Imports c.i.f.	3,918	733,764	962	28,523	4,716	354,810	5,217	1,086,250	1,578	349,920	2,553,268
2004 Exports f.o.b.	...	...	3,766	97,475	305	73,821	...	...	4,171	1,422,739	1,594,035
2004 Imports c.i.f.	3,726	692,181	2,584	94,203	5,587	754,730	7,314	1,910,020	1,320	362,307	3,813,441
2005 Exports f.o.b.	...	...	5,224	175,384	437	113,838	...	...	5,595	2,679,973	2,969,195
2005 Imports c.i.f.	4,140	1,046,881	2,321	89,531	5,239	764,003	8,689	3,322,642	765	368,659	5,591,716

Source: National Institute of Statistics of Romania.
 1/ Quantities from 2000 onwards is expressed in millions of cubic metres.
 2/ Thousands of U.S. dollars.

Table 37. Romania: Energy Balance, 1996-2005

Units	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 1/
Energy Sources - Total	53,941	51,261	46,204	41,804	41,786	44,722	45,299	46,569	48,463	49,432
Production	35,135	31,401	28,796	27,890	28,190	29,021	27,668	28,192	28,094	28,121
Coal 2/	8,065	6,600	5,149	4,576	5,593	6,231	6,109	6,530	6,192	6,186
Hydrocarbons	20,464	18,512	17,610	17,436	17,125	16,994	16,335	16,299	15,788	15,506
Natural gas	13,764	11,908	11,195	11,192	10,968	10,889	10,384	10,529	10,196	10,447
Crude oil	6,700	6,604	6,415	6,244	6,157	6,105	5,951	5,770	5,592	5,059
Hydroelectric power	1,579	2,916	3,009	1,574	1,272	1,284	1,381	1,141	1,421	1,738
Nuclear power	139	...	...	447	470	469	475	422	478	475
Other	4,888	3,373	3,028	3,857	3,730	4,043	3,368	3,800	4,215	4,216
Import	18,806	19,163	15,148	10,186	10,925	12,771	13,949	14,639	16,672	16,686
Coal	2,773	3,429	2,495	1,730	1,917	2,302	2,749	2,772	3,184	2,544
Hydrocarbons	15,788	14,291	12,485	8,361	8,941	10,403	11,162	11,784	13,264	13,942
Natural gas	5,654	4,030	3,773	2,538	2,712	2,332	3,043	4,723	4,127	4,160
Crude oil	7,153	6,243	6,000	4,293	4,759	5,542	6,360	5,215	7,312	8,689
Oil products	2,981	4,018	2,712	292	238	448	609	926	1,179	776
Heavy fuel oil	...	...	...	1,238	1,232	2,081	1,151	920	647	317
Electric power	193	89	101	95	67	66	38	83	222	200
Stocks at the beginning of the period	...	...	...	3,728	2,671	2,930	3,682	3,738	3,697	4,625
Destination - Total	50,365	45,505	40,983	36,567	36,374	37,971	36,480	39,032	39,018	...
Consumption	10,618	9,673	9,412	8,757	8,433	7,197	7,284	7,879	7,910	...
Population	...	...	...	2,317	2,947	3,334	4,999	4,112	4,820	...
Export	...	...	...	2,920	2,464	3,417	3,820	3,425	4,625	...
Stocks by the end of the period	...	...	...	...	...	...	...	...	...	...

Source: National Institute of Statistics.

1/ Provisional data.

2/ Without coking coal.

Table 38. Romania: Primary Supply and Consumption of Petroleum Resources, 1970-2005

	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 1/
(In millions of metric tons)																
Oil																
Domestic production	13.4	14.7	11.5	10.7	7.9	6.4	6.4	6.4	6.3	6.1	6.0	6.0	5.8	5.7	5.5	5.2
Crude oil	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2
Natural gas - liquids	13.6	15.1	11.9	11.1	8.3	6.8	6.8	6.8	6.5	6.3	6.3	6.2	6.1	5.9	5.7	5.4
Subtotal	2.3	5.1	16.2	14.6	16.1	8.8	8.8	8.8	6.0	4.3	4.8	5.5	6.4	5.2	7.3	8.7
Imports - crude oil	5.4	6.2	8.9	9.1	8.4	2.3	2.3	2.3	3.4	2.0	2.7	2.9	4.3	3.6	4.3	5.9
Exports - petroleum products	10.7	13.9	19.2	16.6	16.0	13.3	13.3	13.3	9.1	8.6	8.4	8.8	8.2	7.5	8.7	8.2
Net domestic consumption	127.1	108.6	62.0	66.9	51.9	51.1	51.1	51.1	71.4	73.3	75.0	70.4	74.4	78.7	65.3	65.9
Of which: Domestically produced (in percent)	-29.0	-7.9	38.0	33.1	48.1	48.9	48.9	48.9	28.6	26.7	25.0	29.6	25.6	21.3	34.7	34.1
Net import (in percent)																
(In billions of cubic meters (bcm)) 2/																
Natural gas																
Domestic production	20.0	27.0	25.5	31.9	17.5	12.8	12.8	12.8	12.8	12.7	12.7	12.1	12.0	11.7	11.8	11.8
Non-associated gas	5.3	6.3	7.0	7.0	5.3	5.3	5.3	5.3	1.2	1.5	1.2	1.4	1.4	1.3	1.2	1.1
Associated gas	25.3	31.6	32.5	38.9	22.8	18.1	18.1	18.1	14.0	14.2	13.9	13.5	13.4	13.0	13.0	12.9
Subtotal (bcm) 1/	0.0	0.0	1.6	1.8	5.8	7.3	7.3	7.3	4.7	3.2	3.4	2.9	3.9	5.3	5.1	5.2
Imports	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exports	25.1	31.4	36.6	40.9	28.6	25.4	25.4	25.4	18.7	17.4	17.3	16.4	17.3	18.3	18.1	18.1
Net domestic consumption (bcm)	20.9	26.2	30.5	34.1	23.8	21.2	21.2	21.2	14.8	13.9	13.8	13.3	14.0	14.8	14.6	14.6
Net domestic consumption (million toe)	100.8	100.6	88.8	95.1	79.7	71.3	71.3	71.3	74.9	81.6	80.3	82.3	77.2	71.0	71.7	71.3
Of which: Domestically produced (in percent)	-0.8	-0.6	3.8	4.4	20.3	28.7	28.7	28.7	25.1	18.4	19.7	17.7	22.8	29.0	28.3	28.7
Net import (in percent)																
Total net domestic consumption	31.6	40.1	49.7	50.5	39.8	34.5	34.5	34.5	23.9	22.5	22.2	22.1	22.2	22.3	23.3	22.8
(In millions of toe)																

Sources: National Institute of Statistics.

1/ Provisional data.

2/ 1 bcm of natural gas is equivalent to 0.8 million tons of oil equivalent (toe).

Table 39. Romania: Production, Domestic Consumption, Exports and Imports of Oil and Oil Products, 1980-2005

(In thousands of tons)

	Crude Oil		Total Refined Product			
	Production 1/	Imports	Total Supply	Total Production	Exports	Domestic Consumption
1980	11,865	15,961	27,826	26,929	8,754	18,175
1981	12,012	12,915	24,927	24,777	8,124	16,653
1982	12,112	10,924	23,036	22,986	6,543	16,443
1983	11,974	12,395	24,369	24,037	9,116	14,921
1984	11,835	13,534	25,369	24,859	10,193	14,666
1985	11,092	14,626	25,718	24,987	9,689	15,298
1986	10,520	17,047	27,567	27,081	10,374	16,707
1987	9,846	21,366	31,212	30,250	11,829	18,421
1988	9,713	20,957	30,670	30,253	13,248	17,005
1989	9,573	21,809	31,382	29,821	13,375	16,446
1990	8,135	16,058	24,193	22,790	5,120	17,670
1991	6,941	8,634	15,575	15,293	2,496	12,797
1992	6,770	6,572	13,342	13,073	2,560	10,513
1993	6,830	7,581	13,771	13,111	2,676	10,453
1994	6,860	8,122	14,982	14,390	4,069	10,321
1995	6,951	8,657	15,608	13,796	4,690	9,106
1996	6,852	7,156	14,008	13,602	3,730	9,872
1997	6,750	6,245	12,995	13,166	2,882	10,284
1998	6,553	5,974	12,527	13,233	3,169	10,064
1999	6,379	4,294	10,673	10,459	2,041	8,418
2000	6,287	4,760	11,047	10,990	2,749	8,241
2001	6,238	5,544	11,782	12,073	2,906	9,167
2002	6,072	6,362	12,434	13,228	4,304	8,924
2003	5,890	5,217	11,107	12,040	3,550	8,490
2004	5,705	7,314	13,019	13,077	4,278	8,799
2005 2/	5,433	8,689	14,122	14,778	5,894	8,884

Source: Data provided by the Romanian authorities.

1/ Includes a small amount of by-products from natural gas wells.

2/ Provisional data.

Table 40. Romania: Electric Power Balance, 1995-2005
(In gigawatt hours)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 1/
Total resources	60,022	63,592	58,187	54,677	51,816	52,709	54,633.0	55,371.0	57,607.0	59,066.0	61,710.0
Domestic production	59,267	61,350	57,148	53,496	50,713	51,935	53,866.0	54,935.0	56,645.0	56,482.0	59,389.0
Thermal power plants	42,573	44,209	34,239	29,310	27,225	31,701	33,497.0	33,376.0	38,480.0	34,421.0	33,655.0
Coal	20,594	20,471	16,862	14,485	14,684	18,927	19,694.0	20,312.0	23,344.0	21,466.0	20,988.0
Hydrocarbons and secondary energy resources	21,979	23,738	17,377	14,825	12,541	12,774	13,803.0	13,064.0	15,136.0	12,955.0	12,667.0
Hydropower plants	16,694	15,755	17,509	18,879	18,290	14,778	14,923.0	16,046.0	13,259.0	16,513.0	20,212.0
Nuclear plants	0	1,386	5,400	5,307	5,198	5,456	5,446.0	5,513.0	4,906.0	5,548.0	5,522.0
Import	755	2,242	1,038	1,181	1,103	774	767.0	436.0	962.0	2,584.0	2,321.0
Total destinations	60,022	63,592	58,187	54,677	51,816	52,709	54,633.0	55,371.0	57,607.0	59,066.0	61,710.0
Gross domestic consumption - total	49,475	54,974	50,504	46,235	43,499	44,610	45,742.0	45,195.0	48,482.0	49,244.0	48,990.0
Population 2/	7,401	8,447	8,296	8,296	7,883	7,652	7,724.0	7,771.0	8,243.0	8,043.0	8,504.0
Export	456	1,435	817	715	1,930	1,470	2,077.0	3,290.0	3,046.0	3,766.0	5,224.0

Source: National Institute of Statistics.

1/ Provisional data.

2/ Without public lighting.

Table 41. Romania: Distribution of Land Ownership, 1993-2005
(In thousands of hectares, unless otherwise indicated)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total land area	14,793	14,798	14,797	14,789	14,794	14,802	14,731	14,857	14,852	14,836	14,717	14,712	...
<i>Of which:</i>													1/
Private	10,336	10,371	10,694	10,694	10,431	10,475	11,432	14,218	14,310	14,289	14,560	14,058	...
(for which titles distributed) 2/	1,353	3,724	5,738	6,771	7,268	7,688	8,018	7,153	7,421	8,783	9,391	9,784	9,788
Memorandum items:													
Number of titles distributed	566	1,558	2,401	2,833	3,041	3,217	3,356	3,219	3,591	4,336	4,648	4,848	4,909
Number to be distributed	4,990	4,990	4,990	4,242	4,284	4,312	4,334	...	5,124	4,763	4,804	4,914	5,076
(percent of total distributed) 2/ (thousands of titles)	11.3	31.2	48.1	66.8	71.0	74.6	77.4	...	70.1	91.0	96.7	98.7	96.7

Source: Ministry of Public Administration, National Office for Cadastre, Geodesy and Cartography.

1/ Data will be available after May 30, 2006.

2/ Out of 9,200 hectares of land covered by the Land Law.

Table 42. Romania: Private Sector Share of GDP, 1993-2005 1/
(In percent of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Private Sector	34.8	38.9	45.3	54.9	60.6	61.4	63.7	65.6	68.0	69.4	67.7	72.2	70.4
<i>Of which:</i>													
Industry 4/	5.9	8.4	9.8	12.8	13.0	12.1	13.3	18.7	21.0	22.7	21.1	20.3	19.7
Agriculture and forestry	17.2	17.3	17.6	17.3	17.4	13.9	12.9	10.9	13.1	11.2	11.3	12.5	8.5
Construction	1.4	3.4	3.8	4.5	4.0	4.0	4.1	4.5	5.1	6.0	6.4	7.2	7.6
Trade, other (services)	10.3	9.8	14.1	20.3	26.2	31.4	33.4	31.5	28.8	29.5	28.9	32.2	34.6

Source: National Institute of Statistics. ESA 79 methodology in 1993-1997, ESA 95 methodology in 1998-2005.

1/ Estimations were based on the ratio between Gross Value Added of the private sector from each branch and the total GDP.

2/ Semifinal data.

3/ Provisional data.

4/ Including electric and thermal energy, gas and water.

Table 43. Romania: Market Privatizations of Enterprises, 1993-2005

Size of Companies	Total No. of Companies 1/	Original No. of Employees	Number of companies privatized												Cumulative 1993-2005 3/	
			1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		2005 2/
Total	6,381	4,040,757	264	595	620	1,245	1,163	1,267	1,401	1,202	122	255	310	154	76	8,674
Small	3,124	497,096	238	472	322	984	952	912	906	936	88	185	226	56	61	6,338
Medium	2,549	1,753,828	24	110	269	236	165	276	425	243	20	39	30	46	10	1,893
Large	708	1,789,833	2	13	29	25	46	79	70	23	14	31	54	52	5	443

Source: The Authority for State Assets Recovery.

1/ Number of companies to be offered for privatization.

2/ 76 companies were divested to the private sector during 2005, as follows: (i) 22 companies were privatized (out of which 7 companies had no previous privatization contract); (ii) 54 companies are under liquidation or dissolution procedures. As of December 31, 2005, AVAS was a shareholder in 1105 companies, out of which:

- 62 are privatizable majority state-owned companies;

- 366 are privatizable minority state-owned companies;

- 573 are non-privatizable companies, out of which:

349 under judicial reorganization or bankruptcy

168 companies under dissolution

43 companies candidates to liquidation, due to their economic and financial status

13 under voluntary liquidation

- 104 special status companies.

3/ The total number of privatized companies differs from the sum of the annual privatizations owing to packages of the same company sold more than once. In addition, the initial pool of companies offered for privatization was subsequently enlarged.