January 2001
IMF Country Report No. 01/22

Republic of Moldova: Recent Economic Developments

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International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

REPUBLIC OF MOLDOVA

Recent Economic Developments

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Approved by European II Department

December 1, 2000

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Moldova: Basic Data, 1995-99 1/

I. Social and demographic indicators (1999)

Area (including Transnistria)	33,800	sq. km.
Population	3.6	million
Share of urban population	42	percent
Rate of population growth	-2.8	percent
Life expectancy at birth (1995)	67.8	years
Infant mortality rate (per 1,000 live births)	18.2	
Hospital beds (per 10,000 people)	82.0	
GDP per capita, 1999 (in US$)	318	

	1995	1996	1997	1998	1999
II. Economic Indicators					
Real sector					
Nominal GDP 2/ 6/	7,545	8,828	10,118	10,366	13,713
Real GDP (percent change) 6/	-1.4	-5.9	1.6	-6.5	-4.4
Sectoral distribution of GDP (in percent of total) 3/ 6/					
Agriculture and fishing	29	27	26	26	22
Manufacturing, energy, and processing	25	23	20	17	16
Construction, services and other	46	50	54	57	62
Consumer prices (percent change)					
Period average	30.2	23.5	11.8	7.7	39.0
End-of-period	23.8	15.1	11.2	18.3	43.7
Average nominal wage (percent change)	32.1	30.7	17.5	13.9	21.6
External sector					
Exports of goods (in millions of U.S. dollars)	739	823	890	644	469
(In percent of GDP)	44.0	42.9	40.7	33.4	36.0
Imports of goods (in millions of U.S. dollars)	794	1,075	1,237	1,023	597
(In percent of GDP)	47.3	56.1	56.5	53.4	45.8
Current account (in percent of GDP)	-6.8	-9.8	-12.5	-16.7	-2.6
General government finances 4/					
Total revenue	2,556	2,797	3,431	3,428	3,745
(In percent of GDP)	33.9	31.7	33.9	33.1	27.3
Total expenditure and net lending	2,993	3,418	4,371	4,015	4,491
(In percent of GDP)	39.7	38.7	43.2	38.7	32.7
Overall balance (cash)	-437	-621	-940	-588	-746
(In percent of GDP)	-5.8	-7.0	-9.3	-5.7	-5.4
Money and credit (end-of-period)					
Net foreign assets 5/	233	271	484	-620	163
Domestic credit	1,523	1,804	2,305	3,297	3,414
Claims on general government (net)	489	469	804	1,536	1,778
Broad money (M3)	1,244	1,434	1,922	1,765	2,504
Memorandum items:					
Exchange rate, leu/U.S. dollar					
Period average	4.5	4.6	4.6	5.4	10.5
End-of-period	4.5	4.7	4.7	8.3	11.6

Sources: Moldovan Department for Statistical and Sociological Research; and Fund staff estimates.

1/ Data exclude Transnistria.
2/ GDP data include a staff-estimated allowance for the shadow economy.
3/ Based on share of value added at current prices.
4/ On a cash basis; includes the Social Fund and extrabudgetary funds, and project loan spending.
5/ At actual exchange rates.
6/ Preliminary data for 1999.

I. Introduction and Background

1. Moldova is a small landlocked country in the northeastern Balkans, bordering Ukraine in the north, east, and south and Romania in the west. A moderate continental climate with mild winters and rich, fertile soils have favored agricultural production and processing, which currently account for about 40 percent of GDP. Following the collapse of the Soviet Union and Moldova's independence in 1991, output dropped sharply and inflation soared, but, through mid-1998, substantial progress was made in financial and macroeconomic stabilization, as part of Moldova's transformation to a market economy. Further productivity gains were sought through increased emphasis on structural reform in the main productive sectors that would restore investor's confidence, growth and increase the ability to withstand external shocks.

2. When the Russian crisis hit in August 1998, output declined further, macroeconomic imbalances surged and the financial situation became fragile. In 1999, an unprecedented fiscal adjustment and tight monetary policy attempted, with some success, to contain the external shock. As a result, the external current account deficit contracted considerably. Output also bore some of the adjustment and fell by close to 4.5 percent in real terms. As prudent policies continued in 2000, a slight rebound of output emerged in the first half of the year, despite new shocks in the form of a drought and increased energy prices.

3. The 1999 fiscal adjustment was approximately 6 percent of GDP; it came largely through rationalization of public expenditures, notably by reducing inefficiency in the social sectors. The fiscal stance was consolidated in 2000, by another one-and-a half percent of GDP. Despite the retrenchment, a redirection of expenditures to targeted social compensation, clearance of domestic and external payment arrears, and a long-awaited wage increase were accomplished.

4. The external adjustment involved an initial narrowing—and subsequent widening—of the trade deficit in 1999 and 2000, respectively, as exports collapsed and imports started to recover in 2000 due to increased demand. With the buy-back on extremely favorable terms of some debt instruments and little new borrowing, Moldova's external public and publicly guaranteed debt declined by about US$ 150 million in 1999, although new energy payment arrears were accumulated. Debt indicators deteriorated, however, with the depreciation of the exchange rate and a continued drop in output and exports. The stock of energy arrears was reduced markedly in 2000 with an equity swap involving Moldovagas shares and the issuance of promissory notes to Russia's Gazprom. Furthermore, agreements were reached on the rescheduling of arrears on public and publicly guaranteed debt. At the end of September 2000, the total stock of public and publicly guaranteed debt stood at about US$ 1 billion or 72 percent of GDP, while energy arrears added an estimated US$ 300 million, or 21 percent of GDP.

5. Monetary policy has remained conservative throughout the period. Inflation shot up in the wake of the Russian crisis when the leu depreciated sharply, with twelve-month inflation peaking at 54 percent in October 1999. By December 1999, inflation had decreased to 40 percent (on end-year basis). In 2000 inflation was much lower, reflecting further monetary tightening. Twelve-month inflation fell to 29 percent by end-September 2000. International

reserve levels reached a low of US$ 140 million by end-1998. Since then the National Bank of Moldova has rebuilt the reserves to US$ 190 million as of end-September 2000, while paying large amounts in foreign debt service (US$ 67 million in the first three quarters of 2000). Throughout the period the NBM has allowed the exchange rate of the leu to float freely. In real terms, by end-September 2000, the leu had depreciated by roughly 35 percent vis-à-vis the U.S. dollar compared to its pre-August 1998 level.

6. Progress in structural reforms had been uneven and slowed down further in mid-1999 due to political tensions. Renewed efforts on the structural front were made in 2000, when parliament finally approved the privatization plan for five major wineries and the tobacco sector, three electricity distributing companies were sold to a strategic foreign investor, the land privatization program was successfully concluded, and the civil code was passed in its first reading by parliament.

II. Recent Economic Developments

A. Real Sector Developments

Output and demand

7. Real GDP[1] is estimated to have fallen on average by around 10 percent per year since 1991, bringing the cumulative decline to about 60 percent by 2000 (Figure 1). The declines in 1998 and 1999 reflected a collapse in exports following the Russian crisis in August 1998, as well as a slump in domestic demand (Table 1). In 2000, the economy again faced external shocks; this time in the form of a drought and rising energy prices. On balance, real GDP is expected to remain flat in 2000, or grow marginally at most, reflecting a drop in agricultural output but a recovery in industrial production.

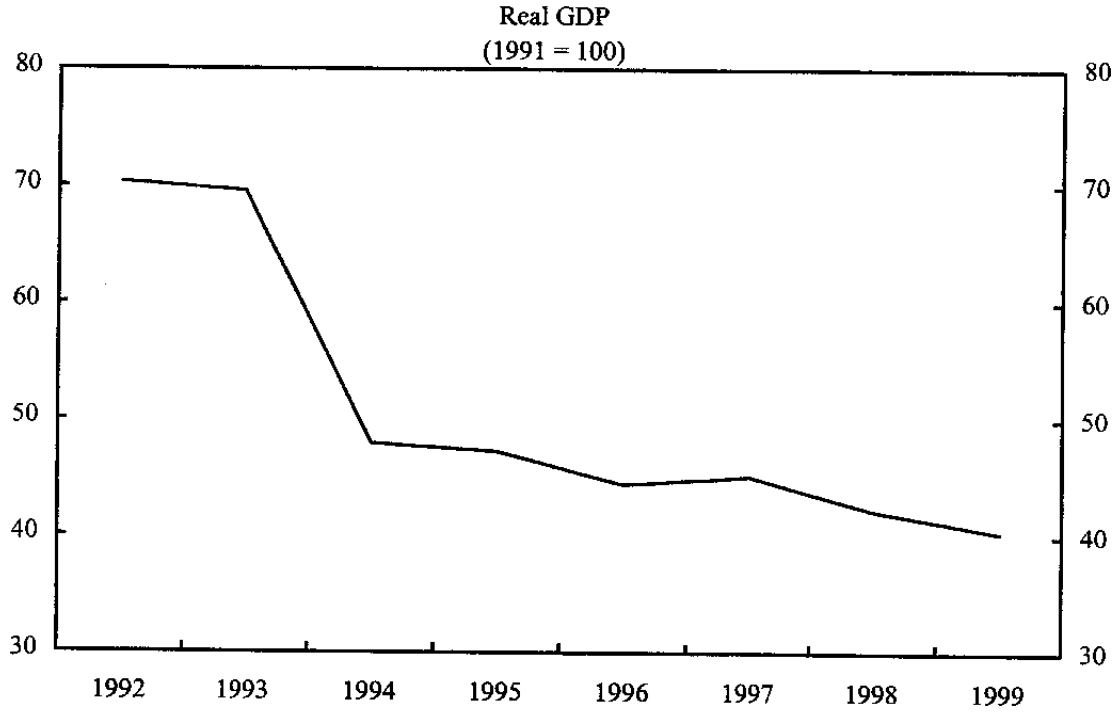
Table 1. Gross Domestic Product, 1993-2000

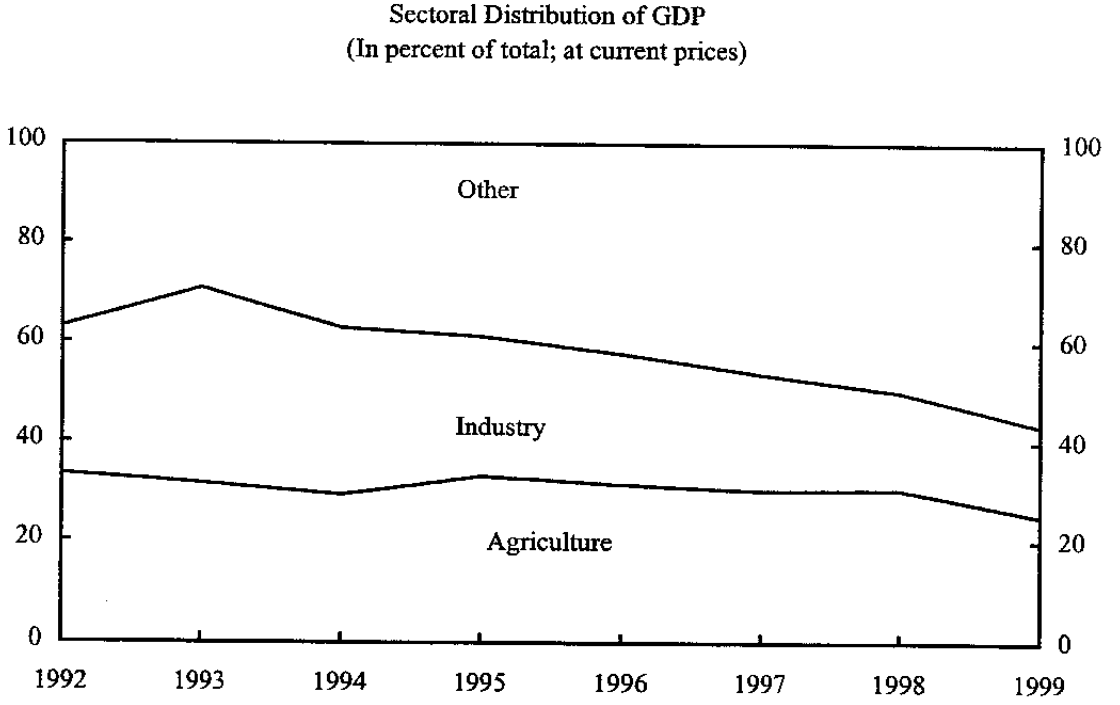
	1993	1994	1995	1996	1997	1998	1999	2000
							Prel.	Jan.-Jun.
Real GDP (percentage change)	-1.2	-30.9	-1.4	-5.9	1.6	-6.5	-4.4	1.7
Nominal GDP (in millions of lei)	2,137	5,505	7,545	8,828	10,118	10,366	13,713	6,463

Source: Moldovan Department for Statistical and Sociological Research; and Fund staff estimates.

[1]Although national accounts data are compiled according to the *1993 SNA* methodology, the coverage of the reporting system remains narrow and a sampling system is not yet in place. The GDP used in this report excludes Transnistria, but includes an additional adjustment for the shadow economy.

Figure 1. Moldova: Output Indicators, 1992-1999





Source: Moldovan Department of Statistics; and Fund staff estimates.

8. On the demand side, rough estimates of GDP by expenditure indicate a drop in the share of final consumption by around 6 percent of GDP in 1999, reflecting a dramatic fiscal correction and a deterioration of the purchasing power of the population. Gross capital formation also declined in 1999 by 3 percent of GDP. The external resource imbalance was drastically reduced in 1999 to nearly 10 percent of GDP, reflecting a major drop in imports (by over 40 percent) that outweighed a further decline in exports. (Appendix Table 29). In the first half of 2000, with incomes augmented by large worker remittances, final consumption increased by over 10 percent of GDP while gross capital formation dropped by 8 percent of GDP, as compared to the same period last year. The trade balance worsened in the first half of 2000; the recovery in imports was stronger than that in exports, with the latter recovering only slowly because of the drought.

9. On the supply side, agricultural production declined by 8 percent in 1999 relative to 1998. This reflected a 10 percent decline in crops and a 3 percent decrease in livestock. The former was mainly due to a drop in the production of grain, sugar beets, and fruits (Appendix Tables 30 and 31), while the latter was mainly concentrated in pig and sheep production (Appendix Table 32). Industrial production fell further by 12 percent in 1999, mainly during the first half of the year, while the second half saw a modest recovery (Appendix Tables 33 and 34). The decline was severe in the heavy industry sector, while output in light industry grew. The food processing sector continued to experience the impact of the Russian crisis, while incomplete reforms continued to limit export potential to non-CIS markets. In the first half of 2000, agricultural production fell further by 4 percent over the same period in 1999, while total industrial production increased by 8 percent.

Impact of Drought on GDP

10. In May-June 2000 Moldova experienced a severe drought; precipitation amounted to only 30 percent of the usual level for the period. Since the agricultural sector accounts for one quarter of GDP, and agro-processing is the dominant part of the country's industry, the drought is expected to reduce real output of the Moldovan economy. Our estimate of the impact on GDP growth is based on the information from surveys of agricultural farm enterprises conducted for the drought assessment project financed by USAID, as well as available GDP data for the first half of 2000.

11. Two surveys were carried out: one shortly after the drought in July, and the second in late August when most of the harvest had just been completed. At the time of the second survey expectations were generally more optimistic than before the harvest; farmers reported a higher estimated annual crop output than initially. In order to estimate the impact of the drought on GDP growth, the 1999 actual output and 2000 expected output reported in Table 2 were weighted by 1999 unit prices. The resulting drop in agricultural output was estimated to be 3.7 percent. The impact on the agro-processing sector is assumed to be one-to-one,[2]

[2] The agro-processing sector relies for almost 100 percent on domestically produced agricultural products for its input. Therefore, output loss in agriculture is assumed to affect agro-processing to an equal degree.

resulting in an adverse impact on real GDP of about 1½ percentage points. An 8 percent growth rate is assumed for industries other than agro-processing and activity in the service sector is assumed to be unchanged in real terms, in line with developments during the first six months. With these assumptions, overall GDP is projected to remain flat in 2000, although some growth would be inside the margin of error.

Table 2. Output of Principal Agricultural Crops Across Surveyed Farms
(in thousand tons)

Crops	Average 1995-1999	Actual 1999	Expected 2000	1999 Unit Prices ($US/metric tons)
Winter wheat	940.2	797.8	711.3	56
Barley	119.5	182.6	175.7	56
Maize	1198.6	1140.3	940.7	57
Leguminous plants	53.3	58	43.3	124
Sugar beet	1586.5	1008.8	1367.4	16
Sunflower	228.1	285.6	262.5	124
Soy-bean	5.5	13.7	18.8	124
Tobacco	23.4	22.4	29.2	658
Vegetables	429.9	488.8	437.0	86
Fruits and berries	590.8	136.3	208.7	106
Grapes	545.6	464.9	429.5	116

Source: "Assessment of the Negative Impact of the 2000 Drought in the Republic of Moldova", Center for Strategic Studies and Reforms, and Center for Private Business Reform, September 2000

Labor markets

12. Official labor statistics are not regarded as particularly reliable. Unemployed workers were officially recorded at 34,900 at end-1999, or less than 2 percent of the civilian work force (Appendix Table 35). By July 1, 2000 the number of unemployed decreased to 33,200, which was near the level of mid-1998. However, in 1999 a new labor force study according to ILO methodology produced an unemployment rate of 11.1 percent. This number may still understate unemployment, as unpaid leave (officially about 140,000), and part-time employment (officially 28,000), compounded by payments difficulties (arrears and payments-in-kind) constitute a well documented and widespread phenomenon.

13. Agriculture continues to be the largest employer (in reporting enterprises of 20 or more workers), at over 30 percent of total employment, followed by education and manufacturing at 16 percent and 13 percent, respectively. Employment appears to be shifting to the informal sector (and/or small businesses), though, as overall employment reported has declined by over 30 percent since 1995 (Table 3).

Table 3. Employment by Sector, 1995-99
(in thousand)

	1995	1996	1997	1998	1999
Agriculture, hunting and related services	560.3	491.3	444.9	389.1	268.4
Manufacturing Industry	185.5	161.2	145.5	128.5	111.3
Electric energy, gas and water supply	20.9	21.6	20.1	22.3	22.2
Construction	50.8	50.8	42.2	35.6	28.9
Wholesale and retail trade	49.0	58.0	49.4	41.2	34.0
Transport, warehousing and Communications	48.5	64.4	60.2	57.5	52.0
Financial activity	8.0	9.5	8.6	8.1	7.1
Real estate activity	33.2	33.1	27.9	29.0	27.8
State administration	26.8	30.3	48.0	52.0	49.0
Education	154.8	153.6	149.6	145.6	135.3
Health and Social services	93.9	92.9	89.7	87.0	79.2
Other	55.1	44.6	39.9	37.1	30.4
Total	1,286.8	1,211.3	1,126.0	1,033.0	845.6

Source: Data provided by the Moldovan authorities.

Wages and Prices

14. Official economy-wide wage data indicate an average monthly wage in 1999 of Mdl 305, or US$29, down from US$47 in the previous year as a result of the depreciation of the leu. The trend to widened wage differentials continued in 1999, with wages in the financial sector averaging more than 3 times the level in the next highest industry group (Appendix Table 36). The lowest wages were recorded in forestry (around US$16/month), with wages in the health and education sectors the next lowest (around US$18/month). The average monthly wage in the first five months of 2000 reached Mdl 351, remaining roughly stable in dollar terms.

15. Reflecting a disciplined monetary policy, inflation had been on a steady downward path since the introduction of the leu in 1993 until the Russian crisis in August 1998 (Appendix Table 37). However, since then inflation picked up, reaching 39.3 percent (average CPI) in 1999. Prices for food, non-food, and services rose by 33 percent, 38 percent and 63 percent, respectively. The much sharper rise in the price of services reflected adjustments in tariffs for energy and utilities and telecom tariffs. In the first ten months of 2000 prices rose by 16 percent, which is 12 percentage points less than during the same period a year earlier.

B. Fiscal Sector Developments

Background

16. Between 1995 and 1998, Moldova's overall fiscal position severely deteriorated (Table 4 and Figure 2). The fiscal deficit[4] on a commitment basis was very high; 7.7 percent of GDP in 1995, oscillating between 11.2 percent of GDP in 1996 and 6.4 percent of GDP in 1997, and reached 10.6 percent of GDP in 1998. The cash deficit fell slightly from 5.8 percent of GDP to 5.7 percent of GDP in the same period, mostly because of non-payment of expenditure obligations that led to an increase in the stock of arrears on pensions and wages. The stock of those arrears increased markedly from 7.9 percent of GDP in 1995 to 10.6 percent of GDP in 1998.

17. Total revenues fluctuated between less than 32 percent of GDP (in 1996) and 34 percent of GDP (in both 1995 and 1997). In 1997, in particular, positive economic growth widened the size of the tax base, thereby increasing total revenue collection. However, over all, collection enforcement remained poor and the stock of tax arrears increased steadily to 14.3 percent of GDP in 1998 (from 10.9 percent of GDP in 1995). Expenditures, on a cash basis, oscillated in the same period around 40 percent of GDP while, on a commitment basis, expenditures fluctuated around 42 percent of GDP. Only in 1997, did the ratio of public outlays to GDP fall significantly (to slightly more than 40 percent). As collection improved, higher revenues were partially used to clear previously accumulated domestic expenditure arrears equal to 2.9 percent of GDP.

18. In the period 1995-97, the bulk of financing requirements was met by external sources, varying between 5.1 percent of GDP in 1996 and 2.9 percent of GDP in 1997. Domestic financing obtained by sales of treasury bills to both commercial banks and nonbank institutions increased steadily from 1995 to 1997, when it reached 2.7 percent of GDP. In 1998, both external financing and financing from commercial banks and nonbank institutions turned negative and reliance on central bank financing increased markedly to 7.9 percent of GDP, up from 1.4 percent of GDP in 1997. Finally, privatization receipts have contributed to the financing of the deficit since 1996, reaching a high point (2.4 percent of GDP) in 1997.

Overall Fiscal Performance in 1999 and in the first three quarters of 2000

19. In 1999 Moldova achieved an impressive and unprecedented reduction in the fiscal deficit, largely through a sizeable rationalization of public spending. The fiscal balance on a commitment basis improved by nearly 5 percent of GDP compared to 1998, reaching 5.3 percent of GDP. The cash deficit declined to 5.4 percent of GDP, down from 5.7 percent of GDP in 1998. The upward trend in expenditure arrears was sharply reversed, as a result of

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[4] The time series of Moldova's consolidated general government budget have been recently revised in order to include off-budget expenditures related to foreign project loans. Privatization receipts up to 1999 were also reclassified as a financing item. See also Appendix Table 38.

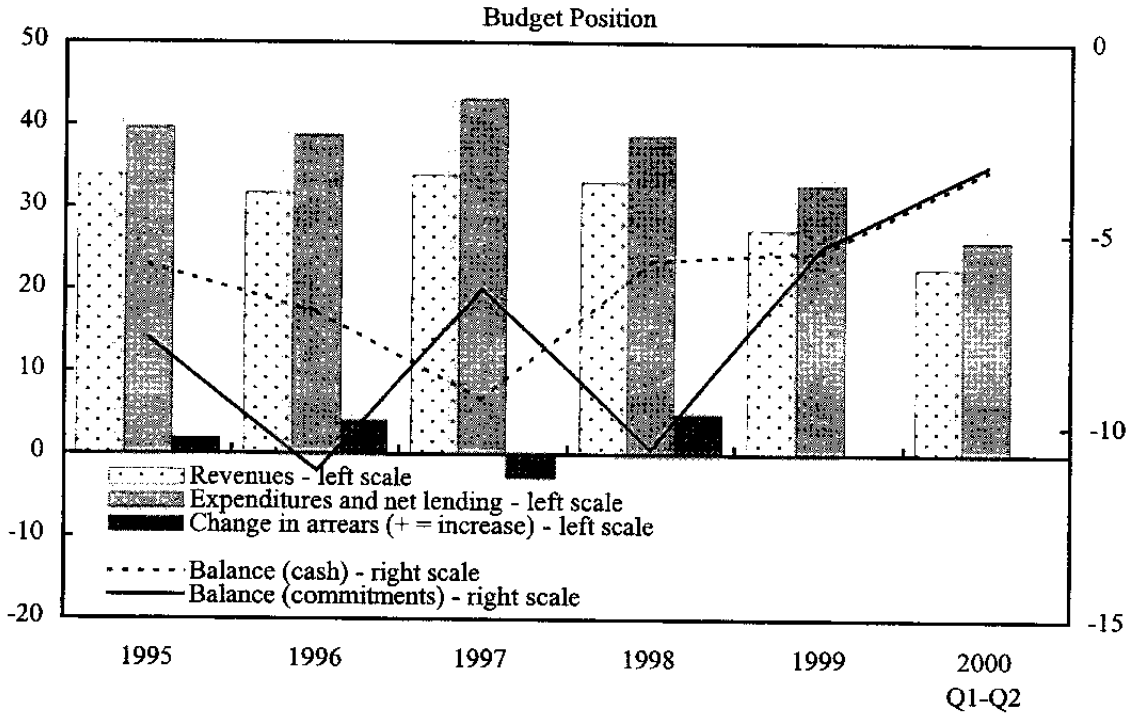
Table 4. General Government Budget, 1995-2000
(In percent of GDP)

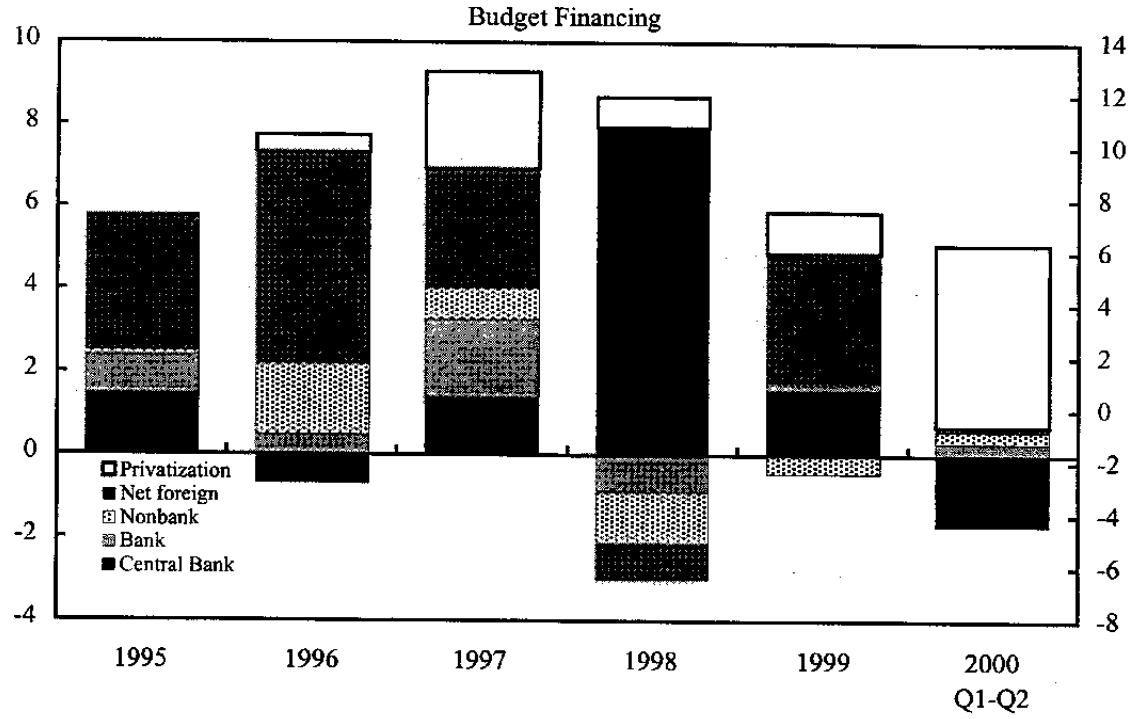
	1995	1996	1997	1998	1999	2000 1/
Revenues	33.9	31.7	33.9	33.1	27.3	22.7
Of which: tax revenues	28.8	27.4	29.9	28.3	22.2	19.3
Expenditures (cash)	39.7	38.7	43.2	38.7	32.7	26.0
Of which: interest payments	3.5	2.8	3.7	4.1	6.6	5.5
Change in arrears	1.9	4.1	-2.9	4.9	-0.1	-0.1
Cash deficit	5.8	7.0	9.3	5.7	5.4	3.3
Commitments deficit	7.7	11.2	6.4	10.6	5.3	3.2
Financing						
Net domestic	2.5	1.5	4.0	5.8	1.3	-1.2
Central Bank	1.5	-0.7	1.4	7.9	1.6	-1.7
Commercial banks	0.9	0.5	1.9	-0.9	0.2	0.3
Nonbank	0.1	1.7	0.8	-1.2	-0.5	0.3
Net foreign	3.3	5.1	2.9	-0.9	3.1	0.1
Of which: change in arrears	0.0	0.0	0.0	0.6	1.3	-25.8
Privatization receipts	0.0	0.4	2.4	0.7	1.0	4.4

Sources: Moldovan authorities; and Fund staff estimates.

1/ First two quarters.

Figure 2. Moldova: General Government Budget Position and Financing, 1995-2000
(In percent of GDP)





Source: Data provided by authorities; and Fund staff estimates and projections.

the authorities' commitment to clear the stock of arrears on pensions and wages. The stock of domestic arrears fell to 8.1 percent of GDP, down from above 10 percent in 1998. Underlying this achievement was the streamlining of expenditure commitments by more than 12 percent of GDP. The bulk of the reduction was concentrated in the bloated health care and education sectors and in public sector employment (see also Chapters III and IV).

20. In the first three quarters of 2000 fiscal policy remained tight as a consequence of the lack of external financing and the negative economic impact of the drought. Total revenues were in line with the 2000 budget, largely as a result of higher than expected transfers of profits from the central bank. Both commitment and cash expenditures were necessarily compressed given the absence of foreign financing. Priority was given to the payment of around Mdl 147 million of arrears on pensions and wages, to debt service obligations and to the planned increase in public sector wages, especially in the social sector.

21. In 1999, deficit financing came primarily from central bank credit to the government and World Bank loans. Around 30 percent of total financing was met by central bank credits in the amount of 1.6 percent of GDP. Other domestic financing was slightly negative (-0.3 percent of GDP) in 1999. Net foreign financing turned positive as well, as opposed to 1998, and contributed to the deficit financing by 3.1 percent of GDP. Privatization receipts in the amount of 1 percent of GDP were used to fill the remaining financing gap.

22. In the first three quarters of 2000, as no external financing was available, the budget deficit was financed mainly by privatization receipts and the issuance of treasury bills to banks. This allowed the net repayment of central bank credits to the government in the amount of 1.7 percent of annualized GDP.

Revenues

23. In 1999, total revenues of the general government decreased markedly compared to 1998. As a share of GDP, revenues declined by nearly 6 percent to 27.3 percent, down from 33.1 percent in 1998. Tax revenues fell from 28.3 percent of GDP in 1998 to 22.2 percent of GDP in the following year. This fall in revenue was primarily due to a large reduction in netting operations, which were not compensated by a rise in cash collection; tax offsets fell from 6.7 percent of GDP in 1998 to 2.3 percent of GDP in 1999 (or from 23.5 percent to 10.2 percent as a share of total tax revenues). Excluding these netting operations, tax revenues still fell by 1.7 percent of GDP relative to 1998, as a consequence of mixed tax collection performance and a relatively sharper drop in income related revenues (social fund contributions and VAT). The stock of tax arrears went up to Mdl 1.5 billion, but its share on GDP declined from 14.3 percent in 1998 to 12.5 percent in 1999.

24. In 1999, the bulk of the reduction in tax revenues came primarily from indirect taxes which reached 10.1 percent of GDP, down from 14.5 percent of GDP in 1998 (Appendix Table 39). VAT revenues fell to 6.9 percent of GDP, down from 10.8 percent of GDP in 1998. Social fund contributions showed a marked decline as well, from 7.6 percent of GDP in 1998 to 5.7 percent of GDP in 1999. However, foreign trade taxes increased from

1.1 percent of GDP to 1.7 percent of GDP despite the compression in imports, as a result of improvements in collection.[5]

25. Nontax revenues and grants increased from 4.8 percent of GDP in 1998 to 5.1 percent of GDP, as Mdl 112 million in grants were available in 1999. However, excluding grants, nontax revenues fell to 4.3 percent of GDP. The decrease in nontax revenues is primarily a consequence of the decline, relative to 1998, in central bank profits transferred to the general government budget.

Expenditures

26. On a cash basis, expenditures fell to 32.7 percent of GDP in 1999, down from 38.7 percent in 1998. However, on a commitment basis, expenditure declined more rapidly from 43.7 percent of GDP to 32.6 percent of GDP. This reduction in public spending was achieved primarily through the curtailment in current expenditures, including a rationalization of energy consumption by budgetary institutions, the implementation of structural reforms for local governments, and the elimination of excess capacity in the health and education sectors.[6] Capital spending was also streamlined with the elimination of non-priority projects. As a share of GDP, capital expenditures fell from 2 percent in 1998 to 0.8 percent in 1999 and the public outlays associated to World Bank project loans increased to 2.7 percent of GDP, up from 2.0 percent of GDP. See also Appendix Table 40.

27. Rationalization of social spending brought Moldova's share of GDP devoted to health care and education in line with the world average and with the rest of transition countries. Education spending (on a cash basis) reached 4.2 percent of GDP, down from 6.1 percent of GDP in 1998. Health care expenditures (also on a cash basis) declined from 3.8 percent of GDP in 1998 to 2.4 percent of GDP in 1999. Excess capacity in the social sector was reduced by closing over 60 underutilized local hospitals, streamlining public employment by 12,500 in education and 5,000 in the health sector (mainly at the local level), increasing the average number of students per class to 24, raising pre-school fees in order to recover 50 percent of the cost of food, and introducing accommodation fees for both graduate and post-graduate students.

28. Public sector wages that had remained frozen in nominal terms in the period 1995-99 were increased by an average 30 percent during 2000, especially in the social sector. In 1999, total public employment was reduced by more than 10 percent compared to 1998, thereby contributing to the overall reduction in expenditure commitments. A partial hiring freeze has been introduced, which allows to hire only one civil servant for each two that retire or leave. The reduction in the wage bill brought a decline in the public expenditure categories not

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[5] See Appendix Table 45 for a summary of the tax structure in Moldova and a recent changes since 1998.

[6] See Appendix Table 46 for a summary of the main policy measures to rationalize public expenditures since 1998.

related to the social sphere. The only expenditure item that increased markedly is interest spending; this reached 6.6 percent of GDP in 1999, up from 4.1 percent of GDP in 1998. Moreover, the composition of interest spending changed over time. The share of expenditures for foreign interests rose to 52 percent of the total, up from 41 percent in 1998 as a result of the depreciation of the leu.

29. Several institutional reforms aimed at rationalizing public sector operations and strengthening intergovernmental fiscal relationships have been implemented since 1998. The Law on the Administrative and Territorial Reform reduced the number of sub-national government levels to 11 regions, from the existing 38 rayons, eliminating overlapping functions and helping to streamline public sector employment and reducing the size of the wage bill. In 1999, the Law on Local Public Finance assigned expenditure functions and revenue sources to the new regional and local governments, increasing the degree of decentralization and autonomy with a view to enhance the degree of efficiency of public spending and to reduce regional inequalities.

Social Fund Operations

30. The Social Fund remained an area of concern for the consolidated budget during 1999 and in the first half of 2000. Despite the reform of the pay-as-you-go pension system and the replacement of the many existing compensation and privilege schemes with a better targeted subsidy scheme for energy consumption in collaboration with the World Bank, the state budget transfers to the Social Fund were still very large. In 1999 slightly less than half of the cash deficit of the consolidated budget or 0.9 percent of GDP was transferred to the Social Fund to pay for social assistance benefits (including energy compensations). In the first half of 2000, the state budget transfers rose to 1.3 percent of GDP, the same level of 1998 (Table 5 and Figure 3).

31. In 1999 overall Social Fund revenues, including transfers from the State budget, fell dramatically compared with 1998. As a share of GDP, Social Fund revenues reached 6.6 percent in 1999, down from 9.1 percent in 1998 (a relative decline of 26 percent) and declined in the first half of 2000. The decrease in revenues was caused by a reduction in both social contributions and state budget transfers. The former fell from 7.7 percent of GDP in 1998 to 5.7 percent of GDP in 1999. The latter reached 0.9 percent of GDP in 1999, down from 1.4 percent of GDP in 1998. Lower social contribution collection was due, in part, to the reduction of in-kind collection which fell from 2.9 percent of GDP in 1998 (31.8 percent of total revenues) to 1.6 percent of GDP in 1999 (24 percent of total revenues), in line with the aim of their complete elimination in 2001.

32. In 1999 Social Fund expenditures (including pensions, family allowances, unemployment benefits and other minor social assistance benefits and subsidies) were still the second largest expenditure category in the general government budget, accounting for slightly less than one quarter of the total. Almost 85 percent of total Social Fund expenditure is accounted for by pensions. On a cash basis, Social Fund expenditures fell by 2.3 percent of GDP in 1999, to 6.5 percent of GDP and reached 6.2 percent of GDP in the first half of 2000. This trend primarily reflects the freeze in the nominal value of pensions and the slight decline in the number of beneficiaries of social insurance. On a commitment basis, however,

Table 5. Social Fund Operations, 1995-2000
(In percent of GDP)

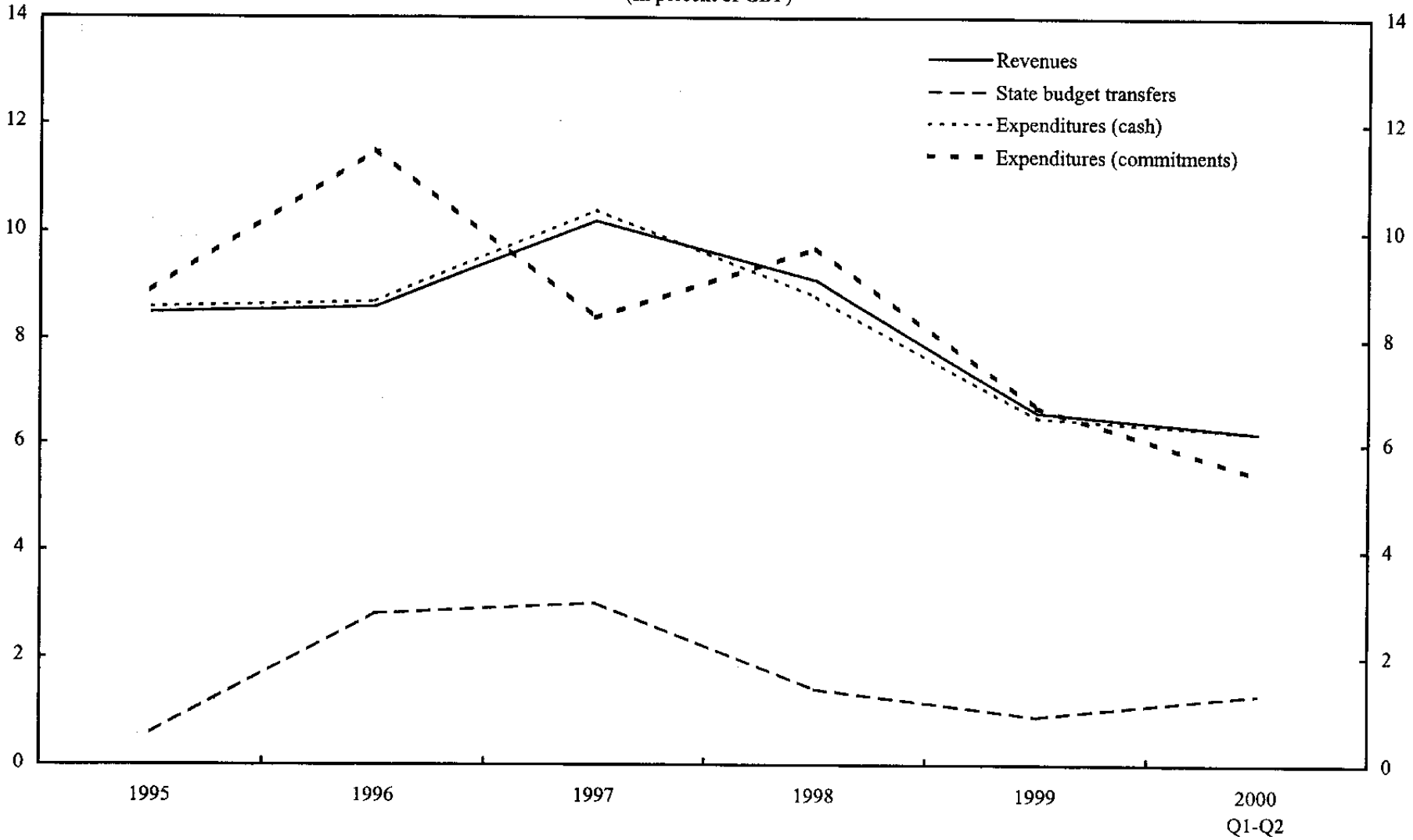
	1995	1996	1997	1998	1999	2000 1/
Revenues	8.5	8.6	10.2	9.1	6.6	6.2
Of which: contributions 2/	7.9	5.9	7.2	7.7	5.7	4.9
Of which: state budget transfers	0.6	2.8	3	1.4	0.9	1.3
Total expenditures (cash)	8.6	8.7	10.4	8.8	6.5	6.2
Of which: pensions	6.8	6.7	...	7.8	5.6	5.5
Expenditures (commitments)	8.9	11.5	8.4	9.7	6.7	5.4
Balance (cash)	-0.1	-0.1	-0.2	0.3	0.1	0
Memorandum item:						
In-kind contributions	...	...	...	2.9	1.6	0.8

Sources: Moldovan authorities; and Fund staff calculations.

1/ Includes fines and penalties.
2/ First two quarters.

Figure 3. Moldova: Social Fund Budget Position, 1995-2000

(In percent of GDP)



Sources: Moldovan authorities; and Fund staff estimates.

expenditures fell from 9.7 percent of GDP in 1998 to 6.7 percent of GDP in 1999 and continued to decline to 5.4 percent of GDP in the first half of 2000. As a consequence, the stock of arrears of the Social Fund reached 1.5 percent of GDP in the first half of 2000, down from 2.7 percent of GDP in 1998 and 2.3 percent of GDP in 1999.

C. Money and Banking

Monetary policy and developments

33. Monetary policy faced a difficult challenge in 1999. It needed to find the right balance between containing inflation and restoring confidence in the leu in the aftermath of Russian financial crisis of August 1998 on the one hand, and accommodating the impact of this large external shock to prevent an all-too-dramatic output loss on the other. This task was further complicated by recurrent domestic political tensions, as well the need to service the country's large external debt obligations.

34. **The results for 1999 were mixed**; reserve money as well as broad money (M3) grew by over 40 percent in 1999 (Table 6 and Appendix Tables 41 and 42), twelve-month inflation accelerated to 44 percent by year-end and the exchange of the leu vis-à-vis the U.S. dollar depreciated by 40 percent. Figure 4 underscores the close relationship between money and inflation in Moldova.

35. Half of the increase in reserve money in 1999 stemmed from central bank credit to the government. This reflected a burst in credit to the government in April and again in December, with the latter used to finance external debt obligations. In the second half of 1999, large inflows of foreign exchange allowed the NBM to start rebuilding its stock of international reserves, which had fallen sharply in the months following the Russian crisis. Reserves increased to US$181 million by end-1999, up from US$143 million at end-1998. The NBM, however, did not fully sterilize these inflows through open market operations, partly out of concern that this would reverse the downward trend in interest rates in the treasury bill market (see below).

36. **Within the overall context of continued economic and, even more so, political uncertainty, the public's demand for domestic money (M2) did not recover in 1999, although it did stabilize.** Demand for overall broad money (M3), however, did almost return to its pre-crises level, indicating a further dollarization in 1999. The dollarization of the economy, and of the banking sector in particular, had deepened considerably following the Russian crises. The share of foreign currency deposits in M3 increased further to almost 30 percent by mid-1999 (compared to levels of around 10 percent in early 1998), about equal to the share of deposits denominated in lei.

37. **Monetary policy was successfully tightened in the first half of 2000, however**; reserve money grew by less than 8 percent during this period, and broad money by 11 percent. As a result, the rate of depreciation of the exchange rate slowed down and the rate stabilized in the second quarter. Money demand increased markedly in the third quarter. Strong foreign exchange inflows caused the leu exchange rate to appreciate. The NBM chose to absorb this excess supply of foreign exchange to accommodate the strong demand for lei

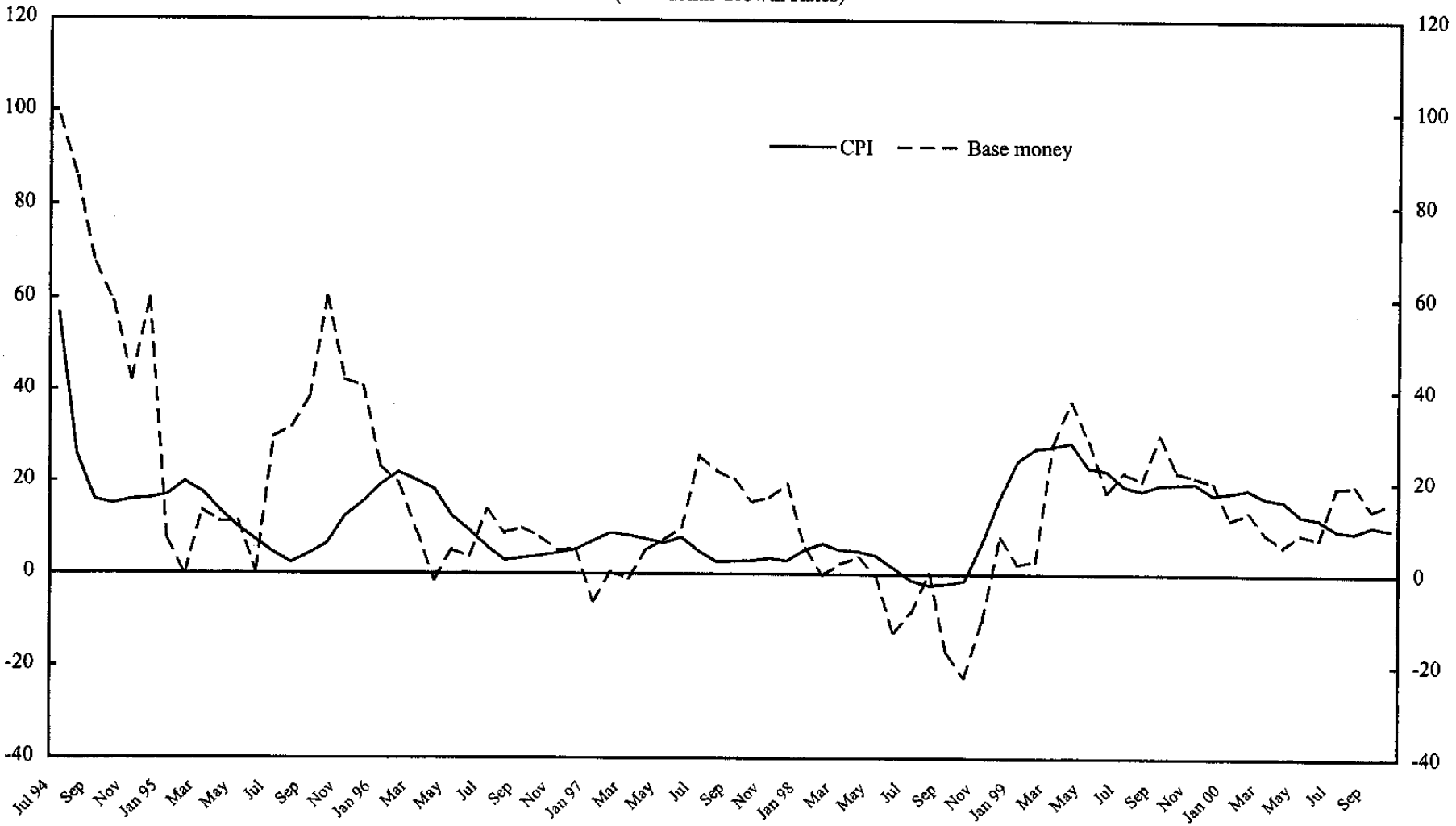
Table 6. Moldova: Key Monetary Indicators, 1995-2000

	1995	1996	1997	1998	1999	2000 Jan.-Sep.
	(Percent change)					
Reserve money	41.5	9.3	31.5	-5.6	41.4	17.8
Domestic broad money (M2)	63.8	16.7	34.6	-21.9	33.4	27.1
Broad money (M3)	65.2	15.3	34.1	-8.7	42.6	27.1
	(Ratios)					
Velocity, M2 (end-of-period)	6.8	6.8	5.8	7.6	7.6	7.2
Velocity, M3 (end-of-period)	6.1	6.2	5.3	5.9	5.5	5.2
Currency/M3	0.51	0.51	0.51	0.49	0.45	0.42
Foreign currency deposits/M3	0.11	0.10	0.10	0.23	0.28	0.28
Bank reserves/total deposits	0.23	0.17	0.16	0.23	0.27	0.23
Money multiplier (M3/reserve money)	1.59	1.68	1.71	1.66	1.67	1.80

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

Figure 4. Moldova: Inflation and Base Money Growth, 1994-2000

(Six-Month Growth Rates)



Sources: Moldovan authorities; and Fund staff estimates.

balances and lei credits. As a result, base money grew by 9 percent in the third quarter and M2 by 15 percent. Central bank credit to the government declined in the first nine months of 2000, as the government was able to repay some loans extended in 1999. The strong foreign exchange inflows allowed the NBM to further rebuild its stock of international reserves to US$190 million by end-September 2000, despite large debt service obligations.

38. **Throughout much of 1999, credit developments also reflected the depressed state of the economy, as well as the banks' general reluctance to lend.** Bank lending to enterprises and individuals fell by 7 percent in 1999, which in real terms implied a one-third drop. Credit expanded by 17 percent in the first nine months of 2000, however, slightly higher than the rate of inflation. This first increase in real credit since 1996 appears to signal a turnaround in economic activity. Foreign currency denominated loans accounted for almost half of the banks' credit portfolios by mid-2000 (compared to about 20 percent before the Russian crisis). Banks did gradually return to the market for Treasury bills, however, which they had left in 1998. This took place notably in the second half of 1999 and the first of half of 2000 when the liquidity position of banks improved steadily, partly associated with the increase in minimum capital requirements that brought in new funding.

39. **Interest rates on treasury bills**, which had risen sharply in 1998, remained at around 50 percent for 3-month bills throughout the first half of 1999, reflecting weak demand for these titles as well as higher inflation. As demand for treasury bills improved slowly but steadily in the summer; interest rates fell to around 20 percent at the end of the third quarter (well below the twelve-month rate of inflation). Demand for maturities longer than three months remained virtually non-existent, however. Interest rates on government securities rebounded to close to 30 percent at year-end in response to the political crisis in November, but they resumed their downward trend in 2000 in response to a period of relative economic and political calm. By end-September, interest rates on three-month Treasury bills had again fallen to around 20 percent. The NBM base lending rate generally followed market developments, but rate adjustments have been much less pronounced.

40. **Commercial bank lending rates** moved much less than the interest rates on government securities; they had risen less sharply in 1998 and came down much slower in 1999/2000. Rates for three-month loans had gone up to close to 40 percent in early 1999, compared to levels of around 30 percent in early 1998, and they gradually declined to around 30-35 percent in late 1999. Apparently, commercial banks adjusted volumes more than prices in response to economic developments. Another factor might have been that bank lending rates are more closely linked to the NBM base rate than to interest rate developments in the market for government securities. Lending rates suggest a considerable risk premium when compared to government securities, even for such short maturities as three-months, reflecting high credit risks. Still, in real terms, when measured by discounting nominal rates by twelve-month inflation rates, lending rates did not appear excessively high in 1999 and early 2000. For part of this period, real rates even have been negative.

41. With the gradual revival of the market for government securities, **the NBM was able to increase its use of market-based tools to manage bank liquidity**. Excess liquidity was (partially) mopped-up through repo operations and outright sales of Treasury bills to banks. Reserve requirements, which had been tightened following the Russian crisis, remained at

15 percent, with at least 13 percentage points of the required reserves to be held continuously in a separate account (instead of on banks' correspondent accounts), while cash in vaults can be counted towards the residual. In September 2000, however, banks were again permitted to hold required reserves in their correspondent accounts, with reserve averaging allowed. In addition, the rate of remuneration was gradually increased to reach 90 percent of the NBM's base rate in early 2000 and further to 100 percent of the base rate in September 2000 to reduce the burden imposed on banks. The additional liquidity requirement to hold 10 percent of a bank's assets in government securities, which had been introduced in December 1998, was reduced to 5 percent in March 1999 and abolished in February 2000. Hardly any use was made in 1999 and 2000 of the Lombard facility.

Banking system developments

42. **Moldova's banking sector is relatively small and underdeveloped.** Total banking sector assets amounted to somewhat over 20 percent of GDP in mid-2000 and total loans only to about 10 percent of GDP. In addition, while the sector is dominated by a few larger banks (the largest five banks account for two thirds of total banking sector assets), each bank as such is small; in mid-2000, total assets of the five largest banks were on average equivalent to about US$ 40 million per bank.

43. **The NBM, in 1999 and 2000, continued its policy of steadily increasing the minimum capital requirements** to stimulate banking sector consolidation, i.e., to establish a smaller number of bigger banks that would be able to compete and invest in building the institutional capacity and infrastructure to effectively support private sector development. The minimum capital requirement for banks with a general license (C) was raised from Mdl 24 million at end-1998 to Mdl 36 million as of end-June 1999, and further to Mdl 48 million as of end-December 1999 and Mdl 72 million as of end-June 2000 (about Euro 6 million)[7]. As of end-December 2000, banks with a general license must have a minimum capital of Mdl 96 million (minimum capital requirements for banks with the lowest license level (A) are one-third of the requirement for banks with a general license). At end-June 2000, total banking sector capital amounted to about US$98 million, roughly US$4½ million on average per bank.

44. **The impact of the 1998 Russian crisis continued to be felt by the banks** throughout most of 1999 and resulted in more banks being deemed problem banks. In early 1999, 14 out of a total of 22 commercial banks had been assigned to the NBM's Bank Resolution Unit (BRU), compared to 10 out of 22 banks a year before.[8] During 1999, the

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[7] A basic license (A) allows a bank to perform domestic banking services, a B license adds foreign exchange operations, and a C license further adds trust services and trading in equities.

[8] Banks assigned to the BRU comprise all banks with CAMEL ratings of 4 and 5, as well as some banks with a 3 rating. All banks assigned to the BRU are provided with an enforcement document which details the problems that need to be addressed and assign a reasonable time frame for solving them. Progress in satisfying the enforcement document is assessed

(continued...)

NBM withdrew the licenses of three commercial banks (eight in total so far). In mid-2000, the banking sector consisted of 21 banks. Of these, 12 were still assigned to the BRU, with total assets accounting for about 40 percent of total banking sector assets. At that time, only 4 banks had a CAMEL rating of 4 or 5, though, together accounting for 4 percent of total banking sector assets.

45. Somewhat paradoxically, according to official figures, the risk-weighted capital adequacy ratio is well over 40 percent, compared to a minimum required ratio of 12 (raised from 10 as of end-1999), suggesting a very healthy banking system. However, because of the required levels for the amount of regulatory capital and the effect of risk-weighting of bank assets in accordance with the Basle Capital Accord and NBM regulations based on that, the capital adequacy ratio currently has less meaning. What is does signal, is that **bank lending in Moldova is at very low levels, given the size of commercial banks' capital. Two interrelated factors are at play:**

- **A lack of attractive investment opportunities.** This is reflected also by the low average real rate of return on banks' loan portfolios. According to the banks' income statements, in 1999, the average rate of return (interest plus commission) on credits was close to 24 percent. Taking into account that about half of the loans are in foreign currencies and the interest rate on dollar denominated loans was around 12 percent, the average rate of return on leu denominated loans was roughly equal to the rate of inflation.

- **A general reluctance of banks to lend.** Apart from the low real rates of return on loans, this is caused by **deficiencies in the legal and institutional framework;** property rights and contract obligations are not easily enforceable, and the necessary infrastructure to facilitate credit risk management, such as registers of mortgages and pledged movable property, are still under development, adding to the cost of banking.

D. External Sector

46. Moldova's external position deteriorated dramatically during 1998, due to the trade impact of the Russian crisis, and the current account deficit widened to 16.7 percent of GDP. This was partially reversed in 1999 when the the current account deficit decreased to 2.6 percent of GDP, as in addition to a further decline in exports, imports fell sharply as well. The current account deficit started to widen again in early 2000, with imports recovering in line with incomes, while exports remained sluggish due to the effects of the drought. By end-1999, the level of gross official reserves had recovered to the equivalent of three month of imports of goods and non-factor services. Moldova 's overall external performance has deteriorated during the last few years. Several factors help explain this: (i) the high

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frequently. CAMEL is an acronym for Capital adequacy, Asset quality, Management, Earnings, and Liquidity, asset and liability management. The ratings range from 1 to 5, with 1 reflecting a sound and stable institution and 5 an institution which is ready for receivership/liquidation.

dependency of Moldova's exports on BRO markets, which made the impact of the 1998 Russian crisis particularly severe; (ii) adverse terms of trade shocks combined with Moldova's high dependence on energy imports; (iii) repeated instances of poor weather conditions, the most recent in 2000, which directly affected agricultural export performance.

47. The stock of public and publicly guaranteed debt increased to 72 percent of GDP by the end of 1999. Moreover, given the high dependence on energy imports, especially from Russia, Moldova accumulated external payment arrears on imported energy supplies during 1994-99. At the end of 1999, the stock of energy arrears was estimated at US$416 million (or 32 percent of GDP).

Balance of payments

48. In 1999, Moldova experienced a dramatic correction of its current account balance. The **current account deficit**, which had deteriorated dramatically to US$323 million in 1998, due to the 1998 Russian crisis, shrunk to US$34 million in 1999. This correction was both large and traumatic. With the collapse of Moldova's export markets, exports fell by a further 27 percent; exports, largely of wine, spirits and agricultural goods, to the main trading partners in the BRO (Russia, Ukraine, and Belarus) contracted by 45 percent. The associated drop in incomes, combined with the depreciation of the leu and the large fiscal adjustment caused imports, including energy, to decrease dramatically in 1999, by 41 percent (see Appendix Table 43).

49. Preliminary data for 2000 indicate a widening of the current account deficit to about 8 percent of GDP, largely due to higher imports, which started to recover in line with incomes. Exports remained more sluggish due, in part, to the effects of the drought and to some import restrictions imposed by Romania (the second main export market after Russia). In the first nine months, exports increased only by 5.1 percent over the same period in 1999, while imports increased by 34 percent. Other major developments in imports during the first three quarters of 2000 are: (i) a significant increase of imports of capital goods (31 percent in dollar terms with respect to the same period in 1999); (ii) a significant decrease of imports from Russia by 35 percent in nominal terms over the same period in 1999.

50. The depressed economic environment also impacted on the **capital account balance**. In 1999, partly due to the stalled privatization process, the level of foreign direct investment reached a low of US$34 million (2.6 percent of GDP). Large capital outflows took place in the form of debt amortization (US$107 million) and short-term capital flight (US$133 million) (see Table 7). These outflows were, however, partially offset by larger disbursements of medium and long term loans (US$197 million), in particular from the World Bank and the EBRD. In 1999, Moldova was also able to buy back, at a deep discount, US$140 million in bonds previously issued to Gazprom.

51. **In 2000, the capital account** showed an increase in foreign direct investments to US$ 143 million (10 percent of GDP), but this was partially the result of the sale of the majority share of Moldovagas to Gazprom by the government (equal to US$ 47 million) to clear energy arrears (see Table 8). Moreover, three out of five electricity distribution

Table 7. Moldova: Financing of Current Account Deficit and Amortization, 1995-99
(In millions of U.S. dollars)

	1995	1996	1997	1998	1999
Total financing needs	-173	-220	-364	-366	-141
Current account	-115	-188	-274	-323	-34
Amortization	-58	-32	-90	-43	-107
Capital flows	194	227	414	-18	70
Foreign direct investment	73	23	71	88	149
Portfolio investment (net)	0	54	237	-55	-140
Loans disbursements	132	133	100	84	197
Other capital flows (net)	-75	-9	5	-70	-141
Use of Fund resources	65	25	1	-64	5
Other financing sources	-21	-7	-50	384	71
Debt rescheduling	0	0	0	0	7
Debt arrears	20	-35	32	45	17
Energy arrears	47	68	-48	103	91
Changes in reserves	-78	-57	-52	227	-41
Errors and omissions	-10	17	17	9	-3

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

Table 8. Moldova: Quarterly Balance of Payments 1997-2000
(In millions of U.S. dollars; unless otherwise indicated)

	1997				1997	1998				1998	1999				1999	2000	
	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2
Current account	-98	-59	-63	-54	-274	-104	-78	-86	-54	-323	-15	2	0	-20	-34	-11	-38
Trade balance	-110	-72	-96	-69	-347	-119	-97	-105	-66	-387	-34	-34	-28	-33	-128	-55	-79
Exports	190	205	211	284	890	179	185	143	137	644	100	94	119	156	469	120	100
Imports	-300	-277	-307	-352	-1237	-298	-282	-259	-204	-1043	-134	-127	-147	-189	-597	-176	-178
Energy	-104	-66	-77	-91	-337	-78	-52	-55	-60	-245	-46	-26	-36	-45	-152	-52	-36
Services (net)	-20	-9	-6	-17	-52	-19	-16	-18	-21	-73	-4	1	-4	-15	-22	-5	-6
Income (net)	16	7	15	10	47	14	9	13	4	41	8	8	14	4	34	17	20
Current transfers (net)	16	16	24	22	77	19	26	23	30	98	14	26	18	24	82	32	27
Capital and financial account	41	220	48	16	324	45	6	-9	-37	3	-37	1	-6	1	-42	15	133
Direct investment (net)	14	16	21	20	71	13	32	16	25	86	7	-1	17	11	34	47	19
Portfolio investment (net)	13	223	7	-6	237	0	-12	-6	-37	-55	-6	-135	1	0	-140	3	89
Loans (net)	-7	4	15	10	23	24	-1	13	-8	28	5	58	23	-4	83	12	12
Other capital flows (net)	20	-23	5	-8	-7	8	-13	-33	-20	-58	-44	-37	-47	-5	-133	-48	13
Errors and omissions	-9	11	14	1	17	-25	27	23	-16	9	0	-5.2	23.8	-21	-2.6	-2	-6
Overall balance	-67	172	-1	-37	67	-85	-44	-72	-109	-311	-53	-2.8	17.8	-41	-78.6	1	90
Financing	67	-172	1	37	-67	85	44	72	109	311	53	3	-18	41	79	-1	-90
Net official reserves	22	-51	-10	-12	-52	27	23	59	53	162	-7	-3	-36	9	-36	-19	-8
Use of Fund credit	-3	-3	15	-8	1	-14	-14	-17	-20	-64	17	-18	19	-14	5	-10	-7
Change of gross official reserves	26	-48	-25	-5	-52	41	37	76	73	227	-24	15	-55	23	-41	-9	-1
Exceptional financing	44	-120	12	49	-15	59	21	13	55	148	60	6	18	31	115	19	-82
Arrears on public debt and guarantees	9	-9	8	25	32	10	17	8	11	45	20	-14	3	8	17	-92	7
Arrears on energy and other supplies	35	-111	4	25	-48	49	4	5	44	103	40	15	13	23	91	19	-90
Rescheduling	0	0	0	0	0	0	0	0	0	0	0	4	2	0	7	92	1
Memorandum items:																	
Gross official reserves	289	337	362	366	366	325	288	212	140	140	164	149	204	181	181	190	191
in months of imports of goods and services	...	...	...	...	3.1	...	...	...	...	1.4	...	...	...	...	2.9	...	...
									(In percent of GDP)								
Current account	...	...	...	...	-12.5	...	...	...	...	-16.7	...	...	...	...	-2.6	...	...
Trade balance	...	...	...	...	-15.9	...	...	...	...	-20.1	...	...	...	...	-9.8	...	...
Exports of goods	...	...	...	...	40.7	...	...	...	...	33.4	...	...	...	...	36.0	...	...
Imports of goods	...	...	...	...	56.5	...	...	...	...	53.4	...	...	...	...	45.8	...	...

Source: National Bank of Moldova; and Fund staff estimates

companies were sold to a strategic investor. However, neither of these transactions resulted directly in capital formation in Moldova.

52. **Direction of trade statistics** indicate that Moldova has yet to start the process of reorienting its exports away from BRO countries towards new markets, especially those in the EU and Eastern Europe. In the last three years, exports to non-BRO markets have remained fairly stable in dollar terms (although they increased in percent of total exports, reflecting the collapse of exports to BRO markets) (see Table 9). Moldova, therefore, remains highly vulnerable to fluctuations in BRO external demand.[9]

53. Moldova's principal exports are agricultural products, in particular wine and tobacco. However, some progress in export diversification away from agricultural products toward manufactured goods, especially textiles, has been made in the last three years. In 1997, the share of agricultural exports was 55 percent of the total; in 1999 it dropped to 42.5 percent (Appendix Table 44). Over the same period, textile exports, as a share of total exports, increased from 6.7 percent to 14 percent.

54. **Import composition** in Moldova is heavily biased toward energy products. Heavy dependence on energy imports (in particular natural gas, electricity and oil), which represented 38 percent of Moldova's imports in 1999 in dollar terms, has been the Achilles' heel of the country's external sector. The trend in recent years to increase imports of capital equipment and machinery up from 9.8 percent of the total imports in 1994 to 19.1 percent in 1998 in order to update manufacturing capabilities, was temporarily reversed in 1999, when the share dropped to 12 percent of total imports (see Appendix Table 44).[10] The main countries of origin of imports are still the BRO countries who were responsible for 40 percent of Moldova's imports in 1999. However, the share of Moldova's non-BRO imports has increased since 1997: in particular the EU share has increased from 19 percent in 1997 to 27.5 percent in 1999, while that of Eastern Europe has increased from 20 percent in 1997 to 25 percent in 1999.

Trade regime

55. Moldova has a liberal trade regime, rated 1 on the Fund staff's ten point index of trade restrictiveness (with a higher score indicating a less open regime). Moldova moved rapidly to liberalize its trade regime in the mid-1990s. By late 1995, it had eliminated all import and export quotas and export taxes and had reduced tariff rates dispersion. Trade liberalization was an integral part of the Fund supported EFF program (EBS/96/68). In 1996, the simple average tariff rate was 6.3 percent (Table 10). However, some restrictive measures

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[9] The possibility of gaining further market shares in EU will crucially depend on the improvement in the quality of goods and the country's ability to penetrate the EU food market.

[10] In terms of non-energy imports the share of imported capital goods went up from 17 in 1994 to 25 percent in 1998. In 1999 it dropped to 16 percent.

Table 9. Direction of Trade, 1994-99
(In percent of total)

	Exports						Imports					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
BRO	72	63	68	70	68	55	72	68	61	52	43	40
Russia	51	48	54	58	53	41	47	33	30	29	23	22
Ukraine	12	8	6	6	8	7	19	27	24	18	15	14
Belarus	4	4	4	4	5	5	3	6	5	4	5	4
Others	5	4	4	2	2	2	3	2	2	1	0	0
Non-BRO	28	37	32	30	32	45	28	32	39	48	57	60
Romania	15	14	9	7	10	9	6	7	6	9	11	14
Germany	4	6	4	4	4	7	5	5	7	8	9	11
Bulgaria	2	3	2	1	1	1	2	4	3	5	3	2
Italy	1	2	3	3	4	6	1	2	3	4	6	7
United States	0	1	1	7	3	3	3	1	3	4	3	4
Others	6	11	13	8	10	19	11	13	17	18	25	22

Sources: Moldovan Department for Statistical and Sociological Research.

Table 10. Import Tariff Developments, 1996-2000 1/

	1996	1997	1998	1999 2/	2000 Est.
Simple average tariff	6.3	11.6	11.8	8.6	7
Weighted average tariff	2.3	6.8	4.3	4.8	4.5
Distribution of imports by tariff band					
0 percent	78	10	31	34	41
5 percent	3	38	29	28	30
6.5 percent	0	0	0	0	1
8 percent	0	0	0	0	0
10 percent	5	17	9	7	10
15 percent	2	2	1	31	16
20 percent	6	29	24	0	0
above 20 percent	6	3	7	0	0

Sources: Information provided by the Moldovan authorities; and Fund staff estimates.

1/ Based on 4,015 import categories, excluding alcohol, tobacco, and vehicles.
2/ Excluding a temporary minimum tariff of 5 percent eliminated in january 2000. The simple avarege becomes 9.5 after the temporary minimum tariff.

(principally an increase in the tariff rate on capital goods and industrial inputs from zero to 20 percent) raised the simple average to 11.6 percent in 1997. Moreover, exports of unbottled wine, cereals, sunflowers seeds and non-fermented tobacco were temporarily restricted in October 1997. These restrictive trade measures were eliminated in 1998. Efforts toward further trade liberalization continued in 1999, when Moldova decreased the maximum tariff rate from 50 percent to 15 percent. The 1999 tariff structure featured three bands (5, 10 and 15 percent) and the simple average tariff rate equaled 8.6 percent.[11] A temporary minimum tariff of 5 percent was introduced in the 1999 budget law for fiscal reasons and eliminated in January 2000. During 2000, the authorities introduced two more bands (6.5 and 8 percent), while still maintaining the maximum tariff rate at 15 percent. In addition, some items were shifted towards the 0 and 5 percent bands from higher rates. As a result, the simple average tariff decreased to 7 percent. In November 2000, Moldova eliminated restrictions on grain exports that had been introduced earlier during the year in response to the drought.

56. Moldova is negotiating accession to the **WTO** with a view to membership in early 2001. Moldova has free trade agreements with all BRO countries and Romania. It has also signed an agreement on partnership and cooperation with the EU in late 1994 which became effective in March 1996.

External debt

57. Moldova's **external public and publicly guaranteed debt** has grown at a rapid pace, from almost zero in the early 1990s to an estimated value of US$936 million at end-1999, equivalent to 71.8 percent of GDP. Including external payment arrears on imported energy supplies and private debt, the total external debt amounted to about US$1.5 billion at the end of 1999 (112 percent of GDP). See Table 11.

58. This indebtedness reflected the accumulation of large, and growing, external current account deficits in the mid-1990s. Debt indicators deteriorated further following the sharp depreciation of the leu in the aftermath of the Russian crisis. On average, these obligations were contracted on only moderately concessional terms; the net present value of the public and publicly guaranteed debt was estimated at US$895 million (68.7 percent of GDP) at end-1999. The estimated NPV of debt-to-export ratio and the debt-to-fiscal-revenue ratio (central government) reached 112 percent and 365 percent, respectively, while the debt service on public and publicly guaranteed debt represented 33 percent of exports of goods and non-factor services.

59. **More than half of Moldova's outstanding public debt was owed to multilateral institutions**, including to the Fund (US$175 million, 19 percent of the total), the World Bank (US$287 million) and the EBRD (US$72 million). Debt owed to bilateral official creditors

[11] This number does not account for the 5 percent temporary minimum tariff. The simple average tariff rose to 9.6 with its inclusion.

Table 11. Moldova: External Debt Indicators, 1994-99
(In millions of U.S. dollars)

	1994	1995	1996	1997	1998	1999
Total external debt	581	730	874	1,080	1,089	936
Multilateral creditors	333	454	503	541	543	535
IMF	165	230	248	233	177	175
World Bank	96	146	146	182	217	287
EBRD	72	78	109	125	149	72
Bilateral creditors	248	261	279	257	257	249
EU	65	59	76	67	71	62
Japan	30	39	39	39	39	37
Russia	93	90	79	64	62	68
USA	40	50	64	65	65	65
Others	19	22	22	22	21	17
Commercial creditors	0	15	93	282	288	153
Memorandum item:						
Energy arrears	125	171	245	221	333	416

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

represented 28 percent of total debt, including Russia (US$83 million),[12] the United States (US$65 million), the European Union (US$62 million) and Japan (US$37 million). Other official obligations amounted to about 15 percent of the total and included a five year US$75 million Eurobonds (issued in 1997 with bullet repayment in 2002) and a number of direct and publicly guaranteed credits from foreign banks (US$60 million).

60. Moldova has also accumulated large **external payment arrears on imported energy supplies** (gas, electricity, and oil) during 1994-99. By end-1999, the stock of energy arrears was tentatively estimated at US$416 million (32 percent of GDP), of which upto US$273 million are obligations of state-owned companied and some US$150 million are owed by private operators.[13] The main creditors were Russian for gas imports, Ukrainian and Romanian for electricity imports and Romanian for oil imports.

61. In 2000, **steps were taken to reduce arrears on debt service obligations and energy payments**. In March, an agreement was reached on US$137 million of arrears due to Gazprom. These arrears were settled through: (i) the issuance of promissory notes in value of US$90 million with a 7-year maturity, 2 year grace period and 7.5 percent interest rate to pay off the debts resulting from natural gas deliveries in 1996 and 1997; and (ii) the agreement on a debt-equity swap in the gas sector, whereby Gazprom acquired 51 percent of Moldovagas in return for the clearance of US$47 millions of arrears. In April, a rescheduling agreement with the Russian authorities covering the total of Moldova's debt to the Russian Federation, including that to Oneximbank, was signed, in the amount of US$122.1 million (including penalties and overdue interest), including US$30.4 million owed by the Transnistria region.[14] On April 12, 2000, a separate agreement was signed between the Moldavian authorities and the administration of the Transnistria region on the settlement of the debt of Transnistria to the Russian Federation. According to this agreement, the administration of the Transnistria region acknowledges its indebtedness in the amount of US$30.4 million to the Russian Federation and agreed to the same debt repayment schedule and terms negotiated by the Moldovan authorities with the Russian government.

62. Also, rescheduling discussions were successfully launched with a number of commercial creditors on **government guarantees**, including to German and Italian creditors.

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[12] Moldova's debt vis-à-vis Russia consists of a restructured loan of US$ 88.6 million granted in 1996 stemming from of two previous Russian credits, and a US$15 million loan extended by the Oneximbank in 1996 and guaranteed by the Russian government.

[13] A full auditing of Moldova's external arrears on energy imports has yet to be completed. Accordingly, the actual outstanding public obligations or potential government contingent liabilities on energy imports are an estimates. Accordingly, the reported amount of energy arrears should be considered as an upper limit.

[14] The net amount (US$91.7 million) is reflected in the tables; Moldovan data are exclusive of the Transnistrian region.

Exchange market and exchange arrangement

63. From its inception in November 1993 until the Russian crisis in August 1998 the Moldovan leu has shown remarkable stability (Table 12). However, the leu became under pressure following the ruble crisis in August 1998. In an attempt to stabilize of the exchange rate at Mdl 4.8 per dollar, the NBM intervened heavily in the market. Despite this, the exchange rate depreciated by 25 percent between August and October of 1998. In November, the NBM stopped supporting the leu and allowed it to float. Moldova's gross official reserves at the end of 1998 stood at US$140 million equivalent to 1.4 months of goods and non-factor services (in comparison, at the end of 1997, the gross official reserves stood at US$366 million or 3.1 months of imports of goods and non-factor services). The leu stabilized at around Mdl 8.5 per dollar at the end of 1998 after having reached Mdl 10 per dollar in November. The leu continued to float freely during 1999, with intervention by the NBM limited to smoothing out short term fluctuations and to meeting reserve targets. At times, however, foreign exchange intervention by the NBM exceeded what was strictly needed to meet reserve targets. As a result, the NBM was able to increase its reserve holdings to US$181 million at end-1999 (equivalent to three months of imports of goods and nonfactor services). The leu depreciated by almost 39 percent in nominal terms vis-à-vis the U.S. dollar in 1999 (end-period), implying a small real appreciation, partly correcting the sharp real depreciation in late 1998. Exchange rate movements were, to a considerable extent, linked to periods of political tensions both at home and abroad as well as to domestic credit expansion. The sharpest movements took place in May-June, following the extension of large NBM credits to the government and a renewed period of political uncertainty in Russia. The rate again came under pressure in November following the resignation of the government.

64. **In 2000, the leu rate stabilized** in April and since then has been slowly appreciating, reflecting strong foreign exchange inflows and a strong demand for lei, linked *inter alia* to inflows of worker remittances and the increase in minimum capital requirements for banks. These inflows allowed the NBM to increase its gross official reserves further to US$190 million at end-September 2000. On balance, during the first three quarters of 2000, the leu depreciated by about 5 percent in nominal terms vis-à-vis the U.S. dollar, implying a real appreciation of roughly 7 percent.

65. **Moldova accepted the obligations of Article VIII** of the Fund's Articles of Agreement on June 30, 1995. The NBM announced in November 1998 that it was ceasing its intervention in support of the leu. Moldova is a member of the Payment Union with the CIS. Proceeds from exports must be repatriated no later than 180 days from the issuance of the custom declaration.

E. Structural Policies

66. **Structural reforms suffered some setbacks in the second half of 1999, but accelerated markedly during 2000.** Political developments prompted a temporary standstill in reforms by end-1999, in particular with the failure of parliament to pass the necessary legislation for the privatization of five major wineries and the tobacco sector. However, in 2000 substantial progress was achieved in the energy sector and land reform has remained been broadly on schedule.

Table 12. Moldova: Exchange Rates, 1993-2000

		Leu/U.S. dollar		Leu/1000 Russian Ruble	
		Average	EoP	Average	EoP
1993		1.635	3.640	1.417	2.950
1994		4.090	4.270	1.968	1.040
1995		4.496	4.499	0.971	0.946
1996		4.603	4.650	0.897	1.192
1997		4.624	4.661	0.794	0.758
1998		5.377	8.323	0.635	0.403
1999		10.516	11.590	0.421	0.418
1998	January	4.676	4.690	0.775	0.773
	February	4.707	4.716	0.775	0.777
	March	4.715	4.717	0.775	0.773
	April	4.719	4.723	0.768	0.769
	May	4.730	4.733	0.768	0.766
	June	4.739	4.747	0.763	0.761
	July	4.748	4.747	0.759	0.756
	August	4.769	4.782	0.650	0.415
	September	4.859	4.966	0.335	0.307
	October	5.536	6.400	0.348	0.400
	November	7.811	9.635	0.474	0.539
	December	8.511	8.323	0.426	0.403
1999	January	8.529	8.759	0.373	0.388
	February	8.741	8.727	0.377	0.377
	March	8.946	9.678	0.370	0.386
	April	9.595	9.947	0.374	0.403
	May	10.867	11.614	0.439	0.469
	June	11.739	11.461	0.479	0.471
	July	11.093	10.994	0.454	0.453
	August	10.981	11.017	0.443	0.443
	September	10.979	10.959	0.428	0.434
	October	10.987	11.197	0.425	0.428
	November	12.005	12.043	0.454	0.453
	December	11.727	11.590	0.435	0.418
2000	January	12.141	12.718	0.430	0.444
	February	12.544	12.515	0.436	0.437
	March	12.588	12.569	0.442	0.438
	April	12.650	12.643	0.442	0.445
	May	12.632	12.634	0.446	0.447
	June	12.580	12.521	0.445	0.445
	July	12.459	12.410	0.447	0.446
	August	12.385	12.360	0.446	0.445
	September	12.299	12.225	0.442	0.440
	October	12.263	12.308	0.439	0.441

Sources: National Bank of Moldova.

67. A key bottle-neck to the reform process has been the **privatization of economically important winery and tobacco sectors.** Parliament had refused to pass the necessary legislation in November 1999 and, again, in April 2000. The current government continued to insist on reform and the bill on privatization of wineries and tobacco was finally approved by parliament in October 2000.

68. **An important achievement of the authorities has been the privatization of three electricity distribution companies** to a strategic foreign investor in early-2000. The sale of the two other distribution companies and the power generation companies is underway. Moldovagas was also privatized with the sale of the majority share to Russia's Gazprom. In addition, measures were taken to improve efficiency and transparency in the sector, in particular, there was a further increase in energy tariffs in mid-2000 and, with the help of the World Bank, the replacement of generous energy privileges with targeted assistance.

69. With respect to the **Telecommunications sector,** preparations for Moldtelecom's privatization have proceeded slowly. In the third quarter of 1999, unexpected complications with donor financing of an investment advisor occurred. However, an independent telecommunications regulatory agency was established to assist tariff reform and restructuring in the sector.

70. The **break-up of the old state and collective farms under the land reform program** has been all but completed. In total, close to 95 percent of all state farms—or 996 farms—have begun distributing their land and property to individual beneficiaries, and of these, 804 farms were fully liquidated and put into private hands. There was a significant acceleration of land reform in 2000. Four hundred farms (or almost half of the 996) started restructuring during the first 10 months; the number of individuals receiving ownership doubled to 950,000 persons; and the registration of land parcels in the Cadaster system was close to 1.2 million titles by end-September 2000 (or about half of the final target), up from less than a quarter million by end-1999. Table 13 demonstrates the changes in ownership of land during the 1990s.

Table 13. Structure of land use 1990-1999 (percent of agricultural land, end of year data)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
State sector	**32.3**	**26.7**	**25.2**	**31.2**	**30.1**	**16.7**	**17.2**	**17.7**	**17.6**	**17.3**
State farms	27.0	23.4	20.4	14.6	12.8	0.1	1.0	1.0	1.0	1.0
Reserve fund	0.0	0.0	0.1	12.7	13.3	13.4	13.6	14.0	14.1	14.1
Corporate forms	**59.4**	**63.0**	**63.0**	**56.2**	**56.8**	**67.9**	**64.8**	**61.4**	**57.2**	**46.0**
Collectives	59.4	63.0	58.8	49.2	45.2	39.3	23.1	15.2	13.2	10.8
New corporate forms	0.0	0.0	4.2	7.0	11.6	28.6	41.7	46.2	44.0	35.3
Individual sector	**8.3**	**10.3**	**11.7**	**12.6**	**13.2**	**15.3**	**18.0**	**20.9**	**25.2**	**36.7**
Peasant farms	--	--	0.0	0.3	0.7	2.4	4.8	7.8	12.0	22.3
Household plots	8.3	10.3	11.7	12.3	12.5	12.9	13.2	13.1	13.2	14.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Cadastral land balances

71. An indispensable factor in going ahead with farm restructuring was the solution to the large state farm debt overhang. The land reform program had been delayed by the unresolved claims of creditors of the old state farms, because the existing bankruptcy procedures had proved inadequate to deal with land restructuring. With the adoption of the Debt Resolution Program (DRP) in 1999, land and movable assets (farm machinery and livestock) were kept outside the debt resolution procedure; these were guaranteed to remain in the hands of the individual beneficiaries who had received or were intended to receive legal title to their land. The outstanding debt was settled from the remaining assets of the farm enterprise, in the following way: enterprise-owned social assets (schools, hospitals, etc.) were transferred to local municipalities in settlement of the debt to the government; enterprise-owned housing were privatized to worker-members in settlement of wage arrears; and inventories, cash, receivables, other current assets, and all farm fixed assets (storage, farm buildings, processing facilities, etc.) were used for settling the debts to commercial creditors. Any residual debt was settled through the state budget by offering future tax credits to commercial creditors with unsatisfied claims. As the main creditor was the state, much of its debt was written off in the process of transferring state property into private hands.

72. **Firm restructuring and bankruptcy procedures** have been formally initiated for a number of firms with large debts to the budget, some of them long outstanding. Progress to date has been marginal, mainly due to weak political support, something that has been compounded by the inadequacy of the legal framework. Very few firms have been restructured, recovery of past arrears to the budgets has been minimal, and firms continue to default on current payments.

73. Further progress in the reform of the **legal and regulatory environment** is indispensable for improving governance and the investment climate in Moldova. The adoption in mid-2000 of a law that requires cabinet approval for any license involving more than US$1 million represented a needed step in improving transparency and governance. The first reading of a new civil code was approved by parliament in November 2000.

III. The Composition of Fiscal Adjustments in Moldova, 1994-1999: A Statistical Analysis[15]

A. Introduction

74. **In 1999 Moldova achieved an impressive consolidation of the general government budget.** The fiscal imbalance[16] was considerably reduced as a result of large

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[15] Prepared by Emanuele Baldacci

[16] Different measures of fiscal unbalance can be used to assess the performance of fiscal policy in Moldova. Authorities' standard budget presentation includes grants among total revenues and excludes public spending related to foreign-financed project loans. An alternative definition of fiscal deficit could exclude grants from total revenues, since the former are not directly under the control of the authority. In addition, according to a more comprehensive definition of the general government sector, project loan expenditures should

(continued...)

expenditure curtailments.[17] This decline in public outlays has been larger than the amount required to compensate the fall in total revenues that occurred in the aftermath of the Russian crisis. The fiscal consolidation significantly reduced the general government size, bringing it closer to the median size of public sectors in transition economies. Moreover, most of the adjustment measures aimed at improving the composition of expenditures, targeting part of the social benefits to the poor and reallocating the scarce available resources to more productive uses.

75. **The fiscal adjustment was also unprecedented.** Moldova has experienced a long period of economic turbulence and political instability after its independence. Some transitory improvement in the fiscal position took place during a comprehensive financial stabilization program supported by a stand-by arrangement with the Fund in 1993-1995, and as a consequence of positive economic growth in 1997. However, both external factors and weak implementation of structural reforms hampered a long-lasting fiscal consolidation and resulted in large fluctuations of the deficit. In a context of dropping output and soaring inflation, public finances deteriorated as public spending rose uncontrolled, particularly in the large and mostly inefficient public sector, because of poorly targeted energy subsidies, and due to the bloated health care and education sectors. In the same period, revenues declined because poor macroeconomic performance narrowed the tax base and widened the informal sector, fostering high levels of tax evasion (Carasciuc, 1999). In addition, poor tax administration, weak enforcement capacity, and overall poor governance were among the most important determinants of a large increase in the stock of tax arrears.

76. The purpose of this chapter is to assess whether the size and the composition of the recent fiscal adjustment could lead to a permanent consolidation of the budget, so as to support sustained economic growth over the medium term. **The main conclusion resulting from the empirical analysis is that both the size and the composition of the adjustment process are consistent with a long-lasting consolidation.** However, the presence of several outstanding structural weaknesses in the general government sector may lead to a deterioration of the budget if fiscal policy is not kept sufficiently tight in the medium term.

77. In the remaining part of the chapter an attempt is made to analyze the changes in the size and the composition of the general government deficit of Moldova, between 1994 and

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be included in total public outlays. Fiscal deficit can be also measured on a cash basis and on a commitment basis (i.e., excluding domestic and foreign expenditure arrears). In this chapter the most comprehensive definition of commitment fiscal deficit (including grants and project loan spending) is used, unless otherwise specified. However, the alternative definitions of fiscal deficit have been used in some cases, in order to assess the robustness of fiscal adjustment estimates.

[17] The focus in this chapter is on the general government sector. This includes local and central government and the Social Fund. Consolidated general government data have been recently revised to include foreign-financed project spending. Moreover, privatization receipts up to 1999 have been reclassified from nontax revenues to a financing item.

1999. In particular, the study deals with the quality of the 1999 fiscal retrenchment. Section B presents the recent trends in the budget, according to alternative definitions of fiscal deficit. The breakdown of public expenditures and revenues by category is shown in Section C, and it is used to assess the factors contributing to the fiscal unbalance during the period. Section IV describes a simple statistical methodology that can be used to estimate the fiscal adjustment size and its components. Section E discusses the results of the decomposition exercise, the following section deals with the outstanding fiscal policy issues, and the last section concludes.

B. Trends in Fiscal Deficit

78. **Moldova's fiscal performance between 1993 and 1999[18] has been mixed**, with a large fall in the deficit occurring in 1999 and a peak in fiscal unbalance in 1994 (Table 14). However, despite the oscillations, the **fiscal deficit measures have exhibited a moderate downward trend since 1994** (Figure 5). The fiscal deficit was relatively low at the beginning of the period, but soon rose as a consequence of a steep increase in public spending, primarily in the social sphere (e.g., education, health care and some minor social assistance schemes) and by the Social Fund.[19] In the following years, the public finance position improved slightly. In particular, in 1997 the budget benefited from the increase in revenue collection brought by the only year of real GDP growth (1.3 percent on an annual basis) since independence. However, the decline in the deficit was immediately reversed in 1998 when the effects of the Russian crisis hit Moldova hardly. The main cause of the large unbalance was the upsurge in public spending while total revenues remained nearly stable. Finally, **in 1999 Moldova achieved a low fiscal deficit level**. This result was achieved through a large retrenchment of commitments in almost all expenditure categories, including the social sector and public investment. At the same time, however, general government revenues fell sharply, primarily as a result of the weak macroeconomic performance.

79. **The accumulation of arrears on domestic payments has been used to smooth the fiscal deficit fluctuations over the entire period.** In general, the overall fiscal deficit on cash basis shows a less volatile time profile[20] relative to the commitment deficit (Table 14). In fact, the accumulation of domestic expenditure arrears has been widely used as a deficit financing item by Moldovan authorities when revenues were not sufficient to pay expenditure

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[18] The data sample used in the analysis does not include year 1992. This year is particularly influenced by the political, economic and institutional changes brought by the independence in 1991, after the collapse of the former Soviet Union. The fiscal deficit for 1992 was 25 percent of GDP, a value well above the average fiscal deficit in the 1993-99 period.

[19] In Moldova the Social Fund provides pensions insurance, family allowances, unemployment and social assistance benefits.

[20] As measured by the coefficient of variation of the time series.

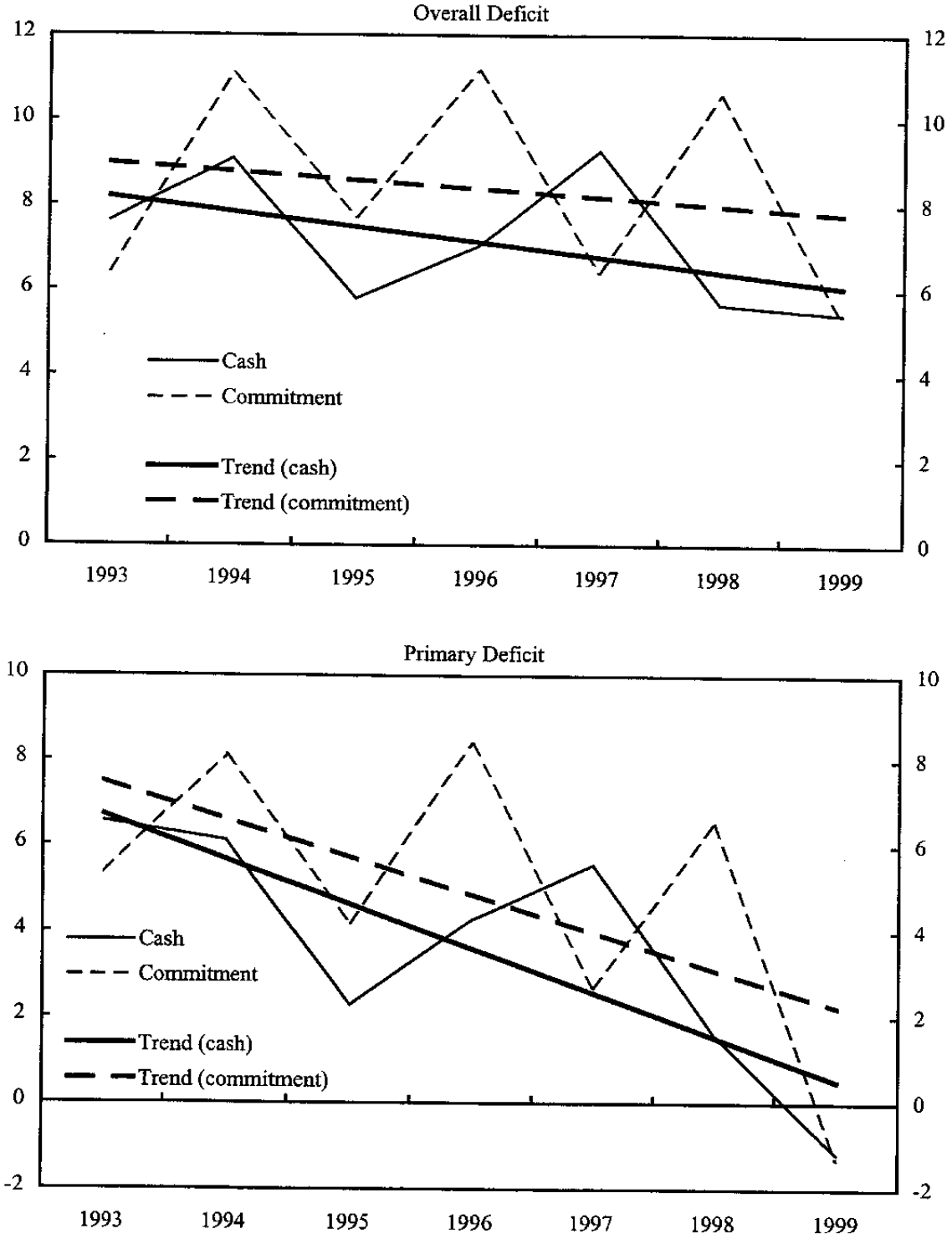
Table 14. Moldova: Fiscal Deficit According to Different Definitions, 1993-99
(In percent of GDP)

	1993	1994	1995	1996	1997	1998	1999	cv 1/
Including grants								
With project loan spending								
Total - cash	7.6	9.1	5.8	7.0	9.3	5.7	5.4	22.6
Total - commitment	6.4	11.1	7.7	11.2	6.4	10.6	5.3	26.9
Primary - cash	6.6	6.1	2.3	4.3	5.6	1.6	-1.2	80.4
Primary - commitment	5.4	8.1	4.2	8.4	2.7	6.5	-1.3	70.9
Without project loan spending								
Total - cash	7.6	9.1	5.8	7.0	9.2	3.6	2.8	39.5
Total - commitment	6.4	11.1	7.7	11.2	6.3	8.6	2.6	37.0
Primary - cash	6.6	6.1	2.3	4.3	5.5	-0.4	-3.9	151.7
Primary - commitment	5.4	8.1	4.2	8.4	2.6	4.5	-4.0	103.8
Excluding grants								
With project loan spending								
Total - cash	7.6	9.5	6.1	7.0	9.3	5.7	6.3	20.7
Total - commitment	6.4	11.5	8.0	11.2	6.4	10.6	6.2	24.3
Primary - cash	6.6	6.5	2.6	4.3	5.6	1.6	-0.3	68.7
Primary - commitment	5.4	8.5	4.5	8.4	2.7	6.5	-0.4	63.1
Without project loan spending								
Fiscal deficit - cash	7.6	9.5	6.1	7.0	9.2	3.6	3.6	35.9
Fiscal deficit - commitment	6.4	11.5	8.0	11.2	6.3	8.6	3.5	33.4
Primary deficit - cash	6.6	6.5	2.6	4.3	5.5	-0.4	-3.0	129.1
Primary deficit - commitment	5.4	8.5	4.5	8.4	2.6	4.5	-3.1	92.3

Sources: Moldovan authorities, and Fund staff estimates.

1/ Coefficient of variation. Ratio of standard deviation to the average in the 1994-99 period, in percent.

Figure 5. Moldova: General Government Fiscal Deficit Trends, 1993-1999
(In percent of GDP)



Sources: Moldovan authorities; and Fund staff estimates.

obligations. As a result, a large stock of arrears, mostly on social benefits and wages, were built up during the period, reaching Mdl 1.1 billion in the end-year.[21]

80. **The large size of fiscal consolidation can be observed in the primary fiscal deficit.** This is a result of the growing incidence of public debt service in total public outlays, which, in turn, is a consequence of the sharp increase in both domestic and external debt.[22] The fiscal deficit, excluding interest spending, shows the steepest decline among the different fiscal balance indicators. On cash basis, the primary balance reached a surplus of 1.2 percent of GDP, up from a deficit of 6.6 percent of GDP in 1993. The most rapid decline in the indicator can be observed for the primary fiscal balance on a commitment basis, which reached a surplus of 1.3 percent of GDP, after a peak deficit of nearly 8 percent of GDP in 1994.

81. When the deficit is measured excluding grants and project loan spending, **its downward trend is steeper, and the size of the 1999 consolidation is larger,** than in any other case. This evidence suggests that the fiscal adjustment has been based mostly on discretionary fiscal policy measures. On a cash basis, the total deficit went down to 3.6 percent of GDP, from a peak of 9.5 percent of GDP in 1994. On a commitment basis, it reached 3.5 percent of GDP in the end-year, down from nearly 12 percent in 1994. The corresponding primary surplus reached 3 percent of GDP on a cash basis and 3.1 percent of GDP on a commitment deficit in 1999, up from a deficit of 6.5 percent and 8.5 percent of GDP in 1994, respectively.

82. The observed trends in fiscal deficit resulted from **different trends in the budget components.** Until 1998, **revenues** remained relatively stable as a share of GDP, in particular when defined exclusive of grants (Table 15). On the **expenditure** side, commitments remained well above 40 percent of GDP, but payments fluctuated between 39 and 43 percent of GDP. In fact, the increase in many public spending programs, especially in the social sector was very difficult to control. **The gap between social contributions and Social Fund expenditures,** a crucial item in the Moldovan budget, was widened since 1996 and reached a peak of around 4 percent of GDP in 1997 (Figure 6).[23] In 1999, the fall in total revenues was more than balanced by the curtailment of expenditure commitments. Total revenues, excluding grants, fell to 25.4 percent of GDP, down from 32.3 percent in 1998, in part as a consequence of the drastic reduction in the in-kind collection of social contributions and the

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[21] The stock of domestic arrears has been growing continuously since 1993, except for 1997.

[22] In Moldova, a large public debt (including energy arrears) has been built up since independence, reaching 127 percent of GDP in 1999. The domestic component of this debt increased rapidly to 26.4 percent of GDP until 1998 but fell to 21.4 percent in the following year.

[23] Once state transfers are included among total revenues, however, the Social Fund budget is in balance.

Table 15. Moldova: Revenues and Expenditures of the General Government Budget According to Different Definitions, 1993-99
(In percent of GDP)

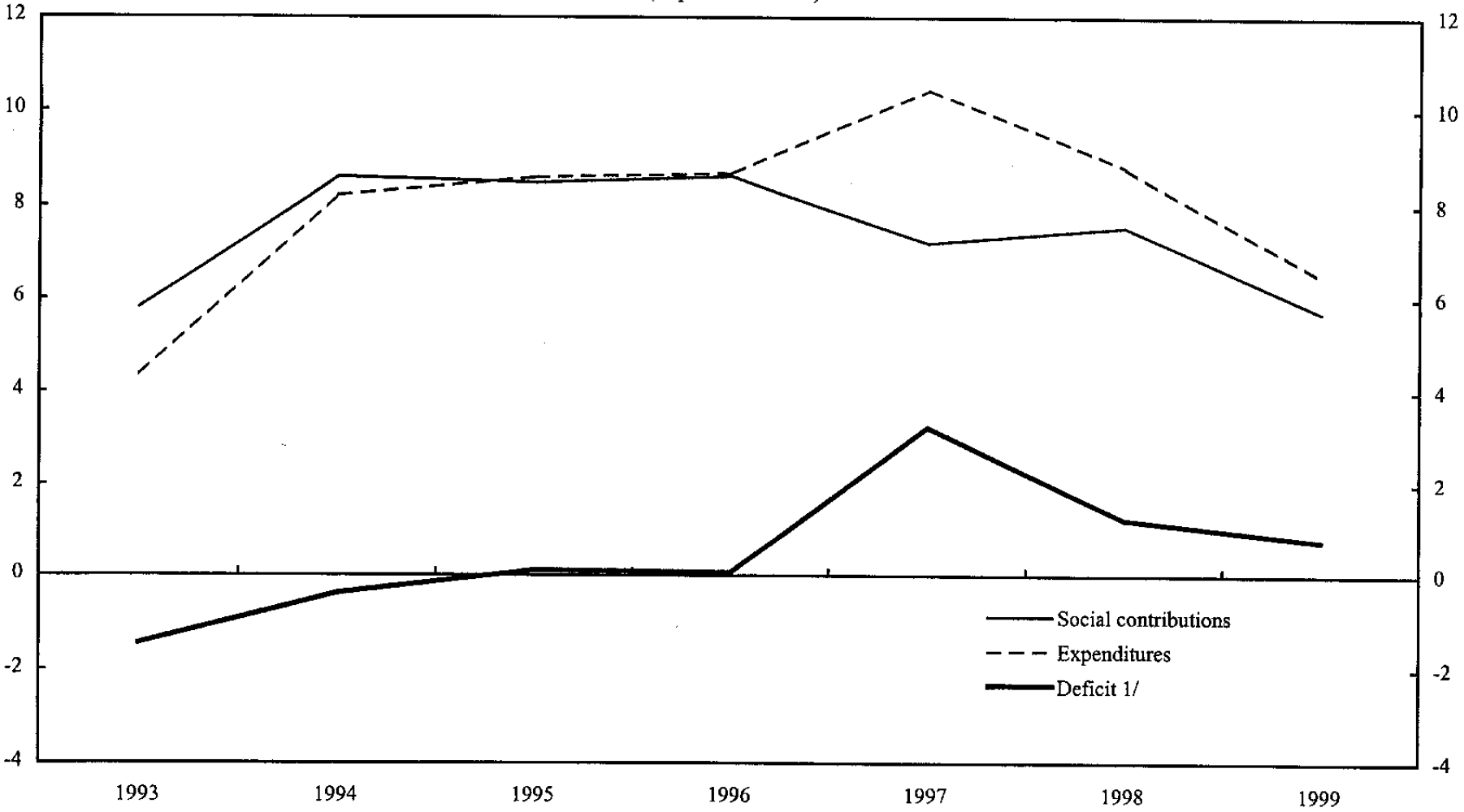
	1993	1994	1995	1996	1997	1998	1999
Revenues							
Including grants	22.8	33.5	33.9	31.7	33.9	33.1	27.3
Excluding grants	22.8	32.7	33.2	31.3	31.5	32.3	25.4
Expenditures 1/							
Total - cash	30.5	42.6	39.7	38.7	43.2	38.7	32.7
Total - commitment	31.7	44.6	41.6	42.8	40.3	43.7	32.6
Primary - cash	29.4	39.7	36.2	36.0	39.5	34.7	26.1
Primary - commitment	30.6	41.7	38.1	40.1	36.6	39.6	26.0

Sources: Moldovan authorities, and Fund staff estimates.

1/ Including net lending.

Figure 6. Moldova: Social Fund Contributions and Expenditures, 1993-99

(In percent of GDP)



Sources: Moldovan authorities; and Fund staff estimates.

1/ Social Fund contributions minus Social Fund expenditures.

fall in offsetting operations.[24] As a consequence, the authorities decided to cut public expenditure commitments. In 1999, total expenditure fell to nearly 33 percent of GDP and primary expenditure reached 26 percent of GDP.

C. Composition of Revenues and Expenditures

83. **The composition of revenues and expenditures has changed sharply in the 1994-99 period** as a result of the deep revision in fiscal policy that has taken place since independence (Tables 16 and Table 17). Important reforms of the tax system were introduced in order to broaden the tax base, to simplify tax administration, and to bring the tax rates in line with the ones prevailing in other countries. Overall, direct taxes (including profit tax and personal income tax) fell as a share of total general government revenues, indirect taxes[25] remained relatively stable, social contributions decreased slightly, and other revenues[26] increased (Figure 7). The rise in the share of the latter is mostly due to improvements in the collection of foreign trade taxes and higher nontax revenues (including net profits transferred from the central bank to the state budget). **Total expenditures** as well, went through a significant compositional change (Figure 8). The share of social spending in the total fell to 30 percent in 1999, down from 47 percent in 1993. Most of this decline took place in the 1994-98 period. Social spending reached a share of 33 percent in terms of total expenditures in 1998; a reduction by 14 percent compared with 1993. Interest spending exhibited an uninterrupted upward trend in the same period, reaching 20 percent of total spending in the end-year, up from 4 percent in 1994. Social Fund expenditures were also increasingly important in the general government budget because of the growth in both the number of beneficiaries and the value of the benefits they received. Finally, the incidence of the remaining expenditure categories (including public investments and project loan spending) fell to slightly more than 10 percent of total public outlays. A large share of total reduction took place in 1999, when the total weight of capital outlays fell by 3 percent relative to 1998 as a result of a large cut in public investment programs.

84. **As a result of the 1999 fiscal adjustment, the structure of general government revenues was largely modified**, while the composition of public spending changed less relative to 1998. On **revenue** side, the share of indirect taxes fell to 37 percent of total revenues, down from 44 percent in 1998. Direct taxes and social contributions remained almost stable at their 1998 levels, while the weight of the remaining revenues rose sharply. On **expenditure** side, to the contrary, all categories exhibited small changes in their share to total spending, relative to 1998. Nondiscretionary interest spending, however, reached 20 percent of the total, as a consequence of the growing burden of public debt service and

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[24] In the 1996-98 period, netting operations amounted to more than 35 percent of total revenues. From 1998 to 1999, tax offsets were reduced from 24 percent to 10 percent of tax revenues.

[25] VAT and excise taxes.

[26] Including foreign trade tax, property tax, land tax, and non tax revenues.

Table 16. Moldova: Revenues and Expenditures of the General Government Budget, 1993-99
(Cash basis, in percent of GDP)

	1993	1994	1995	1996	1997	1998	1999
Revenues	22.8	33.5	33.9	31.7	33.9	33.1	27.3
Tax revenues	21.0	26.4	28.8	27.4	29.9	28.3	22.2
Direct taxes 1/	6.2	8.7	7.9	6.5	5.2	3.9	3.3
Indirect 2/	7.4	7.9	10.0	9.2	14.4	14.5	10.1
Foreign trade taxes	0.9	0.5	0.7	1.1	1.3	1.1	1.7
Social fund contributions	5.8	8.6	8.5	8.6	7.2	7.6	5.7
Other taxes 3/	0.8	0.7	1.7	2.0	1.8	1.3	1.5
Non-tax revenues and grants	1.8	7.1	5.1	4.3	4.0	4.8	5.1
Expenditures and net lending	30.5	42.6	39.7	38.7	43.2	38.7	32.7
Expenditures	29.8	40.2	38.8	40.2	42.9	38.4	33.1
National economy	1.4	2.4	2.2	2.0	3.6	2.7	2.1
Social sphere 4/	14.3	17.3	14.8	17.3	16.4	12.9	9.8
Interest	1.1	3.0	3.5	2.8	3.7	4.1	6.6
Domestic	0.8	2.2	2.3	1.5	2.1	2.4	3.2
Foreign	0.2	0.8	1.2	1.3	1.6	1.7	3.4
Capital expenditures	2.8	2.0	1.8	1.7	2.3	2.0	0.8
Other expenditures 5/	5.8	7.1	7.0	7.5	6.4	6.0	4.7
Social fund expenditures	4.4	8.2	8.6	8.7	10.4	8.8	6.5
Project loan spending	0.0	0.0	0.0	0.0	0.1	2.0	2.7
Net lending	0.5	2.0	0.9	-1.5	0.3	0.3	-0.3

Sources: Moldovan authorities, and Fund staff estimates.

1/ Includes profit tax and personal income tax.
2/ Include VAT and excise tax.
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.
4/ Includes public expenditure for health care, education and some minor social assistance schemes.
5/ Includes administrative, military, indexation of deposits, environment, and unallocated expenditures.

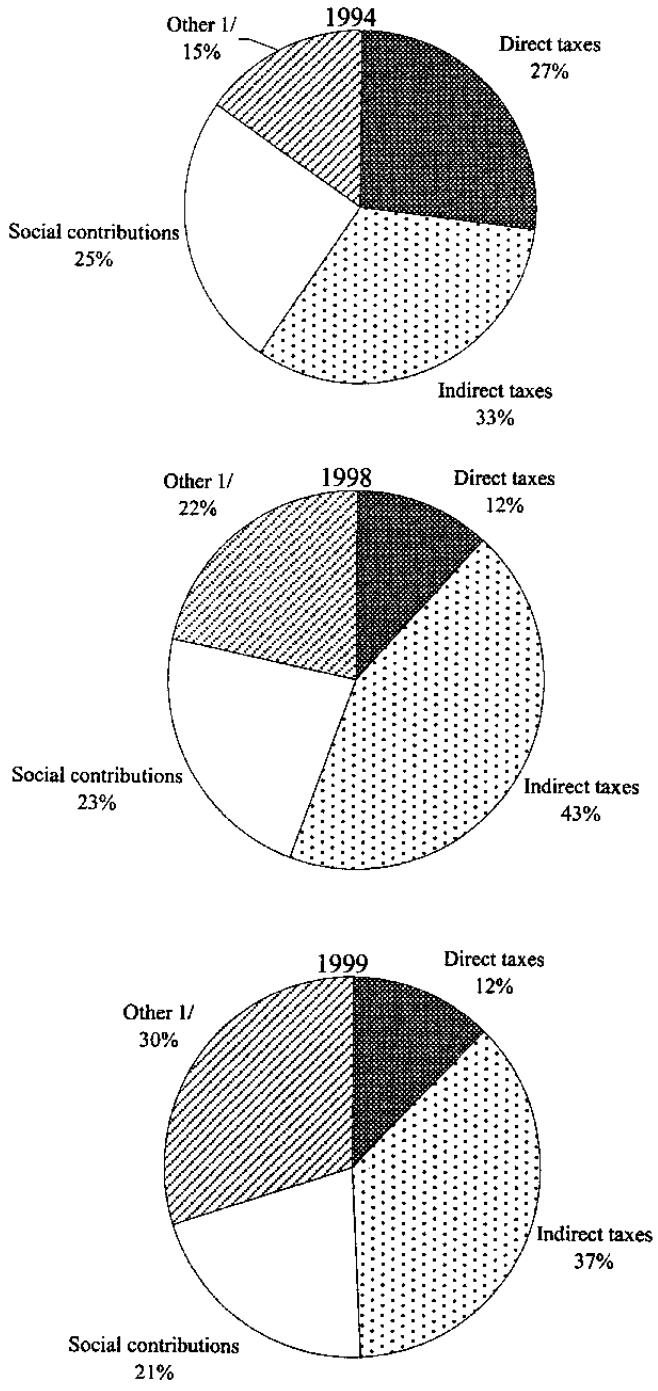
Table 17. Moldova: Breakdown of Revenues and Expenditures of the General Government Budget, 1993-99
(Cash basis, in percent of total revenues and total expenditure and net lending)

	1993	1994	1995	1996	1997	1998	1999
Revenues	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tax revenues	92.0	78.7	84.9	86.4	88.2	85.5	81.4
Direct taxes 1/	27.0	26.0	23.2	20.7	15.3	11.7	12.1
Indirect 2/	32.4	23.5	29.5	29.0	42.5	43.7	37.0
Foreign trade taxes	3.9	1.6	2.0	3.4	3.7	3.2	6.2
Social fund contributions	25.4	25.6	25.0	27.2	21.2	22.8	20.9
Other taxes 3/	3.5	2.0	5.1	6.2	5.4	4.0	5.3
Non-tax revenues and grants	7.8	21.3	15.1	13.6	11.8	14.5	18.6
Expenditures and net lending	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Expenditures	97.7	94.2	97.8	103.8	99.3	99.3	101.0
National economy	4.5	5.7	5.6	5.2	8.2	7.0	6.4
Social sphere 4/	47.0	40.6	37.2	44.8	38.0	33.3	29.8
Interest	3.5	7.0	8.9	7.1	8.6	10.5	20.2
Domestic	2.8	5.1	5.8	3.9	4.9	6.1	9.8
Foreign	0.8	1.9	3.1	3.2	3.8	4.4	10.4
Capital expenditures	9.1	4.7	4.5	4.3	5.4	5.1	2.3
Other expenditures 5/	19.2	16.6	17.7	19.3	14.7	15.4	14.3
Social fund expenditures	14.3	19.3	21.7	22.4	24.2	22.7	19.8
Project loan spending	0.0	0.0	0.0	0.0	0.2	5.3	8.2
Net lending	1.5	4.7	2.4	-4.0	0.7	0.8	-1.0

Sources: Moldovan authorities, and Fund staff estimates.

1/ Includes profit tax and personal income tax.
2/ Include VAT and excise tax.
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.
4/ Includes public expenditure for health care, education and some minor social assistance schemes.
5/ Includes administrative, military, indexation of deposits, environment, and unallocated expenditures.

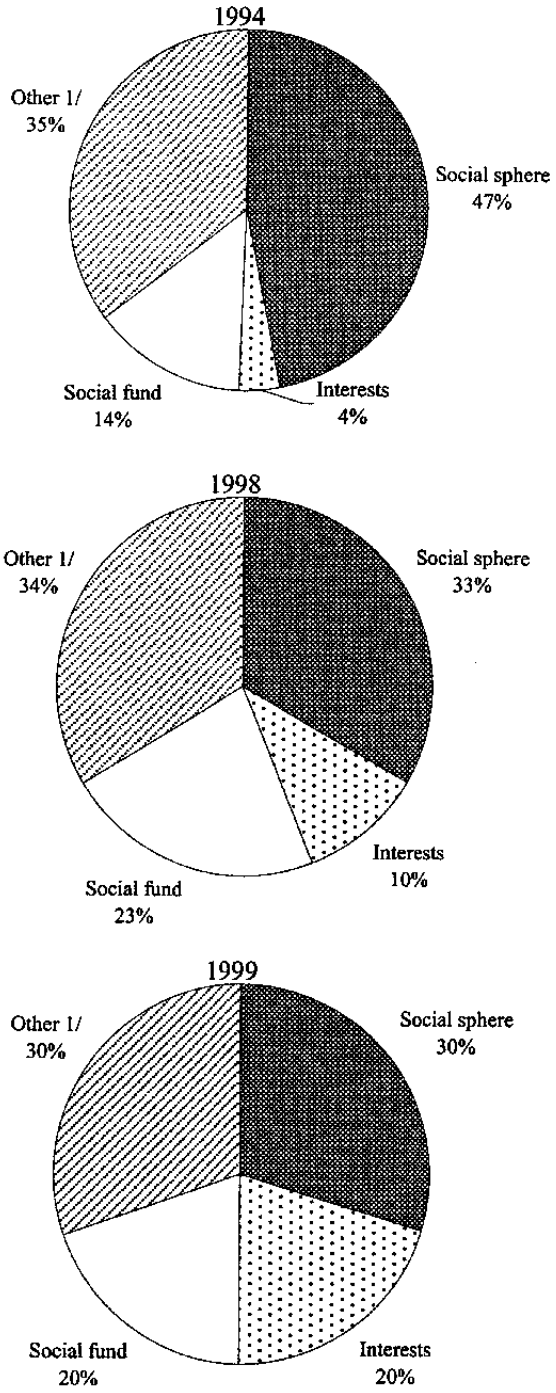
Figure 7. Moldova: Breakdown of General Government Revenues in 1994, 1998, and 1999
(In percent of total revenues)



Source: Moldovan authorities; and Fund staff estimates.

1/ Includes foreign trade tax, property and land taxes, and non tax revenues and grants.

Figure 8. Moldova: Breakdown of General Government Expenditures in 1994, 1998, and 1999
(In percent of total expenditures)



Source: Moldovan authorities; and Fund staff estimates.

1/ Includes project loan spending, expenditures for national economy, capital expenditures, net lending, administrative, military, and other unallocated categories.

both capital outlays and project loan spending significantly reduced their incidence on the total.

D. Size and Composition of Fiscal Adjustment: Methodology

85. According to the economic literature, both **the size and the composition of fiscal adjustment are relevant to its long-lasting success.** A good quality fiscal adjustment can trigger positive macroeconomic effects that lead to sustainable growth. In general, fiscal adjustments are more likely to be successful when they rely on non-priority expenditure cuts and small, or no, tax increases, with negligible disincentive impact (see Box 1).

Box 1. Quality of Fiscal Consolidation

According to country experiences, **both the adjustment size and its composition are relevant to assess the quality of fiscal consolidation** (Tanzi, 1989; Abed et al., 1998). In order to be successful, the reduction in fiscal deficit has to be durable over time and should have a positive impact on public policy efficiency. In general, fiscal adjustments that rely mostly on revenue increases, resulting from higher tax ratios with strong microeconomic disincentive effects or based on across-the-board cuts in expenditures, including capital spending, are less likely to be long-lasting. On the contrary, fiscal retrenchments based on the curtailment of selected expenditure categories, including wages and transfers and non-productive expenditure items, are more likely to be successful in the long run (Mackenzie, Orsmond and Gerson, 1997). The positive impact of fiscal adjustments is especially strong when the tax burden on households is kept stable, or even reduced. The reason why the latter type of adjustment is likely to be permanent and more conducive to growth is based on several well known arguments (Alesina and Perotti, 1997). First, large fiscal adjustment may have important **credibility effects** that will decrease the size of public debt service as a result of reduced risk premia on interest rates. Second, expenditure cuts and a reduction in the size of government could raise consumption, as they generate **expectations of lower taxes in the future.** Thirdly, a small fiscal deficit and low tax rates could have a positive impact on both **labor supply and demand** (e.g., by reducing the disincentive to work and the cost of labor, respectively). In addition, lower production costs can enhance the competitive position of the country in the world market, with a direct positive impact on the external position.

86. It is therefore important to measure the **composition of the fiscal adjustment** in Moldova, in order to assess the quality of the consolidation that took place in the 1994-99 period. A simple statistical approach to the measurement of the composition of fiscal adjustment requires the definition of:

- the **period** when the consolidation occurred. In the case of Moldova the adjustment took place primarily in one single year, during 1999. However, a moderate downward trend, although discontinuous, in many fiscal deficit indicators can be observed in the 1994-99 period. Thus, two alternative periods can be chosen in order to assess the size and the composition of the adjustment process: 1994-99 and 1998-99.

- the **measure** of fiscal position. Alternative measures of change in fiscal stance includes overall and primary deficit both on a cash and a commitment basis. Primary deficit measures are more suited to be linked to **discretionary changes in fiscal policy** than overall deficit. Grants and project loan spending should be also excluded when the actual change in the fiscal stance is to be measured. In fact, the former revenues and expenditure items are related to additional, extraordinary resources

transferred to the budget and cannot be considered completely under the control of the government in terms of fiscal policy.

- the **size** of the adjustment. A simple measure of the size of adjustment is given by:

$$\Delta_{t,p} = D_{t+p} - D_t$$

- where D is a measure of fiscal deficit as a ratio to GDP, $\Delta_{t,p}$ is the size of adjustment, t is the year when the consolidation process started and p is the length of the consolidation period.

- a measure of the **factors contributing to fiscal adjustment**. The above definition of fiscal adjustment size can be decomposed into the effects of the change in the ratio of public spending to GDP (G) and the change in the revenues to GDP ratio (T), with i and j being the indexes for a generic expenditure and revenues category, respectively:

$$\Delta_{t,p} = \sum_i (G_{i,t+p} - G_{i,t}) + \sum_j (T_{j,t} - T_{j,t+p})$$

- hence, the contribution of expenditures[27] to total fiscal adjustment (α) is:

$$\alpha_{i,t,p} = \frac{(G_{i,t+p} - G_{i,t})}{\Delta_{t,p}}$$

- and the relative contribution (β) of each expenditure[28] category i to the contribution of public outlays is:

$$\beta_{i,t,p} = \frac{(G_{i,t+p} - G_{i,t})}{\sum_i (G_{i,t+p} - G_{i,t})}$$

E. Empirical Results

87. **The size of fiscal adjustment is large**, although it differs widely depending on the definition of fiscal unbalance adopted. For the 1994-99 period, the estimates point at a consolidation not smaller than 4 percent of GDP in the lowest case, when total cash deficit includes grants. In the highest case, the size of consolidation in primary commitment deficit excluding grants and project loan spending is as high as 12 percent of GDP (Table 18). **When the sample is restricted to the 1998-99 period**, the size of fiscal consolidation falls to nearly zero, in the case of cash total deficit, if grants and project loan spending are excluded. In the highest case (primary commitment deficit including grants and project loan spending), the

[27] A similar formula can be used to measure the contribution of revenues.

[28] The contribution of a specific category of revenues can be calculated accordingly.

Table 18. Moldova: Size of Fiscal Adjustment and Contribution of Revenues and Expenditures, 1994-99 and 1998-99
(In percent of GDP)

	1994-99				1998-99			
	Size	Contribution			Size	Contribution		
		Revenues	Expenditures	α 1/		Revenues	Expenditures	α 1/
Including grants and project loan spending								
Total - cash	-3.7	6.2	-9.9	2.7	-0.2	5.8	-6.0	25.8
Total - commitment	-5.8	6.2	-12.0	2.1	-5.3	5.8	-11.0	2.1
Primary - cash	-7.3	6.2	-13.5	1.9	-2.8	5.8	-8.5	3.1
Primary - commitment	-9.4	6.2	-15.6	1.7	-7.8	5.8	-13.6	1.7
Excluding grants and project loan spending								
Total - cash	-5.8	7.3	-9.9	1.7	0.0	6.9	-6.0	-644.3
Total - commitment	-7.9	7.3	-12.0	1.5	-5.0	6.9	-11.0	2.2
Primary - cash	-9.4	7.3	-13.5	1.4	-2.5	6.9	-8.5	3.4
Primary - commitment	-11.6	7.3	-15.6	1.4	-7.6	6.9	-13.6	1.8

Sources: Moldovan authorities, and Fund staff estimates.

1/ Contribution of public expenditures to the fiscal adjustment.

adjustment reaches 9.4 percent of GDP. **The size of fiscal consolidation is larger for primary deficit than for total deficit**, as non-interest spending contributed to the most relevant share of public expenditure curtailment. Moreover, the **size of fiscal adjustment grows when grants and project loan expenditures are excluded** from the definition of fiscal budget. Finally, the largest size of budget consolidation can be observed when the deficit is defined on a **commitment basis**, as opposed to cash deficit.

88. The estimate of the extent of **fiscal consolidation is robust to the elimination of the cyclical factors** that can affect the deficit. The size of the adjustment grows when measured in terms of a cyclically adjusted budget indicator (Chand, 1991).[29] The latter can be defined as the level of fiscal unbalance that results, once the effects on government revenues and expenditures of cyclical macroeconomic fluctuations are taken into account. The changes in the **adjusted fiscal deficit** can be associated with the changes in the fiscal stance that reflect exclusively policy decisions. For any indicator of fiscal unbalance, the fiscal adjustment measured by the revised indicator is larger than the one based on the actual deficit (Table 19). In the period 1994-99, and to a lesser extent in 1998-99, the impact of public policy on fiscal retrenchment has been partially compensated by negative cyclical macroeconomic factors. Had those factor not been in place, the size of fiscal consolidation would have been larger.

89. **Public expenditure cuts have been the most important factor contributing to fiscal consolidation**, while the net impact of revenue changes widened the deficit (Table 20). The fiscal adjustment relied mostly on expenditure cuts that ranged between 10 percent of GDP and 14 percent of GDP in the 1994-99 period and from 6 percent to 9 percent of GDP in the 1998-99 period. Total revenue changes raised the deficit by 6 percent of GDP (7 percent of GDP excluding grants) in both periods. **The largest contribution of public expenditure to fiscal consolidation can be observed for primary deficit on a commitment basis**, whatever the definition of the adjustment period.

90. According to the breakdown of total contributions by revenue and expenditure category, **the composition of fiscal adjustment in Moldova is mostly consistent with a long-lasting budget consolidation**[30] (Figure 9 and Table 20). **Cuts in social spending and in capital outlays** and increases in the collection of **indirect tax** revenues are the most significant factors positively affecting the adjustment size, based on the overall deficit

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[29] The cyclically adjusted fiscal deficit (CAD_t) in a given year t can be obtained defining g_{t-1} and t_{t-1} as the corresponding preceding year ratios to GDP of expenditure and revenues, and Y_t^{CA} and Y_t as the current year adjusted and actual GDP, respectively. The cyclically adjusted deficit is given by: $CAD_t = (g_{t-1}Y_t^{CA} - t_{t-1}Y_t)$. In the estimates, the cyclically adjusted GDP results from a three-years moving average of the real annual economic growth rates.

[30] Unfortunately, the relative contributions to fiscal adjustment of revenues and expenditures by category can be estimated only for the cash deficit. In fact, the breakdown of domestic expenditure arrears by economic and functional classification is not available in Moldova for the sample analyzed.

Table 19. Moldova: Size of Fiscal Adjustment, Deficit Corrected for Cyclical Effects, 1994-99 and 1998-99.
(In percent of GDP)

	1994-99			1998-99		
	Actual	Adjusted 3/	Difference	Actual	Adjusted 3/	Difference
Overall						
Cash 1/	-3.7	-6.5	2.9	-0.2	-4.9	4.7
Commitment 1/	-5.8	-13.8	8.0	-5.3	-6.9	1.6
Cash 2/	-5.8	-10.1	4.3	0.0	-0.3	0.3
Commitment 2/	-7.9	-12.7	4.7	-5.0	-5.7	0.7
Primary						
Cash 1/	-7.3	-14.5	7.2	-2.8	-4.0	1.3
Commitment 1/	-9.4	-17.1	7.7	-7.8	-9.5	1.7
Cash 2/	-9.4	-13.4	4.0	-2.5	-2.9	0.3
Commitment 2/	-11.6	-16.0	4.4	-7.6	-8.3	0.7

Sources: Moldovan authorities; and Fund staff estimates.

1/ Including grants and project loan spending.
2/ Excluding grants and project loan spending.
3/ Fiscal deficit net of cyclical effects.

Table 20. Moldova: Composition of Cash Deficit Adjustment, Including Grants and Project Loan Spending, 1994-99 and 1998-99.
(In percent of GDP)

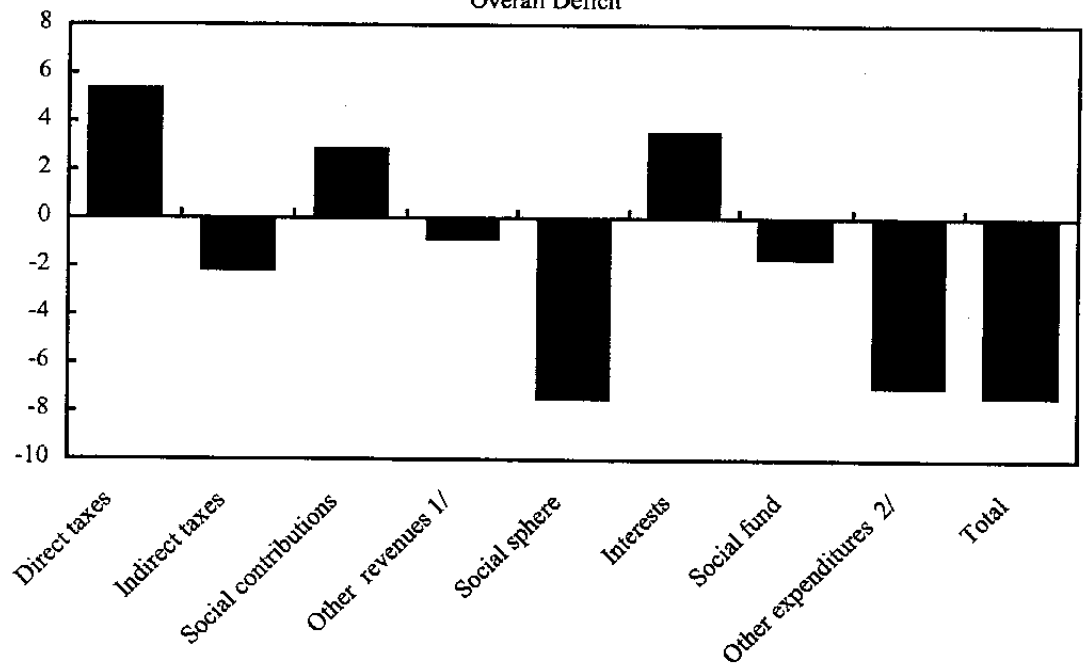
	1994-99			1998-99		
	Contribution	β 7/	β/α 8/	Contribution	β 7/	β/α 8/
Revenues	6.2	100	-171	5.8	100	-2374
Tax revenues	4.2	67	-114	6.0	105	-2486
Direct taxes 1/	5.4	87	-148	0.6	10	-239
Indirect 2/	-2.2	-36	61	4.4	76	-1799
Foreign trade taxes	-1.1	-18	31	-0.6	-11	260
Social fund contributions	2.9	46	-79	1.8	32	-760
Other taxes 3/	-0.8	-13	22	-0.1	-2	52
Non-tax revenues and grants	2.1	33	-57	-0.3	-5	113
Expenditures and net lending	-9.9	100	271	-6.0	100	2465
Expenditures	-7.1	72	194	-5.4	90	2214
National economy	-0.4	4	10	-0.6	10	253
Social sphere 4/	-7.5	76	206	-3.1	52	1283
Interest	3.6	-37	-99	2.5	-43	-1048
Domestic	1.0	-10	-28	0.8	-14	-345
Foreign	2.6	-26	-71	1.7	-28	-700
Capital expenditures	-1.3	13	34	-1.2	21	508
Other expenditures 5/	-2.4	24	65	-1.3	21	529
Social fund expenditures	-1.7	18	47	-2.3	39	954
Project loan spending	2.7	-27	-73	0.6	-11	-267
Net lending	-2.3	24	64	-0.6	10	253
Residual 6/	-0.5	5	12	0.0	0	-1
Total size of adjustment	-3.7	...	100	-0.2	...	100

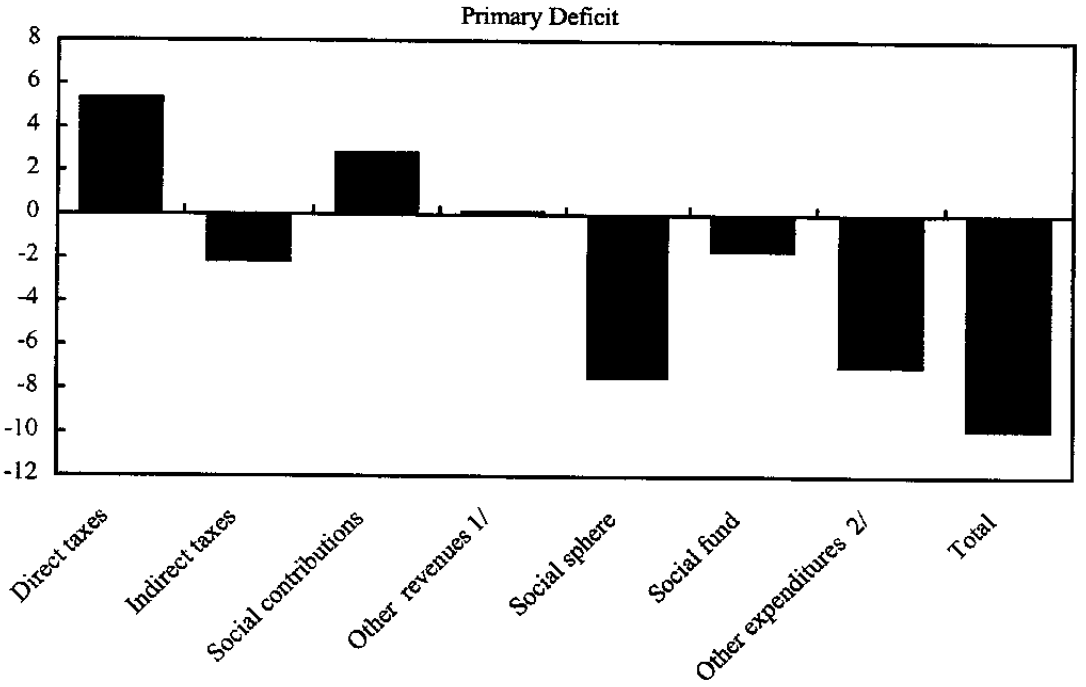
Sources: Moldovan authorities; and Fund staff estimates.

1/ Includes profit tax and personal income tax.
2/ Include VAT and excise tax.
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.
4/ Includes public expenditure for health care, education and some minor social assistance schemes.
5/ Includes extrabudgetary funds, administrative, military, indexation of deposits, environment, and unallocated.
6/ Residual term included to take into account of rounding errors.
7/ Relative weights of revenue and expenditure categories to total revenue and expenditure contributions.
8/ Ratio of relative to total contribution of revenues and expenditures.

Figure 9. Moldova: Contribution of Revenues and Expenditures to the Fiscal Adjustment, 1994-99

(In percent of GDP)





Source: Moldovan authorities, and Fund staff estimates.

1/ Includes foreign trade tax, property and land taxes, non tax revenues and grants.
2/ Includes project loan spending, expenditures for national economy, capital expenditures, net lending, administrative, military and other unallocated categories.

definition. Lower revenues from **direct taxes** and **social contributions,** and higher **interest spending** are the most relevant factors that tended to increase the deficit. When **primary deficit** is considered, the contribution of social spending to the fiscal adjustment is above 50 percent of total public expenditure contribution. On revenue side, the increase in the collection of indirect taxes is not sufficient to fully compensate the fall in direct taxes and social contributions (Table 21).

91. Some differences appear when the 1998-1999 fiscal adjustment is considered in greater detail. As compared with the 1994-1999 results, the size of fiscal consolidation in 1999 has been smaller and the **negative contribution of revenues much more relevant.** This result is primarily due to lower indirect tax revenues, mostly because of the **fall in VAT collection,** while foreign trade taxes and nontax revenues contributed positively to fiscal consolidation. However, this result has been partially caused by an increase in **grants** . On expenditure side, all categories (except interest spending) contributed positively to the deficit reduction. The largest share of contribution is accounted by **social spending** curtailment (37 percent) and by the reduction in **Social Fund expenditures** (Table 21). As a result of the 1999 fiscal adjustment, the public expenditure ratio in Moldova converged to a level consistent with its per capita GDP in a sample of Baltic, Russia and other former Soviet Union countries (BRO), as is shown in Figure 10.

F. Outstanding Issues

92. Despite the fact that the empirical results illustrated in the preceding section point to the good quality of Moldovan fiscal adjustment, there are still several **weaknesses in fiscal policy.** Fiscal vulnerability could reverse the positive effects of the 1999 consolidation, if no adequate policies will counteract it. Among the outstanding fiscal issues, the most relevant are poor revenue collection capacity, a large stock of domestic expenditure arrears, the low level of capital outlays, and the steady growth in Social Fund and interest spending:

- The fluctuations observed in **tax revenue** collection over the period of analysis, can be only partially explained by cyclical factors. Overall, weak tax administration and poor collection enforcement brought to a concentration of high tax burdens among few taxpayers or restricted income categories (Carasciuc, 1999). In many cases (e.g., VAT), tax bases are narrowed by exemptions and the use of multiple rates. This affects both the amount of revenues collected and the administration of the tax system.

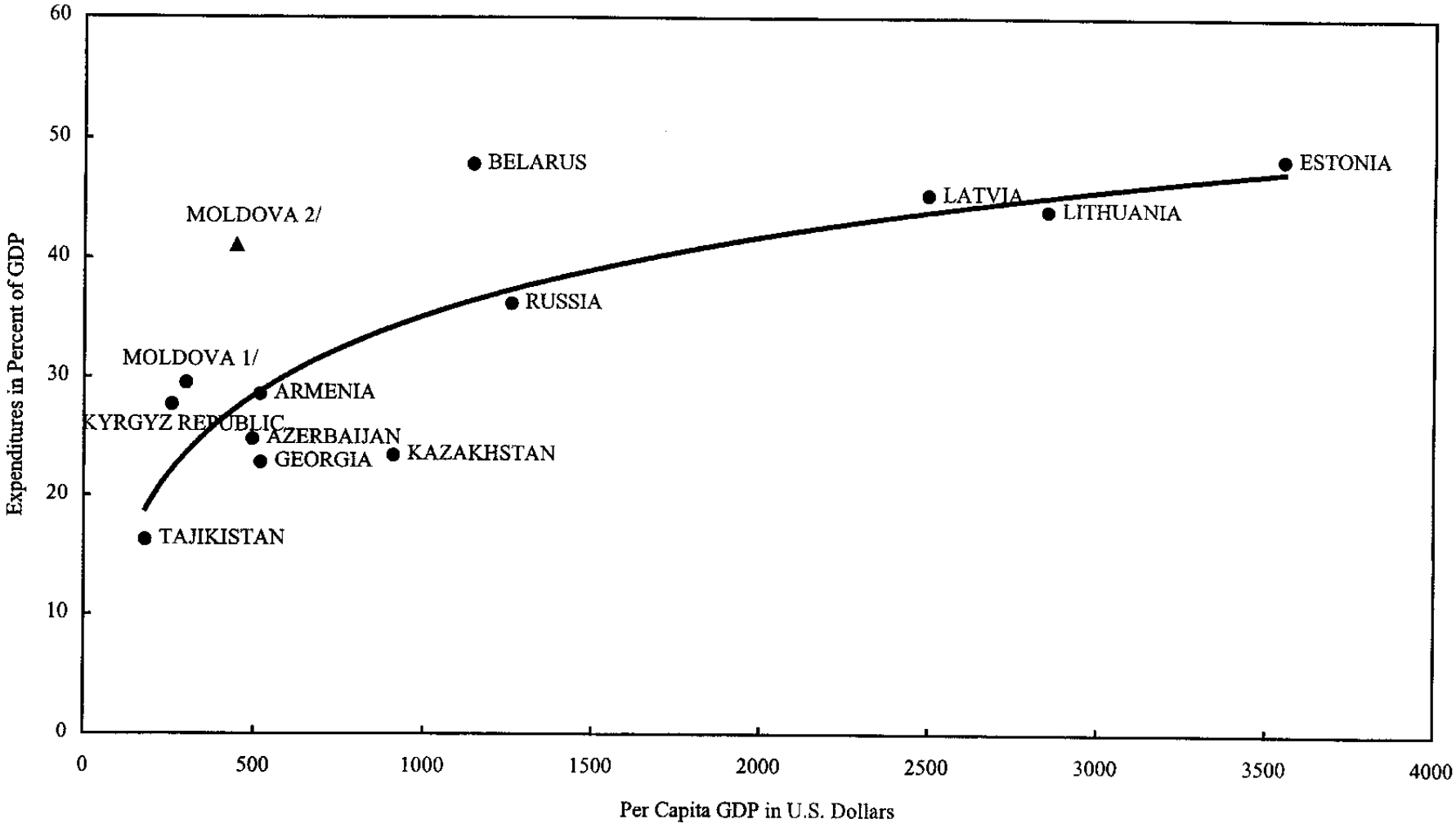
Table 21. Moldova: Composition of Primary Deficit Adjustment, Excluding Grants and Project Loan Spending, 1994-99 and 1998-99.
(In percent of GDP)

	1994-99			1998-99		
	Contribution	β 7/	β/α 8/	Contribution	β 7/	β/α 8/
Revenues	7.3	100	-78	6.9	100	-277
Tax revenues	4.2	57	-44	6.0	87	-241
Direct taxes 1/	5.4	74	-58	4.4	63	-175
Indirect 2/	-2.2	-30	24	-0.6	-9	25
Foreign trade taxes	-1.1	-16	12	1.8	27	-74
Social fund contributions	2.9	39	-31	-0.1	-2	5
Other taxes 3/	-0.8	-11	8	-0.3	-4	11
Non-tax revenues and grants	3.2	43	-34	0.9	13	-36
Expenditures and net lending	-13.5	100	143	-8.5	100	341
Expenditures	-13.3	98	141	-8.6	100	342
National economy	-0.4	3	4	-0.6	7	25
Social sphere 4/	-7.5	56	80	-3.1	37	125
Capital expenditures	-1.3	9	13	-1.2	14	49
Other expenditures 5/	-2.4	18	25	-1.3	15	51
Social fund expenditures	-1.7	13	18	-2.3	27	93
Project loan spending	2.7	-20	-28	0.6	-8	-26
Net lending	-2.3	17	25	-0.6	7	25
Residual 6/	2.1	-15	-22	0.6	-8	-26
Total size of adjustment	-9.4	...	100	-2.5	...	100

Sources: Moldovan authorities; and Fund staff estimates

1/ Includes profit tax and personal income tax.
2/ Include VAT and excise tax.
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.
4/ Includes public expenditure for health care, education and some minor social assistance schemes.
5/ Includes extrabudgetary funds, administrative, military, indexation of deposits, environment, and unallocated.
6/ Residual term included to take into account of rounding errors.
7/ Relative weights of revenue and expenditure categories to total revenue and expenditure contributions.
8/ Ratio of relative to total contribution of revenues and expenditures.

Figure 10. General Government Expenditures and per Capita GDP in BRO Countries, 1999



Sources: Moldovan authorities; and Fund staff estimates.

1/ Before fiscal consolidation.
2/ After fiscal consolidation.

- **The level of Social Fund expenditure and its rate of growth are not yet completely under control.** An important reform of the **pension system**, which will strengthen the link between contributions and benefits is currently under implementation, in collaboration with the World Bank. However, despite the value of pension benefits is continuing to fall in real terms because of the lack of indexation to price changes, and social contribution rates are very high,[31] Social Fund expenditures are one of the fastest increasing items in the budget. In addition, many social insurance and social assistance benefits provided by the Social Fund are still **weak-targeted and poorly designed.** As a consequence, a huge number of benefits is provided to large sectors of the population, but the average value of benefits is relatively low.

- The curtailment of public investment programs may bring to serious deterioration of important infrastructure, thereby hampering economic growth. Public investments were drastically reduced in 1999 and now account for slightly more than 2 percent of total public spending. As a ratio to GDP, capital outlays are less than 1 percent.[32] Compared with a sample of similar low-income countries, where capital outlays accounted for 15-20 percent of total public expenditures, Moldova's position is clearly at variance. Although the elimination of many investment activities was based on their low cost-effectiveness, essential public investments in social infrastructure may need to be expanded in the medium term.

- The stock of arrears continues to be a heavy burden for the budget. Arrears on domestic expenditure, mostly on pensions and wages, reached their peak value in 1999 at 8.1 percent of GDP. The fastest accumulation of arrears took place primarily in 1996 and in 1998, and it slowed down in the rest of the period, but the size of the stock is still very large.

- **Interest spending is rapidly growing as a share of total public expenditures.** The large amount of both domestic and foreign interests is going to constrain a significant part of spending decisions in the next years. Interest spending is rapidly growing as a consequence of high interest rates, reflecting country-risk premia, and the large stock of public debt.

G. Conclusions

93. **In 1999 Moldova went through a large and unprecedented fiscal consolidation process.** Despite the moderate downward sloped trend in all deficit measures since 1994, the fiscal retrenchment occurred in 1999 is clearly sizeable. **The size of the adjustment is robust to alternative definitions of fiscal balance** and to the elimination of the effects of

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[31] Social contribution rates are set at level that are well above those currently used in many high-income countries.

[32] This figures do not include public investments financed by World Bank project loans.

cyclical macroeconomic fluctuations. Public expenditure commitments were significantly reduced in order to compensate for the fall in tax revenue collection, occurred in the aftermath of the Russian crisis. Most of the expenditure cuts resulted from the elimination of excess capacity in the bloated health care and education sectors.[33] Nonpriority public investment programs were canceled and public employment was radically streamlined. Overall, **public expenditures were brought in line with the current levels of many low-income BRO countries**, facing similar financial constraints.

94. According to the results of the empirical analysis, both **the size and the composition of the 1999 fiscal adjustment could be consistent with a long-lasting budget consolidation** if a tight fiscal policy will be maintained in the next years. Many policy measures adopted in 1999 could be conducive to higher growth, by reducing the public sector crowding-out of private investment. In addition, the fall in the size of the large and non-effective social sector could free resources that may be allocated to public investment projects and to protect the most vulnerable groups of the population.[34]

95. According to recent empirical evidence in country with large government sizes, substantial fiscal adjustments can be conducive to higher economic growth when fiscal consolidation results from the permanent elimination of unproductive expenditures and the stabilization of revenues. In the case of Moldova, the overall evidence on the 1999 fiscal retrenchment is that previous actions were **necessary, but they are not a sufficient condition to achieve permanent fiscal consolidation.** Despite the large expenditure cuts implemented in the social sector and for civil service, **important reforms are still required** to strengthen revenue collection, to monitor public spending, to improve its allocation toward more productive uses and to make it more equitable.

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[33] See chapter IV for an analysis of social spending efficiency in Moldova, before the 1999 fiscal adjustment.

[34] Moldova's poverty head-count ratio is 20 percent when a definition of relative poverty is used and the poverty line is set at 40 percent of average consumption (World Bank, 1999). Poverty is particularly high among large households, people living in the rural areas and those with low educational attainments.

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IV. The Efficiency of Social Spending In Moldova[35]

A. Introduction

96. Moldova went through a period of unprecedented fiscal adjustment in 1999, with the commitments deficit of the consolidated general government contracting by nearly 6 percent of GDP relative to 1998. Central to the adjustment effort was a comprehensive rationalization of expenditures, particularly in the social area. Recent pressures have emerged to relax the government's stance on social spending while, at the same time, improving the quality of publicly-funded social programs. These pressures have highlighted the need for a more in-depth analysis of spending and performance indicators in the formulation of social policies. Against this background, an important policy question is whether or not the ongoing fiscal consolidation efforts have been accompanied by measures to improve the quality and efficiency of public spending on social programs in Moldova, particularly health care and education.

97. Moldova's performance on education and health indicators compares poorly with other transition economies, despite its higher share in GDP and total government of spending on these programs. The combination of relatively poor education and health indicators and high public spending on social programs suggests inefficiencies in program design and service delivery in the social area. To estimate the efficiency of government spending on health care and education in Moldova, an efficiency frontier is constructed for a sample of transition economies using the Free Disposal Hull methodology—a non-parametric estimation procedure to be described below.[36] Moldova's efficiency in the provision of health care and education services is compared with other transition economies.

98. This chapter is structured as follows. Section B describes recent trends in social spending and social indicators in Moldova and in other transition economies in the 1990s. Section C describes the methodology for estimating efficiency in public spending on education and health care. Section D reports the empirical findings and Section E concludes.

B. Measuring Efficiency in Social Spending: FDH Analysis

99. The efficiency of public spending on social programs can be measured in different ways. Regression analysis offers insights into how efficiently governments provide social services, after controlling for other determinants of social development. However, the elasticities calculated using standard regression analysis suffer from a number of limitations, including the sensitivity of parameter estimates to the functional specification of the reduced-form equations to be estimated. Also, most models from which estimating equations are

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[35] Prepared by Luiz de Mello. I am indebted to Emanuele Baldacci for helpful comments and discussions.

[36] The data used in the calculation of the efficiency frontiers are available at the World Bank Development Indicators.

derived rely on assumptions (on utility maximizing behavior, for instance) that are not easily applicable to public goods.

100. Alternative, non-parametric methods have been developed in recent years to measure efficiency in the provision of public goods and services (see, for example, Tulkens and Van den Eeckaut, 1995).

101. These methods consist of defining an efficiency frontier for the provision of social services treating public spending as an input in a social production function. Outputs are conventionally proxied by social indicators, such as school enrollment rates, illiteracy rates, life expectancy, among others. By using information on both inputs and outputs, the production frontier defines best practices for the production/provision of social outputs and the use of inputs in the set of producers under examination. The tradeoffs in the choice of inputs and outputs is well documented in the literature (Harbison and Hanushek, 1992; Jimenez and Lockheed, 1995). Unlike standard regression analysis, the calculation of these non-parametric efficiency frontiers does not depend on the assumptions used in the theoretical model or the functional specification of the social production function.

102. A widely-used non-parametric method is Free Disposal Hull (FDH) analysis. Accordingly, a producer is efficient in the provision of public goods and services if its combination of outputs and inputs lies near the efficiency frontier constructed for the sample of producers. The analysis allows for the ranking of producers according to their efficiency scores. The only assumption made is that inputs and outputs be freely disposed of; in other words, it is possible with the same production technology to lower outputs while maintaining the same level of inputs, and increasing inputs while maintaining the same level of output.

103. FDH analysis shows that a producer (i.e., the government) is relatively inefficient in the provision of, say, education services if another producer uses less input (public spending) to generate as much or more output (performance indicator). Efficiency is determined as follows. First, the relatively efficient production results are identified for the sample of countries under examination, based on their public spending levels and performance indicators in education and health care. Second, an efficiency score is calculated as the distance of individual production results to the production frontier (FDH). This distance can be calculated from the point of view of inputs and outputs.

104. The input efficiency score is the ratio of inputs used by a given producer A to the inputs used by producer B. This efficiency score indicates the excess use of inputs by the inefficient producer and therefore the extent to which resources are used inefficiently. By the same token, the output efficiency score is the ratio of producer A's output to that of producer B. This ratio indicates the loss of output relative to the most efficient producer with equal or lower level of inputs. Finally, the producers in the sample are ranked according to their input and output scores. Alternatively, a producer is found to be dominated by other producers that achieve a higher level of output using the same, or lower, level of input (output efficiency); or the same level of output using less inputs (input efficiency). Dominance analysis is useful if the sample of producers is small.

C. Trends in Social Spending and Indicators

105. Moldova's performance in the public provision of social services compares unfavorably with other transition economies for a wide range of standard health care and education indicators (Table 22).[37]

106. With regard to **education indicators:**

- The adult illiteracy rate is higher in Moldova than in the average transition economy. However, Moldova has reduced the adult illiteracy rate at a faster pace than other transition economies. This reflects, at least in part, a catch-up effect relative to other transition economies, given Moldova's higher initial illiteracy rate.[38]

- School enrollment rates are comparable in Moldova with the average transition economy. The gross primary enrollment rate is slightly higher than the average for the transition economies in the sample, whereas the gross secondary enrollment rate is slightly lower. Unfortunately, information on net enrollment rates is not available for Moldova. This would allow for a more detailed analysis of the impact of dropout and repetition rates on the gross enrollment rates, particularly in light of Moldova's higher rate of growth of gross primary enrollment rate in the 1990s, relative to the average transition economy.[39] On a positive note, unlike the average transition economy, Moldova's gross secondary school enrollment rate rose in the period under examination.

107. With regard to **health care indicators:**

- Moldova fares better than other transition economies in immunization indicators, with higher immunization rates for both DPT and measles than the average transition economy. Also, on average, Moldova's rate of increase in the coverage of DPT immunization has outpaced that of other transition economies.

- Access rates for safe water and sanitation are considerably lower in Moldova than in the average transition economy.

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[37] See World Bank (1999), for more information of education and health care indicators in Moldova.

[38] Over a given period of time, countries with lower (worse) initial indicators tend to improve faster than their counterparts with higher (better) initial scores.

[39] A wedge between net and gross school enrollment rates indicate high dropout and repetition rates.

Table 22. Moldova: Health and Education Spending and Indicators in Transition Economies, 1992-97

	Transition economies 1/		Moldova		Percent change		Latest year of observation	
	1992	Latest	1992	Latest	Transition economies	Moldova	Transition economies	Moldova
Education indicators 2/								
Illiteracy rate, adult total (% of people aged 15 and above)	2.0	1.2	3.5	1.7	-41.4	-50.3	1997	1997
Persistence to grade 5, total (% of cohort)	97.0	93.6	...	...	-3.4	...	1994	...
School enrollment, primary (% gross)	93.5	94.8	93.1	97.4	1.4	4.6	1996	1996
School enrollment, primary (% net)	88.8	91.8	...	...	3.4	...	1996	...
School enrollment, secondary (% gross)	84.7	82.0	80.0	80.5	-3.2	0.6	1996	1996
School enrollment, secondary (% net)	2.0	1.2	...	...	-40.1	...	1997	...
Health indicators								
Births attended by health staff (% of total)	97.6	97.6	...	...	...	...	1996	...
Immunization, DPT (% of children under 12 months)	82.8	93.4	81.0	97.0	12.7	19.8	1997	1997
Immunization, measles (% of children under 12 months)	82.4	95.0	93.0	99.0	15.3	6.5	1997	1997
Low-birthweight babies (% of births)	6.3	6.8	6.6	6.6	6.7	...	1995	1992
Safe water (% of population with access)	70.4	64.5	55.0	55.6	-8.4	1.1	1993	1995
Sanitation (% of population with access)	85.1	55.5	49.7	49.7	-34.9	...	1995	1995
Life expectancy at birth, total (years)	69.6	70.0	68.3	66.5	0.5	-2.6	1997	1997
Mortality rate, infant (per 1,000 live births)	21.6	17.0	19.0	20.0	-21.4	5.3	1997	1997
Mortality rate, under-5 (per 1,000 live births)	24.2	22.4	37.3	24.0	-7.6	-35.7	1997	1997
Public spending 3/								
Education								
In percent of GDP	6.1	4.4	7.3	8.8	-27.2	20.6	1997	1997
In percent of total government spending	12.9	13.6	14.9	20.4	5.8	37.0	1997	1997
Health								
In percent of GDP	4.1	4.1	3.6	5.3	0.0	45.5	1997	1997
In percent of total government spending	9.8	9.8	7.4	12.3	0.0	65.3	1997	1997

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

1/ Comprises Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and Yugoslavia.
2/ The initial observation is 1990 for illiteracy rate, net secondary school enrollment, and access to safe water and sanitation; and 1996 for births attended by health staff.
3/ The initial observation is 1992.

- Mortality rates are slightly higher in Moldova than in the average transition economy. More importantly, whereas the infant mortality rate increased in the 1990s in Moldova, despite the downward trend in the transition economies, the reduction in the under-five mortality rate was impressive and outpaced the transition economy average reduction in the period.

- The share of babies born with low birth weight is comparable in Moldova with the average for the transition economies.

- Life expectancy is lower in Moldova and has fallen more rapidly than in the average transition economy.

108. With regard to trends in **health and education spending**, Moldova has higher ratios of public health care and education spending to GDP and total government spending than the average transition economy. Also, unlike the average transition economy, there was an increase in these ratios in Moldova between 1992 and 1997 (Figure 11). Nevertheless, these spending indicators have to be treated with caution for several reasons.

- As in other transition economies, expenditures are recorded on a cash, rather than commitment, basis and include netting operations. This underestimates the size of government when domestic expenditure arrears are accumulated.[40] Data on expenditure arrears disaggregated by expenditure function are not readily available, which prevents the construction of an internationally comparable expenditure data set on a commitment basis for Moldova and other transition economies.[41]

- Expenditures within the social sector have often been reclassified in the period under examination. This complicates comparisons over time.[42]

- A rise in the ratio of social spending to GDP may reflect the decline in Moldova's GDP and total government spending in the 1990s, rather than an increase in social outlays over time.

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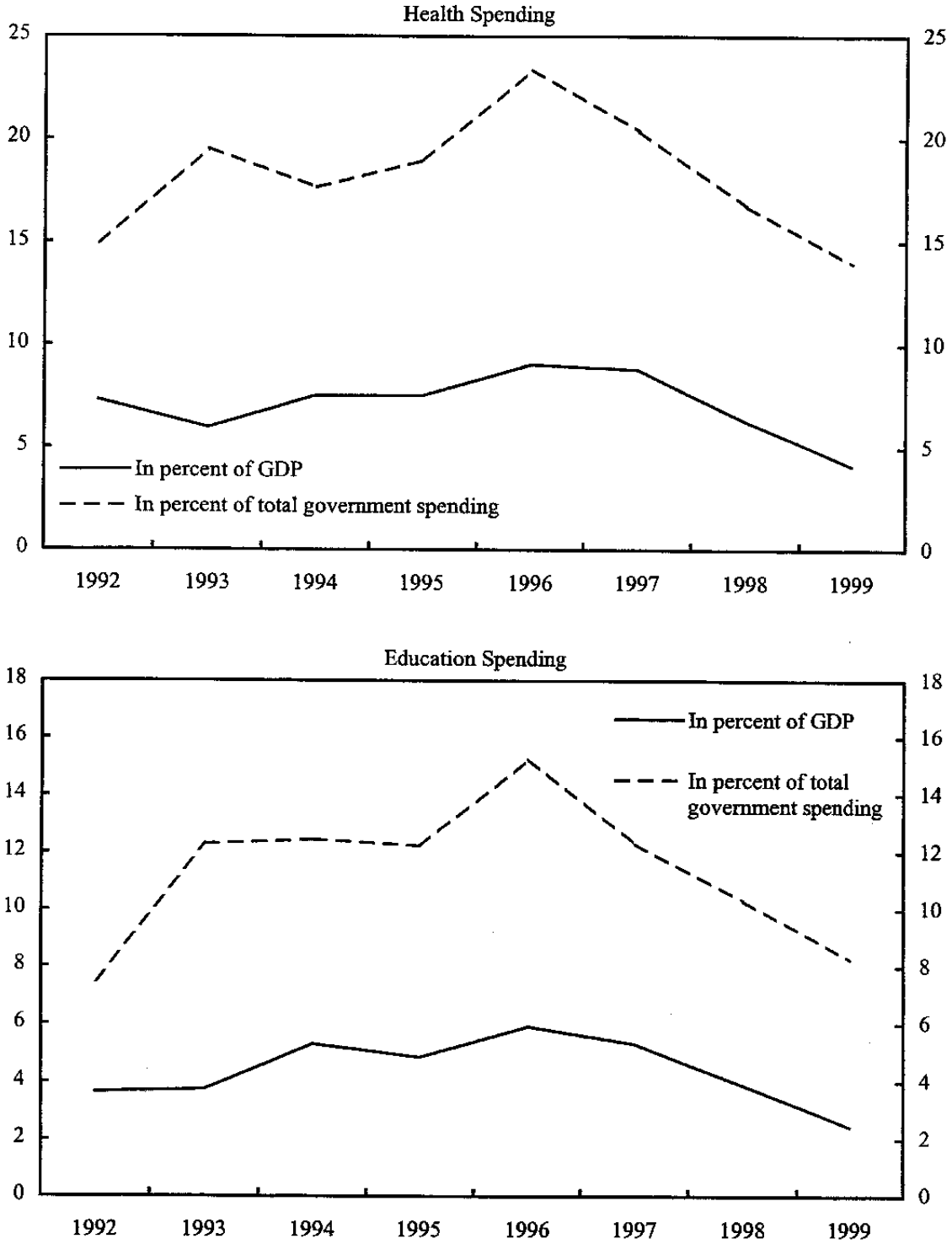
[40] In 1998, for instance, the accumulation of domestic expenditure arrears reached nearly 5 percent of GDP and constituted an important source of deficit financing in Moldova. Information of the volume of netting operations and other noncash transactions is not readily available before 1998.

[41] See de Mello (1999), for more information.

[42] For instance, in Moldova, some social assistance programs within the education and health care sectors (e.g., student grants and stipends) have been recorded as other social spending, instead of health care and education.

Figure 11. Moldova: Health and Education Spending, 1992-1999



Sources: Moldovan authorities; and Fund staff estimates.

D. Efficiency Analysis: The Results

109. With regard to **education efficiency scores**, Moldova fares poorly compared with other transition economies. In terms of input efficiency, Moldova scores 0.38 and 0.34 respectively when the gross primary school enrollment rate and the gross secondary school enrollment rate are used as the output indicators (Table 23 and Figure 12).[43] These scores place Moldova in the last position in the efficiency ranking of the 12 transition economies for which data on gross school enrollment rates are available. As discussed above, these results mean that Moldova could achieve the same, or higher, gross primary (secondary) school enrollment rate using 38 percent (34 percent) of its public spending on education programs.[44] Unfortunately, data on net enrollment rates, as well as other education performance indicators, are not available for Moldova, as discussed above.

110. In the case of **health care efficiency indicators**, Moldova also fares poorly in immunization efficiency, despite its higher coverage rates than the average transition economy (Table 24 and Figure 13). The input efficiency scores are 0.51 and 0.73 respectively for DPT and measles immunization. These scores place Moldova in the 12th and 8th efficiency positions in respectively DPT and measles immunization. The input efficiency score for DPT immunization suggests that the same immunization rate could be achieved using nearly half of the public resources devoted to health care.

111. When mortality rates are used as the performance indicators (Table 25 and Figure 14), the FDH analysis shows that the same mortality rates could be reached using nearly half of the public resources devoted to health care. Moldova ranks 13th in the 20 transition economies for which data on infant mortality are available and 12th in the efficiency ranking of transition economies in under-five mortality.

112. The results reported above show that countries with higher spending levels relative to GDP are relatively less efficient than countries that yield comparable output with less use of inputs. For instance, countries that have education spending patterns skewed towards teachers' compensation or have higher ratios of teachers to students tend to be less efficient in the provision of education services. Likewise, countries that spend proportionally more resources on expensive curative care programs relative to preventive care will also tend to fare poorly in terms of efficiency scores.

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[43] Countries with score equal to 1.0 define best practices for the set of countries under examination. These countries dominate those that produce less output with the same or higher level of input (input efficiency) or use more input to produce the same or lower level of output (output efficiency). These countries define the efficiency frontier, as depicted in Figure 12.

[44] Information for illiteracy rates is not available for most countries in the sample. In this case, the efficiency scores would be based on a small sample size. The results of the efficiency analysis using the illiteracy rate as the output indicator are therefore not reported but confirm the findings above.

Table 23. Moldova: Transition Economies: FDH Analysis (School Enrollment Rates)

	Gross primary school enrollment						Gross secondary school enrollment					
	Input Efficiency			Output Efficiency			Input Efficiency			Output Efficiency		
	Score	Rank	Dominates	Score	Rank	Dominates	Score	Rank	Dominates	Score	Rank	Dominates
Azerbaijan	1.00	4	5	1.00	4	5	0.39	11	0	0.74	11	0
Belarus	0.48	11	1	0.93	7	1	0.44	9	1	0.90	7	1
Bulgaria	0.83	5	4	0.96	6	4	0.42	10	0	0.74	12	0
Croatia	0.57	10	0	0.92	11	0	1.00	4	4	1.00	4	4
Estonia	0.63	8	0	0.91	12	0	1.00	3	7	1.00	3	7
Georgia	1.00	3	1	1.00	3	1	1.00	2	2	1.00	2	1
Kazakhstan	0.76	6	2	0.92	9	1	0.77	6	2	0.84	8	2
Lithuania	0.57	9	1	0.92	8	1	0.58	8	1	0.83	9	1
Moldova	**0.38**	**12**	**0**	**0.92**	**10**	**0**	**0.34**	**12**	**0**	**0.78**	**10**	**0**
Romania	1.00	2	7	1.00	2	7	0.87	5	2	0.96	5	2
Slovak Republic	0.70	7	3	0.96	5	3	0.70	7	3	0.91	6	3
Tajikistan	1.00	1	2	1.00	1	2	1.00	1	2	1.00	1	2

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

Table 24. Moldova: Transition Economies: FDH Analysis (Immunization Rates)

	DPT Immunization						Measles Immunization					
	Input Efficiency			Output Efficiency			Input Efficiency			Output Efficiency		
	Score	Rank	Dominates	Score	Rank	Dominates	Score	Rank	Dominates	Score	Rank	Dominates
Albania	1.00	4	12	1.00	4	12	0.67	10	4	0.99	8	3
Belarus	0.51	11	3	0.97	12	2	0.73	7	4	0.98	11	3
Bulgaria	0.67	7	1	0.94	16	1	0.45	13	2	0.93	16	1
Croatia	0.32	17	0	0.92	17	0	0.32	15	0	0.93	15	0
Czech Republic	0.35	16	0	0.98	8	0	0.28	16	0	0.96	13	0
Estonia	1.00	3	0	1.00	3	0	1.00	5	1	1.00	6	0
Georgia	1.00	2	2	1.00	2	1	1.00	4	5	1.00	5	3
Hungary	1.00	1	11	1.00	1	11	1.00	3	11	1.00	4	10
Kazakhstan	0.60	9	2	0.96	14	2	0.73	9	3	0.97	12	3
Kyrgyz Republic	0.55	10	7	0.98	7	4	0.79	6	5	0.98	10	3
Lithuania	0.84	5	0	0.98	10	0	1.00	2	6	1.00	3	5
Moldova	**0.51**	**12**	**2**	**0.97**	**11**	**2**	**0.73**	**8**	**4**	**0.99**	**7**	**4**
Romania	0.83	6	7	0.98	9	5	1.00	1	6	1.00	2	5
Slovak Republic	0.44	14	2	0.98	6	0	0.64	11	1	0.98	9	1
Tajikistan	0.48	13	1	0.95	15	1	0.32	14	1	0.95	14	1
Turkmenistan	0.40	15	1	0.98	5	0	0.57	12	1	1.00	17	1
Uzbekistan	0.62	8	3	0.96	13	2	0.11	17	0	0.88	1	0

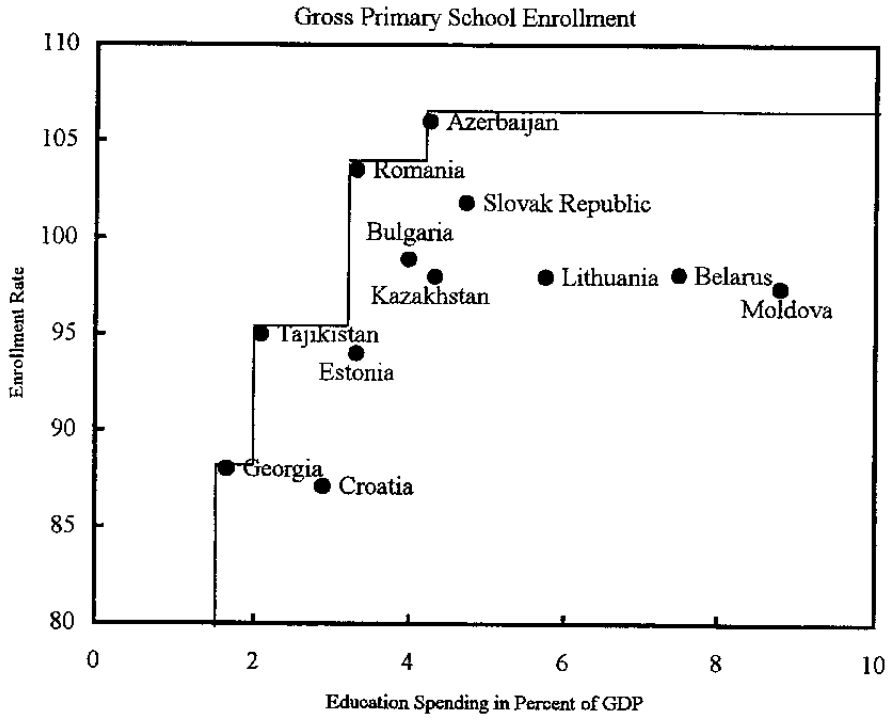
Sources: Data provided by authorities; and Fund staff calculations.

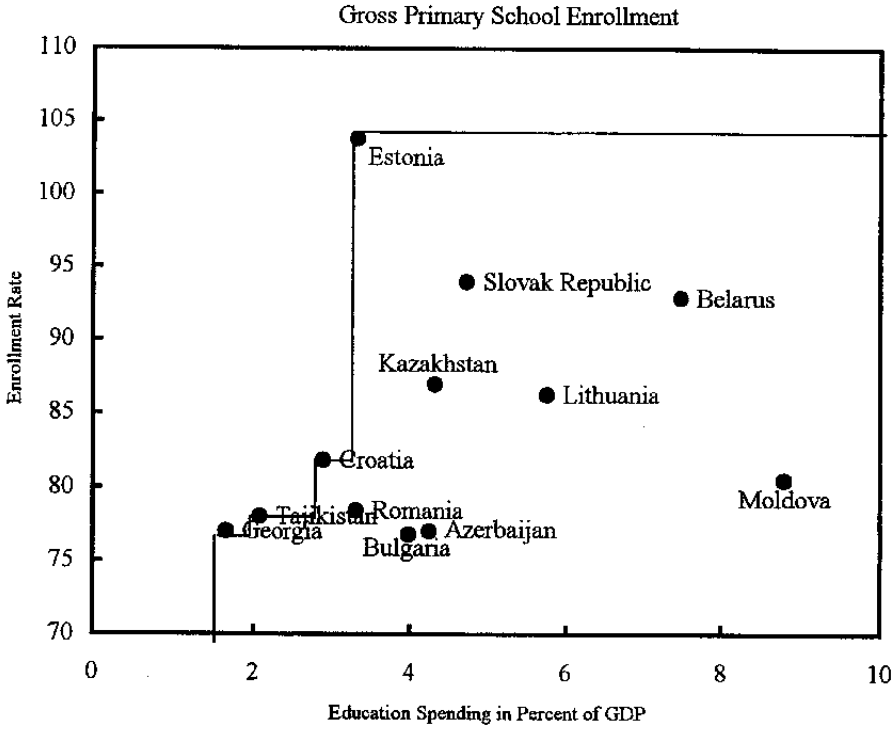
Table 25. Moldova: Transition Economies: FDH Analysis (Mortality Rates)

	Infant Mortality						Under-5 Mortality					
	Input Efficiency			Output Efficiency			Input Efficiency			Output Efficiency		
	Score	Rank	ominates	Score	Rank	Dominates	Score	Rank	Dominates	Score	Rank	Dominates
Albania	1.00	6	13	1.00	6	13	1.00	4	13	1.00	4	13
Azerbaijan	0.82	9	8	0.76	9	8	0.82	8	5	0.57	13	5
Belarus	0.34	16	3	0.44	15	3	...	...	...	...	...	...
Bulgaria	0.67	10	5	0.68	11	5	0.67	9	3	0.59	12	3
Croatia	0.09	18	1	0.28	19	1	0.09	17	1	0.25	17	1
Czech Republic	0.06	20	0	0.15	20	0	0.06	18	0	0.15	18	0
Estonia	1.00	5	4	1.00	5	4	1.00	3	4	1.00	3	4
Georgia	1.00	4	9	1.00	4	9	1.00	2	6	1.00	2	6
Hungary	0.12	17	3	0.38	17	3	0.13	15	2	0.30	16	2
Kazakhstan	0.60	11	5	0.93	7	5	0.60	11	3	0.72	7	3
Kyrgyz Republic	1.00	3	5	1.00	3	5	...	...	...	...	...	...
Lithuania	0.84	7	5	0.60	13	5	0.84	5	4	0.62	10	4
Moldova	**0.51**	**13**	**3**	**0.71**	**10**	**3**	**0.51**	**12**	**2**	**0.60**	**11**	**2**
Poland	0.46	14	3	0.39	16	3	0.12	16	2	0.30	15	2
Romania	0.83	8	10	0.85	8	10	0.83	7	8	0.66	8	8
Russian Federation	0.60	12	7	0.66	12	7	0.84	6	8	0.63	9	8
Slovak Republic	0.08	19	1	0.29	18	1	...	...	...	...	...	...
Tajikistan	1.00	2	3	1.00	2	3	0.48	13	2	0.91	5	2
Turkmenistan	1.00	1	1	1.00	1	1	1.00	1	1	1.00	1	1
Ukraine	0.44	15	4	0.54	14	4	0.44	14	2	0.43	14	2
Uzbekistan	...	...	...	...	...	...	0.62	10	4	0.78	6	4

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

Figure 12. Transition Economies: Education Spending and Indicators, 1997 1/

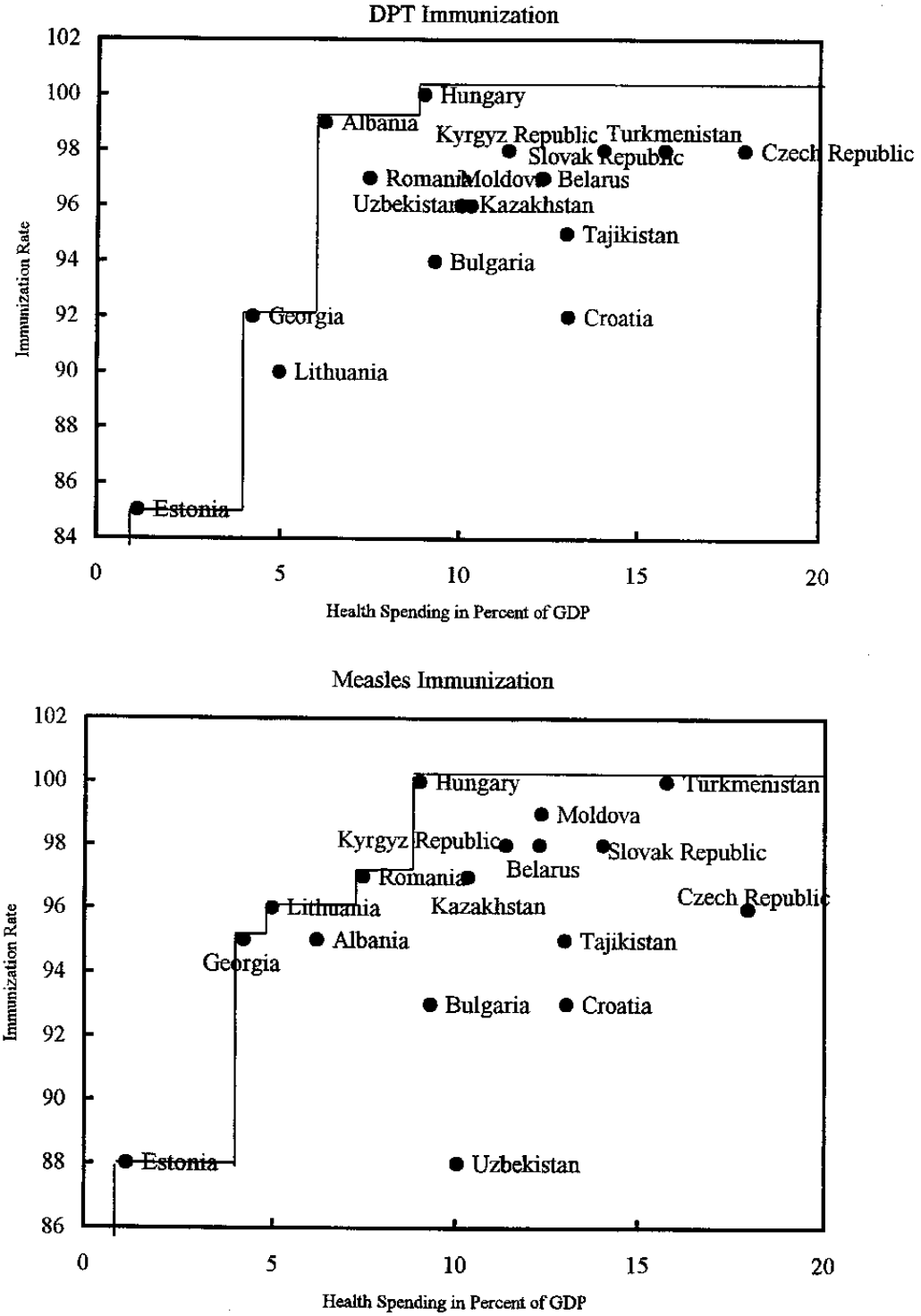




Source: Data provided by authorities; and Fund staff calculations.

1/ The line depicts the efficiency frontier.

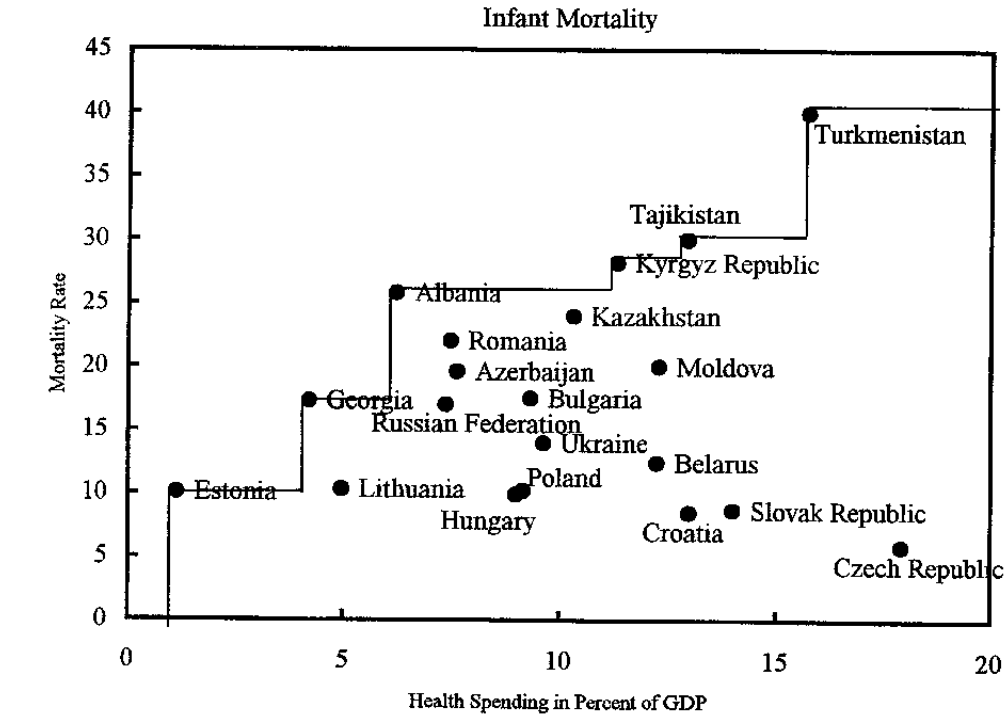
Figure 13. Transition Economies: Health Indicators (Immunization), 1997 1/

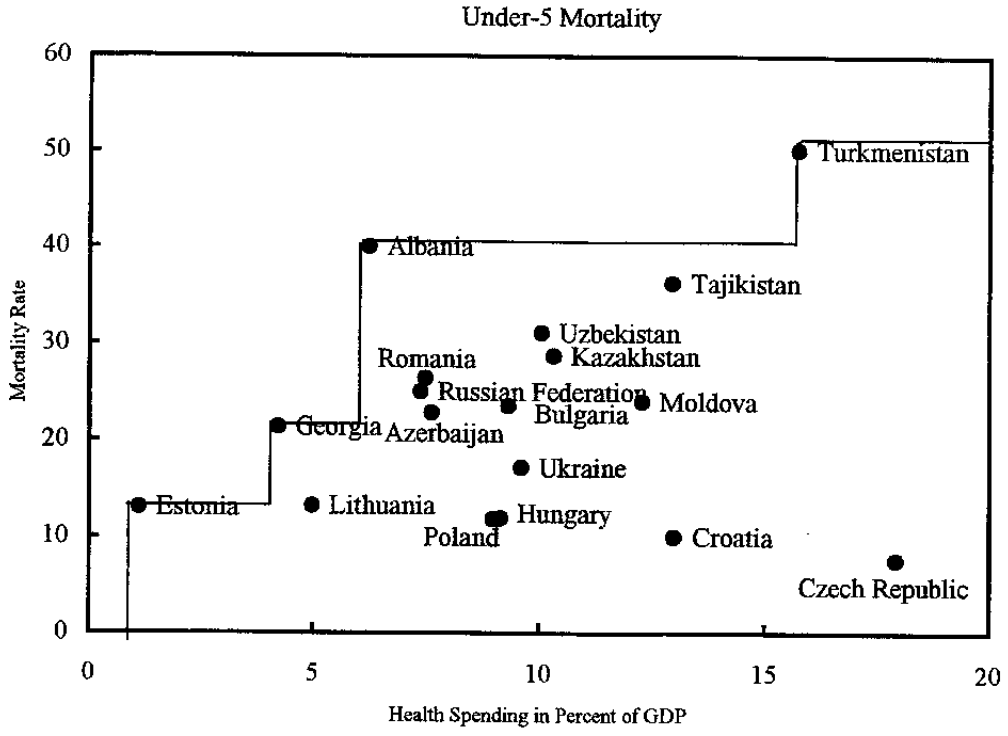


Source: Data provided by authorities; and Fund staff calculations.

1/ The line depicts the efficiency frontier.

Figure 14. Transition Economies: Health Indicators (Mortality Rates), 1997 1/





Source: Data provided by authorities; and Fund staff calculations

1/ The line depicts the efficiency frontier.

113. The results of the FDH analysis should be assessed with some caution for three main reasons. First, spending data for all countries in the sample, including Moldova, exclude private outlays on health care and education. The exclusion of private outlays underestimates the use of inputs in the provision of social services and therefore overestimates the efficiency of government spending. This upward bias is greater the higher the share of private outlays in total spending. Second, in many countries, public spending data on health care and education exclude subnational outlays. This underestimation of total public outlays overstates efficiency in the provision of education and health care. The upward bias is likely to be greater in countries where subnational governments are important providers of health care and education services. Third, performance in social indicators may be affected by factors other than (public and private) spending. For instance, social development is likely to be correlated with variables such as income levels, poverty incidence, and lagged spending levels, among others. Unfortunately, these explanatory variables cannot be taken into account in non-parametric models.

114. To test the sensitivity of the FDH efficiency scores, a number of options were entertained. First, the analysis was carried out using the ratio of health care and education spending to total government expenditures, rather than GDP. This would correct for the overestimation of social spending in the transition economies that experienced more dramatic contractions in GDP, such as Moldova. The results, not reported but available upon request, confirm the previous findings.

115. The sensitivity of the efficiency analysis was further tested by using both performance indicators in education jointly using the FDH methodology. In this case, the efficiency analysis is carried out for one input (public spending on education) and two outputs (gross primary and secondary school enrollment rates). The results, not reported but available upon request, confirm the previous findings and Moldova still ranks last in terms of input efficiency in the sample of transition economies for which the methodology could be applied. The same one input-two output procedure was used for the mortality and immunization performance indicators and the results, not reported, confirm the findings above.

E. Conclusions

116. The results of the efficiency analysis reported in this chapter suggest that Moldova has used its scare public resources on social programs inefficiently. Compared withother transition economies, Moldova has worse performance indicators and spends a higher share of GDP and total government spending on health care and education programs. The empirical results suggest that the same performance indicators could be achieved with substantially lower spending on social programs.

117. These empirical findings lend support to Moldova's ongoing efforts to rationalize social spending. Important measures were taken in 1999 (Box 2). With the consolidation of fiscal adjustment, emphasis in social policymaking in Moldova should be shifted from preserving social spending from further retrenchment to a more in-depth assessment of the efficiency and effectiveness of government spending on social programs and the adequacy of the existing programs to alleviate poverty and improve social indicators. Despite the caveats of the efficiency analysis presented in this chapter, the results reported suggest that much remains to be done in ensuring that increases in social spending translate into progress in poverty alleviation and significant improvements in social indicators

Box 2: Rationalization of Health Care and Education Services

In 1999, measures were taken to rationalize the provision of education services. These include:

- Employment was reduced in the education sector (from 148,951 in 1997 to 148,463 in 1998), as well as payroll costs (from Mdl 307,193 million in 1997 to Mdl 284,991 million in 1998).

- The average number of students per class increased by 0.4 compared to 1998 to 24.1 students per class. Measures were taken to increase class sizes to 20 children instead of 10 in crèches; 25 instead of 15 in kindergartens; in primary, secondary, advanced secondary schools, 25 students per class instead of 20; and in colleges and universities, 30 students per class instead of 25. School curricula were changed to reduce the total number of teaching hours per subject in 1998 to 812,771, reflecting a decrease of 51,188 hours relative to 1997.

- Pre-school fees were increased from 30 to 50 percent of the food costs. In 1998, there were 1,237 pre-schools with enrollment of 108,800 children, against 1,246 pre-schools with 115,996 children in 1997. Budget expenditure on these institutions fell from Mdl 1988 million in 1997 to Mdl 153.2 million in 1998.

- Free meals were replaced by cash benefits for students of vocational and professional schools. Accommodation fees were introduced (30 percent of the accommodation costs for undergraduates, and 50 percent of the accommodation costs for post-graduates). Other resident students pay rents at full cost-recovery level.

In health care, key measures include:

- A number of village hospitals were closed, leading to a reduction in the number of hospital beds. The 1999 budget eliminated 4,000 beds in hospitals funded by local budgets, and 3,000 beds in hospitals funded by the State budget. The saving to the budget was estimated at approximately Mdl 70 million in 1999.

- The Law on Minimum Medical Services Guaranteed by the State was implemented on February 3, 1999. The implementation of this law was reviewed by the Government on July 2, 1999 including the goals achieved by the introduction of medical services guaranteed by the state; the regulation on paid medical services provided to the population; and the formulation of medical services charges and tariffs.

- Over last five years, the personnel of medical institutions was reduced by 9,266 employees (10 percent), of which 3,944 in 1998. In most cases, downsizing was carried out mainly at the local level and amounted to 8,718 employees over last 5 years, including 3,944 employees in 1998.

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V. Energy Sector Issues[45]

118. Perhaps, the Achilles heel of the Moldovan economy is the energy sector, particularly gas.[46] Moldova's external energy debt has historically grown on average by US$60 million annually (excluding penalty interest), (see Figure 15). At the same time, the country seems to always be hostage to threats of gas (and electricity) cut-offs in the winter for non-payment of its debts.

119. The energy sector is a major source of both internal and external imbalances in the Moldovan economy. The quasi-fiscal deficit of the sector is estimated at about Mdl 730 million in 1999.[47] This constitutes 5 percent of GDP and compares to the fiscal deficit of Mdl 238 million.[48] Moreover, a large share of energy revenues is collected in-kind. If in-kind revenues are excluded, the amount of the deficit triples. The highest deficits are recorded in the electricity and gas sectors (see Figure 16).

120. At the outset, it is worth noting that a consistent set of data and information on the gas sector are difficult to obtain. There are gas meters to measure gas consumption and transit, but these are located in Ukraine (2-100 kilometers from the Moldovan border), and at the left bank of the river (i.e. in the self declared republic of Transnistria). It is conventional wisdom,

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[45] Prepared by Hassan Al-Atrash. The estimation of the quasi-fiscal deficit of the energy sector was done by Irina Dolinskaya.

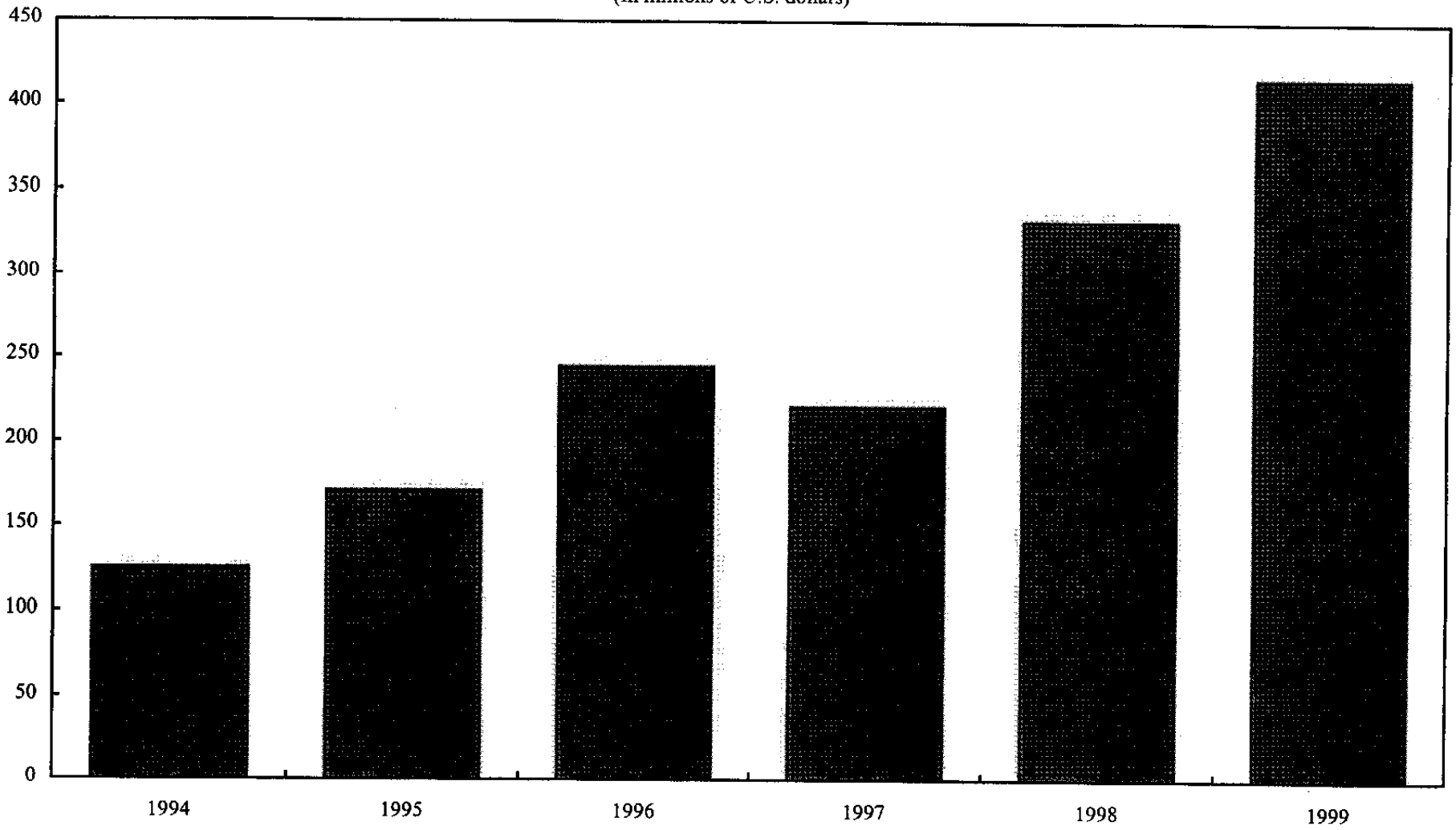
[46]Former Prime Minister Sturza claimed in an interview with a popular weekly magazine that Moldova's energy sector "is dominated by strong corruptive interests and a big deal of money is laundered, with tens of millions of dollars paid for Ukrainian power to off-shore companies." He went on to say that all attempts by his government "to make order in the payment system was met with tough resistance." Premier Braghis has called the energy sector "a state in a state," noting that "in this sector the Cabinet cannot learn even the strategic indicators at the first request."

[47] Staff estimates based on data of the Department of Energy and the Energy Regulatory Agency. The figure may still underestimate the actual deficit due to less than full cost recovery, under-estimation of technical losses, under-accounting of privileges and compensations.

[48] Unlike the fiscal deficit that underwent a major downward correction between 1998 and 1999, the energy sector deficit remained virtually unchanged as percent of GDP during this period.

Figure 15. Moldova: Evolution of Energy Debt, 1994-1999

(In millions of U.S. dollars)

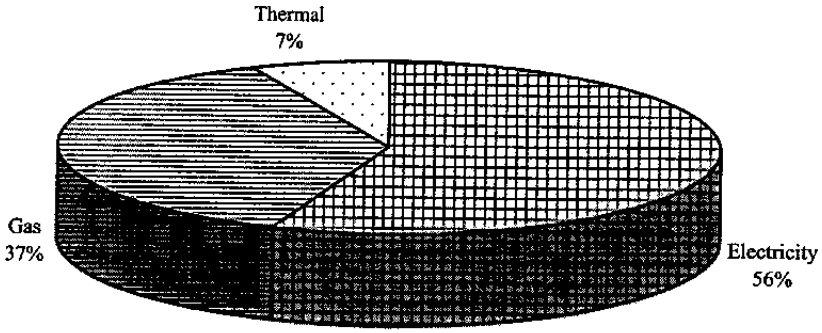


Sources: Moldovan authorities; and Fund staff estimates.

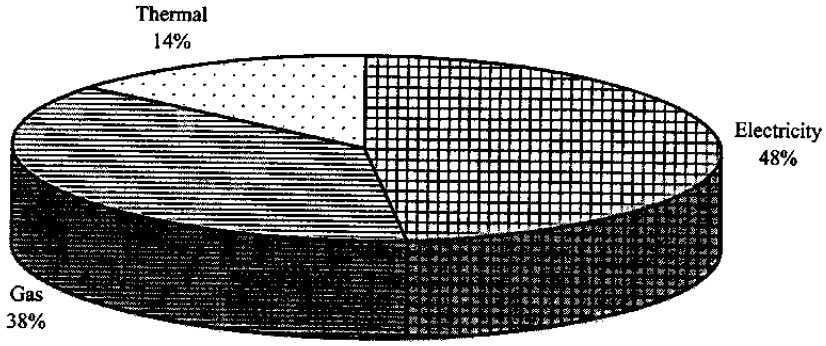
Note: The stock of debt declined in 1997 on account of the US$140 million Gazprom bond deal.

Figure 16. Moldova: Energy Sector, Deficit, 1999
(In percent of total)

Including in-kind collections



Excluding in-kind collections



Source: Moldovan authorities; and Fund staff calculations.

however, that about 23 billion cubic meters of gas go through Moldova's territory annually, of which about 2 billion are consumed locally, about 1 billion is consumed by Transnistria, and the remainder is transit, going to the Balkan countries and to Turkey.[49]

121. Moldova pays about US$80 per one-thousand cubic meters for gas (US$60 if the transit fee is subtracted). Interestingly, the transit fee is tied to the amount of gas consumed by Moldova and not the amount and/or conditions of gas transit. Had the transit fee with the main gas supplier been based on the actual amount of gas transiting through Moldova (and based on an arrangement similar to the one that exists with Ukraine), Moldova could receive an additional US$30-50 million in transit fees. Moldova has recently expressed interest in renegotiating its gas agreement with its main foreign supplier.

122. Moldovan enterprises and consumers have had difficulties servicing their gas debt. However, any reform of the gas sector must first start with reforms in the power (and thermal) sectors; the linkages between these sectors are strong. Indeed, it is the power sector that is the primary non-payer of gas debt, contributing to 80 percent of the debt to *Moldovagas*, the joint stock distribution company owned by RAO *Gazprom*, Moldova, and Transnistria. In turn, the heating companies do not pay their debt to the power generation companies.

123. Figure 17 shows the various linkages in the energy sector. As shown, there are a number of intermediaries between RAO *Gazprom* and the final consumers of energy in Moldova. The main links, however, are simple enough. Gas is used by three power generation companies to produce electricity that is distributed by 5 companies. The gas is also used by the boiler houses of *Termocom* and *Termocomenergo* to produce heat.

124. Interestingly, as you go up the chain, from the final consumers to the various producers of energy, the payments record deteriorates (Figure 18).[50] Thus, households pay 88 percent (58 percent in cash) of their energy bill to the electricity distribution companies;[51] *Termocom* pays 62 percent (47 percent in cash) of its energy bill to these companies;

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[49] There are 4 gas pipelines that go through Moldova, one pipeline goes East-West through the Northern part of Moldova and three parallel pipelines go North-South (located along the south border with Ukraine). The annual capacity of the East-West pipeline is about 11 billion cubic meters (bcm) and the North-South pipelines are 27 bcm.

[50] All figures relate to 1999.

[51] The problems with thermal energy are more complicated, and the payment record of consumers of their heating bill (50 percent, of which 30 percent is in cash), is not as good. However, consumers seem to be overcharged for their heating bill: consumers that don't have meters are charged a standard fee for 12 cubic meters (per household per month) while those that have meters are consuming about 5 cubic meters. Given that the majority of households do not have meters, most are overcharged. In turn, about 50 percent don't pay.

Figure 17: Moldova: Sources of Energy

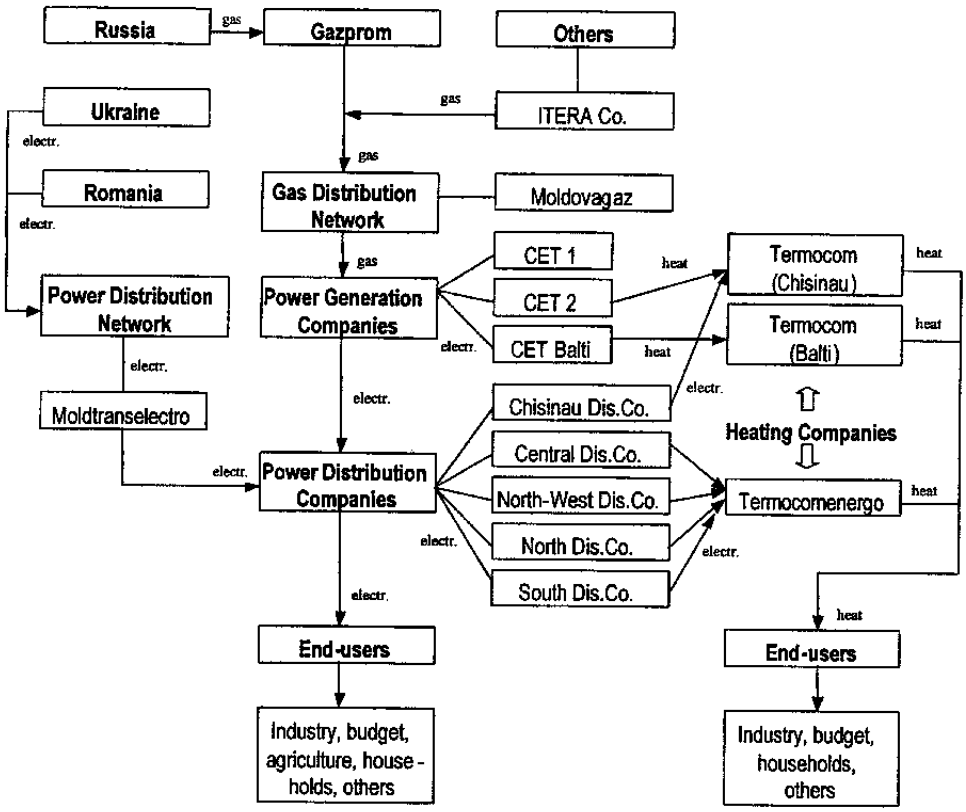
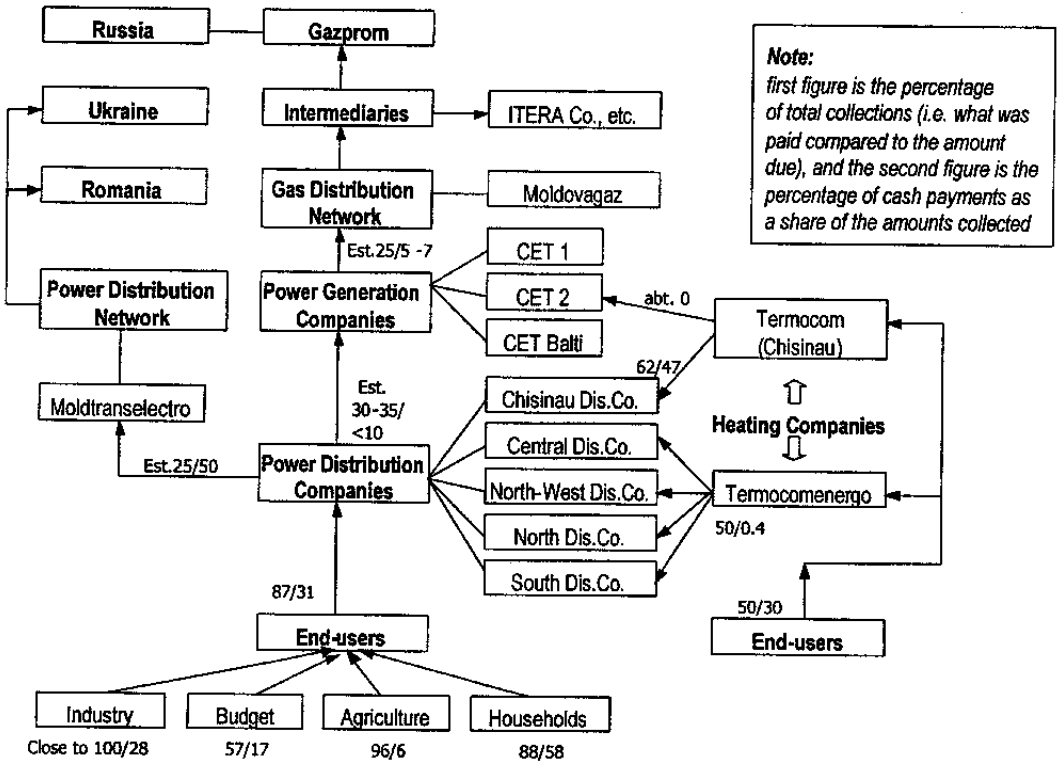


Figure 18: Moldova: Payments for Energy



Termocomenergo pays 50 percent (0.4 percent in cash) of its energy bills; the power distribution companies pay about 30 percent (less than 10 percent in cash) of its energy bill to the generation companies; and the generation companies pay about 25 percent (around 5 percent in cash) of their bill to *Moldovagas*. Thus, Moldova pays for gas through a number of intermediary firms each, in turn, reduce the cash component of its payment. This inevitably raises the transaction costs, and hence, the foreign supplier overcharges for its gas deliveries to Moldova.

125. Reform of the energy sector requires that all payments be effected in cash and that a hard budget constraint be strictly enforced. The argument that this is socially difficult to implement is largely not valid as the population pays a significant portion of their energy (at least, their electricity) bill, mostly in cash. The problem lies with the budgetary institutions, both at the state and local levels. Indeed, public institutions financed from the budget account for a quarter of the consumer debt to the power distribution network. Unless a hard budget constraint on the energy consumption of budgetary institutions is imposed (and the list of "vital" consumers that cannot be disconnected is limited), energy arrears will continue to increase.

126. Much progress has been made in reforming the energy sector in 2000. In February, three electricity distribution companies were sold to a strategic investor. The privatization of these distribution companies provided a stepping-stone to reforming the energy sector. In April, parliament passed a law replacing energy privileges (subsidies) to a wide group of the population with a more targeted program designed to help the most vulnerable segments of the population. Effectively, this saved the budget about Mdl 500 million annually. In April, tender was launched for the sale of the remaining two power distribution companies and three generation companies, which are expected to be sold to strategic investors later in 2000.

127. The government has also made progress in decentralizing the district heating company, *Termocomenergo*, as a first step towards its privatization. Steps have also been taken to restructure the electricity company, *Moldtranselectro* (MTE). It is being divided into two companies, one that includes the stock of debt and the other that would operate MTE's existing transmission network. This will provide breathing space to sort out the debts on the books of MTE.

128. Together with better government enforcement of cash collection, these measures have already started to improve the energy payments record. As an example, household payment to the remaining two non-privatized electricity companies has increased to 94 percent (of which nearly 65 percent is in cash) by June 2000. Moreover, there is a noticeable

improvement in the payments record by Moldova to its foreign gas supplier. In the first half of 2000, the gas debt increased by about US$5 million.[52]

129. The restructuring/privatization of *Termocom*, *Termocomenergo*, and *Moldtranselectro* will require a resolution to the stock of debt problem. Moldtranselectro has external debt of nearly US$90 million, which are not considered government guaranteed. [53] In addition, various energy companies owe *Moldovagas* about US$80 million in domestic debt.[54] Without a resolution to the stock problem, strategic investors may be unwilling to invest in these companies. The World Bank is currently working with the authorities on a strategy to address this.

VI. Current Account Determination in Moldova[55]

A. Introduction

130. **Since independence in 1989, Moldova's current account balance has fluctuated widely** (Figure 19). The sharp deterioration in the country's external position in 1992-1993 was due primarily to a terms-of-trade shock, as prices on energy imports from Russia and Ukraine soared. The current account worsened again between 1995 and 1997 reflecting a rapid growth of imports, mainly consumer goods; widening fiscal deficits; and an accumulation of foreign arrears. Export performance was weak throughout the period due to poor harvests, structural imbalances in the agricultural sector, and the inability to expand into new markets. In August 1998 Moldova was hard hit by the financial crisis in Russia, its main trading partner, that led to a severe decrease in both exports and imports. In 1999, the country experienced a dramatic external adjustment as the fall in imports more than offset the fall in exports as a result of a drop in income and a major fiscal contraction.

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[52] In 1997, payment on gas to Gazprom represented 57 percent of total bill; in 1998, the payment record deteriorated to 48 percent of the total bill. In 1999, the payment record improved significantly to nearly 95 percent of the gas bill.

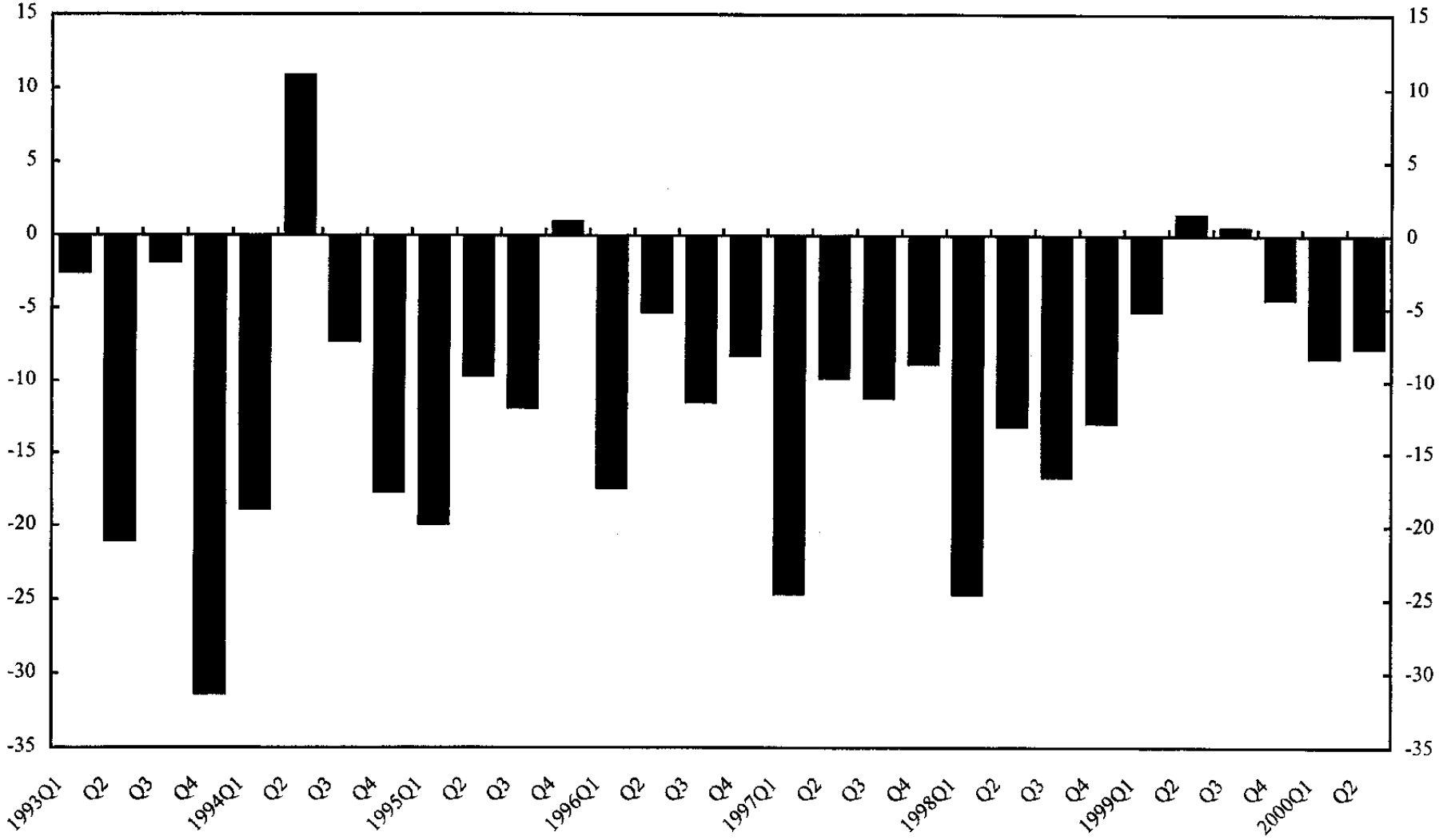
[53] As of April 1, 2000, the stock of Moldtranselectro debt to Romania was US$32 million; to Ukraine was US$41 million; to Transnistria was US$10 million; and to others was US$6 million.

[54] As of April 1, 2000, the stock of debt owed to Moldovagas by Termocom was US$9 million; by Termocomenergo was US$4 million; by CET-2 (power generation) was US$24 million; by CET-1 (power generation) was US$11 million; by CET-Nord (power distribution) was US$4 million; and by Moldtranselectro was US$29 million.

[55] Prepared by Luiz de Mello and Irina Dolinskaya.

Figure 19. Moldova: Current Account Balance, 1993-2000

(In percent of GDP)



Sources: Moldovan authorities; and Fund staff estimates.

131. **Moldova has progressively liberalized its trade and exchange regimes over the past decade**. Export licensing had been limited and then completely abolished in mid-1997, import quotas were eliminated by 1996, and the tariff system was simplified with the average tariff substantially reduced. Moldova continues negotiations for accession to the WTO and has free trade agreements with all the CIS countries and Romania. The leu was introduced as Moldova's national currency in November 1993 and enjoyed remarkable stability until August 1998. In early November 1998, the National Bank of Moldova (NBM) had to abandon the regime of managed float in favor of the fully floating exchange rate. The leu depreciated dramatically following the Russian crisis and ensuing political instability in Russia and at home. Moldova accepted the obligations of Article VIII (sections 2,3, and 4) of the Fund's Articles of Agreement in June 1995. Since then, Moldova's exchange system has remained free of any restrictions on current account transactions, while capital account transactions require licenses and/or registrations from the NBM.

132. **Debt instruments have been the most important sources of current account financing**. Moldova's current account deficits have been financed mainly through the accumulation of foreign debt, including borrowing from multilaterals, arrears to energy suppliers, issuance of Eurobonds, sales of treasury bills to nonresidents, and other commercial borrowing. Foreign direct investment has been modest; portfolio investment has been negligible. Large capital outflows (short-term capital flight, as well as debt amortization) took place in the aftermath of the Russian crisis. 1999 was marked by an impressive reversal in Moldova's current account position.

133. **The observed volatility of Moldova's current account reflects the country's access to foreign sources of finance**. As in other developing and transition economies, excessive volatility of the current account as compared to that of the national cash flow (national income net of private investment and government spending) would indicate imperfect capital mobility. In order to estimate the relationship between current account imbalances and capital flows in Moldova over time, we focus on the recent consumption-smoothing literature on international capital mobility and current account determination (Ghosh, 1995; Glick and Rogoff, 1995; Ostry, 1996).

134. This chapter is organized as follows. Section II briefly reviews the literature on current account determination. Section III describes the methodology used in this chapter. Section IV presents the data. Section V reports the empirical results and Section VI concludes.

B. Brief Literature Review

135. **The international capital mobility literature offers several options to test the capital mobility hypothesis**. They are:

- The traditional approach pioneered by Feldstein and Horioka (1980) consists of **regressing the investment ratio on the savings ratio** for a sample of countries. A

positive, close-to-one coefficient of the savings rate is suggestive of imperfect capital mobility. Several economists have challenged Feldstein and Horioka's interpretation, on the grounds that the high correlation of national savings and investment may be the result of a number of plausible macroeconomic factors (see Golub, 1990; Obstfeld, 1986; Hussein, 1998).

- Alternatively, the capital mobility hypothesis can be tested in terms of **deviations from international parity conditions**: covered interest parity (CIP), uncovered interest parity (UIP), and real interest parity (RIP) (Moosa, 1996). The argument is that, if capital is perfectly mobile, then its rate of return should be equal across countries. Satisfactory testing of this argument nevertheless depends upon finding perfectly substitutable assets located in different countries (Mishkin, 1984; Frankel and MacArthur, 1988; Taylor, 1987), which is not easy.

- A more recent approach, and the one followed here, consists of assessing capital mobility in terms of **consumption smoothing** in response to shocks to domestic expenditure variables. Ghosh (1995) tests whether capital has been sufficiently mobile in five industrialized countries (United States, Japan, Germany, United Kingdom, and Canada), by comparing the variance of actual and optimal consumption-smoothing current account balances. Deviations from the optimal value indicate imperfect capital mobility. Ghosh finds that capital flows have been more volatile than expected changes in the national cash flow in his sample of industrial countries, except for the United States, and attributes excessive volatility to capital market barriers that prevent optimal international risk-sharing. Evidence for developing and emerging economies is provided by Hussein and de Mello (1999).

C. The Methodology

136. **This chapter follows a two-stage approach.** First, we estimate the degree of capital mobility in Moldova using a VAR representation of the current account dynamics and test a number of restrictions consistent with the hypothesis of perfect capital mobility. Second, we estimate how the current account balance responds to exogenous shocks in the national cash flow (national income net of private investment and government spending), and its components. This is because capital flows tend to be more volatile and current account imbalances tend to be larger in developing economies than in developed economies, which suggests that there may be less scope for optimal consumption smoothing and international risk-pooling in the former countries.

The VAR Model

137. **Testing the capital mobility hypothesis consists of comparing actual current account balances against the benchmark values obtained under frictionless capital mobility and optimal consumption smoothing.** Deviations of actual current account

balances from benchmark values are indicative of friction in international capital markets: the larger the deviation, the more imperfect capital mobility.

138. In more formal terms, and following recent methodological developments in testing for capital mobility (Campbell and Shiller, 1987), the following VAR can be estimated:

(1) $Z(t) = \Pi Z(t-1) + v(t)$,

where $Z(t) = [\Delta y(t) \quad \Delta i(t) \quad \Delta g(t) \quad CA(t)]'$; Π is the transition matrix of the VAR; y is GDP; i, g, and CA are interest, government spending and the current account (all in percentages of GDP); and $v(t)$ is a white-noise term.

The transition matrix in equation (1) can be decomposed as $\Pi = \alpha\beta'$, where $\alpha = [\alpha_y \quad \alpha_i \quad \alpha_g \quad \alpha_{CA}]$ represents the speed of adjustment to equilibrium and $\beta = [\beta_y \quad \beta_i \quad \beta_g \quad \beta_{CA}]'$ is the matrix of long-run coefficients. In this framework, the hypothesis of capital mobility can be tested following two approaches:[56]

- **The restricted multivariate approach.** The hypothesis that capital flows respond to consumption-smoothing behavior requires the changes in the national cash flow (and/or its components) to be endogenous to the current account balance. This can be tested by imposing the following restriction on the VAR coefficients: $\alpha = [1 \quad -1 \quad -1 \quad 0]$.[57]

- **The bivariate approach.** Alternatively, following Campbell and Shiller (1987), the VAR can be estimated using $\overline{Z}(t) = [\Delta AB(t) \quad CA(t)]'$, where $\Delta AB(t) = \Delta(y - i - g)(t)$, and imposing the following exogeneity restriction on the loading parameters: $\alpha = [0 \quad 1]$.[58]

The Variance Decomposition Analysis

139. **Variance decomposition analysis is used to estimate the impact of exogenous shocks to the national cash flow (or its components) on the current account balance, and the dynamic responses of the system to those exogenous shocks.** This is important because developing and transition economies tend to be more shock-prone than their more

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[56] For more information, see Hussein and de Mello (1999).

[57] This restriction combines an identification test of the VAR with the exogeneity test of the cash flow. The VAR is identified and the cash flow parameters are weakly exogenous when the restriction is rejected.

[58] The cash flow is weakly exogenous when this restriction is not rejected.

developed counterparts, and current account disequilibria may reflect the responsiveness of the current account balance to exogenous shocks in the national cash flow, or in one or more of its components (national income, private investment, and net government spending).

140. Variance decomposition analysis is conducted using the following reduced-form, common-trend representation of the VAR system in equation (1):

(2) $\Delta Z(t) = A(L)v(t)$,

where $A(L)$ is a square matrix of lag polynomials.

141. The technique consists of orthogonalizing the multivariate VAR residuals, by (Cholesky) decomposing them into as many orthogonal time series as endogenous variables in vector $Z(t)$. In this case, the dynamic responses of the current account balances to exogenous shocks to the national cash flow or its components can be simulated. The policymaker can evaluate which components of the national cash flow have a stronger dynamic impact on the current account balance and therefore assess the vulnerability of the current account to external and domestic shocks.

D. The Data

Data Sources

142. **The data sources for this study include information provided by Moldovan authorities and IMF staff estimates.** National income data for Moldova are not readily available. In this case, we use GDP as a proxy for national income. The GDP data include staff estimates of the shadow economy in Moldova. The quality of private investment data for Moldova is poor. Therefore, a fixed investment time series is used. The data are available from the National Accounts, but include both private and public investment.[59] The time series for GDP, investment, and government spending were converted to US dollars at the market exchange rate (Figure 20).

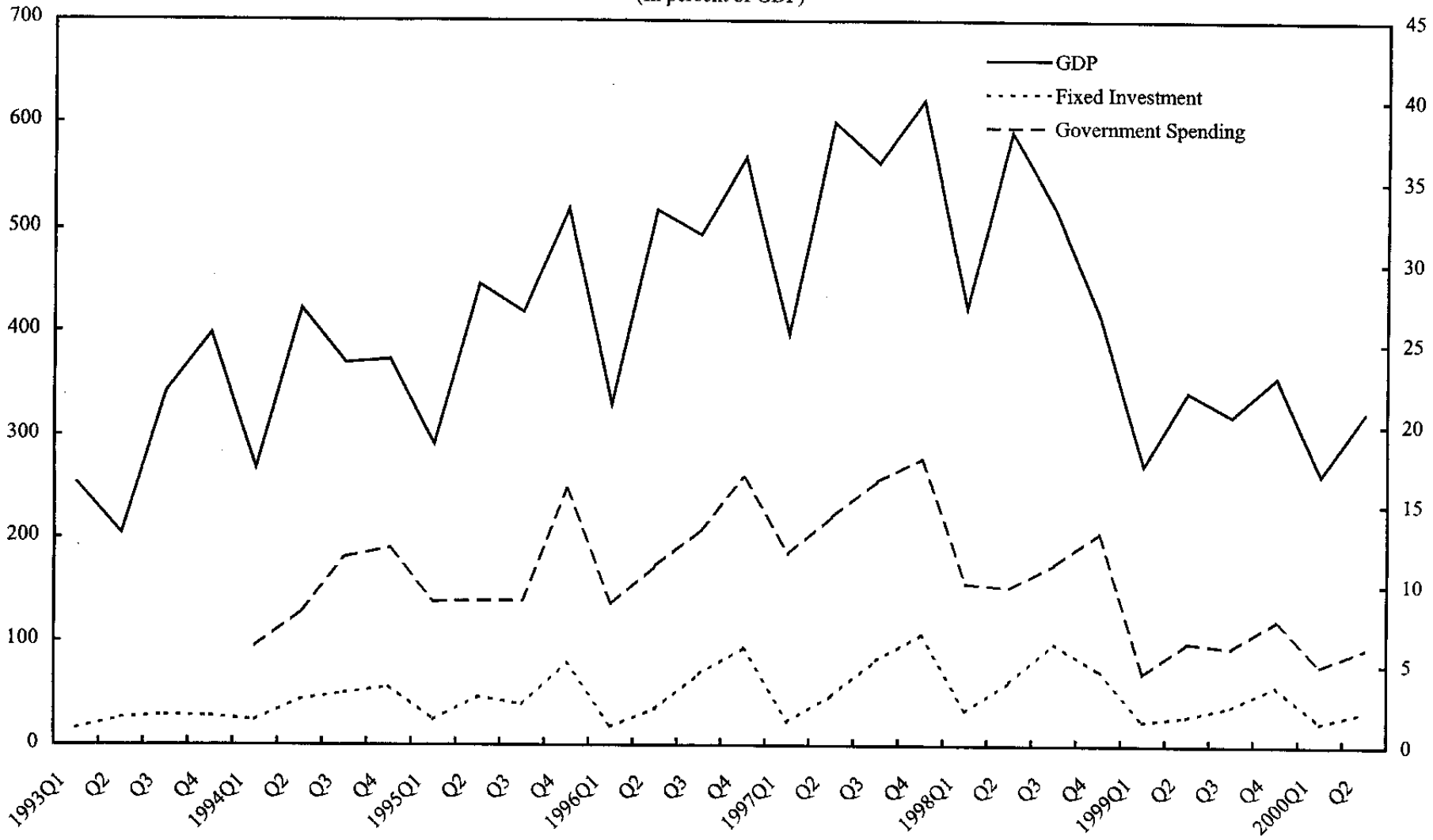
The Unit Root Properties of the Data

143. **The preliminary step in our analysis is to test the degree of integration of the relevant variables.** For this purpose, we use the Augmented Dickey-Fuller (ADF) procedure, where the degree of augmentation is determined by the minimum number of lags to produce

[59] We attempted to disaggregate private and public investment on the basis of available information for public outlays on investment projects. Nevertheless, information on public capital expenditures is not available for the entire period under examination. This would severely reduce the degrees of freedom in the empirical analysis.

Figure 20. Moldova: GDP, Fixed Investment, and Government Spending, 1993-2000

(In percent of GDP)



Sources: Moldovan authorities; and Fund staff estimates.

white-noise error terms. Because of the structural breaks in the series, we also test for unit roots using the Phillips-Perron (PP) methodology. The tests are summarized in Table 26.

144. In view of strong seasonality of the data, in what follows all the series were seasonally adjusted. The results indicate that the non-stationarity hypothesis is rejected for the level of the current account balance. For the national cash flow and its components (government spending, investment, and GDP) the null hypothesis of a unit root is rejected when the variables are defined in first differences.

Table 26. Moldova: Unit Root Tests, 1993-2000

	ADF Statistic		PP Statistic	
	Level	First difference	Level	First difference
Current account balance	-2.89 *	-	-4.29 ***	-
GDP	-1.09	-3.63 **	-2.16	-8.33 ***
Fixed investment	-2.48	-6.42 ***	-2.87 *	-7.70 ***
Government spending	-0.92	-3.52 **	-1.25	-5.90 ***
National cash flow	-1.47	-3.35 **	-1.93	-5.97 ***

Sources: Data provided by the authorities; and IMF staff estimations.
***, **, and * denote rejection of the unit root hypothesis at the 1 percent, 5 percent, and 10 percent levels, respectively.

E. The Results

The VAR Analysis

145. **The exogeneity test shows that the national cash flow components are weakly exogenous with respect to the current account balance. However, the national cash flow itself fails the exogeneity requirement**[60] and hence the single-equation analysis would be misleading in that case. Therefore, the analysis has to be restricted to the multivariate case.[61] The results of the VAR analysis are summarized in Table 27.

[60] The test yields $\chi^2(1) = 4.75$ (0.03), hence the exogeneity hypothesis cannot be accepted at the 5 percent level.

[61] The number of lags was selected according to the Schwartz criterion.

Table 27: Moldova: VAR Analysis, 1993-2000
(current account equation)

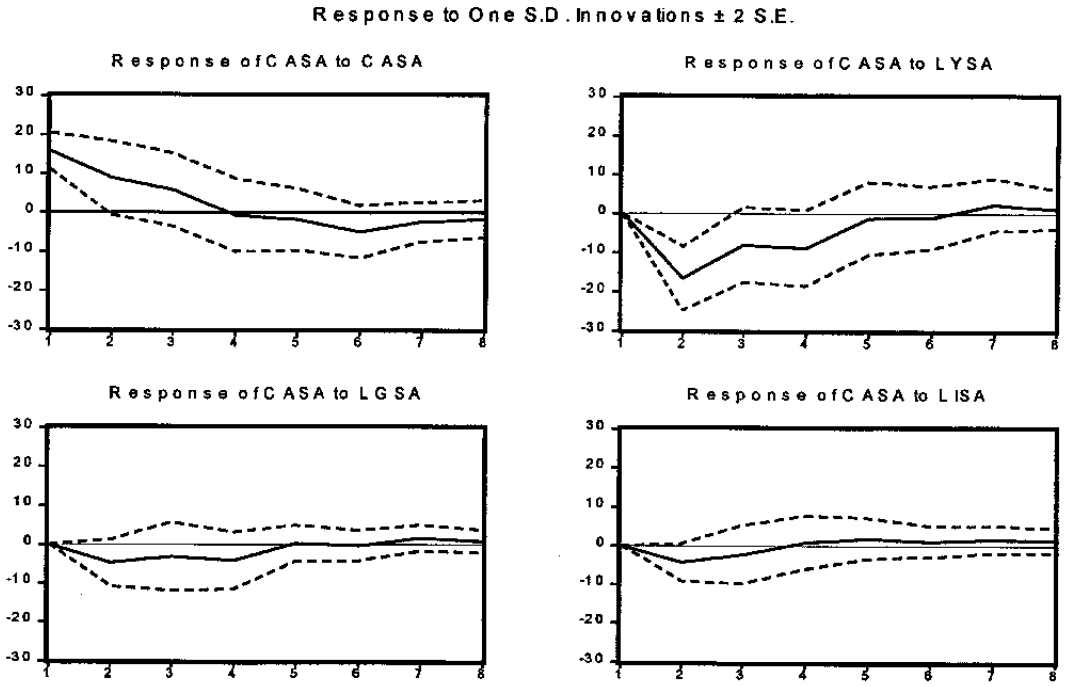
	VAR coefficient on the 1st lag	VAR coefficient on the 2nd lag
Current account balance	1.11 (0.001) ***	-0.47 (0.04) **
Change in GDP	-0.27 (0.06) *	0.41 (0.03) **
Change in fixed investment	-0.57 (0.18)	-0.86 (0.05) **
Change in government spending	-0.30 (0.17)	-0.10 (0.63)
Exogeneity Test	χ^2 (3) = 18.89 (0.0003) ***	

Sources: Data provided by the authorities; and IMF staff estimations.
(***), (**), and (*) denote statistical significance of the coefficients at the 1 percent, 5 percent, and 10 percent levels, respectively. *p*-values in parentheses.

146. The components of the national cash flow (income, investment, and public spending) are found to be important determinants of current account variations over time. Fixed investment and government spending have the correct (negative) sign, consistent with partial foreign financing of investment projects and government expenditure. However, the sign on the change in GDP is negative on the first lag and positive on the second lag, the latter consistent with the cash flow argument. The negative sign on the first lag of the GDP variable is suggestive of a one-off deterioration of the current account balance reflecting, for instance, the surge in imports when economic activity accelerates. Subsequently, the current account balance is likely to improve in response to, for example, a reaction of exports, a switch in consumption demand away from imported goods, or an improvement in the budget.

147. Impulse response functions (Figure 21) show adjustment of the current account (CASA) in response to a one-standard deviation exogenous shock to national income (LYSA), government spending (LGSA), and investment (LISA).

Figure 21. Moldova: VAR Impulse Response Functions



148. **The current account balance is responsive to exogenous shocks to national income**. The dotted lines in Figure 21 are confidence intervals. These shocks tend to deteriorate the current account balance in the first quarter after the shock, as discussed above. The current account balance subsequently improves in the second quarter in the aftermath of the shock. Although the responses of the current account balance to exogenous shocks to government spending and investment are correctly signed, their statistical significance is borderline.

Variance Decomposition Analysis

149. **The results show that the current account responds strongly to innovations in national income**. In line with the impulse responses estimated above, Table 28 reports the results of the variance decomposition analysis of the responses of the current account balance to exogenous shocks. Nearly half of the dynamic response of the current account is accounted for by changes in GDP after 8 quarters in the aftermath of the exogenous shock, followed by innovations in government spending (6.0 percent) and investment (3.7 percent). The forecast error is nevertheless large, suggesting that the results of these simulations should be interpreted with caution.

Table 28. Moldova: Variance Decomposition Analysis, 1993-2000

	Period 1	Period 2	Period 4	Period 8
Current account	100.0	50.5	42.2	43.5
Change in GDP	0.0	43.0	48.9	46.8
Change in fixed investment	0.0	2.9	2.9	3.7
Change in government spending	0.0	3.6	6.0	6.0
Standard error	15.8	25.4	29.2	30.2

Sources: Data provided by the authorities, and IMF staff estimations

F. Conclusions

150. Recent developments in the literature favor the estimation of current account equations in a VAR set-up. The empirical results presented above show that **evidence of capital mobility and consumption smoothing in Moldova is mixed**. While components of the national cash flow are weakly exogenous with respect to the current account balance, the aggregate cash flow is not. This finding suggests that while the current account is responsive to shocks in national income, investment, and public spending, a significant offsetting adjustment occurs among these variables, so that the impact of changes in the aggregate cash flow on the current account is suppressed.

151. The empirical findings point out that the **current account balance in Moldova is strongly responsive to changes in the national income**. The current account deteriorates when economic activity picks up but tends to improve subsequently. The dynamic responses of the current account to shocks in national income tend to last two quarters. The **current account response to shocks in investment and government spending is much weaker**. The current account tends to deteriorate as more foreign financing goes into domestic investment projects and public expenses.

152. The results reported in this chapter may be influenced by a high share of concessional borrowing in Moldova.[62] Capital mobility and consumption smoothing could be substantially restricted if Moldova had to rely on non-consessional financing of its current account. Some caution is also recommended in the interpretation of the results due to data inadequacies. These are common weaknesses of empirical analyses for transition economies and the time

[62] Explicit accounting for the composition of foreign borrowing is difficult due to data limitations.

series available for the relevant variables are typically not long enough for more sophisticated hypothesis testing.

153. The results described above have a number of policy implications. The dynamic pattern of the current account response to changes in national income suggests that **economic growth in Moldova is overly vulnerable to external constraints**, as income growth at the first instance tends to give rise to debt accumulation. Over the longer term, therefore, the ongoing efforts to create a pro-growth economic environment in Moldova should focus on reducing the country's vulnerability to external shocks. To this end, structural reform in the export-oriented sectors should be intensified, including privatization and restructuring in agriculture and agro-processing. Hard budget constraints should also be enforced throughout the economy in order to contain the responsiveness of imports and ensure allocation of resources to their most productive uses.

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Table 29. Moldova: Gross Domestic Product by Expenditure 1994-2000 1/

(In millions of lei; at current prices)

	1994	1995	1996	1997	1998	1999 Prel.	2000 Jan.-Jun.
Gross Domestic Product, official	4,737	6,480	7,798	8,917	9,122	12,204	6,463
Final consumption expenditure	3,573	5,371	7,356	8,680	9,203	10,715	7,271
Private	2,486	3,616	5,243	6,017	6,876	8,391	5,904
Public	1,087	1,755	2,113	2,663	2,327	2,324	1,367
Gross capital formation	1,365	1,612	1,891	2,124	2,360	2,695	1,011
Fixed capital	914	1,034	1,540	1,774	2,011	2,296	692
Stockbuilding	451	578	351	350	340	399	319
Net exports	-201	-503	-1,449	-1,887	-2,441	-1,206	-1,819
Additional staff adjustment for shadow economy 2/	768	1,065	1,030	996	1,244	1,509	...
Gross Domestic Product, adjusted	5,505	7,545	8,828	10,118	10,366	13,713	...
			(Percent change from previous period)				
Memorandum items:							
Real GDP	-31	-1	-6	2	-7	-4	2
Implicit GDP deflator	274	39	24	13	10	38	23

Sources: Moldovan Department for Statistical and Sociological Research; and Fund staff estimates.

1/ Excludes Transnistria.

Table 30. Moldova: Gross Domestic Product by Sector, 1994-2000 1/
(In millions of lei at current prices)

	1993	1994	1995	1996	1997	1998	1999	2000
								Jan.-Jun.
							Prel.	
Value added	1,803.5	4,425.2	5,744.1	6,825.9	7,664.7	7,718.7	10,857.8	5,552.0
Agriculture and fishing	568.7	1,292.8	1,896.8	2,143.1	2,315.2	2,350.6	2,727.1	886.0
Processing industry	629.1	1,367.3	1,485.6	1,651.8	1,654.2	1,293.1	1,602.2	907.0
Gas, electricity and water	79.0	117.7	133.0	146.9	149.0	228.8	369.2	194.0
Construction	60.6	213.4	228.2	297.8	421.9	288.6	373.3	398.0
Repairs, personal services, and trade	144.1	367.1	517.8	649.4	731.3	941.5	1,615.7	1,022.0
Transport, warehouses, and communication	67.8	296.5	333.2	438.0	575.2	670.6	1,054.7	626.0
Other		770.4	1,149.5	1,498.9	1,817.9	1,945.5	3,115.6	1,519.0
Of which:								
Financial services	87.7	244.2	237.9	515.1	530.6	676.5	857.2	...
Education	79.2	219.1	330.7	447.9	562.0	561.9	937.8	...
Public health and social assistance	81.5	153.1	229.9	234.4	295.7	333.5	488.8	...
Other	5.8	154.0	351.0	301.5	429.6	373.6	831.8	...
Net taxes		311.6	735.6	971.7	1,252.2	1,403.4	1,345.9	911.0
Of which:								
plus: Taxes on production and imports	159.0	485.4	823.1	1,075.1	1,366.0	1,603.4	1,617.6	...
less: Subsidies	-141.4	-173.8	-87.5	-103.4	-113.8	-200.0	-271.7	...
GDP (unadjusted)	1,821.1	4,736.8	6,479.7	7,797.6	8,916.9	9,122.1	12,203.7	6,463.0

Sources: Moldovan Department for Statistical and Sociological Research; and Fund staff estimates.

1/ Excludes Transnistria and additional staff adjustment for shadow economy (see table 34).

Table 31. Moldova: Agricultural Production by Product, 1994-99 1/
(In thousands of metric tons)

	1994	1995	1996	1996 2/	1997 2/	1998 2/	1999 2/
Grain 1/	1,684	2,612	1,978	1,793	3,122	2,428	2,142
Wheat (winter)	659	1,277	784	674	1,153	952	798
Rye	3	5	8	6	6	4	4
Corn	629	979	1,037	989	1,717	1,239	1,140
Barley (winter)	130	206	85	72	145	93	81
Oats	7	9	4	3	8	9	5
Oilseeds	153	235	318	279	178	205	300
Sunflower seeds	149	232	316	277	175	199	286
Soybeans	4	3	2	2	3	6	14
Sugarbeets	1,527	2,084	1,917	1,807	1,749	1,452	1,009
Potatoes	475	401	383	343	391	372	329
Pulses	70	56	32	29	58	71	58
Vegetables	599	607	394	319	355	501	489
Grapes	670	876	789	767	301	343	465
Other (fruits and berries)	665	610	573	521	947	367	136
Tobacco	42	27	19	19	24	24	22

Sources: Moldovan Department for Statistical and Sociological Research.

1/ Clean weight.
2/ Excludes Transnistria.

Table 32. Moldova: Animal Husbandry, 1994-99

	1994	1995	1996 1/	1997 1/	1998 1/	1999 1/
			(In thousands)			
Livestock inventory						
Cows	399	381	319	291	286	275
Pigs	1,061	1,015	866	724	860	683
Sheep	1,411	1,320	1,248	1,115	1,026	930
Goats	96	103	96	94	95	100
Horses	59	61	59	61	64	67
Poultry	14,415	14,740	11,423	11,613	12,088	12,575
			(In thousands of metric tons)			
Production						
Meat 2/	153	137	115	112	103	104
Beef	62	47	35	31	24	23
Pork	61	60	57	59	58	61
Lamb	5	5	4	4	4	3
Poultry	24	24	18	17	16	16
Other	1	1	1	1	1	1
Milk	909	837	682	617	610	589
Eggs (millions)	515	563	526	512	539	555
Wool	2,851	2,924	2,808	2,711	2,433	2,278
Productivity measures 3/						
Eggs per laying hen	152	181	202	217	223	222
Milk per cow (kilograms)	2,245	1,984	2,002	1,687	2,001	2,036

Sources: Moldovan Department for Statistical and Sociological Research.

1/ Excluding Transnistria.
2/ Slaughter weight.
3/ Productivity measures exclude production on garden plots.

Table 33. Moldova: Agricultural and Industrial Production Indices, 1994-99

(Percent change from same period of the previous year; period averages)

	Agricultural production 1/	Industrial production
1994	-24.6	-27.7
1995	1.9	-3.9
1996	-11.9	-6.5
1997	11.4	0.0
1998	-11.6	-15.0
1999	-8.0	-11.6
1994 I	-6.0	-28.0
II	-6.0	-32.5
II	-14.0	-33.4
IV	-24.6	-26.5
1995 I	-11.0	-25.6
II	-9.0	-13.8
II	-8.0	2.1
IV	1.9	6.1
1996 I	-2.0	4.5
II	-3.0	13.5
II	-13.0	-18.2
IV	-11.9	-17.0
1997 I	-9.0	-14.9
II	-11.0	-8.3
III	7.8	6.1
IV	11.4	3.8
1998		
I	-4.0	2.3
II	-2.0	-1.3
III	-3.0	-23.1
IV	-11.0	-30.8
1999 2/		
I	0.8	-29.9
II	-2.0	-27.3
III	-7.0	1.9
IV	-8.0	0.6

Sources: Moldovan Department for Statistical and Sociological Research.

1/ Seasonally adjusted.
2/ Preliminary data.

Table 34. Moldova: Industrial Production by Industry, 1994-99 1/
(Percent change from the previous year)

	1994	1995	1996	1997	1998	1999
All industries	-27.7	-3.9	-6.5	0.0	-15.0	-11.6
Heavy industry	-27.2	-10.6	-4.1	-8.1	-10.6	-14.5
Fuel and energy	-17.5	-6.4	5.6	-0.7	-9.4	-9.9
Machinery and metalworking	-36.3	-10.6	-19.8	-20.3	-12.7	-20.8
Petrochemical	-35.6	-63.6	5.6	-27.7	-15.5	-8.8
Forestry/wood	-31.3	-13.8	-21.2	-5.1	-20.5	-19.8
Construction materials	-21.8	-4.8	26.8	14.8	-21.1	-15.7
Other	-15.5	-11.4	-5.6	-12.5	6.2	-14.1
Light industry	-48.5	-31.1	-0.2	-4.8	-16.6	10.6
Textiles	-41.8	-48.8	-0.1	-20.3	-22.9	18.4
Clothing	-45.7	-10.2	6.2	-4.8	8.0	17.4
Leather and shoes	-62.0	-12.2	-9.0	10.9	-34.8	-12.9
Food industry	-24.4	4.4	-8.1	-0.7	-18.9	-14.3
Food processing	-21.7	7.3	-9.0	4.4	-18.0	-12.2
Meat and dairy	-38.2	-13.8	-5.6	-18.8	-19.9	-0.4
Fish	-32.9	-20.4	137.0	-4.6	-14.0	-18.6
Other	-23.0	2.9	5.2	-10.6	-24.1	-52.8

Sources: Moldovan Department for Statistical and Sociological Research.

1/ Excluding Transnistria.

Table 35. Moldova: Unemployment, Unpaid Leave, and Part-time Employment, 1994-99
(In thousands; excludes Transnistria)

End of Period		Unemployed	Of which receiving benefit	Vacancies	Official Unemployment rate (Percent)	Workers on unpaid leave	Workers on Part-time Employment
1994		20.6	6.3	6.5	1.1	220.3	34.4
1995		24.5	8.0	5.5	1.4	224.0	43.5
1996		23.4	7.0	6.6	1.5	197.8	35.5
1997		28.0	7.5	7.5	1.5	171.3	34.8
1998		32.0	8.1	6.4	2.0	146.4	41.0
1999							
1996	I	27.1	7.7	6.5	1.5	124.4	39.7
	II	26.1	7.3	7.2	1.5	142.0	35.1
	III	26.3	7.7	7.0	1.6	165.7	36.3
	IV	23.4	7.0	6.6	1.5	197.8	35.5
1997	I	22.9	6.5	6.2	1.3	117.3	42.4
	II	22.8	5.7	6.2	1.5	131.8	37.4
	III	27.1	6.9	8.0	...	155.3	40.0
	IV	28.0	7.5	7.5	1.5	171.3	34.8
1998	I	39.1	7.7	6.4	...	82.1	30.8
	II	33.7	7.2	7.4	...	97.7	38.0
	III	33.8	7.8	6.6	...	120.9	43.1
	IV	32.0	8.1	6.4	...	146.4	41.0
1999	I	40.1	8.3	5.5	...	100.6	33.4
	II	38.6	8.7	6.4	...	116.6	32.3
	III	40.4	10.6	7.3	...	127.4	35.6
	IV	34.9	11.4	6.7	...	139.1	28.0

Sources: Moldovan Department for Statistical and Sociological Research.

Table 36. Moldova: Nominal Wages in Different Sectors, 1994-99 1/

(In lei per month; period average)

	1994	1995	1996	1997	1998	1999
Total	108.4	143.2	187.1	219.8	250.4	304.6
Agriculture 2/	82.4	106.7	121.5	135.2	140.6	172.8
Forestry	90.0	120.3	...	...	...	...
Industry	153.0	209.7	286.5	363.2	423.5	518.6
Construction	149.7	187.5	247.7	326.5	362.4	426.2
Transport 3/	137.7	191.2	258.3	323.5	376.5	455.3
Telecommunications	145.8	190.7	...	...	...	...
Hotels and restaurants	...	172.2	183.5	197.9	230.2	277.3
Trade	105.1	143.2	211.5	253.1	265.7	319.0
Material and technical supplies and sales	203.3	243.2	...	...	...	...
Acquisitions	134.4	202.5	...	...	...	...
Data processing service	137.7	189.4	...	...	...	...
Real estate activity	...	240.8	246.8	285.3	336.3	436.1
General commercial activity for insuring market functionin	244.6	352.5	...	...	...	...
Geology, hydrometeorologic services and survey	110.3	167.3	...	...	...	...
Communal husbandry	130.6	189.0	...	...	...	...
Consumer services	92.8	132.8	...	...	...	...
Health care, physical training and social assistance	102.9	127.4	161.1	175.9	183.5	186.7
Education	83.8	108.8	156.7	170.9	183.0	193.0
Culture and art	87.9	104.6	...	...	...	...
Science	135.0	196.5	...	...	...	...
Banking, credit and insurance	299.6	494.1	687.0	823.5	1,135.4	1,672.5
Administration	156.3	230.2	295.5	327.2	392.0	438.8

Source: State Department of Statistics.

1/ Excludes Transnistria.

2/ 1996 data includes fishery, forestry and hunting.

3/ 1996 data includes transport, warehouses, and communication.

Table 37. Moldova: Inflation, 1997-2000

	Consumer Prices Index				
	Overall		Goods		Services
	Index	Percent Change	Food	Nonfood	
1997					
January	258.6	1.9	231.4	218.3	461.9
February	262.2	1.4	234.9	219.6	473.0
March	264.8	1.0	233.7	220.2	506.1
April	267.0	0.8	234.4	220.9	520.8
May	268.6	0.6	235.3	221.1	532.8
June	273.9	2.0	231.8	221.3	612.7
July	271.2	-1.0	225.1	222.4	619.4
August	269.0	-0.8	221.9	223.5	610.8
September	272.3	1.2	224.6	224.7	625.4
October	274.7	0.9	228.2	225.8	624.8
November	277.7	1.1	232.3	227.4	626.1
December	281.9	1.5	238.3	228.5	629.2
1998					
January	285.6	1.3	243.8	229.9	630.4
February	286.7	0.4	244.5	230.8	633.6
March	286.4	-0.1	243.6	231.5	634.2
April	288.4	0.7	246.7	231.7	636.1
May	289.0	0.2	247.0	232.4	636.8
June	285.8	-1.1	243.3	232.6	732.3
July	281.8	-1.4	236.2	233.8	740.3
August	280.1	-0.6	239.5	235.0	730.0
September	280.7	0.2	242.4	236.2	747.5
October	284.6	1.4	246.3	237.3	746.7
November	309.1	8.6	250.7	239.0	748.2
December	333.2	7.8	257.2	240.2	752.0
1999					
January	351.2	5.4	265.5	249.6	867.8
February	356.5	1.5	269.4	253.8	876.5
March	358.6	0.6	269.4	258.6	882.6
April	365.8	2.0	275.4	264.6	892.3
May	380.8	4.1	288.9	276.7	902.1
June	408.2	7.2	319.2	288.4	909.3
July	418.4	2.5	319.2	293.8	930.2
August	421.3	0.7	318.2	298.5	954.4
September	428.5	1.7	325.6	302.4	958.3
October	437.5	2.1	334.7	307.6	965.0
November	456.3	4.3	350.4	317.7	1,006.5
December	479.1	5.0	370.7	325.3	1,065.8
2000					
January	493.0	2.9	385.9	330.2	1,075.4
February	499.4	1.3	391.3	335.5	1,078.7
March	499.9	0.1	389.4	339.9	1,081.9
April	507.9	1.6	393.7	343.3	1,127.3
May	515.0	1.4	400.4	345.7	1,145.4
June	537.7	4.4	428.4	349.5	1,148.8
July	541.4	0.7	432.2	351.6	1,151.1
August	545.8	0.8	436.1	354.7	1,154.6
September	553.4	1.4	443.1	357.6	1,170.7
October	558.9	1.0	448.0	360.8	1,181.3
			(Percent changes)		
Annual averages					
1994	...	329.7	453.0	466.1	721.9
1995	...	30.2	29.6	25.3	40.3
1996	...	23.5	19.5	16.6	60.9
1997		11.8	7.0	7.5	36.5
1998	...	7.7	6.1	5.1	22.3
1999		39.0	26.0	22.3	34.0 #
End-of-period (December)					
1994	...	116.1	105.1	85.6	219.9
1995	...	23.8	24.5	12.0	58.0
1996	...	15.1	11.6	14.7	29.9
1997	...	11.2	6.3	5.3	37.2
1998	...	18.3	7.9	5.1	19.5
1999		43.7	44.1	35.5	41.7

Sources: Department of Statistics; and Fund staff estimates.

Table 38. Moldova: General Government Budget, 1994-2000 1/
(In millions of lei; unless otherwise indicated)

	1994	1995	1996	1997	1998	1999	2000 2/
Revenues	1,847	2,556	2,797	3,431	3,428	3,745	1,987
Tax revenues	1,454	2,171	2,417	3,027	2,931	3,050	1,694
Direct taxes	480	594	578	526	403	453	268
Indirect	433	755	810	1,460	1,499	1,384	822
Foreign trade taxes	30	51	95	127	109	231	122
Social fund contributions	474	640	761	729	783	783	427
Other taxes 3/	36	130	174	185	137	199	55
Non-tax revenues and grants 4/	393	385	380	404	497	695	294
Expenditures and net lending	2,347	2,993	3,418	4,371	4,015	4,491	2,280
Expenditures	2,212	2,927	3,546	4,341	3,985	4,535	2,290
National economy	135	167	178	359	281	287	108
Social sphere	953	1,113	1,530	1,662	1,336	1,340	674
Interest	164	265	243	377	421	906	481
Domestic	120	173	132	213	244	438	310
Foreign	44	93	111	165	177	467	171
Capital expenditures	110	135	149	234	206	103	62
Other expenditures 5/	389	530	658	643	619	643	260
Social fund expenditures 6/	452	648	766	1,057	912	889	542
Project loan spending	0	0	0	9	211	368	161
Net lending	111	71	-137	30	30	-44	-10
Fiscal balance (cash)	-501	-437	-621	-940	-588	-746	-292
(excl. project loan spending)	-501	-437	-621	-931	-377	-378	-131
Change in arrears (+, increase)	110	145	364	-290	510	-17	-9
Domestic expenditure	110	145	364	-287	418	16	-59
Foreign interest	0	0	0	-3	92	-33	50
Fiscal balance (commitment)	-611	-582	-985	-650	-1,098	-729	-283
(excl. project loan spending)	-611	-582	-985	-641	-887	-361	-122
Financing	501	437	621	940	588	746	292
Net domestic	117	189	131	407	604	181	-102
Net Central bank	107	112	-62	142	823	217	-151
Net commercial banks 7/	9	69	42	189	-92	26	27
Net nonbank 7/	...	9	151	76	-127	-62	22
Net foreign	384	248	452	293	-93	426	6
Drawings	384	422	505	606	211	937	161
Amortization	0	-174	-53	-312	-639	-676	-183
Change in principal arrears	0	0	0	0	62	180	-2,264
Debt rescheduling/restructuring	0	0	0	0	273	-15	2,292
Privatization receipts			38	239	77	139	387
			(In percent of GDP)				
Revenue	33.5	33.9	31.7	33.9	33.1	27.3	22.7
Tax revenue	26.4	28.8	27.4	29.9	28.3	22.2	19.3
Non-tax revenue and grants	7.1	5.1	4.3	4.0	4.8	5.1	3.4
Expenditure and net lending	42.6	39.7	38.7	43.2	38.7	32.7	26.0
Expenditure	40.2	38.8	40.2	42.9	38.4	33.1	26.1
Net lending	2.0	0.9	-1.5	0.3	0.3	-0.3	-0.1
Surplus/deficit (cash)	-9.1	-5.8	-7.0	-9.3	-5.7	-5.4	-3.3
(excl. project loan spending)	-9.1	-5.8	-7.0	-9.2	-3.6	-2.8	-1.5
Surplus/deficit (commitment)	-11.1	-7.7	-11.2	-6.4	-10.6	-5.3	-3.2
(excl. project loan spending)	-11.1	-7.7	-11.2	-6.3	-8.6	-2.6	-1.4
Memorandum items (in millions of lei):							
Stock of expenditure arrears	454	599	963	679	1,097	1,113	1,104
Nominal GDP	5,505	7,545	8,828	10,119	10,366	13,713	8,763

Sources: Data provided by authorities, and Fund staff estimates.

1/ The accounts comprise the republican government, local governments, extrabudgetary funds and the Social Fund.
2/ First two quarters
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.
4/ Includes profit remittances from the National Bank of Moldova and privatization revenues.
5/ Includes extrabudgetary funds on a net basis, administrative, military, indexation of deposits, environment, and unallocated.
6/ Includes transfers from the State Budget.
7/ Includes treasury securities.

Table 39. Moldova: General Government Revenues, 1994-2000 1/
(In millions of lei; unless otherwise indicated)

	1994	1995	1996	1997	1998	1999	2000 /2
Total revenue	1,847	2,556	2,797	3,431	3,428	3,745	1,987
Tax revenue	1,454	2,171	2,417	3,027	2,931	3,050	1,694
Direct taxes	480	594	578	526	403	453	268
Profit tax	351	392	359	244	179	233	154
Personal income tax	130	201	219	282	224	220	114
Indirect	433	755	810	1,460	1,499	1,384	822
VAT	282	568	614	949	1,124	940	557
Excises	151	186	197	511	375	444	264
Foreign trade taxes	30	51	95	127	109	231	122
Social fund contributions	474	640	761	729	783	783	427
Other taxes 3/	36	130	174	185	137	199	55
Non-tax revenues and grants	393	385	380	404	497	695	294
Of which: Central Bank profits	0	190	106	131	187	160	131
				(In percent of GDP)			
Total revenue	33.5	33.9	31.7	33.9	33.1	27.3	22.7
Tax revenue	26.4	28.8	27.4	29.9	28.3	22.2	19.3
Direct taxes	8.7	7.9	6.5	5.2	3.9	3.3	3.1
Profit tax	6.4	5.2	4.1	2.4	1.7	1.7	1.8
Personal income tax	2.4	2.7	2.5	2.8	2.2	1.6	1.3
Indirect taxes	7.9	10.0	9.2	14.4	14.5	10.1	9.4
VAT	5.1	7.5	7.0	9.4	10.8	6.9	6.4
Excises	2.8	2.5	2.2	5.0	3.6	3.2	3.0
Foreign trade taxes	0.5	0.7	1.1	1.3	1.1	1.7	1.4
Social fund contributions	8.6	8.5	8.6	7.2	7.6	5.7	4.9
Other taxes 3/	0.7	1.7	2.0	1.8	1.3	1.5	0.6
Non-tax revenue and grants	7.1	5.1	4.3	4.0	4.8	5.1	3.4
Of which: Central bank profits	0.0	2.5	1.2	1.3	1.8	1.2	1.5
Memorandum items (in millions of lei):							
Tax arrears	...	823	1,205	1,132	1,484	1,720	1,643
Nominal GDP	5,505	7,545	8,828	10,119	10,366	13,713	8,763

Sources: Data provided by authorities, and Fund staff estimates.

1/ Comprises the republican government, local governments, extrabudgetary funds and the Social Fund.
2/ First two quarters of 2000.
3/ Includes land tax, real estate tax, natural resources tax, state tax, and private tax.

Table 40. Moldova: General Government Expenditures, 1994-2000 1/
(In millions of lei; unless otherwise indicated; cash basis)

	1994	1995	1996	1997	1998	1999	2000 /2
Total expenditure and net lending	2,347	2,993	3,418	4,371	4,015	4491	2280
Total expenditures	2,212	2,927	3,546	4,341	3,985	4535	2290
Current expenditure							
National economy	135	167	178	359	281	287	108
Environment	8	8	14	7	6	6	6
Social sphere	953	1,113	1,530	1,662	1,336	1340	674
Education	414	567	790	890	637	575	296
Health care	292	366	521	537	393	335	174
Other	246	180	220	235	306	430	202
Interest	164	265	243	377	421	906	481
Domestic	120	173	132	213	244	438	310
Foreign	44	93	111	165	177	468	171
Capital expenditures	162	135	149	234	206	103	62
Other expenditures 3/	331	530	658	643	619	643	260
Social fund expenditures 4/	452	648	766	1,057	912	889	542
Project loan spending	0	0	0	9	211	368	161
Net lending	111	71	-137	30	30	-44	-10
			(In percent of GDP)				
Total expenditure and net lending	42.6	39.7	38.7	43.2	38.7	32.7	26.0
Total expenditures	40.2	38.8	40.2	42.9	38.4	33.1	26.1
Current expenditure							
National economy	2.4	2.2	2.0	3.5	2.7	2.1	1.2
Environment	0.2	0.1	0.2	0.1	0.1	0.0	0.1
Social sphere	17.3	14.8	17.3	16.4	12.9	9.8	7.7
Education	7.5	7.5	8.9	8.8	6.1	4.2	3.4
Health care	5.3	4.9	5.9	5.3	3.8	2.4	2.0
Other	4.5	2.4	2.5	2.3	2.9	3.1	2.3
Interest	3.0	3.5	2.8	3.7	4.1	6.6	5.5
Domestic	2.2	2.3	1.5	2.1	2.4	3.2	3.5
Foreign	0.8	1.2	1.3	1.6	1.7	3.4	2.0
Capital expenditures	2.0	1.8	1.7	2.3	2.0	0.8	0.7
Other expenditures 3/	7.1	7.0	7.5	6.4	6.0	4.7	3.0
Social fund expenditures 4/	8.2	8.6	8.7	10.4	8.8	6.5	6.2
Project loan spending	0.0	0.0	0.0	0.1	2.0	2.7	1.8
Net lending	2.0	0.9	-1.5	0.3	0.3	-0.3	-0.1
Memorandum items (in millions of lei):							
Stock of expenditure arrears	454	599	963	679	1,109	1,113	1,104
Nominal GDP	5,505	7,545	8,828	10,119	10,366	13,713	8,763

Sources: Data provided by authorities, and Fund staff estimates.

1/ Comprises the Republican government, local governments, extrabudgetary funds and the Social Fund.

2/ First two quarters.

3/ Includes extrabudgetary funds on a net basis, administrative, military, indexation of deposits, environment, and unallocated.

4/ Includes transfers from the State Budget.

Table 41. Moldova: Accounts of the National Bank of Moldova, 1996-2000
(In millions of lei; end-of-period at current exchange rates)

	1996	1997	1998				1999				2000		
			Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
Net foreign assets	313.7	605.6	471.1	397.4	94.6	-304.1	-246.3	-194.3	167.7	40.3	348.2	454.8	533.4
NFA (convertible)	308.1	599.7	475.0	401.1	98.2	-301.9	-244.3	-192.1	169.8	42.6	350.7	456.9	535.5
Assets	1,458.2	1,704.2	1,531.7	1,364.1	1,054.1	1,177.2	1,632.5	1,806.8	2,352.8	2,204.9	2,526.1	2,532.7	2,457.6
Liabilities	-1,150.1	-1,104.5	-1,056.7	-963.0	-955.9	-1,479.1	-1,876.8	-1,998.9	-2,183.0	-2,162.3	-2,175.4	-2,075.8	-1,922.1
NFA (non convertible, net)	5.6	5.9	-3.9	-3.9	-3.6	-2.2	-2.0	-2.2	-2.1	-2.3	-2.5	-2.1	-2.1
Net domestic assets	540.3	517.0	557.0	583.9	755.0	1,363.9	1,338.0	1,443.9	1,250.8	1,458.3	1,199.1	1,160.6	1,232.1
Domestic credit	732.4	786.9	787.7	842.8	1,026.5	1,570.5	1,504.5	1,599.7	1,413.7	1,680.6	1,471.1	1,511.2	1,537.1
Net claims on general government	369.7	516.7	526.0	531.6	725.7	1,341.0	1,340.2	1,460.4	1,272.4	1,558.3	1,368.3	1,407.4	1,433.4
Credit to banks	362.6	270.3	261.8	311.2	300.8	229.5	164.3	139.3	141.3	122.3	102.8	103.8	103.7
Other items (net)	-192.1	-269.9	-230.7	-259.0	-271.4	-206.6	-166.5	-155.8	-162.9	-222.3	-272.0	-350.6	-305.0
Reserve money	854.0	1,122.6	1,028.1	981.3	849.6	1,059.8	1,091.7	1,249.6	1,418.5	1,498.6	1,547.3	1,615.4	1,765.5
Currency in circulation	731.1	972.1	924.4	863.6	747.0	855.3	853.7	910.3	1,073.6	1,122.0	1,109.3	1,159.2	1,339.6
Bank reserves	118.6	150.6	103.7	117.7	102.6	204.5	238.0	339.3	344.9	376.6	438.0	456.2	425.9
Of which: Cash in vault	20.5	32.4	35.3	26.6	27.9	27.5	29.0	29.7	53.2	44.6	60.5	54.7	68.7
Enterprise deposits	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: National Bank of Moldova.

Table 42. Moldova: Monetary Survey, 1996-2000
(In millions of lei, end-of-period; at current exchange rates)

	1996	1997	1998				1999				2000		
			Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
Net foreign assets	270.7	484.2	255.0	129.1	-171.0	-620.2	-421.8	-228.1	264.1	162.6	540.3	657.0	846.4
NFA (convertible)	245.6	458.1	278.8	195.4	-136.3	-584.1	-417.1	-234.5	256.7	168.4	548.5	628.3	831.9
Assets	1,632.6	1,815.0	1,640.1	1,518.9	1,254.4	1,446.3	2,011.9	2,364.5	2,998.7	2,824.1	3,275.1	3,199.7	3,240.7
Liabilities	-1,387.0	-1,356.8	-1,361.3	-1,323.5	-1,390.7	-2,030.4	-2,429.0	-2,599.0	-2,742.0	-2,655.7	-2,726.6	-2,571.4	-2,408.8
NFA (non-convertible)	25.2	26.1	-23.8	-66.3	-34.7	-36.1	-4.7	6.4	7.4	-5.8	-8.2	28.7	14.5
Net domestic assets	1,163.3	1,437.9	1,635.6	1,744.0	1,839.4	2,385.3	2,351.7	2,503.1	2,190.5	2,341.8	2,209.3	2,131.8	2,335.4
Domestic credit	1,803.9	2,305.2	2,528.6	2,658.0	2,750.5	3,296.5	3,270.2	3,468.5	3,201.8	3,413.8	3,279.5	3,451.3	3,699.5
Net claims on general government	468.8	804.3	845.5	878.8	986.4	1,535.7	1,585.7	1,690.9	1,538.3	1,778.6	1,528.3	1,655.5	1,715.2
Credit to the economy	1,335.1	1,505.6	1,683.0	1,779.0	1,764.0	1,760.8	1,684.5	1,777.6	1,663.5	1,635.2	1,751.2	1,795.8	1,984.3
Other items (net)	-640.5	-872.0	-893.0	-914.1	-911.0	-911.2	-918.5	-965.4	-1,011.3	-1,072.0	-1,070.2	-1,319.5	-1,364.1
Broad money (M3)	1,434.1	1,922.1	1,890.6	1,873.1	1,668.4	1,765.1	1,929.9	2,275.0	2,454.6	2,504.4	2,749.6	2,788.8	3,181.8
Domestic broad money (M2)	1,292.1	1,738.9	1,689.7	1,620.8	1,380.4	1,367.3	1,467.2	1,535.7	1,745.2	1,811.2	1,876.9	2,006.0	2,302.9
Currency in circulation	731.1	972.1	924.4	863.6	747.0	855.3	853.7	910.3	1,073.6	1,122.0	1,109.3	1,159.2	1,339.6
Deposits in domestic currency	561.1	766.8	765.3	757.2	633.4	501.4	537.0	550.4	671.7	687.0	766.5	846.0	962.0
Demand deposits	267.5	325.8	311.8	284.3	228.1	202.4	206.7	222.1	345.7	340.0	378.4	411.0	463.7
Time deposits	293.6	441.0	453.5	472.9	405.3	299.0	330.3	328.3	326.0	347.0	388.1	435.0	498.3
Foreign currency deposits	141.9	183.2	200.9	252.3	288.0	397.8	462.7	739.3	709.4	693.2	872.7	782.8	878.9

Source: National Bank of Moldova.

Table 43. Moldova: Balance of Payments, 1995-99
(In millions of U.S. dollars)

	1995	1996	1997	1998	1999
Current account	-115	-188	-274	-323	-34
Trade balance	-55	-252	-347	-387	-128
Exports of goods	739	823	890	644	469
Imports of goods	-794	-1,075	-1,237	-1,032	-597
Of which: energy products	-293	-328	-337	-245	-152
Balance of services	-96	-64	-52	-73	-22
Exports of services	126	114	134	119	136
Imports of services	-222	-178	-186	18	29
Income (net)	-29	55	47	41	34
Current transfers (net)	65	73	77	98	82
Capital and financial account	71	170	324	3	-42
Capital transfers and Direct investment 1/	73	23	71	88	149
Portfolio investment 2/	0	54	237	-55	-140
Medium and long-term loans	74	101	10	40	90
Disbursements	132	133	100	84	197
World Bank	50	0	38	32	90
E.B.R.D.	5	34	23	15	22
Other official	49	46	1	0	19
Private creditors	27	53	38	37	66
Amortization	-58	-32	-90	-43	-107
Other capital flows	-75	-9	5	-70	-141
Errors and omissions	-10	17	17	9	-3
Overall balance	-54	-1	67	-311	-79
Financing	54	1	-67	311	79
Use of IMF credit (net)	65	25	1	-64	5
Change in gross official reserves	-78	-57	-52	227	-41
Debt and energy arrears and rescheduling	67	33	-15	148	115
Memorandum items:					
Gross official reserves	257	314	366	140	181
(In months of imports)	3.0	3.0	3.1	1.4	2.9

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

1/ Includes Eurobond issues.
2/ Entries for 1997 reflect issuance of $140 million of securities to Gazprom in settlement of energy arrears.

Table 44. Moldova: Composition of Trade, 1994-99
(In percent of total)

Product description	Exports						Imports					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Livestock and Animal products	8.0	9.1	7.6	8.6	5.4	6.3	0.4	1.0	1.5	1.9	1.7	1.1
Vegetable products	17.6	10.2	8.5	8.6	11.3	14.7	4.0	4.1	3.8	3.2	1.6	1.9
Animal and vegetable grease and oils	2.0	1.5	0.4	0.9	0.6	0.5	0.1	0.2	0.3	0.4	0.3	0.4
Foodstuffs: hard and soft drinks, vinegar, tobacco and its substitutes	40.1	51.3	57.1	54.8	55.4	42.5	3.1	4.1	7.7	7.6	5.5	3.2
Mineral products	2.6	1.1	0.3	0.4	0.4	0.4	55.6	46.5	37.0	35.3	31.8	38.2
Chemicals and related products	1.4	1.1	1.5	1.5	1.2	2.7	5.8	7.8	7.1	9.6	9.1	8.0
India-rubber and plastic products made of them	0.6	0.6	0.7	0.6	0.5	0.4	1.7	2.5	3.3	3.1	3.2	3.5
Raw and tanned leather, furs and items made of them	1.6	2.0	1.5	1.4	1.7	2.8	0.5	0.5	0.3	0.3	0.2	0.5
Timber and timber products, cork	0.0	0.1	0.1	0.1	0.1	0.2	1.1	1.4	1.7	1.7	1.5	1.1
Paper, cardboard, and items made of them	1.4	1.1	1.1	0.4	0.4	0.4	2.2	3.5	4.3	4.1	4.5	3.8
Textiles and textile products	5.2	4.7	6.2	6.7	9.8	13.9	5.9	4.9	5.4	5.3	6.2	11.6
Footwear, hats, umbrellas, artificial flowers	0.5	0.4	0.5	0.6	0.4	0.7	0.5	0.3	0.3	0.3	0.3	0.4
Items made of stone, gypsum, cement, asbestos, ceramics, glass and other similar materials	1.0	2.1	3.4	1.4	1.5	2.2	1.5	2.6	2.5	3.9	3.4	2.3
Precious metals, items made of them, precious and semi-precious stones, jewellery, coins	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.2
Metals and items made of metals	3.3	4.3	1.7	1.0	1.4	3.5	3.1	4.0	4.7	4.4	4.0	4.3
Machinery, electric equipment and its parts, registration devices or sound and imade reproducing devices and accessories	9.6	6.2	5.3	5.2	6.5	5.9	9.8	12.4	14.5	12.9	19.1	12.1
Motor vehicles, aircrafts, vessels, and auxillary transportation equipment	1.9	1.7	1.6	5.9	1.7	1.5	3.0	2.6	3.2	3.0	4.6	2.1
Optical, photographic, cinematographic measurement, control devices and instruments, surgical instruments, watches, musical instruments	0.3	0.2	0.5	0.4	0.5	0.5	0.6	0.8	1.5	1.7	1.6	3.9
Goods and various products	2.7	2.0	1.9	1.4	1.2	0.9	1.0	0.5	0.6	1.1	1.3	1.4
Works of art and antiques	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sources: Moldovan Department for Statistical and Sociological Research.

Table 45. Moldova: Summary of Tax Structure and Recent Changes

Main Taxes	Description	Rates	Legislation
Corporate Income Tax	Base: Corporate earnings. Revenue sharing arrangements (2000): 50 percent allocated to local budgets in Chisinau and Balti , 100 percent in Gagauzia, and 50 percent in other rayons . Income tax of banks and insurance companies not shared with local budgets. In 2000, the Law on Local Public Finances changes the current revenue sharing arrangements. Main exemptions: Agricultural enterprises (1997). Charity funds, religious organizations, orthopedic equipment producers. Tax benefits for small enterprises and foreign investors. Lower rate for agricultural enterprises, and Free Trade Zones (until 1998).	32 percent until 1997. Reduction to 28 percent in 1998.	Corporate Income Tax Law (No. 1214-XII of December 2, 1992). Law on Income Tax for Banks and Financial Institutions (No. 490-XIII of June 8, 1995). Annual Budget Laws. Chapters I and II of the Tax Code (1998).
Personal Income Tax	Base: Earnings (in cash and in kind). Revenue sharing: Local tax not shared with State budget. Main exemptions: Disabled, military, and registered unemployed.	1997 Budget Law: 10, 20, and 32 percent rates. 1998 Budget Law: 15, 20 and 32 percent rates. 1999 Budget Law: 10, 15, and 28 percent rates in 1999. 2000 Budget Law: 10, 15 and 28 percent rates in 2000 Annual thresholds were changed: minimum - 2520 lei, up to 10800 lei - 10%, from 10800 - to 14400 lei - 15 %, above 14400 lei - 28%	Individual Income Tax Law (No. 1218-XII of December 2, 1992). Annual Budget Laws. Chapters I and II of the Tax Code (1998).
VAT	Base: Goods and services produced domestically or imported. Revenue sharing arrangements (2000): 10 percent allocated to local budgets in Chisinau and Balti, 100 percent in Gagauzia for 2000, and 20-30 percent in other rayons. VAT on imported goods not shared with local governments. Exemptions: Annual budget Law	20 percent (8 percent on necessity goods). 2000 Budget Law - 5 % on gas and agriculture	Value Added Tax Law (No. 264-XIII of November 8, 1994). Chapter II of the Tax Code (1998). Chapter III of the Tax Code (1.07.98). Annual Budget Laws.
Excises	List of excisable goods in annual Budget Laws. Revenue sharing: State budget tax not shared with local budgets.	According to annual Budget Laws. Increase in rates for certain excisable goods in 1999.	Excise Tax Law (No. 347-XIII of December 2, 1994). Annual Budget Laws.
Foreign Trade Tax	Free trade agreement with CIS and Romania. Revenue sharing: State budget tax not shared with local budgets.	Tariff range of 0-50 percent in 1997. Tariff range of 0-40 percent in 1998. Maximum tariff of 15 percent in 1999. Minimum 5 percent tariff in 1999 (including Romania and the CIS). Special tax of 5 percent on import was eliminated in Budget Law for 2000.	Annual Budget Laws.
Land Tax	Base: Collective, State-owned and private rural and urban parcels of land. Revenue sharing: Local tax not shared with State budget.	Varies according to location and use between 1 and 350 lei per hectare. Increase in rates in 1999.	Law on Taxes No. 1254-XII of December 2, 1992 Annual Budget Laws.
Real Estate Tax	Base: real estate and fixed assets. Revenue sharing: Local tax not shared with State budget. Proposal for combination of the land and real estate tax in a property tax in 2000. Differentiated rates for dwelling purposes depending of surface. Main exemptions: Afghanistan War veterans and workers in the Chernobyl clean-up in 1999.	Varies between 0.1 and 0.5 percent of the real estate value. Reduction to 0.15 percent in 1998. Varies between 0.1 and 0.3 percent of the real estate value (1999).	Real Estate Tax Law (No. 189 of November 8, 1993). Annual Budget Laws.
Special Road Tax	Vehicle registration and road tolls.		Law on the Road Fund (No. 720-XIII of February 2, 1996).

Table 46. Main Expenditure Policy Measures in 1999-2000.

A. Wages and Public Sector Employment	
1. Partial hiring freeze in the public sector	Total employment in public sector institutions was cut from 309,300 in January, 1999 to 284,676 in January 2000. Law No. 96 of July 16, 1998 provided for a reduction of employment in public sector institutions by cutting vacant positions and introducing a hiring freeze in these institutions. Additional measures were introduced by Government Resolution. "Additional measures to ensure the execution of the 1999 Budget," No. 28 of January 20, 1999.
2. Consolidation of ministries and departments, and elimination of public sector functions	In the context of the administrative and territorial reform, the structure and staffing of local departments of ministries and government departments are being reviewed, overlapping functions are being eliminated, and certain functions were transferred to self-supporting agencies.
3. Consolidation of local government	The Local Government Law (February 8, 1999) was implemented in conjunction with the Law on the Administrative and Territorial Reform. Local government employment has been reduced by 5,000-10,000 in 1999. The fiscal impact is estimated at Mdl 28 million in expenditures cuts in 2000.
4. Centralization of recruitment of central government civil servants	The computerization of records in the personnel departments of the ministries and departments of the Central Government is being carried out with technical assistance from TACIS. Regulations on recruitment for vacant positions in the civil service are being adopted.
B. Education	
1. Partial hiring freeze in the education sector	As a result of the introduction of a new "staff-scheme" in the eduction sector in September 1999, employment fell from 148,977 in 1998 to 135,212 in 1999. Wage bill decreased from Mdl 285,3 million to Mdl 260,2 million.
2. Increase in average class size and teaching load	In 1999, the average number of students per class increased by 0.4 compared to 1998 to 24.1 students per class. The Ministry of Finance proposed amendments to article 13 (4) of the Education Law along the following lines: • Increase to 20 children per group instead of 10 in crèches. • Increase to 25 children per class instead of 15 in kindergartens; in primary, secondary, advanced secondary schools, increase to 25 students per class instead of 20; • In colleges and universities, increase to 30 students per class instead of 25. Since September 1, 1998, school curricula have been changed to reduce the number of teaching hours per subject.

3. Streamlining of pre-school education	In 1998, there were 1,237 pre-schools with enrollment of 108,800 children, against 1,246 pre-schools with 115,996 children in 1997. In 1999 there were 1,187 pre-schools with enrollment of 92,090 children. Budget expenditure on these institutions fell from Mdl 1988 million in 1997 to Mdl 146,3 million in 1998, and to Mdl 99,7 million in 1999. Employment in pre-schools fell from 31,500 in 1998 to 25,500 in 1999. In 1999, pre-school fees were increased from 30 to 50 percent of the food costs, resulting in a fall in expenditures of approximately Mdl 10 million.
4. Elimination of underutilized educational institutions	In 1999, the total number of educational institution (pre-schools, colleges, etc.) was reduced by 349 institutions (state budget – 22, and local budgets – 327) compared to 1998.
5. Introduction of user charges in universities and colleges	In 1999, students of vocational and professional schools received student benefits instead of free meals (Government resolution No. 71 of February 2, 1999). Government Resolution No. 367 of April 28, 1999 introduced accommodation fees for students (30 percent of the accommodation costs for undergraduates, and 50 percent of the accommodation costs for post-graduates). Other resident students paid rents at full cost-recovery level. The possibility of introducing user charges is being considered. Contract students increased from 23,382 in 1998 to 28,862 in 1999 (by 5,280). As a result their out-of-pocket payments rose by Mdl 33,7 million (from Mdl 77,3 million in 1998 to Mdl 115,1 million in 1999.
C. Health Care	
1. Restructuring of health care services	A number of village hospitals were closed, leading to a reduction in the number of hospital beds. The 1999 budget eliminated 4,000 beds in hospitals funded by local budgets, and 3,000 beds in hospitals funded by the State budget. The saving to the budget is estimated at approximately Mdl 70 million.
2. Introduction of per capita budget allocation	In 1999, budget funds for health care were estimated on per capita basis.
3. Adoption of a minimal medical services package in conformity with budgeted funds	The Law on Minimum Medical Services Guaranteed by the State No. 267-XIV was implemented on February 3, 1999. The implementation of this law was reviewed by the Government on July 2, 1999 including the goals achieved by the introduction of medical services guaranteed by the state; the regulation on paid medical services provided to the population; and the formulation of medical services charges and tariffs. The introduction of user charges is expected to yield additional Mdl 50 million in 1999 and approximately Mdl 100 million the following year.

4. Partial hiring freeze in the health care sector	Over last five years, the staff of medical institutions was reduced by 9,266 employees (10 percent), of which 3,944 in 1998. In most cases, downsizing was carried out mainly at the local level and amounted to 8,718 employees over last 5 years, including 3,944 employees in 1998. In view of the partial hiring freeze, downsizing has continued in 1999. Total employment in health care sector fell by slightly less than 10,000 in 1999, from 79,956 at the end-1998 to 69,960 at end-1999.
D. Social Assistance and Social Insurance	
1. Pegging of pensions to contributions and increase in the retirement age	On January 1, 1999, the Law on Public Pensions was implemented, including a gradual increase of the retirement age and pegging pensions to length of service and contributions.
2. Elimination of privileges, and reform of targeted compensations	The new Law on targeted compensations, that limits the benefits to the most vunerable groups of the population (nine groups including 1st and 2nd degree invalids, disabled children under 16, families of those killed in service, World War II participants), was approved and came into force on June, 22 2000. It changed the mechanism of granting such benefits by providing money compensations directly to beneficiaries for utilities, electricity, natural gas, heat and fuel and covering the costs from the State budget through the Social Fund. The budget law provided Mdl 50 million to finance the heating subsidies in 2000, although the estimated cost of the scheme is around Mdl 150 million. The annual cost of the new compensation scheme is around Mdl 245 million. Government Resolution No. 569 of June 18, 1999 eliminated all effective housing and utilities privileges and transportation benefits.
3. Elimination of subsidies for milk and cattle	No funds for these purposes were budgeted for 1999 and 2000.
E. Capital Expenditures	
1. Identifying key investment projects	Government Resolution No. 379 of May 4, 1999 identified specific investment projects and allocated Mdl 39.5 million in 1999 for public sector funding of investment projects with foreign participation, including the modernization of Chisinau International Airport (Mdl 22.7 million), water supply to the south of the country (Mdl 9.6 million), and rehabilitation of water supply system in the municipality of Chisinau (Mdl 7.25 million).
2. Suspension of new housing construction projects	The capital expenditure program for 1999 (Government Decision No. 379 of May 4, 1999) and 2000 does not allocate budget resources for new housing construction projects. Funding for completion of housing construction already in progress and having reached completion at more than 90 percent amounts to Mdl 2.8 million in 1999, or 4.2 percent of total investment and 71 percent less than total investment for these purposes in 1998.
3. Suspension of construction of education and health care facilities	Funding for construction of education and health care facilities was suspended. The budget allocated Mdl 1.5 million for completion of unfinished construction.

4. Suspension of construction of gas pipes in rural areas	Construction of gas pipes in rural areas was not included in the State budget investment program. It has financed primarily by residents and partly by local budgets and the social investment fund. The 1999 Budget allocated Mdl 13 million for construction of high- and medium-pressure gas pipes (56 percent of 1998 allocation).
5. Creation of a data base of government guarantees and loans in the Ministry of Finance	In 1993–1998, government guarantees for domestic loans were issued at a total of Mdl 589.1 million in accordance with parliament and government resolutions. As of July 1, 1999, Mdl 387.6 million were withdrawn from the budget, Mdl 338.6 million were repaid, and debt of economic agents to the Ministry of Finance amounts to Mdl 97 million. Article 5 of the 1999 Budget Law prohibits the issuance of new government guarantees to economic agents for domestic and foreign loans.

Source: Ministry of Finance.