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Romania: Selected Issues and Statistical Appendix

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ROMANIA

Selected Issues and Statistical Appendix

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Approved by the European Department

June 24, 2004

Contents Page

Tables

Figures

Tables

Appendix

Appendix Tables

Statistical Appendix Tables

I. Addressing the Non-Payment Culture and Arrears in Romania[1]

Widespread arrears reflect the slow pace of restructuring in Romania, and have delayed the transition to a market economy. State-owned enterprises (SOEs), after losing access to directed credit and most budget subsidies in the 1990s have resorted to payments offsets and arrears to keep afloat. The authorities sanctioned this outcome by tolerating late payment of tax and utility bills. The associated lack of transparency has hampered structural reform efforts and contributed to the growth of the informal economy, weak governance and tax evasion. Under the previous Stand-by arrangement from 2001 to 2003, efforts to reduce the growth of arrears and associated implicit quasi-fiscal subsidies concentrated on tougher enforcement of tax and utility payments, and measures to promote industrial restructuring and impose hard budget constraints.

A. Background to the Emergence of Arrears

1. **The practice of non-payment and arrears accumulation has been widespread in Romania**. Strengthening financial discipline in the enterprise sector is seen as fundamental not only for establishing a market economy, but also for consolidating macroeconomic stability. Despite considerable progress over the last three years, much of the state-owned enterprise sector remains unprofitable and unrestructured, and depends on quasi-fiscal subsidies in the form of non payment of utilities and taxes to continue operating. When SOEs lost access to directed credits in the 1990s, arrears became an important source of finance. Moreover, SOEs resorted to payments offset schemes through state clearing institutions.[2] Financial indiscipline also extends to budgetary spending, notably in the health sector and at the local government level, with the latter incurring large arrears to utilities. The problem of arrears is not confined to the state sector, however, with a large number of private debtors to the budget. The state's reluctance to move against private firms reflects social considerations (especially in one-company towns) as well as political influence of managers/owners of key enterprises.

2. **Romania is not alone in failing to impose hard budget constraints.** Payment arrears present a serious problem in the Russian Federation and other countries of the former Soviet Union. Accounts payable of state enterprises in Russia peaked at nearly 50 of GDP in the late 1990s, about half of which was delinquent, and in Ukraine state enterprise payable exceeded GDP, with about 70 percent delinquent. As summarized by Cheryl Gray, even in the leading reformers, such as Hungary and Poland, arrears were a significant problem as a

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[1] Prepared by Graeme Justice.

[2] There are two state clearing houses for registration and clearance of claims by public enterprises. The Bucharest stock exchange is currently developing a scheme to trade private claims.

result of demand and liquidity shocks in the early years of transition.[3] Arrears to the tax, social security and customs offices accounted for a substantial proportion of the debt of distressed firms in Hungary and Poland in the early 1990s. In these countries, the arrears' problem eased as the expanding private sector imposed its own hard budget constraints, preventing the emergence of new overdue payables. Moreover, tight budgets forced the authorities to increase pressures on delinquent tax payers. Experience in these countries suggests that attempts to impose hard budget constraints have been of critical importance for the transition process. Crucial measures included the strengthening of the implementation of legal rights under contract, collateral, workout and bankruptcy laws. Above all, creditors should be given effective means to collect debts, which can only be ensured with competitive markets, predominantly private ownership, and a true risk of failure for unrestructured enterprises.

3. **The build-up of state enterprise arrears has been attributed to a number of factors**:

- *Liquidity squeeze in absence of payments discipline*. Public enterprises experienced a sharp drop in liquidity as demand contracted following transition and directed credits were cut. In an environment of weak contract enforcement and poor corporate governance, most enterprises responded by resorting to barter and arrears rather than restructuring.[4]

- *Protracted privatization*. Managers of enterprises that remain in the pipeline for privatization for long periods of time have little incentive to reduce arrears. In Romania, firms under the privatization authorities' portfolio have enjoyed protected status from creditors.

- *Implicit subsidies by the state*. The state contributed to growth of arrears by accepting non-monetary tax and utility payments, using tax offsets in procurement, and tolerating payment arrears. These practices have been prevalent at all levels of state and local government, as well as state utility companies.

- *Rent seeking*. Arrears are a source for corruption and fraud. An example is the overvaluation of goods in tax offset operations. Lack of transparency also helps

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[3] Cheryl W. Gray, *Creditors' Crucial Role in Corporate Governance, Finance and Development*, June 1997.

[4] For an interesting explanation of use of arrears in terms of rational behavior of enterprise managers: Christian Mumssen, Barter and Arrears in Russia: Principles of a Solution Strategy, Conference on Post-Election Strategy, Moscow, April 2000.

managers who seek to enrich themselves at the expense of outside shareholders or creditors.

- *Chain effects*. The industrial structure inherited from the Ceausescu era had strong vertical links as a result of isolationist policies. Even for profitable enterprises in the chain there were few opportunities to transact in cash if principle trading partners resorted to non-monetary payment settlements. This is especially the case where energy sector companies are involved; for example, mining companies offset their utility bills with coal deliveries.

B. Recent Developments of Arrears in the Romanian Economy

4. **Over the last three years, total arrears in Romania remained stubbornly high, at just under 40 percent of GDP, despite some success in addressing SOE arrears (Table 1).**[5] Interenterprise arrears account for about a half of total arrears, of which about 40 percent are owed to energy suppliers (Figure 1). Arrears to the central budget and social security funds, account for about a third of the total. Arrears to banks are low, at about 4 percent of total arrears in 2003, reflecting successful reform of the banking sector. Arrears to other creditors, mainly wage arrears, account for about 12 percent of the total, and remain relatively low compared with other transition economies.[6] Information on local authority arrears is difficult to obtain, and is not included in the above total. A recent USAID funded study suggests local authority arrears could amount to as much as 1–2 percent of GDP.

5. **The recent evolution of arrears is shown in Figure 2.** Interenterprise arrears have risen steadily, partly as a result of the accumulation of interest and penalties.[7] Public sector arrears increased sharply in 2002, and remained roughly unchanged in 2003. Arrears to banks have continued to decline. Wage arrears also appear to have become less of a problem, partly as a result of the restructuring of state-owned enterprises. At first glance (Figure 3), it would appear that the share of arrears accounted for by the private sector has risen sharply, those of the mixed state sector have fallen, and the wholly owned state sector remained fairly constant.

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[5] The Ministry of Finance defines arrears as all payments overdue by 30 days, according to contracts or legal obligations. A rough breakdown for 30, 60 and 90 days exists with about a third of debts in each category, suggesting the amount of truly delinquent loans is considerably lower. Tax arrears are overdue obligations as declared by tax authorities.

[6] Other arrears are defined as those arrears for which there is no contractual obligation based on a sales purchase agreement.

[7] Unfortunately, the company register does not record interest and penalties separately.

Table 1. Romania: Enterprise Payment Arrears, 2000–2003
(In percent GDP)

	2000 Dec.	2001 Dec.	2002 Dec.	2003 Jun.
National economy	40.5	35.4	38.3	39.7
To suppliers	17.7	16.4	17.2	19.5
To other creditors	6.4	3.8	5.3	4.9
To banks	3.9	3.5	2.3	1.7
To public sector	12.5	11.6	13.5	13.6
To state budget	8.3	6.2	7.2	7.9
To state social funds	3.9	5.2	5.8	5.3
To local budgets	0.3	0.3	0.5	0.3
Private sector	17.7	19.1	20.9	24.4
To suppliers	8.9	10.2	10.3	13.5
To other creditors	2.9	2.7	3.6	3.6
To banks	2.2	1.6	1.5	1.2
To general government	3.5	4.4	5.3	5.9
To state budget	2.4	2.9	3.6	4.1
To state social funds	1.2	1.4	1.7	1.8
To local budgets	0.1	0.2	0.2	0.2
State sector (50–100% ownership)	18.0	12.4	13.9	12.8
To suppliers	5.6	3.7	5.0	4.6
To other creditors	2.9	0.7	1.2	1.0
To banks	1.3	1.6	0.6	0.3
To general budget	8.0	6.3	6.9	6.8
To state budget	5.6	2.9	3.1	3.5
To state social funds	2.4	3.4	3.8	3.3
To local budgets	0.2	0.1	0.1	0.1
Mixed with state share < 50%	4.7	3.8	3.3	2.4
To suppliers	3.2	2.5	1.9	1.4
To other creditors	0.6	0.4	0.4	0.3
To banks	0.3	0.3	0.2	0.2
To general budget	0.5	0.6	0.6	0.5
To state budget	0.3	0.3	0.3	0.2
To state social funds	0.2	0.3	0.3	0.3
To local budgets	0.0	0.0	0.2	0.0

Source: Ministry of Finance.

Figure 1. Share of Total Arrears, June 2003
Percent of total

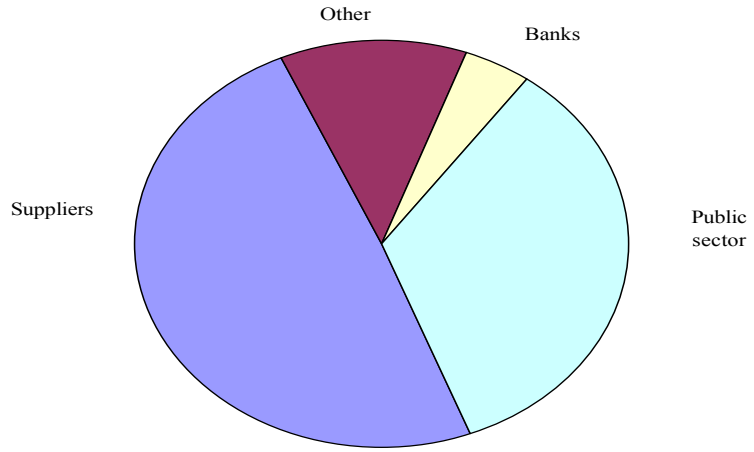
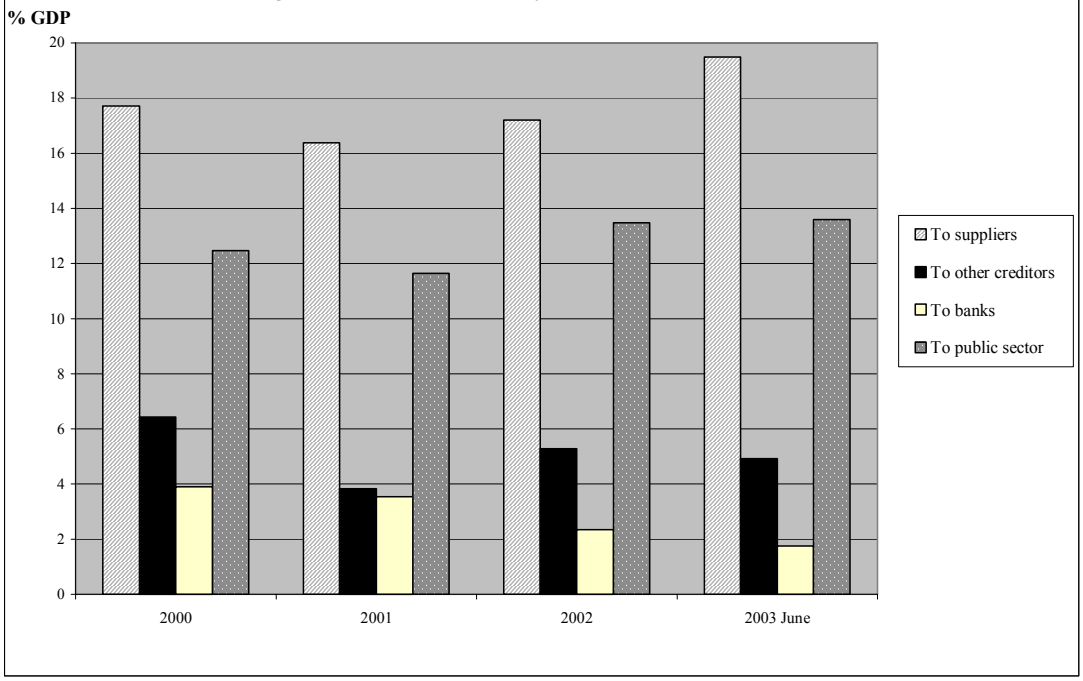
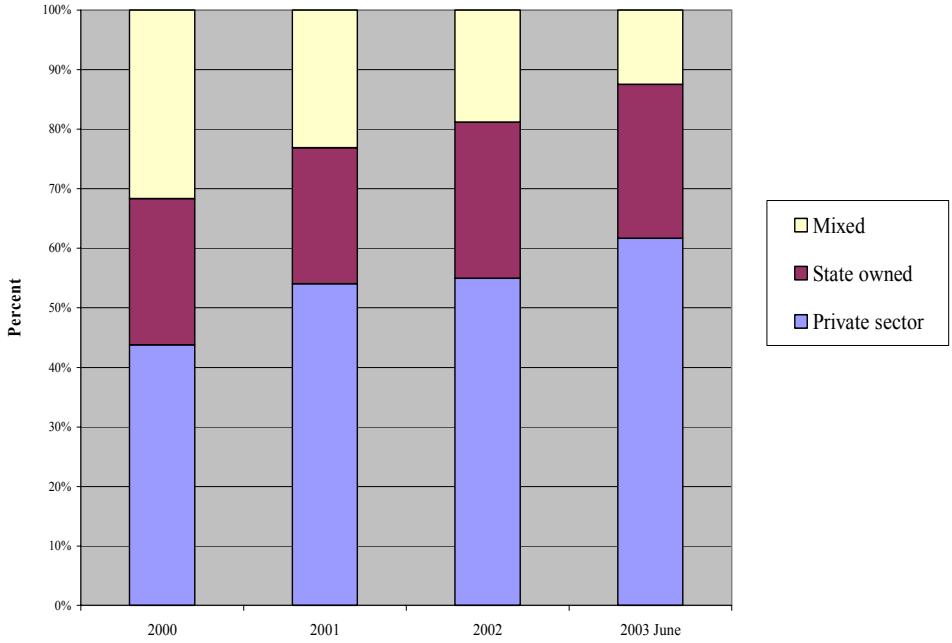


Figure 2. Total Arrears by Debtor, 2000-June 2003



6. **Attempts to analyze the trends in arrears by sector, however, are complicated by serious data problems.** First, a number of state-owned and partially state-owned enterprises were privatized, so that the arrears, to the extent that they were not cancelled at the time of privatization, were shifted to the private sector. This was common under earlier privatizations when indebted companies were sold for a low price, which in itself often led to continuing corporate governance problems and asset striping.[8] Second, part of the increase in private sector arrears is attributed by the Ministry of Finance to tax rescheduling obligations that require previously unreported arrears to be registered in the company books. The liberal use of tax rescheduling facilities may in itself have contributed to a lack of payment discipline in the private sector. Even so, the increase in total arrears from 2001 to 2003 may reflect in part more transparent accounting practices.

Figure 3. Arrears by Sector, 2000-2003 June



[8] Under the previous SBA, the focus of the privatization agency shifted towards privatization to strategic investors, with arrears to public sector creditors largely written off. Normally, the privatized company retains arrears to commercial creditors.

7. **The official data on arrears suffer from a number of other shortcomings**. First, data on overdue amounts may be overstated to the extent that non-monetary payments are not fully captured (such payments may be underreported by the receivers for tax evasion purposes). Second, state and local budget arrears are not recorded in the official statistics.[9] Third, many enterprises have not yet adopted transparent accounting practices (under international accounting standards), so that bad debts are not adequately singled out. Fourth, the accumulation of penalties and interest on debts, which should be written off under normal accounting conventions, have more than doubled the stock of arrears in many cases. Finally, arrears often appear in circular links, with public enterprises incurring arrears to utility companies, utility company arrears to power companies, and power company arrears to suppliers (for example, to mines) so that the overall level of bad debts may be overstated. The complexity of these arrangements is clear from Table 2, which illustrates the chain of hidden and direct subsidies in Romania.[10]

C. Arrears Continue to Be an Important Source of Funding

8. **As shown in Table 3, arrears represent a far more important source of financing for enterprises than bank credit.** Bank credit represented only 8 percent of total financing in 2001 compared to 35 percent for arrears, over half of which was delayed tax and social security payments. More recent data is not available, but despite the fact that the enterprise sector has shown some improvement in profitability, bank lending to enterprises remains low relative to GDP due to perceived risk. About one third of enterprises remain unprofitable, and weak enforcement of collateral and bankruptcy legislation has made banks reluctant to inject fresh liquidity into state-owned enterprises to undertake restructuring.

D. State-Owned Enterprises Are the Worst Offenders

9. **Despite some progress in restructuring, unprofitable state owned enterprises continue to run up large arrears to the budget and state-owned energy suppliers.** In 2003, companies with state participation had total payment arrears of 55 percent of turnover, compared with 17 percent for those of private companies (Table 4). The difference is even more marked for arrears to the central budget and social security funds, with arrears of state companies' equivalent to 45 percent of turnover, and arrears of private companies' equivalent to 3 percent of turnover. The worst offenders were those enterprises with majority state ownership (92 percent of turnover), but even a minority shareholding by the state appeared to result in weak financial discipline and lenient treatment of budgetary obligations.

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[9] Under the new SBA, there will be an attempt to measure the stance of the overall public sector including changes in net arrears.

[10] OECD, Economic Assessment-Romania, 2002.

Table 2. Direct and Indirect State Subsidies in Romania

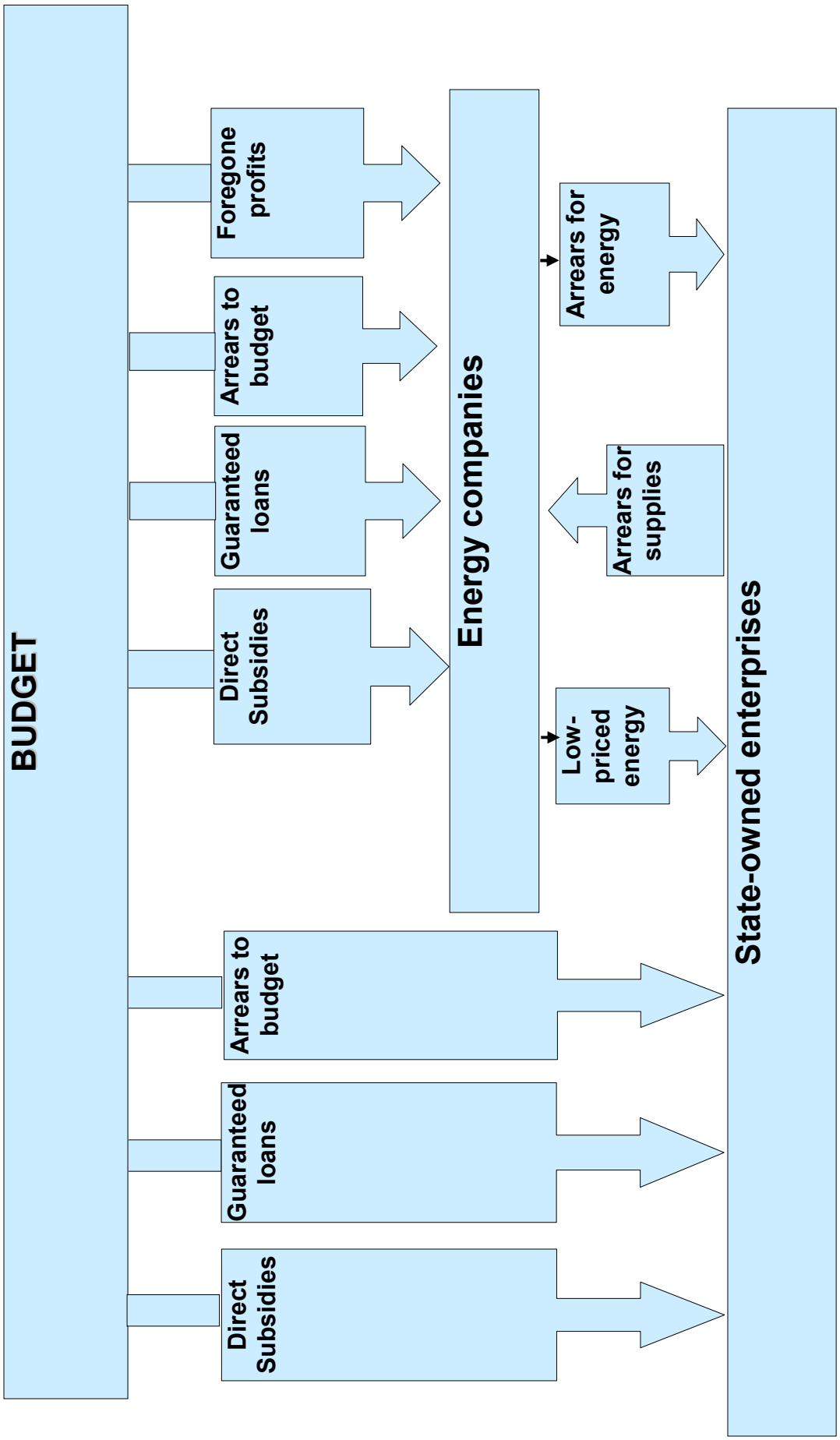


Table 3. Sources of Funds for Romanian Firms

(Percent of total financing)

	1999	*2000*	*2001*
Number of firms	1155	932	726
Internal financing	7.4	10.0	12.8
Retained earnings	6.8	8.9	11.9
Reserves	0.6	1.1	0.9
External financing	58.8	51.8	52.5
Share capital	35.6	29.2	28.3
Bank credit	10.1	7.6	8.3
Trade credit	13.1	15.0	15.9
Arrears	33.6	38.2	34.6
Taxes	19.2	22.6	15.2
Social security	6.0	5.7	7.2

Sources: Ministry of Finance. World Bank and Fund staff estimates, Financial Sector Assessment Program, 2003

Table 4. Arrears as a Share of Turnover, June 2003

(Percent)

State Institutions	36.5
State Enterprises (majority state-owned)	92.4
State Enterprises (minority state-owned)	38.3
Private Sector	17.1

Source: Ministry of Finance.

E. Mining and Railways Are Among the More Problematic Sectors

10. **Along with companies in the privatization authorities (APAPS) portfolio, the mining and railway sectors now account for the major source of public sector arrears to the budget.** Total outstanding arrears at the end of 2003 of the mining and railway sectors amounted to 2.7 and 1.0 percent of GDP respectively. In the mining sector, non payment of taxes and utilities in 2003 amounted to lei 3 trillion,[11] roughly equivalent to the overall losses of the sector after subsidies and transfers, and double the amount of formal subsidies and transfers of lei 1.4 trillion. In the railway sector, non payment of taxes and utilities amounted to about lei 2 trillion, compared with subsidies and transfers of lei 5.2 trillion. Both sectors benefited from substantial arrears cancellations in 2003.

F. Energy Sector Has Large Arrears But Is Also a Source of Hidden Subsidies

11. **The arrears problem is concentrated in the energy sector.** Payment discipline of consumers has been weak, particularly in the heating sector, where the suppliers have been prevented by law from cutting off consumers in the heating season. This has contributed to the weak financial condition of the sector, where in the past prices had been set administratively below production costs. In addition, while households have been relatively reliable in payment of electricity and gas, enterprises and local governments have been less disciplined. Large loss making public enterprises are among the worst payers. Attempts by the distributors to cut off suppliers have often been hampered by political or social considerations, and in some cases, the need to maintain a minimum technological level of supply (for example, to prevent the permanent shutdown of large furnaces).

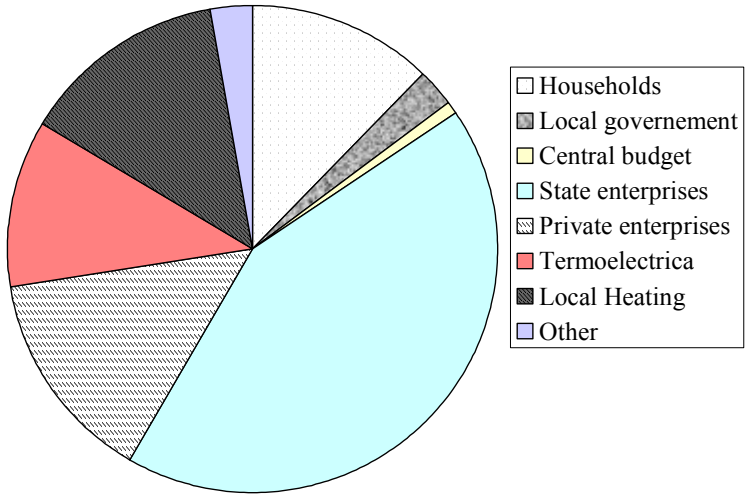
12. **While arrears to the energy sector are large at about 6–7 percent of GDP, the problem is concentrated.**[12] In the gas distribution sector, state enterprises account for over 45 percent of total overdue accounts payable, followed by Termoelectrica, the largest thermo-producer, and the externalized heating plants, the two accounting for about 25 percent (Figure 4). The 50 largest enterprises in debt to the gas distribution companies account for about 30 percent of total arrears (excluding heating companies). In the electricity sector, the 30 largest debtors of Electrica account for about 20 percent of the total debt. At the same time, the 4 largest debtors amongst the heat distribution companies had accumulated arrears of lei 9.5 trillion to Termoelectrica, or 170 percent of Termoelectrica's turnover in 2003. This has led to a complex chain of arrears in the energy sector with the heating companies in arrears to Termoelectrica, Termoelectrica in arrears to the gas and electricity companies, and the energy companies in arrears to the budget. The need to resolve the arrears of the utility

[11] Excluding penalties and late interest of lei 3.9 trillion.

[12] There is probably an element of double counting in the official statistics as the state-owned energy companies are not separated out in the data for the enterprise sector.

companies in advance of privatization has been a major challenge for privatization efforts in the sector.

Figure 4. DistriGas Arrears by Debtor, 2003
Percent



Source: Ministry of Economy and Commerce

G. Public Expenditure Arrears Are Concentrated in Local Government and the Health Sector

13. **Local authorities account for a substantial share of outstanding arrears to the utility companies.** The problem is particularly acute for local heating, where failure of the local authorities to meet payments has resulted in large arrears of local heating plants to the gas companies. Information on the arrears situation of local authorities (judets) is scarce, but a recent study of three judets commissioned by DFID suggests the problem is serious (with arrears possibly as much as 1–2 percent of GDP). In the case of one of the larger judets, Giurgiu, total outstanding arrears were equivalent to the annual total budget for the municipality. Recent legislation (ordinance 81/2003) states that local authorities must give priority to paying heating, electricity and gas suppliers. While this may reduce the current levels of arrears to these suppliers, it will certainly lead to cutbacks in already low levels of recurrent and capital expenditure. Evidence from the study suggests that the ordinance is already having an impact on education, as outstanding utility bills have to be paid before any other non-salary items.

14. **The DFID study points to serious weakness in local financial management**. Many utilities, which are wholly owned by the local authorities, do not operate at arms length. In particular, the local heating companies (CETs), were devolved from the main heat producer,

Termoelectrica, to local government control. For example, in Giurgiu the company responsible for provision of heating (wholly owned by the Judet) has not taken the same debt recovery measures against the local authority as it has against private sector clients. This suggests the CET is being used to cross subsidize the local authority resulting in confusion over management control and decision making.[13] The accumulated loss of the Giurgiu CET since decentralization is euro 2.5 million.

15. **The problems of public procurement are particularly acute in the health sector.** In 2002, public health institutions incurred lei 3.6 trillion of the arrears to suppliers accumulated. Under the new Stand-by arrangement, these arrears, identified in protocols agreed with the supplier organizations, will be repaid by end-September 2004. To avoid the recurrence of arrears, legislation was approved in February 2004 strengthening the procurement procedures for medical supplies. Based on World Bank recommendations to improve the efficiency of the hospital system, the authorities are working to complete a strategy for the short-, medium-, and long-term rationalization of the entire health sector, which should lead to better expenditure management

H. Private Sector Arrears to the Budget Are an Emerging Concern

16. **Private sector arrears to the budget, including social funds, account 57 percent of the total arrears of the top 549 debtors to the budget, or 4.2 percent of GDP.**[14] [15] Total arrears of the top private debtors to the state budget, excluding social funds, but including interest and penalties (Table 5), increased by 0.9 percent of GDP in 2003 (of which 0.3 percent in interest and penalties). One of the top private debtors alone accounted for arrears of $310 million.

[13] A government ordinance in 2001 transferred the ownership of 17 CETs (heat providers) from Termoelectrica to the Local Councils.

[14] Including social funds, and interest and penalties. Excluding interest and penalties, private sector arrears accounted for 2.3 percent of GDP.

[15] The Ministry of Finance reports arrears for the top 549 debtors to the budget.

Table 5. Tax Arrears of the Top 549 Debtors to the Budget, 2002–2003
(Including interest and penalties)

	End-2002		End-2003	
	Lei trillion	Percent of GDP	Lei trillion	Percent of GDP
Total	68.2	3.6	90.2	4.8
State Enterprises 1/	25.5	1.4	29.9	1.6
Private enterprises 2/	42.7	2.3	60.3	3.2

Source: Ministry of Finance.
1/ State-owned enterprises and mixed ownership with 50 percent or more in state ownership.
2/ Private plus mixed ownership with less than 50 percent state capital.

I. Addressing Arrears and Payments Offsets a Complex Issue

17. **The widespread and complex nature of the arrears and non-payments problem, requires implementation of comprehensive reforms covering a number of areas.** Under the Fund supported program, efforts have concentrated on tougher enforcement of tax and utility payments, aggressive restructuring of the public enterprise sector, measures to strengthen expenditure management, and enforcement of contract and bankruptcy legislation. Despite aggressive measures in some areas, progress has been mixed with frequent reversals, particular in the energy sector. The authorities have often been reluctant to cut off energy supplies to socially sensitive enterprises with large numbers of employees, and efforts to tackle problem sectors, such as mining and railways have intensified only in the last year and a half. The need to take stronger measures to enforce tax payments by private companies has only recently been recognized, and is a focus of the new Fund supported arrangement.

18. **In the state-owned enterprise sector, initial efforts focused on the large lossmaking enterprises in the privatization authorities (APAPS) portfolio.** Many of the larger loss makers had been in the pipeline for privatization for some time, and temporary special administrators had little incentive to observe hard budget constraints, despite repeated efforts to ensure payments of taxes and utilities under the program. The pace of privatization only picked up following large scale restructuring of these companies, resulting in some 34,000 layoffs, or about half of their employment. Since the beginning of 2003, 23 large loss-making SOEs were sold to strategic investors, with over 70,000 employees. The 23 companies accounted for about 40 percent of the total arrears to public utilities of the companies in APAPS portfolio. Of the 513 large companies in the APAPS portfolio in 1993, about 74 percent had been sold by the end of 2003. Important privatizations in 2003 included Siderurgica, Tractorul, Roman Brasov and Aro. The new Stand-by arrangement seeks to accelerate the pace of privatization and restructuring of the remaining large enterprises, with prior actions and structural benchmarks on the number of enterprises to be privatized or liquidated. Aggressive restructuring of the lossmaking companies in early 2004 has already

taken place. To monitor progress, an indicative benchmark has been placed on the reduction of arrears of the state-owned enterprises monitored under the program.

19. **The only permanent solution for the arrears problem in the mining and railway sectors is further substantial restructuring.** Both sectors have built up substantial arrears since previous restructuring efforts in the late 1990s. At the time of the reorganization of the railway sector in 1998, for example, all the newly created railway companies were exempted from accumulated arrears of lei 5.4 trillion. As of end-2003, new arrears of lei 13.9 trillion had re-emerged. Further restructuring will involve a comprehensive strategy to reduce the labor force, downsize the network, privatize non-core activities, and increase passenger tariffs. The new arrangement builds on the government's decision in 2003 to reduce the workforce by about 18 percent and to close some 3,000–3,500 kilometers of railway line, which should substantially improve financial performance and help prevent the emergence of new arrears in 2004. In the mining sector, the government has approved a mining strategy in May 2004 that covers all aspects of sector reform, including reduction in operations, closure of nonviable mines, financial restructuring and social protection. The strategy targets a reduction in state support of 14 percent a year in the hard coal sector until 2010, and a reduction of 25 percent a year in the minerals sector until 2007. Total personnel in the sector is to be reduced from 66,000 at end-2003 to 38,500 by end 2007.

20. **Under the new SBA, more attention is being paid to budget transparency**. Implicit subsidies to the two sectors, in the form of nonpayment of taxes and utilities, have been converted into explicit subsidies in the 2004 company budgets. The main advantage is increased transparency, and improvement in the finances of the utilities sector.[16] In principle, such formalization of subsidies should not affect the overall fiscal stance, as higher explicit subsidies would automatically be offset by higher tax and utility payments. The formalization of the implicit subsidies has also had the advantage of increasing pressures on the sectors to restructure, as the government is committed to the EC to reduce the level of subsidies in the run up to EU accession.

J. Efforts to Tackle Energy Arrears Are Shifting From Collections to Privatization and Restructuring

21. **Under the previous program, the main policy instrument to address energy sector arrears was an aggressive disconnection of non-payers of gas and electricity.** The credible threat of disconnection has been relatively successful in inducing the majority of large debtor companies to pay at least their current bills. The collection rate of the two gas distributors has increased from 87 percent in 2000 to 99 percent in 2003, with the bulk of the payments in cash. The collection rate for Electrica has increased from 82 percent to 98

[16] The risk that the companies divert payments has been addressed by direct payment of utilities from the budget.

percent over the same period, and a new payments clearing system has been put in place. Under the new arrangement, the policy of aggressive disconnection will continue, but in tandem with an acceleration of the privatization of the sector. The two gas distribution companies are scheduled to be privatized, as well as 5 of the 8 regional branches of Electrica. In the preparation of the companies for privatization discussions with potential investors has already led to a strengthening of regulations to enforce collections, and the ability of the companies to disconnect for nonpayment.

22. **In the heating sector, performance has been less convincing**. Collections have weakened, reflecting shifting government policies and the inability of heating distributors to cut off consumers. The collection rate for Termoelectrica heating was only 83 percent in 2003. Several attempts have been made to improve the financial situation of the heating sector, including raising the heating price for producers toward cost recovery (from 58 percent in 2000 to over 90 percent in 2003). Subsidies for households and heat generators have been better targeted and made more realistic. In some cases, the subsidy that was meant to be paid by local authorities to heat producers exceeded their revenue and could not be implemented. Despite these efforts, the heating system remains highly inefficient, with heating plants operating at low levels of efficiency, and distribution networks with high losses through leakages (up to 40 percent). Under the new SBA, the government approved a strategy for the heating sector in May 2004 in consultation with the World Bank. This strategy envisages a switch to heating contracts or conventions with individual households, the installation of thermostatic valves and heat meters, and the introduction of a split-tariff structure. In addition, subsidies and delivery of fuel by state-owned companies are being phased out for inefficient heating plants, together with measures to assist the few remaining connected households to switch to individual heating systems.

K. Private Sector Arrears Require Improved Budget Management

23. **As a first step, under the new arrangement, the Ministry of Finance is to move aggressively against the top non payers, initiating bankruptcy proceedings against the worst offenders.** In addition, an FAD technical assistance mission on tax administration has pointed to the urgent need to modernize arrears collection. Management information systems are extremely weak and the tax authorities lack processes to manage arrears effectively. For example, many of the top debtors into the budget in 1999 continued to be among the worst.

Box 1. Approaches to Manage Budget Arrears Collection

Targets

Total tax arrears should not exceed a prescribed percentage of annual revenue collection

The level of tax arrears should be reduced by a prescribed percentage each year

The average age of tax arrears should be reduced by a prescribed amount each year

The annual administrative cost of the arrears collection program should be related to the percentage of arrears

Systems and Processes

Systems should automatically send notices within prescribed short intervals after missed payments

Workload management systems should automatically route arrears cases to officers for action within prescribed times, and record the actions and plans

Systems should track and report, both nationally and for each office, the performance against targets for the amount of time to first collections action, the time required to carry out each type of collection enforcement action, the number of cases closed each year, and the average age of debt.

Debt should be tracked and reported by tax type, age, industry, and office, and reported regularly to field office and headquarters.

24. **The reduction in arrears of the largest private debtors to the state budget and the social security funds will be a performance criterion.** Moreover, the government will continue posting a list of the top 549 debtors to the state budget on the internet and update this list every quarter, including arrears to the four social security funds. It is hoped that the enforcement of bankruptcy legislation by the public sector will gradually lead to a strengthening of payments discipline, and respect for contractual obligations.

25. **Efforts are also been stepped up to better monitor the overall public sector.** Initiatives are underway to monitor the overall balance of the public sector through financing data and monitoring of changes in net public sector arrears. This should lead to greater transparency, and reduce the types of payments offsets between different public sector entities that have contributed to the pervasive arrears culture. Public sector expenditure management will also be strengthened though the introduction of medium-term expenditure budgeting, the development of public expenditure plans for critical sectors such as health with the assistance of the World Bank and other donors, and the strengthening of public sector procurement practices.

L. Concluding Remarks

26. **The economic benefit from of reducing arrears is considerable, as it goes to the heart of the lagging restructuring process, which is one of the main challenges facing Romania in the transition to a market economy.** The complex nature of the non-payment problem and resistance to restructuring requires a comprehensive strategy to avoid policy reversal and address the underlying pressures and institutional constraints that support soft budget constraints. The authorities will have to continue to aggressively restructure the remaining problem sectors, accelerate privatization of the energy sector, enforce tougher measures to ensure tax and utility payments, and make bankruptcy legislation work better. Ultimately, payment discipline will only improve with the development of well-functioning competitive markets, predominantly private ownership, and real risk of failure for enterprises that fail to pay debts.

II. Sources of Inflation and Disinflation Policies in Romania[17]

A. Introduction

1. **Since 2001, the Romanian economy has enjoyed a virtuous combination of high growth and gradually improving internal and external stability, exemplified by falling inflation, rising international reserves and generally manageable current account deficit.** Nevertheless, inflation has fallen relatively slowly, and as of April 2004, Romania still has one of the highest inflation rates in Europe at 12½ percent. This note aims to analyze the factors that have kept and are still keeping inflation in double digits and recommend disinflation policies to bring it to mid-single digits without harming external stability or growth.

2. **Sources of inflation can be classified in several categories:[18]**

- **Financial market disequilibria,** possibly caused by a weak fiscal position, which surface as exchange rate or money shocks.

- **Demand-pull factors**: shocks in aggregate demand, measured by changes in the output gap or other real activity variables.

- **Cost-push shocks:** hikes in international prices of intermediate inputs (oil, metals, etc.), domestic administered price increases, as well as labor cost pressures.

- **Inflation inertia**: a sluggish response of prices to disinflation policies. This sluggish response may be due to low policy credibility, staggered price and wage contracts, a backward-looking component in the formation of inflation expectations, or the costs of frequent reoptimization of the price setters' objective function.

- **Inflation persistence:** slow dissipation of second-round effects after shocks. Note that persistence is different from inertia.[19] Inertia is usually defined as the speed of reaction of inflation to unanticipated shocks, including policy ones, while persistence is measured as the time needed for the effect of these shocks, once passed through to inflation, to die out.

3. **We analyze the relative importance of these channels in Romania, as well as the sensitivity of inflation to various shocks, by a recursive vector autoregression (VAR)**

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[17] Prepared by Nikolay Gueorguiev.

[18] Loungani and Swagel (2001) and Lissovolik (2003).

[19] Cespedes, Kumhof, and Parrado (2003).

framework, in the period from late 2000, when the current strategy of gradual disinflation was adopted, to early 2004. We present the econometric methodology and the list of variables in Appendix I.

4. **We find that inflation persistence is the most important source of inflation, followed by exchange rate and labor cost shocks.** Shocks from administered prices propagate only moderately and dissipate fast, while demand shocks are insignificant. Monetary policy works mostly through the exchange rate, while the direct impact of the policy interest rate on inflation is modest. As continuing reliance on the exchange rate for disinflation seems unavoidable, it is imperative that monetary policy be relieved from current account considerations by wage restraint and a tight fiscal stance.

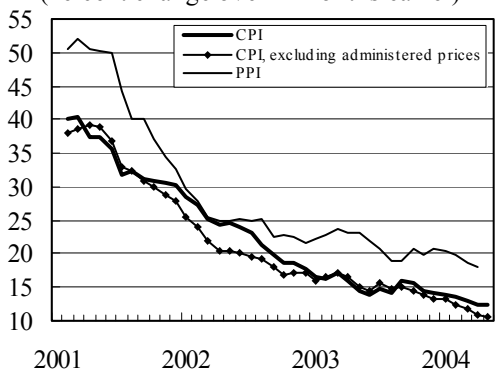
5. The plan of this paper is as follows. After a brief reckoning of inflation developments, we describe in Section C the policy framework underlying the disinflation effort. Then, in Section D, we discuss the relative importance of inflation factors in Romania before turning to analyzing inflation's reaction to shocks in Section E. Section F concludes and draws some policy implications.

B. Inflation Dynamics in 2001–04

6. **In the past three years, the 12-month consumer price inflation rate in Romania has been falling in almost monotonic fashion.** It dropped from 40 percent in January 2001 to 12½ percent in April 2004, while producer price inflation fell from 50 percent to 18 percent in the same period (Figure 1). Food prices, with a weight of over 40 percent in the consumer price index (CPI), led the decline, while services initially lagged (Figure 2). More important, inflation declined against a background of sizable adjustments in gas and electricity prices,[20] aimed at bringing the former closer to import parity and the latter to cost recovery levels. As these adjustments affected producer prices more heavily (especially in 2002 and late 2003), producer price inflation declined more gradually.

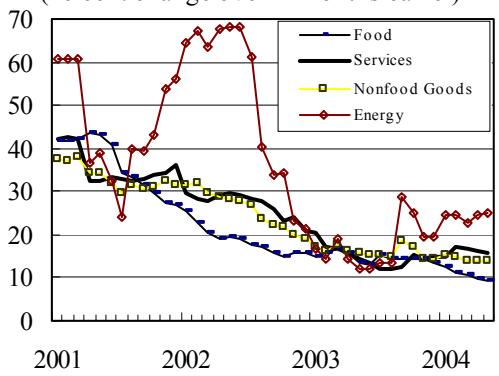
[20] With a weight of about 10 percent in the CPI in 2004.

Figure 1. Consumer and Producer Prices, 2001-04
(Percent change over 12 months earlier)



Sources: Romanian authorities; and Fund staff estimates.

Figure 2. CPI Components, 2001-04
(Percent change over 12 months earlier)



Sources: Romanian authorities; and Fund staff estimates.

C. Romania's Disinflation Strategy

7. **Romania's disinflation is gradual by design.** Formulated in early 2001, the disinflation strategy acknowledged the obstacles to fast disinflation imposed by Romania's circumstances. With the large pass-through from the exchange rate to prices, any monetary policy framework aiming at disinflation had to rely on the exchange rate as a nominal anchor. However, in the presence of rigid collective labor contracts and wage setting with a backward-looking component, rapid disinflation could easily result in an unsustainable real exchange rate appreciation and a sizable current account imbalance. The authorities therefore opted for the less ambitious (and less risky) target of cutting inflation by roughly one-third every year, and two policy pillars, the exchange rate and wage restraint. In the event, the strategy worked well, with the established inflation targets for 2001–03 either met or improved upon.[21]

8. **Relying on the exchange rate as a soft nominal anchor and high interest rates, monetary policy has reduced inflation and accumulated reserves.** Over the last three years, the National Bank of Romania (NBR) has guided the exchange rate broadly in line with the disinflation target and the scope for real effective appreciation resulting from the productivity growth differential. The restrictions on nonresident purchases of T-bills and deposits with local banks have afforded the NBR a degree of autonomy in setting its policy interest rate, which it has used mainly to support the desired exchange rate dynamics and reserve accumulation. This framework has successfully anchored inflation expectations by avoiding large and disruptive fluctuations in the exchange rate.

[21] 2001: target 29 percent, outcome 30 percent; 2002: target 22 percent, outcome 18 percent; and 2003: target 14 percent, outcome 14 percent.

9. **The authorities' record on wage policies—the second pillar of the disinflation strategy—has been mixed.** Wage policies have two facets: minimum wage setting and wage control in state-owned enterprises (SOEs), where financial discipline has much room for improvement. Both aspects are intertwined, as SOE wages are generally linked to the economywide minimum wage through a system of markups for rank and experience, which are set in a multilayered system of collective contracts. After a difficult start in 2001, wage policies improved significantly in 2002, contributing to the inflation overperformance in that year. However, 2003 saw a sharp minimum wage increase (of 43 percent), which sparked strong economywide wage growth and necessitated a slowdown in the speed of disinflation. Once again, policies tightened in 2004 (targeting a zero real increase in the minimum wage and SOE wages on an annual average basis), helping to sustain the disinflation trend. Overall, the combination of wage policies and large social security cuts led to declining real unit labor costs (see Figure 3), thus minimizing supply shocks on inflation.

D. Relative Importance of the Various Sources of Inflation

10. The variance decomposition of the forecast error, which is based on the estimated variance-covariance matrix of the model, gives the contribution of each of the variables included in the VAR to explaining inflation variability. While a small contribution indicates that the variance of the respective VAR variable explains less of the variance of inflation than competing variables, shocks associated with such a variable can still have a sizable impact on the level of inflation (see Section E). The results are presented in Tables 1a and 1b for consumer and producer price inflation, respectively.

Table 1a. Variance Decomposition of Consumer Price Inflation

(Percentage points)

Months	ADM	TLC	GAP	RBAS	CPIC	IR
1	5	1	5	3	85	0
3	4	10	9	15	61	1
6	3	12	8	15	58	4
9	3	12	8	15	58	4
12	**3**	**13**	**9**	**15**	**58**	**4**
18	**3**	**13**	**9**	**15**	**58**	**4**
24	**3**	**13**	**9**	**15**	**58**	**4**

Table 1b. Variance Decomposition of Producer Price Inflation

(Percentage points)

Months	ADM	TLC	GAP	RBAS	PPI	IR
1	31	13	1	18	36	0
3	21	18	1	28	24	9
6	20	17	2	28	23	9
9	20	17	2	28	23	9
12	**19**	**17**	**3**	**28**	**23**	**10**
18	**19**	**16**	**3**	**28**	**24**	**10**
24	**19**	**16**	**3**	**28**	**24**	**10**

Legend: ADM - administered prices; TLC - labor costs; GAP - output gap; RBAS - exchange rate; CPIC - consumer price inflation; IR - policy interest rate; PPI - producer price inflation.

11. **Persistence is the most important source of inflation.** Past realizations of the own inflation shock account for almost 60 percent of its variance at the policy-relevant horizons of 12–24 months. As formal indexation schemes (which could explain this finding by allowing past inflation to influence current wage and price setting) were not practiced over the analyzed period, this result probably reveals the

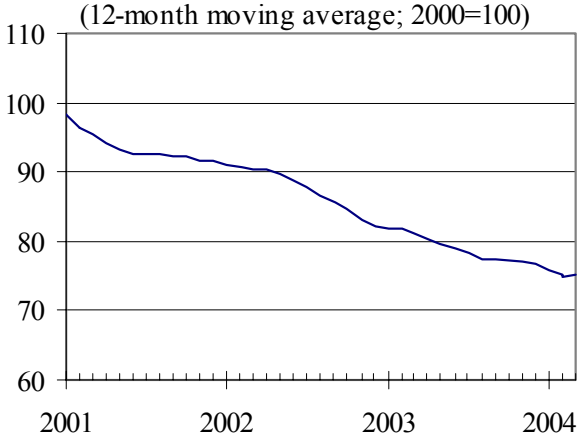
expectations of price setters for gradual and smooth disinflation. To some extent, these expectations may have been influenced by the success of the chosen gradual disinflation strategy, as persistence seems to have increased over time.[22]

12. **Cost-push factors—administered prices and labor costs—are responsible for about one-sixth of all inflation movements.** The small contribution of labor cost (relative to other factors), which is robust to various VAR orderings and wage measures, comes as a minor surprise. One explanation is that wage growth has been offset by social security cuts and rising productivity, so that the unit labor cost actually declined in real terms and did not pressure prices (see Figure 3).

13. **Exchange rate volatility accounts for about one-seventh of the variation in inflation.** This relatively small contribution merely reflects the low variability of the exchange rate compared with inflation, which is not surprising given the exchange rate's role as a nominal anchor. In terms of channels of influence, the exchange rate affects inflation both as a cost-push factor and as a guide to inflation expectations. Both roles require relatively low variability, especially in view of the exchange rate's large pass-through (see Section E).

Figure 3. Unit Labor Cost Deflated by Domestic Producer Prices

(12-month moving average; 2000=100)



Sources: Romanian authorities; and Fund staff estimates.

14. **Demand-pull effects, proxied by the output gap in industry, play a minor role.** The weight of demand-pull factors remains small even if we replace the labor cost variable by the net wage and treat it as an additional proxy for demand shocks. This result, shared with other economies in the region,[23] probably reflects the authorities' success in steering the nominal anchor (the exchange rate) on the desired path, so that demand shocks affect primarily the current account deficit, rather than inflation.

15. **The small contribution of the interest rate is not surprising, given the low level of monetization and credit relative to GDP, as well as the gradual and smooth disinflation path (see Figure 1).** With shallow financial markets and restricted capital mobility, interest rate changes would have only moderate effect on domestic demand and financial flows,

[22] Compared with the analysis in Gueorguiev (2003) on data from June 1997 to January 2003.

[23] See Kuijs (2002), Billmeier and Bonato (2002), and Ross (1998).

translating into a moderate impact on prices. Also, as the inflation target was largely met in 2001 and 2003 and substantially overperformed upon in 2002, there was little particular need to use the interest rate to battle shocks to inflation (aside from the second half of 2003). This small weight is a restatement of the fact that most of the impact that the exchange rate has on inflation in Romania comes not directly, but via its effect on the exchange rate, as confirmed by the impulse response analysis in Section E.

16. **Policies have a heavy impact on producer price movements.** In marked contrast to consumer prices, own shocks explain only about one-fourth of the fluctuations in producer price inflation. Variations in policy-influenced variables—the exchange rate, labor costs and administered prices—are responsible for about two-thirds of producer price movements. This is in fact a positive result, as it shows that policies can have an even stronger impact on changes in producer prices, which bodes well for bringing producer price inflation down to single digits in 2005. The slower decline in producer price inflation, compared with the CPI inflation, can be attributed to the much larger influence of the hikes in administered prices (mostly energy, but also water supply, railway transportation, and telecommunications).

E. Sensitivity of Inflation to Shocks

17. While the variance decomposition described above gives the relative importance of each variable included in the VAR in explaining inflation movements, the pass-through coefficients, computed from impulse responses, measure what fraction of each particular shock is eventually transmitted to inflation. To the extent that these shocks are policy induced, this analysis shows the impact of various policies on inflation. The impulse response functions of consumer and producer prices, as well as those of the exchange rate to shocks emanating from the exogenous and policy variables in the model, are presented in Figures 4–6, while the corresponding pass-through coefficients are shown in Tables 2a and 2b.[24]

Table 2a. Pass-Through to Consumer Price Inflation
(Percentage points)

Months	ADM	TLC	GAP	RBAS	IR
1	5	2	5	7	0
3	8	15	8	24	-3
6	9	27	11	36	-13
9	9	34	13	40	-18
12	**10**	**38**	**14**	**42**	**-21**
18	**10**	**43**	**15**	**44**	**-23**
24	**10**	**45**	**16**	**45**	**-25**

Table 2b. Pass-Through to Producer Price Inflation
(Percentage points)

Months	ADM	TLC	GAP	RBAS	IR
1	19	12	-3	25	0
3	17	29	-3	43	-17
6	20	36	1	51	-23
9	22	36	3	52	-24
12	**23**	**38**	**4**	**52**	**-25**
18	**24**	**40**	**5**	**52**	**-25**
24	**25**	**40**	**6**	**52**	**-26**

Legend: ADM - administered prices; TLC - labor costs; GAP - output gap; RBAS - exchange rate; CPIC - consumer price inflation; IR - policy interest rate; PPI - producer price inflation.

18. **Inflation in Romania exhibits low inertia.** Romania's consumer prices show little stickiness, as inflation's response to shocks peaks between the first and the fourth month after

[24] See Appendix II for the definition of the pass-through coefficients.

impact (Figure 4). This is partly a function of the relatively high inflation during the period of analysis. Other studies on high- and moderate-inflation countries report similarly low inertia, while low-inflation countries in the region, like Croatia and Slovakia (although not Slovenia), show substantially higher inertia (see Table 3).

Table 3. Response of Inflation to Shocks in Selected Countries

	Turkey	Brazil	South Africa	Croatia	Slovakia	Slovenia	Romania
Month after the shock in which inflation's impulse responses peak	1-2	3	5	4-6	6-10	2-4	1-4
Months after the shock until inflation's impulse responses die out	10	14-16+	5-9	4-6	30-40	12-18	15-20

Sources: Leigh and Rossi (2002) for Turkey; Belaisch (2003) for Brazil; Bhundia (2002) for South Africa; Billmeier and Bonato (2002) for Croatia; Kuijs (2002) for Slovakia; Ross (1998) for Slovenia.

19. **Inflation persistence is average by international and regional standards.** It takes about 15–20 months after the shocks for most of the impulse responses to return to zero. In other emerging markets, it takes 2–3 years for most shocks on inflation to dissipate[25] and, in developed countries, at least 3 years[26]. However, regional comparisons show less persistence in Croatia and about the same in Slovenia. Persistence may be average relative to other countries, but it still dominates other sources of inflation in Romania, as shown in Section D.

20. **The pass-through from the exchange rate is large and fast.** Forty to fifty percent of exchange rate shocks are eventually transmitted to prices. Compared with previous estimates, the pass-through has indeed declined for producer prices but has increased somewhat for consumer prices.[27] Possible explanations for the smaller PPI pass-through include (i) improved monetary policy credibility and exchange rate predictability at an annual horizon, resulting in price setters demanding a smaller premium for uncertainty; and (ii) better foreign exchange risk management, resulting in lower producer sensitivity to exchange rate changes. The increased pass-through to consumer prices is a puzzle, however, as it is expected to decline with lower inflation.[28] Moreover, the same factors that affect the pass-through to

[25] See Loungani and Swagel (2001).

[26] See Favero (2001) and Cespedes, Kumhof, and Parrado (2003).

[27] Using data from June 1997 to January 2003, Gueorguiev (2003) estimates the exchange rate pass-through to producer and consumer prices after 12 months at 64 percent and 33 percent, respectively.

[28] See Taylor (2000) and Choudhri and Hakura (2001).

producer prices should be in play for consumer prices as well. This remains an important issue for further research.

21. **Labor cost shocks also have a large pass-through, commensurate to the exchange rate one.** Interestingly, it is about the same for consumer and producer prices, indicating that wage dynamics affect consumer prices mostly as a supply shock, as presumed by the model, rather than as a demand shock.

22. **The small pass-through of administered prices is a positive surprise.** It indicates a high degree of competition, as the sizable increase in the administered prices, in particular for energy over the examined period, seems to have been successfully absorbed in the profit margins of economic agents, rather than passed to the consumer. Such resilience to this kind of supply shocks bodes well for further disinflation.

23. **The direct effect of the policy interest rate on inflation is moderate.** A 100-basis point increase in the policy interest rate would lower inflation by only 20 basis points after 12 months. However, as Figure 6 indicates, most of the effect of monetary policy on inflation comes through the exchange rate, whose reaction to interest rate shocks is both larger and faster than inflation's. In addition to the direct effect, the same 100-basis points interest rate hike would result in a 65 basis points exchange rate appreciation after 12 months, and lower inflation by an additional ¼ percentage point.

F. Conclusion and Policy Implications

24. **This analysis confirms that the gradual disinflation strategy chosen in 2001 has been and remains appropriate.** The strong inflation persistence, coupled with the much-needed policy of raising administered prices toward cost-recovery/market levels, would have made faster disinflation rely too much on the exchange rate anchor and thus risk the loss of competitiveness. Albeit of secondary importance, administered price adjustments would continue in the medium term, as gas prices need to reach import parity and electricity prices should move in line with rising costs. Gradual disinflation, therefore, continues to be the safe and credible way to disinflate without creating external imbalances and sacrificing output growth.

25. **Nevertheless, even gradual disinflation requires strong policies and smooth policy coordination.** Although demand shocks have a minor effect on inflation, they have a major impact on the current account deficit, as the 2003 experience clearly showed. The policy package needed to deliver the inflation objectives of 9 percent for 2004 and 6 percent for 2005 without compromising external stability thus combines the continuing use of the exchange rate as a nominal anchor with tight fiscal and wage policies to reign in the current account deficit.

26. **Guiding the exchange rate broadly in line with the inflation target and a modest real appreciation continues to be the policy with the highest disinflation potential.** This

policy anchors inflation expectations at an annual horizon while allowing sufficient short-term flexibility to prevent excessive speculation on the financial markets. Beyond 2004, however, the progressive relaxation of capital controls will generate strong appreciation pressure, especially if domestic interest rates stay high. While accepting more substantial real appreciation will certainly help in lowering inflation,[29] it needs to be accompanied by a continuing increase in public and private savings to prevent further deterioration in the current account deficit.

27. **Wage restraint is an important disinflation policy as well.** First, the pass-through from wage shocks is quite strong, even though such shocks account for only a moderate fraction of inflation variability. Second, wage moderation is an "enabling" policy, allowing the NBR to use the exchange rate as a disinflation tool without fear of harming competitiveness. The wage policies in place in 2004 will help to both preserve competitiveness and moderate the current account deficit, thus allowing the NBR to focus on disinflation. Similar prudence will be required in the following years, to cope with the effects of the likely strong exchange rate appreciation pressures on the current account.

[29] Some estimates of NBR economists put the Balassa-Samuelson effect at close to 5 percent per annum, suggesting that there is room for somewhat larger equilibrium real appreciation than the currently assumed 2 percent.

Figure 4: Response of Consumer Prices to Cholesky One S.D. Innovations ± 2 S.E.

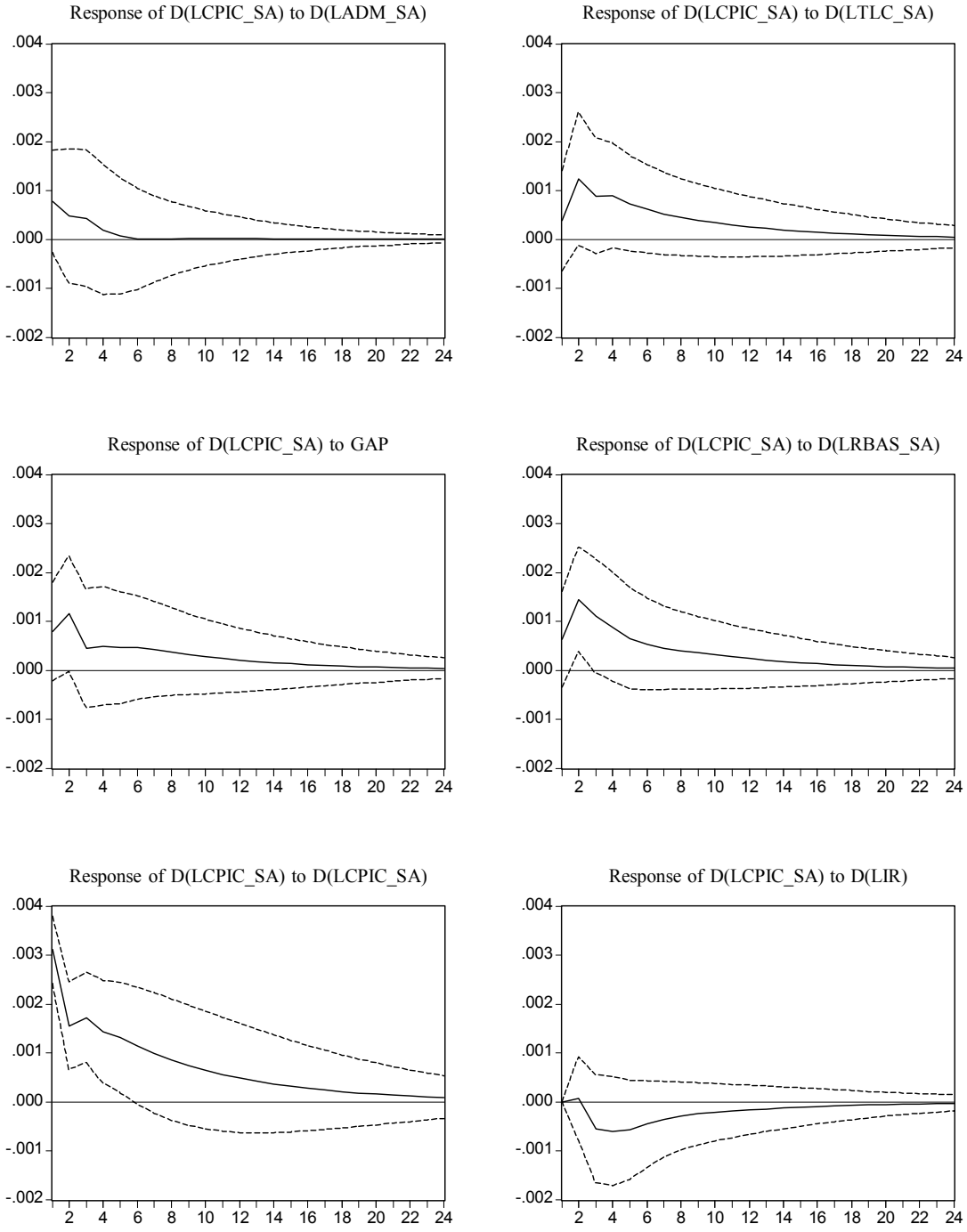


Figure 5: Response of Producer Prices to Cholesky One S.D. Innovations ± 2 S.E.

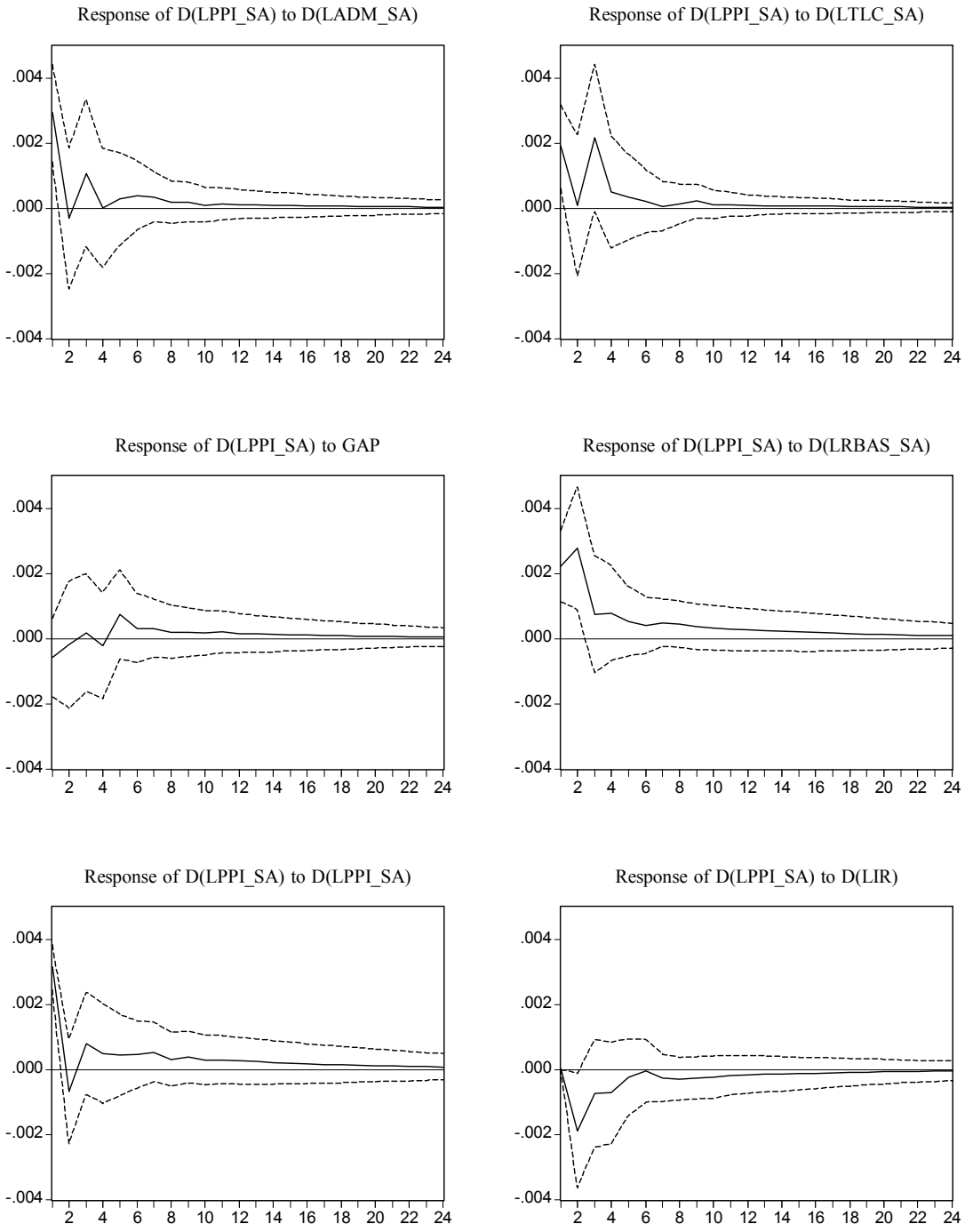
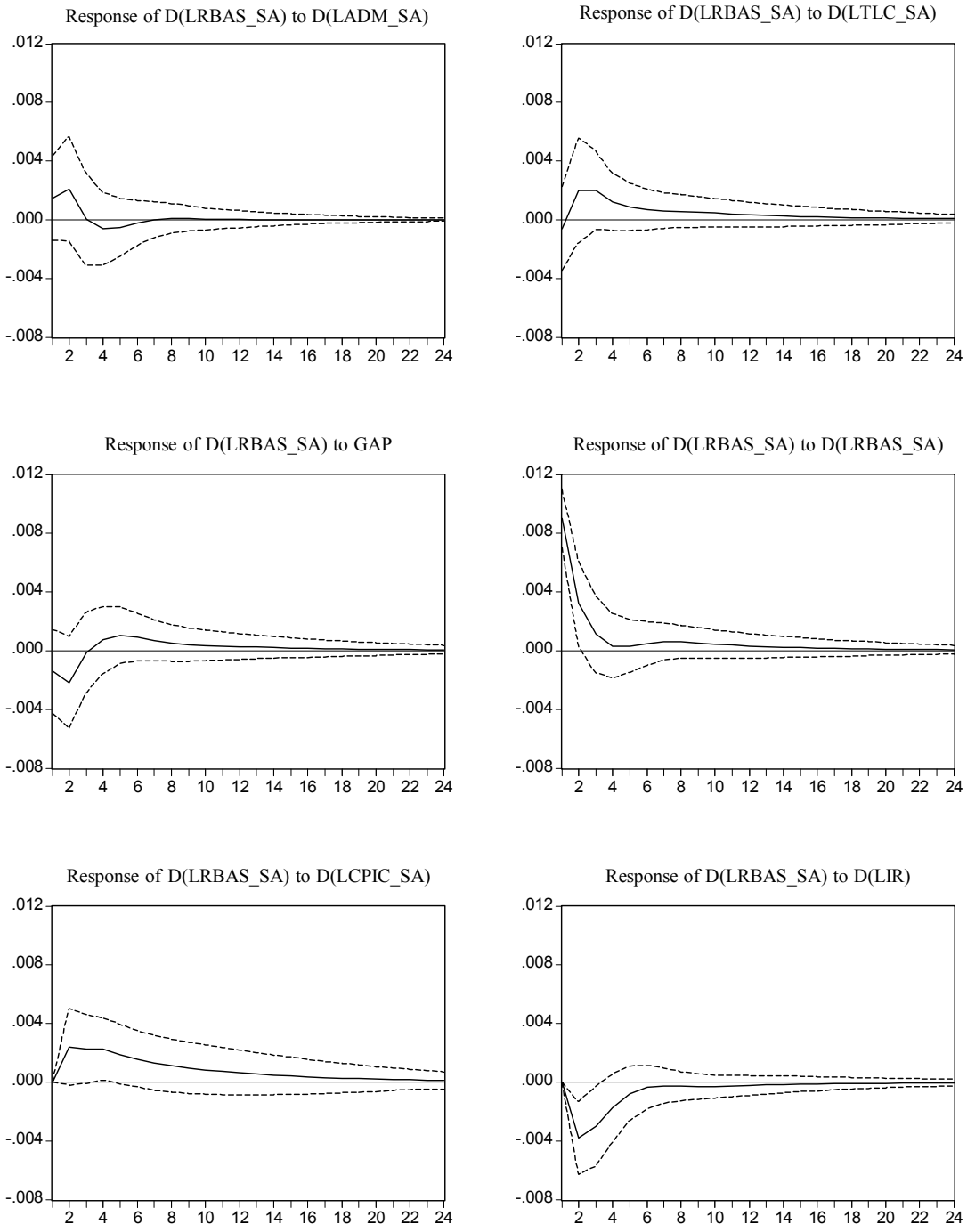


Figure 6: Response of the Exchange Rate to Cholesky One S.D. Innovations ± 2 S.E.



DATA DEFINITIONS AND SOURCES

Variable Notation	Description	Source
ADM	Index of administered prices included in the CPI.	Romania's National Institute of Statistics.
TLC	Total nominal labor costs in lei, calculated as the gross economywide wage augmented by the employers' share of the social security contributions.	The gross economywide wage is reported monthly by Romania's National Institute of Statistics. Data on employers' contributions come from the EURO3 database.
GAP	Output gap, constructed as the difference between the series of real industrial production, seasonally adjusted, and its Hodrick-Prescott-filtered trend.	Romania's National Institute of Statistics.
RBAS	Nominal exchange rate of the Romanian leu against a 60/40 EUR/US$ basket.	National Bank of Romania
PPI	Producer price index, domestic market prices.	Romania's National Institute of Statistics.
CPIC	Consumer price index, excluding administered prices.	Staff calculations.
IR	The National Bank of Romania's deposit auction interest rate on an annual basis, compounded monthly.	National Bank of Romania

METHODOLOGICAL NOTES

The methodology draws loosely on the reduced-form recursive model introduced by McCarthy (1999, 2000) for studying the impact of various exogenous and policy shocks on inflation. The vector autoregressive (VAR) framework allows for estimating the impact of each of these shocks on inflation from their impulse responses, as well as ascertaining the relative importance of each shock from its contribution to the variance decomposition of the forecast error. In this model we have included the following potential shocks on prices:

- policy-driven administered price increases, measured by an index of administered prices, weighed with their CPI weights;
- domestic price shocks, coming from increases in total labor costs. The inclusion of this variable is motivated by Romania's history of wage-price spirals and the relevance of wage dynamics for inflation in the past (see, e.g., Moore (2001));
- demand shocks, conventionally proxied by the output gap;
- exchange rate shocks, which are an important inflation determinant in Romania;
- monetary policy shocks, captured by the inclusion of the NBR's policy interest rate. Ordered last, this equation is a reduced form of the central bank reaction function.

As large movements of administered prices are an important part of the overall CPI dynamics, we used a CPI measure that excluded administered prices. Moreover, as we have captured the most important supply shocks and to avoid double counting, we estimated the model separately for consumer and producer prices. The precise definitions of variables and the sources of data are provided in Appendix I.

The sample period consists of monthly observations between November 2000–March 2004. The choice of this sample is motivated by the need to avoid estimating the VAR model over different policy regimes, an approach subject to the Lucas critique (see, e.g., Favero (2001), pp. 162–208). As this period coincides with both the tenure of the current government and a stable monetary framework, we feel confident that the overall economic policy framework has stayed unchanged. All level variables (except the policy interest rate and the output gap) have been transformed in natural logarithms and seasonally adjusted with the X12 procedure.

Unit roots have indicated that the series in levels are nonstationary; thus, the variables are transformed in first differences to achieve stationarity.[30] As recursiveness is generally

[30] Strictly speaking, the VAR system should be represented as a vector error-correction model, including possible error-correction terms stemming from potential cointegration between some of the included variables in levels. However, cointegration tests indicate too many cointegration relationships between the six included variables, with low (and often

(continued…)

supported by Granger causality tests, the Cholesky decomposition of the estimated variance-covariance matrix is appropriate for identifying the structural shocks. Experiments with different orderings of the variables did lead to similar results.

Lag length is chosen as the minimal number of lags sufficient to achieve "white noise" residuals, which resulted in one lag for the model including consumer prices and two lags for the model with the PPI.

The pass-through coefficients at horizon '*j*', shown in Tables 2a and 2b are calculated as $PT_{t,t+j} = P_{t,t+j} / X_{t,t+j}$, where *P* and *X* are the *j*-period-ahead cumulative impulse responses of the price measure and the shocked variable, respectively. This way of measurement, used in Rabanal and Schwartz (2001), Leigh and Rossi (2002) and Belaisch (2003), accounts for the total impact of exchange rate changes on prices for a given time horizon, including the secondary exchange rate dynamics generated by the initial shock. The series of direct non-cumulative impulse responses of the consumer and producer prices as well as the exchange rate for 24 months after the shock are shown in Figures 4–6.

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borderline significant at best) adjustment coefficients. Ignoring the error-correction terms thus has no grave consequences in the relatively short time span of the analysis.

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III. ROMANIA: TRANSMISSION OF POLICY INTEREST RATE TO MARKET RATES[31]

A. Introduction

1. **This paper aims to test the hypothesis that the interest rate pass-through from policy to market rates plays a lesser role in Romania than in other transition economies in the region.** The policy interest rate pass-through is claimed to be more slow and limited as a consequence of specific features of the Romanian monetary policy framework .
The transmission from the policy interest rate to the lending and deposit rates studied here is part of the broader issue of the effectiveness of interest rate policy in controlling inflation and affecting aggregate demand, which, however, goes beyond the scope of this paper.

2. **Several factors are usually referred to as explaining the ineffectiveness of interest rate policies.** Those that Romania shares, to a larger or smaller extent, with other countries in the region are a low degree of monetization, underdeveloped financial markets, and capital controls. In addition, the lending policies of banks are often found to be price inelastic with respect to interest rates in the short run, because other, non-interest rate factors, like adjustment costs and, sometimes, directed lending, play a substantial role (see e.g. Cottarelli and Kourelis (1994), Schaechter, Stone, and Zelmer, 2000 or Carare et. al. (2002)). The balance sheet problems in the banking and corporate sectors are also frequently mentioned, but in the case of Romania they do not seem to be of critical importance.

3. **The Romanian monetary system has, however, some specific characteristics that could potentially further weaken the interest rate instrument.** Starting with 1997, the Romanian economy exhibited a strong and consistent increase in structural excess liquidity (Anthoni, Udea, and Braun, 2003). As the NBR has been increasing its reserves sharply, it had to control high-powered money by accepting deposits from the commercial banks. Hence instead of borrowing from the central bank, commercial banks typically have substantial deposits over and above their reserve requirements at the NBR. Therefore, instead of reflecting the marginal costs of funding for the commercial banks, the policy interest rate it merely reflects an opportunity cost. Since empirical evidence suggests that commercial banks react differently to cost increases than to revenue decreases, the question arises whether the Romanian situation of excess liquidity could cause such asymmetric behavior of banks, rendering policy interest rate less effective.

4. **After estimating interest rate pass-through coefficients for several CEE economies, the paper concludes that the pass-through in Romania is in line with that in other countries in the region.** Further research would be needed to estimate the contribution of various factors to the effectiveness of the policy interest rate.

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[31] Prepared by Alexander Tieman.

B. The Model

5. **The paper measures the interest rate pass-through from the policy rate to market rates by employing an error-correction framework**. Assuming perfect competition in the loan market, the relation between market and policy rates can be described by

$$i^m = \alpha + \beta \cdot i^p, \quad (1)$$

where i^m is the market loan rate, i^p is the policy rate, α is a mark up, and β reflects the demand elasticity of market rates with respect to policy rates. Relatively inelastic demand (an elasticity β lower than 1) is likely to be found when banks have substantial market power, either because no close substitutes for bank loans exists, i.e. when capital markets are underdeveloped, or because of the structure of the market for bank loans (De Bondt, 2002). A wide range of factors influence the structure of the market, such as the degree of state-ownership of the banking sector, and the degree and form of regulation, including market entry restrictions and menu costs. Relatively elastic demand would signal that bank credit is not-rationed. In such a setting, banks would want to lend money to both low and high risk borrower, equalizing returns on both types of lending by charging risk-adjusted rates to the high-risk borrowers. Hence, the risk adjustment in the rate might on average cause market rates to react more than one-to-one to changes in the policy rate.

6. **Relationship (1) does not touch upon the issue of timing.** Market interest rates will not react instantly to changes in the policy rate. Even though bank will quickly adapt their short-term lending rates, medium and long-term rates will react more slowly, or not at all, as they are primarily guided by expectations of future short-term rates. Moreover, average lending rates will adapt only gradually, as new loans replace old ones. These considerations point to a gradual adjustment of market rates to the new policy rates. Therefore, equation (1) should be interpreted as valid only in the long run.

7. **The long-run nature of equation (1) suggests a model in which equation (1) can be seen as a long-run equilibrium relationship, around which short-term dynamics abound.** Such an approach is well-established in the literature. Engle and Granger (1987) suggest a two-step approach in which the long-run relationship is fitted in levels, while in the second step involves regressing the first differences of the dependent variables on their lagged values and lagged deviations from the long-run equilibrium relationship. This approach, labeled error-correction, is warranted as long as the dependent and explanatory variables are cointegrated, i.e. both are non-stationary, but there exists a linear combination of these series which is stationary. In general, interest rates series would not be expected to be non-stationary, as they normally do not exhibit a long-term trend. In transition economies, however, one might expect interest rate series to exhibit a declining trend as the transition takes hold and the problem of inflation is reigned in. This would imply these series to be

integrated of order 1 (I(1)). To establish this hypothesis, the paper performs unit root tests on the series by applying the augmented Dickey-Fuller (1981) test on the individual series. In case both the policy rates and the market rates are I(1), the series might be cointegrated, which is subsequently tested using standard Johansen (1988, 1991) statistical tests . When a cointegrating relationship is found, the suggested interpretation of equation (1) as a long-run equilibrium relationship, around which short-term dynamics abound, is justified from a statistical point of view.

An error-correction model (ECM) of interest rate pass-through can be specified as

$$\Delta i_t^m = \gamma_1 + \gamma_2 \Delta i_{t-1}^m + \gamma_3 \left(i_{t-1}^m - \beta \cdot i_{t-1}^p - \alpha \right) + \eta_t . \qquad (2)$$

Here, Δ is the difference operator, and the equation states that is the first difference of market interest rates, Δi^m_t, depends on its own one-period lag, Δi^m_{t-1}, the deviation from the long-run relationship in the last period, $i^m_{t-1} - \beta \cdot i^p_{t-1} - \alpha$, and a constant, γ_1. In such an ECM, the coefficient γ_3 indicates the speed of adjustment of the short-run dynamics to the long-run equilibrium relationship. This coefficient hence can be interpreted to signal the effectiveness of the interest rate instrument of monetary policy; a higher value of the coefficient signals a faster market response and hence a more effective first step in the interest rate channel of monetary transmission.

8. **This paper employs ECM (2) to test the whether the interest rate pass-through in Romania is low compared to other transition economies in the region**, as claimed previously due to the nature of the monetary policy regime. This is done by a simple comparison and statistical testing of estimation results from different transition economies in the region.

C. The Data

9. **For the purpose of estimation, data from a wide range of transition economies in Central and Eastern Europe is collected.** The countries included are Romania, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia. The period under consideration is January 1995 - February 2004, and the frequency of data is monthly. Because of the transition most economies in the region have experienced, data problems abound: The Baltic states were not included owing to the lack of data, while Bulgaria was not included owing to its currency board arrangement. The sample for Slovak Republic has been limited to 2000-04 period, owing to the switch in the monetary regime from an exchange rate peg to a disinflationary regime with a floating exchange rate in 1998[32]. The remaining countries each

[32] The year 1999 is left out of the time series, as the interest rate series took roughly a year to adapt to the new monetary policy framework.

have broadly comparable monetary policy regimes, with inflation as the primary, or in some cases the sole target of monetary policy.

10. **For these countries, the monthly data consists of average short and long-term loan rates, deposit rates, and the central bank policy rates.** The period for which all data are available vary by country, but even the shortest series still has at least three years of monthly data available. In addition, short series of monthly interest rates on new loans (as opposed to all loans) are available for the Czech and Slovak Republics, and Romania.

D. Results on Outstanding Loan Rates: Equilibrium Equation and Basic ECM

11. **Estimations results for the series on outstanding-loan rates are in Table 1.** The table contains results on, first, equation (1), which is estimated for all short- and long-term lending rates on the outstanding stock of loans. Second, unit roots test are performed on all data series, using the standard augmented Dickey-Fuller test at the 5 percent uncertainty level. All policy rates and long- and short-term lending rates are found to be integrated of order 1, with the exception of the short term rate for Romania (which is found to be I(2)) and the short-term and policy rates for Slovenia (which are found to be I(0)). Third, to test for cointegration between the market and policy rates, standard Johansen cointegration tests are performed on the pairs of series.

12. **In all countries in the sample, the policy rate is a highly significant explanatory variable for both the short- and the long-term market rates.** Significance is lowest (but still high) in Hungary and Slovenia, presumably because of the small length of the time series in the case of Hungary (data from January 2000 onwards only), while the Slovenian policy rate is characterized by only a few movements since 1995. The magnitude of the estimated coefficients varies between 0.67 and 2.07, with most estimates being close to 1. Coefficient estimates below 0.8 are found for the Czech Republic (short- and long-term rates), Hungary (long-term rate), Romania (short- and long-term rates), and the Slovak Republic (long-term rate). This point to substantial market power of commercial banks, be it because no close substitutes for bank lending exists, or because of the limited competition in the banking market. In contrast, the banking markets in Poland and especially Slovenia exhibit relatively elastic demand, which hints at a market where credit is not rationed and banking competition is amply present.

13. **Cointegration tests confirm that the market rates can to a large degree be explained by the policy rates.** For the series which are I(1), this indicates that there is a high degree of co-movement between policy and market rates. The one pair of series that fails the cointegration test consists of the Hungarian short-term market rate and the Hungarian policy rate. This is presumably due to the short series being tested. From the above, the general conclusion is that the policy rate is a highly relevant explanatory variable for the market lending rate in the long run, as can be expected in a market economy. This allows the estimation of the ECM specifications.

14. **The estimation results for the basic ECM for each country, as specified in equation (2), are in Table 2.** The fit of the estimated equations, as indicated by the R^2, is low for all of the equations. At the same time, the Durbin-Watson (1950, 1951) test statistic indicates little serial autocorrelation in the residuals. Both effects are the normal consequences of estimating a model in first differences. The main parameter of interest in the ECM is the estimate c(3) of the coefficient γ_3, which indicates the speed of adaptation of the short-term dynamics to the long-run equilibrium equation. This coefficient estimate thus is a measure of the speed of the pass-through of the policy interest rate to the market rates, and hence of the effectiveness of the interest rate channel. Since the coefficient indicates adaptation to the long-run equilibrium, it is expected to be negative.

15. **For the series on rates on outstanding loans, the hypothesis that the interest rate pass-through is low in Romania compared to other transition countries, is contradicted.** For most countries in the sample, the estimated adaptation coefficient c(3) is negative and significantly different from 0 at the 5 percent uncertainty level. However, in the case of Slovenia, the coefficient estimates are significantly different from 0 only at the 8 percent (long-term rates) or 11 percent (short-term rates) uncertainty levels. In the sample, the coefficient estimates range from -0.08 to -0.39, with almost all estimates being in the range -0.09 to -0.18. The coefficient estimates for Romania, at -0.14 and -0.15 for the short- and long-term rate respectively, are not substantially different from the estimates for the other transition countries in the sample. Statistical testing indicates that the adaptation coefficient for the short-term rate is significantly larger than -0.08 (the lower bound of the estimates for the other countries) at the 5 percent uncertainty level, while the same holds for the long-term coefficient estimates, but only at a 12 percent uncertainty level.

E. Results on Deposit, Newly Issued Loan Rates, and Panel Estimations

16. **Estimation results for deposit rate data also reject the hypothesis that the pass-through in Romania is weaker than in other countries.** The estimation results for the long-run equilibrium equation for the deposit rates are in Table 3. Most series are cointegrated, indicating that estimation through ECM methodology is warranted. The results for the ECMs for deposit rates in the individual countries are in Table 4. All the estimates of the adaptation coefficients are negative and in most cases they are significantly different from 0, the exceptions being the estimates in the long-term rate equation for the Slovak Republic, and in the short-term rate equation for Poland. The other estimates are in the range -0.13 to -0.60, with the estimate for the long-term rate equation for Romania being -0.24. Once again, statistical testing shows that Romania does not stand out as exhibiting an exceptionally slow speed of adaptation.

17. **Estimation results on series for newly issued loans suggest that the pass-through is fast and almost one-to-one.** However, data on newly issued loans are not available for most countries in the sample. Time series comprising more than a year are only available for the Czech and Slovak Republics, while for Romania, time series spanning just 10 months are available. The series for Romania are too short even to perform unit root tests and hence are

not suited for analysis in an ECM framework. The estimation results are shown in Tables 5 and 6. They confirm that monetary policy transmission from policy rates to market rates is generally fast and almost one-to-one. In the long-term equilibrium equation, all estimates of the policy rate coefficients are highly significant, with estimated values between 0.83 and 1.21, i.e. close to 1. While the Czech long-rate coefficient estimate at 0.83 is still significantly different from 1 at the 5 percent uncertainty level, the Czech short-rate coefficient and both the long- and short-rate Slovak coefficients are not statistically different from 1.

18. **Pooling the data series in a panel regression yields inconclusive results.** The results of a fixed effects panel estimation with a common coefficient on the policy rate confirm the policy rate as a highly significant variable for the market rates, with values of the t-statistic of 29.0 and 36.5 for the short- and long-term equation respectively. Further estimation in an ECM framework, using the residuals from the panel regression for the long-run equilibrium equation, does not yield any conclusive results. The cause presumably lies in the fact that significant changes in monetary policies in the different countries in the sample occurred at very different points in time. Hence, the residuals of the long-run equilibrium relation look very different when this relationship is estimated in a panel than when estimated for the countries individually.

F. Results: Time Consistency

19. **Estimation results for Romania clear differ when different time periods are taken into account (Table 7).** To see if the above results are constant over time or whether the market evolved over time, the data series for Romania are split in two, taking as the break point the first month in which the policy interest rate was below 40 percent. The two samples are October 1999- June 2001 and June 2001-January 2004. Estimation results for the different samples clearly differ, as seen in Table 7.

20. **In the earlier period the policy rate does not significantly influence the market interest rates.** In addition, no cointegration between market and policy rates is found, which also prevents a well-founded interpretation of the estimation results of the ECMs.

21. **In sharp contrast, in the later period, the policy rate is highly significant for the market rates and the series are cointegrated.** In addition, the coefficients for the policy rates are considerably higher than the estimates for the full sample, a difference which is statistically significant at the 5 and 10 percent level for the short- and long term rate series respectively. These higher estimates indicate that the Romanian banking market has developed towards a more complete market while banking competition increased.

22. **Moreover, the interest rate pass-through in Romania has increased over time.** The estimates of the adaptation coefficients in the ECMs indicate a significantly swifter adaptation of short-term dynamics to the long-run equilibrium than in the regressions for the

full sample. In other words, the interest rate channel of monetary policy may have become more effective over time.

G. Conclusions

23. **Claims that the particular features of Romania's monetary policy regime result in a lower effectiveness of its interest rate instrument are contradicted by the results of this study**, which can be summarized as follows:

- The estimates of interest rate pass-through from policy interest rates to rates on the outstanding volume of loans and deposits in Romania are in line with coefficient estimates for other transition economies in the region.

- Results for data series on newly issued loans suggest that, in some of the transition countries in the sample, market rates for new loans react to policy rate changes quite fast. For Romania, however, the time series span too short a period.

- Panel data regressions are inconclusive, likely due to differences in the timing of significant changes in monetary policy in the different countries in the sample. Hence, fitting the same long-run relationship on all countries in the sample yields systematic distortions in the residuals for the individual countries.

24. **Moreover, studying the Romanian loans market for different time periods strongly suggests that the interest rate pass-through from policy to market rates has become more pronounced over time.** It also suggests that the Romanian banking market was further developed in the later years compared to the period before mid-2001, and became more competitive, with less market power for individual banks.

H. Appendix: Estimation Tables

Table 1. Country Long-Term Equations - Loan Rates
Country_Rate,t = c(1) + c(2) * Country_Policy_Rate,t

Country	Maturity	Coef	Estimate	t-statistic	R-squared	Coint 1/
Czech Republic	Short Rate				0.951	yes
		c(1)	2.8729	18.03		
		c(2)	0.7579	43.03		
	Long Rate				0.959	yes
		c(1)	4.1903	33.43		
		c(2)	0.6506	46.96		
Hungary	Short Rate				0.382	no
		c(1)	7.6227	3.7		
		c(2)	1.0973	5.46		
	Long Rate				0.338	yes
		c(1)	13.5277	9.75		
		c(2)	0.6707	4.95		
Poland	Short Rate				0.912	yes
		c(1)	7.2796	15.64		
		c(2)	0.8507	29.42		
	Long Rate				0.898	yes
		c(1)	1.8865	3.33		
		c(2)	0.9571	32.28		
Romania	Short Rate				0.749	yes
		c(1)	14.6490	6.25		
		c(2)	0.7998	12.23		
	Long Rate				0.747	yes
		c(1)	15.3746	7.12		
		c(2)	0.7324	12.14		
Slovak Republic	Short Rate				0.624	yes
		c(1)	-2.1216	-1.47		
		c(2)	1.6222	8.92		
	Long Rate				0.728	yes
		c(1)	3.0948	5.57		
		c(2)	0.7915	11.32		
Slovenia	Short Rate				0.369	yes
		c(1)	-3.8601	-1.38		
		c(2)	2.0788	7.41		
	Long Rate				0.356	yes
		c(1)	-0.2881	-0.11		
		c(2)	1.8546	7.2		

1/ Using the standard Johansen Cointegration Test

Note: all series are I(1) at the 5 percent uncertainty level, except Rom_St_Out, which is I(2) and SVN_St_Out and SVN_Pol, which are I(0).

Table 2. Country ECM Estimation Results - Loan Rates
D(Country_Rate),t = c(1) + c(2) * D(Country_Rate),t-1 + c(3) * L-T-Eq_Resi

Country	Maturity	Coef	Estimate	t-statistic	R-squared	D-W
Czech Republic	Short Rate				0.157	2.02
		c(1)	-0.0761	-1.14		
		c(2)	0.0748	0.63		
		c(3)	-0.3880	-3.68		
	Long Rate				0.060	1.96
		c(1)	-0.6180	-1.35		
		c(2)	0.1923	1.75		
		c(3)	-0.1821	-2.27		
Hungary	Short Rate				0.139	1.92
		c(1)	-0.1354	-1.83		
		c(2)	-0.1451	-1.03		
		c(3)	-0.0822	-2.62		
	Long Rate				0.234	1.85
		c(1)	-0.1020	-2.24		
		c(2)	0.0097	0.07		
		c(3)	-0.1029	-3.41		
Poland	Short Rate				0.165	1.99
		c(1)	-0.1414	-2.26		
		c(2)	0.1846	1.80		
		c(3)	-0.1266	-3.33		
	Long Rate				0.080	1.99
		c(1)	-0.2091	-2.88		
		c(2)	0.0967	1.08		
		c(3)	-0.0908	-2.90		
Romania	Short Rate				0.408	2.15
		c(1)	-1.0089	-4.64		
		c(2)	-0.4558	-4.05		
		c(3)	-0.1541	-4.27		
	Long Rate				0.370	2.05
		c(1)	-0.9474	-4.35		
		c(2)	-0.4372	-3.76		
		c(3)	-0.1417	-3.58		
Slovak Republic	Short Rate				0.115	1.92
		c(1)	-0.1704	-2.68		
		c(2)	-0.0242	-0.22		
		c(3)	-0.1061	-2.39		
	Long Rate				0.276	2.01
		c(1)	-0.0743	-3.14		
		c(2)	0.0693	0.54		
		c(3)	-0.1607	-3.92		
Slovenia	Short Rate				0.044	1.81
		c(1)	-0.1942	-1.10		
		c(2)	0.1602	1.55		
		c(3)	-0.0751	-1.61		
	Long Rate				0.046	1.82
		c(1)	-0.1756	-1.00		
		c(2)	0.1524	1.47		
		c(3)	-0.0895	-1.78		

Table 3. Country Long-Term Equations - Deposit Rates
Country_Rate,t = c(1) + c(2) * Country_Policy_Rate,t

Country	Maturity	Coef	Estimate	t-statistic	R-squared	Coint 1/
Czech Republic	Short Rate				0.947	yes
		c(1)	0.0705	0.40		
		c(2)	0.7975	41.02		
	Long Rate				0.788	no
		c(1)	1.7917	7.57		
		c(2)	0.4918	18.79		
Hungary	Short Rate				0.990	yes
		c(1)	-0.4599	-3.22		
		c(2)	0.8237	102.97		
	Long Rate				0.980	yes
		c(1)	-1.2950	-5.89		
		c(2)	0.9039	73.30		
Poland	Short Rate				0.956	yes
		c(1)	-3.0961	-8.39		
		c(2)	0.9824	50.88		
	Long Rate				0.974	yes
		c(1)	-0.8408	-3.22		
		c(2)	0.9054	55.89		
Romania	Short Rate				...	...
		c(1)	...	...		
		c(2)	...	...		
	Long Rate				0.762	yes
		c(1)	1.3739	0.62		
		c(2)	0.7826	12.64		
Slovak Republic	Short Rate				0.536	yes
		c(1)	-4.1156	-3.05		
		c(2)	1.2650	7.44		
	Long Rate				0.441	yes
		c(1)	-0.2667	-0.21		
		c(2)	1.0048	6.16		
Slovenia	Short Rate				0.440	yes
		c(1)	-5.1917	-3.17		
		c(2)	1.4155	8.60		
	Long Rate				0.363	yes
		c(1)	-0.9470	-0.44		
		c(2)	1.5705	7.32		

1/ Using the standard Johansen Cointegration Test

Note: all series are I(1) at the 5 percent uncertainty level, except SVN_Dep_St_Out and SVN_Pol, which are I(0).

Table 4. Country ECM Estimation Results - Deposit Rates
D(Country_Rate),t = c(1) + c(2) * D(Country_Rate),t-1 + c(3) * L-T-Eq_Resi

Country	Maturity	Coef	Estimate	t-statistic	R-squared	D-W
Czech Republic	Short Rate				0.254	2.09
		c(1)	-0.0776	-0.92		
		c(2)	0.0872	0.75		
		c(3)	-0.6008	-4.76		
	Long Rate				0.073	1.99
		c(1)	-0.0802	-1.44		
		c(2)	-0.0191	-0.19		
		c(3)	-0.1261	-2.61		
Hungary	Short Rate				0.417	1.74
		c(1)	-0.0831	-2.34		
		c(2)	0.2174	2.91		
		c(3)	-0.4812	-7.83		
	Long Rate				0.302	1.69
		c(1)	-0.1336	-3.04		
		c(2)	0.0653	0.89		
		c(3)	-0.3337	-6.71		
Poland	Short Rate				0.083	2.07
		c(1)	-0.1371	-2.64		
		c(2)	0.2906	3.24		
		c(3)	-0.0193	-0.57		
	Long Rate				0.505	1.65
		c(1)	-0.1470	-3.21		
		c(2)	0.2320	2.82		
		c(3)	-0.3741	-7.35		
Romania	Short Rate				...	...
		c(1)	...	...		
		c(2)	...	...		
		c(3)	...	...		
	Long Rate				0.561	1.97
		c(1)	-0.9378	-5.61		
		c(2)	-0.2986	-2.85		
		c(3)	-0.2415	-7.75		
Slovak Republic	Short Rate				0.534	1.95
		c(1)	-0.1590	-4.34		
		c(2)	0.0434	0.30		
		c(3)	-0.1390	-4.47		
	Long Rate				0.073	1.80
		c(1)	-0.0752	-1.62		
		c(2)	0.2341	1.66		
		c(3)	-0.0339	-0.95		
Slovenia	Short Rate				0.073	1.77
		c(1)	-0.1429	-1.02		
		c(2)	0.1585	1.54		
		c(3)	-0.1598	-2.51		
	Long Rate				0.053	1.84
		c(1)	-0.1682	-0.93		
		c(2)	0.1065	1.01		
		c(3)	-0.1426	-2.25		

Table 5. Country Long-Term Equations - Rates on Newly Issued Loan
Country_Rate,t = c(1) + c(2) * Country_Policy_Rate,t

Country	Maturity	Coef	Estimate	t-statistic	R-squared	Coint 1/
Czech Republic	Short Rate				0.949	yes
		c(1)	1.1038	4.94		
		c(2)	1.0366	41.92		
	Long Rate				0.968	yes
		c(1)	3.6515	25.78		
		c(2)	0.8333	53.21		
Romania	Short Rate				0.345	yes 2/
		c(1)	16.7957	3.57		
		c(2)	0.4601	1.92		
	Long Rate				0.019	yes 2/
		c(1)	26.7505	8.63		
		c(2)	-0.0589	-0.37		
Slovak Republic	Short Rate				0.533	yes
		c(1)	-0.2350	-0.18		
		c(2)	1.2137	7.400		
	Long Rate				0.733	yes
		c(1)	2.1810	3.39		
		c(2)	0.9299	11.47		

1/ Using the standard Johansen Cointegration Test

2/ These test results should be treated with caution, as no unit root tests could be performed on the series.

Note: all series for the Czech Republic and Slovakia are I(1) at the 5 percent uncertainty level, while the series for Romania are too short to perfrom unit root tests.

Table 6. Country ECM Estimation Results - Rates on Newly Issued Loans

D(Country_Rate),t = c(1) + c(2) * D(Country_Rate),t-1 + c(3) * L-T-Eq_Resid

Country	Maturity	Coef	Estimate	t-statistic	R-squared	D-W
Czech Republic	Short Rate				0.179	2.02
		c(1)	-0.0594	-0.51		
		c(2)	0.4003	2.80		
		c(3)	-0.7125	-4.43		
	Long Rate				0.161	2.00
		c(1)	-0.1056	-1.41		
		c(2)	-0.1671	-1.59		
		c(3)	-0.3357	-2.82		
Romania 1/	Short Rate				0.866	1.60
		c(1)	0.3967	1.86		
		c(2)	0.1420	0.40		
		c(3)	-1.5233	-2.48		
	Long Rate				0.537	2.14
		c(1)	-0.1435	-0.69		
		c(2)	0.1455	0.41		
		c(3)	-1.3531	-1.78		
Slovak Republic	Short Rate				0.109	1.33
		c(1)	-0.1317	-1.62		
		c(2)	-0.1589	-1.55		
		c(3)	-0.1205	-1.89		
	Long Rate				0.616	2.22
		c(1)	-0.1324	-2.45		
		c(2)	-0.2259	-2.42		
		c(3)	-0.6499	-7.12		

1/ These test results should be treated with caution, as no unit root tests could be performed on the series.

Table 7. Romania: Estimation Results for Different Samples - Loan Rates

	Maturity	Coef	Estimate	t-statistic	R-squared	Coint 1/	D-W
			1999:10-2001:06				
Long-Run Equations	Short Rate				0.0188	no	
		c(1)	49.0471	6.35			
		c(2)	0.0827	0.14			
	Long Rate				0.0211	no	
		c(1)	46.9781	7.69			
		c(2)	0.0844	0.64			
ECMs	Short Rate				0.2810		1.92
		c(1)	-0.9717	-1.78			
		c(2)	-0.4101	-1.88			
		c(3)	-0.1541	-1.42			
	Long Rate				0.293		1.92
		c(1)	-1.0227	-1.86			
		c(2)	-0.4078	-1.91			
		c(3)	-0.1719	-1.47			
			2001:07-2004:01				
Long-Run Equations	Short Rate				0.925	yes	
		c(1)	6.7495	4.53			
		c(2)	1.0622	18.85			
	Long Rate				0.900	yes	
		c(1)	11.7058	8.68			
		c(2)	0.8197	16.06			
ECMs	Short Rate				0.623		2.29
		c(1)	-0.9738	-5.90			
		c(2)	-0.5252	-4.36			
		c(3)	-0.4151	-5.74			
	Long Rate				0.596		2.19
		c(1)	-0.8705	-5.86			
		c(2)	-0.5000	-3.95			
		c(3)	-0.3494	-5.13			

1/ Using the standard Johansen Cointegration Test

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Table 1. Romania: GDP by Origin, 1993-2003

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002[1/]	2003[2/]
					(In billions of lei; at current prices)						
Total	20,036	49,773	72,136	108,920	252,926	373,798	545,730	803,773	1,167,687	1,512,617	1,890,778
Agriculture, forestry, fishery	4,206	9,898	14,269	20,949	45,533	53,773	72,805	89,015	156,179	171,131	221,111
Industry[3/]	6,781	18,018	23,711	36,182	78,094	98,213	135,344	219,480	323,047	428,859	537,174
Construction	1,040	3,251	4,755	7,067	13,230	19,029	27,377	39,287	62,334	84,265	108,465
Trade	1,695	3,386	6,243	9,973	22,789	40,902	60,913	82,364	106,641	138,557	826285.6[4/]
Other	6,313	15,220	23,157	34,749	93,280	161,881	249,291	373,628	519,487	689,805	197743.9[5/]
					(Sectoral GDP shares; in percent)						
Agriculture and forestry	21.0	19.9	19.8	19.2	18.0	14.4	13.3	11.1	13.4	11.3	11.7
Industry[3/]	33.8	36.2	32.9	33.2	30.9	26.3	24.8	27.3	27.7	28.3	28.4
Construction	5.2	6.5	6.6	6.5	5.2	5.1	5.0	4.9	5.3	5.6	5.7
Trade	8.5	6.8	8.6	9.2	9.0	10.9	11.2	10.2	9.1	9.2	43.7[4/]
Other	31.5	30.6	32.1	31.9	36.9	43.3	45.7	46.5	44.5	45.6	10.5[5/]

Source: National Institute of Statistics. ESA 79 methodology in 1993-97, ESA 95 methodology in 1998-2003.

1/ Semifinal data.

2/ Provisional data.

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

4/ Services including financial intermediation services indirectly measured.

5/ Net taxes.

Table 2. Romania: GDP by Expenditure, 1993-2003
(In percent)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002[1/]	2003[2/]
					(Real annual change)						
GDP	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	2.1	5.7	5.0	4.9
Total consumption	1.2	3.8	10.8	7.0	-4.3	1.1	-2.5	1.5	6.3	2.4	6.9
Households	0.9	2.6	13.0	8.0	-3.7	0.6	-2.5	-0.8	6.9	5.2	7.3
Public & private	2.8	9.5	1.1	1.9	-7.5	4.5	-2.5	12.3	3.6	-9.6	4.9
Gross fixed capital formation	8.3	20.7	6.9	5.7	1.7	-5.7	-4.8	5.5	10.1	8.2	9.2
Exports	11.1	19.0	17.0	2.0	11.4	-1.7	10.5	23.4	12.1	17.6	11.1
Imports	4.4	2.8	16.3	8.7	7.5	11.3	-1.5	27.1	18.4	12.0	16.3
					(Shares of GDP)						
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total consumption	76.0	77.2	81.3	82.6	86.4	90.3	88.7	86.1	85.2	82.2	83.3
Households	63.2	63.2	67.3	69.1	73.6	74.9	73.2	68.9	68.8	67.9	68.1
Public & private	12.8	14.0	14.0	13.5	12.8	15.4	15.5	17.2	16.4	14.3	15.2
Gross fixed capital formation	17.9	20.3	21.4	23.0	21.2	18.2	17.7	18.9	20.7	21.3	22.5
Changes in stocks	11.1	4.5	2.9	2.9	-0.6	-0.5	-1.6	0.6	1.9	2.2	2.1
Net exports	-5.0	-2.0	-5.6	-8.5	-7.0	-8.0	-4.8	-5.6	-7.8	-5.7	-7.9
Exports	23.0	24.9	27.6	28.1	29.2	22.6	28.0	32.9	33.3	35.5	36.2
Imports	28.0	26.9	33.2	36.6	36.2	30.6	32.8	38.5	41.1	41.2	44.1
					(Contributions to GDP growth)						
GDP	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	2.1	5.7	5.0	4.9
Total consumption	1.0	2.9	8.3	5.7	-3.5	1.0	-2.3	1.3	5.4	2.0	5.7
Households	0.5	1.7	8.2	5.4	-2.5	0.4	-1.9	-0.6	4.8	3.6	5.0
Public & private	0.4	1.2	0.1	0.3	-1.0	0.6	-0.4	1.9	0.6	-1.6	0.7
Gross fixed capital formation	1.6	3.7	1.4	1.2	0.4	-1.2	-0.9	1.0	1.9	1.7	2.0
Changes in stocks	-2.5	-6.3	-2.4	-0.6	-3.4	0.0	-0.8	2.2	1.6	0.3	0.0
Net exports	1.5	3.6	-0.2	-2.3	0.5	-4.6	2.8	-2.3	-3.1	0.9	-2.8
Exports	3.1	4.4	4.2	0.6	3.2	-0.5	2.4	6.6	4.0	5.9	3.9
Imports	1.6	0.8	4.4	2.9	2.7	4.1	-0.5	8.9	7.1	4.9	6.7

Source: National Institute of Statistics. ESA 79 methodology for 1993-98, ESA 95 methodology for 1999-2003.
For shares of GDP, ESA 79 methodology for 1993-97, ESA 95 methodology for 1998-2003.
1/ Semifinal data.
2/ Provisional data.

Table 3. Romania: Investment by Sector, 1993-2003
(In billions of lei at current prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Industry	1410.8	2951.8	5402.4	9186.8	19771.6	27568.1	37172.0	49394.1	81735.5	104634.1
Construction	78.2	431.0	678.8	1309.8	3675.8	4226.9	5766.7	10672.7	13183.0	17743.3
Agriculture and forestry	196.4	1528.6	1420.3	2427.4	2889.8	4088.4	5932.8	9880.7	12977.2	31679.3
Transport	316.8	750.3	710.5	1286.4	2332.6	3472.7	5325.0	10650.8	20700.5	20418.5
Telecommunications	134.1	300.1	368.4	761.1	3015.7	4588.9	9404.4	12416.3	28638.5	16715.2
Trade	272.5	678.6	1144.2	2071.0	3868.3	7220.3	7688.7	14971.4	24653.9	33546.4
Education	16.9	67.2	109.0	295.1	709.7	768.3	588.3	82.7	717.6	2298.9
Health and social assistan	20.6	43.4	104.8	166.1	355.5	581.0	456.8	175.3	302.6	2521.4
Public administration and	56.3	291.8	577.9	808.9	2703.4	2286.9	4423.5	5356.1	6202.6	8819.6
Financial sector	80.6	311.3	471.9	830.5	2070.8	3002.0	3870.4	5582.2	5545.3	10584.7
Other	238.6	650.5	2007.3	1802.2	2741.5	2711.7	3319.5	5804.9	9538.5	22773.3
Investment in the nationa	2821.8	8004.6	12995.5	20945.3	44134.7	60515.2	83948.1	124987	204195.2	271734.7
Of which:										
State sector	1958.5	4692.7	6898.5	10704.9	20083.6	21669.9	25357.5	32420.7	47538.7	75365.0

Source: National Institute of Statistics.

Table 4. Romania: Saving-Investment Balance, 1993-2003

(Current prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001 1/	2002 2/	2003 3/
						(Billions of lei)					
Gross domestic saving	4800	11321	13473	18980	34306	36330	61369	111240	173036	261923	307403
Net factor receipts and transfers from abroad	597	1126	1450	1512	2288	3202	17888	12939	25090	35131	35303
Gross national saving	5397	12446	14924	20492	36594	39532	79257	124179	198126	297054	342706
Non government	5354	10713	12997	18949	32834	37219	73765	131848	198463	287517	317004
General government	42	1734	1927	1543	3759	2312	5492	-7669	-337	9536	25702
Gross investment	5796	12348	17510	28160	52171	66334	87741	156491	263528	349463	459723
Non government	4952	9619	13708	22478	40065	52807	72426	132009	226513	300599	390533
General government	844	2729	3802	5682	12106	13526	15315	24482	37015	48864	69190
Non-financial sector balances	-399	98	-2587	-7668	-15578	-26802	-8484	-32312	-65402	-52409	-117017
Non government	-319	1094	-711	-3529	-7231	-15588	1339	-161	-28050	-13081	-73529
General government	-80	-995	-1876	-4139	-8347	-11214	-9823	-32151	-37352	-39328	-43488
Memo: Nominal GDP	20036	49773	72136	108920	252926	373798	545730	803,773	1,167,687	1,512,617	1,890,778
						(Percent of GDP)					
Gross domestic saving	24.0	22.7	18.7	17.4	13.6	9.7	11.2	13.8	14.8	17.3	16.3
Net factor receipts and transfers from abroad	3.0	2.3	2.0	1.4	0.9	0.9	3.3	1.6	2.1	2.3	1.9
Gross national saving	26.9	25.0	20.7	18.8	14.5	10.6	14.5	15.4	17.0	19.6	18.1
Non government	23.1	21.5	18.0	17.4	13.0	10.0	13.5	16.4	17.0	19.0	16.8
General government	3.8	3.5	2.7	1.4	1.5	0.6	1.0	-1.0	0.0	0.6	1.4
Gross investment	28.9	24.8	24.3	25.9	20.6	17.7	16.1	19.5	22.6	23.1	24.3
Non government	24.7	19.3	19.0	20.6	15.8	14.1	13.3	16.4	19.4	19.9	20.7
General government	4.2	5.5	5.3	5.2	4.8	3.6	2.8	3.0	3.2	3.2	3.7
Non-financial sector balances	-2.0	0.2	-3.6	-7.0	-6.2	-7.2	-1.6	-4.0	-5.6	-3.5	-6.2
Non government	-1.6	2.2	-1.0	-3.2	-2.9	-4.2	0.2	0.0	-2.4	-0.9	-3.9
General government	-0.4	-2.0	-2.6	-3.8	-3.3	-3.0	-1.8	-4.0	-3.2	-2.6	-2.3
Current account Deficit	-4.5	-1.4	-5.0	-7.3	-6.1	-7.0	-4.1	-3.7	-5.5	-3.4	-5.9

Sources: National Institute of Statistics and National Commission for Economic Forecasting.

1/ Semidefinitive data.
2/ Provisional data.
3/ Preliminary data of National Commission for Economic Forecasting.

Table 5. Romania: Employment in Agriculture (Including Self-Employed), 1993-2002

(In thousands of persons, end of year)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total employment in agriculture	3,537	3,561	3,187	3,249	3,322	3,296	3,419	3,523	3456	2971
Private farms	3,139	3,242	2,926	3,000	3,156	3,143	3,314	3,448	3401	2921
State farms (public and mixed)	398	319	261	249	166	153	105	75	55	50
Agro processing (average)	255	244	231	219	213	214	187	169	160	163
Memorandum items:										
Total employment in economy	10,062	10,011	9,493	9,379	9,023	8,813	8,420	8,629	8563	8329
Employment in agriculture (percent of tot	35.2	35.6	33.6	34.6	36.8	37.4	40.6	40.8	40.4	35.7

Sources: National Institute of Statistics.

Table 6. Romania: Distribution of Land Ownership, 1993-2003

(In thousands of hectares)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
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
Of which:											
Private	10,336	10,371	10,694	10,694	10,431	10,475	11,432	14,218	14,310	14,289	14,156
(for which titles distributed)	1,353	3,724	5,738	6,771	7,268	7,688	8,018	7,153	7,421	8,783	9,391
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
Number to be distributed	4,990	4,990	4,990	4,242	4,284	4,312	4,334	...	5,124	4,763	4,804
(percent of total distributed)	11.3	31.2	48.1	66.8	71.0	74.6	77.4	...	70.1	91.0	96.7
(thousands of titles)											

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

Table 7. Romania: Output of Main Agricultural Products, 1993-2003

(In thousands of tons, unless otherwise indicated)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Grains, total	15,493	18,184	19,883	14,200	22,107	15,453	17,037	10,478	18,871	14,357	12,964
Of which:											
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
Maize	7,987	9,343	9,923	9,608	12,687	8,623	10,935	4,898	9,119	8,400	9,577
Sunflower seeds	696	764	933	1,096	858	1,073	1,301	721	824	1,003	1,506
Sugar beet	1,776	2,764	2,655	2,848	2,726	2,361	1,415	667	876	955	765
Potatoes	3,709	2,947	3,020	3,591	3,206	3,319	3,957	3,470	3,997	4,078	3,947
Field vegetables	2,766	2,476	2,783	2,647	2,354	2,754	2,996	2,478	2,826	2,807	3,300
Fruit	2,183	980	917	1,632	1,416	1,036	936	1,301	1,353	952	2,088
Grapes	1,339	1,033	1,314	1,431	1,179	874	1,117	1,295	1,122	1,077	1,078
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
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	57.8
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
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
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
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
Of which:											
Irrigated	3,102	3,104	3,110	3,096	3,089	3,085	3,084	3,082	3,081	3,077	3,077
Per capita output											
Wheat and rye (in kg.)	235	272	340	140	319	231	209	199	347	204	115
Potatoes (in kg.)	163	130	133	159	142	148	176	155	178	187	182
Meat (in kg.)	85	82	81	83	76	74	68	63	63	75	78
Milk (in liters)	208	236	250	253	249	242	234	230	237	253	266

Source: National Institute of Statistics.

Table 8. Romania: Industrial Production Index, 1993-2003 1/

	1991=100						1998=100									
	1993 2/		1994 2/		1995 2/		1996 2/		1997 2/		2001 4/		2002 4/		2003	
	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change	Index	Monthly Change
January	70.6	…	71.6	1	74.4	-6	80.8	-11	91.3	-7	98.6	-6	103.5	-3	105.2	-6
February	77.3	9	73.1	2	81.2	9	82.9	3	100.5	10	109.5	11	115.0	11	112.9	7
March	75.5	-2	72.4	-1	83.8	3	92.2	11	100.7	0	110.7	1	114.3	-1	118.2	5
April	78.8	4	77.7	7	89.2	6	93.0	1	89.3	-11	115.4	4	113.9	0	119.7	1
May	77.4	-2	77.4	0	84.1	-6	93.1	0	87.0	-3	115.0	0	119.0	4	124.3	4
June	80.2	4	80.4	4	85.0	1	97.1	4	89.8	3	114.0	-1	126.0	6	129.7	4
July	71.8	-11	76.7	-5	83.6	-2	90.6	-7	80.9	-10	109.5	-4	115.6	-8	123.4	-5
August	67.8	-6	75.7	-1	81.9	-2	89.5	-1	74.9	-7	104.1	-5	114.2	-1	121.1	-2
September	73.4	8	77.8	3	88.9	9	98.2	10	79.9	7	115.4	11	121.5	6	121.9	1
October	77.2	5	81.1	4	89.8	1	98.0	0	86.8	9	109.3	-5	119.9	-1	123.4	1
November	77.1	0	83.0	2	91.6	2	102.8	5	94.4	9	116.1	6	128.4	7	132.9	8
December	70.7	-8	78.7	-5	90.3	-1	97.9	-5	83.9	-11	106.2	-9	111.4	-13	118.0	-11
Year Average	74.8	…	77.1	3	85.3	11	93.0	9	88.3	-5	110.2	2	116.8	5	120.5	3

Source: National Institute of Statistics.

1/ Series corrected for number of hours worked, but not seasonally adjusted.
2/ 1993-1997 based on 1991 shares.
3/ 1998-2000 based on 1995 shares.
4/ 2001-2002 based on 1998 shares.

Table 9. Romania: Number of Employees by Sector and Type of Ownership, 1993-2002 1/

	1995			1996			1997			1998			1999			2000			2001			2002		
		Private Sector			Private Sector			Private Sector			Private Sector			Private Sector			Private Sector			Private Sector			Private Sector	
	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)	Total employees (1000s)	Total (1000s)	Total employment in sector (%)
Total economy	6,047.7	1,364.2	100.0	5,893.9	1,332.4	100.0	5,399.1	1,531.2	100.0	5,181.6	1,759.5	100.0	4,658.7	1,785.5	100.0	4,646.3	1,979.4	100.0	4,613.1	2,041.8	100.0	4,614.7	2,193.7	100.0
Of which:																								
Industry	2,600.3	439.6	32.2	2,633.0	490.4	36.8	2,341.4	600.2	39.2	2,221.3	747.6	42.5	1,980.3	805.9	45.1	1,913.0	928.4	46.9	1,923.8	981.0	48.0	1,911.3	1,069.0	48.7
Agriculture and forestry	422.9	91.9	6.8	369.1	57.7	4.3	283.9	62.8	4.1	257.4	66.1	3.7	198.6	58.0	3.2	163.6	56.7	2.9	150.6	66.0	3.2	140.5	61.7	2.8
Transport and telecommunications	510.1	52.8	3.9	493.4	48.5	3.6	457.5	51.6	3.4	415.7	65.5	3.7	366.5	65.2	3.7	368.2	86.4	4.4	353.1	85.9	4.2	344.8	102.9	4.7
Construction	425.8	228.2	16.7	425.4	232.8	17.5	382.0	235.6	15.4	340.7	222.8	12.7	298.2	210.8	11.8	313.5	226.1	11.4	291.3	215.9	10.6	305.5	235.4	10.7
Trade	667.3	430.1	31.5	581.2	387.0	29.1	619.8	450.0	29.4	644.8	506.5	28.8	580.2	480.0	26.9	581.6	488.5	24.7	602.2	495.7	24.3	585.5	484.5	22.1
Other	1,421.3	121.6	8.9	1,391.8	116.0	8.7	1314.5	131.0	8.5	1301.7	151.0	8.6	1234.9	165.6	9.3	1306.4	193.3	9.7	1292.1	197.3	9.7	1327.1	240.2	11.0

Source: National Institute of Statistics.

1/ Excludes self-employed.

Table 10. Romania: Enterprise Payment Arrears, 1995-2002

(Percentage of GDP)

	1995 Dec.	1996 Dec.	1997 Dec.	1998 Dec.	1999 Dec.	2000 Dec.	2001 Dec.	2002 Dec.
National economy	25.19	36.27	33.66	35.61	40.36	40.48	35.76	37.70
To suppliers	13.37	16.14	15.06	14.99	17.23	17.71	16.55	16.67
To other creditors	3.57	6.94	6.20	6.68	9.05	10.31	9.88	5.34
To banks	3.13	6.26	5.80	5.97	6.16	3.89	3.57	2.41
Of which : Principal	.....	.....	.....	3.62	4.34	2.62	2.40	1.76
Of which : Overdue interest	.....	.....	.....	2.36	1.82	1.27	1.17	0.66
To Budget	5.12	6.93	6.60	7.96	7.93	8.57	5.75	13.27
Private sector	8.15	14.36	13.21	15.37	18.66	17.71	19.28	20.98
To suppliers	4.52	7.64	7.60	8.37	9.23	8.88	10.27	10.18
To other creditors	2.28	2.42	2.15	2.50	3.50	4.14	4.60	3.69
To banks	0.83	2.97	2.29	2.96	4.02	2.24	1.67	1.55
Of which : Principal	.....	.....	.....	2.10	3.04	1.52	1.13	1.15
Of which : Overdue interest	.....	.....	.....	0.86	0.98	0.72	0.53	0.40
To budget	0.53	1.33	1.17	1.55	1.91	2.45	2.75	5.57
State sector (50-100% ownership)	15.30	20.39	17.90	17.39	17.44	17.97	12.57	12.81
To suppliers	8.16	7.61	5.98	4.95	5.49	5.59	3.70	5.70
To other creditors	1.20	4.34	3.54	3.82	4.67	5.32	4.54	1.20
To banks	1.46	3.10	3.34	2.67	1.71	1.31	1.63	0.52
Of which : Principal	.....	.....	.....	1.32	1.06	0.91	1.10	0.38
Of which : Overdue interest	.....	.....	.....	1.35	0.65	0.39	0.53	0.14
To budget	4.48	5.34	5.04	5.94	5.56	5.76	2.70	5.39
Wholly state-owned	14.01	14.37	10.26	9.69	8.20	9.91	8.17	9.52
To suppliers	7.62	5.29	3.52	2.64	3.25	3.95	2.79	3.82
To other creditors	0.97	3.24	1.92	2.14	2.44	2.44	2.88	0.83
To banks	1.28	1.95	1.59	1.20	0.50	0.43	1.10	0.30
Of which : Principal	.....	.....	.....	0.60	0.26	0.31	0.75	0.25
Of which : Overdue interest	.....	.....	.....	0.60	0.23	0.12	0.35	0.05
To budget	4.14	3.88	3.23	3.70	2.02	3.09	1.40	4.57
Mixed ownership	2.11	7.40	10.11	10.47	13.43	12.78	8.24	7.06
To suppliers	1.17	3.16	3.91	3.96	4.74	4.86	3.49	2.66
To other creditors	0.30	1.25	2.11	2.01	3.07	3.69	2.36	0.75
To banks	0.22	1.32	1.92	1.81	1.64	1.22	0.80	0.56
Of which : Principal	.....	.....	.....	0.93	1.03	0.80	0.51	0.35
Of which : Overdue interest	.....	.....	.....	0.89	0.60	0.42	0.29	0.20
To budget	0.42	1.67	2.17	2.69	3.98	3.01	1.59	3.09
Mixed with state share >= 50%	1.29	6.02	7.64	7.71	9.24	8.06	4.40	3.30
To suppliers	0.54	2.32	2.46	2.31	2.25	1.64	0.92	1.88
To other creditors	0.22	1.10	1.62	1.68	2.24	2.88	1.66	0.37
To banks	0.19	1.14	1.76	1.47	1.22	0.88	0.53	0.22
Of which : Principal	.....	.....	.....	0.72	0.80	0.60	0.35	0.13
Of which : Overdue interest	.....	.....	.....	0.75	0.42	0.28	0.18	0.09
To budget	0.34	1.45	1.81	2.24	3.54	2.67	1.30	0.82
Mixed with state share < 50%	0.82	1.38	2.46	2.76	4.19	4.73	3.83	3.77
To suppliers	0.63	0.84	1.45	1.65	2.49	3.22	2.57	0.78
To other creditors	0.07	0.15	0.48	0.33	0.83	0.82	0.70	0.38
To banks	0.03	0.18	0.16	0.34	0.42	0.34	0.27	0.33
Of which : Principal	.....	.....	.....	0.20	0.23	0.19	0.16	0.22
Of which : Overdue interest	.....	.....	.....	0.14	0.19	0.15	0.11	0.11
To budget	0.07	0.22	0.37	0.45	0.44	0.35	0.29	2.27
GDP (billions of lei)	72,136	108,920	252,926	373,798	545,730	803,773	1,167,687	1,512,617

Sources: Romanian Ministry of Finance and Fund staff estimates.

Table 11. Romania: Average Monthly Nominal and Real Wages, 1993-Apri
(October 1990 = 100)

		Nominal Wage 1/	Real Wage	Real Wage in Industry
1993	December	2,968	56	59
1994	December	5,824	69	67
1995	December	8,314	77	79
1996	December	12,738	75	80
1997	January	11,655	60	64
	February	13,404	58	64
	March	14,891	50	55
	April	17,378	54	60
	May	16,666	50	55
	June	17,049	50	55
	July	18,242	53	59
	August	19,100	53	59
	September	20,857	56	62
	October	23,401	60	65
	November	24,103	59	63
	December	27,623	64	67
1998	January	26,601	59	62
	February	26,414	55	58
	March	28,686	57	61
	April	31,440	61	65
	May	30,056	57	60
	June	31,289	59	62
	July	33,041	61	66
	August	33,768	62	66
	September	34,274	62	65
	October	35,200	61	64
	November	35,833	61	63
	December	40,922	68	69
1999	January	37,321	60	61
	February	38,925	61	62
	March	42,429	63	66
	April	44,465	62	64
	May	43,887	59	60
	June	45,467	58	61
	July	48,195	60	64
	August	48,822	60	64
	September	49,017	59	62
	October	49,850	57	60
	November	52,692	58	63
	December	59,858	64	68
2000	January	51,897	53	56
	February	52,571	53	56
	March	57,355	57	59
	April	64,238	61	62
	May	61,026	57	58
	June	63,223	57	58
	July	65,246	56	59
	August	66,681	57	61
	September	68,282	56	57
	October	70,808	57	59
	November	75,057	59	60
	December	87,516	67	67
2001	January	83,172	61	62
	February	78,864	57	60
	March	85,639	60	65
	April	91,894	63	67
	May	88,557	60	64
	June	90,568	60	62
	July	94,875	62	68
	August	95,237	61	66
	September	94,924	60	63
	October	97,522	60	63
	November	100,676	60	63
	December	111,169	65	68
2002	January	111,531	64	62
	February	105,236	59	61
	March	111,374	63	65
	April	120,469	66	69
	May	115,293	62	65
	June	115,626	62	65
	July	119,058	63	68
	August	118,421	63	67
	September	117,101	62	64
	October	120,518	62	64
	November	122,666	62	62
	December	137,476	68	69
2003	January	143,705	70	67
	February	135,232	66	65
	March	140,878	68	68
	April	150,528	72	72
	May	143,661	68	68
	June	142,949	67	68
	July	147,746	69	71
	August	146,051	68	69
	September	148,289	67	69
	October	150,580	67	68
	November	153,033	67	67
	December	171,873	75	73
2004	January	175,305	75	70
	February	166,390	71	71
	March	177,931	76	77
	April	181,335	77	78

Sources: Data provided by the Romanian authorities; and Fund staff calculations.

1/ Net of taxes and social security contributions.

Table 12. Romania: Population, Labor Force, and Employment, 1993-2002
(In thousands of persons; end of year)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Population	22,748	22,712	22,656	22,582	22,526	22,489	22,456	22,431	22,392	21,773
Of which:										
Working age 1/	13,126	13,188	13,228	13,283	13,328	13,365	13,378	13,437	13,758	13,426
Of which:										
Labor force 2/	10,245	10,242	9,513	9,049	8,927	8,869	8,578	8,669	8,427	8,148
Nonworking age	9,622	9,524	9,428	9,299	9,198	9,124	9,078	8,994	8,634	8,347
Of which:										
Labor force 3/	982	993	979	987	977	968	972	967	963	942
Total employment 4/	10,062	10,011	9,493	9,379	9,023	8,813	8,420	8,629	8,563	8,329
Of which:										
In the state and cooperative sector 5/										
(in percent)	56.3	50.8	49.3	48.5	42.5	38.2	33,3	29.6	27.4	26.1
Total unemployed	1,165	1,224	998	658	881	1,025	1,130	1,007	827	761
Percent of labor force										
Of which:										
Receive benefits (in percent)	9.5	9.5	7.4	4.6	6.6	8.1	9.1	7.8	6.5	3.8
Recipients of unemployment benefits	1,066	1,068	774	462	656	793	872	752	608	344
Civilian labor force (total)	11,227	11,235	10,491	10,037	9,904	9,838	9,550	9,636	9,389	9,090
Labor force										
Participation rate in percent 6/	78.1	77.7	71.9	68.1	67.0	66.4	64,1	64.5	61.2	60.7

Sources: the National Institute for Statistics.

1/ Includes women age 16-54 and men age 16-59; women age 55-56 and men age 60-61 working in the agricultural sector, and women age 55-56 and men age 60-61 who are still employed. From 2001 onwards, according to legislation in force, it includes men aged 16 - 62 years and women aged 16 - 57 years.

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

3/ Active population not of working age consists of employees and other persons over and below working age, who still 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.

Table 13. Romania: Monthly Consumer Price Index, 1996-2003
(October 1990 = 100)

			CPI	Food	Non-food	Services	Monthly Inflation (in percent)
	Weight (percent)	1996	100.0	47.1	40.9	12.0	
		1997	100.0	47.9	40.3	11.8	
		1998	100.0	47.9	40.3	11.8	
		1999	100.0	50.4	37.3	12.3	
		2000	100.0	47.6	37.9	14.5	
		2001	100.0	43.9	40.2	15.9	
		2002	100.0	44.7	39.6	15.7	
		2003	100.0	44.3	39.3	16.4	
1996	December		17,052	18,634	16,331	15,035	10.3
1997	January		19,386	20,609	19,121	17,205	13.7
	February		23,025	25,804	21,482	20,079	18.8
	March		30,097	33,914	27,392	27,795	30.7
	April		32,174	35,775	29,556	30,366	6.9
	May		33,545	36,770	31,442	31,384	4.3
	June		34,316	37,156	32,187	33,459	2.3
	July		34,553	36,981	32,747	33,997	0.7
	August		35,768	38,408	33,637	35,612	3.5
	September		36,952	39,215	34,710	38,375	3.3
	October		39,346	41,548	36,807	41,990	6.5
	November		41,026	43,264	38,316	44,144	4.3
	December		42,872	45,769	39,619	45,685	4.5
1998	January		44,960	47,814	40,729	51,003	4.9
	February		48,193	51,494	43,573	54,187	7.2
	March		50,002	52,780	45,843	56,257	3.8
	April		51,365	53,892	46,889	59,446	2.7
	May		52,536	54,281	48,823	60,771	2.3
	June		53,196	54,259	50,087	61,725	1.3
	July		53,908	53,737	51,390	64,503	1.3
	August		54,251	53,206	52,357	65,705	0.6
	September		55,717	54,625	53,272	69,076	2.7
	October		57,878	55,499	56,006	73,599	3.9
	November		58,984	56,492	57,052	75,276	1.9
	December		60,265	57,888	58,141	76,843	2.2
1999	January		62,079	59,312	59,583	81,446	3.0
	February		63,863	60,782	61,601	83,636	2.9
	March		67,925	63,630	67,043	87,862	6.4
	April		71,222	66,942	69,549	93,748	4.8
	May		75,006	69,043	71,909	108,909	5.3
	June		78,827	69,356	77,130	121,803	5.1
	July		80,129	68,557	79,107	129,073	1.7
	August		81,105	68,580	80,880	131,140	1.2
	September		83,691	71,058	83,241	134,920	3.2
	October		87,174	73,489	86,235	144,164	4.2
	November		90,651	75,990	90,834	147,768	4.0
	December		93,297	79,127	93,131	149,643	2.9
2000	January		97,318	84,476	95,329	154,597	4.3
	February		99,427	87,056	96,595	157,754	2.2
	March		101,209	89,137	97,769	160,433	1.8
	April		106,051	91,178	102,993	174,709	4.8
	May		107,982	92,919	104,968	177,253	1.8
	June		111,042	96,353	108,115	178,704	2.8
	July		115,791	101,386	112,334	184,211	4.3
	August		117,918	102,580	114,672	189,209	1.8
	September		121,230	105,619	118,174	193,100	2.8
	October		124,579	108,847	120,930	198,861	2.8
	November		128,115	111,996	125,149	201,824	2.8
	December		131,278	115,336	128,092	205,131	2.5
2001	January		136,122	119,718	130,936	219,511	3.7
	February		139,181	123,409	132,601	224,721	2.3
	March		142,017	126,466	134,996	227,921	2.0
	April		145,784	130,571	138,288	231,408	2.7
	May		148,318	133,005	140,722	234,547	1.7
	June		150,681	135,635	142,400	237,932	1.6
	July		152,650	135,819	145,282	244,680	1.3
	August		156,063	136,730	150,931	250,855	2.2
	September		159,096	138,656	154,428	257,009	1.9
	October		162,982	141,182	158,411	266,568	2.4
	November		167,432	142,832	165,982	271,635	2.7
	December		171,042	146,499	168,351	279,450	2.2
2002	January		175,028	150,176	172,358	284,173	2.3
	February		177,046	151,202	175,035	288,169	1.2
	March		177,679	151,890	175,001	291,271	0.4
	April		181,305	155,362	177,762	298,620	2.0
	May		184,657	158,878	180,287	304,098	1.9
	June		186,881	161,266	181,802	307,954	1.2
	July		187,822	159,699	184,563	313,990	0.5
	August		189,361	160,094	186,331	320,334	0.8
	September		190,524	160,197	188,368	323,156	0.6
	October		193,654	161,691	192,931	328,270	1.6
	November		198,597	165,178	198,654	336,514	2.6
	December		201,556	169,573	200,018	338,163	1.5
2003	January		204,156	172,167	202,258	341,815	1.3
	February		205,809	175,050	203,798	337,419	0.8
	March		208,026	177,255	205,819	340,259	1.1
	April		210,243	179,595	207,079	345,568	1.1
	May		211,271	180,103	208,419	347,800	0.5
	June		213,065	182,223	209,679	349,694	0.9
	July		215,625	184,275	212,839	351,824	1.2
	August		216,189	182,935	214,099	359,162	0.3
	September		220,825	183,325	223,620	364,100	2.1
	October		224,191	185,462	225,820	378,235	1.5
	November		227,416	189,413	227,341	384,389	1.4
	December		230,056	192,770	228,561	388,785	1.2

Source: Data provided by the Romanian authorities.

Table 14. Romania: Industrial Producer Prices, 1999-2003

		PPI	Extractive industry	Processing industry	Electricity production	Monthly PPI inflation (in percent)
			(1998=100)			
1999	January	112	108	113	106	…
	February	116	112	117	116	3.8
	March	124	126	123	126	6.2
	April	132	134	132	127	6.7
	May	136	135	137	128	3.4
	June	144	154	143	149	5.5
	July	148	160	147	155	2.9
	August	153	169	151	157	3.2
	September	159	172	158	157	3.8
	October	165	184	164	162	3.9
	November	170	186	169	168	3.0
	December	177	192	178	168	4.4
2000	January	183	194	185	169	3.5
	February	189	198	191	170	3.0
	March	194	207	196	172	2.5
	April	199	214	202	172	2.9
	May	204	218	207	173	2.3
	June	214	230	216	192	4.8
	July	226	247	225	222	5.7
	August	232	252	231	234	3.0
	September	242	264	241	242	4.0
	October	252	268	252	243	4.2
	November	260	270	262	244	3.2
	December	266	271	269	245	2.4
2001	January	275	271	279	249	3.4
	February	285	301	289	249	3.6
	March	291	306	296	251	2.1
	April	296	314	300	257	1.5
	May	303	328	306	265	2.3
	June	307	336	311	267	1.6
	July	317	338	319	294	3.0
	August	323	355	323	315	2.1
	September	330	362	330	318	2.0
	October	337	367	337	327	2.1
	November	341	371	340	338	1.4
	December	346	361	345	347	1.4
2002	January	353	367	352	360	2.0
	February	359	376	357	371	1.7
	March	365	380	362	381	1.6
	April	373	382	368	411	2.3
	May	381	404	376	416	2.1
	June	386	409	381	418	1.4
	July	395	409	388	443	2.3
	August	400	415	393	447	1.2
	September	407	415	402	449	1.8
	October	414	430	409	450	1.6
	November	420	434	415	451	1.4
	December	423	424	419	451	0.7
2003	January	433	446	428	460	2.3
	February	444	468	440	463	2.6
	March	452	469	450	464	1.9
	April	460	468	459	462	1.6
	May	465	447	466	463	1.1
	June	466	449	467	464	0.4
	July	471	450	472	465	1.0
	August	474	459	476	469	0.7
	September	488	466	484	524	2.9
	October	495	473	492	527	1.5
	November	505	475	504	529	2.0
	December	510	478	509	529	0.9

Source: National Institute of Statistics

Table 15. Romania: Private Sector Share of GDP, 1993-2003

(In percent of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002[1/]	2003[2/]
GDP, total	34.8	38.9	45.3	54.9	60.6	61.4	63.7	65.6	68.0	68.9	69.1
Of which:											
Industry[3/]	5.9	8.4	9.8	12.8	13.0	12.1	13.3	18.7	21.0	22.3	22.4
Agriculture and forestry	17.2	17.3	17.6	17.3	17.4	13.9	12.9	10.9	13.1	11.2	11.5
Construction	1.4	3.4	3.8	4.5	4.0	4.0	4.1	4.5	5.1	5.7	5.3
Trade, other (services)	10.3	9.8	14.1	20.3	26.2	31.4	33.4	31.5	28.8	29.7	29.9

Source: National Institute of Statistics. ESA 79 methodology in 1993-97, ESA 95 methodology in 1998-2003.

1/ Semifinal data.

2/ Provisional data.

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

Note: Estimations were based on ratio between Gross Value Added of the Private Sector from each branch and the Total GDP.

Table 16. Romania: Private Ownership in Selected Sectors, 1993-2003

(In percent)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002[1/]	2003[2/]
Agriculture	83.5	89.3	89.0	90.1	96.8	96.3	96.7	98.6	97.8	98.9	98.7
Industry[3/]	17.4	23.3	29.9	38.5	42.1	46.0	53.7	68.4	76.0	78.6	79.0
Construction	26.8	51.6	57.8	69.3	76.6	79.3	81.9	91.7	94.7	102.3	93.2
Services	29.3	39.1	58.1	66.7	71.5	76.1	76.6	71.6	68.4	68.1	68.7
Total private sector share of GDP	34.8	38.9	45.3	54.9	60.6	61.4	63.7	65.6	68.0	68.9	69.1

Source: National Institute of Statistics. ESA 79 methodology in 1993-97, ESA 95 methodology in 1998-2003.

1/ Semifinal data.

2/ Provisional data.

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

Table 17. Romania: Ownership Structure of the Enterprise Sector, 1994-2003
(Number of Units)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 2/
Total	636,270	681,519	819,504	862,429	959,830	1,044,702	1,105,703	1,155,150	1,201,834	1,293,217
Private companies	421,676	440,603	548,873	582,411	626,324	661,165	695,043	735,929	787,051	855,938
State-owned companies	6,951	5,160	3,004	1,991	2,218	2,224	2,224	2,208	2,264	2,292
Régies autonomes 2/	446	346	281	275	183	153	154	144	136	136
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
Co-operative companies	4,176	4,357	4,505	4,652	4,160	5,037	5,093	5,232	5,294	5,344
Family businesses 2/	38,346	63,367	82,533	90,944	120,043	128,265	133,610	142,537	152,389	155,391
Self-employed 2/	162,454	162,497	172,497	172,996	197,994	238,908	261,258	260,796	246,223	265,611
Foreign investors (from total)	38,697	43,487	48,330	53,203	63,255	71,318	79,614	82,424	89,911	97,203

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

1/ INSSE- Statistical Business Register.

2/ Provisional data.

Table 18. Romania: Market Privatizations of Enterprises, 1993-2003

Size of Companies	Total No. of Companies 1/	Original No. of Employees	Number of companies privatized 2/											Cumulative
			1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1993-2003 3/
Total	6,381	4,040,757	264	595	620	1,245	1,163	1,267	1,401	1,202	122	280	310	7,528
Small	3,124	497,096	238	472	322	984	952	912	906	936	88	191	226	5,558
Medium	2,549	1,753,828	24	110	269	236	165	276	425	243	20	50	30	1,642
Large	708	1,789,833	2	13	29	25	46	79	70	23	14	31	54	368

Source: The Authority for Privatization and Management of the State Ownership .

1/ Number of companies to be offered for privatization.
2/ Include also companies for which the privatization process took place during more than one year.
3/ The total number of privatized companies differs from the sum of the annual numbers: Multiple counting has been removed and companies with cancelled privatizations have been excluded.
Note: As of December 31, 2003, APAPS is a shareholder in 1197 companies: in 122 companies it is the majority shareholder, 374 companies are under liquidation, and in 386 companies APAPS is a minority shareholder.

Table 19. Romania: Summary of Consolidated General Government, 1993-2003 1/

(In billion of lei)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total revenue (incl. grants)	6,700	15,537	22,642	31,597	72,386	111,000	173,838	251,095	351,741	449,012	566,727
Current	6,652	15,476	22,580	31,443	71,802	110,867	173,337	249,945	351,108	447,645	564,314
Tax	6,269	14,042	20,804	29,257	67,000	103,992	164,026	235,048	326,699	418,166	532,482
Direct tax	4,332	10,028	14,117	19,523	44,248	63,467	100,813	141,970	197,540	248,355	301,305
Profits	754	1,911	2,811	3,548	10,780	11,067	17,037	20,334	22,206	30,190	44,167
Wages & Salaries 2/	1,325	3,221	4,583	6,656	13,946	18,577	28,312	26,998	37,203	41,661	53,541
Social security	2,137	4,602	5,885	8,186	17,671	29,940	47,188	86,557	125,106	161,867	186,147
Other direct tax	116	295	838	1,132	1,852	3,882	8,276	8,081	13,025	14,637	17,450
Indirect tax	1,937	4,014	6,687	9,734	22,752	40,525	63,213	93,079	129,159	169,811	231,176
VAT	726	2,268	3,779	5,359	11,681	22,493	32,471	50,439	73,604	104,495	136,357
Customs	269	562	1,043	1,674	3,353	5,741	7,847	8,702	9,038	9,362	12,882
Excises	744	775	1,054	1,485	4,289	8,431	16,958	20,636	27,293	32,434	60,408
Other indirect tax	198	409	811	1,216	3,429	3,859	5,937	13,301	19,224	23,521	21,530
Nontax	383	1,434	1,776	2,186	4,802	6,875	9,311	14,897	24,409	29,479	31,832
Capital 3/	48	61	62	154	584	133	297	826	387	682	1,524
Grants	0	0	0	0	0	0	204	325	246	685	889
Total expenditure	6,771	16,643	25,061	36,810	85,639	131,123	193,567	283,351	389,321	488,523	610,603
Current	5,786	13,757	20,840	30,783	71,859	115,394	177,835	255,275	351,794	438,494	542,261
Goods and services	2,335	5,924	9,078	12,873	26,774	42,738	68,800	100,397	139,293	180,850	234,500
Wages and salaries	1,333	3,236	4,694	6,568	12,344	18,671	26,259	43,894	58,174	73,555	90,888
Other	1,002	2,688	4,384	6,305	14,430	24,067	42,542	56,503	81,119	107,295	143,612
Interest	188	672	989	1,840	9,659	17,450	28,796	38,973	44,610	45,351	40,229
Subsidies and transfers	3,262	7,161	10,773	16,070	35,426	55,206	80,239	115,905	167,891	212,293	267,532
Subsidies	1,366	1,913	2,972	4,729	6,364	6,211	9,303	17,581	24,294	29,900	43,566
Transfers	1,895	5,248	7,801	11,341	29,062	48,995	70,936	98,324	143,597	182,393	223,965
Capital	844	2,729	3,802	5,682	12,106	13,530	15,015	24,482	36,549	48,864	66,226
Lending minus repayments	141	157	419	345	1,674	2,198	717	3,594	978	1,165	2,116
Overall balance	-71	-1,106	-2,419	-5,213	-13,253	-20,123	-19,729	-32,256	-37,580	-39,512	-43,877

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 20. Romania: Summary of Consolidated General Government, 1993-2003 1/

(In percent of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total revenue (incl. grants)	33.4	31.2	31.4	29.0	28.6	29.7	31.9	31.2	30.1	29.7	30.0
Current	33.2	31.1	31.3	28.9	28.4	29.7	31.8	31.1	30.1	29.6	29.8
Tax	31.3	28.2	28.8	26.9	26.5	27.8	30.1	29.2	28.0	27.6	28.2
Direct tax	21.6	20.1	19.6	17.9	17.5	17.0	18.5	17.7	16.9	16.4	15.9
Profits	3.8	3.8	3.9	3.3	4.3	3.0	3.1	2.5	1.9	2.0	2.3
Wages & Salaries 2/	6.6	6.5	6.4	6.1	5.5	5.0	5.2	3.4	3.2	2.8	2.8
Social security	10.7	9.2	8.2	7.5	7.0	8.0	8.6	10.8	10.7	10.7	9.8
Other direct tax	0.6	0.6	1.2	1.0	0.7	1.0	1.5	1.0	1.1	1.0	0.9
Indirect tax	9.7	8.1	9.3	8.9	9.0	10.8	11.6	11.6	11.1	11.2	12.2
VAT	3.6	4.6	5.2	4.9	4.6	6.0	6.0	6.3	6.3	6.9	7.2
Customs	1.3	1.1	1.4	1.5	1.3	1.5	1.4	1.1	0.8	0.6	0.7
Excises	3.7	1.6	1.5	1.4	1.7	2.3	3.1	2.6	2.3	2.1	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
Nontax	1.9	2.9	2.5	2.0	1.9	1.8	1.7	1.9	2.1	1.9	1.7
Capital 3/	0.2	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.1
Grants	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	33.4	32.3	32.3
Current	28.9	27.6	28.9	28.3	28.4	30.9	32.6	31.8	30.1	29.0	28.7
Goods and services	11.7	11.9	12.6	11.8	10.6	11.4	12.6	12.5	11.9	12.0	12.4
Wages and salaries	6.7	6.5	6.5	6.0	4.9	5.0	4.8	5.5	5.0	4.9	4.8
Other	5.0	5.4	6.1	5.8	5.7	6.4	7.8	7.0	6.9	7.1	7.6
Interest	0.9	1.4	1.4	1.7	3.8	4.7	5.3	4.8	3.8	3.0	2.1
Subsidies and transfers	16.3	14.4	14.9	14.8	14.0	14.8	14.7	14.4	14.4	14.0	14.1
Subsidies and bonuses	6.8	3.8	4.1	4.3	2.5	1.7	1.7	2.2	2.1	2.0	2.3
Transfers	9.5	10.5	10.8	10.4	11.5	13.1	13.0	12.2	12.3	12.1	11.8
Capital	4.2	5.5	5.3	5.2	4.8	3.6	2.8	3.0	3.1	3.2	3.5
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
Overall balance	-0.4	-2.2	-3.4	-4.8	-5.2	-5.4	-3.6	-4.0	-3.2	-2.6	-2.3
GDP (in billions of lei)	20,036	49,773	72,136	108,920	252,926	373,798	545,730	803,773	1,167,243	1,512,617	1,890,778

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 21. Romania: Consolidated General Government Expenditures by Function, 1993-2003 1/

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
					(in billions of lei)						
Total expenditures	6,771	16,643	25,061	36,810	85,639	131,123	193,567	283,351	389,321	488,523	610,603
General public services	322	516	918	764	1,750	3,725	5,583	12,298	17,582	22,866	31,764
Defense affairs	420	1,185	1,525	2,058	5,878	8,494	8,416	13,203	17,947	22,042	26,457
Public order and safety affairs	249	785	1,108	1,609	2,858	5,484	7,616	16,067	20,466	26,237	33,773
Education affairs	637	1,545	2,471	3,878	8,262	12,147	16,365	24,985	37,054	47,955	58,036
Health affairs	545	1,529	2,075	3,030	6,417	11,046	18,926	30,948	46,318	57,191	72,581
Recreational, cultural affairs	52	179	384	586	1,341	2,121	2,680	4,598	6,083	7,916	11,453
Social security and welfare	1,814	4,495	6,730	9,682	24,178	39,314	58,800	77,894	114,181	149,551	181,635
Housing and community services	351	890	1,461	2,078	4,444	6,197	9,308	15,160	22,179	28,007	44,260
Environment	0	...	...	0	159	282	650	1,123	2,547	3,546	2,993
Industry	818	1,279	1,744	2,364	2,738	2,694	4,066	6,503	8,814	12,881	16,918
Agriculture, forestry, fishing	588	1,234	1,658	2,665	3,647	4,512	5,092	9,208	11,400	12,637	18,522
Transportation and communication	378	1,150	1,710	2,418	5,911	8,767	15,492	21,390	30,581	40,285	53,187
Other economic affairs and services	260	790	877	1,623	3,688	2,024	2,585	2,630	3,697	4,616	8,449
Research affairs	0	336	388	457	763	1,050	1,019	1,523	2,591	2,982	3,634
Other expenditures	149	58	1,023	1,758	5,024	6,493	9,850	9,308	7,270	9,457	12,828
Interest payments	188	672	989	1,840	8,582	16,773	27,120	36,514	40,612	40,354	34,113
					(in percent of GDP)						
Total expenditures	33.8	33.4	34.7	33.8	33.9	35.1	35.5	35.3	33.4	32.3	32.3
General public services	1.6	1.0	1.3	0.7	0.7	1.0	1.0	1.5	1.5	1.5	1.7
Defense affairs	2.1	2.4	2.1	1.9	2.3	2.3	1.5	1.6	1.5	1.5	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	1.8
Education affairs	3.2	3.1	3.4	3.6	3.3	3.2	3.0	3.1	3.2	3.2	3.1
Health affairs	2.7	3.1	2.9	2.8	2.5	3.0	3.5	3.9	4.0	3.8	3.8
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
Social security and welfare	9.1	9.0	9.3	8.9	9.6	10.5	10.8	9.7	9.8	9.9	9.6
Housing and community services	1.8	1.8	2.0	1.9	1.8	1.7	1.7	1.9	1.9	1.9	2.3
Environment	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Industry	4.1	2.6	2.4	2.2	1.1	0.7	0.7	0.8	0.8	0.9	0.9
Agriculture, forestry, fishing	2.9	2.5	2.3	2.4	1.4	1.2	0.9	1.1	1.0	0.8	1.0
Transportation and communication	1.9	2.3	2.4	2.2	2.3	2.3	2.8	2.7	2.6	2.7	2.8
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
Research affairs	0.0	0.7	0.5	0.4	0.3	0.3	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	0.7
Interest payments	0.9	1.4	1.4	1.7	3.4	4.5	5.0	4.5	3.5	2.7	1.8
GDP (billions of lei)	20,036	49,773	72,136	108,920	252,926	373,798	545,730	803,773	1,167,243	1,512,617	1,890,778

Source: Ministry of Finance and Fund staff estimates.

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

Table 22. Romania: NBR Refinancing Practices, 1994-2003

		Total amounts due by banks to NBR	Total Credits	Of which: Directed Lines 1/	Of which: Auction	Of which: Overdraft	Of which: Troubled Banks 2/	Litigious Debtors 3/	Directed Credit to Agriculture 4/	Shares in Total NBR Credit: Directed Lines	Auction	Overdraft	Troubled Banks	Directed Credit to Agriculture
		(In billions of lei)								(In percent)				
1994	Q1	1,891	1,891	1,052	680	159	0	...	883	55.6	36.0	8.4	0.0	46.7
	Q2	2,026	2,026	1,206	820	0	0	...	893	59.5	40.5	0.0	0.0	44.0
	Q3	2,064	2,064	1,414	650	0	0	...	1,210	68.5	31.5	0.0	0.0	58.6
	Q4	2,331	2,331	1,497	800	0	34	...	1,699	64.2	34.3	0.0	1.5	72.9
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

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 with problems.

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 23. Romania: Balance Sheet of the National Bank of Romania, 1994-2003

(In billions of lei, end of period)

	1994	1995	1996	1997	1998	1999	2000		2001		2002		2003	
					December	December	June	December	June	December	June	December	June	December
Assets	9,291	12,760	15,969	36,165	41,927	69,729	82,818	99,616	136,237	143,375	177,251	214,038	204,008	258,903
Foreign assets	2,742	2,839	5,647	26,508	25,207	45,455	58,001	87,872	127,482	153,617	197,689	244,747	244,568	308,032
Gold	1,704	2,011	3,429	8,998	10,155	17,629	17,801	23,849	23,870	29,661	29,679	39,535	39,540	45,968
Convertible FX	1,037	828	2,198	17,510	15,052	27,826	40,200	64,023	103,613	123,955	168,010	205,212	205,029	262,064
Other	...	...	...	0	0	0	0	0	0	0	0	0	0	0
Claims on government	1,906	3,520	0	3,271	9,142	21,412	20,039	16,176	14,540	8,415	7,033	2,348	6	5
State budget	1,771	3,299	...	...	...	...	...	...	...	...	...			
Treasury bills	...	...	...	843	3,898	0	33	0	0	1,657	0			
T-bills in foreign currency	...	...	...	0	0	4,573	2,029	0	0	0	0			
Other claims on central government	135	221	0	2,428	5,244	16,839	17,977	16,176	14,540	6,758	7,033	2,348	6	5
Claims on DMBs	2,334	4,515	8,822	5,251	5,532	4,383	2,935	4,045	2,890	1,432	1,145	284	284	284
Refinancing credits	2,331	3,678	8,024	2,516	2,470	4,383	2,935	4,045	2,890	1,432	1,145	284	284	284
Memo: litigious debtors	...	...	...	1,885	1,914	1,950	1,680	1,749	1,749	284	284	284	284	284
FX deposits with DMBs	3	836	798	2,735	3,062	0	0	0	0	0	0	0	0	0
Other assets (net)	2,311	2,722	1,500	1,134	2,046	-1,521	1,843	-8,477	-8,675	-20,089	-28,616	-33,341	-40,850	-49,418
Liabilities	9,291	12,760	15,969	36,165	41,927	69,729	82,818	99,616	136,237	143,375	177,251	214,038	204,008	258,903
Reserve money	3,245	4,691	7,877	10,587	19,090	35,982	44,177	51,485	59,186	67,791	75,794	80,191	91,705	98,415
Currency outside NBR	2,398	3,951	5,902	9,627	12,297	18,646	22,787	28,065	31,706	39,956	42,695	52,772	58,018	65,175
DMB current accounts at NBR	848	739	1,975	960	6,793	17,336	21,389	23,420	27,481	27,836	33,100	27,418	33,686	33,240
Deposit auctions	...	...	...	6,792	2,223	2,662	404	9,715	14,847	27,859	42,984	66,030	46,273	71,815
NBR FX liabilities to DMBs	564	1,260	1,131	3,926	4,427	13,797	12,970	15,398	20,140	26,833	32,063	43,244	47,166	57,042
Foreign liabilities	2,243	2,889	7,094	13,678	15,970	14,195	16,737	19,409	21,528	16,347	15,239	14,296	15,259	19,406
Government deposits	2,163	3,800	-275	670	23	2,847	7,880	2,991	20,469	8,389	16,471	9,958	7,128	11,906
Deposits	...	...	...	0	0	0	5,383	1,976	18,133	4,075	14,119	3,117	2,337	10,888
General account of Treasury	...	...	...	670	23	2,847	2,497	1,016	2,336	4,314	2,352	6,842	4,790	1,018
Capital accounts	1,075	120	141	512	194	246	650	617	67	-3,843	-5,300	319	-3,522	319
Capital and reserves	81	120	141	193	194	246	246	411	319	319	319	319	319	319
Profits	994	0	0	318	0	0	403	206	-252	-4,162	-5,619	0	-3,841	0
Gold revaluation deposits	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

Table 24. Romania: Commercial Banks' Specific Provisions, 1995-2003

	1995	1996	1997	1998	1999	2000		2001		2002		2003	
	December	December	December	December	December	June	December	June	December	June	December	June	December
						(In billions of ROL)							
Actual provisions made by banks	1,785	2,514	7,313	16,208	10,056	9,998	2,642	3,485	2,788	2,395	2,013	2,970	2,889
Provisions needed according to NBR	2,550	4,218	10,001	21,950	9,793	10,588	2,642	3,485	2,788	2,395	2,013	2,970	2,889
Remaining gap	765	1,704	2,688	5,742	-263	590	0	0	0	0	0	0	0
Memorandum items:													
Non-performing loans and interest arrears, gross	7,793	11,499	21,075	39,148	21,038	34,144	3,720	4,195	3,587	3,767	3,769	21,904	23,429
of which: with guarantees or collateral	5,138	7,187	10,682	16,985	11,459	21,626	139	72	65	138	89	17,858	19,197
Non-performing loans and interest arrears, net	2,655	4,311	10,393	22,163	9,579	12,518	3,581	4,123	3,522	3,629	3,680	4,046	4,232
						(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
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

Source: National Bank of Romania.

Table 25. Romania: Foreign Assets and Liabilities of the Banking System, 1994-2003

(In millions of U.S. dollars, end of period)

	1994	1995	1996	1997	1998	1999	2000		2001		2002		2003	
							June	Dec.	June	Dec.	June	December	June	December
NBR 1/														
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	7,994
Gold	1,016	1,036	1,081	1,158	904	932	940	946	947	948	949	949	949	947
Convert. foreign exchange (liquid)	536	278	542	2,208	1,374	1,530	1,906	2,520	3,781	4,142	5,051	6,026	5,860	7,047
Participation in foreign banks and other	60	57	5	0	0	0	0	0	0	0	0	0	0	0
Nonconvertible Fx, net				-8	-6	-4	-3	-3	-2	0	0	0	0	0
Foreign liabilities	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	2,429
Use of fund resources	1,421	1,051	682	716	519	452	536	471	409	417	355	427	462	543
Short term	...	...	...	100	0	114	0	100	100	100	100	0		
Medium and long term	...	...	...	1,111	1,065	294	294	294	269	0	0	0	0	0
Reserve Requirement in Fx	...	...	...	...	296	596	607	594	691	849	958	1,291	1,429	1,750
Other Fx Liabilities to DMB (domestic)	...	...	...	...	0	160	0	0	0	0	0	0	0	0
Fx Liabilities to Ministry of Finance	...	...	...	...	...	...	257	80	717	139	424	90	66	136
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	7,451
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	5,701
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	1,124
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	1,084
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	959
Other	57	71	75	78	86	91	97	94	90	93	97	104	112	125
Nonconvertible foreign exchange, net	-6	-6	-9	-14	-5	-2	-4	-1	-3	-7	-5	38	36	40
Foreign liabilities	678	790	1,226	1,135	801	610	523	505	563	654	882	999	1,380	2,201
Short term	273	212	604	267	188	221	226	225	275	371	512	491	702	1,208
Medium and long term	405	578	622	867	613	389	297	280	288	283	370	508	678	993
Net foreign assets	867	520	392	539	773	640	840	1,041	804	951	448	229	-98	-1,077
Excluding nonconvertible and other Fx assets	816	455	326	475	692	551	747	948	717	865	356	87	-246	-1,242
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	6,374
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	6,635	6,101	6,209

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

1/ Gold is valued at US$280.4 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$1.355109 for the SDR.

2/ Includes liabilities to nonresidents only.

3/ Includes foreign exchange liabilities to resident banks.

Table 26. Romania: Stock Market Indicators, 1995-2003
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	75.800	192,875	97,157
1996						
Q1	14	13	99	346.143	238,697	171,681
Q2	23	13	54	216.522	48,793	38,811
Q3	24	13	53	196.208	22,046	12,570
Q4	23	17	61	140.739	12,446	5,222
1997						
Q1	29	25	92	1,528.030	220,117	192,814
Q2	55	44	618	4,298.600	1,427,315	1,257,553
Q3	66	62	707	2,573.260	1,566,343	778,047
Q4	57	75	632	2,749.950	1,116,893	559,456
1998						
Q1	62	92	785	2,548.190	1,235,012	813,501
Q2	63	104	652	2,464.760	1,095,174	542,752
Q3	66	113	330	1,602.610	432,955	277,733
Q4	64	126	357	1,366.520	305,684	172,849
1999						
Q1	63	126	275	1,434.430	394,163	555,813
Q2	64	127	300	992.875	178,935	150,626
Q3	66	126	434	985.591	193,458	166,917
Q4	60	127	317	3,084.250	314,997	427,274
2000						
Q1	63	127	345	2,987.870	356,927	253,960
Q2	64	125	379	2,126.060	593,210	2,522,690
Q3	65	123	437	1,523.690	195,957	178,343
Q4	59	114	427	1,246.530	240,245	326,290
2001						
Q1	63	113	610	1,271.940	566,624	1,583,459
Q2	62	106	762	1,031.340	633,407	1,672,706
Q3	65	70	1,232	1,644.140	500,177	1,607,656
Q4	57	65	1,228	1,872.460	430,660	659,229
2002						
Q1	62	65	1,294	1,703.500	368,186	223,895
Q2	61	65	1,851	2,825.520	723,518	389,259
Q3	66	65	2,980	2,946.940	902,249	707,442
Q4	58	69	2,171.51	3,620.21	1,505,614	2,589,196
2003						
Q1	61	63	2,818.47	2,109.70	1,084,295	1,724,530
Q2	57	63	3,184.57	1,928.60	1,324,289	2,356,167
Q3	66	63	3,319.54	1,571.80	1,493,231	4,833,663
Q4	57	62	3,710.21	1,516.25	1,178,523	856,301

Source: Bucharest Stock Exchange.

Table 27. Romania: Monetary Survey, 1994-2003

(End of period, in billions of lei unless otherwise stated)

	1994	1995	1996	1997	1998	1999	2000	2001	2002				2003			
									QI	QII	QIII	QIV	QI	QII	QIII	QIV
Net foreign assets 1/ 6/	1,373	1,173	-48	16,280	15,211	39,303	92,022	171,866	178,368	197,564	209,139	222,272	212,786	201,431	230,180	247,038
(millions of U.S. dollars)	777	455	-12	2,029	1,389	2,153	3,549	5,439	5,424	5,901	6,327	6,635	6,411	6,101	6,985	7,579 *
Of which : Commercial banks	816	455	326	590	689	551	948	865	639	356	280	87	-216	-246	-668	-1242
Net domestic assets 2/	9,276	17,105	30,383	45,865	77,318	94,811	93,038	98,647	96,958	103,347	108,193	151,441	156,665	187,068	184,289	213,704
Total credit	9,183	17,399	31,450	46,488	79,920	101,340	112,886	143,244	155,234	164,421	170,243	200,221	215,324	246,397	242,184	300,943
Credit to government, net	-301	964	4,609	10,607	20,833	43,621	37,878	24,990	24,997	17,154	13,241	20,595	17,339	21,926	-19,594	-1,936
Of which : Bank rehabilitation bonds				8,015	8,171	31,415	27,342	16,310	16,632	16,392	12,153	7,563	5,922	2,036	1,734	1,003
Net credit to non-government	9,485	16,435	26,841	35,881	59,087	57,719	75,007	118,254	130,237	147,267	157,003	179,626	197,985	224,470	261,778	302,879
Of which : Foreign currency credit	2,050	4,860	9,898	19,649	34,814	33,275	44,596	70,721	78,627	94,486	98,923	112,898	120,876	129,352	147,587	167,839
(percent of total)	22	30	37	55	59	58	59	60	60	64	63	63	61	58	56	55
(millions of U.S. dollars)	1,160	1,885	2,453	2,451	3,179	1,823	1,720	2,238	2,391	2,822	2,993	3,370	3,642	3,918	4,479	5,149
Other items, net	92	-294	-1,067	-623	-2,602	-6,529	-19,847	-44,597	-58,276	-61,074	-62,050	-48,780	-58,659	-59,328	-57,895	-87,239
Broad Money	10,649	18,278	30,334	62,145	92,529	134,114	185,060	270,513	275,326	300,912	317,332	373,712	369,451	388,499	414,468	460,741
Currency outside banks	2,201	3,761	5,383	9,200	11,525	17,372	25,742	35,636	33,416	39,615	42,334	45,578	45,868	52,535	58,143	57,978
Deposits	8,448	14,518	24,952	52,945	81,004	116,742	159,318	234,877	241,910	261,297	274,998	328,134	323,583	335,965	356,326	402,763
Of which : Leu deposits	6,090	10,386	17,866	35,265	50,803	66,269	84,462	119,093	124,330	136,733	147,124	181,322	177,267	183,274	196,706	231,604
Sight	2,693	3,819	6,580	11,131	11,988	13,654	22,181	30,895	25,723	27,576	32,110	46,204	37,904	44,288	48,436	60,451
Time	3,397	6,567	11,286	24,134	38,815	52,615	62,281	88,198	98,607	109,157	115,014	135,118	139,363	138,985	148,270	171,153
Foreign currency deposits	2,358	4,132	7,086	17,680	30,201	50,473	74,856	115,784	117,580	124,564	127,874	146,812	146,317	152,691	159,620	171,159
(millions of U.S. dollars)	1,335	1,603	1,756	2,204	2,758	2,765	2,887	3,664	3,575	3,721	3,869	4,382	4,409	4,625	4,844	5,251
NBR balance sheet																
Reserve money	3,245	4,691	7,877	10,587	19,090	35,982	51,485	67,791	66,397	75,794	75,017	80,191	84,141	91,705	94,099	98,415
Currency outside NBR	2,398	3,951	5,902	9,627	12,297	18,646	28,065	39,956	36,166	42,695	46,411	52,772	50,767	58,018	63,778	65,175
Bank lei deposits at NBR	848	739	1,975	960	6,793	17,336	23,420	27,836	30,231	33,100	28,606	27,418	33,374	33,686	30,320	33,240
Net foreign assets (program definition) 3/	-69	-425	-1,695	9,259	4,424	15,444	52,046	117,670	129,014	153,587	164,102	176,113	174,920	162,386	201,338	230,479
(millions of U.S. dollars)	-39	-165	-420	1,154	404	846	2,008	3,724	3,923	4,588	4,965	5,257	5,270	4,919	6,110	7,071 *
Net domestic assets	3,314	5,116	9,572	1,328	14,666	20,538	-561	-49,878	-62,618	-77,792	-89,085	-95,923	-90,779	-70,681	-107,239	-132,064
NBR refinancing 4/	2,331	3,578	8,024	2,517	2,451	4,383	7,908	4,946	4,643	4,618	3,751	3,104	3,094	2,757	2,737	2,094
Memorandum items:																
CPI inflation (12-month rate)	0.0	27.8	56.9	151.4	40.6	54.8	40.7	30.3	25.1	24.0	19.8	17.8	17.1	14.0	15.9	14.1
Exchange rate (Lei per US$, eop)	1,767	2,578	4,035	8,023	10,951	18,255	25,926	31,597	32,887	33,477	33,055	33,500	33,189	33,014	32,952	32,595
Real annual broad money growth	47.2	34.4	5.8	-18.5	5.9	-6.4	-1.9	12.2	14.9	16.4	12.7	17.3	14.6	13.3	12.7	8.1
Real annual credit growth 5/	33.2	48.3	15.2	-41.2	20.5	-7.6	9.9	25.6	28.1	31.1	34.2	…	…	…	…	…
Velocity:																
Velocity of broad money	5.54	4.54	4.62	5.13	4.49	4.66	4.98	4.78	5.22	5.02	4.86	4.36	4.94	4.81	4.67	4.38
Velocity of broad lei money	7.11	5.87	6.03	7.17	6.66	7.47	8.36	8.36	9.11	8.57	8.13	7.18	8.18	7.93	7.60	6.97
Ratio of foreign currency deposits to broad money	22.1	22.6	23.4	28.4	32.6	37.6	40.4	42.8	42.7	41.4	40.3	39.3	39.6	39.3	38.5	37.1

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

1/ Only liquid convertible foreign assets and gold are included.
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.

Note: 1) Numbers before and after December 2003 are not strictly comparable, owing to an update in the exchange rates and in the gold price used to convert stocks denominated in convertible currencies into US$-equivalent.
2) Gold is valued at US$407 per ounce. All foreign currencies other than the U.S. dollar are converted in dollars at their end-2003 exchange rates: US$1.26145 for the euro and US$1.48597 for the SDR.

Table 28. Romania: Balance of Payments, 1993-2003 1/
(In millions of U.S. dollars)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Current account	-1,518	-1,239	-516	-1,867	-2,611	-2,159	-2,976	-1,475	-1,355	-2,223	-1,525	-3,368
Trade account	-1,373	-1,130	-483	-1,605	-2,494	-1,980	-2,625	-1,257	-1,684	-2,969	-2,611	-4,537
Exports	4,286	4,882	6,067	7,882	8,061	8,431	8,302	8,487	10,366	11,385	13,876	17,618
Imports	-5,659	-6,012	-6,550	-9,487	10,555	-10,411	-10,927	-9,744	-12,050	-14,354	-16,487	-22,155
Services account	-256	-323	-328	-631	-710	-758	-1,104	-844	-531	-397	-450	-692
Receipts	683	799	1,132	1,510	1,626	1,706	1,472	1,513	2,072	2,488	2,760	3,336
Of which: Interest	52	56	102	59	65	186	204	52	151	328	265	204
Payments	-939	-1,122	-1,460	-2,141	2,336	-2,464	-2,576	-2,357	-2,603	-2,885	-3,210	-4,028
Of which: Interest	-140	-204	-233	-293	345	-419	-545	-504	529	-616	-669	-781
Unrequited transfers (net)	111	214	295	369	593	579	753	626	860	1,143	1,536	1,861
Capital account	1,454	1,412	1,294	1,427	1,997	4,090	2,521	2,120	2,750	3,992	2,729	3,337
Direct investment and capital transfers (net) 2/	73	97	347	691	608	2,075	2,232	1,051	1,211	2,121	1,604	2,312
Medium- and long-term												
credit received (net)	1,221	957	870	877	761	965	437	320	1,499	1,005	1,478	758
Receipts	1,306	1,105	1,165	1,246	1,209	2,238	1,956	1,818	2,437	2,460	3,521	3,002
Multilateral	214	263	375	246	342	787	683	689	788	557	1,035	880
Bilateral	928	728	529	322	3	0	41	51	143	12	12	0
Other	135	343	182	678	864	1,451	1,232	1,078	1,506	1,891	2,474	2,122
Payments	-85	-147	-295	369	448	1,273	1,519	1,498	938	1,455	2,043	2,244
Multilateral	0.0	0.0	-3	14	39	108	353	382	273	259	543	391
Bilateral	-40	-84	-154	44	17	19	16	118	69	43	50	55
Other	-45	-63	-138	311	392	1,146	1,150	998	596	1,153	1,450	1,798
Credit extended (net)	75	-11	24	67	7	35	31	34	-34	-45	19	-29
Bilateral clearing agreements	-159	-128	-9	-478	-4	19	0	-4	-19	6	7	10
Short-term (net) 3/	244	498	62	270	625	996	-179	719	93	905	-379	286
Overall balance	-63	173	778	-440	-614	1,931	-455	645	1,395	1,769	1,204	-31
Financing	63	-173	-778	440	614	-1,931	455	-645	-1,395	-1,769	-1,204	31
Net foreign assets NBR (increase, -)	140	54	-341	202	426	-1,710	542	-845	-922	-1,809	-1,890	-1,134
of which: IMF net	268	0	217	-315	-356	28	-126	-67	20	-50	12	126
Net foreign assets of commercial												
banks (increase, -)	-77	-227	-437	238	188	-221	-87	200	-473	40	686	1,165

Sources: Romanian authorities; and Fund staff estimates.

1/ Excludes transactions in transferable rubles 1993 -1999.
2/ Including portfolio investment.
3/ Including errors and omissions.

Table 29. Romania: Composition of Exports, 1993-2003

(In percent of total)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Live animal and animal products	3.3	3.6	2.1	1.9	2.4	1.1	1.4	1.2	1.1	1.0	1.2
Vegetable products	1.2	1.0	2.6	4.6	1.9	2.2	2.9	1.2	1.6	1.3	1.1
Fats and animal or vegetable edible (	1.3	0.8	1.0	0.9	1.5	0.9	0.6	0.2	0.2	0.1	0.2
Foodstuffs, beverages, tobacco	1.0	1.1	0.9	1.3	1.2	1.1	0.7	0.7	0.9	0.8	0.7
Mineral products	11.7	11.6	9.2	8.6	7.6	6.1	5.9	7.9	6.9	8.5	7.0
Chemicals	7.0	7.9	9.1	8.5	6.6	4.1	3.9	5.0	4.4	3.5	3.7
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
Wood products, cork, and wattles	3.6	3.6	3.3	3.6	4.0	4.6	5.8	5.4	4.7	4.5	4.5
Textiles and textile articles	16.0	18.8	19.8	21.4	23.0	26.0	25.9	24.2	26.2	25.3	25.4
Footwear	3.3	5.0	5.4	6.2	6.4	7.3	8.0	7.6	8.6	8.4	8.2
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
Basic metals and articles thereof	19.6	17.3	18.2	15.7	18.5	19.1	15.5	16.0	13.3	12.8	12.9
Machinery, appliances, and electrical equipment	9.0	8.4	8.3	8.3	8.7	9.5	11.4	14.0	14.8	15.7	16.0
Transport equipment	8.3	6.4	5.4	5.4	5.3	5.1	5.3	4.9	5.2	5.7	5.7
Other	11.0	10.4	10.2	9.3	8.9	8.9	8.6	7.9	8.6	8.4	8.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Institute of Statistics.

Table 30. Romania: Direction of Trade, 1996-2003

(In percent of total)[2/]

	1996		1997		1998		1999		2000		2001		2002		2003 [3/]	
	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
Of which :																
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
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	7.4	7.3
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
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	25.0	20.7	24.1	19.5
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
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
United States	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
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
Of which :																
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
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	2.8
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	3.0
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	2.0	1.0	2.3
Russia/Russian Federation	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	7.2	0.3	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
Moldova	1.2	0.7	1.5	0.6	1.6	0.5	1.2	0.4	1.4	0.3	1.0	0.2	0.8	0.3	0.8	0.3
Serbia/Yugoslavia	1.7	0.3	1.7	0.5	1.4	0.5	1.0	0.5	1.3	0.5	1.4	0.2	0.9	0.1	0.9	0.1
FYR Macedonia	0.1	0.1	0.1	0.1	0.1	1/	0.1	1/	0.1	1/	0.1	1/	0.1	1/	0.1	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	100.0	100.0	100.0

Source: National Institute of Statistics.

1/ Under 0.1 percent.

2/ percentage calculated based on dollar statistics

3/ Provisional data

Table 31. Romania: Composition of Imports, 1993-2003

(In percent of total)

	1993	1994	1995	1996	1997	1998	1999	1998	2000	2001	2002	2003
Live animals and animal products	1.0	1.4	1.2	0.6	0.6	1.7	1.2	1.6	1.1	1.8	1.7	1.2
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
Foodstuffs, beverages, and tobacco	6.1	5.5	5.7	5.3	3.8	4.4	3.9	3.8	3.6	3.6	3.0	2.9
Mineral products	28.7	26.8	24.2	23.5	21.3	14.3	11.9	17.8	14.5	14.4	12.7	12.4
Chemicals	7.9	7.9	9.0	8.6	8.3	8.7	9.2	9.0	8.3	7.8	8.4	7.9
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
Crude hides and skins, leather, furs, etc.	1.7	2.1	2.0	2.3	2.5	2.6	2.9	2.4	2.8	3.3	3.5	3.1
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
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
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
Machinery, appliances, and electrical equipment	17.6	20.4	20.6	21.9	23.0	23.0	23.5	22.1	24.6	22.7	22.9	24.0
Transport equipment	4.3	4.7	3.9	3.6	3.4	4.1	4.0	3.3	4.2	5.1	5.7	6.2
Other	7.2	8.8	9.9	9.8	10.5	11.1	10.0	11.6	9.5	9.2	9.6	9.5
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

Source: National Institute of Statistics.

Table 32. Romania: Foreign Exchange Market Transactions, 1996-2003
(In millions of U.S. dollars)

		Total Volume	Daily Average Volume	Total Volume between Banks
1996	January	349.3	16.6	22.5
	February	302.9	14.4	32.2
	March	314.0	15.0	36.4
	April	341.7	16.3	17.6
	May	360.8	16.4	32.0
	June	354.6	17.7	35.6
	July	404.8	17.6	74.3
	August	371.0	16.9	29.1
	September	386.9	18.4	92.8
	October	320.0	13.9	26.2
	November	293.8	14.0	13.1
	December	466.4	25.9	104.6
1997	January	272.4	13.6	12.2
	February	342.9	17.1	69.4
	March	488.0	23.2	158.1
	April	1,042.9	49.7	472.3
	May	858.8	40.9	339.1
	June	690.7	32.9	257.8
	July	881.2	38.3	321.6
	August	759.5	36.2	327.7
	September	698.6	31.8	236.7
	October	889.1	38.7	354.3
	November	789.8	39.5	307.5
	December	962.1	48.1	388.6
1998	January	947.8	47.4	435.2
	February	849.9	42.5	389.6
	March	1,172.4	53.3	572.3
	April	1,117.1	53.2	556.2
	May	980.8	49.0	442.1
	June	933.3	42.4	422.6
	July	1,177.3	51.2	605.3
	August	1,228.1	58.5	679.0
	September	1,513.6	68.8	890.0
	October	1,768.4	80.4	1155.8
	November	1,719.6	81.9	1085.1
	December	2,220.2	105.7	1462.6
1999	January	1,644.0	82.2	1140.2
	February	2,302.7	115.1	1816.7
	March	1,838.9	80.0	1219.4
	April	1,287.3	61.3	737.1
	May	1,854.9	88.3	1365.4
	June	1,455.7	66.2	939.5
	July	1,692.6	76.9	1082.4
	August	1,557.8	70.8	965.1
	September	1,824.9	82.9	1154.2
	October	1,953.0	93.0	1342.9
	November	2,501.9	113.7	1817.6
	December	1,853.1	88.2	1093.6
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

Source: National Bank of Romania.

Table 33. Romania: Exchange Rate Against the U.S. Dollar, 1990-2003

		(Lei per U.S. dollar)	
		End of Period	Period Average
1990		34.7	22.43
1991		189.0	76.39
1992		460.0	307.95
1993		1,276.0	760.05
1994		1,767.0	1,655.09
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
1999	I	14,925.0	12,559.37
	II	15,840.0	15,262.31
	III	16,488.0	16,127.12
	IV	18,255.0	17,382.91
2000	I	19,480.0	18,753.78
	II	21,358.0	20,394.11
1997	December	8,023.0	7,960.25
2000	January	18,465.0	18,352.55
	February	18,892.0	18,701.71
	March	19,480.0	19,207.09
	April	20,076.0	19,758.50
	May	20,697.0	20,393.18
	June	21,358.0	21,030.64
	July	21,890.0	21,601.38
	August	22,973.0	22,421.61
	September	24,169.0	23,601.71
	October	24,850.0	24,537.86
	November	25,364.0	25,102.77
	December	25,926.0	25,603.83
2001	January	26,513.0	26,243.05
	February	27,059.0	26,815.30
	March	27,566.0	27,299.05
	April	28,214.0	27,878.25
	May	28,754.0	28,493.36
	June	29,160.0	28,952.48
	July	29,623.0	29,364.32
	August	30,044.0	29,808.96
	September	30,465.0	30,235.90
	October	31,015.0	30,785.57
	November	31,532.0	31,298.50
	December	31,597.0	31,555.65
2002	January	32,184.0	32,052.04
	February	32,599.0	32,233.30
	March	32,887.0	32,765.71
	April	33,445.0	33,101.59
	May	33,533.0	33,490.95
	June	33,477.0	33,392.25
	July	32,888.0	32,979.04
	August	33,215.0	33,093.77
	September	33,055.0	33,116.14
	October	33,524.0	33,242.22
	November	33,569.0	33,544.67
	December	33,500.0	33,653.84
2003	January	33,130.0	33,448.00
	February	33,121.0	32,883.95
	March	33,189.0	33,134.50
	April	33,214.0	33,702.67
	May	32,156.0	32,501.71
	June	33,014.0	32,616.43
	July	32,793.0	32,676.61
	August	34,140.0	33,359.14
	September	32,952.0	33,799.32
	October	33,901.0	33,157.17
	November	33,523.0	34,108.80
	December	32,595.0	33,012.55

Source: Data provided by the Romanian authorities.

Table 34. Romania: Stock of Direct Foreign Investment 1997-2003
(Cumulative from 1990)

Country (Financial Organization)	Foreign Capital 1/							Number of Foreign Investors						
	1997	1998	1999	2000 2/	2001 2/	2002 2/	2003 2/	1997	1998	1999	2000 2/	2001 2/	2002 2/	2003 2/
Total	2,780.0	3,648.5	4,500.3	6,045.5	7,842.0	9,110.8	10,365.7	53,203	63,255	65,817	77,334	82,424	90,609	97,203
European Union	1,541.0	2,140.5	2,696.7	3,801.0	4,566.6	5,482.0	6,298.2	20,372	23,936	27,016	27,863	31,233	36,387	41,298
Austria	110.8	174.1	236.7	316.0	532.1	566.6	595.1	1,406	1,727	1,990	1,893	2,084	2,520	2,785
Belgium	18.4	38.0	39.4	46.5	53.6	53.6	65.0	588	684	783	772	872	1,068	1,165
Denmark	5.8	6.6	7.2	7.1	9.9	13.4	18.3	135	163	193	177	189	234	261
France	214.9	273.6	305.4	489.1	666.1	666.7	1,068.0	1,592	1,865	2,012	2,081	2,294	2,818	3,150
Finland	0.7	1.8	8.8	7.6	1.2	1.8	2.0	30	35	42	43	46	53	54
Germany	338.1	376.3	536.4	651.7	752.0	898.5	880.3	6,926	7,905	8,601	8,453	9,121	10,204	10,954
Greece	67.4	85.5	131.3	181.9	231.1	293.2	318.1	1,407	1,603	1,739	1,819	1,991	2,348	2,555
Ireland	10.1	12.7	13.3	23.8	26.8	25.0	24.0	95	100	113	112	118	171	198
Italy	197.0	292.2	345.7	779.1	517.5	557.1	624.5	5,780	7,081	8,334	9,048	10,634	12,411	14,157
Luxembourg	123.3	138.1	168.3	116.3	169.4	164.1	196.8	109	127	161	138	156	194	218
Netherlands	275.3	480.3	582.5	764.0	1,122.2	1,593.1	1,858.9	806	967	1,158	1,178	1,332	1,561	1,743
Portugal	1.1	1.7	1.8	23.4	4.0	116.7	63.0	27	35	40	42	58	75	92
Spain	27.1	27.8	28.9	72.6	142.3	147.7	157.2	231	268	309	355	406	520	629
Sweden	31.4	48.7	50.9	57.8	81.7	108.0	109.0	506	524	579	630	669	732	782
United Kingdom	119.6	183.1	240.0	264.1	256.8	276.5	318.1	734	852	962	1,122	1,263	1,478	2,555
Other countries	1,239.0	1,508.0	1,803.6	2,244.3	3,275.3	3,628.9	4,067.5	32,831	39,319	38,801	49,471	51,191	50,689	53,234
of which:														
Korea, Rep. of	234.0	234.1	234.1	248.6	260.1	238.4	218.4	46	60	72	68	75	76	82
U.S.A.	254.5	242.4	339.1	366.9	624.2	700.2	704.3	2,280	2,483	2,715	2,975	3,207	3,499	3,800
Turkey	126.3	176.9	193.2	225.5	260.6	407.9	418.7	4,427	5,343	6,117	6,689	7,280	8,212	8,666
Switzerland	89.8	73.0	101.7	173.8	200.1	257.6	308.1	671	751	821	927	1,002	1,146	1,252
Canada	48.0	51.6	56.1	58.4	68.2	73.4	60.0	521	584	635	695	664	826	893
Syria	53.1	55.9	59.2	60.5	54.8	55.5	62.7	3,550	3,942	4,237	4,604	4,830	5,176	5,259
Israel	24.1	25.0	25.4	29.6	28.2	27.6	28.4	1,369	1,512	1,651	1,735	1,887	2,335	2,566
Hungary	51.2	84.5	152.1	139.7	189.8	235.7	264.5	2,175	2,712	3,075	2,988	3,595	3,965	4,392
Cyprus	69.2	85.4	383.1	469.8	535.0	436.6	504.9	385	534	745	797	755	1,019	1,144
Lebanon	24.7	31.0	35.8	39.7	37.5	40.9	45.8	2,038	2,274	2,477	2,866	2,817	3,218	3,304
China	37.4	40.8	42.7	46.4	44.8	54.3	103.6	3,176	4,697	5,550	6,806	7,334	8,100	8,210
Iraq	24.7	28.5	30.7	41.0	45.9	45.2	52.0	2,880	3,807	4,781	5,043	5,138	5,675	5,778
Liechtenstein	17.5	17.6	36.1	39.6	39.1	49.0	59.4	110	123	135	140	134	147	151
Iran	14.9	15.4	15.9	16.6	17.3	18.0	20.4	1,688	1,902	2,075	2,270	2,289	2,535	2,591
Britain Islands	4.1	13.1	22.9	41.3	82.6	120.6	123.4	53	83	114	110	108	164	190
Bulgaria	7.9	8.1	8.8	9.3	8.7	10.2	10.3	199	236	293	351	355	451	514
Egypt	8.0	9.3	9.4	9.7	10.1	9.0	10.5	765	967	1,111	1,120	1,136	1,245	1,275
Rep. of Moldova	6.9	10.3	20.4	10.9	12.5	13.3	13.4	594	760	964	973	1,134	1,397	1,592
Australia	11.0	10.9	11.1	16.6	15.6	10.1	10.1	282	297	325	345	314	374	399
Saudi Arabia	0.6	0.6	0.7	0.7	0.8	2.0	2.1	55	69	76	73	82	109	112
Panama	15.2	16.3	16.3	16.9	15.8	16.4	17.8	92	97	101	109	102	112	115
Yugoslavia	4.7	4.8	4.8	18.1	18.0	21.9	22.7	486	534	599	626	656	706	728
Poland	2.7	2.2	4.0	7.3	7.2	6.1	8.0	99	118	132	153	173	202	221

Source: Office of Trade Register - Ministry of Justice (Statistical Bulletin no.68).

1/ In millions of U.S. dollars.
2/ Cumulative from 1991.

Table 35. Romania: Outstanding External Debt in Convertible Currencies, 1993-March 2004

(In millions of U.S. dollars, end of period)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	March-04
Medium- and long-term	**3,357**	**4,597**	**5,482**	**7,208**	**8,585**	**9,323**	**8,771**	**10,273**	**11,914**	**15,270**	**19,222**	**19,310**
Official creditors	*3,123*	*4,245*	*4,962*	*6,229*	*7,053*	*7,517*	*6,936*	*7,678*	*8,432*	*10,363*	*13,111*	*13,177*
Multilateral Institution	2,059	2,712	2,788	2,720	3,392	3,689	3,875	4,345	4,541	5,366	6,454	6,407
Of which: IMF	1,041	1,313	1,039	651	642	539	458	453	386	426	593	558
Government and government guaranteed credits 1/	1,064	1,533	2,174	3,509	3,661	3,828	3,061	3,333	3,891	4,997	6,657	6,770
Of which: China	137	89	57	36	15	16	13	23	0	0		
Commercial creditors	*212*	*352*	*520*	*979*	*1,532*	*1,806*	*1,835*	*2,595*	*3,482*	*4,907*	*6,111*	6,133
Trade-related credits	212	290	415	485	438	307	204	125	80	69	68	66
Commercial banks 2/	0	4	57	160	204	263	254	284	428	588	1,006	1,039
Non-guaranteed suppli	0	58	48	334	890	1,236	1,377	2,186	2,974	4,250	5,037	5,028
Ex-CMEA banks	*22*	*0.0*	*0.0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		
Short-term 3/	**892**	**966**	**1,000**	**1,136**	**1,052**	**591**	**408**	**400**	**485**	**751**	**1,399**	**1,653**
Of which:												
Documents in transit	85	62	172	475	471	232	160	148	160	170	166	178
Letters of credit	431	504	546	410	258	151	128	161	148	206	222	280
Total	**4,249**	**5,563**	**6,482**	**8,344**	**9,637**	**9,914**	**9,179**	**10,673**	**12,399**	**16,021**	**20,621**	**20,963**

Source: Romanian authorities.

1/ Includes guaranteed supplier credits, guaranted credits from private banks, bonds issued in 1996 and 1997 and sindicated loans.
The figures do not include the disputed obligations to Sweden dated 1928.
2/ revised data includes financial credits received from commercial banks and bond issued by Romanian companies and bought by foreign commercial banks.
3/ revised data includes short term loans contracted by non-banking system from non-residents.

Table 36. Romania: Currency Composition of Medium- and Long-Term External Debt, 1993- March 2004

(In percent; end of period)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	March-04
U.S. dollars	31.4	39.3	42.5	47.5	52.1	52.7	58.3	57.2	53.7	46.4	38.7	39.6
Swiss francs	4.0	1.8	1.6	0.9	1.1	1.7	2.1	2.1	1.4	1.4	1.1	1.0
Deutsche marks	4.8	4.8	11.1	11.9	14.4	16.1	15.2	12.2	9.4			
SDRs	31.0	28.6	19.0	9.0	7.5	5.8	5.2	4.4	3.3	2.8	3.1	2.9
Pounds sterling	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.5
French francs	3.5	4.4	4.5	3.9	3.8	4.1	3.7	2.4	1.7			
ECU	16.1	14.4	14.7	11.3	9.3	7.7	6.8	14.3	25.9	47.5	54.1	53.4
Other currencies	9.1	6.7	6.6	15.4	11.7	11.8	8.5	7.2	4.4	1.6	2.5	2.6
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

Source: Data provided by the Romanian authorities.

Table 37. Romania: Summary of Export Restrictions, 1994-2003 1/

(Products subject to export quotas)

1994	1995	1996	1997
II. Grains and Technical Crops Double and crossed maize hybrids (1 pos.) (1,000 tons) Triple crossed hybrids (1 pos.) (2,120 tons) Simple hybrids (1 pos.) (5,995 tons) Sunflower seeds for sowing (1 pos.) (230 tons) Raw sunflower oil (1 pos.) (15,000 tons) VI. Non-Ferrous Minerals, Fuels Copper-based alloys (3 pos.) (12,500 tons) Lead-based alloys (1 pos.) (1,000 tons) VIII Wood and Wood Products Different kinds of timber (9 pos.) Not-processed or semi-processed wood products (7 pos.)	II. 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) IV. 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.) VI. 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) VIII. 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.)	II. Grains and Technical Crops Wheat for seeds and common wheat (2 pos.) (1,510,000 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) IV. 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) VI. 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) VIII. 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.)	II. Grains and Technical Crops Wheat and maize 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) IV. 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) V. Ferrous metals Iron and steel trash (3 pos) (250,000 t VI. Non-ferrous minerals, metals, fuels Copper trash (1 pos) - 3,000 tons) Copper and copper based alloys, copper products (3 pos); (4,200 ton Aluminum based alloys (2 pos) (10,000 tons) Lead, lead alloys (2 pos); (6000 tons) Zinc (1 pos); (10,000 tons) VIII Wood and wood products Coniferous timber (9 pos); (972,000 n Beech tree timber and other timber (9 pos); (310,000 m3) Wood products: 1 pos = 1,000 m2 1 pos = 10,000 m3 1 pos = 2,000 m3

2001	2002	2003
II. Sunflower seeds for a three months period starting with September 25, 2001 VIII 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)	VII. Not-processed or semi-processed wood products sold on the domestic market exclusively during January 1- April 30, 2002 (Government Decision 1052/2001)	II. Wheat (1 pos. at 4 digit level) temporary suspension from August 3, 2003 till July 1, 2004 (Government Decision 864/2003)

Source: Foreign Trade Department.

1/ There were no restrictions in 1998, 1999, and 2000.

Table 38. Romania: Energy Prices, 1993-2003 1/

(In domestic currency)

	Units	Jan. 1993	Feb.-Aug. 1993	Jan. 1994	Feb.-Aug. 1994	Jan. 1995	Feb.-Apr. 1995	May-Sep. 1995	Oct. 1995-June 1996	July-Nov. 1996	Dec. 1996	Jan.-Dec. 1997	Jan.-Apr. 1998	1998	1999	2000	2001	2002	2003
Liquid bottled gas 2/ (Households)	lei/bottle	150	836 3/	2,500	3,572	4,100	4,758	6,565	6,639	10,647	11,112	27,667	33,977	34,793	69,222	130,363	149,356	168,179	195,603
Premium gasoline	lei/liter																		
Households		140	184	400	436	452	494	600	742	989	991	2,764	3,599	4,175	8,153	11,414	15,216	20,703	25,146
Enterprises		93	118	264	284	287	316	380	474	612	612	1,423	1,305	1,207	1,846	3,462	5,585	9,066	9,807
Diesel fuel	lei/liter																		
Households		110	156	290	334	355	377	432	497	679	680	2,256	2,902	3,191	5,316	8,477	13,225	15,896	18,870
Enterprises		75	101	197	225	237	249	270	316	431	429	1,282	1,356	1,225	1,683	3,226	5,323	8,952	10,194
Light fuel type P	lei/ton																		
Households		16,890	96,847 3/	229,192	274,372	295,540	314,706	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
Enterprises		102,700	139,573	275,300	318,107	273,140	289,451	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	7,379,766	8,444,487
Heating oil (light)	lei/ton																		
Households		10,170	61,330 3/	146,000	206,490	229,770	249,193	293,890	295,830	485,250	486,920	1,205,310	1,521,790	1,600,540	2,880,610	5,457,240	8,937,000	10,466,370	14,966,760
Enterprises		31,700	46,375	74,800	107,383	127,160	139,593	172,065	172,000	269,457	270,000	651,719	859,753	812,502	1,190,571	2,687,605	3,369,683	4,298,362	5,102,332
Crude oil	lei/ton	34,625	47,825	84,565	104,754	113,448	124,521	149,713	179,097	315,638	315,948	863,238	966,110	918,992	1,586,058	3,293,931	5,191,144	5,770,967	7,230,357
Natural gas	lei/1,000 m3																		
Enterprises and population		11,437	14,883	38,799	45,366	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	1,573,517	1,565,381
Enterprises		...	...	...	...	...	...	...	...	...	...	608,333	712,500	714,700	854,713	991,553	1,193,805	1,379,522	1,443,421
Used as fuel		3,700	15,300	24,000	30,860	34,000	34,000	38,640	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
Coal (lignite)	lei/ton																		
Households		1,980	8,963 3/	24,588	27,988	38,990	39,262	41,486	44,167	58,496	61,781	142,933	267,088	291,251	391,910	596,144	794,897	1,074,925	1,352,466
Enterprises		5,078	7,143	12,970	17,762	19,740	19,726	22,053	26,250	35,839	35,992	88,773	106,751	107,098	170,653	232,147	300,333	380,943	412,697
Electricity 4/	lei/kwh																		
Households		6	19 3/	28	36	40	40	45	46	73	73	161	187	321	...	...	...	...	...
Enterprises		...	...	52	67	78	78	84	88	137	140	365	436	430	553	746	1,033	1,487	1,647
Enterprises and population		17	22	48	62	71	72	78	81	127	127	325	385	400	568	792	1,091	1,557	1,734

Source: National Institute of Statistics.

1/ Delivery prices, including VAT from July 1, 1993 (for households).
2/ 12.5 kg. bottles, delivered for households.
3/ Exempted from VAT.
4/ Explicit subsidies for households were eliminated from May 1, 1993.
5/ Provisional data.
Note: Delivery prices for enterprises exclude VAT.

Table 39. Romania: Energy Exports and Imports, 1996-2003

	Natural Gas (Tera Jouli)		Electric Power (thousand kw hours)		Mineral Fuel (thousand tons)		Crude Petroleum (thousand tons)		Petroleum Products (thousand tons)		TOTAL US$ thousands
	Quantity	Value 1/	Quantity	Value 1/	Quantity	Value 1/	Quantity	Value 1/	Quantity	Value 1/	
1996 Exports f.o.b.	...	...	...	...	490	32.7	...	...	2944	563361	596025
Q1	...	...	...	...	126	8.4	...	...	923	155067	163503
Q2	...	...	...	...	116	8.4	...	...	818	160950	169343
Q3	...	...	...	...	126	8.4	...	...	509	99377	107809
Q4	...	...	...	...	122	7.4	...	...	694	147967	155370
1996 Imports c.i.f.	271195	611.9	749	16.7	4843	324.1	7156	1,036.9	3219	400583	2390196
Q1	70189	153.1	341	7.9	1025	69.0	2429	323.5	961	116713	670138
Q2	62146	135.8	324	6.8	967	65.5	1499	209.2	862	102586	519863
Q3	62411	141.4	84	2.0	1191	79.8	1196	173.9	627	75093	472145
Q4	76449	181.6	...	...	1660	109.9	2032	330.3	769	106191	728050
1997 Exports f.o.b.	...	...	556	13.1	418	24.7	...	...	2659	480025	517782
Q1	...	...	84	2.0	112	6.9	...	...	768	145517	154465
Q2	...	...	98	2.2	106	6.7	...	...	897	158375	167287
Q3	...	...	57	1.3	126	7.0	...	...	691	120695	128982
Q4	...	...	317	7.5	74	4.1	...	...	303	55438	67048
1997 Imports c.i.f.	185716	448.1	777	17.5	5462	370.2	6245	838.3	3915	456764	2130818
Q1	56834	142.0	151	3.4	913	60.8	2042	305.2	685	84639	596083
Q2	32590	80.3	155	3.5	1665	115.8	1852	226.0	902	96578	522203
Q3	31111	75.4	399	8.9	1161	78.9	953	121.3	1702	189145	473725
Q4	65181	150.4	72	1.7	1723	114.6	1398	185.7	626	86402	538807
1998 Exports f.o.b.	...	...	337	11.1	378	19.3	...	...	3001	362882	393211
Q1	...	...	126	4.1	90	5.6	...	...	566	81500	91192
Q2	...	...	50	1.6	115	5.9	...	...	751	90822	98299
Q3	...	...	26	0.8	69	3.2	...	...	679	77094	81059
Q4	...	...	135	4.6	104	4.6	...	...	1005	113466	122661
1998 Imports c.i.f.	179684	350.4	724	26.7	4014	245.9	5974	550.8	2716	256780	1430532
Q1	50384	112.3	86	2.5	1032	69.8	1448	140.5	605	58725	383823
Q2	43100	89.9	287	10.9	1240	74.4	1222	114.6	874	81100	370925
Q3	40179	70.7	324	12.1	966	56.8	1256	110.0	604	58969	308643
Q4	46021	77.4	27	1.3	776	44.9	2048	185.6	633	57986	367141
1999 Exports f.o.b.	...	...	2237	72.6	291	21.2	...	...	1957	320489	414260
Q1	...	...	832	26.9	111	6.0	...	...	504	50225	83106
Q2	...	...	449	14.6	37	2.6	...	...	394	56893	74055
Q3	...	...	526	17.1	69	5.0	...	...	517	98848	120897
Q4	...	...	430	14.0	74	7.7	...	...	542	114523	136202
1999 Imports c.i.f.	121712	198.6	1412	46.1	2730	161.5	4294	478.2	1513	166842	1051219
Q1	33691	52.8	288	9.5	613	35.0	1201	89.9	332	30418	217648
Q2	20488	30.6	621	20.2	631	40.4	535	50.9	228	25205	167304
Q3	17490	26.8	309	10.1	804	46.0	1090	118.2	454	42830	243944
Q4	50043	88.4	194	6.3	682	40.1	1468	219.1	499	68389	422323
2000 Exports f.o.b	...	...	1,530	46.7	245	36.5	...	...	2,520	659,570	742,826
Q1	...	...	524	16.4	68	10.1	...	...	645	157,472	183,930
Q2	...	...	88	2.6	70	6.4	...	...	527	134,722	143,712
Q3	...	...	346	9.7	64	9.3	...	...	689	188,412	207,348
Q4	...	...	572	18.1	43	10.8	...	...	659	178,963	207,837
2000 Imports c.i.f.	122,508	326.2	836	25.1	3,205	525.6	4,642	822.5	1,215	210,085	1,583,270
Q1	48,715	103.3	196	5.9	827	152.4	1,086	179.7	543	80,185	418,220
Q2	19,084	46.6	155	4.6	791	95.5	1,174	199.3	342	56,779	356,206
Q3	14,721	43.5	296	8.9	739	93.1	1,276	232.0	186	39,006	373,055
Q4	39,988	132.9	189	5.7	848	184.6	1,106	211.5	145	34,116	435,789
2001 Exports f.o.b.	...	...	2,077	62.3	225	36.5	...	...	2,852	608,337	707,119
Q1	...	...	738	22.2	38	8.6	...	...	638	141,650	172,443
Q2	...	...	120	3.6	60	9.7	...	...	962	218,738	232,014
Q3	...	...	420	12.6	66	9.2	...	...	876	185,541	207,362
Q4	...	...	799	24.0	61	8.9	...	...	376	62,408	95,300
2001 Imports c.i.f.	108,882	351.3	767	23.0	3,971	284.8	5,544	954.2	2,372	357,133	1,970,450
Q1	42,705	146.7	159	4.8	1,581	103.7	1,120	200.1	927	143,348	598,577
Q2	21,921	74.7	201	6.0	839	57.2	1,700	312.3	684	95,820	546,040
Q3	12,392	39.2	354	10.6	747	58.5	1,129	202.7	169	34,967	346,004
Q4	31,864	90.7	53	1.6	804	65.4	1,595	239.2	592	82,998	479,829
2002 Exports f.o.b.	...	...	3290	100.5	222	40.8	...	...	4,405	959,765	1,101,054
Q1	...	...	1005	31.9	44	6.7	...	...	944	166,899	205,516
Q2	...	...	517	15.5	53	9.0	...	...	1,120	240,960	265,471
Q3	...	...	704	21.1	72	11.6	...	...	1,199	275,382	308,105
Q4	...	...	1064	31.9	53	13.5	...	...	1,142	276,524	321,962
2002 Imports c.i.f.	145,601	411.5	435	12.1	4,541	262.6	5,691	1,065.6	1,537	240,499	1,992,288
Q1	48,087	140.2	65	1.9	1,223	74.3	1,040	161.0	979	117,702	495,074
Q2	17,566	46.4	154	4.3	967	54.5	1,122	205.3	218	44,014	354,541
Q3	30,751	80.0	151	4.2	1,108	60.4	1,923	373.8	112	30,847	549,227
Q4	49,197	144.9	65	1.8	1,243	73.4	1,606	325.5	228	47,936	593,446
2003 Exports f.o.b.	...	...	3046	79.2	190	41.7	...	...	3,606	1,023,382	1,144,342
Q1	...	...	874	21.5	55	14.2	...	...	1,107	333,292	368,965
Q2	...	...	751	19.6	39	7.4	...	...	958	252,000	278,952
Q3	...	...	677	18.0	45	10.3	...	...	945	278,518	306,822
Q4	...	...	744	20.2	51	9.8	...	...	596	159,572	189,603
2003 Imports c.i.f.	226,681	799.3	962	29.0	4,716	355.8	5,217	1,087.7	1,578	347,447	2,619,307
Q1	63,457	207.3	114	3.4	1,211	74.1	1,393	303.9	579	108,157	697,022
Q2	54,681	196.6	112	3.4	1,173	88.1	875	183.9	389	85,650	557,629
Q3	48,698	174.4	371	10.9	891	78.4	859	165.9	251	70,654	500,231
Q4	59,845	221.0	365	11.3	1,441	115.2	2,090	434.0	359	82,986	864,425

Source: National Institute for Statistics.

1/ Millions of U.S. dollars.

Table 40. Romania: Energy Balance, 1996-2003

		1996 Actual	1997 Actual	1998 Actual	1999	2000	2001	2002	2003
		Thousand toe 1/	Thousand toe 1/	Thousand toe 1/	Thousand toe 1/	Thousand toe 1/	Thousand toe 1/	Thousand toe 1/	Thousand toe 1/
Energy Sources - Total		53,941	51,261	46,204	41,804	41,786	44,722	45,299	45,204
Production		35,135	31,401	28,796	27,890	28,190	29,021	27,668	24,488
Coal 2/	thousand tons	8,065	6,600	5,149	4,576	5,593	6,231	6,109	6,393
Hydrocarbons		20,464	18,512	17,610	17,436	17,125	16,993	16,744	15,714
Natural gas	million m^3	13,764	11,908	11,195	11,192	10,968	10,889	10,384	10,219
Crude oil	thousand tons	6,700	6,604	6,415	6,244	6,157	6,105	6,360	5,495
Hydroelectric power	Gwh	1,579	2,916	3,009	1,574	1,272	1,285	1,381	1,172
Nuclear power	Gwh	139	...	...	447	470	1,335	1,352	1,203
Other		4,888	3,373	3,028	3,857	3,730	3,178	2,082	2,390 e
Import		18,806	19,163	15,148	10,186	10,925	12,771	13,949	14,513
Coal	thousand tons	2,773	3,429	2,495	1,730	1,917	2,302	2,749	2,778
Hydrocarbons		15,788	14,291	12,485	8,361	8,552	10,403	11,163	11,652
Natural gas	million $m.^3$	5,654	4,030	3,773	2,538	2,712	2,332	3,043	4,726
Crude oil	thousand tons	7,153	6,243	6,000	4,293	4,759	5,542	6,360	5,217
Oil products	thousand tons	2,981	4,018	2,712	1,530	1,081	448	609	819
Heavy fuel oil	thousand tons	...	...	...	1,238	396	2,081	1,151	891
Electric power	Gwh	193	89	101	95	67	66	38	83
Stocks at the beginning of the period	thousand tons	...	...	...	3,728	2,671	2,930	3,682	3,820
Destination - Total									
Consumption		50,365	45,505	40,983	36,567	36,374	37,971	36,481	37,715
Population		10,618	9,673	9,412	8,757	8,433	7,197	7,284	...
Export		...	...	...	2,317	2,947	3,334	4,999	4,190
Stocks by the end of the period		...	...	...	2,920	2,464	3,417	3,820	3,299

Source: National Institute of Statistics.

1/ Tons of oil equivalent (10,000 Kcal/kg).
2/ Without cooking coal.

Table 41. Romania: Primary Supply and Consumption of Petroleum Resources, 1980-2003

	1980	1985	1989	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Oil													
Domestic production													
Crude oil	11.5	10.7	9.2	7.9	6.4	6.4	6.4	6.3	6.1	6.0	5.8	5.6	5.5
Natural gas - liquids	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.3	0.3	0.4	0.3
Subtotal	11.9	11.1	9.6	8.3	6.8	6.8	6.8	6.5	6.3	6.3	6.1	6.0	5.8
Imports - crude oil	16.2	14.6	21.8	16.1	8.8	8.8	8.8	6.0	4.3	4.8	5.5	6.4	5.2
Exports - petroleum products	8.9	9.1	12.0	8.4	2.3	2.3	2.3	3.4	2.0	2.7	3.1	4.8	3.9
Net domestic consumption	19.2	16.6	19.6	16.0	13.3	13.3	13.3	12.8	8.6	8.4	8.5	7.6	7.1
Of which: Domestically produced (in percent)	62.0	66.9	49.0	51.9	51.1	51.1	51.1	79.7	73.3	75.0	71.8	78.9	81.7
Net import (in percent)	38.0	33.1	50.0	48.1	48.9	48.9	48.9	20.3	26.7	25.0	28.2	21.1	18.3
Natural gas													
Domestic production													
Non-associated gas	25.5	31.9	25.3	17.5	12.8	12.8	12.8	9.1	12.7	12.7	12.2	11.7	11.4
Associated gas	7.0	7.0	7.0	5.3	5.3	5.3	5.3	5.3	1.5	1.2	1.4	1.3	1.2
Subtotal (bcm) 1/	32.5	38.9	32.8	22.8	18.1	18.1	18.1	14.4	14.2	13.9	13.6	13.0	12.6
Imports	1.6	1.8	7.0	5.8	7.3	7.3	7.3	4.7	3.2	3.4	2.9	3.8	5.9
Exports	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-
Net domestic consumption (bcm)	36.6	40.9	39.8	28.6	25.4	25.4	25.4	18.6	17.4	17.3	16.5	16.8	18.5
Net domestic consumption (million toe)	30.5	34.1	33.2	23.8	21.2	21.2	21.2	14.8	13.9	13.8	13.2	13.4	14.8
Of which: Domestically produced (in percent)	88.8	95.1	82.4	79.7	71.3	71.3	71.3	77.7	81.6	80.3	82.4	77.4	68.1
Net import (in percent)	3.8	4.4	17.6	20.3	28.7	28.7	28.7	22.3	18.4	19.7	17.6	22.6	31.9
Total net domestic consumption (In millions of toe)	49.7	50.5	52.7	39.8	34.5	34.5	34.5	24.3	22.5	22.2	21.7	21.0	21.9

Sources: National Institute of Statistics.

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

Table 42. Romania: Production, Domestic Consumption, Export and Import of Oil and Oil Products, 1980-2003

(In thousands of tons)

	Crude Oil		Total Refined Product			
	Domestic Production 1/	Import	Total Supply	Total Production	Export	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	6,237	5,544	11,781	12,152	3,101	9,051
2002	6,072	6,362	12,434	13,453	4,576	8,877
2003	5,893	5,217	11,110	11,709	3,741	7,968

Source: Data provided by the Romanian authorities.

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

Table 43. Romania: Electric Power Balance, 1995-2003

(In gigawatt hours)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total resources	60,022	63,592	58,187	54,677	51,816	52,709	54,632	55,371	57,500
Domestic production	59,267	61,350	57,148	53,496	50,713	51,935	53,866	54,935	56,538
Thermal power plants	42,573	44,209	34,239	29,310	27,225	31,701	33,497	33,375	38,004
Coal	20,594	20,471	16,862	14,485	14,684	18,927	19,693	20,312	24,307
Hydrocarbons and secondary energy resources	21,979	23,738	17,377	14,825	12,541	12,774	13,804	13,063	13,697
Hydropower plants	16,694	15,755	17,509	18,879	18,290	14,778	14,923	16,046	13,629
Nuclear plants	0	1,386	5,400	5,307	5,198	5,456	5,446	5,513	4,906
Import	755	2,242	1,038	1,181	1,103	774	767	436	962
Total destinations	60,022	63,592	58,187	54,677	51,816	52,709	54,632	55,371	57,500
Gross domestic consumption - total	49,475	54,974	50,504	46,235	43,499	43,046	45,742	45,156	47,224
Population 1/	7,401	8,447	8,296	8,296	7,883	7,652	7,724	7,771	7,971
Export	456	1,435	817	715	1,930	2,260	2,077	3,290	3,046

Source: National Institute of Statistics.

1/ Without public lighting.