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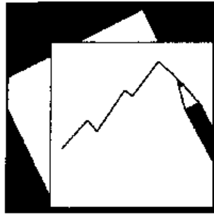

IMF Working Paper

Fiscal Sustainability and Resource Mobilization in the Dominican Republic

Oscar Melhado

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Fiscal Sustainability and Resource Mobilization in the Dominican Republic

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Abstract

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This paper examines fiscal sustainability and resource mobilization in the Dominican Republic. The fiscal position appears to be sustainable, if resource mobilization is strengthened. If expenditure continues to rise (relative to GDP), without any further fiscal adjustment, indicators of sustainability would begin to deteriorate. It would be important to maintain an appropriate mix between additional financing and fiscal adjustment, in order that the future debt burden does not rise excessively.

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I. Introduction

This paper examines fiscal sustainability and resource mobilization in the Dominican Republic.[2] An assessment of fiscal sustainability is motivated by pressures for increased fiscal spending and an upward trend in public external debt, albeit from a low level. Given the expected increase in spending pressures, policymakers should examine strengthened resource mobilization as an option for ensuring continued fiscal sustainability. Undertaking the government's medium-term expenditure program without the appropriate revenue measures would risk fiscal sustainability. **This paper shows that the fiscal position is sustainable, if resource mobilization is strengthened, so that the future debt burden does not rise excessively.**

As the Dominican Republic slipped into a situation of severe pressures in the foreign exchange market in late 2002, a key issue that arose was the role of fiscal policy to stabilize the economy and to foster growth in the medium term. Against this background, **Section II of this paper investigates the sustainability of the government's fiscal program** or, put differently, what are the conditions under which the fiscal program is sustainable? This implies that the total-public-debt-to-GDP ratio should tend to stabilize over the medium term at a level consistent with the government's fiscal priorities and macroeconomic stability. An explosive behavior of debt would be unsustainable. The section evaluates different government expenditure scenarios, indicating the needed adjustment and the behavior of public debt. An extension of the analysis allows increasing public debt and stabilizing the debt-to-GDP ratio at a higher level. Finally, the sensitivity of the projected path of public debt to a number of shocks is tested. Considering the possible fiscal reform agenda and options for external and domestic financing, **Section III gauges the medium-term capacity of the country to raise additional resources and Section IV presents the conclusions.**

In the last 10 years, the authorities have shown a steadfast determination to maintain fiscal discipline. After running large fiscal deficits during the 1980s (averaging almost 6 percent of GDP a year),[3] the fiscal position shifted from a deficit of about 7 percent of GDP in 1989 to balance in 1992. During 1995–2001, the deficit averaged 1.7 percent of GDP. Notwithstanding past moderate fiscal deficits, there are still important issues to consider in assessing fiscal sustainability, which is a more forward-looking concept. Over the next five to ten years, there will be increasing pressures on government expenditure arising from, among other items, the cost of social security reform, the infrastructure investment required to enhance productivity and external competitiveness, government involvement in the solution to electricity sector problems, and poverty alleviation programs. These pressures will occur in the context of expected declines in trade taxes owing to commitments to eliminate a foreign exchange commission (with a yield of about 1 percent of GDP a year).

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[2] This paper is generally based on information through end-2001.

[3] The fiscal deficit is measured as revenue plus grants less expenditures, and covers the consolidated public sector (including quasi-fiscal losses of the central bank).

Therefore, public finances will need to be managed adequately in order to maintain fiscal sustainability.

Fiscal impulse analysis shows a generally conservative fiscal stance (Appendix I). The quasi-fiscal deficit of the central bank has hovered around ½ percent of GDP, largely reflecting operational costs and interest paid on central bank securities and on external debt.[4] The net external financing of the central government's fiscal deficit averaged about ½ percent of GDP a year or less during 1990–2001, but rose to 2.6 percent of GDP in 2001.[5]

Public external debt is relatively low—at end-2001 it stood at US$4.2 billion or 19.5 percent of GDP, well below the average of developing countries and Western Hemisphere countries of about 40 percent of GDP. In addition, debt indicators show a controllable debt situation at end-2001—the stock of public external debt was equivalent to about half of annual exports of goods and services and 63 percent of broad money. Creditors comprise bilaterals (39.7 percent of total debt), multilaterals (32.3 percent of total debt), and commercial banks and private suppliers (28 percent of total debt). The only relatively weak indicator is the ratio of official gross international reserves to short-term debt (on a residual maturity basis), which at 96 percent at end-2001,[6] was among the lowest in the region.

Notwithstanding the low level of public external debt, the average maturity is short and debt service, under the current debt profile, is expected to rise to about US$825 million in 2002 (3.6 percent of GDP compared with 2.4 percent of GDP in 2000) and to peak at about US$1.5 billion in 2006 (4.9 percent of GDP), reflecting a US$500 million bullet payment due that year on the recent sovereign bond issue.[7] The lumpiness of the debt service schedule has prompted the authorities to gauge alternatives to improve the debt profile, including the placement of a new sovereign bond. The external debt profile could be improved and domestic debt management could be enhanced. Given the recent history of sound macroeconomic management, the availability of external financing, at reasonable costs, has increased.

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[4] The central bank is in the process of reducing the quasi-fiscal deficit by divesting itself of assets and reducing operational costs. For the purpose of the fiscal sustainability exercise, quasi-fiscal losses are assumed to be zero over the medium term.

[5] Reflecting the issuance of a US$500 million sovereign bond (2.3 percent of GDP). The bond proceeds have been used according to an investment plan, comprising mainly infrastructure projects.

[6] This ratio has continued to deteriorate, decreasing to 46 percent at end-2002.

[7] The authorities are taking steps to modernize debt management, with the aim of improving the debt-service profile and reducing financing costs. One of the options being considered, in view of recent upgrades to the sovereign credit rating, is the refinancing of more expensive short-term debt with less expensive medium- and long-term debt.

Table 1. Developing Countries: Ratio of External Debt to GDP 1/

	1997	1998	1999	2000	2001
Developing Countries	38.6	43.2	44.5	40.6	40.3
Africa	65.4	67.5	67.1	63.6	62.5
Sub-Sahara	66.4	69.6	70.1	67.6	68.1
Developing Asia	31.9	36.0	33.5	30.1	29.6
Excl. China and India	57.5	81.5	70.1	63.6	63.0
Middle East	54.9	62.8	62.2	59.1	60.7
Western Hemisphere	33.6	37.8	44.3	39.3	39.6
Dominican Republic	**23.6**	**22.1**	**21.0**	**18.6**	**19.5**

Source: IMF. World Economic Outlook, September 2002.

1/Debt at year-end in percent of GDP in year indicated.

II. Fiscal Sustainability

Key factors to consider in assessing fiscal sustainability are the government debt and debt dynamics, the tax structure, and the government expenditure program, including the fiscal implications of social security reform and the resources needed to finance poverty reduction and capital spending programs.

The current stock of public debt, including external and domestic, was estimated at 23.8 percent of GDP at end-2001 (Appendix II). Domestic debt was estimated at 4.3 percent of GDP at end-2001, but could be underestimated because of incomplete data on domestic arrears.[8] Pre-1996 domestic arrears are to be repaid with proceeds from the issuance of RD$5 billion of government bonds; arrears accumulated since 1996 have not yet been accurately recorded.[9] The estimation of arrears is important for the sustainability exercise, since the clearance of arrears will represent additional pressures.

If fiscal discipline is maintained, the debt dynamics of the country appear to be manageable. In addition to a low public debt-to-GDP ratio, interest payments stood at 2.3 percent of exports of goods and services and total debt services at 7.2 percent of exports of goods and services at end-2001.

Tax collections will be affected by the planned reduction of the foreign exchange commission. Commitments under international trade agreements (WTO, free-trade

[8] Domestic arrears have resulted from financing problems in the electricity sector and inadequate debt management, particularly the lack of control in the acquisition of debt by some public sector units.

[9] A commission, overseen by the secretary of finance, was appointed to estimate post-1996 arrears.

agreements with Central America and CARICOM, and possibly with United States) are expected to be revenue neutral.[10] Over the medium term, it is expected that trade taxes, comprising import taxes and the foreign exchange commission, will decline from 4 percent of GDP in 2000 to under 3 percent by 2005. Thus, in order to protect fiscal sustainability, either additional revenue sources will need to be found, or selected expenditures will need to be cut.

The government's medium-term expenditure program includes the launching of a social sector strategy to reduce poverty and a capital spending program to improve basic infrastructure. Public social spending, at 6.3 percent of GDP, is among the lowest in Latin America (with a regional average of 12.3 percent of GDP).[11] The government's poverty reduction strategy aims to increase social spending by 2 percent of GDP over the medium term.[12] The next two years would center on rationalizing existing expenditures, particularly through switching them away from inefficient programs. Beginning in the third year, social spending is to be augmented by ½ percent of GDP a year, until it reaches an additional 2 percent of GDP in 2006.

The fiscal costs of social security reform, including the transition to the new pension system and the healthcare reform, are expected to rise to about 1.2 percent of GDP by 2005; and remain stable thereafter (Appendix III). Congress approved a law to reform the social security system in May 2001. The reform envisages the full financing of pensions to independent low-wage workers, in addition to poor, handicapped, and unemployed persons; a partial financing of independent workers earning above the minimum wage; and partial financing of the contribution for public workers (currently the government does not make any contribution). In contrast to other Latin American countries, the fiscal implications of paying the pensions of current retirees are not substantial, since the affiliation rates to the system and pension payments have traditionally been low. The estimate of 1.2 percent of GDP assumes some rationing of benefits; full coverage as intended in the law would imply a much higher cost.[13]

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[10] The import elasticity is assumed to be unitary.

[11] Public social spending includes social security and welfare. It should be noted that cross-country comparisons of social spending are notoriously difficult, mainly because of differing definitions of social spending from country to country.

[12] According to the World Bank the country needs to increase social spending substantially. See "Principles, priorities, and actions to reduce poverty" in World Bank (2001) .

[13] Based on back-of-the-envelope calculations, the cost of full coverage could be as much as 4 percent of GDP. However, there is considerable uncertainty surrounding this estimate as it depends on assumptions regarding the amount of "solidarity" pensions (see Appendix III) and the amount of additional investment needed to harmonize the quality of public and private healthcare.

A. Assessing Fiscal Sustainability

Fiscal sustainability can be defined as the fiscal position that maintains debt at a level that can be serviced without an undue burden of adjustment. [14] For the purpose of this Section, fiscal sustainability is operationalized by determining the minimum primary surplus that maintains the total-debt-to-GDP ratio constant. However, different scenarios are evaluated, allowing the total-debt-to-GDP ratio to increase over the medium term (given its low starting point).

Table 2 shows the minimum primary balance for different combinations of real GDP growth rates and real interest rates on public sector debt, assuming 2001 as the base year. The values are obtained by using the following formula:

Primary balance/GDP = (real interest rate-real GDP growth rate) * total debt-to-GDP ratio

Table 2. Minimum Primary Balance

Real interest on public debt	Real GDP growth rate					
	1.0	2.0	3.0	4.0	5.0	6.0
5.0	1.0	0.7	0.5	0.2	0.0	-0.2
6.0	1.2	1.0	0.7	0.5	0.2	0.0
7.0	1.4	1.2	1.0	0.7	0.5	0.2
8.0	1.7	1.4	1.2	1.0	0.7	0.5
9.0	1.9	1.7	1.4	1.2	1.0	0.7
10.0	2.1	1.9	1.7	1.4	1.2	1.0

Source: Fund staff estimates.

[14] An extension of the current analysis would be to analyze the net present value (NPV) of the debt profile, i.e., the discounted value (cost) of all future debt-service obligations. In this case, applying a discount rate of 9½ percent (equal to the rate on the September 2001 sovereign bond issue) would result in an NPV smaller than the face value, since a proportion of the debt stock is at less-than-market terms. The NPV concept could be useful in evaluating different medium-term scenarios, particularly if the various debt-service paths cross each other at multiple points.

The baseline scenario assumes an average real GDP growth of 5.5 percent a year over the medium term and a real interest rate on public debt of 7.5 percent.[15] From the table above it can be seen that the public sector must generate an annual primary surplus of 0.7 percent of GDP to maintain constant the debt-to-GDP ratio beyond 2001 (compared with a historical average of -1.3 percent of GDP a year during 1997–2001).

The medium-term fiscal program of the government includes an expected reduction of international trade taxes from 3.6 percent of GDP in 2002 to 2.7 percent of GDP by 2006, reflecting the elimination of the foreign exchange commission in 2003. On the expenditure side, the fiscal program incorporates the authorities' plans for social security reform, the strengthening of the poverty reduction strategy, and increased capital outlays to improve basic infrastructure. Table 3 presents the medium-term baseline scenario for the central government fiscal accounts.

Table 3. Summary Operations of the Central Government
(In percent of GDP)

	2002	2003	2004	2005	2006
Total revenue	**16.3**	**15.4**	**15.4**	**15.4**	**15.4**
Current revenue	16.2	15.3	15.3	15.3	15.3
Tax revenue	15.5	14.6	14.6	14.6	14.6
Income and profits	4.0	4.0	4.0	4.0	4.0
Property	0.3	0.3	0.3	0.3	0.3
Goods and services	7.4	7.4	7.4	7.4	7.4
International trade	3.6	2.7	2.7	2.7	2.7
Other taxes	0.3	0.3	0.3	0.3	0.3
Nontax revenue	0.7	0.7	0.7	0.7	0.7
Capital revenue	0.1	0.1	0.1	0.1	0.1
Grants	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
Total expenditure	**18.5**	**17.2**	**17.6**	**17.9**	**18.2**
Current expenditure	12.8	12.4	12.7	12.5	12.3
Wages and salaries	6.1	5.5	5.3	5.0	4.8
Goods and services	1.4	1.7	1.7	1.7	1.7
Interest	1.5	1.5	1.6	1.6	1.6
Current transfers	3.6	3.4	3.9	4.0	4.0
Of which:					
Social security reform	0.0	0.6	1.1	1.2	1.2
Other	0.3	0.2	0.2	0.2	0.2
Capital expenditure	5.2	4.8	4.9	5.4	5.9
Fixed investment	3.2	2.3	1.9	1.9	1.9
Of which:					
Pan American games	0.1	0.2	0.0	0.0	0.0
Capital transfers	1.9	1.8	1.8	1.8	1.8
Other	0.2	0.2	0.2	0.2	0.2
Social strategy	0.0	0.5	1.0	1.5	2.0
Primary balance	**-0.6**	**-0.2**	**-0.6**	**-0.8**	**-1.0**
Overall balance	**-2.1**	**-1.6**	**-2.1**	**-2.4**	**-2.7**

Source: Projections.

[15] The growth assumption is based on the potential growth estimates and interest rates for the external debt are based on WEO projections. The real interest rate on public debt is a weighted average of a real interest rate on external debt of 6.5 percent and a real interest rate on domestic debt of 12 percent.

Based on the authorities' stated expenditure program, indicators of debt sustainability would deteriorate over the medium term, unless the external environment improves beyond the framework envisaged in this paper. Debt indicators reflecting the government expenditure program, without undertaking any further fiscal adjustment, are presented in Table 4.

Table 4. Indicators of Public Debt Sustainability 1/

	2000	2001	2002	2003	2004–06 1/
Exports of goods and services (in percent of GDP)	46.0	39.4	39.5	39.4	38.6
Interest payments (as a percent of exports of goods and services)	2.2	2.3	3.4	3.9	3.9
Debt service to exports ratio	5.2	7.2	9.1	10.2	10.6
Short-term external debt to total debt (in percent) 2/	12.9	14.6	19.1	22.2	24.8
Short-term debt to gross international reserves 2/	200.1	103.9	104.3	97.1	71.5
Public debt (in percent of GDP) 3/	25.9	23.8	24.3	25.0	28.7
Public debt (as a percent of exports of goods and services)	56.4	60.4	61.4	63.4	74.4
Public debt to broad money	88.8	76.2	71.2	71.8	79.0
Public debt to tax revenues 3/	175.0	149.7	156.8	171.2	196.6

Sources: Central Bank of the Dominican Republic; and Fund staff estimates and projections.

1/ Based on the first scenario, i.e., assuming full implementation of the government's expenditure plan, but without any further fiscal adjustment.
2/ Simple averages.
3/ Residual maturity basis.

Sustainability scenarios

We consider four basic scenarios. The first scenario is based on implementing all of the government's stated plans. This scenario shows a rising debt-to-GDP ratio. The second scenario evaluates the reduction in fiscal pressures that would occur if the government were to scale down its plans and focus only on social security reform (not devoting *additional* resources to its social sector strategy—it would still maintain its current level of social sector spending). In the latter scenario, the debt-to-GDP ratio still rises, albeit slowly. The third scenario is similar to the second scenario, but includes enough fiscal adjustment to hold the debt-to-GDP ratio constant. The fourth scenario is similar to the first scenario (full implementation of expenditure plans), but includes the requisite fiscal adjustment to hold the debt-to-GDP ratio constant.[16] Thus, this scenario provides an indication of the fiscal measures that would be needed if the intention was to hold the debt-to-GDP ratio constant and implement all the government's expenditure objectives. Of course, to the extent that a

[16] Long-term growth is likely to be sensitive to the reforms implemented. For this analysis, which focuses on a five-year horizon, growth could be considered exogenous across the scenarios. Growth gains from education and health improvements are more likely to be seen only in the long term.

moderate increase in the debt-to-GDP ratio does not jeopardize fiscal sustainability, the magnitude of the fiscal measures could be reduced. The following table presents the primary balance, the public sector debt path, and the required adjustment in each of the four scenarios.

In the first scenario, where the government's expenditure plan is implemented in its entirety, with no further adjustment measures, there would be some deterioration of the various sustainability indicators. The primary fiscal balance is lower than the minimum 0.7 percent of GDP required to keep the public sector debt-to-GDP ratio constant. As a consequence, the public sector debt increases from 24 percent of GDP in 2002 to 31 percent in 2006; the ratio of debt service to government revenues rises from 25 percent to 36 percent over the same period.[17] The combination of the reduction in trade taxes and the fiscal costs of the social security reform would put pressure on the fiscal accounts. The pressure would continue beyond 2006 as social expenditure would remain 2 percent of GDP higher than the benchmark year and the social security reform costs will continue at 1.2 percent of GDP, or more. Debt ratios continue to rise and adjustments would be needed eventually in order to stabilize them.

In the second scenario, the government is assumed not to devote additional resources to social sector spending, but to proceed only with the social security reform. This scenario still results in a moderately rising debt-to-GDP ratio through 2006—assuming no fiscal measures are implemented. **In the third scenario** (similar to the second in terms of expenditure plans), a fiscal adjustment of ½ percent of GDP a year would be needed to maintain the debt-to-GDP ratio constant. **In the fourth scenario,** the government would execute all of its expenditure plans, but at the same time it would undertake fiscal measures to finance it. This scenario points to the need for fiscal measures equivalent to about 1½ percent of GDP a year in order to maintain a constant debt-to-GDP ratio.

[17] The spike in 2006 reflects the bullet payment on the sovereign bond (equivalent to 10.8 percent of government revenues that year).

Table 5. Fiscal Sustainability Scenarios
(In percent of GDP)

		2002	2003	2004	2005	2006
Scenario 1	Primary balance	-0.6	-0.2	-0.6	-0.8	-1.0
	Public sector debt	24.3	25.0	26.7	28.7	30.9
Scenario 2	Primary balance	-0.6	0.2	0.3	0.5	0.7
	Public sector debt	24.3	24.5	25.2	25.7	26.0
Scenario 3	Primary balance	-0.6	0.8	0.8	0.8	0.8
	Fiscal measures	0.0	0.4	0.3	0.2	0.0
	Public sector debt	24.3	24.3	24.3	24.3	24.3
Scenario 4	Primary balance	-0.6	0.8	0.8	0.8	0.8
	Fiscal measures	0.0	0.9	1.3	1.7	1.9
	Public sector debt	24.3	24.3	24.3	24.3	24.3

Source: Fund staff estimates and projections.

Stabilization of the debt-to-GDP ratio at a higher level

Given the relatively low starting point for the debt-to-GDP ratio, the government has the option of increasing public debt and stabilizing the debt-to-GDP ratio at a higher level. The adoption of this option assumes the following: substantial enhancement of debt management over the medium term, a favorable external environment, and a prudent macroeconomic stance in place. This could be a viable option if the increase in public debt is associated with higher outlays on productive capital expenditure and the implementation of a poverty reduction strategy. This is in line with the authorities' plans to increase external financing over the medium term to help finance a more ambitious expenditure program. The authorities could establish an ex ante debt ceiling, which if surpassed would trigger the implementation of fiscal adjustment measures. Table 6 presents fiscal paths consistent with three possible debt ceilings, assuming the execution of the original expenditure plan. The three ceilings (in relation to GDP) are 28.5 percent, 30 percent, and 32.5 percent. The assumption is that the authorities' expenditure program would be financed through the accumulation of additional external financing, until the debt-to-GDP ratio reaches the given ceiling, at which point measures to stabilize the debt-to-GDP ratio would be taken.

Table 6. Stabilization of Debt-to-GDP Ratio
(In percent of GDP)

	2002	2003	2004	2005	2006
Stabilization at 28.5%					
Overall balance	-2.1	-1.6	-2.1	-2.4	-0.8
Primary balance	-0.6	-0.3	-0.6	-0.9	0.8
Minimum adjustment	0.0	0.0	0.0	0.2	1.9
Public sector debt	24.3	25.0	26.7	28.5	28.5
Interest payments	1.3	1.4	1.5	1.6	1.6
Stabilization at 30.0%					
Overall balance	-2.1	-1.6	-2.1	-2.4	-2.7
Primary balance	-0.6	-0.3	-0.6	-0.8	-1.0
Minimum adjustment	0.0	0.0	0.0	0.0	0.9
Public sector debt	24.3	25.0	26.7	28.7	30.0
Interest payments	1.3	1.4	1.5	1.6	1.7
Stabilization at 32.5%					
Overall balance	-2.1	-1.6	-2.1	-2.4	-2.7
Primary balance	-0.6	-0.3	-0.6	-0.8	-1.0
Minimum adjustment	0.0	0.0	0.0	0.0	0.0
Public sector debt	24.3	25.0	26.7	28.7	30.9
Interest payments	1.3	1.4	1.5	1.6	1.7

Source: Fund staff estimates and projections.

This exercise has shown that the government could finance its expenditure program through limited external borrowing, without jeopardizing medium-term fiscal sustainability. Under the 28.5 percent of GDP ceiling, an adjustment of about 2 percent of GDP is needed to stabilize the debt-to-GDP ratio by 2006. Meanwhile, higher debt ceilings do not entail substantial adjustment measures.

Sensitivity test on the public sector debt

The sensitivity analysis focuses on shocks arising from real interest rates (at historical average plus two standard deviations in 2003 and 2004), lower growth (at historical average minus two standard deviations in 2003 and 2004), and real depreciation (one time 30 percent real depreciation in 2003). The baseline scenario assumes the full implementation of the government's expenditure program and the absence of fiscal reforms.

The sensitivity analysis shows that the projection is most sensitive to a large depreciation. In the case of a 30 percent depreciation in 2003, the public-debt-to-GDP ratio by 2007 would be about 21 percent higher than in the baseline. In the case of an interest rate shock, the public-debt-to-GDP ratio would be 10 percent higher and 7 percent higher for a real GDP shock.

The results illustrate the vulnerability of the fiscal accounts. Risks associated with changes in the macroeconomic environment suggest the need to pursue measures that will consolidate the fiscal position and maintain macroeconomic stability in order to prevent depreciating pressures on the peso with an adverse impact on public debt.

Table 7. Public Debt Sustainability
(Public Debt/ GDP)

	2001	2002	2003	2004	2005	2006
Baseline	24.3	25.0	26.7	28.7	30.9	32.0
Depreciation shock	24.3	32.1	33.8	35.7	37.7	38.7
Interest rate shock	24.3	26.8	30.0	31.9	34.1	35.2
GDP shock	24.3	25.6	28.5	30.6	32.9	34.1

Source: Fund staff projections.

III. Resource Mobilization

The objective of this section is to assess the medium-term capacity of the country to raise additional resources. The ambitious process of reform envisaged by the authorities will create spending pressures over the medium term. Resources will need to be increased to finance larger expenditures stemming from the government's desire to find a solution to electricity sector problems, finance the social security reform, and implement a revamped social sector strategy.

Additional resources could be raised from taxes, domestic financing, external financing, and cuts of unproductive expenditure. Domestic resource mobilization refers to the government's ability to raise revenues by means of taxes, commissions, and fees.[18] Domestic financing includes bank financing and government bonds. External financing comprises loans from international financial institutions, foreign banks, and sovereign bond issues.

Although expenditure efficiency is a key tool to free additional resources, it is not covered in this paper. The analysis of optimal budget allocation is left to the World Bank's Public Expenditure and Institutional Review (2002), which gauges the performance of the public sector, including budget management.

A. Domestic Resource Mobilization

Tax reform

Important progress has been made in expanding revenues and improving tax efficiency. Tax revenues have risen from 10 percent of GDP in 1990 to 16 percent of GDP in 2001. Following a comprehensive fiscal reform in 2001, the tax system was simplified and some distortions eliminated, yielding a more efficient tax system.[19] Notwithstanding these achievements, the fiscal burden is still below the regional average and there are several areas where efficiency gains could be obtained, such as eliminating a number of value-added tax (VAT) exemptions, and improving tax administration.

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[18] Capital revenues and grants, accounting 0.2 percent of GDP in 2001, are not key sources of government revenues.

[19] The key features of the tax reform included a new hydrocarbons law, an increase in the VAT from 8 percent to 12 percent, increases in excise taxes on alcoholic beverages and tobacco, a minimum floor for corporate taxation of 1.5 percent of gross sales, adjustment of personal income tax brackets, and various measures to streamline the system. The net effect of the reform is estimated at about 1½ percent of GDP.

The tax system continues to rely mainly on indirect taxation. However, driven by trade liberalization, trade tax revenues have decreased (in relation to GDP), while value added and excise tax revenues have risen substantially (Appendix IV). The shares of direct and indirect taxes in total taxes have remained broadly unchanged since 1990, at about 25 percent and 75 percent, respectively. However, the structure of indirect taxes has changed somewhat. Between 1990 and 2001, in relation to total tax revenues, the VAT increased from 16 percent to 25 percent, excise taxes rose from 15 percent to 21 percent, while trade taxes decreased from 40 percent to 23 percent.

The rationale for increasing the level of taxation is twofold: **first, to finance additional economic development needs; and second, to harmonize the tax burden with other countries in the region.**[20] The optimal tax level is a function of not only the two aspects mentioned above, but also the need to ensure **fiscal sustainability**, particularly given the known spending pressures over the medium term.

Reaching economic development objectives will require the mobilization of additional resources. Removal of the distortionary foreign exchange commission implies a loss of revenue; this should be offset by a modernization of the VAT. In order to harmonize taxes with other countries in the region, total tax revenues should be raised to about 18 percent of GDP (an increase of 2 percentage points relative to 2001).

The pillar of any tax reform should be the VAT. The overriding objective of the tax reform should be the proper design of the VAT, which has a low tax rate (12 percent) and exemptions beyond the core items accepted according to best international practices. The target would be to increase the VAT yield to 6 percent of GDP from 4 percent in 2001. This could be achieved by the elimination of most exemptions and an increase of the VAT rate to 15 percent. The efficiency ratio of the VAT, at 33 percent, is low compared with a Latin American average of 37 percent.[21] This rate should be raised to at least 40 percent over the medium term.

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[20] The comparison with Latin America has no theoretical basis, but it is a convenient benchmark to judge the tax system against countries with similar levels of development (Tanzi and Zee, 2001).

[21] The efficiency ratio is defined as the ratio of VAT revenues to GDP divided by the standard rate (expressed as a percentage).

Table 8. Current VATs in Latin America

	Standard Rate	Other Rates	Percent of Tax Revenue	Percent of GDP
Argentina	21.0	10.5, 27	51.4	6.2
Bolivia	14.9		29.0	5.7
Brazil	20.48	9.89, 12.36	31.2	8.6
Chile	18.0		45.0	8.5
Colombia	15.0	8, 10, 20, 35, 45	28.1	4.9
Costa Rica	15.0		38.5	6.5
Dominican Republic	**12.0**		**25.0**	**4.0**
Ecuador	12.0		41.6	4.4
El Salvador	13.0		51.6	5.3
Haiti	10.0		25.6	2.2
Mexico	15.0	10.0	19.7	3.2
Nicaragua	15.0	5, 6	42.6	10.0
Panama	5.0	10	15.5	2.0
Paraguay	10.0		39.0	4.5
Peru	18.0		53.2	6.3
Uruguay	23.0	14	34.6	8.4
Venezuela	15.5		25.0	3.2

Sources: National authorities; and Fund staff estimates.

VAT exemptions should be left at minimum. Most countries exempt items related to education, health, and financial services (Ebrill, Keen, Bodin, and Summers, 2001). The Dominican Republic has generously exempted some 400 items, including agricultural and fishery products and inputs; basic goods (e.g., milk, meats, sugar, coffee, flour, dental paste); fuels; medicines; fertilizers; cultural products and inputs (e.g., magazines, newspapers); matches; soap; diplomatic and humanitarian organizations' imports; computers; and the following services: education, health, financial, pensions, transportation, electricity, house rents, and personal care.

Resource mobilization could also come from the elimination of the fuel oil tax exemption enjoyed by the electricity generating firms. Domestic retail prices of petroleum products are regularly adjusted for changes in international costs, while taxes are specific and not adjusted for changes in international costs.[22]

The monthly advance payment of 1.5 percent of gross sales to be credited as a minimum corporate tax should be maintained beyond 2003. The advance payment was introduced in January 2001 (as a temporary measure to be eliminated in 2003). As a result, corporate

[22] The structure as of May 2002 encompassed excise taxes on the following oil products: premium gasoline RD$18.72 per gallon; regular gasoline RD$14.71 per gallon; premium gasoil RD$6.55 per gallon ; and regular gasoil, kerosene, and fuel oil RD$5.20 per gallon. Gasoil and fuel oil used by the electricity companies are exempt from the tax.

income taxation doubled to 2 percent of GDP that year. The government should resist pressures to eliminate the advance payment.[23]

The foreign exchange commission should be eliminated. Foreign exchange sales for goods imports are subject to a 4.75 percent commission that has to be deposited directly in the central bank.[24] The first 1.75 percentage points are earmarked to cover the central bank's external debt service and the remainder is earmarked to cover external debt service of the nonfinancial public sector. This would represent a revenue loss equivalent to 1 percent of GDP, but it would remove a distortionary measure, which constitutes a multiple currency practice.

The VAT modernization, the elimination of the exemption of the fuel oil tax to electricity generating firms, and the elimination of the foreign exchange commission will generate net revenues of about 2 percent of GDP. These measures should also be accompanied by tax administration improvements, including improving customs administration, broadening the VAT base, and greater auditing of income taxes.

B. Government Financing

Official external financing

In recent years, the government has built a solid financial reputation allowing it access to financing from various sources. This reputation stems from sound macroeconomic management. The Dominican Republic was the first emerging market economy to issue sovereign debt bonds following the September 11 attacks, with a spread over comparable U.S. treasury bonds of 576 basis points.

The country has managed prudently its debt with multilateral and bilateral institutions. Nonfinancial public sector net external financing from those institutions has remained low, averaging about 0.2 percent of GDP a year in the last five years. Debt with multilaterals fell from 7 percent of GDP in 1997 to 6 percent in 2001; debt with bilaterals dropped even more, from 11 percent of GDP in 1997 to 8 percent in 2001. The greatest share of lending from multilaterals comes from the Inter-American Development Bank (IDB). The main public sector projects financed by the IDB are concentrated in social sector reform, followed by education, and agriculture. Financing has been focused mainly in the areas of transport, hurricane reconstruction, agriculture, and energy.

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[23] In August 2002, President Mejía sent to congress a set of fiscal measures, including the proposal to maintain the advance payment.

[24] The commission was increased from 1.75 percent to 5 percent in October 1999. It was subsequently reduced to 4.75 percent in October 2001. A resolution in August 2002, eliminated the commission on financial transaction and services and designated customs as the agency in charge of collections.

Debt with bilateral creditors has declined in nominal terms. This is mainly debt owed to Paris club creditors. The policy has been to reduce gradually the stock of debt with all bilateral creditors, with the only exception being Spain.

At least for the medium term, **the country does not face constraints in borrowing from multilaterals.** In addition to undisbursed credits amounting to about 3 percent of GDP in 2001, the portfolio with the IDB and the World Bank could be increased substantially.[25]

[25] Based on the institutions' administrative limits on borrowing by a given country.

Table 9. Outstanding External Public Sector Debt by Creditor

	1997	1998	1999	2000	2001
(In millions of U.S. dollars)					
Total	**3,572**	**3,545**	**3,657**	**3,685**	**4,137**
Multilateral	**1,071**	**1,137**	**1,236**	**1,243**	**1,339**
IDB	784	820	850	842	917
World Bank	208	204	275	294	318
IDA	16	15	15	14	13
IMF	29	56	54	51	50
OPEC	17	16	14	11	8
Other	18	26	28	30	33
Bilateral	**1,695**	**1,718**	**1,754**	**1,744**	**1,641**
Paris Club creditors	1,519	1,564	1,586	1,591	1,504
France	43	44	38	30	25
Germany	62	80	74	66	66
Italy	55	54	51	46	41
Japan	161	179	198	171	153
Spain	289	319	380	531	574
United States	907	886	844	745	620
Other Paris Club	2	2	2	3	25
Other bilateral	176	154	168	153	137
Argentina	0	0	0	0	0
Brazil	0	7	32	42	39
Colombia	5	2	0	0	0
Mexico	0	0	0	0	0
Peru	6	6	6	6	6
Taiwan Province of China	0	0	0	0	0
Venezuela	165	138	130	104	79
Other	0	0	0	1	13
Commercial banks	**687**	**604**	**619**	**657**	**1,118**
Suppliers and others	**120**	**87**	**48**	**41**	**39**
(In percent of GDP)					
Total	**23.6**	**22.1**	**21.0**	**18.7**	**19.3**
Multilateral	7.1	7.1	7.1	6.3	6.3
Bilateral	11.2	10.7	10.1	8.8	7.7
Paris Club	10.0	9.8	9.1	8.1	7.0
Other bilateral	1.2	1.0	1.0	0.8	0.6
Commercial banks	4.5	3.8	3.6	3.3	5.2
Suppliers and others	0.8	0.5	0.3	0.2	0.2
(In percent of total debt)					
Multilateral	30.0	32.1	33.8	33.7	32.4
Bilateral	47.4	48.4	48.0	47.3	39.7
Paris Club	42.5	44.1	43.4	43.2	36.4
Other bilateral	4.9	4.3	4.6	4.1	3.3
Commercial banks	19.2	17.0	16.9	17.8	27.0
Suppliers and others	3.4	2.4	1.3	1.1	1.0
(In millions of U.S. dollars, unless otherwise indicated)					
Memorandum items:					
Total debt to official creditors	2,766	2,854	2,990	2,987	2,980
(In percent of total debt)	77.4	80.5	81.8	81.1	72.0
Total debt to private creditors	806	691	667	698	1,157
GDP	15,157	16,030	17,412	19,719	21,395

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

Access to international credit markets

The issuance of sovereign debt bonds in September 2001 was well received by international markets, thus opening a window of opportunity for further bond placements. Just prior to the bond issuance, the country's sovereign credit rating was upgraded—Moody's upgraded the Dominican Republic's foreign currency country ceiling to Ba2 from B1 in September 2001. At the same time, it upgraded the rating of bonds issued by the government denominated in both foreign currency and pesos to Ba2 from B1. Moody's cited a low external debt burden, supported by a stable macroeconomic environment, as the rationale for the upgrade. The rating improvement increases the chances of additional successful sovereign bond issues.

The first bond issued was earmarked to finance capital expenditures. At the time of writing this paper, a new placement of bonds of about US$500-750 million was being considered in order to smooth the debt profile by buying back Brady bonds, retiring shorter-term (and more expensive) debt, and reducing the stock of domestic arrears.

C. Domestic Financing

Domestic financing of the nonfinancial public sector (NFPS) has come mainly from the banking system and an accumulation of arrears with private suppliers. Domestic capital markets, at present, are not a major source of financing. In the past, the central bank and the government-owned Reserves Bank had an active role in financing the NFPS. However, beginning in 2001, the government began to rely exclusively on private commercial bank financing. The stock of credit from private commercial banks increased from a negative RD$126 million at end-2000 to RD$2.5 billion at end-2001, a historically high level. Commercial bank financing is exclusively short term and at market rates.

Financing through the accumulation of domestic arrears stems from debt management problems rather than lack of resources. The accumulation of arrears has two sources: (1) selected government units procure goods and services from private suppliers on a bilateral basis and with a lack of adequate controls; and (2) arrears of the public electricity company with private power suppliers. A commission was appointed in 2001 to set guidelines to identify and clear domestic arrears. Improved controls have been put in place, including the prohibition of contracting bilateral debt and the centralization of debt authorizations in one office. The authorities expect these administrative improvements to halt the further accumulation of arrears. Regarding arrears with the electricity sector, the problem is more complex, entailing a cumbersome system of subsidies and contracts with private producers of electricity. The government has been reducing arrears; however, a definitive solution will depend on a comprehensive reform of the electricity sector.

Resource mobilization from domestic capital markets is not a viable option in the near future. First, the government will need to clear its domestic arrears to gain credibility. These

bonds represent particular situations, where the government placed them to honor specific obligations. The servicing of these securities has not been satisfactory and there is little demand for these securities in the secondary markets. Attempts to issue new bonds to service debt of old bonds have failed. Development of government security markets will require revamping public debt management and strengthening institutional capacity. Regular debt issues of various maturities would provide a benchmark for private securities and improved, market-based information regarding inflation expectations.

IV. Conclusions

The fiscal position of the Dominican Republic appears to be sustainable. However, if expenditure continues to rise (relative to GDP), without any further fiscal adjustment, indicators of sustainability would begin to deteriorate. Given the relatively low debt burden, there is some room for additional external borrowing. However, it would be important to maintain an appropriate mix between additional financing and fiscal adjustment, in order that the future debt burden does not rise excessively.

The government does not face constraints in mobilizing resources in the short and medium term. The expenditure program can be financed by a combination of domestic resource mobilization and external financing, facilitating the needed investment to foster growth and reduce poverty. The tax system needs to be modernized, including through the elimination of most VAT exemptions.

Domestic financing should come mainly from private commercial banks and domestic arrears should be eliminated. In the medium term, a market for treasury securities should be developed. This could be an alternative to commercial banking financing. Government financing from the central bank should be prohibited[26] and financing from commercial banks should only be on a short-term basis to satisfy liquidity needs.

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[26] Indeed, the Monetary and Financial Law prohibits the central bank from providing financing to the central government.

I. Fiscal Impulse Estimation

Fiscal impulse analysis focuses on changes in the cyclically adjusted stance of fiscal policy, in order to judge whether fiscal policy is expansionary or contractionary. The fiscal stance is measured as the difference between a cyclically neutral balance and the actual fiscal balance. The cyclically neutral balance assumes that revenues and expenditures are unitary elastic with respect to actual GDP and potential GDP, respectively. Due to data restrictions, the analysis is conducted for the central government only (i.e., excluding public enterprises and decentralized agencies).[27] In general, focus is on the primary fiscal impulse, which attempts to gauge the level of fiscal effort. In the Dominican Republic, given the stability of interest expenditures (relative to GDP), primary and total fiscal impulse measures tend to move in parallel. An important assumption made for this analysis is that actual and potential GDP converged in 2001.[28] This implies a cyclically neutral revenue-to-GDP ratio of about 16.6 percent. The primary fiscal impulse manifests a strong correlation with the political cycle. The stance of fiscal policy tends to be expansionary during electoral years and contractionary in the year after.

Fiscal Impulse Estimates (Central Government)
(In percent of GDP)

	90	91	92	93	94	95	96	97	98	99	00	01	02 1/	02
Actual	-1.4	-0.5	-0.5	-2.8	-3.7	-0.5	-2.0	-1.3	-1.2	-3.4	-2.2	-1.8	-1.8	-1.4
Revenue	12.4	13.5	15.2	15.7	14.7	14.9	14.1	16.2	15.9	15.6	15.9	16.6	15.7	16.2
Expenditure	13.8	14.0	15.7	18.5	18.4	15.4	16.1	17.4	17.1	19.0	18.2	18.5	17.5	17.7
Total impulse	-5.4	-1.6	0.5	1.9	0.8	-3.3	2.0	-0.2	0.3	2.7	-0.7	-0.8	-0.2	-0.6
Revenue	3..2	-1.1	-1.7	-0.5	1.0	-0.2	0.8	-2.1	0.2	0.3	-0.3	-0.7	1.0	0.4
Expenditure	-8.7	-0.6	2.2	2.4	-0.2	-3.1	1.2	1.9	0.1	2.4	-0.4	-0.1	-1.2	-1.0
Primary impulse	-5.3	-1.6	0.8	1.6	1.4	-3.4	2.1	0.0	0.3	2.7	-0.8	-0.8	-1.0	-0.9
Revenue	3.2	-1.1	-1.7	-0.5	1.0	-0.2	0.8	-2.1	0.2	0.3	-0.2	-0.7	1.0	0.4
Expenditure	-8.6	-0.5	2.5	2.1	0.4	-3.2	1.3	2.0	0.1	2.4	-0.6	-0.1	-1.9	-1.3

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

1/ Approved budget.

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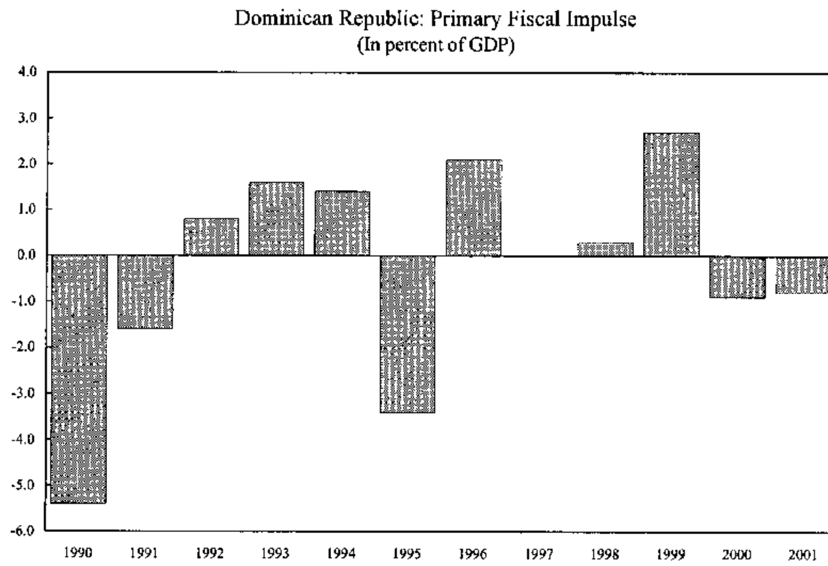
[27] Exclusion of the rest of the public sector should not affect the conclusions, as the rest of the public sector tends to operate near fiscal balance, once transfers from the central government are excluded.

[28] In 2000, it was widely agreed that the economy had been overheating, partly reflecting an expansionary fiscal stance in the first half of the year, associated with the August presidential election. However, economic growth slowed sharply in 2001, reflecting the impact of the global economic slowdown and heightened security concerns following the September 11 terrorist attacks, bringing actual GDP growth below potential, and resulting in a convergence of the levels.



Dominican Republic: Primary Fiscal Impulse
(In percent of GDP)

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

II. PUBLIC DEBT

Public sector debt

There are several deficiencies in the measurement of both public external and domestic debt.[29] This appendix attempts to overcome these deficiencies in order to arrive at a more accurate estimate of public sector debt.

Public external debt

There are some important deficiencies in the control and monitoring of public external borrowing. Data on short-term debt are still incomplete. The table below presents the stock of public sector external debt. The public external debt-to-GDP ratio has been dropping sharply—from levels of above 40 percent at the beginning of the 1990s to under 19 percent in 2000 (compared with an average of almost 40 percent in Latin America). In light of this low ratio, the authorities have decided to increase their reliance on external financing. In particular, the 1.2 percentage point of GDP increase in the debt-to-GDP ratio in 2001 stems from the issuance of a US$500 million sovereign bond and new loans from several international financial institutions, including the Inter-American Development Bank.

Table 1. External Debt by Type of Public Institution
(In millions of U.S. dollars)

Public external debt	1997	1998	1999	2000	2001
Medium- and long-term debt	3,593.5	3,551.2	3.652.8	3,658.6	4,184.1
Central bank 1/	868.7	848.4	828.6	808.0	782.2
Central government	2,446.2	2,445.0	2,577.8	2,623.2	3,177.5
Reserves bank and housing bank	64.3	64.3	64.3	64.3	64.3
Decentralized agencies	214.3	193.5	182.1	163.1	160.1
Short-term debt	-19.9	-5.8	4.3	16.9	-13.7
Total	3,573.6	3,545.4	3,657.1	3,675.5	4,277.2
(In percent of GDP)	23.6	22.1	21.0	18.6	19.5

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

1/ The central bank's debt includes obligations to the IMF and Department of Project Financing's (DEFINPRO) debt.

[29] The public sector debt is calculated net of intra-government debt.

Public domestic debt

Government domestic debt management continued to be inadequate. Institutional weaknesses have hampered the government's ability to monitor debt developments and to make timely payments. Some measures are being implemented to improve debt management, including the appointment of a commission to define domestic debt policy and to identify overdue financial obligations.

The accounting of public domestic debt faces a number of conceptual and methodological challenges. Specifically, some financial public institutions, such as the central bank and the Reserves Bank are engaged in activities beyond the best international practices for such institutions. For example, the central bank owns Rosario Dominicana (a gold mine). The central bank also gives loans to the private sector through its Department of Project Financing (DEFINPRO). The Reserves bank has multiple roles in several private sector activities, such as banking, insurance, and pension management. In addition, it is the government's financial agent and the de facto lender-of-last-resort for other public financial institutions.

While external public debt comprises liabilities of the entire public sector, including *financial* public institutions, the accounting of domestic debt focuses only on the *nonfinancial* public sector, implying that government's net debt owed to the central bank and to the Reserves Bank is not excluded from the definition of public domestic debt. The definition of domestic debt in the Dominican Republic includes the following:

- Recognized direct financial obligations (interest payments and amortization) stemming from the issuance of treasury certificates and public sector domestic bonds net of intra-government debt;
- Recognized arrears with private suppliers;[30]
- Net credit from the central bank and the Reserves Bank; and
- Net credit from the commercial banks.

The definition excludes the following:[31]

- Intra-government debt among the nonfinancial public sector units;

[30] An important proportion of arrears is with the electricity sector (0.7 percent of GDP at end-2001), including central government arrears with distributors and generators and the Dominican Electricity Company's arrears with independent power providers.

[31] As per the IMF's Manual on Government Finance Statistics.

- Government-guaranteed debt;
- Contingent liabilities;
- Actuarial liabilities of the social security reform; and
- Floating debt.[32]

In accordance with the above, net domestic debt is summarized in Table 2. This is the concept used in this chapter's estimation of domestic debt.

Table 2. Nonfinancial Public Sector Net Domestic Debt
(In millions of Dominican pesos; unless otherwise indicated)

Domestic debt	1997	1998	1999	2000	2001
Treasury bonds	11.2	10.3	11.1	1,551.8	961.8
Treasury certificates	0	97.0	161.5	174.8	180.3
Arrears excluding electricity 1/	7,509.9	7,413.3	6,673.9	5,035.8	7,930.6
Arrears to electricity sector	...	...	...	5,577.3	2,681.7
Net debt with central bank 2/ 3/	4,669.2	4,285.0	4,741.8	6,447.0	-321.2
Net debt with reserves bank	-1,191.9	1,183.9	1,384.0	2,433.7	1,719.5
Rosario Dominicana's net debt with central	1,473.7	1,798.7	2,330.4	2,440.2	2,520.8
Net debt with commercial banks	232.5	386.1	738.8	-126.4	2,502.4
Total	12,704.6	15,174.3	16,041.5	23,534.2	15,439.9
In percent of GDP	**5.9**	**6.3**	**5.8**	**7.3**	**4.3**

Sources: Central Bank of the Dominican Republic; Sovereign Bond Prospectus; and Fund staff estimates.

1/ The source is the sovereign bond prospectus.
2/ Excluding Rosario Dominicana.
3/ The substantial drop in net debt in 2001 reflects the government's deposit of the proceeds from the bond issue (equivalent to 2.3 percent of GDP).

Table 3 shows that the total public debt ranks among the lowest in the region (relative to GDP).

Table 3. Total Public Debt
(In percent of GDP)

	1997	1998	1999	2000	2001
External debt	23.6	22.1	21.0	18.6	19.5
Domestic debt	5.9	6.3	5.8	7.3	4.3
Total	29.5	28.4	26.8	25.9	23.8

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

[32] Floating debt includes unpaid obligations stemming from government delays in meeting accrued obligations for goods and services received, but within the normal grace period.

III. Fiscal Costs of the Social Security Reform

Fiscal costs of social security reform

The law restructuring the health and pension systems and creating the Dominican System of Social Security (DSSS) was introduced in 2001. Similar to other pension reforms in Latin America, the reform will substitute a pay-as-you-go system for one of individualized capital accounts. However, it differs from many other reforms in that the government's intention is to provide universal coverage in pensions and health, including for low-income persons, those in the informal sector, and independent workers.[33] The two key economic concerns are the still uncertain fiscal costs of the reform and the effects on labor demand and supply owing to increases in surcharges for employers and additional payments required of workers. This section focuses on the prospective fiscal costs of the reform.

Social security reform—objectives and characteristics

The previous system was highly fragmented with overlapping institutional mandates, unregulated, and with low coverage. The objective of the reform is to increase the coverage of the pension, healthcare, and accident insurance. **The intention is to extend coverage to all workers in both the formal and informal sectors**. The new law creates a three-pillar system:

- **A contributory regime,** covering public and private formal workers and employers including the government as employer. Funded by both employees and employers.

- **A subsidized regime,** covering informal workers with income below the minimum wage, the unemployed, and the poor. This regime is funded by the government.

- **A contributory-subsidized regime,** covering the self-employed and informal workers with income above the minimum wage. Financed by workers and complemented by government subsidies.

The implementation of the regimes requires the approval of a set of regulations specific to each benefit. The timetable to initiate the regimes is as follows:

[33] Defined as self-employed persons, particularly in professions such as the law and medicine.

Table 1. Social Security Reform Timetable

Regime	Health Insurance	Pension Insurance	Accident Insurance
Contributory	November 2002	February 2003	November 2002
Subsidized	February 2003	August 2004	Not applicable
Contributory-subsidized	August 2003	August 2005	Not applicable

Source: Dominican Republic Social Security Law.

The government's financial involvement will start as early as November 2002, stemming from the payment of contributions for the public sector workers in the contributory healthcare regime and financing the accident insurance of public sector workers. Fiscal costs will reach a maximum in 2005, when all three regimes will be fully in place.

Fiscal costs of the reform

The traditional fiscal costs of pension reforms arise mainly from funding the pensions of the retired workers when there is no more financing from current workers. This is not a substantial cost in the Dominican Republic, since the previous system had one of the lowest coverage rates in Latin America. The additional fiscal costs stem from the wider coverage (universal) of pensions and healthcare; and the government contribution to the accident insurance in the contributory regime. In the DSSS, the government's fiscal costs include the following:

- The pensions of the current retirees;
- In the contributory regime
    - The equivalent of 7.12 percent of workers' salaries for the individualized accounts of the public sector workers, including 0.4 percent of public sector workers' salaries for the Social Solidarity Fund.
    - The equivalent of 7 percent of workers' salaries to finance the "Family Health Insurance" of public sector workers.
    - The equivalent of 1.2 percent of workers' salaries to finance accident insurance for public sector workers.
- In the subsidized regime
    - The payment of a "solidarity" pension, equivalent to 60 percent of the minimum public sector monthly wage, to handicapped persons, to the elderly poor, and to all unemployed single poor mothers with dependants under 18 years of age.
    - The cost of basic healthcare services to the unemployed and their dependants, the handicapped, and the poor.

- In the contributory-subsidized regime

    - The complementary payment needed to reach the minimum pension equivalent to 70 percent of the minimum salary in the private sector to the affiliated self employed that at the moment of retirement have not accumulated enough in their individual retirement accounts.

    - The complement of the cost of the Family Health Insurance of the contributing self-employed workers.

An overall assessment is difficult due to uncertainty regarding the number of potential beneficiaries in the subsidized and contributory-subsidized regimes. The table below presents some preliminary estimates. The estimation of the net fiscal costs should adjust for any proceeds from the sale of the assets of the Dominican Institute of Social Security (since some of the assets are being sold to cover the actuarial debt) and any savings from replacing previous healthcare expenditures in the budget with those under the new system. The authorities intend to enhance healthcare services, providing more benefits and coverage than under the present law. The objective is to increase healthcare expenditure to 2 percent of GDP, which would represent 0.4 percent of GDP of additional healthcare expenditures beginning in 2004. In 2002 and 2003, the authorities intend to work on improving the efficiency of existing healthcare expenditures—without increasing them.

If sufficient resources are not available to fund the government's universal coverage intention, the law contains a provision that allows the government to ration the benefits. Rationing rules would still need to be defined.

Table 2. Fiscal Costs of the Social Security Reform
(In millions of Dominican pesos)

Fiscal costs	2002	2003	2004	2005	2006
Current retirees 1/	0.0	1612.9	1620.0	1634.1	1648.2
Contributory regime 1/					
-Pension insurance	0.0	369.2	394.7	420.7	472.2
-Healthcare insurance	151.1	361.8	386.8	412.3	462.8
-Accidents insurance	18.9	62.8	67.1	71.5	80.3
Subsidized regime					
-Solidarity pension 2/	0.0	0.0	624.7	1458.2	1530.7
-Healthcare services 3/	0.0	6515.9	7146.3	7780.4	8400.7
Contributory-subsidized					
-Pension	0.0	0.0	0.0	1.8	4.0
-Health services	0.0	10.0	25.0	35.0	45.0
Total	170.0	8,932.6	10,264.6	11,814.0	12,643.9
In percentage of GDP	0.04	2.1	2.2	2.3	2.3
With recommended healthcare expenditure 4/	0.04	2.1	2.6	2.7	2.7
Total additional fiscal costs from the law 5/	0.04	0.6	0.7	0.8	0.8
Net additional fiscal costs 4/ 5/	0.04	0.6	1.1	1.2	1.2

Sources: Central Bank of the Dominican Republic; Fund staff estimates; and the World Bank.

1/ Based on estimates by Schulthess, Zaslavsky, and Gomez (2002).
2/ Based on the assumption of at least 135,000 poor elders, handicapped, and single mothers benefiting at the beginning of the implementation in 2004.
3/ The cost of provision of healthcare services is based on the report by Bitran, Ma, Saint-Pierre, and Veloz (2001) that estimates a preliminary fiscal cost of the healthcare reform at 1.6 percent of GDP.
4/ Includes the World Bank recommendation of increasing healthcare spending to 2 percent of GDP beginning in 2004.
5/ Subtracts the traditional healthcare allocation in the budget of about 1.5 percent of GDP.

IV. Tax Revenues

Direct taxes

Personal income taxes

Revenues from personal income taxes represented about 1½ percent of GDP (12 percent of total tax revenues) in 2001. Under the 2001 tax code, there are three annual income brackets: income up to and including RD$120,000 is tax exempt; income between RD$120,000 and RD$200,000 (inclusive) is taxed at a marginal rate of 15 percent; income between RD$200,000 and RD$300,000 (inclusive) is taxed at a marginal rate of 20 percent; and income above RD$300,000 is taxed at a marginal rate of 25 percent.[34] The main source of revenues is taxes on formal sector employee income (93 percent of total personal income taxes); the rest comes from self-employed contributors.

Corporate income taxes

Corporate income taxes amounted to 2 percent of GDP (15 percent of total tax revenues) in 2001. A spike in corporate income taxes in 2001 partly reflects a tax amnesty, which yielded an estimated ½ percent of GDP; consequently, corporate tax revenues are projected to decrease in the near future. Corporate income taxes comprise four categories: taxes on corporations, taxes on telephone companies,[35] and two relatively low-yield taxes on casinos and racetracks. Corporations with gross annual income above RD$2,000,000 are subject to a tax of 25 percent on their net income; small businesses with income below that threshold are subject to a different tax regime.[36] There is a minimum tax equivalent to 1.5 percent of gross revenues, which is withheld monthly. Telephone companies are subject to a 10 percent tax on gross income. The tax rate on casinos is 20 percent of net income, in addition slot machines are taxed at a 50 percent rate.[37] Racetrack gambling is taxed at 27 percent.

Property taxes

Property tax revenues amounted to 0.3 percent of GDP in 2001 (1.7 percent of total tax revenues). Property taxes are levied on real estate operations, registration of vehicles,

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[34] The tax code allows adjusting tax brackets for inflation.

[35] Telephone companies are treated differently. In 1995, it was agreed they will be taxed on gross income as part of the concession to operate.

[36] Agro businesses are tax exempted.

[37] There is a minimum tax depending on the coin denomination of the machine. For instance, for machines operating with RD$1 the minimum tax is RD$10,000.

inheritances, and business registrations. The bulk of revenues come from taxes on real estate transactions, including transfer of property, land registration, and house tax.

Indirect taxes

Excise taxes

Excise taxes generated 3.4 percent of GDP in 2001 (21.6 percent of total tax revenues). Excise taxes are levied on alcoholic beverages, tobacco, oil products and other products. The tax rate on beer is 25 percent, whisky 45 percent, rum 35 percent, vodka 45 percent, cigars 25 percent, and cigarettes 50 percent.

Following its reform in 2000, the hydrocarbon tax has become a key source of revenue, yielding over 2 percent of GDP in 2001 (13 percent of total tax revenues). The proceeds from petroleum taxation are earmarked for external debt service.[38]

Value added tax

The VAT (12 percent) is imposed on sales of products and services; it amounted to 4 percent of GDP in 2001 (25 percent of total tax revenues).[39] Despite its recent increase, from 8 percent to 12 percent, the tax rate remains among the lowest in Latin America. The only exceptions to this rate are on publicity and advertising services, which are taxed at 6 percent, and export products, which face a zero rate.[40]

Trade taxes

Trade taxes comprise import duties and a foreign exchange commission. Import duties have been falling steadily as a result of trade liberalization. In 2001, they represented 3 percent of GDP (17 percent of total tax revenues). The current tariff structure encompasses three main ranges: final products—20 percent, intermediate goods—8 and 14 percent, and inputs—3 percent. Some 25 products, mainly vehicles, have a 40 percent tariff. The average weighted tariff is about 8 percent.[41]

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[38] The government has fixed the amount of the tax depending on the type of petroleum product. Changes in international prices would change prices at the pump, but the government would collect the same revenues if demand remains unchanged.

[39] This tax is known as the ITBIS (tax on transfer of industrial goods and services) in the Dominican Republic.

[40] The zero rate on exports is a common practice in other countries.

[41] A special regime, agreed with the WTO, covers eight agricultural products.

The foreign exchange commission represented 1 percent of GDP in 2001 (6 percent of total tax revenues). Commercial banks must report all their transactions to the central bank. For commercial banks, the central bank immediately charges its current account with the commission.

Nontax revenues

Nontax revenues amounted to almost 1 percent of GDP in 2001, comprising three broad categories: administrative fees and charges (½ percent of GDP), contributions from government enterprises and free trade zones (¼ percent of GDP), and others. Fees and charges include an assortment of activities such as stamps and mail services, issuance of passports and licenses, and official newspaper sales. Contributions from government enterprises refer to transfers from the superintendencies and the petroleum refinery. For instance, the superintendence of banks has operational profits from commissions paid by commercial banks.

Central Government Revenues 1990–2001
(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
I. **Total revenue and grants (II+VII)**	12.5	13.7	15.4	16.1	14.9	15.0	14.2	16.2	16.1	15.8	16.1	16.8
II. **Total revenue (III+VI)**	12.4	13.5	15.2	15.7	14.7	14.9	14.1	16.2	15.9	15.6	15.9	16.6
III. **Current revenue (IV+V)**	12.1	13.3	15.0	15.5	14.6	14.8	13.9	15.9	15.9	15.6	15.9	16.6
IV. **Tax revenue**	10.3	11.7	13.7	14.6	13.6	13.4	12.9	14.7	15.0	14.7	14.8	15.9
Taxes on income	2.6	2.4	2.4	2.5	2.3	2.5	2.5	3.1	3.2	3.4	3.5	4.4
Taxes on property	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3
Taxes on goods and services	3.4	5.1	5.4	6.4	6.7	6.6	6.4	7.0	7.2	6.1	5.5	7.4
VAT	1.6	1.5	2.1	2.6	2.6	2.5	2.5	2.9	3.0	3.1	3.1	4.0
Domestic	1.2	1.0	1.1	1.2	1.3	1.3	1.3	1.5	1.5	1.6	1.7	2.4
External	0.4	0.5	1.0	1.4	1.2	1.3	1.2	1.4	1.4	1.5	1.4	1.6
Excises	1.5	3.4	3.1	3.5	3.9	3.9	3.6	4.1	4.2	3.0	2.4	3.4
Excises on goods	0.8	2.7	2.4	2.8	3.0	2.9	2.9	3.4	3.6	2.4	1.9	3.2
Tobacco	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.3
Beverages	0.4	0.2	0.4	0.4	0.4	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Oil	0.2	2.3	1.9	2.3	2.5	2.1	1.8	2.4	2.6	1.5	1.0	2.1
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excises on services	0.8	0.7	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.6	0.5	0.3
Others	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
Taxes on international trade	4.1	4.0	5.7	5.5	4.4	4.0	3.8	4.2	4.3	4.8	5.4	3.6
Import duties	4.1	4.0	5.7	5.5	4.4	4.0	3.8	4.2	4.3	4.5	4.3	2.7
Export duties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign exchange commission	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.9
Other taxes	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2
V. **Nontax revenue**	1.8	1.6	1.3	0.9	1.0	1.4	1.1	1.2	0.9	0.9	1.1	0.7
Property income	1.5	1.2	0.9	0.4	0.6	0.7	0.4	0.4	0.3	0.2	0.4	0.2
Administrative fees and charges	0.2	0.3	0.4	0.4	0.3	0.7	0.6	0.5	0.5	0.5	0.6	0.5
Other nontax revenue	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.2	0.1
VI. **Capital revenue**	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.1
VII. **Grants**	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.0	0.2	0..2	0.1	0.1

Sources: Central Bank of the Dominican Republic; and Fund staff estimates.

References

Bitrán, Ricardo, Cecilia Má, Enrique Saint-Pierre, and Apolinar Veloz, 2001, "*Escenarios Macroeconómicos y Fiscales para la Reforma de la Seguridad Social en Salud en la República Dominicana,*" Bitrán & Associates, *Presidencia de la República Dominicana.*

Córdoba, Juan P., 2001, "Alternative Measures of the Fiscal Deficit and Fiscal Sustainability," Mexico: Selected Issues, IMF Staff Country Report No. 01/191 (Washington: International Monetary Fund).

Ebrill, Liam, Michael Keen, Jean-Paul Bodin, and Victoria Summers, *The Modern VAT* (Washington: International Monetary Fund).

International Monetary Fund, 2001, *International Capital Markets: Developments, Prospects, and Key Policy Issues,* World Economic and Financial Surveys (Washington).

Schinasi, Garry J., and Mark S. Lutz, 1991, "Fiscal Impulse," IMF Working Paper 91/91 (Washington: International Monetary Fund).

Schulthess, Walter, Ariel Zaslavsky, and Fabricio Gómez, 2002, *Consultoría Internacional para Determinar los Costos de Previsión del Proyecto de Ley que crea el Sistema Dominicano de Seguridad Social,* Final Report, *Presidencia de la República Dominicana.*

Tanzi, V., and Zee, H, 2001, "Tax Policy for Emerging Countries: Developing Countries," IMF Working Paper WP/00/35 (Washington: International Monetary Fund).

World Bank, 2001, "Dominican Republic Poverty Assessment," Report No. 21306 (Washington: World Bank).