

IMF Working Paper

The Role of Medium-Term Fiscal Frameworks for Transition Countries: The Case of Bulgaria

Balázs Horváth and István P. Székely

IMF Working Paper

European I and Fiscal Affairs Departments

The Role of Medium-Term Fiscal Frameworks for Transition Countries: The Case of Bulgaria

Prepared by Balázs Horváth and István P. Székely¹

Authorized for distribution by Adrienne Cheasty and Juha Kähkönen

January 2001

Abstract

The views expressed in this Working Paper are those of the author(s) and do not necessarily represent those of the IMF or IMF policy. Working Papers describe research in progress by the author(s) and are published to elicit comments and to further debate.

This paper discusses the foundations for a medium-term fiscal framework for Bulgaria, a transition economy aspiring to join the European Union. The paper argues that a well-designed framework can help to enhance the credibility of macroeconomic policies and facilitate preparations for EU membership. It presents an illustrative scenario for Bulgaria, utilizing a broad concept of net public debt.

JEL Classification Numbers: H60, H61, H10

Keywords: Fiscal management, medium-term fiscal framework

Author's E-Mail Address: bhorvath@imf.org, iszekely@imf.org

¹ The authors thank Adrienne Cheasty and Juha Kähkönen for initiating the project and for their helpful comments. In addition, they are grateful for the comments and suggestions of Marco Cangiano, Costas Christou, Tina Daseking, Mark DeBroeck, Luc Everaert, Tarhan Feyzioglu, George Kopits, Kornélia Krajnyák, Neven Mates, Peter Stella, Eivind Tandberg, other colleagues at the International Monetary Fund. Helpful discussions with Dimitar Radev, Nikolay Gueorguiev, Dobrin Pindjurov and Svetla Kostova at the Ministry of Finance, Bulgaria are also gratefully acknowledged.

Contents	Page
I. Introduction.....	3
II. Medium-Term Fiscal Framework for Bulgaria: General Considerations.....	7
III. Medium-Term Fiscal Framework for Bulgaria: Country-Specific Considerations.....	11
A. Revenues.....	12
B. Expenditures and Financing.....	16
IV. An Illustrative Medium-Term Fiscal Framework for Bulgaria	22
 Text Boxes	
1. Sources of Fiscal Risk.....	9
2. Bulgaria: Tax Rate Summary as of January 1, 2000	15
3. Pension and Health Reforms	18
4. Progress Towards Creating a Treasury	21
 Tables	
1. Selected Economic Indicators, 1996-2000	5
2. Selected Countries: Structure of General Government Revenues, 1995-98.....	13
3. Overview of Standard VAT Rates (In percent)	14
4. Medium-Term Fiscal Framework 2000-05: Main Assumptions and Indicators	23
5. Medium-Term Fiscal Framework 2000-05: Key Revenue and Expenditure Measures.....	25
 Figures	
1. Selected Economic Indicators, 1991-1999	6
2. General Government Operations, 1996-99 (In percent of GDP).....	17
3. Long-Term Forecasts of the National Social Security Institute, 1999-2047 (In thousands)	19
4. Projected Deficits of Pillar I With and Without Reform, 1999-2047 (In percent of GDP)	20
5. Illustrative Central Medium-Term Scenario	24
6. Expenditure Structure in Illustrative Central Medium-Term Scenario.....	24
7. Impact of the Real Shock.....	27
8. Interest Rate Shock and No Access to International Capital Markets	27
References.....	29

I. INTRODUCTION

This paper examines medium-term fiscal management in Bulgaria as a case study for a transition economy aspiring to join the European Union (EU). Several industrial countries have adopted formal medium-term fiscal frameworks to guide fiscal management,² and these frameworks are also being developed by some advanced transition countries (Christou and Daseking, 2000). The paper describes the progress already made in this area by Bulgaria, a possible way of developing a formal medium-term fiscal framework, and the advantages of doing so. Bulgaria's case is of particular interest because the country adopted a Currency Board Arrangement (CBA) in mid-1997, which forces fiscal policy—the main operational policy instrument—to remain prudent, and to extend its horizon beyond annual budgets. Bulgaria has already made significant progress in this regard by preparing medium-term fiscal projections on a rolling basis to ensure that annual fiscal targets are consistent with medium-term fiscal and external sustainability.

A well-designed medium-term fiscal framework provides a coherent quantitative statement of the government's fiscal strategy and a degree of public commitment to it. Such a framework enhances the feasibility of the government's fiscal objectives by ensuring that the targeted path of fiscal aggregates is consistent with medium-term fiscal sustainability and with a macroeconomic framework aiming for sustained rapid growth and external viability. It is a vehicle through which the government can credibly commit to the targeted path of fiscal aggregates over the medium term in an uncertain world, and thereby anchor expectations. In selecting this path, the government considers the initial fiscal position, the available institutional capacity, development and policy priorities, together with its desired future role in the economy. On this basis, the government sets the modalities and timing of major multi-year institutional reforms (pensions, health, education and fiscal management), and the ground rules to preclude the emergence of large quasi-fiscal liabilities. Alternative quantitative scenarios help to determine the size of the cushion needed to enable the government to react flexibly to adverse cyclical developments or to deviations from the assumptions used. Using the alternative scenarios, the government can choose a robust fiscal path incorporating a considerable cushion for these purposes. To aid this choice, the scenarios also trace out the trade-offs between various possible tax and expenditure plans.

A further motivation for transition economies in articulating a medium-term fiscal framework is to respond to the challenges posed by European Union and NATO accession. Candidate countries will need to abide by the EU's fiscal rules, notably the Stability and Growth Pact and the excess deficit procedure. They also need to create room in successive budgets for expenditure related to the implementation of Partnership goals, as set out by NATO. A medium-term fiscal framework would be a natural way to help achieve these goals, and could also serve as a building block to the EU's Pre-accession Economic Programs (PEPs). These programs form an integral part of the pre-accession fiscal

² For example, Finland, the Netherlands, and the United Kingdom.

surveillance procedure, and pave the way toward participation in the EU's multilateral surveillance process. The PEPs focus on the economic reforms needed for EU accession, and help develop the institutional and analytical capacity necessary to participate in the Economic and Monetary Union (EMU) following accession, particularly in the areas of economic analysis and medium-term policy planning. Bulgaria is scheduled to present its PEP to the EU by May 1, 2001.

Bulgaria's transition experience shows the importance of taking a multi-year, forward-looking approach to ensuring prudent policies. The lack of structural reforms through mid-1997 led to chronic losses in the state-owned enterprise (SOE) sector, necessitating massive budgetary transfers to the sector and to decapitalized state-owned banks. Quasi-fiscal operations of this sort, rather than conventional monetary or fiscal laxity, were mainly responsible for the surge in money supply and in public debt.³ These developments resulted in defaults on public external debt during 1990–94 and in the 1996–97 financial crisis. This crisis culminated in hyperinflation and a collapse of output, creating a consensus in support of far-reaching reforms to restore policy credibility and impose macroeconomic discipline. The most visible change was the acceptance of drastic monetary policy constraints imposed by the CBA in mid-1997, which, supported by a tight fiscal stance and accelerated structural reforms, brought about a remarkable turnaround. These reforms were supported by intensive technical assistance from the IMF that was efficiently utilized by the authorities, and by successful Stand-By and Extended Fund Facility programs. Real wages and foreign exchange reserves rebounded, the debt-to-GDP ratio began to decline, inflation was stopped in its tracks, and budgetary interest expenditure fell in tandem with plummeting domestic interest rates. All these factors helped restore fiscal balance. Positive growth returned from 1998, albeit tempered by a sequence of exogenous shocks (Table 1 and Figure 1).

Looking forward, Bulgaria's medium-term fiscal framework is constrained by four key legacies from the past. First, lasting damage was caused by the way government solvency was restored in the mid-1990s. Bulgaria's default on its foreign debt precluded foreign commercial borrowing through the remainder of the 1990s, and the erosion of its domestic debt through hyperinflation seriously undermined policy credibility. Second, the CBA rules out recourse to inflation to ensure government solvency. Third, Bulgaria has yet to fully complete structural reforms, including the restructuring of the corporate sector and of government institutions, leaving the economy vulnerable to shocks and limiting institutional capacity. Fourth, the country remains highly indebted, with public debt amounting to 87 percent of GDP (195 percent of general government revenues) at end-1999, and budgetary interest payments reaching almost 10 percent of revenues in that year.

³ Excluding quasi-fiscal operations and the interest costs of accumulated public debt, general government operations would have shown a substantial surplus since at least 1994.

Table 1. Bulgaria: Selected Economic Indicators, 1996-2000

	1996	1997	1998	1999	2000		
					Q1	Q2	Q3
Output, prices, and employment							
	(Percent change, from same period of previous year)						
Real GDP	-10.9	-6.9	3.5	2.4	4.8	5.5	...
CPI (end-of-period)	311.3	549.9	1.6	7.0	9.5	11.7	12.0
Unemployment rate (percent, period average)	12.5	13.7	12.2	13.8	18.0	18.7	18.1
Monthly wages (in US dollars) 1/	89.4	80.6	111.0	120.6	115.3	119.7	118.1
Public sector wages, real (period average)	-35.3	-19.5	23.6	11.2	1.1	2.9	1.4
Private sector wages, real (period average)	39.8	9.9	13.7	13.1	10.8
Consolidated government 2/							
	(In percent of GDP)						
Revenue	32.6	36.8	39.5	40.3	45.6	45.4	32.3
Noninterest expenditure	24.9	29.2	34.0	37.4	37.4	35.4	30.8
Primary balance	7.7	7.6	5.5	3.0	8.2	10.0	1.4
Interest payments	20.3	8.5	4.4	3.9	7.9	1.9	5.6
Overall balance	-12.7	-0.9	1.0	-1.0	0.3	8.1	-4.2
External financing	-2.9	0.3	-0.7	0.2	-2.8	-2.1	...
Domestic financing	15.6	-2.7	-2.0	-1.3	1.9	-6.8	...
Privatization receipts	0.0	3.2	1.7	2.2	0.6	0.8	...
Public debt	105.8	110.4	80.2	86.7	86.9	85.5	...
<i>Of which</i> : Domestic 3/	22.0	24.4	20.3	19.6	20.4	19.0	...
Money and credit							
	(End-of-period; percent change, from same period of previous year)						
Broad money (M3)	124.5	359.3	9.6	11.4	20.4	22.5	25.7
Lev money	52.7	423.0	18.2	11.5	19.9	25.6	25.2
FX deposits (U.S. dollar million)	1,357	1,477	1,543	1,477	1,533	1,552	1,562
FX deposits (percent of M3)	50.5	43.6	39.2	39.1	41.6	41.9	41.6
Interest rates (annualized)							
	(In percent, end of period)						
BNB basic rate	435.0	7.0	5.2	4.6	3.3	3.7	4.0
Time deposit (leva)	213.8	3.0	3.3	3.2	3.3	3.1	3.3
Balance of payments 4/							
	(In millions of U.S. dollars)						
Gross official reserves	793	2,468	3,056	3,222	2,875	3,145	2,959
(In months of GNFS imports)	2.0	6.4	6.1	5.9	4.8	5.2	4.6
Current account (percent of GDP)	0.2	4.4	-0.5	-5.5	-13.1	-3.8	2.2
External debt	9,517	9,732	10,024	9,891	10,105	10,312	10,261
(In percent of GDP)	96.8	95.9	81.8	79.8	78.3	82.2	83.4

Sources: Bulgarian authorities; and staff estimates.

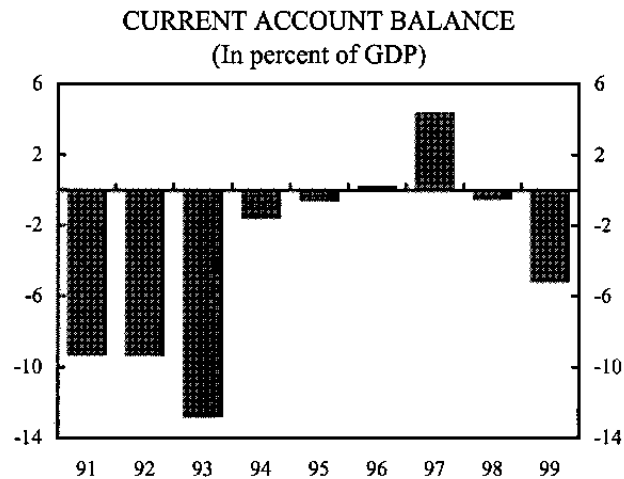
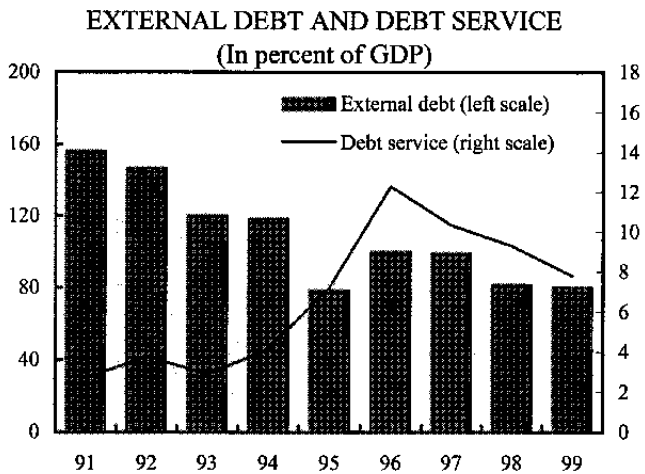
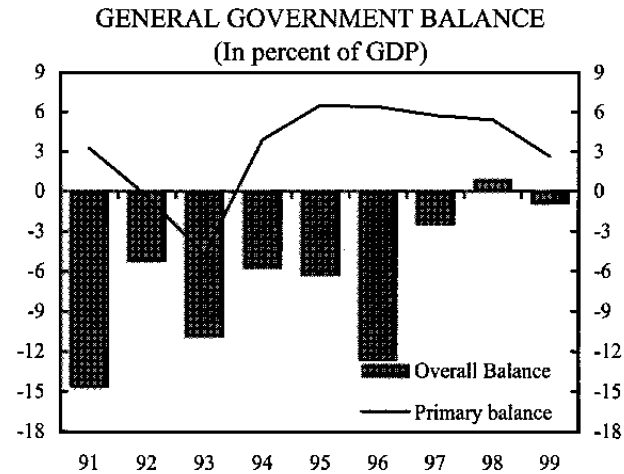
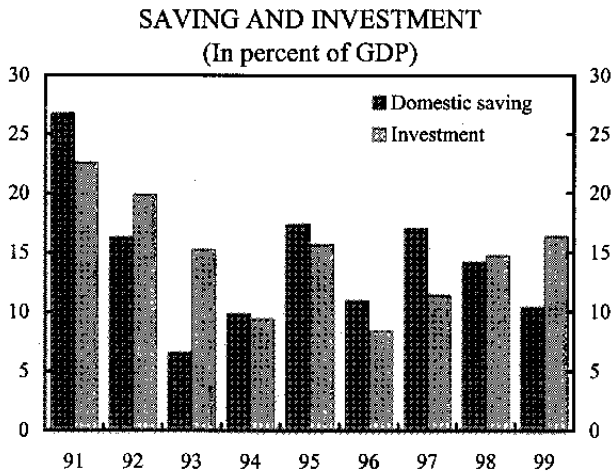
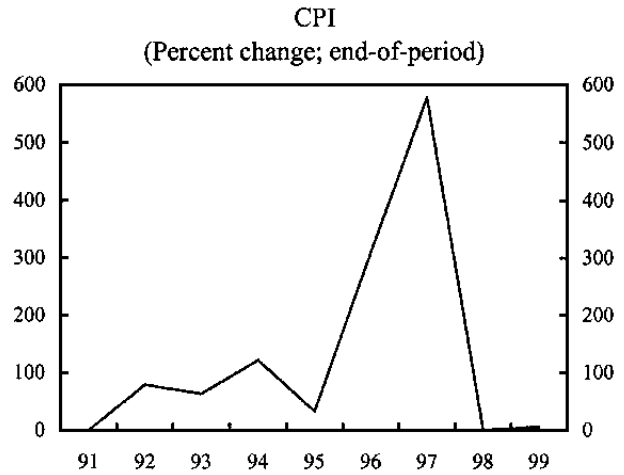
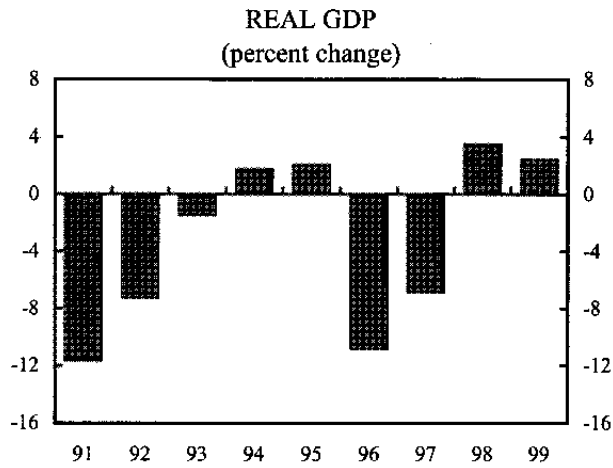
1/ Average monthly wage in the public (including nonbudgetary) sector.

2/ Includes the republican budget, municipalities, and extrabudgetary funds. The coverage became more comprehensive from 1998 onward, resulting in a structural break.

3/ Domestic debt increased by 2.5 percent of GDP in June 1997 due to a restructuring of central bank claims on government.

4/ Starting 1998, a new methodology was adopted for the calculation of BOP data.

Figure 1. Bulgaria: Selected Economic Indicators, 1991-1999



Sources: Bulgarian authorities; and Fund staff estimates and projections.

The main conclusion of this paper is that a medium-term fiscal framework can usefully guide policymaking in a transition country like Bulgaria. This paper provides a possible methodology for compiling a medium-term fiscal framework in Bulgaria. It argues that such a framework can raise the effectiveness of macroeconomic management by ensuring that the size and the structure of the budget are determined on the basis of the stated policy objectives, notably rapid sustained growth, poverty reduction, and EU and NATO accession. It demonstrates through stress tests that fiscal vulnerability can be reduced by substantially lowering broadly defined public indebtedness. This can be achieved without reductions in public efficiency or a re-emergence of arrears, while accommodating the government's policy objectives. Such a reduction in fiscal vulnerability is essential for an economy like that of Bulgaria, with relatively high public debt, limited access to international capital markets, and structural weaknesses. A well-designed and implemented medium-term fiscal framework can also help increase resources available to the private sector, and regain access to international capital markets. Finally, it imposes structure on the design of much-needed fiscal reforms and thus facilitates their implementation. In the Bulgarian context, these reforms are key to the continued successful implementation of the CBA, and encompass the following:

- On the revenue side, lowering tax rates, especially on labor, and improving tax administration to broaden the tax base. This is critical, owing to the shift in the composition of taxpayers from a small number of large state-owned enterprises to an increasing number of mostly small, private enterprises.
- On the expenditure side, amending the structure of spending to enhance the flexibility of budget execution, and creating contingency mechanisms to enable nimble adjustment to unforeseen shocks.
- In institution building, unifying revenue collection and developing the treasury.
- Addressing the implicit debt arising from unfunded pension and health-related liabilities.

II. MEDIUM-TERM FISCAL FRAMEWORK FOR BULGARIA: GENERAL CONSIDERATIONS

Perhaps the most basic criterion is that medium-term fiscal targets need to satisfy *ex ante liquidity and solvency constraints*. To meet the *ex ante* liquidity constraint, the government must be able to meet its financial obligations at any point in time. Resorting to debt default, expenditure arrears, or a "fire sale" of assets to meet the liquidity constraint *ex post* can be very costly in the longer run. Under the CBA, the Law on the Bulgarian National Bank (BNB) precludes short-term central bank financing for the budget. Besides, as in many transition countries, Bulgaria's domestic financial markets are underdeveloped and the government's access to foreign financial markets is limited and uncertain. Thus, the government needs to maintain an adequate level of liquid assets (depending on the volatility of cash flows, the existing contingency mechanisms, and borrowing capacity). To this end, at

end-1999 the Fiscal Reserve Account (FRA)⁴ contained over 10 percent of GDP in funds readily available to the central budget in Bulgaria. Moreover, its size is treated as an explicit intermediate policy target that is considered important to maintain confidence in the CBA. The ex ante solvency (sustainability) constraint requires that today's government debt be matched by an excess of future primary surpluses over primary deficits in present value terms (Chalk and Hemming, 2000). This implies that the growth rate of debt cannot be higher than the (risk-free) interest rate.⁵ The solvency constraint is also always met ex post, but possibly only through costly mechanisms, which a sound medium-term fiscal framework can help avoid. Despite their availability (see, e.g., Corsetti, 1990), we do not perform formal statistical tests to ascertain whether Bulgaria met the solvency constraint prior to the CBA, since the default on foreign debt and the subsequent hyperinflation is clear evidence to the contrary. Statistical tests are not performed on the post-CBA period because of the small sample size. However, we used a modified Buiter (1989) indicator, an augmented net debt-to-GDP ratio, to evaluate compliance with the solvency constraint. This indicator shows a decisive shift toward fiscal sustainability after 1997.

Transition economies are often characterized by higher *macroeconomic uncertainty and fiscal risk* stemming from the strains of transition, vulnerability to exogenous shocks, and limited access to capital markets (Box 1). In Bulgaria, the CBA requires policymakers to reduce the budget's vulnerability by targeting a strong fiscal position, a low level of indebtedness, and a sizable stock of liquid reserves, while employing strong contingency mechanisms. Greater fiscal transparency, including a well-specified medium-term fiscal framework, can curtail fiscal risks by reducing asymmetric information, thereby limiting moral hazard and adverse selection. Risk sharing with the private sector and stringent rules for honoring calls on budgetary contingent liabilities can further lower fiscal risks. Brixi, Shatalov, and Zlaoui (2000) provide a comprehensive analysis of fiscal risk in Bulgaria and stress the importance of debt management and risk-hedging strategies.

⁴ The FRA is the sum of liquid central government funds held on deposit at the Bulgarian National Bank. It includes the deposits of extrabudgetary funds, but excludes those of municipalities and amounts held in custody.

⁵ The shortcomings of this general interpretation make further restrictions necessary: (i) convergence of the present value of the terminal debt stock to zero to rule out Ponzi games; and (ii) a limit on government revenue to rule out an unbounded ratio of debt to output in case debt grows faster than output.

Box 1. Sources of Fiscal Risk

The budget in transition countries is often exposed to significant **currency risk**, owing to the mismatch of currencies and the timing of cash flows. In these economies, many prices and cash flows are fixed in foreign exchange, with a large proportion of government debt denominated in foreign exchange while tax liabilities and most government payment obligations are fixed in domestic currency. Currency risk is often exacerbated by exchange rate volatility (including shifts in cross-exchange rates, important for the Bulgarian lev, which is pegged to the euro with some 65 percent of its public debt being U.S. dollar-denominated). The domestic private market for currency risk is typically non-existent or imperfect and the treasury has limited access to foreign markets. Finally, a considerable part of the tax base is determined by cash flows fixed in a foreign currency (e.g., corporate income tax paid by exporting firms).

A variety of additional factors also contribute to fiscal risk. Floating interest rate loans, representing some 74 percent of total public debt in Bulgaria in mid-2000, generate cash flows that are uncertain even if measured in the currency in which the loan is denominated. These uncertain cash flows impose **interest rate risk** on the government, which can typically do little to hedge it. **Refinancing risk** is related to obstacles to rolling over the government's maturing debt, which can give rise to liquidity problems even if the budget is in surplus and revenues are sufficiently large to finance expenditure. As a result of previous debt restructuring, the average maturity of Bulgaria's foreign debt was a comfortable 12.5 years in mid-2000. On the other hand, the average maturity of securities issued on domestic markets was less than two years, though increasing. Governments also assume **credit risk** in lending to SOEs that may not repay. Government guarantees for nonsovereign borrowing and other payment obligations are examples of **contingent liabilities**, which also add to fiscal risk. In mid-2000, government-guaranteed debt reached some 7.5 percent of GDP in Bulgaria. Privatization can be an important source of contingent liabilities, e.g., by imposing the cost of repairing environmental damage incurred prior to privatization on the budget (in Hungary the amount of such obligations assumed by the government is comparable to total privatization receipts). Finally, **implicit liabilities** (ones not based on written contracts or laws, but which the government cannot afford to ignore for political or systemic reasons, e.g., bank bail-outs) also contribute to fiscal risk.

The fiscal strategy needs to be based on a *broad definition of government*. In practice the central government bears responsibility for financial obligations of subnational governments: a no-bail-out policy would carry little credibility, given the financial and political costs of local government bankruptcy. Thus, the liquidity and solvency of subnational governments need to be incorporated into the medium-term fiscal framework. Similarly, quasi-fiscal liabilities arising from the operations of certain state-owned enterprises⁶ should be factored into the government's solvency constraint. Liabilities that would result in systemic risk (e.g., bad loans of large state-owned banks), or on which default would be politically too costly (wage or pension arrears) also need to be covered, even if the time when they fall due is uncertain.

⁶ Bankruptcy as a means to restore solvency is not feasible for SOEs providing core services (for which private supply cannot substitute public supply without major interruption) because the state's responsibility as owner extends beyond the level of their capital.

However, it is necessary to improve corporate governance through supporting reform measures to avoid the moral hazard stemming from explicitly acknowledging these liabilities.

The present value of the current and future deficits of the *pension system* and flows of *seigniorage* also need to be factored in. The former is calculated as the present value of pension-related revenues and expenditures, taking into account asset returns of partially or fully funded pension schemes.⁷ Since pension schemes rarely have a positive present value—the usual motivation for pension reforms—future pension liabilities will have to be partly covered by general revenue, making the pension scheme akin to other transfer schemes (Chand and Jaeger, 1996). Present and future seigniorage flows also need to enter the solvency calculation. Seigniorage under a CBA is the profit of the currency board (see Buiter, 1997 for alternative definitions). This profit equals the return on foreign exchange reserves, including the reserve counterpart of the Banking Department deposits, less interest on any interest-bearing liabilities of the currency board and the cost of operating the central bank (not only the currency board). Seigniorage can be transferred to the government without endangering the CBA because the transfer leaves the nominal value of base money issued by the central bank and full reserve coverage unchanged. The calculation is complicated in practice by the dependence of future profits on the future demand for base money.

External sustainability is another basic criterion that a medium-term fiscal framework needs to meet. The conceptual framework to analyze foreign debt and external liquidity coincides with that for public debt. External constraints cover both the public and private sectors, but concern only foreign assets and liabilities. For the purpose of our illustrative calculations we do not explicitly incorporate the private sector's savings-investment decision. Since at present the Bulgarian private sector has a hard budget constraint and limited access to foreign financial markets, it cannot overborrow abroad, so it will not violate the external constraint. The government's foreign borrowing is already included in the analysis of the fiscal constraints. As a result, given the currency board arrangement, the medium-term fiscal targets that meet the fiscal solvency and liquidity criteria would by construction meet the criteria derived from the sustainability of foreign debt and the liquidity constraint on gross foreign financing. However, if the private sector (especially banks) gains substantial access to external borrowing over time, external constraints can become binding and will need to be explicitly incorporated into the medium-term calculations.⁸

⁷ If net pension debt is added to government debt to assess solvency or sustainability, the associated net cash flows have to be excluded from the government's primary position. The double counting of government debt held by funded pension schemes should also be avoided.

⁸ This is complicated by the lines dividing foreign and domestic assets becoming increasingly blurred. In many transition economies, foreign investors hold the bulk of T-bills; domestic investors hold some government securities issued on international markets; and domestically incorporated foreign multinational firms often borrow abroad through parent companies.

In devising a medium-term fiscal framework, policymakers need to strike a *balance between commitment to pre-set fiscal targets, and flexibility*. Fiscal policy gains in importance under a CBA. Apart from structural reforms (which deliver their impact with a considerable lag) and incomes policy (which acts only on the state sector), the timing and magnitude of fiscal policy measures are the only macroeconomic policy instruments to counter exogenous shocks or fine-tune domestic demand. Therefore, fiscal policy needs to be flexible to enable the government to mount an effective policy response within a reasonable time frame. In countries with high public debt and a lack of proven track record, commitment to a disciplined fiscal policy through a medium-term fiscal framework can bolster the credibility of macroeconomic policies. At the same time, strong commitment to a formal medium-term fiscal framework carries the risk of not being able to meet the pre-set targets owing to exogenous shocks, or having to pursue a suboptimal fiscal policy to counterbalance the negative impact of such shocks. The approach we suggest to deal with this dilemma is to use the medium-term fiscal framework to commit to a rapid reduction in net augmented public debt. This enhances credibility and allows any needed fiscal expansion to continue for a sufficiently long period without reaching a dangerously high level of net augmented debt. Moreover, the built-in defense mechanisms (contingency mechanisms and the liquid reserves of the budget) raise credibility for fiscal policy by enabling the government to carry out orderly fiscal adjustment without additional borrowing when the budget is hit by large exogenous shocks and/or the country is cut off from foreign capital markets. Finally, increased expenditure flexibility (a lower share of nondiscretionary expenditure) also adds credibility to a fiscal expansion, since a withdrawal of fiscal stimulus can be more easily carried out if needed.

III. MEDIUM-TERM FISCAL FRAMEWORK FOR BULGARIA: COUNTRY-SPECIFIC CONSIDERATIONS

Bulgaria's main medium-term fiscal goals are supporting the CBA, and ensuring fiscal viability and sustained rapid growth. While fiscal policy in itself can do relatively little to directly elicit sustained rapid growth, it can help create the preconditions for such growth. To this end, the government already prepares annual budgets in a multiyear setting. The government's objective is to reduce public debt, and through this, the degree of fiscal vulnerability to a level that creates credibility and more room for maneuver for fiscal policy. To meet this objective, the government seeks to maintain a broadly balanced underlying fiscal position, with actual deficits up to 2 percent of GDP to cover nonrecurring costs of structural reform. As the costs of structural reforms diminish and interest payments decline with a contracting debt burden, the overall balance of general government operations is envisaged to shift gradually, from a deficit of 1½ percent of GDP in 2000 toward balance. The quantitative analysis presented in Section IV envisages a reduction in the size of government, allowing the private sector to become the engine of growth through a gradual cut in taxes, and a commensurate adjustment in expenditures. The balance of costs and benefits of reducing the government's involvement in the economy results in a medium-term goal for the revenue-to-GDP ratio of around 38 percent, with noninterest spending limited to about 35 percent of GDP.

A. Revenues

Bulgaria collects some 40 percent of GDP in general government revenues. Tax revenues are around the average of European transition economies, and well below that in advanced transition countries or in EU countries (Table 2). However, the unusually high share of nontax revenues (9 percent of GDP, more than half again as much as in either transition or EU countries) causes the overall revenue ratio to exceed the averages of all these groups. Tax revenues (mainly from the Value-Added Tax (VAT), excises, taxes on income and profit, and social security contributions) and their composition have been roughly stable since 1997. Nontax revenue was derived in recent years primarily from property income, fees and charges, and penalty interest paid on outstanding tax arrears of a handful of large SOEs. Temporary factors, such as delays in the revaluation of real estate and fluctuations in the intensity of arrears collection, contributed to the significant volatility of nontax revenue. The main means of taxing the large informal sector are indirect taxes, primarily the well-designed single-rate VAT, which has offset much of the revenue decline in other taxes and compares well with the VAT in other countries (Table 3).

The authorities' medium-term objective is to lower tax rates and broaden the tax base. High tax rates in Bulgaria (Box 2) impose a deadweight loss on the economy and have contributed to the high share of the informal economy.⁹ This high share in turn makes tax rate cuts harder and—reflecting the pattern of evasion—also has adverse implications for equity. Measures to reduce the tax burden—especially for labor—and to reduce disincentives to enter the formal sector are thus high on the agenda. Such measures could raise voluntary compliance and help position Bulgaria as a more desirable target for foreign investment. During 1999-2000, the authorities reduced the rates of the corporate profit tax and the VAT, shifted personal income tax brackets upward, reduced import tariffs, and eliminated export taxes. Additional ambitious tax cuts in 2001 of about 1.5 percent of GDP will support job creation and sustained rapid growth. The package consists of a substantial reduction in the income tax burden focused on lowest-earning taxpayers; a 5 percentage point cut in the average corporate profit tax rate to 27 percent; and a 3 percentage point reduction in social contribution rates. The revenue base will be strengthened as income growth picks up, and as budget constraints harden owing to structural reforms. The remaining challenges for tax reform are to narrow the tax wedge on labor through further cuts in the excessive social insurance contributions to boost employment and enhance voluntary compliance; and to modernize corporate profit taxation through the unification of the tax rate for enterprises with small and large profits.

⁹ According to the National Statistics Institute, the size of the informal economy is around a third of the measured economy, implying that much activity escapes the tax net altogether.

Table 2. Selected Countries: Structure of General Government Revenues, 1995-98 1/

	(In percent of GDP)									(In percent of tax revenue)					
	Total Revenue	Tax Revenue	Nontax Revenue	Income & Profit Tax	Social Security, Payroll Taxes	Domestic Taxes on Goods & Services incl. VAT & excises	Int'l Trade Taxes Total	Property Taxes	Other Taxes	Income & Profit Tax Total	Social Security, Payroll Taxes	Domestic Taxes on Goods & Services incl VAT & excises	Int'l Trade Taxes Total	Property Taxes	Other Taxes
A. Selected Transition Countries															
Advanced Transition Countries 2/	38.8	35.0	3.8	7.6	12.6	12.4	1.7	0.1	0.5	21.6	36.2	35.8	4.7	0.4	1.4
Czech Republic	33.9	32.0	1.9	4.9	14.6	11.2	1.0	0.3	0.1	15.2	45.5	35.0	3.2	0.9	0.2
Estonia 3/	34.2	30.4	3.8	6.0	10.8	13.5	0.0	0.0	0.0	19.8	35.4	44.5	0.1	0.1	0.0
Hungary	38.6	33.7	4.9	7.2	10.9	12.1	2.8	0.2	0.5	21.3	32.4	35.9	8.4	0.6	1.4
Poland	37.1	33.7	3.4	9.6	10.6	11.5	2.0	0.0	0.1	28.5	31.4	34.0	5.9	0.0	0.2
Slovak Republic	45.9	39.6	6.3	10.4	14.3	12.2	1.8	...	1.0	26.1	36.0	30.8	4.4	...	2.6
Slovenia	42.8	40.4	2.4	7.6	14.7	14.0	2.5	...	1.6	18.9	36.3	34.7	6.2	...	3.9
Other Transition Countries 2/	34.3	30.0	4.2	7.1	7.5	10.5	1.9	0.5	4.0	23.2	27.3	34.7	7.5	1.7	11.5
Albania	19.8	15.8	4.0	1.5	4.0	6.2	2.7	0.3	1.2	9.3	25.1	38.9	17.2	1.9	7.6
Bulgaria	39.8	30.5	9.3	7.8	8.1	11.6	1.1	0.4	1.5	25.7	26.5	37.9	3.7	1.3	4.9
Croatia 2/	43.9	41.5	2.3	4.9	...	18.0	3.6	0.2	14.8	11.9	...	43.4	8.7	0.4	35.6
Romania	31.0	27.5	3.4	9.8	7.6	6.6	1.5	...	1.9	35.8	27.6	24.1	5.5	...	7.1
Russian Federation 4/	12.0	10.2	1.9	1.8	...	6.6	1.5	...	0.2	18.2	...	65.3	14.6	...	2.0
Ukraine	37.1	34.8	2.3	11.6	10.5	10.1	0.8	1.1	0.8	33.2	30.0	29.1	2.2	3.1	2.3
B. Selected EU Countries															
European Union	36.6	33.4	3.2	10.2	10.8	11.3	...	0.8	0.2	30.7	31.2	35.0	...	2.5	0.7
France	41.0	38.3	2.8	7.5	18.0	11.6	...	0.8	0.3	19.6	47.1	30.4	...	2.1	0.8
Germany	31.6	26.7	4.9	4.7	15.3	6.7	...	0.0	0.0	17.7	57.4	24.9	...	0.0	0.0
Italy	42.5	39.5	3.0	13.7	13.7	10.7	...	0.9	0.5	34.7	34.7	27.2	...	2.3	1.2
United Kingdom	36.1	33.7	2.4	13.5	6.2	11.5	...	2.4	0.0	40.2	18.5	34.2	...	7.2	0.0
Bulgaria: difference versus															
Advanced transition countries	1.0	-4.5	5.5	0.2	-4.5	-0.9	-0.6	0.3	1.0	4.1	-9.7	2.1	-1.0	0.9	3.5
Other transition countries	5.5	0.5	5.0	0.7	0.6	1.1	-0.8	-0.1	-2.6	2.5	-0.8	3.2	-3.7	-0.4	-6.6
European Union	3.1	-2.9	6.0	-2.4	-2.7	0.3	...	-0.5	1.3	-5.0	-4.7	2.9	...	-1.2	4.2

Sources: IMF, Government Finance Statistics; and International Financial Statistics.

1/ Data for Bulgaria are for 1999, thus avoiding the inclusion of the 1996-97 crisis period to facilitate comparison.

2/ Unweighted average of available data for countries shown; Russia is excluded from the average for other transition countries due to definitional differences.

3/ Consolidated central government.

4/ Federal government budget only.

Table 3. Overview of Standard VAT Rates (In percent) 1/

A. Selected Transition Countries		B. Selected EU Countries	
Advanced Transition Countries	21.5	Austria	20
Czech Republic	22	Belgium	21
Estonia 2/	18	Denmark 2/	25
Hungary	25	Finland	22
Poland	22	France	20.6
Slovak Republic	23	Germany	16
Slovenia	19	Greece	18
Other Transition Countries	20	Ireland	21
Albania 2/	20	Italy	19
Bulgaria 2/	20	Netherlands	17.5
Croatia 2/	22	Portugal	17
Romania	18	Spain	16
Russia	20	Sweden	25
Ukraine 2/	20	United Kingdom 2/	16.5
Unweighted average	20.8		19.6

Source: IMF, Fiscal Affairs Department.

1/ International comparisons are complicated by the existence in most countries of several other VAT rates applicable to specific groups of goods and services. In countries with multiple

VAT rates, the weighted average rate generally tends to be lower than the standard rate.

2/ Single rate is in effect.

Box 2. Bulgaria: Tax Rate Summary as of January 1, 2000

Tax	Rate	Remarks
VAT	20 percent	Tax-inclusive uniform rate, exporters zero-rated.
Excise tax	Various specific and ad valorem rates	Applies to alcoholic beverages, coffee, tea, cars, tobacco, certain fuels and gambling.
Profit tax	32 percent (effective average)	Standard rate if 25 percent (20 percent for private enterprises with profits under 50,000 leva); a 10 percent municipal tax also applies (deductible against the standard tax). Capital gains, dividends are taxed at 15 percent; insurance premia at 7 percent. Simplified lump-sum presumptive tax available for small enterprises in selected sectors.
Personal income tax (PIT)	Graduated scale with rates of 0, 20, 26, 32 and 40 percent	Bulgarian citizens: on worldwide income; foreign citizens on income derived from Bulgarian sources. Fringe benefits included at market value. Capital gains, interest from banks and state securities, income from mandatory pension, health schemes and from social security are exempt. 50 percent of PIT revenues accrues to municipalities.
Social security	45.7 percent (standard rate)	Consists of contributions for pensions, occupational accident and illness, maternity, unemployment and health insurance. Employer pays surcharge of 7 or 12 percent of special categories of labor. Self-employed persons pay contributions on declared income (in practice, the minimum wage).
Local taxes and fees	Various rates	Including taxes on real estate, inheritance, gifts, property transfer; and fees for kindergartens, administrative services, garbage collection, etc.
Import duties	Effective average of 3 percent	Rates vary from 0 to 35 percent (0 to 74 percent in the agricultural sector) in 25 bands.

The most important tax administration initiative for the medium term is the implementation of a Unified Revenue Agency (URA). Given the ongoing privatization efforts and the phasing out of loss-making SOE activities, Bulgaria now faces a dwindling number of economic actors that reliably pay taxes and social contributions. The typical taxpayer is now private, small-scale, and agile at both tax avoidance and evasion. Revenue collection is performed by various agencies facing diverging incentives, with limited coordination of their activities.¹⁰ The various information systems are still largely incompatible, leaving

¹⁰ Central and local government taxes are collected by the General Tax Department (GTD); social insurance contributions (including for health insurance) by the National Social Security Institute (NSSI), and customs duties by the General Customs Directorate.

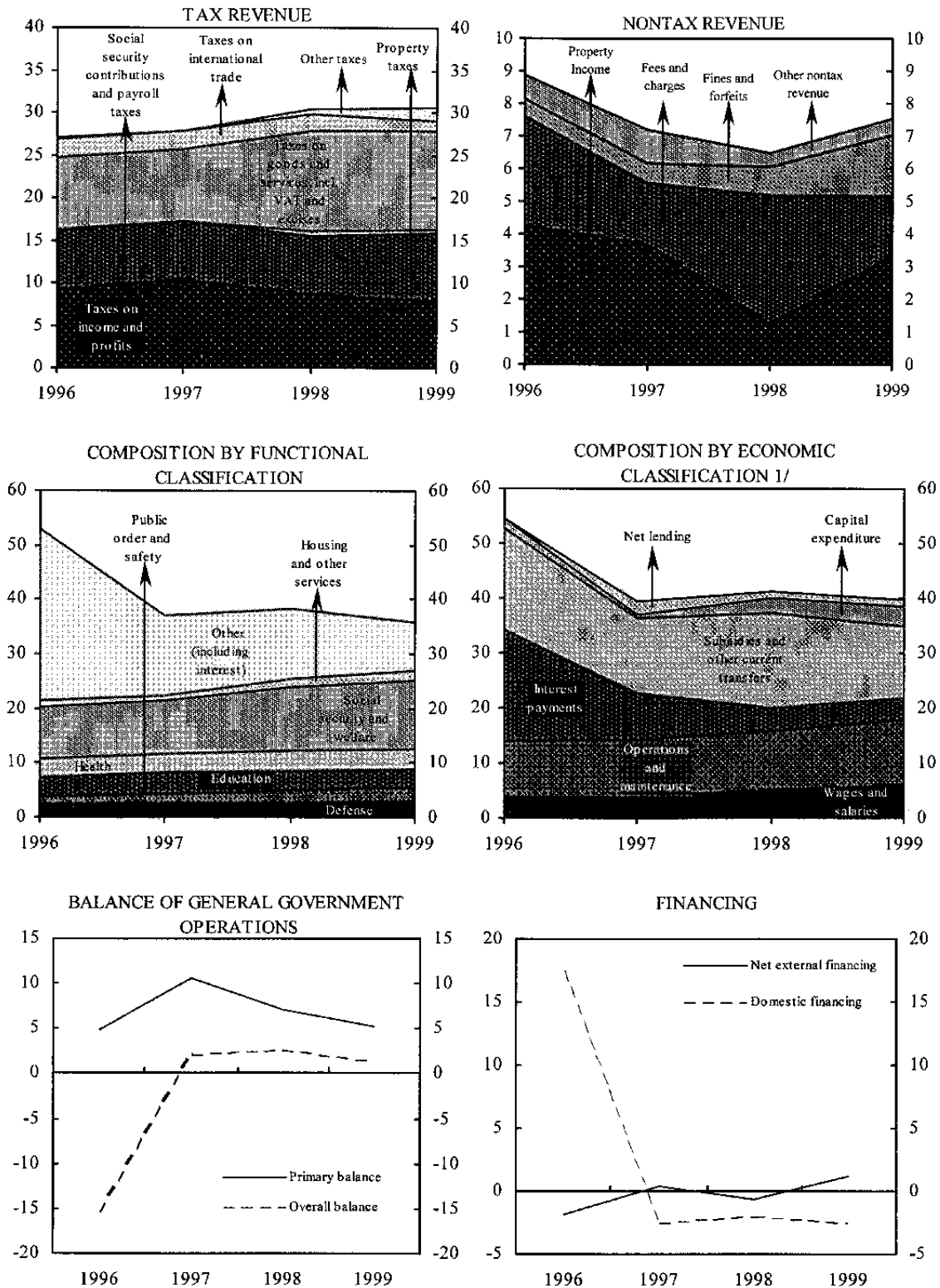
significant scope for evading taxes and social contributions, and overall revenue collection below potential. In addition, parallel revenue administrations impose a significant budgetary cost, and the reporting burden on taxpayers is excessive, further reducing compliance. The authorities seek to gradually integrate revenue collection (encompassing tax and nontax revenue for the central budget, and social insurance contributions) in the URA by the beginning of 2002. The URA will be instrumental in preparing for EU accession by enhancing revenue collection capacity and improving services to taxpayers, while substantially reducing the costs of compliance and tax fraud. Nevertheless, a number of challenges must still be met before the benefits of the URA can be realized. The most important of these challenges are:

- Harmonizing the bases of the personal income tax and social contributions, with at least a uniform definition of labor income
- Delivering noticeably lower compliance costs to taxpayers to maintain support
- Assigning the responsibility for the direct payment of short-term benefits for sickness and work injury to the NSSI (currently these are paid through employers).

B. Expenditures and Financing

The CBA marked the beginning of a sea change in expenditure management. Prior to 1997, ad hoc solutions to budgetary pressures—among them, recurrent large-scale offsetting of tax liabilities against energy sector subsidies, administrative control over cash spending, and the proliferation of extrabudgetary funds—became the norm with a deleterious effect on the efficiency of fiscal operations. Rapidly declining interest costs under the CBA created room for the restoration of unsustainably suppressed expenditures even as total expenditures continued to decline as a percentage of GDP (Figure 2). Fiscal reforms were launched to increase the efficiency and flexibility of budget implementation, and to limit budgetary responsibility for selected important nondiscretionary expenditure categories (Box 3). The government has also substantially reduced and restructured budgetary employment in conjunction with a decompression of the budgetary wage scale while avoiding an increase in the budgetary wage bill as a percent of GDP. Strong efforts to develop a treasury have enhanced the capacity to manage expenditure and implement expenditure reforms, although a considerable medium-term agenda still remains (see Box 4).

Figure 2. Bulgaria: General Government Operations, 1996-99 (In percent of GDP)



Box 3. Pension and Health Reforms¹

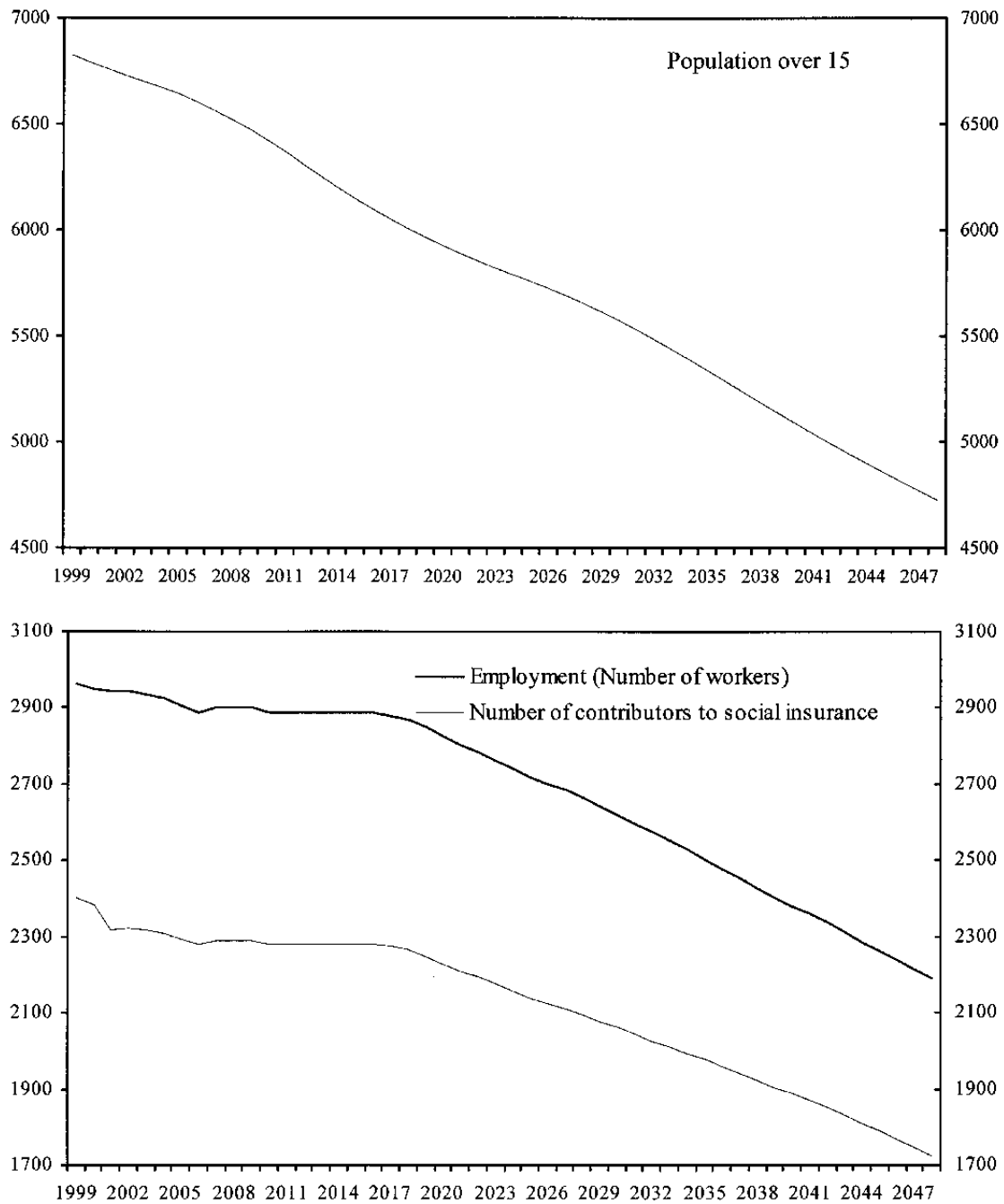
The pre-reform pension and health systems were on a financially unsustainable path. Bulgaria faces alarming demographic trends, notably a projected drop of at least a quarter in the number of working-age population, in employment, and in the number of contributors to social insurance during the next half century (Figure 3). But the social insurance system also accumulated a heavy burden in its past. Social insurance revenues were on a declining path despite very high contribution rates, reflecting weak compliance, especially in the emerging private sector (which accounted for two-thirds of economic activity, but provided only 10 percent of social insurance revenues in 1999). This, coupled with a surge in the share of pensioners in the population to 29 percent owing to an ill-advised policy of encouraging early retirements, had led to ballooning unfunded pension liabilities. The universal health care system suffered from a lack of investment and the consequent decline in the quality of services provided at an increasing cost to patients as side payments became the norm. The quality of health care varied with the patient's employer, location, and ability to provide side payments.

Ambitious reforms of the pension and health systems were initiated in 1999–2000. These reforms hold the promise of considerably reducing the role of government and restoring viability to social insurance schemes while improving their efficiency. Model calculations show that without reforms, the deficits of the pay-as-you-go (PAYG) pension scheme would have remained on a worsening trend, averaging 2 percent of GDP per annum (Figure 4). Pension reform restored the viability of the traditional PAYG pension scheme through a significant reduction in entitlements and a higher retirement age, and also added public and private fully funded components. The reform slashed the net present value of the cumulative deficits over the next 50 years from 160 percent to 24 percent of 1999 GDP. Health reform features the Health Insurance Fund (HIF), created in mid-1999 to centrally contract out health care provision to competing agencies, and finance it while controlling costs. The reform seeks to gradually develop an efficient mix of private and public health care while eliminating the system's bias against basic and preventive care, albeit at a higher explicit cost to individuals.

In the medium term, a number of important challenges remain. Up-front pension-related deficits are inevitable, with the working population having to finance current PAYG expenditures while also accumulating savings to fund their own future pensions. The principal challenges are to finalize the supervisory and regulatory framework for funded pension schemes; and in health care, avoid an escalation of costs, to finance hospital and specialized care without increasing contribution rates, and promote supplementary private health insurance.

¹ For a detailed survey, see Chapter II of Bulgaria: Selected Issues, IMF, March 2000.

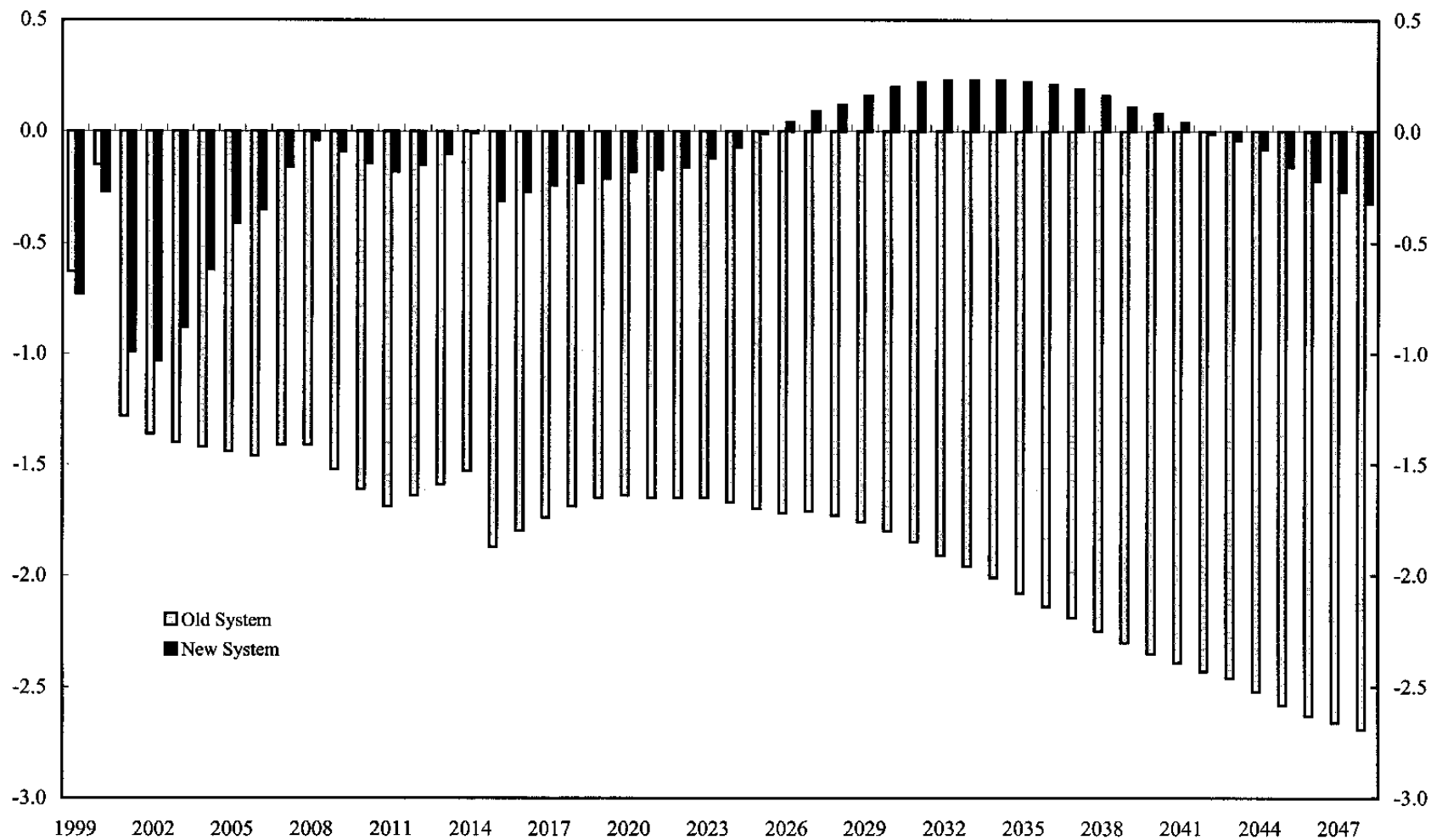
Figure 3. Bulgaria: Long-Term Forecasts of the National Social Security Institute, 1999-2047 (In thousands)



Source: NSSI, long-term projection model.

The difference between the number of workers and the number of contributors to social insurance in the bottom panel consists primarily of budgetary employees for whom contributions are paid by the budget directly.

Figure 4. Bulgaria: Projected Deficits of Pillar I With and Without Reform, 1999-2047
(In percent of GDP)



Source: NSSI, long-term projection model.

Box 4. Progress Toward Creating a Treasury

Preparatory steps during 1998-99 streamlined the budget execution framework. Among these steps were drastic reductions in the number of central extrabudgetary funds and accounts from over 1000 at end-1997 to 33 by January 1, 2000 and in the number of first-level budgetary spending units (accountable directly to Parliament under Bulgarian Law) from over 100 to 33. Work is at an advanced stage to create a modern budgetary information system and a new chart of accounts for the central government, thereby facilitating accrual accounting.

A key measure for efficient management of government resources is the consolidation of government funds into a single treasury account (STA) at the Bulgarian National Bank. The STA will have separate ledgers for each budgetary spending unit to facilitate ready disposal of funds when needed and provide up-to-date information on the government's liquidity position. Regular budgetary spending units will be able to perform authorized spending operations, subject to a monthly liquidity limit set by the Ministry of Finance. Funds in ledgers for spending units with a higher level of autonomy (including the NSSI, the HIF, and remaining extrabudgetary funds) will be available without liquidity limits, much like a regular bank account.

Much work remains to be done. Additional critical steps are still needed: (i) implementing accrual accounting and a modern budget information system; (ii) further streamlining central government by reducing the excessive number of separate lower-level spending units (in particular, cutting the number of second-level spending units in central government from about 1600 to perhaps a tenth of this number); (iii) reallocating central and subnational government expenditure responsibilities to better reflect local needs and priorities; and (iv) coordinating the various fiscal institution-building efforts underway.

The CBA also brought lower deficits and a turnaround in budget financing. Prudent fiscal policies, aided by a dramatic drop in domestic interest rates, have led to a restoration of budgetary balance. On the financing side, to ensure liquidity and bolster policy credibility, the government has built up a substantial balance in the FRA. As for domestic financing, it will be important as a medium-term consideration to maintain an adequate stock of T-bills outstanding to facilitate the deepening of financial markets and to devise a policy for the liquidity management aspect of net T-bill issues under the CBA (these affect bank liquidity if the proceeds are placed in the FRA).

Further progress is needed in lowering enterprise subsidies and in reforming social assistance. Continued progress in enterprise structural reform and streamlining in-kind benefits provided through employers would allow substantial reductions in subsidies to SOEs, which could in part be redirected to targeted social assistance programs. Improved targeting of subsidies to consumers and budgetary social assistance schemes (which accounted for expenditures of 2.1 percent of GDP in 1999 and covered some 1 million households, about a third of the total) would allow a substantial increase in the support of the truly needy without raising budgetary costs.

EU and NATO accession will require additional spending. The principal areas with expenditure implications associated with EU accession are enhancing public infrastructure, environmental remediation projects, institution-building, and legal harmonization. The 2000-04 NATO Membership Action Plan envisages the organizational strengthening and development of the Ministry of Defense and the armed forces. The plan defines 89 Partnership Goals focusing on developing the capacity for interoperability and for implementing tasks related to collective defense and participation in non-war operations. Despite expected medium-term savings stemming from defense sector reform, EU and NATO accession costs could be tentatively estimated to imply additional annual general government expenditures of at least 1 percent of GDP in the coming years. A considerable expected increase in pre-accession EU grants will help limit the effect on the deficit.

IV. AN ILLUSTRATIVE MEDIUM-TERM FISCAL FRAMEWORK FOR BULGARIA

This section presents illustrative calculations for a medium-term fiscal framework for Bulgaria. The previous section described qualitatively the government's plans for the medium term. This section assesses their appropriateness by incorporating them into a quantitative medium-term fiscal framework. The objective is to present a medium-term fiscal scenario consistent with that agreed by the authorities and the International Monetary Fund. The scenario needs to absorb real and interest rate shocks, possibly combined with a lack of market access; increase the flexibility of fiscal policy to ensure that it can stabilize domestic demand without undermining the credibility of the CBA; and reduce the share of interest expenditure to create the necessary room for tax reduction and primary expenditure in high priority areas. The illustrative scenario presented here reflects the objectives discussed previously: a relatively rapid reduction of a broadly defined net debt ratio to create room for discretion in fiscal policy, aided by contingency mechanisms, the maintenance of an adequate balance in the fiscal reserve account, and the needed institutional reforms.

The medium-term scenario for Bulgaria also meets the general criteria set out in Section II. The analysis covers the general government, including subnational governments and extrabudgetary funds. Explicit contingent and implicit liabilities, as well as net pension debt are added to debt in present value terms, using conservative assumptions such as the valuation of guarantees at face value. The foreign (euro) interest rate is assumed to be constant, with the value taken from the latest euro yield curve at the average maturity of new foreign debt. The risk premium converges to the average of leading transition economies as the net debt-to-GDP ratio falls. It is assumed that the CBA continues, and economic growth averages around 5 percent. For a detailed summary of the assumptions, see Table 4.¹¹

The solvency objectives are defined in terms of an augmented net debt-to-GDP ratio. This definition represents a departure from the approach suggested by Buitier (1989), who

¹¹ The scenario presented here is built on detailed illustrative multiyear budget projections, which are available from the authors upon request.

expresses the solvency constraint in terms of the government's broadly defined net worth. The augmented net public debt definition encompasses publicly contracted and guaranteed debt at face value, the net present value of future unfunded deficits of the pension system, the balance of the fiscal reserve account, and a conservative estimate of future privatization receipts through 2008. The target level of 54 percent comfortably satisfies the relevant Maastricht criterion, and also takes into account liquidity considerations (the amortization schedule of existing public debt and planned privatization receipts). The liquid assets of the currency board are not taken into account, as they are matched by liquid liabilities (currency issued by the currency board). Similarly, the liquid deposits of the Banking Department with the currency board are also excluded as an asset necessary to act as the lender of last resort, a core government function.

The central scenario presents a fiscal path leading to a comfortable fiscal position by 2005. Figure 5 shows the net augmented debt-to-GDP ratio (dropping to 54 percent of GDP by end-2005), the primary balance excluding seigniorage under the central scenario, together with the value of the primary balance that would stabilize the net augmented debt-to-GDP ratio in each period at its beginning-of-period level. The difference between the latter two is the primary gap (Buitier, 1997). Its negative sign indicates the extent to which the primary position in each period could be relaxed while still maintaining the net augmented debt-to-GDP ratio at its beginning-of-period level. The scenario is characterized by a declining interest burden, and a steady fall in the share of current noninterest while the share of public investments is increasing (Figure 6, and Table 4).

Table 4: Medium-Term Fiscal Framework 2000-05: Main Assumptions and Indicators

	Period average	Beginning of period	End of Period
GDP growth (in percent)	5.0	4.0	5.5
Seigniorage (in percent of GDP)	0.6	0.5	0.6
Marginal rate of borrowing (non-IFI, Euro, ppa)	7.8	8.7	7.3
Augmented net public debt-to-GDP ratio (in percent)	75.0	103.7	54.0
Fiscal reserve account (in percent of GDP)	7.3	10.5	5.1
Overall budget deficit (in percent of GDP)	1.2	1.5	0.8
Primary surplus (excluding seigniorage, in percent of GDP)	2.4	2.5	2.1
Primary gap (in percent of GDP) 1/	-2.6	-2.8	-2.4
Revenue (in percent of GDP)	38.3	40.5	37.6
Expenditure (in percent of GDP)	39.4	42.0	38.5
Interest cost (in percent of GDP)	4.1	4.6	3.5
Current noninterest expenditure (in percent of GDP)	30.3	32.3	29.5
Public investment (in percent of GDP)	4.3	3.8	4.9

1/ The difference between the primary balance that would stabilize the net augmented debt-to-GDP ratio at its beginning-of-year level, and the primary balance in the central scenario. expenditure

Figure 5. Bulgaria: Illustrative Central Medium-Term Scenario

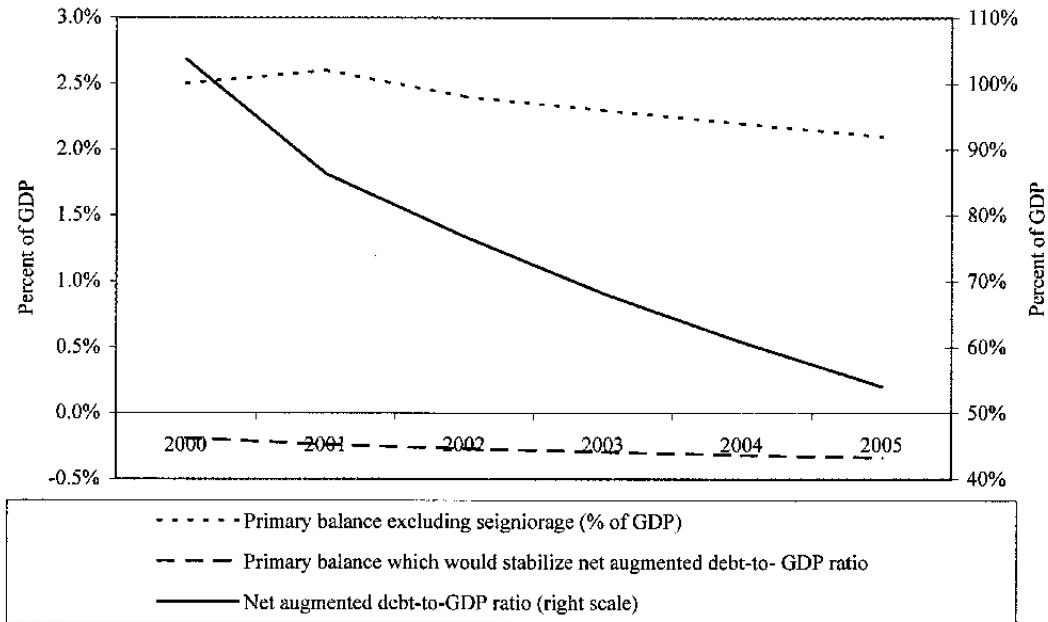
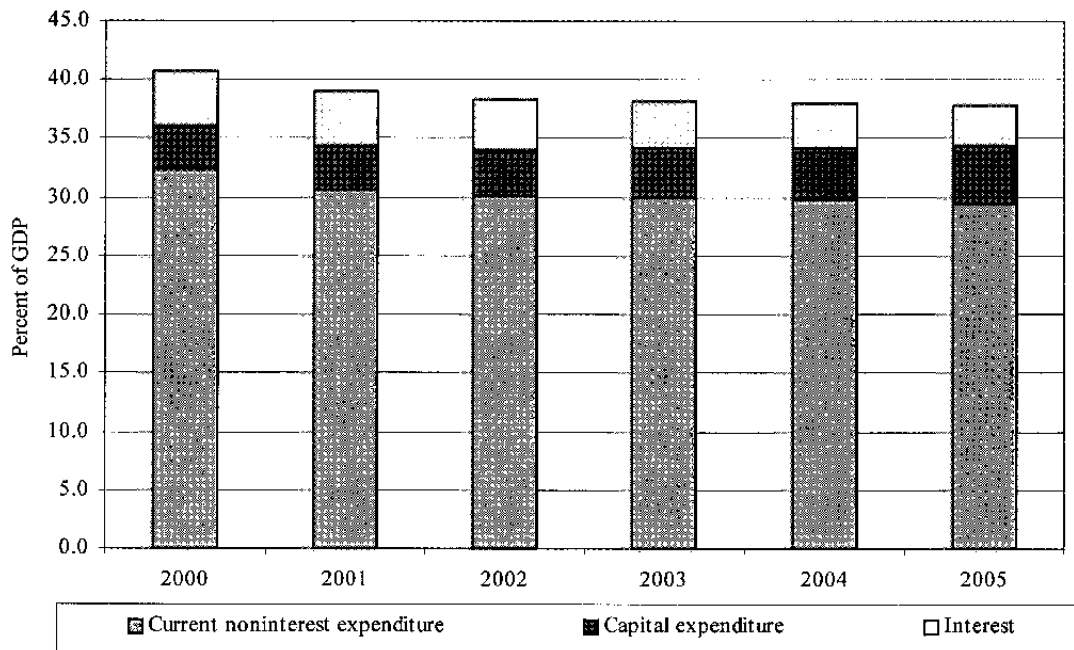


Figure 6. Bulgaria: Expenditure Structure in Illustrative Central Medium-Term Scenario



Source: Bulgarian authorities, and Staff calculations.

Several important policy measures underpin the central scenario (Table 5). It is not a no-policy-change scenario, which would not be credible, or even feasible. Instead, the central scenario incorporates the stated medium-term policy intentions of the government. One of the policy requirements on the revenue side is a continuation of the government's policy of gradually reducing tax rates, particularly the social contribution rate. Ongoing tax administration reforms and improved incentives for the incorporation of informal economic activities into the formal sector are assumed to result in better compliance and a broader tax base, offsetting the associated revenue losses. On the expenditure side, the main measures are pension and health reforms, a streamlining of public administration lowering budgetary employment by 1.5 percent annually while allowing an annual average increase in real budgetary wages of 2 percent, and a reform of the military in line with NATO commitments. At the same time, poverty-alleviating social expenditures and infrastructure maintenance spending grow substantially, the latter in line with increased public investment.

Table 5. Medium-Term Fiscal Framework 2000-05: Key Revenue and Expenditure Measures

Measures	Impact on the budget 1/
Revenues	
Tax cuts in 2001	1.5 percent of GDP decline in tax revenue in 2001
(i) Substantial reduction in income tax rates, focused on lowest-earning people	
(ii) 5 percentage points reduction in the average profit tax rate	
(iii) 3 percentage points reduction in social security contribution rates	
Expenditures	
Costs of EU and NATO membership preparations	Increase reaching 1 percent of GDP per annum by the end of the period
Increased public investment	Increase reaching 1 percent of GDP per annum by the end of the period
Reduction of subsidies	Increase reaching 1 percent of GDP per annum by the end of the period
Increase in expenditure on targeted social programs	Increase reaching 1 percent of GDP per annum by the end of the period
Pension reform	14 percent of GDP decline in the NPV of pension system deficits by the end of the period
Health care reform	Expenditure contained at level in central scenario
Lowering budgetary employment by 1.5 percent annually and increasing public sector real wages by 2 percent annually	Decline reaching 0.7 percent of GDP in public sector wage costs annually by the end of the period
Military reform	Decline reaching 0.7 percent of GDP in public sector wage costs annually by the end of the period

1/ The impact of these measures in the central scenario is measured as a deviation from a no-policy-change scenario.

The resulting position in 2005 would open up substantial room for maneuver. From 2005 onward, a primary deficit of ½ percent of GDP would allow a stabilization of the augmented net debt ratio (compared with a projected primary surplus of 2½ percent). With the gross debt ratio as defined in the Maastricht Treaty comfortably below the 60 percent limit by 2005 (by coincidence, also at 54 percent of GDP in 2005), this room can be used for a combination of (i) discretionary fiscal policy, to stabilize domestic demand without undermining the CBA or breaching the budget deficit limit under the Maastricht rules; (ii) additional tax reduction; (iii) priority expenditure programs; or (iv) a further reduction of the augmented net debt-to-GDP ratio.

The robustness of the fiscal strategy to shocks is assessed by stress testing. The assumed shocks are (i) a protracted recession, i.e., an annual GDP decline of 2 percent for three years; and (ii) a lasting increase of 300 basis points in LIBOR¹² combined with a cut off from international financial markets for two years. The question posed in the stress tests is whether plausible contingency mechanisms could keep the proposed fiscal strategy viable in the presence of one (or more) of these shocks. Two contingency mechanisms—a 10 percent sequestration of nonpension and nonwage primary expenditures, and the postponement of selected new investments in case of a revenue or financing shortfall—are used in order to reduce expenditure, and through this the speed with which the FRA is depleted. The contingency mechanisms are invoked when the balance of the FRA begins to decline. In the first case—the recession shock—the fiscal position deteriorates rapidly owing to the decline in revenue. The FRA is used to finance the increased deficit while the contingency mechanisms are invoked to limit the deterioration in the fiscal position. As the results of the stress test show (see Figure 7), Bulgaria can follow this strategy for two years without any additional borrowing. In the second case—the interest rate shock—the FRA is used to repay maturing foreign loans. The contingency mechanisms are invoked to limit the speed with which the fiscal reserve account is depleted, as the country responds to its liquidity constraint (see Figure 8). The results confirm the robustness of the fiscal strategy: in the model the country is able to survive the interest rate shock, and for two years the massive real shock, by relying on the contingency mechanisms to limit the deficit and on the FRA to finance the deficit and to repay maturing foreign debt. Even if such major shocks were to materialize, the combined use of the contingency mechanisms and of liquid reserves would provide ample time to devise and implement an orderly fiscal adjustment strategy.

¹² The size and duration of the assumed interest rate shock are based on historical experience: no interest rate shock lasted for longer than two years in the past 15 years, and the 300 basis point increase would raise the LIBOR rate to the highest level observed during the 1990s.

Figure 7. Bulgaria: Impact of the Real Shock

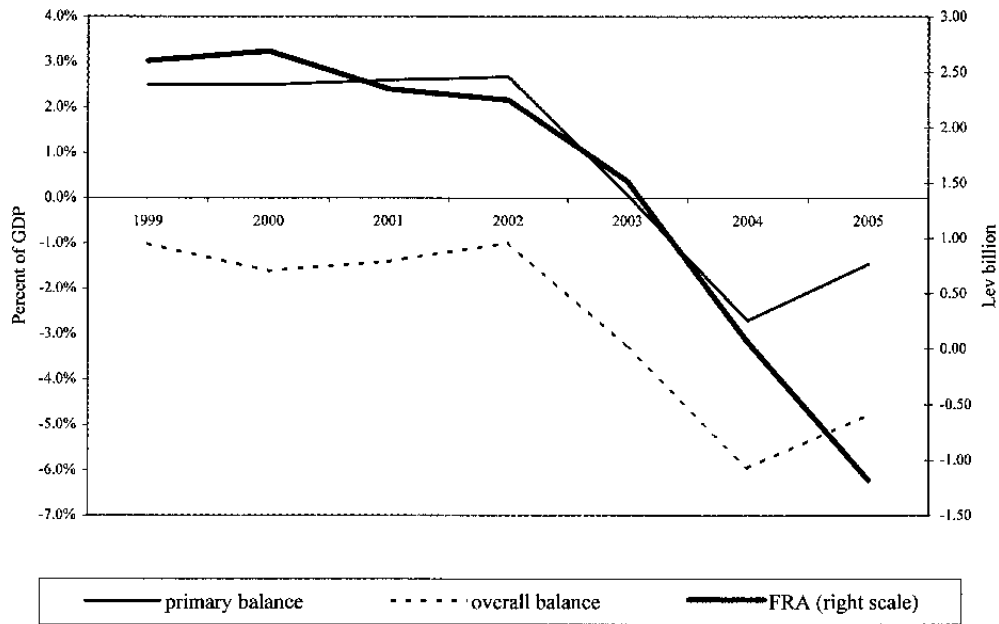
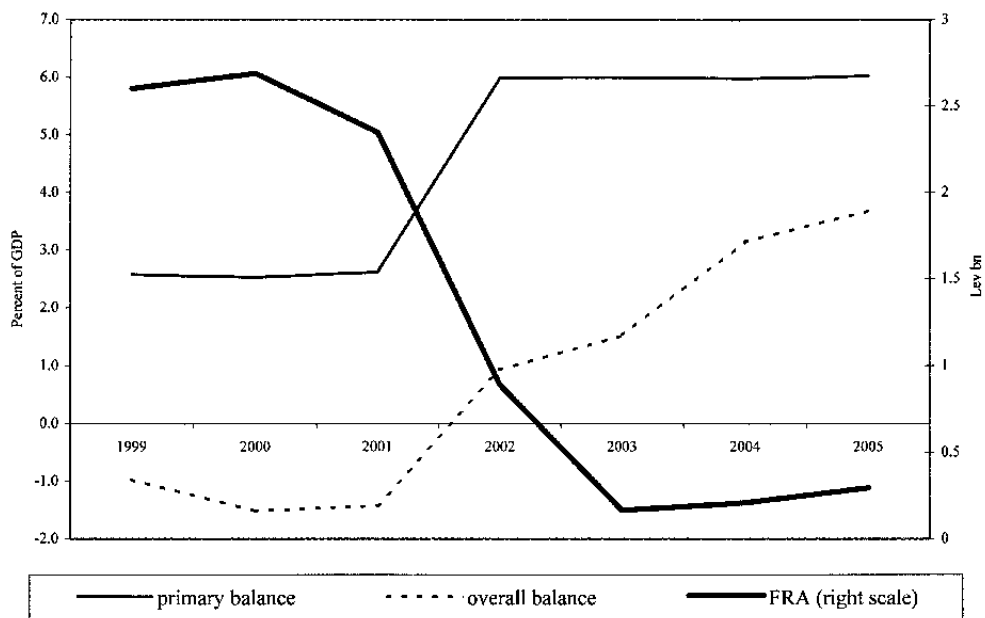


Figure 8. Bulgaria: Interest Rate Shock and No Access to International Capital Markets



Source: Bulgarian authorities, and Staff calculations.

To be operational, the proposed illustrative medium-term fiscal framework would need to conform with the annual budget preparation process, transparently representing all interests and clarifying trade-offs. Starting early each year with a well-defined agenda and a top-down overall spending envelope set by the Ministry of Finance can ensure that macroeconomic constraints are respected. Complementing this by a bottom-up compilation of proposals for budgetary resource use allows all interest groups to stake a claim on budgetary resources subject to the overall budget constraint. In a multiyear setting, the priorities among competing claims need to be sorted out, requiring a consensus built in the political arena and within government around the accepted spending pattern. The early involvement of the legislative branch would ensure that the overall budget constraint is observed. Such involvement could take the form of approving overall spending guidelines, with new spending introduced only if other expenditure is cut. Similarly, different levels of governments need to be involved and fully informed at all stages of the process. Public investment merits special attention because of the trade-off between developing infrastructure and providing public goods (e.g., environmental remediation), and owing to its prominent role in spending adjustments. The government could also usefully identify areas in which it could not outperform the market in the efficiency of investment (e.g., power generation, telecommunications, transportation), and proceed with divestment accordingly.

The conclusion is that a medium-term fiscal framework can effectively anchor annual budgets and help reach policy objectives in Bulgaria and in other transition economies. It can ensure a consistent fiscal stance throughout the business and political cycles, and facilitate finding optimal intertemporal trade-offs, which could be lost in the annual budget formulation process. Such a framework can incorporate not only a flow analysis of revenues and expenditures but also cover stocks, including the FRA, outstanding government debt, and contingent liabilities. The illustrative calculations presented in this paper apply the principles outlined in Section II. The resulting fiscal path is consistent with the Bulgarian government's medium-term objectives, notably NATO and EU accession, rapid structural reform and transferring resources to the private sector. A medium-term fiscal framework can also lead to budget consolidation and a marked increase in the capacity to implement fiscal policy flexibly.

REFERENCES

- Bogetic, Z., and A. L. Hillman, editors, 1995, *Financing Government in Transition: Bulgaria*. World Bank Regional and Sectoral Studies, Washington, D.C.
- Brixi, H. P., S. Shatalov, and L. Zlaoui, 2000, *Managing Financial Risk in Bulgaria Background Study for the 2000 Country Economic Strategy for Bulgaria* World Bank
- Buiter, W. H., 1989, *Principles of Budgetary and Financial Policy*, Harvester-Wheatsheaf, New York, 1989, p. 461
- , 1997, *Aspects of Fiscal Performance in Some Transition Economies Under Fund-Supported Programs*, IMF Working Paper WP/97/31, Washington, D.C.
- Chalk, N. and R. Hemming, 2000, *Assessing fiscal sustainability in theory and practice*, IMF Working Paper WP/00/81, Washington, D.C.
- Chand, S. K. and A. Jaeger, 1996, *Aging Population and Public Pension Schemes*, IMF Occasional Paper No. 147. Washington, D.C.
- Corsetti, G., 1990, *Testing for solvency of the public sector: an application to Italy*, Discussion Paper No. 617, Economic Growth Center, Yale University
- Christou, C. and C. Daseking: *Balancing Fiscal Priorities—Challenges for the Future* Chapter III of forthcoming Occasional Paper, IMF 2001, Washington, D.C.
- EBRD, 2000, *Transition Report 2000*, European Bank for Reconstruction and Development, London
- Gray, S. and D. Woo, 2000, *Reconsidering External Financing of Domestic Budget Deficits: Debunking Some Received Wisdom*, IMF, PDP/00/8. Washington, D.C.
- Hemming, R. and M. Petrie ,2000, *A framework for assessing fiscal vulnerability*, IMF Working Paper WP/00/52, Washington, D.C.
- Horváth, B., 2000,: “Pension and Health Reforms in Bulgaria—Restoring Sustainability”, Chapter II in *International Monetary Fund: Selected Issues and Statistical Appendix for the 1999 Article IV Consultation with Bulgaria*. Washington, D.C.
- Ministry of Finance, 2000, *Concept Paper for the Creation of a Unified Revenue Agency*, Document adopted by the Council of Ministers of the Republic of Bulgaria on June 29, 2000. Sofia

National Statistical Institute, 1998, *Report on Survey-Based Research of the Hidden Economy*, Sofia, (in Bulgarian)

Potter, B. H., J. Diamond, 1999, *Guidelines for Public Expenditure Management*, IMF, Washington D.C.