



Jamaica's Debt: Exploring Causes and Strategies

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JAMAICA'S DEBT: EXPLORING CAUSES AND STRATEGIES

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EXECUTIVE SUMMARY

Jamaica is the fourth most indebted country in the world, measured either by debt/GDP ratio or debt per capita. This debt load arose largely over a period of seven years between 1996 and 2003 when the public debt rose by 71 percentage points of GDP – doubling the amount of debt. That growth was a reflection of changing circumstances at home and conditions abroad. The domestic capital market expanded and became increasingly sophisticated in response to financial liberalization in the early 1990s. This increased the absorptive capacity of the economy for domestic debt growth. At the same time, the efforts made by the government to provide timely information on public accounts, using both the IMF and ratings agencies to that effect, allowed the government to float international bonds for the first time.


With new avenues of borrowing in both the domestic and international markets, the structure of the debt changed along with the impressive growth in the level. In the domestic debt, Local Registered Stock issues grew exponentially while bond issues were also added to the debt mix in almost equal measure. In the external debt, the dominant role was played by tradable bonds in place of bi-lateral and multi-lateral loans.

While the changes in market capacity and conditions allowed the government to become more indebted, the reason for the increased indebtedness required some investigation. The growth of the debt between the trough of 1996 and the peak of 2003 was decomposed into five mutually exclusive components – the primary, recurrent fiscal balance, interest payments, net changes in public asset ownership, revaluations of the existing debt stock, and the absorption of liabilities from outside of central government. Our decomposition reveals that the absorption of non-central government debt accounts for a significant portion of the growth of debt over the period. A Ministry of Finance and Planning Budget Memorandum from 2004/05 suggests that the largest part of that debt absorption was due to the costs and debts associated with the financial crisis of the late 1990s. An average one percent of GDP annually was due to the debts of public enterprises, in particular Air Jamaica and the National Water Commission.

In order to provide fiscal policy guidelines, we test the impact of three policy initiatives on the future evolution of the level of the national debt, using a model that combines extrapolations of the debt structure with assumptions about the determination of the major fiscal variables and the structure of interest rates. The exercise suggests that, in the absence of policy shifts and external shocks, the budget will eventually become balanced after seven years and the stock as a

percentage of GDP declines gradually along with it. Changes to the mix of debt types yield only negligible improvements in the paths of the fiscal deficit and debt/GDP ratio. The absence of contingent liabilities produces noticeable improvement. But the most impactful strategy lies in fiscal policy, not debt management narrowly defined. Reforming the tax system with the objective of increased compliance provides significant improvement even if the revenue gain is only a modest four to seven percent increase. On the expenditure side, pro-growth expenditure, such as for infrastructural improvements, along with growth favouring policy shifts, provides the largest improvement in the paths of the fiscal deficit and debt.

Summary of Findings

- Jamaica's debt-to-GDP ratio almost doubled between 1996 and 2003; it moved from 76% in 1996 to 147% in 2003 
- Off-budget liabilities is a root cause of rapid growth in the debt between 1997 and 2003
- Interest payments is a contributory factor to the growth in national debt
- Current debt dynamics are sustainable
- Economic growth and increased revenue are the main solutions for significant debt reduction and fiscal improvement.

Our Recommendations

- Identify, quantify and monitor contingent liabilities
- Minimize or hedge against contingent risks
- Implement tax reform for quick revenue gains
- Focus on economic growth rather than amortization

INTRODUCTION

Jamaica is the fourth most indebted country in the world (measured either relative to GDP or population), behind Lebanon, Japan, and the Seychelles. The debt/GDP ratio at the end of 2007 stood at 132 percent. In per capita terms, each Jamaican resident's share of the public debt comes to US\$7,920. This enormous debt burdens the economy with debt service that is the equivalent of 15 percent GDP, siphons off the largest portion of tax revenue, and severely constrains the country's development options. The purpose of this paper is to investigate how the public debt came to be as large as it is, with a view to learning lessons to prevent a recurrence, and to assess alternative strategies for its management going forward.

The size and composition of Jamaica's national debt has changed considerably over the last four decades. Initially, there was a rapid build-up of external debt in the late 1970s and early 1990s. Debt levels rose once again in the late 1990s. Finally, the third episode of debt accumulation began in the mid 1990s and remains with us. The debt-to-GDP ratio during the 1980s and 1990s reached levels far greater than current periods, with the highest being 262 percent in fiscal year 1990/1991

The paper is organized as follows. Section 2 recounts the historical factors that created a need for debt accumulation, local and international capital market developments; and the structure and evolution of Jamaica's national debt. Detailed analysis of the primary causes of debt growth between 1997/98 and 2002/03 is covered in Section 3. Section 4 examines a series of fiscal policy and debt management options that could affect the size of the debt burden going forward. Section 5 provides guidelines for future policy initiatives by the government, incorporating assessments of existing policy where appropriate. The final section draws the implications of the previous discussions and provides policy recommendations.

BACKGROUND ON THE GROWTH OF THE DEBT

EARLIER EPISODES OF DEBT

Jamaica's first experience with public debt financing in the 1970s was caused by a combination of bad policy choices and external shocks that exposed our structural vulnerability. The relevant policy choices were of two types. The external balance was adversely affected, paradoxically, by the imposition of exchange controls, which diminished the incentive to export and encouraged private hoarding of foreign exchange. Fiscal sustainability was meanwhile undermined by overly-ambitious distributive policies on the expenditure side at the very same time the revenue base was shrinking due to the negative impact of exchange controls and import restrictions on production. GDP fell by 26 percent between 1973 and 1980 as the fiscal deficit grew from J\$95 million in 1973/74 to J\$515 million in 1978/79. The result of these two forces was simultaneous shortages of government revenue and foreign exchange. External borrowing was one solution to that problem.

Jamaica's structural vulnerability played its part as external shocks contributed heavily to the economic difficulties and the shortage of foreign exchange. The greatest impact came from the oil crises of 1976 and 1979 triggered by OPEC's discovery of market manipulation. This manifested itself in sharp increases in the world price of oil.

Under the influence of revenue shortfalls, exchange controls and high oil prices, Jamaica's national debt tripled as a percentage of GDP between 1973 and 1979. With a tiny domestic capital market, almost all of the debt growth was external debt, sourced from friendly governments and multi-lateral lending institutions, such as the World Bank, International Monetary Fund, and Inter-American Development Bank.

The accumulation of debt accelerated in the 1980s, facilitated as much by international geopolitics as by domestic economics. With the new American administration of Ronald Reagan rhetorically belligerent against Cold War foes, the electoral defeat of Michael Manley's democratic socialism created an opportunity for the United States to make a symbolic success of Edward Seaga's more pro-western government. As a result, American bilateral and Washington multi-lateral concessionary loan facilities were opened up to Jamaica on a greater scale. The JLP took full advantage of the opportunity to double the debt load by the mid 1980s.

CREATING THE CONDITIONS FOR BORROWING

Accessing the Global Money Market

The earlier debt episode of the 1970s and 1980s consisted largely of borrowing internationally from commercial banks and multilateral and bilateral institutions. In the mid-1970s, debt was owed mainly to external commercial banks. The debt composition began to change in the late 1970s and early 1980s as multilateral and bilateral debt came to dominate Jamaica's portfolio.¹ The period from the first agreement with the IMF in 1977 to 1991 saw the signing of no less than 18 agreements with that institution (see Appendix 1).² During this period the World Bank also became a prominent creditor as a result of a number of structural adjustment loans (SAL) and sectoral adjustment loans (SECALs) that were granted.

The 1990s' debt build-up occurred in a different international and domestic context. Domestically, the size and sophistication of the capital market increased. Internationally, the magnitude of international capital flows increased rapidly.

Markets need information, therefore a critical element of the process allowing the Jamaican government to float sovereign bonds was the provision of timely information on the fiscal accounts. Hitherto, fiscal account information appeared only after the end of the fiscal year. The Ministry of Finance began to issue monthly updates of expenditure and revenue outcomes as soon as they became available. Further, the government granted the IMF permission to publish Jamaica's Article IV assessments. And most importantly the government invited the major international ratings agencies to visit Jamaica to gather the information needed to issue ratings of Jamaica's sovereign debt.

Development of the Domestic Capital Market

The 1990s was a period of transformation for the financial sector. As a result of a range of financially repressive policies promulgated in the 1970s and 1980s, the financial sector in Jamaica had remained small relative to the size of the economy, and limited in terms of the number and type of savings and investments instruments on offer. In the presence of interest-rate ceilings and credit restrictions, financial entities largely confined their activities to collecting deposits and life insurance premiums.

¹ Jamaica also considered the possibility of financial assistance from Trinidad and Tobago, Venezuela and Cuba at this time (see Bernal, Richard (1982). *The IMF, Economic Policy and the Preservation of Dependent Capitalism in Jamaica*. Jamaica: University of the West Indies, pp. 122).

² Levitt, Kari (1991). *The Origins and Consequences of Jamaica's Debt Crisis: 1970-1990*. The Consortium School of Social Sciences, Mona, Jamaica, pp. 21.

All this changed at the turn of the 1990s. During 1990 and 1991, restrictions on lending and limits on interest rates were lifted from the commercial banking sector. Exchange controls, which had been in place since 1974, were also removed. Further financial deepening was achieved through the introduction of legislation in 1994 to allow for “primary dealers” to buy government securities. Later in the decade, the Bank of Jamaica abandoned the use of direct controls on the amount and distribution of credit in favour of open market operations as its primary instrument of monetary policy. And as a part of and a result of these changes, there was a significant increase in the issuance of new licences for financial institutions.

With the liberalization of the financial sector, the domestic capital market grew in both size and sophistication. In the period 1985 to 1987, before liberalization, the financial sector represented 6.3 percent of total economic activity. By 1994 to 1996, the sector’s share of GDP had grown to 8.2 per cent. Employment in the financial sector grew by nearly half in the six years following liberalization. Concomitant with these changes was an expansion of the range of options available to savers, who now had a broader choice of savings institutions, currencies, and risks.

The development of the domestic capital market in the mid 1990s opened up a new borrowing option to the government which was about to become severely indebted. This in turn, had two further consequences for debt accumulation. A symbiotic relationship developed between the government, placing large amounts of debt with the domestic capital market, and the financial sector, which used the government’s borrowing appetite to retail linked savings instruments to support further expansion of the sector. A second consequence of the growth of the financial sector was the comfort that a large and willing domestic capital market provided to international purchasers of the government’s hard-currency instruments, likely allowing the government to place a larger amount of foreign debt than it otherwise would have.

The development of the financial sector ultimately resulted in the country’s financial crisis in the late 1990s. However due to that experience an even stronger financial sector emerged. As a result of the lessons learnt from the financial crisis, the regulatory and legal framework is now in place to ensure adequate supervision and insurance against risks of imprudent practices in areas such as private pension schemes and security trading.³ Jamaica’s regulatory system is now considered to meet international standards. Deposit-taking financial institutions such as commercial banks, building societies and merchant banks are regulated by the Bank of Jamaica and are subject to

³ International Monetary Fund – Staff Report (Washington DC: May 2007). “Jamaica: Article IV Consultation,” IMF.

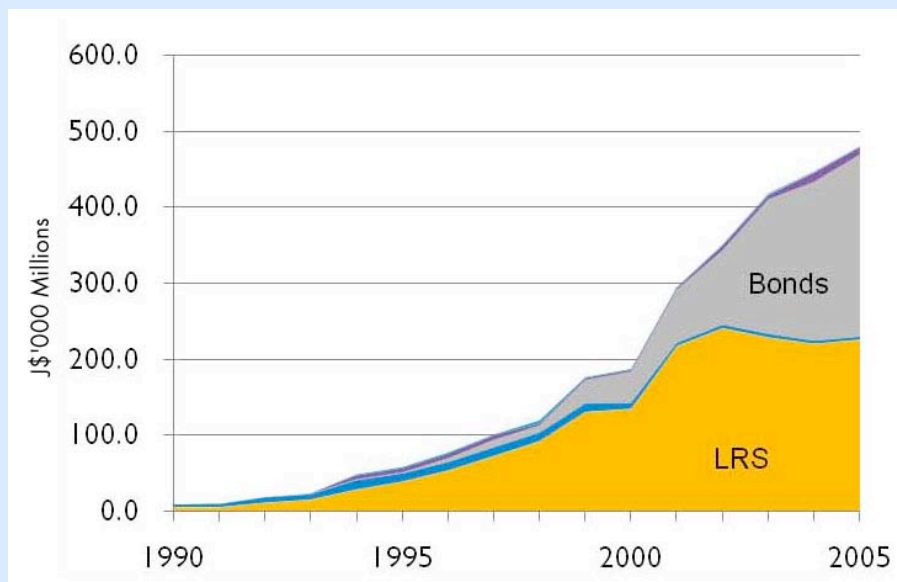
legislative acts that are enforced by the central bank. The Financial Services Commission was established in August 2001, replacing the Office of Superintendent of Insurance and the Unit Trust and the Securities Commission, and was given the mandate to regulate non-bank financial institutions. The latter include insurance companies, securities firms, pension funds and unit trusts.

THE STRUCTURE AND EVOLUTION OF THE DEBT

Several features characterize the evolution of Jamaica's current debt stock. The first is that, in contrast to previous periods, domestic debt as a percentage of GDP has accounted for an average 60 per cent of total debt since 1999. Second, the domestic debt mix comprises fixed and floating rate medium to long-term Local Registered Stocks (LRS); medium-term debentures; short-term Treasury Bills; fixed-rate foreign currency domestic bonds, indexed bonds; savings and developmental bonds and commercial loans.⁴ Figure 1 illustrates the domination

FIGURE I

Growth and Composition of Domestic Debt, 1990 – 2005



Source: Bank of Jamaica

of LRS as a proportion of domestic debt which in July 2007, accounted for approximately 42 per cent of domestic debt. The growth in LRS is due to the adoption of a market-based mechanism/a auction system that facilitated the selling of Local Registered Stocks (LRS)

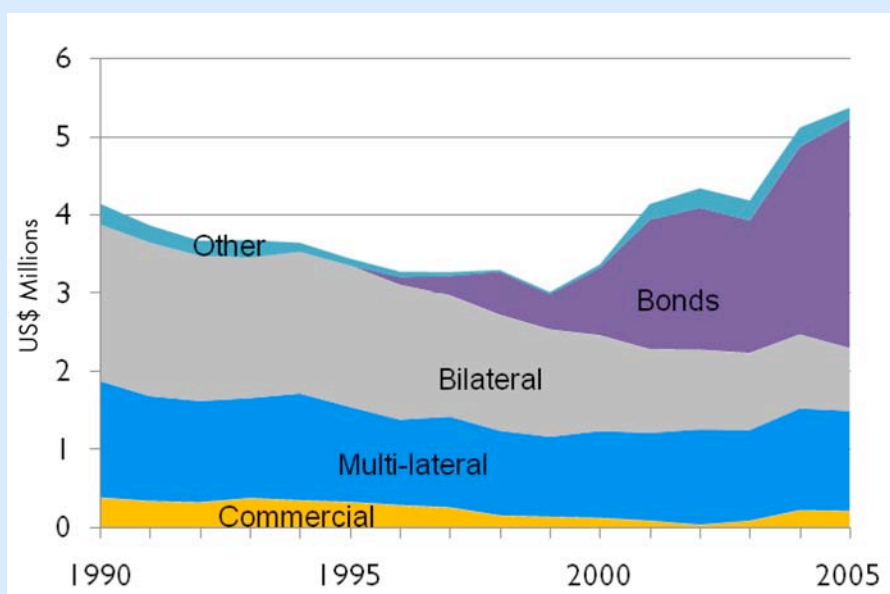
⁴ Morgan, Murna (2001). Domestic Debt Developments in Jamaica - Ministry of Finance and Planning, Jamaica.

in 1999. This led to increased competitiveness in the market for short-and long-term domestic securities and a consequent narrowing of their interest differentials.

Third, over 86 per cent of domestic debt is redeemable in local currency. Approximately 9 per cent of total domestic debt is denominated in US\$ currency, 4.6 per cent represent US\$ indexed bonds and 0.07 per cent denominated in Euro bonds.⁵

FIGURE 2

Growth and Composition of External Debt, 1990 – 2005



Source: Bank of Jamaica.

Fourth, as mentioned, the share of external debt has decreased over the last decade. Figure 2 shows the main components of the country's external debt, which generally comprises debt owed to bilateral agencies

such as OECD and non-OECD institutions; multilateral debt for IDB, IBRD and other agencies; and private creditors such as commercial banks, bondholders and other private arrangements – the majority (80 per cent) comprising fixed loans.⁶

Fifth, external debt broken down by borrower category is predominantly debt accrued by the central government (approximately 84.5 per cent). The remainder was borrowed by the Bank of Jamaica (0.02 per cent) and government guaranteed (15.45 per cent).

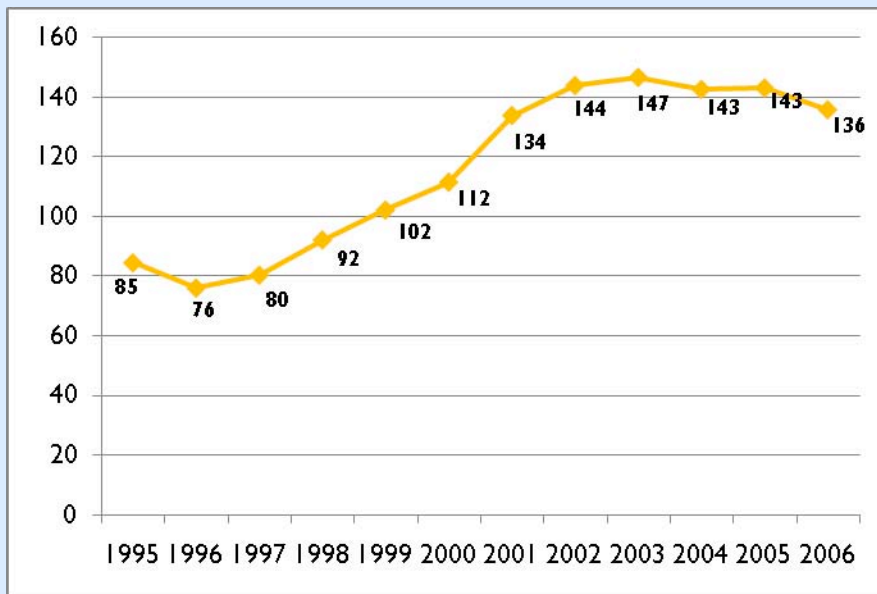
⁵ Data taken from tables generated by the Ministry of Finance and Planning - Debt Management Unit, as a July 2007. Website: <http://www.mof.gov.jm/dmu>

⁶ Ibid.

Finally, in terms of size, Jamaica's public debt levels climbed consistently between fiscal years 1996/97 and 2003/04. Figure 3 displays the evolution of the national debt as a percent of GDP. As is evident, during the latter years of financial liberalization and periods leading up to the financial crisis, the debt as a percent of GDP rose to a peak of 147 percent. Between 1996 and 2003, debt as a percent of GDP almost doubled.

FIGURE 3

Total Public Debt: Ratio to GDP



CAUSES OF DEBT GROWTH

Between 1996 and 2003, Jamaica's national debt increased by approximately 71 percentage points, with the largest annual increase, 22 percentage points, taking place in 2001. This section discusses the main factors that account for this growth of the debt stock by disaggregating annual changes in debt between any two years into the main contributing components (see Appendix 2 for technical details and Appendix 3 for a brief literature review of debt decompositions).

The debt total changes between any two periods only if new debt is acquired or the existing debt revalues (say, due to an exchange rate movement if the debt is denominated in a foreign currency). New debt, in turn, may come about either because of additional borrowing or absorption of debt from another entity. Finally, borrowing will occur whenever the government runs an overall fiscal deficit, and that fiscal imbalance may be disaggregated into the balance of capital expenditure and revenue, interest payments, and the remaining primary, recurrent balance.

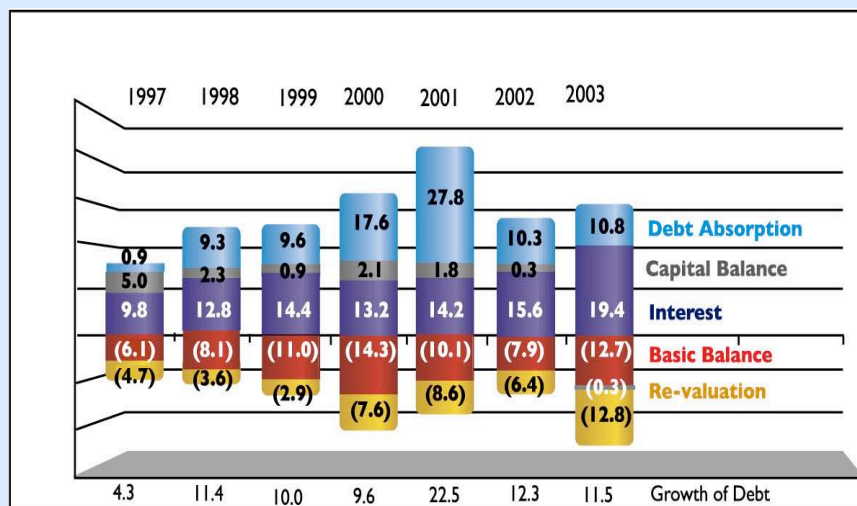
As with most national debt analysis, we use the debt-to-GDP ratio rather than the absolute level of the debt measured in currency units. The debt-to-GDP ratio is used because it more accurately reflects the relative burden of the debt than does absolute debt stock. But measurement in GDP units means that "revaluations" of the existing debt stock occurs whenever the value of GDP changes. Since a portion of the debt is denominated in Jamaican currency, whenever the value of GDP grows, due either to real GDP growth or to inflation, the valuation of the existing debt stock declines relative to GDP.

Figure 4 illustrates the results of the debt/GDP decompositions for the period from 1997 to 2003. The government accounts experienced a primary, recurrent surplus for the entire period, reflecting the fact that tax revenue exceeded expenditure on programmes and public sector salaries. This category was therefore a net contributor of fiscal resources, not a user. Further, since nominal GDP grew throughout the period at a rate that exceed the revaluation of external debt caused by exchange rate depreciation, the existing debt shrunk each year relative to GDP. So neither the primary, recurrent balance nor revaluation added to the debt load throughout the entire period. The factors that contributed to debt growth every year were borrowing to service debt, and debt absorption from outside of central government. That interest payments have had a significant impact on the country's debt dynamics has been shown by previous researchers.⁷

⁷ With the use of a VAR model, Lewis analyzed the sustainability of public debt, paying particular attention to stochastic factors such as contingent liabilities in the debt dynamics. Like his counterparts, he concentrated on a debt accumulation equation

FIGURE 4

Decomposing the Growth of the Debt, 1997 – 2003



Source: Author's calculation from Ministry of Finance data.

That the absorption of liabilities from outside of central government are the root cause of the doubling of Jamaica's debt puts Jamaica in a unique position within the Caribbean, where the six other countries that are heavily indebted all became so as a

result of fiscal slippage – the failure to generate sufficient tax revenue to cover non-interest expenditure.⁸ At the same time, the absorption of such contingent liabilities is a common cause of public debt growth in the wider Latin American region.⁹

The vast majority of the debt taken over by the central government to account for the debt growth was from Finsac Ltd, the institutional vehicle created by the government to manage the assets and liabilities of financial institutions that were nationalized as a result of the financial crisis. Table 1 details the absorption of debt from all sources. It reveals that from 1998 through 2001, Finsac accounted for most of the debt accumulation. This was due, initially, to the capitalization of interest due on the government paper that had been used to purchase the bad loans of commercial banks. The interest was eventually converted to Local Registered Stock and so became government debt. But the largest part of the debt accumulation came about in 2001 as government took over the liabilities of

involving a debt to GDP ratio (as the dependent variable), the real interest rate paid, the growth rate of GDP, the primary deficits, the exchange rate and the inflation rate. Contrary to Sahay's findings, Lewis showed that changes in both primary deficits and real interest rates make the largest contribution to the debt dynamics in Jamaica. See Jide Lewis (2004). *Sovereign Debt Sustainability in Jamaica: A Risk Management Approach*, BOJ Working Paper - Financial Stability Department in the Research and Economic Programming Division.

⁸ Sahay, Ratna (2005). "Stabilization, Debt and Fiscal Policy in the Caribbean," IMF Working Paper No. 05/26 (Washington: International Monetary Fund).

⁹ Inter-American Development Bank (2006). "How to Live with Debt," (Washington: Inter-American Development Bank Research Department).

Finsac accumulated in the rehabilitation of the financial sector entities that had been nationalized in the crisis.

There were public enterprises, other than Finsac Ltd., that contributed to the debt due to non-central government activities.

TABLE I

Public Enterprise and Para-Statal Debt Assumed by Central Government,
1996 – 2003

Year	J\$b.			% of GDP		
	Finsac	Public Enterprises	Bank of Jamaica	Finsac	Public Enterprises	Bank of Jamaica
1996	0.6	0.2	7.0	0.3	0.1	3.0
1997	0.0	0.0	4.6	0.0	0.0	1.8
1998	6.7	3.4	4.0	2.5	1.3	1.5
1999	7.9	5.8	0.0	2.7	2.0	0.0
2000	37.6	0.0	0.0	11.6	0.0	0.0
2001	81.2	1.6	0.0	22.7	0.4	0.0
2002	5.6	2.0	8.3	1.4	0.5	2.1
2003	0.0	2.8	0.9	0.0	0.6	0.2

Source: 2004/05 Budget Memorandum, Ministry of Finance and Planning, 2005.

POLICY ANALYSIS

The purpose of this section is to assess the sustainability of the present debt stock and composition. For this, we combine known information about the composition of the present debt stock with assumptions about the future path of GDP, fiscal variables, and interest rates to extrapolate borrowing requirements and therefore the evolution of debt in the future.

The exercise starts by estimating the level of interest payments for the 2008/09 fiscal year, using the level of debt disaggregated by type and the current interest rate structure. Given an estimate of nominal GDP growth and assumptions about how both recurrent and capital expenditure as well as revenue respond to changes in nominal GDP, an estimate is made of the primary fiscal balance. The aggregate of the primary balance, interest payments, and an estimate of off-budget expenditure yields the borrowing requirement for the year, which is distributed over the categories of debt according an assumption about the desired debt mix. Finally, known levels of amortization for the year are used, along with assumptions about whether to roll-over or re-structure, to determine changes to the existing debt mix. The specific assumptions are presented in Appendix 4.

TABLE 2

Debt Composition, December 2007

External	Multilateral	8.5%
	Bilateral	5.2%
	Other	2.4%
	Bonds	25.0%
Domestic	Fixed	17.9%
	Variable	35.8%
	Indexed	5.3%

Source: Ministry of Finance.

The factors most relevant to debt management and the evolution of the debt stock are the mix of types of instruments in the debt portfolio (see Table 2 for the current distribution), the fiscal balance, real economic growth, and, as we learned in the section on debt decomposition, the realization of contingent liabilities and off-budget expenditures.

The first exercise assumes a continuation of the status quo, such that the debt mix in Table 2 is the desired mix, no

improvement in compliance so that tax revenue remains at approximately 36 percent of GDP, real GDP growth continues at the 1.5 percent per year that has been the average of the recent past, and that non-central government liabilities are approximately \$14 billion per year. Under these assumption, the fiscal account drifts into balance after seven years as economic growth gradually builds up revenue while non-capital expenditure grows more slowly to exploit assumed economies of scale in public administration (Figure). With the gradually improving fiscal account and the growing level of GDP as the denominator, the debt to GDP ratio diminishes over time, falling below 80 percent in 11 years (Figure).

FIGURE 5
Fiscal Balance / GDP Ratio, Default Scenario, 2008 – 2018

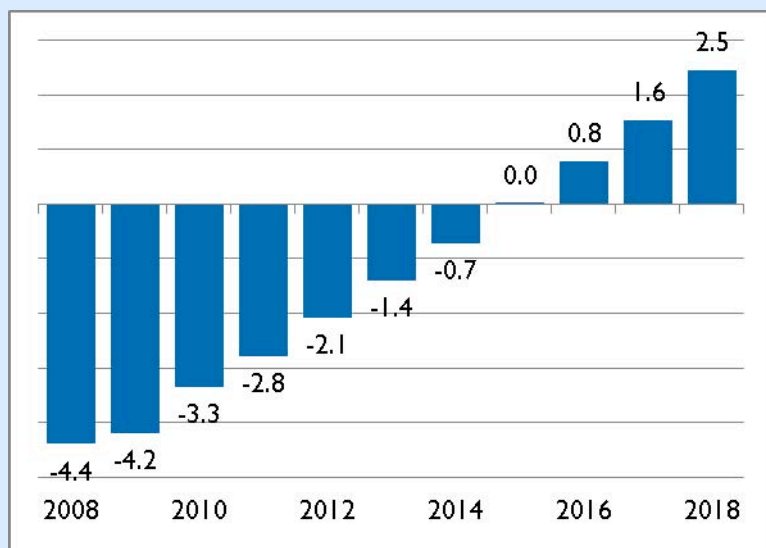
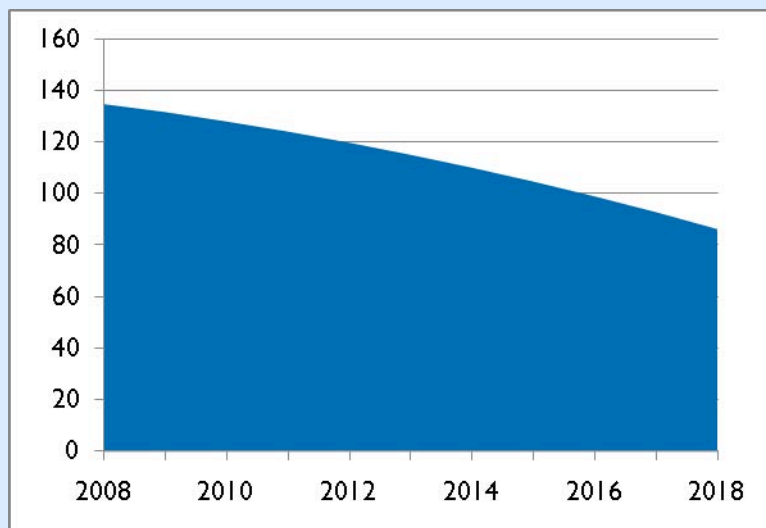


FIGURE 6
Debt/GDP Ratio, Default Scenario, 2008 – 2018



By changing our assumptions one-at-a-time and leaving all others unchanged, we may compare alternative approaches to debt management for their effectiveness in reducing the debt/GDP ratio. Neither of two exercises which change the debt mix show significantly different outcomes for the evolution of debt levels. First, increasing the share of external debt in the desired debt mix from 44 percent to 60 percent, spread evenly across external debt categories, in order to take advantage of the lower interest rates on external debt, yields slight improvements in the fiscal and debt profiles, but not sufficient to reduce the number of years to a balanced budget or a debt ratio below 80 percent.¹⁰ For the second debt mix experiment, the share of multilateral debt in the portfolio is doubled from the existing share of 8.5

percent, reducing the share of bonded debt commensurately. Again, the improvement is negligible without a reduction in the number of years needed to meet the thresholds of a balanced budget of debt below 80 percent.

¹⁰ Increasing the share of external debt in the debt portfolio, while it lowers interest cost, does come with the risk of greater exposure to exchange rate fluctuations.

Since the historical analysis above exposed the significant role that non-central government liabilities played in the growth of the debt to present levels, the path of fiscal balances and the debt stock were simulated with the assumption that no contingent liabilities were added to the public debt. This exercise produced a balanced budget a year sooner and met the debt threshold two years faster.

Tax reform has been much discussed in Jamaica over the last four years and a formal proposal has been tabled.¹¹ With the assumption that the implementation tax reform results in improved compliance with a four percent increase in revenue in the first year, rising to seven percent after five years, the simulation shows dramatic improvements in reaching the fiscal and debt targets. The assumed revenue gains balance the budget in only three years, cutting four years off the default outcome. Debt falls below 80 percent in eight years, five years earlier than expected.

The final exercise investigates the effect of economic growth. With growth in the real economy (actual production and not just price increases) of four percent in the first year rising to six percent after five years, a balanced budget is achieved after only three years and the debt ratio attains its target after only five. GDP growth not only raises the value of the denominator in the debt ratio, but also

TABLE 3

Summary of Model Simulation Results

Simulation	Years to...	
	Balanced budget	Debt/GDP < 80%
Default	7	11
Increase external share from 44% to 60%	7	11
Increase Multi-lateral share from 8.5% to 17%	7	11
Zero contingent liabilities	6	9
Tax reform yields 4 to 7 percent revenue gain	3	8
Economic growth rises to 4 to 6 percent	3	5

generates correspondingly higher tax revenue to close the fiscal deficit.

The simulation exercises, summarized in Table 3, reveal that

while the absolute savings from fiddling with the debt mix may be large given the magnitude of the debt portfolio, the improvements in the evolution of the debt path are only marginal. Noticeable improvements come from managing contingent liabilities, modest improvements in tax compliance, and mostly, with economic growth.

A suitable debt policy for Jamaica therefore consists of two important strategies which the government can easily access: tax reform and higher growth. Public

¹¹ Tax Policy Review Committee (2004). "Final Report of the Tax Policy Review Committee to Government of Jamaica," Ministry of Finance, Government of Jamaica.

debt has the power to support development if the proceeds are invested appropriately. However, a debt load retards by drawing resources from the private sector, more often than not manifested as higher interest rates.¹² Debt also heightens macroeconomic uncertainty.¹³ Finally, debt management distracts policy-makers from more constructive policy reform. The inimical effect of debt on growth is more significant where the level of debt is over a certain threshold.¹⁴ The box summarizes some of these implications for Jamaica.

Box

Debt has Implications for Development

The impact of the debt overhang is summarized in the debt-growth trap and the debt-inflation trap. The debt-growth trap is evident despite the aggressive reduction of interest rates to stimulate the economy, large public debt crowds out private sector credit and thus discourages investment. This, in turn, reduces the country's prospects for growth, perpetuating increases in public debt stock and associated interest costs.

The debt-growth trap negatively affects Jamaica in two ways. First, the large stock of public debt signifies claims on the future tax receipts and the government's borrowing ability. Implicitly, the government's future income stream is ex ante allocated to debt repayment and therefore less is allocated to the development and maintenance of infrastructure to encourage ("crowd-in") private investment. Moreover, debt does not improve the country's productive capacity when it does not finance capital investments. Secondly, high interest rates on government debt and deposits reduces the incentive for potential entrepreneurs, thus reducing the probability of growth as it makes more sense to invest in government paper than to invest in a business. There is also crowding-out of private investment through interest rate risk and credit rationing, in that public sector debt carries no risk of non-performance and no capital requirement relative to private sector debt, and thus is more attractive to financial institutions. Large firms which may have access and leverage to borrow abroad incur an exchange rate risk which becomes an additional cost to operating a business. The burgeoning public sector debt therefore limits large firms and crowds out small firms. Consequently, the financial system's stability is closely linked to the macroeconomic environment, and more specifically to domestic sovereign credit risk, due to the large take up of debt by financial institutions.

The debt-inflation trap points to the risk of monetary policy having limited effect in achieving price stability as expectations of inflation become linked to fiscal policy and fiscal

¹² Pattillo, Poirson and Ricci, 2004, "What are the channels through which external debt affects growth," IMF Working Paper 04/15, (Washington: International Monetary Fund).

¹³ Blavy, Rodolphe (2006). Public Debt and Productivity: The Difficult Quest for Growth in Jamaica. IMF Working Paper.

¹⁴ Pattillo, C., Poirson, H., and L. Ricci, 2002, "External Debt and Growth," IMF Working Paper 02/69 (Washington: International Monetary Fund).

consolidation, given the high level of debt. In other words, given Jamaica's high level of indebtedness there may exist high inflation expectations, which result in large increases in budgetary costs of non credible disinflation policy and limit sustained sterilized interventions. Consequently, a vicious cycle is created when constant increases in debt result in increased inflation expectations, which then feed back into more than proportional increases budgetary cost which destabilize debt dynamics which would again increase inflation expectations. Therefore, the ability to achieve price stability through open market instruments issued by the central bank is contingent on fiscal consolidation and other reforms to address fiscal dominance.

Sources: International Monetary Fund (2006) d. Jamaica: Selected Issues. IMF Country Report No. 06/157 and World Bank (2004). Jamaica: The Road To Sustainable Growth –Country Economic Memorandum, World Bank: Washington D.C.

CONCLUSION AND RECOMMENDATIONS

Jamaica experienced rapid debt growth in both the 1970s and 1980s. In both cases, primary fiscal shortfalls and external account deficits created a need for external borrowing to provide foreign exchange and support for public expenditure. The growth of debt in the 1990s differed from previous experiences. As has happened in many other countries that have experienced crises in domestic financial institutions on a large scale (Mexico, Thailand), the Jamaican government absorbed a large debt burden during the financial crisis. The analysis above reveals that the entire amount of the debt growth can be attributed to that event. At the same time, increased access to local and international bond markets beginning in the mid-1990s substantially increased the capacity of the government to maintain a large debt load.

The generalized lesson drawn from this experience is the danger of contingent liabilities to the public purse. A government's obligations may be either explicit, for which a contractual arrangement or budgetary promise exists, or implicit, for which moral, social, or political reasons suggest responsibility. Along another dimension, obligations may be direct, those that are known with certainty, or contingent, in which case the need for a budgetary allocation is now known in advance and depends on an uncertain event. The problem arises from implicit contingent liabilities, such as publicly-owned enterprises that may run sustained losses; private enterprises that become insolvent; and are deemed too critical to fail, and natural disasters. The financial crisis that Jamaica experienced in the late 1990s is a common and particularly expensive example of a public contingent liability.

Debt, once accumulated to the burdensome level that Jamaica now has, can become considerably worse or improved depending upon changes in interest rates. The large contribution to debt accumulation by interest payments attests to that possibility. Changes in domestic and international interest rates remain an important source of vulnerability in managing Jamaica's debt.

From the above exercises and discussion, the following recommendations are offered:

- The government must identify and monitor contingent liabilities from all sources both within the wider public sector and across the private sector. Identified contingencies should be minimized where possible or hedged against where minimization is not possible.
- Tax reform that is geared toward increased compliance should be implemented. Tax reform has gained some attention over the last four years since the publication of the Matalon Committee report. The additional revenue to be gained as a result of increased compliance is shown to substantially reduce the debt over eight years.
- Fiscal choices should be exercised in favour of economic growth. Tax reform that eliminates both variability and discretion in the application of tax rates and therefore results in a simpler tax structure will facilitate investment and promote growth. Further, a choice between pro-growth expenditure, such as on infrastructure, should be exercised ahead of debt amortization, given the underlying sustainability of the debt load.

APPENDICES

APPENDIX 1: JAMAICA'S AGREEMENTS WITH IMF, WORLD BANK, 1977-1992

Date	Agreement	Comments
July 1977	year IMF Standby	Tests failed December 1977; cancelled January 1978.
June 1978	3 year IMF Extended Fund Facility	
June 1979	EFF tests failed	Cancelled December 1979
April 1981	3 year IMF Extended Fund Facility for SDR	Amount was \$477.7 million
1982	1 st World Bank Structural Adjustment Loan	
1983	2 nd World Bank Structural Adjustment Loan	IMF test failed in March, waiver granted, failed again September and then cancelled
June 1984	1 year IMF Standby Facility for SDR 64 million. 3 rd World Bank Structural Adjustment	Tests failed; waiver granted
July 1985	22 month Standby Agreement for SDR 115 million	Test failed and it was later suspended.
1987	15 month IMF Standby Agreement for SDR 88 million and CFF for SDR 40 million	Both successfully completed.
Sep 1988	20 month IMF Standby Agreement	
1989	IMF waiver in March	Tests subsequently failed and Standby cancelled by September.
1990	15 month IMF Standby Agreement for SDR 82 million	Successfully completed
June 1991	12 month IMF Standby Agreement for DEG	
Dec 1992	3 year IMF Extended Fund Facility for DEG	

Source: Evans, Trevor, Carlos Castro and Jennifer Jones (1995). *Structural Adjustment in Central America and the Caribbean*. Managua: CRIES, pp. 109 -111.

APPENDIX 2: DEBT DECOMPOSITION

The following derivation provides a justification for the debt decomposition used in the text.

$$(1) \quad \Delta Debt = \Delta D_t + \Delta(S_t F_t)$$

D_t = domestic debt in local currency

F_t = external debt in foreign currency

S_t = nominal exchange rate, domestic currency per unit of foreign currency

The change in total indebtedness is disaggregated into domestic and external components.

$$(2) \quad \Delta \frac{Debt}{GDP} = \Delta(g_t D_t) + \Delta(s_t F_t)$$

g_t = 1/GDP

s_t = S_t /GDP_t

CP = $\lambda_t + \Delta s_t \Delta F_t$

$$= [g_t \Delta D_t + D_t \Delta g_t + \Delta g_t \Delta D_t] + [s_t \Delta F_t + F_t \Delta s_t + \Delta s_t \Delta F_t]$$

$$= [g_t \Delta D_t + s_t \Delta F_t] + [D_t \Delta g_t + F_t \Delta s_t] + CP$$

Debt and its components are expressed in units of GDP.

In the last equation above, the components are rearranged into two groups, new borrowing (the terms in ΔD and ΔF) and the re-evaluation of existing debt due to GDP growth and exchange rate movements (the terms in Δg and Δs), plus quantitatively insignificant cross-product terms.

$$(3) \quad \Delta D_t + S_t \Delta F_t = - \text{fiscal balance} + evt$$

evt = changes to the debt stock that originate outside the fiscal budget

New borrowing derives from either fiscal deficits or non-budgetary events such as “skeletons” – legacy liabilities that are brought onto the public balance sheet.

$$(4) \quad sbal = \text{fiscal balance} + int + \Delta A_t$$

int = interest payments

ΔA_t = change in the stock of publicly held assets

The structural balance (*sbal*) is the remainder after interest payments on debt and the cost/proceeds of net asset acquisition/disposal are removed from the overall fiscal balance.

$$(5) \quad \Delta D_t + S_t \Delta F_t = int + \Delta A_t - sbal + evt$$

The combination of equations (3) and (4) produces equation (5), which in GDP units yields equation (6).

$$(6) \quad g_t \Delta D_t + s_t \Delta F_t = g_t int + g_t \Delta A_t - g_t \cdot sbal + g_t \cdot evt$$

$$(7) \quad \Delta \frac{D_{sbt}}{GDP} = g_t int + g_t \Delta A_t - g_t \cdot sbal + g_t \cdot evt$$

$$(8) \quad + [D_t \Delta g_t + F_t \Delta s_t] + CP$$

Equation (7) is the combination of equations (2) and (6), and provides the decomposition used in the text. The components are, in turn, interest payments, the spending on or proceeds from asset acquisitions and privatizations, the structural fiscal balance, one-off non-budgetary adjustments, and finally, revaluations due mainly to exchange rate movements.

APPENDIX 3: A REVIEW OF THE USE OF DEBT DECOMPOSITIONS

Over the last decade, analysts have relied on varying types of decomposition techniques to identify the main causes of debt. For the period 1994-1998 Bevilaqua and Garcia (2000) examined a number of factors that could explain changes in Brazilian domestic public debt, a period within which Brazil's domestic debt grew very rapidly. This research used a decomposition technique which specifically explains the difference between the debt stock between the periods under investigation, highlighting and quantifying the contraction and expansion sources of the federal bonded debt. The first step was to calculate the change in domestic debt between the periods. This value was later broken down into three broad factors which could arguably account for this change. These were fiscal deficits, government asset accumulation and the repayment of debt. Each of these components was later adjusted based on other relevant factors that could explain their variations between the periods. For instance, the states', municipalities' and state-owned enterprises' net variation, balance sheet adjustments and privatization adjustments were later included in the fiscal debt variation. The adjustments to the asset accumulation was straight forward, while the repayment of other kinds of government debts was extended to include the Monetary Base and other factors affecting the growth in this component. The conclusions are that the main causes of domestic debt growth were mainly linked to the extremely high interest payments, which was influenced by the countries weak fiscal stance and quasi-fixed exchange rate regime, and the accumulation of public assets.

Without discounting the domestic factors that contribute to rapid growth in national debt, Helbling, Mody and Sahay (2004) decomposed the external debt of seven Commonwealth of Independent States (CIS-7) countries which had accumulated a substantial amount of multilateral debt in a short time span. Decomposing the changes in external debt meant sectionalizing this amount into those factors that could best explain its changes. The balance of payments identities formed the basis of the exercise since changes in the amount owed to external creditors must be equivalent to the sum of the trade of goods and services, the transfer balance, interest payments on existing external debt and the change in foreign exchange reserves, minus non-debt creating capital (e.g. FDI flows). Additionally, in order to determine the debt burden and the debt dynamics in real terms, the research used the ratio of external debt to GDP in US dollars. After the debt identity was determined, a formula was developed to decompose the debt ratio over several periods. All the components in the identity were reflected as cumulative annual flows or factors that explain the changes in the external debt of these countries. The findings of this exercise were that there are three main factors that contributed to the growth in external debt. These

were systemic distortions resulting from their econo-political transition, slow growth performance and over-optimism of multilateral institutions which offered more loans rather than grants.

Other researchers have concentrated on debt growth for groups of countries. One such example is Inter-American Development Bank (IDB) Research Department in 2006, which used seven Latin American economies,¹⁵ to identify factors that influenced changes in the level of debt (IDB, 2006). Adopting statistical method from Campos, Jaimovich and Panizza (2006), the IDB decomposed the growth of the debt-to-GDP ratio into five components: inflation, real GDP growth, stock flow reconciliation (unexplained component), interest expenditure and primary deficits, between 1995 and 2005. One important finding is that across countries, the stock-flow reconciliation tends to be large especially in times of crisis or just after a crisis. This stock-flow reconciliation is however a function of three other sets of variables: contingent liabilities and skeletons - a reflection of inappropriately measured past deficits that; factors associated with the resolution of banking crises and its usually high fiscal costs and thirdly, those variables which directly impact on the components of the debt such as the interaction of currency depreciations and the presence of foreign currency debt. The conclusion is that emerging economies with relatively huge amount of foreign currency denominated debt coupled with a volatile real exchange rate are prone to volatile debt to GDP ratios and debt explosions.

Other researchers looked specifically at national debt for specific countries. Fortin (1996) used a decomposition technique to explain Canadian debt. According to his research, the change in the debt-to-GDP ratio results from three components: a **structural** component that accounts for government spending and taxation programmes; a **cyclical** element that captures the gaps in economic performance due to economic performance below potential (so that spending is inordinately high or revenues are inordinately low); and a **rate** component that measures the increase in the debt-to-GDP ratio that occurs because of a gap between the growth rate of the debt and the growth rate of output. Fortin later revealed the negligible impact of fiscal spending on the debt, with cyclical changes and changes in the interest rates and growth rates accounting for 60 per cent and 40 per cent, respectively, of the change in the debt-to-GDP ratio. Government spending on social programmes, according to these results, is not a factor in rising debt patterns in the 1970s and 1980s. Instead, the main factors emanate from external economic conditions and the monetary policies of the central bank. Fortin's arguments was criticized by many monetarists such as Freedman and Macklem (1998) who pointed out major flaws in Fortin's definition of potential output and the importance of paying attention to the direction of the

¹⁵ These were: Argentina, Brazil, Chile, Colombia, Peru, Mexico and Venezuela.

change in the *level* of debt which affects interest rates. In 2000, Kneebone and Leach revised this work by using a longer time period, a different definition for potential output and the cyclically adjusted primary deficits and made corrections to the measurement error in Fortin's work. In correcting Fortin's work, they identified a "reconciliations" factor that resulted from discrepancies in the national accounts, but which Fortin included in the rate component as a measure of residual. This was later separated and used as a fourth variable in Kneebone and Leach's work. Their findings are that structural factors accounted for 30 per cent of the change in the ratio while the cyclical and rates components explained 47 percent and 24 percent of the explainable increase in the ratio (Kneebone and Leach 2000).

Sahay's (2005) analysis was a bit different from Fortin, Kneebone and Leach's. She focused on the six most indebted Caribbean countries that had debt-to GDP ratios exceeding 90 per cent at the end of 2003¹⁶, over two separate periods – 1991-1997 and 1998-2003. Like Fortin, Kneebone and Leach, however, Sahay also used the public debt- to- GDP ratio as the dependent variable but denoted each country's GDP in U.S. dollars. She also measured the accumulation of public sector debt in foreign currency (the US dollar) so that the dependent variable was the sum of foreign and domestic debt converted into a foreign currency. In her analysis she identified five main components of debt accumulation: domestic and foreign public debt with their associated interest payments, the government's primary fiscal balance, grants and a 'value' of events that does not appear in the fiscal accounts but modifies the public debt.

Her findings revealed a rise in the average public debt to GDP ratio of over 8.5 per cent annually between 1998 and 2003. Of this change in the debt-to-GDP ratio, more than half, 4.5 per cent of GDP is accounted for by the deterioration of fiscal primary balances (excluding grants) and 3.3 per cent of GDP by the net effect of interest payments and output growth. The price effect (due both to inflation and appreciation of the real exchange rates) and grants together helped to reduce the debt ratio by 3 per cent of GDP and "events" (such as the assumption of government guaranteed debt of the private sector) and measurement error explain 3.5 percent of GDP per year. As a specific case, Jamaica's rapid public debt accumulation between 1997 and 2003 was mainly affected by the sharp increase in the interest payments component and based on the findings - the sharp increase in interest costs equalled the increase in public debt to GDP ratio. On a whole, the research shows that the single most important factor contributing to the rise in the public debt to GDP ratio in all cases with the exception of Jamaica is the deteriorating primary balance.

¹⁶ These were Antigua and Barbuda, Belize, Dominica, Grenada, Jamaica and St. Kitts and Nevis – the Caribbean-6.

APPENDIX 4: ASSUMPTIONS OF THE DEBT SIMULATION MODEL

- The inflation rate is 8 percent.
- Exchange rate depreciates at the differential between Jamaican and U.S. exchange rates.
- Government revenue grows at a rate equal to the sum of the inflation rate and real GDP growth.
- Government capital expenditure also grows at a rate equal to the sum of the inflation rate and real GDP growth.
- Recurrent government expenditure grows at a rate equal to the sum of the inflation rate and half the real growth rate of GDP.
- The entire interest rate table is based on LIBOR
- The interest rate on foreign currency denominated variable-rate debt is equal to LIBOR plus a country-risk premium, which premium varies positively with the fiscal deficit/GDP ratio and the debt/GDP ratio.
- Fixed rate debt is contracted at a one percentage point premium over variable rate debt.

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