# GOVERNMENT OF JAMAICA

# MEDIUM-TERM DEBT MANAGEMENT STRATEGY FY2019/20-FY2022/23

**Ministry Paper No:**
**February 14, 2019**

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| | |
|---|---|
| **ABP** | Annual Borrowing Plan |
| **ATM** | Average Time-to-Maturity |
| **ATR** | Average Time-to-Refixing |
| **BIN** | Benchmark Investment Note |
| **BOJ** | Bank of Jamaica |
| **BOP** | Balance of Payments |
| **BPS** | Basis Points |
| **B-FXITT** | Bank of Jamaica Foreign Exchange Intervention Trading Tool |
| **CAD** | Current Account Deficit |
| **CaR** | Cost at Risk |
| **CFaR** | Cash Flow at Risk |
| **CPI** | Consumer Price Index |
| **DMB** | Debt Management Branch |
| **EM** | Emerging Market |
| **EME** | Emerging Market Economies |
| **FAA Act** | Financial Administration and Audit Act |
| **FED** | Federal Reserve Bank |
| **FFF** | Flexible Financing Facility |
| **FR** | Fixed-Rate |
| **FRAN** | Fixed-Rate Accreting Notes |
| **FRF** | Fiscal Responsibility Framework |
| **FY** | Fiscal Year |
| **FX** | Foreign Exchange |

| | |
|---|---|
| **GDP** | Gross Domestic Product |
| **GGL** | Government Guaranteed Loan |
| **GOJ** | Government of Jamaica |
| **ICM** | International Capital Market |
| **IDB** | Inter-American Development Bank |
| **IMF** | International Monetary Fund |
| **IR** | Investor Relations |
| **IRP** | Investor Relations Plan |
| **JAMAN** | Jamaica's Global Bonds |
| **JAMCLEAR-CSD** | Central Securities Depository |
| **JMD** | Jamaica Dollar |
| **JSDA** | Jamaica Securities Dealer Association |
| **JSE** | Jamaica Stock Exchange |
| **LIBOR** | London Inter-Bank Offered Rate |
| **MTDS** | Medium-Term Debt Management Strategy |
| **NIR** | Net International Reserves |
| **PBMA Act** | Public Bodies Management and Accountability Act |
| **PD** | Primary Dealer |
| **PDMA** | Public Debt Management Act |
| **PSBA** | Precautionary Standby Arrangement |
| **USD** | United States Dollar |
| **VaR** | Value at Risk |
| **VR** | Variable-Rate |

## FOREWORD

Over the years, high levels of national debt have compromised Jamaica's economic independence and impeded opportunities to accelerate the conversion and redirection of savings into investment, job creation and economic empowerment for all Jamaicans. During FY2018/19, the Government continued efforts to reverse this trend by implementing proactive debt management strategies supported by prudent fiscal and monetary reforms. This underpinned the positive performance of key macroeconomic and debt indicators, facilitating the continued downward trajectory of the debt-to-GDP ratio. The debt-to-GDP is estimated at 96.4 percent for FY2018/19, and is on track to meet the legislated target of 60.0 percent or less by FY2025/26.

The Government of Jamaica's (GOJ) Medium-term Debt Management Strategy (MTDS) FY2019/20 – FY2022/23 comprises a review and update of programmed debt targets for the medium-term. As a requirement under Section 5 of the Public Debt Management Act (PDMA), the MTDS is prepared in accordance with international best practices and aligned to the GOJ's public debt strategic priorities and policy objectives. The document represents the Government's commitment to developing and executing feasible public debt management strategies over the medium-term.

The MTDS also contains the Annual Borrowing Plan (ABP), which details the financing plans for FY2019/20. The financing strategy is inclusive of the allocations from external and domestic funding sources and the instruments that the Government plans to issue to achieve the desired composition of the debt portfolio.

The document identifies the attendant risks to the debt portfolio. To support efforts in mitigating these risks, the GOJ will continue to operationalize the strategy of borrowing mainly in the domestic market at fixed-rates across the yield curve.

The GOJ remains focused and committed to ensuring that Jamaica continues to be fiscally responsible and pursues strategies for attaining higher levels of sustainable growth. In keeping with the objective of inclusiveness and open dialogue with stakeholders, the GOJ will continue to deepen its engagement with the market through, *inter alia*, initiatives advanced through the DMB's Investor Relations Programme.

Your comments on the document are welcome at: invrelinfo@mof.gov.jm

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## ACKNOWLEDGMENTS

Public debt and public debt management are key public policy issues that, if not managed properly, can undermine the macroeconomic and financial stability of any country. The Medium-Term Debt Management Strategy (MTDS), which is aligned to the Government of Jamaica's (GOJ) strategic priorities and policy objectives, continues to play a significant role in guiding public debt operations to ensure efficiency and transparency.

The MTDS FY2019/20-FY2022/23 is formulated to enable the GOJ to satisfy its financing needs at prudent levels of risk over the medium-term. The planned activities outlined in the document reaffirm the Government's commitment to continued deepening of stakeholders' engagement in the management of the public debt.

The preparation of the document involved the technical process of utilizing an analytical toolkit to model and evaluates alternate financing scenarios from which an optimal borrowing strategy is selected for execution over the stated period.

Sincere appreciation and thanks to the DMB team for their valuable contribution and continued commitment to the preparation of the MTDS. Special thanks to: Miss Darlene Morrison, Financial Secretary; Mrs. Michele Robinson, Debt Management Consultant; World Bank and IMF consultants as well as the Public Debt Management Committee for their support, guidance and input.

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# EXECUTIVE SUMMARY

The Government of Jamaica's (GOJ) annual Medium-Term Debt Management Strategy (MTDS) is formulated in accordance with Section 5 of the Public Debt Management Act,. The MTDS FY2019/20 – FY2022/23 reviews the costs and risks of the debt portfolio relative to established targets and outlines a broad strategic approach to ensure alignment with the Government's debt management objectives. A primary objective of the medium-term debt management strategy is to raise adequate financing at the lowest possible costs and at prudent levels of risk. Another important objective of the MTDS is the further development of the domestic debt market.

The selected strategy corresponds with the current medium-term debt management strategy as it seeks to rebalance the debt portfolio towards greater reliance on domestic debt vis-à-vis external debt. The strategy also seeks to reduce the portfolio's exposure to interest rate and refinancing risks by borrowing only at fixed-rates across mainly longer tenors in the domestic market. To satisfy domestic market demand for shorter-tenor instruments, the GOJ will also issue securities with maturities of five years or less over the medium-term. Overall, the issuance strategy covers the entire yield curve and should augur well for further developing the domestic debt market.

During FY2018/19, public debt operations were conducted against the backdrop of a Jamaican economy anchored by sound fiscal and monetary policy reforms. The Government's track record of sustained high primary surpluses is expected to continue over the medium-term, and is projected at 7.0 percent of gross domestic product (GDP). Concomitantly, debt-to-GDP is expected to continue along a downward trajectory and is estimated at 96.4 percent at end-FY2018/19 and 90.9 percent at end-FY2019/20, below the target of 96.0 percent.

During the period end-March 2018 to end-December 2018, the Government enjoyed relatively favourable market conditions, whereby reductions in market and refinancing risks were realized within the context of generally lower interest costs. Government guaranteed loans (GGLs) as a percentage of GDP continued on a downward trajectory, in line to achieve the legislated target of 5.0 percent or lower for FY2021/22. During FY2019/20, the GOJ will continue to monitor the stock of GGLs to ensure the sustained reduction in the risks associated with these contingent liabilities.

The Government remains committed to supporting the continued development of the domestic debt market. In collaboration with the BOJ, significant market development initiatives were undertaken during FY2018/19, including the dematerialization of Treasury Bills, the revision of the primary dealers (PD) agreement and the upgrade of the Central Securities Depository (JamClear-CSD). During FY2019/20, the Government will, through the DMB's Investor Relations Programme, continue to deepen its engagement with the market.

# SECTION I: INTRODUCTION

The Government of Jamaica's (GOJ) Medium-Term Debt Management Strategy (MTDS) is developed within the context of the Fiscal Responsibility Framework and guided by the Public Debt Management Act (PDMA). The MTDS for FY2019/20 - FY2022/23 examines the costs and risks to the debt portfolio relative to established targets. Further, it considers alternative financing strategies, geared toward meeting the following broad strategic debt management objectives of the Government:

- Raising adequate funding to satisfy GOJ's financing needs, at the lowest possible costs and at prudent levels of risk;
- Minimizing exposure to and managing the main risks inherent in the public debt portfolio;
- Maintaining and encouraging further development of an efficient domestic debt market for GOJ securities; and
- Broadening the Government's investor base and diversifying funding sources.

During FY2018/19, the Government continued to realize improved fiscal performance and strong macroeconomic fundamentals. Consistently large primary surpluses ensured continuance of the downward trajectory in the debt-to-GDP ratio. At end-FY2018/19, the debt-to-GDP is projected to be 96.4 percent, on track to meeting the legislated target of no more than 60.0 percent by end-FY2025/26.

There were also improvements in key risk indicators as reflected in lower exposure to interest rate and refinancing risks. Though nominal exposure to foreign currency risk decreased over the review period, larger net redemptions in the domestic portfolio relative to the external portfolio contributed to a marginal increase in the share of foreign currency debt in the portfolio. The accommodative monetary policy of the Bank of Jamaica (BOJ) during the review period contributed to marginally lower annualized interest cost for the debt portfolio. The general reduction in exposure to market and refinancing risks coupled with marginally lower annualized interest costs highlighted the key successes of the Government over the review period.

Notwithstanding the improvements in the cost and risk profile of the public debt portfolio, foreign currency and refinancing risks remain significant concerns for the Government. Accordingly, the MTDS for FY2019/20 - FY2022/23, which includes the Annual Borrowing Plan and Issuance Calendar, will continue to operationalize the strategy of borrowing mainly in the domestic market, at fixed-rates across the yield curve.

The scope of the analysis covers the public debt—domestic and external—referencing the new GOJ definition. Public debt in this context includes Central Government, guarantees (external and domestic) and specified public bodies except the Bank of Jamaica, net of any cross holdings. The stock of debt used in the analytical toolkit includes Central Government and Government guaranteed loans currently serviced by GOJ.

This document is divided into eight (8) sections, including the Introduction. The remainder of the document is organized as follows: **Section II** provides a profile of the public debt stock; and **Section III** presents the cost and risk analysis for the debt portfolio. **Section IV** highlights key risk factors that affect the portfolio and estimates the portfolio's sensitivity to specific market risks. **Section V** provides a general overview of the macroeconomic environment. **Section VI** discusses the modelling and selection of the medium-term debt management strategy. **Section VII** presents the Annual Borrowing Plan and Issuance Strategy. **Section VIII** discusses key developments in the domestic debt market and the Investor Relations Programme. **Section IX** concludes the medium-term debt management strategy.

## SECTION II: PROFILE OF THE PUBLIC DEBT STOCK

Total public debt at end-December 2018 was $1,951.7 billion, a reduction of $0.5 billion compared to the $1,952.1 billion at end-March 2018. The change in the nominal value of the public debt stock was mainly driven by reductions in Central Government domestic debt and Net Public Bodies debt, which accounted for 38.5 percent and 0.4 percent of the total public debt at end-December 2018 (see **Table 1**). The stock of public debt is estimated to be $1,961.0 billion at end-March 2019.

**Table 1: Profile of the Public Debt Stock**

| | Mar-18 | | Dec-18 | | Change | |
|---|---|---|---|---|---|---|
| | J$ millions | % Total | J$ millions | % Total | J$ million | % |
| **Total Debt** | **1,952,148.7** | **100.0** | **1,951,655.7** | **100.0** | **(493.0)** | **(0.0)** |
| **Total Central Government Debt** | **1,941,710.9** | **99.5** | **1,944,074.3** | **99.6** | **2,363.4** | **0.1** |
| **Central Government Domestic Debt** | **756,864.5** | **38.8** | **752,120.9** | **38.5** | **(4,743.6)** | **(0.6)** |
| **Marketable Securities** | **754,712.6** | **38.7** | **751,867.0** | **38.5** | **(2,845.6)** | **(0.4)** |
| Bonds | 746,912.6 | 38.3 | 743,011.8 | 38.0 | (3,900.8) | (0.5) |
| Treasury Bills | 7,800.0 | 0.4 | 8,855.2 | 0.5 | 1,055.2 | 13.5 |
| **Loans** | **2,151.9** | **0.1** | **253.9** | **0.0** | **(1,898.0)** | **(88.2)** |
| Commercial Banks | 1,837.5 | 0.1 | 0.0 | 0.0 | (1,837.5) | (100.0) |
| Public Sector | 314.2 | 0.0 | 253.7 | 0.0 | (60.5) | (19.2) |
| Perpetual Annuities | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| **Central Government External Debt** | **1,184,846.4** | **60.7** | **1,191,953.3** | **61.1** | **7,106.9** | **0.6** |
| **Marketable Securities** | **725,134.5** | **37.2** | **723,927.1** | **37.1** | **(1,207.4)** | **(0.2)** |
| Bonds | 725,134.5 | 37.2 | 723,927.1 | 37.1 | (1,207.4) | (0.2) |
| **Loans** | **459,711.9** | **23.5** | **468,026.2** | **24.0** | **8,314.3** | **1.8** |
| **Bilateral** | **85,642.6** | **4.4** | **91,607.0** | **4.7** | **5,964.4** | **7.0** |
| OECD | 9,039.5 | 0.5 | 6,445.8 | 0.3 | (2,593.7) | (28.7) |
| Non-OECD | 76,603.1 | 3.9 | 85,161.2 | 4.4 | 8,558.1 | 11.2 |
| **Multilateral** | **364,444.5** | **18.7** | **371,633.7** | **19.0** | **7,189.2** | **2.0** |
| IDB | 189,310.1 | 9.7 | 200,457.0 | 10.3 | 11,146.9 | 5.9 |
| IBRD | 108,439.2 | 5.6 | 110,438.7 | 5.7 | 1,999.5 | 1.8 |
| Other | 66,695.2 | 3.4 | 60,737.0 | 3.1 | (5,958.2) | (8.9) |
| **Commercial Banks** | **9,624.8** | **0.4** | **4,785.5** | **0.2** | **(4,839.3)** | **(50.3)** |
| **Gross Public Bodies' Debt** | **363,536.8** | 18.6 | **347,748.4** | 17.8 | **(15,788.4)** | (4.3) |
| Guaranteed Loans | 121,940.4 | 6.2 | 111,458.3 | 5.7 | (10,482.1) | (8.6) |
| Loans from Central Gov't | 196,850.2 | 10.1 | 176,136.6 | 9.0 | (20,713.6) | (10.5) |
| Non-Guaranteed Loans | 44,746.2 | 2.3 | 60,153.5 | 3.1 | 15,407.3 | 34.4 |
| **Net Public Bodies** | **10,437.8** | **0.5** | **7,581.4** | **0.4** | **(2,856.4)** | **(27.4)** |
| Investments with GOJ | 156,248.9 | 8.0 | 164,030.3 | 8.4 | 7,781.4 | 5.0 |

Source: Ministry of Finance and the Public Service (MoFPS).

## 2.1 Central Government Debt

Total Central Government debt at end-December 2018 was $1,944.1 billion, $2.4 billion or 0.1 percent more than the $1,941.7 billion recorded at end-March 2018. The increase was entirely driven by the external portfolio, which rose from $1,184.8 billion at end-March 2018 to $1,192.0 billion at end-December 2018, an increase of $7.1 billion or 0.6 percent. This increase was largely due to the depreciation in the Jamaica dollar relative to the US dollar, as the stock of Central Government external debt in US dollar terms decreased by approximately US$71.8 million. Central Government external debt is projected to be $1,211.2 billion at end-March 2019.

The increase in the external portfolio was partially offset by a reduction in the domestic portfolio from $756.9 billion at end-March 2018 to $752.1 billion at end-December 2018. This decrease was mainly due to net outflows from large amortizations of Benchmark Investment Notes (BINs). A reduction in outstanding loans of $1.9 billion or 88.2 percent also contributed to the lower domestic debt and was only partially offset by an increase in Treasury bill issuances throughout the review period. Central Government domestic debt is projected to be $746.2 billion at end-March 2019.

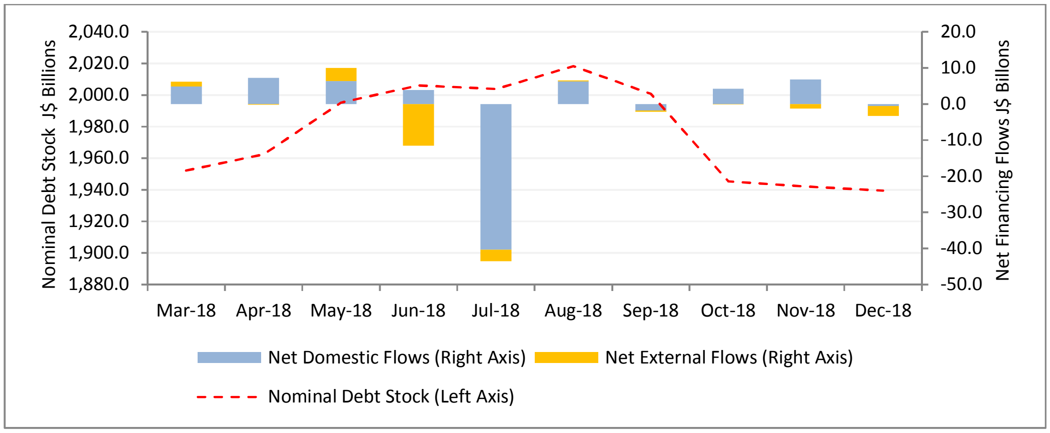
## 2.2 Non-Central Government Debt

The Non-Central Government sector comprises public bodies that have not been certified by the Auditor General as primarily carrying out functions of a commercial nature. Gross public bodies' (PBs) debt at end-December 2018 of $347.7 billion was 4.3 percent less than the $363.5 billion recorded at end-March 2018. This decrease was attributed to a reduction of $20.7 billion and $10.5 billion in the stock of loans from the Central Government and in the Government guaranteed debt, respectively. However, this was offset by an increase in non-guaranteed loans by $15.4 billion. Net PBs debt at end-December 2018 of $7.6 billion was $2.9 billion or 27.4 percent lower than the $10.4 billion recorded at end-March 2018. This decrease was driven by reductions in the stock of guaranteed loans and loans from Central Government as well as an increase in PBs investments in GOJ securities. The relative change in the composition of the gross public bodies' debt highlights a reduction in the Government's direct exposure to credit default risks from public bodies. Net PBs debt is projected to be $3.6 billion at end-March 2019.

## 2.3 Public Debt Trajectory

**Figure 1** illustrates the net financing flows for the Central Government domestic and external debt portfolios and highlights the trajectory of the stock of total public debt from end-March 2018 to end-December 2018. During the first nine months of FY2018/19, the financing activities of the GOJ reflected a deliberate attempt to reduce net financing inflows. Large principal repayments of $11.4 billion for JAMAN global bonds in June 2018 and $58.4 billion for a variable-rate benchmark investment note (BIN) in the domestic market in July 2018 contributed to net financing outflows of $23.6 billion between April 2018 and December 2018. Over the review period, net outflows from the Central Government domestic and external debt portfolios were $8.0 billion and $15.6 billion, respectively. However, the depreciation of the Jamaica dollar relative to the US dollar resulted in a net increase in Central Government debt by $2.4 billion or 0.1 percent.

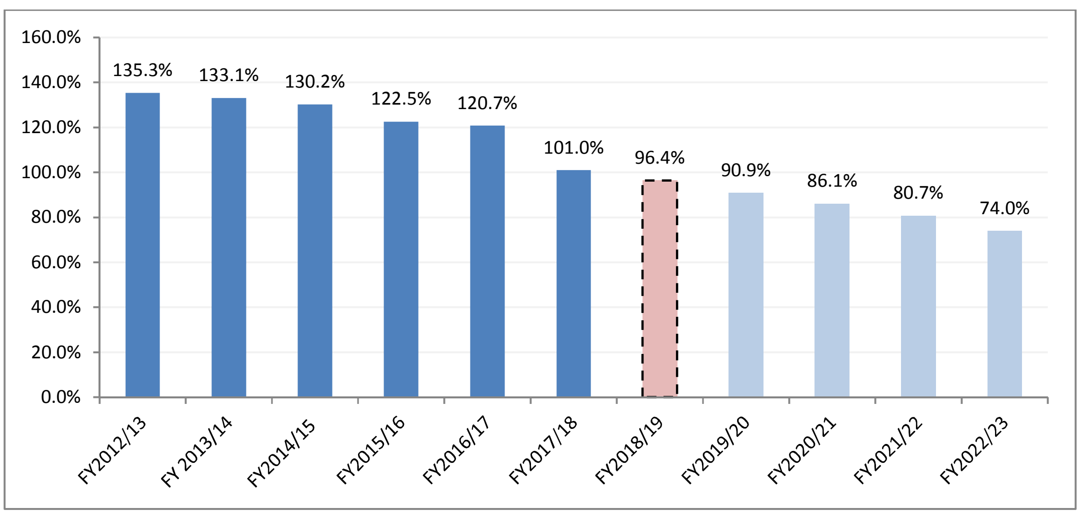
**Figure 1: Net Financing Flows and Trajectory of Public Debt**




Source: Ministry of Finance and the Public Service (MoFPS)

Strong fiscal discipline and prudent debt management contributed to the reduction in the debt-to-GDP from 135.3 percent in FY2012/13 to 101.0 percent in FY2017/18. The trajectory has maintained a steady decline and is estimated to be 96.4 percent at end-FY2018/19 and 90.9 percent at end-FY2019/20, 5.1 percent below the internal target of 96.0 percent. Based on the current trajectory, the Government is on track to meet the debt-to-GDP target of 60.0 percent or less by end-FY2025/26 (see **Figure 2).**

**Figure 2: Debt-to-GDP Trajectory**




Note: Dark blue bars represent the actual outturn and light blue bars are projections through FY2023/24
Source: Ministry of Finance and the Public Service (MoFPS)

## SECTION III: COST AND RISK ANALYSIS

Paramount to the effective management of the public debt is ensuring an appropriate balance between the relative costs and risks in the public debt portfolio. The MTDS provides a diagnostic framework through which cost and risk assessments of alternative financing strategies are conducted. While cognizant of the varied risks to the debt portfolio, the MTDS focuses on the quantification and management of market and refinancing risks.

Market risks relate to changes in macroeconomic or financial variables that impact the debt portfolio, either through valuation effects or debt service costs. The main market risks are exchange rate, interest rate, and inflation risks. The public debt portfolio continues to be significantly exposed to foreign currency risk. Given the current trajectory of interest rates in the external and domestic markets and considering the monetary policy dynamics at play, there are potential upside risks to interest costs over the medium-term. Inflation risks are subdued due to low exposure and low and stable inflation expectations over the medium-term.

**Table 2** compares key cost and risk indicators for the debt portfolio at end-March 2018 and end-December 2018, relative to established medium-term targets. Overall, the key cost and risk indicators remained consistent with the medium-term targets and were generally improved compared to end-March 2018. Foreign currency risk continues to be the main risk in the debt portfolio and increased marginally between end-March 2018 and end-December 2018. Net outflows of variable-rate (VR) debt from the domestic portfolio reduced the portfolio's exposure to interest rate variability. Compared to end-March 2018, interest rate risk indicators at end-December 2018 fell within the targeted range. Refinancing risk was also reduced over the review period, with general improvements in specific indicators for the domestic and external portfolios.

**Table 2: Public Debt Cost and Risk Indicators**

| | Outcomes | | Change | Targets end-March 2020 | |
|---|---|---|---|---|---|
| | Mar-18 | Dec-18 | | Min | Max |
| **Implied Annual Interest Cost** | | | | | |
| Domestic | 7.0 | 6.2 | (0.8) | - | - |
| External | 5.5 | 5.8 | 0.3 | - | - |
| Total | 6.1 | 6.0 | (0.1) | - | - |
| **Interest Rate Risk** | | | | | |
| Domestic | | | | | |
| Variable Rate Debt (%) | 44.5 | 37.7 | (6.8) | 28 | 30 |
| Debt Refixing in 1 year (% of total) | 45.3 | 44.3 | (1.0) | - | - |
| Average Time to Refixing (Years) | 7.3 | 7.9 | 0.6 | - | - |
| External | | | | | |
| Variable Rate Debt (%) | 28.0 | 28.9 | 0.9 | 35 | 40 |
| Debt Refixing in 1 year (% of total) | 29.1 | 28.4 | (0.7) | - | - |
| Average Time to Refixing (Years) | 9.5 | 9.5 | (0.0) | - | - |
| Total | | | | | |
| Variable Rate Debt (%) | 35.7 | 32.2 | (3.5) | 30 | 33 |
| Debt Refixing in 1 year (% of total) | 35.4 | 34.6 | (0.8) | - | - |
| Average Time to Refixing (Years) | 8.3 | 8.9 | 0.6 | - | - |
| **Refinancing Risk** | | | | | |
| Domestic | | | | | |
| Debt maturing in 1 year (% of total) | 9.0 | 7.7 | (1.3) | - | - |
| ATM (Years) | 9.7 | 10.3 | 0.6 | - | - |
| External | | | | | |
| Debt maturing in 1 yr (% of total) | 0.5 | 1.2 | 0.7 | - | - |
| ATM (Years) | 11.8 | 11.9 | 0.1 | - | - |
| Total | | | | | |
| Debt Maturing in 1 yr (% of total) | 3.7 | 3.6 | (0.1) | - | <=10.0 |
| ATM (Years) | 11.0 | 11.3 | 0.3 | >=9.0 | - |
| **Foreign Currency (FX) Risk** | | | | | |
| FX debt as (% of total debt) | 61.0 | 61.9 | 0.9 | 61.0 | 65.0 |
| **Contingent Liabilities** | | | | | |
| Guaranteed Loans (% of GDP) | 6.3 | 5.5 | (0.8) | - | <=5.0 |

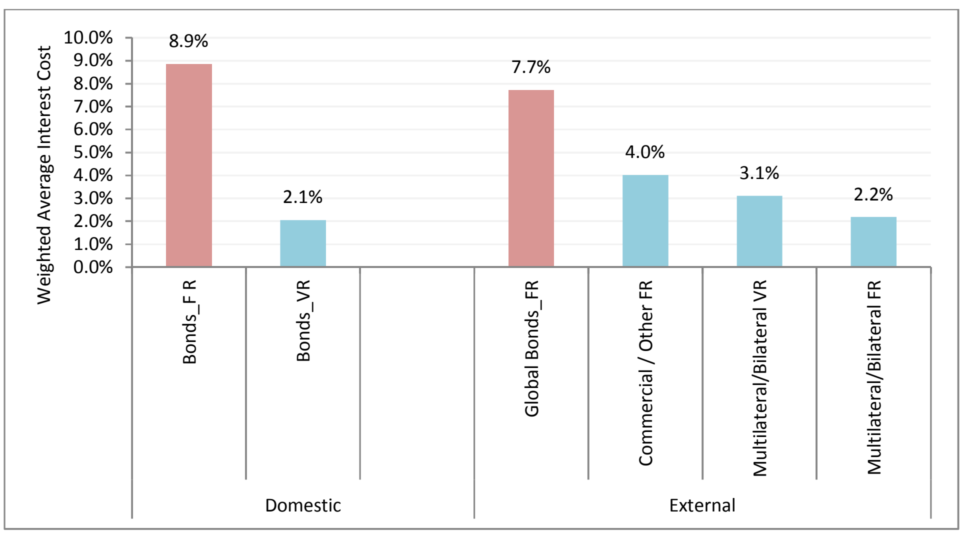
Source: Ministry of Finance and the Public Service (MoFPS)

## 3.1 Interest Cost

At end-December 2018, the weighted average implied annual interest cost of 6.0 percent for Central Government debt was marginally lower than the 6.1 percent recorded at end-March 2018. Whereas tighter financing conditions in the international market contributed to slightly higher interest costs for the external portfolio, the opposite was true for the domestic portfolio, where the weighted average implied interest cost decreased from an estimated 7.0 percent at end-March 2018 to 6.2 percent at end-December 2018 (see **Table 2**). The relative change in interest cost largely reflects the impact of the accommodative monetary policy stance of the Bank of Jamaica (BOJ) vis-à-vis monetary policy tightening in advanced economies during the review period.

Domestic fixed-rate bonds were the main cost drivers in the portfolio, with an average annual interest cost of 8.9 percent. This compared to the estimated average annual cost on variable-rate domestic bonds of 2.1 percent at end-December 2018 (see **Figure 3**). Global fixed-rate bonds are the next most expensive instrument category with an annual average cost of 7.7 percent. The annual average interest cost on multilateral/bilateral variable-rate and fixed-rate debt were 3.1 percent and 2.2 percent, respectively. Notably, the estimated cost on multilateral/bilateral variable-rate debt was higher than that on comparable fixed-rate instruments, a trend that could persist if US monetary policy tightening continues.

**Figure 3: Weighted Average Implied Interest Costs by Instruments**



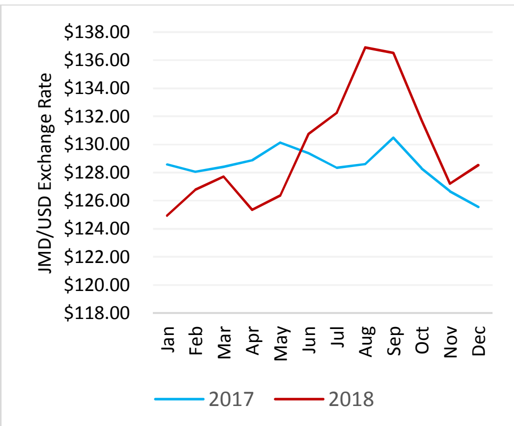

Source: Ministry of Finance and the Public Service (MoFPS).

## 3.2 Foreign Currency Risk

Foreign currency risk relates to changes in the exchange rate between the Jamaica dollar and foreign currencies, whereby the degree of the impact is determined by the change in prices as well as the level of exposure. A depreciation of the Jamaica dollar relative to foreign currencies will increase the debt stock valuation as well as debt service costs in Jamaica dollar terms, in respect of foreign currency-denominated debt.

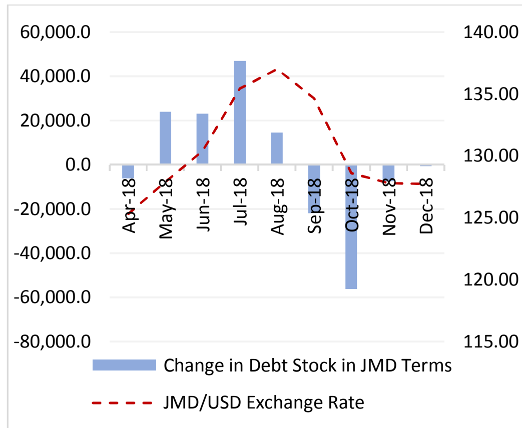
Following reforms in the foreign exchange market, including the implementation of Bank of Jamaica Foreign Exchange Intervention Trading Tool (B-FXITT), exchange rate movements essentially reflect market demand and supply, with limited participation by the central bank. Consequently, the exchange rate is currently experiencing two-way (up and down) movement relative to benchmark currencies. As highlighted in **Figure 4,** there was increased volatility in the average monthly JMD/USD exchange rate for the calendar year (CY) 2018 compared to the previous calendar year. The Jamaica dollar depreciated by approximately 2.9 percent relative to its US counterpart in CY 2018, compared to an appreciation of 1.3 percent for CY 2017.

**Figure 4: Average Monthly JMD/USD Exchange Rate**




Source: Bank of Jamaica (BOJ).

**Figure 5: Monthly Valuation Effects from Exchange Rate Changes**




Notes: Net financing in millions on the left axis and the JMD/USD exchange rate on the right axis.
Source: Ministry of Finance and the Public Service (MoFPS).

As shown in **Figure 5**, depreciation of the exchange rate from May 2018 through to August 2018 contributed to an increase in the stock of external debt in Jamaica dollar terms. However, subsequent appreciation of the Jamaica dollar since September 2018 significantly moderated the increase in the stock of external debt that occurred during the first half of the fiscal year.

Notwithstanding a reduction in the nominal stock of foreign currency denominated debt of US$71.8 million, the depreciation over the period end-March 2018 to end-December 2018 contributed to a net increase in foreign currency debt in Jamaica dollar terms. Although there was general improvement in key portfolio risk indicators, the share of foreign currency debt in total Central Government debt increased marginally from 61.0 percent at end-March 2018 to 61.9 percent at end-December 2018 (see **Table 2**).

Given the relatively high level of exposure to foreign currency risk, the GOJ will seek to advance de-dollarization strategies to reduce the exposure.[1] Active consideration is being

[1] The de-dollarization strategies are targeted at reducing the US dollar component of the portfolio in favour of local currency.

given to utilizing the currency conversion option in the loans contracted from the Inter-American Development Bank (IDB) through its Flexible Financing Facility (FFF). Other de-dollarization strategies under consideration include possible swaps or buy back arrangements targeting GOJ global bonds.

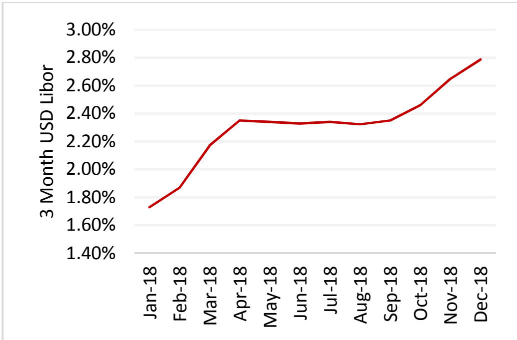
## 3.3 Interest Rate Risk

Interest rate risk measures the portfolio's exposure to changes in market interest rates. Adverse movements in interest rates can increase debt service costs for variable-rate debt and will also have implications for the cost of rolling over near-to-maturity fixed-rate debt.

**Figure 6** and **Figure 7** highlight the trajectory of benchmark interest rates over the period January 2018 to December 2018 in the external and domestic markets, respectively.[2] The trend in external and domestic benchmark interest rates reflects the divergent monetary policies of the Federal Reserve Bank (FED) and the BOJ over the period. The continued strengthening of the US economy supported the FED's decision to increase the federal funds rate four times during CY 2018, resulting in a cumulative increase of 100 basis points. Concomitantly, US Libor increased by approximately 119 basis points over the same period. The BOJ continued monetary easing, reducing its policy rate four times from 3.00 percent in January 2018 to 1.75 percent at end-December 2018. This supported the downward trend in T-Bill rates which continued through the first half of FY2018/19, with the 3-month benchmark rate achieving a minimum of 1.71 percent in September 2018, before increasing to 2.05 percent in December 2018, representing a 213 basis points reduction compared to March 2018.

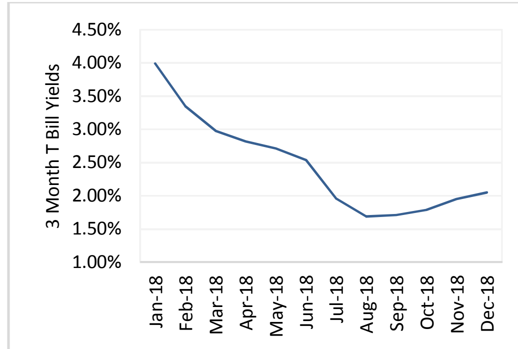
[2] The 91-days or 3-month T-bill serves as the reference rate for domestic market securities and the 3-month US dollar Libor serves as the reference rate for external debt.

**Figure 6: 3-Month Libor Rate**




Source: Federal Reserve Bank of St. Louis

**Figure 7: 3 - Month Treasury Bill Yields**




Source: Ministry of Finance and the Public Service (MoFPS)

Interest rate risk remains relatively moderate with variable-rate debt representing 32.2 percent of the portfolio at end-December 2018, 3.5 percentage points less than end-March 2018 and within the target range of 30.0 percent to 33.0 percent for the medium-term. The reduction in exposure to interest rate risk was mainly driven by the domestic portfolio, where the variable-rate component fell by 6.8 percentage points to 37.7 percent at end-December 2018 from 44.5 percent at end-March 2018. There was a marginal increase in exposure in the external portfolio, where the share of variable-rate debt increased by 0.9 percentage point to 28.9 percent at end-December 2018 from 28.0 percent at end-March 2018.

Complementary indicators of interest rate risks include the share of debt re-fixing within one year and average time to re-fixing (ATR). The share of debt re-fixing within one year measures the proportion of the portfolio that will be subject to new interest rates within a year. The ATR measures the average time it takes for the underlying interest rate in the debt portfolio to reset.

The share of Central Government debt re-fixing within one year or less decreased by 0.8 percentage point from 35.4 percent at end-March 2018 to 34.6 percent at end-December 2018. This was driven by improvements in both the external and domestic portfolios. The ATR for Central Government debt increased by 0.6 years from 8.3 years at end-March 2018 to 8.9 years at end-December 2018. This was driven by an increase in the domestic portfolio by 0.6 years. Overall, there was a reduction in exposure to interest rate risk, which can be attributed to the Government's strategy of borrowing at primarily fixed-rates over longer tenors in both the external and domestic markets.

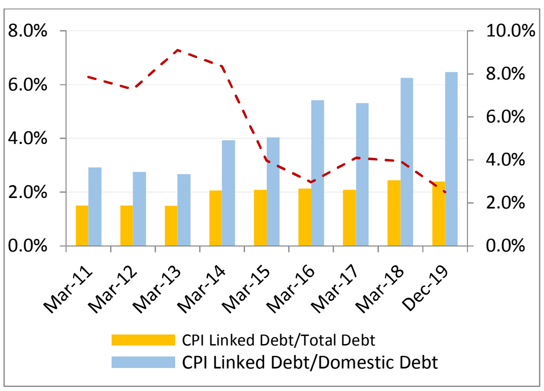
## 3.4 Inflation Risk

Inflation-linked debt instruments are attractive to potential investors in a context of high and unpredictable inflation. Upward movements in the inflation rate will increase the nominal value of inflation-linked debt, thereby preserving value for the investor but increasing the costs to the GOJ. The extent of the impact will depend on the inflation rate and the portfolio's exposure. Inflation-linked bonds are only in the domestic portfolio.

At end-December 2018, 6.6 percent and 2.4 percent of the domestic and total public debt, respectively was inflation-linked (see **Figure 8**). This is an increase of 0.2 percentage point and 0.1 percentage point over the outturn at end-March 2018. This was due to revaluation effects, in line with movements in the CPI and net redemptions in non-inflation linked debt over the review period.

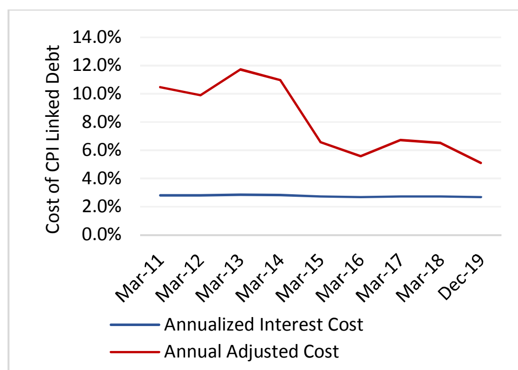
Inflation has been relatively low and stable over the last few years. Annual point-to-point inflation at end-December 2018 was 2.4 percent compared to 3.9 percent at end-March 2018. In the low-inflation environment, the implied annualized average interest cost on Inflation-linked debt instruments have been relatively low compared to comparable fixed-rate BINs and was approximately 2.7 percent at end-December 2018 (see **Figure 9**). However, the annualized adjusted cost on Inflation-linked debt instruments are higher (though decreasing over the last 6 years) and were estimated at approximately 5.1 percent at end-December 2018, down from 6.5 percent at end-March 2018.

**Figure 8: Share of Inflation-Linked Debt in Public Debt**




Notes: The share of CPI-linked debt in total and domestic debt can be read from the left axis and the annual-point-to-point inflation is read from the right
Source: Ministry of Finance and the Public Service and Statistical Institute of Jamaica (STATIN).

**Figure 9: Annual Adjusted Cost on Inflation-Linked Debt**

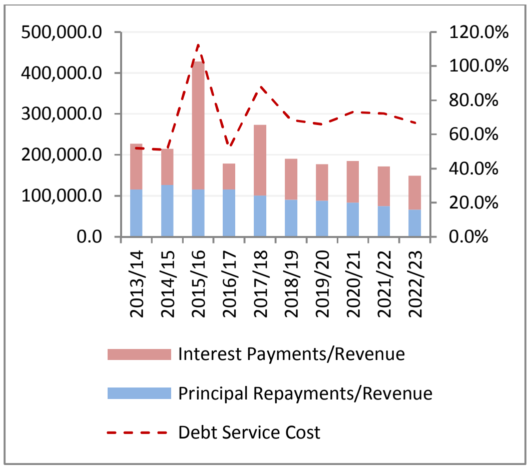



Source: Ministry of Finance and the Public Service (MoFPS) and Statistical Institute of Jamaica (STATIN).

## 3.5 Debt Vulnerability Indicators

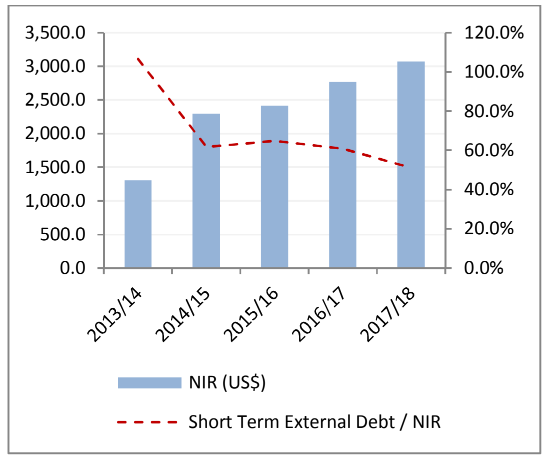
The financial crises over recent years have highlighted the significance of sound debt and liquidity management practices in minimizing the fallout from external shocks. The above assessment of market risks for the debt portfolio does not give an indication of the Government's ability to withstand these shocks. Debt service to revenues is an indicator of the Government's ability to honour its debt service obligations. As highlighted in **Figure 10,** total debt service as a share of revenue and grants is estimated at 45.8 percent for end-FY 2018/19, down from 65.5 percent in FY2017/18. The projected reduction in this ratio over the medium-term implies improved capacity on the part of the Government to meet its debt service obligations. Short-term external debt to reserves is an indicator of a country's external vulnerability. Strong Net International Reserves (NIR) (and export earnings) can help to mitigate the potential fallout from external shocks. The increase in the NIR since FY2013/14 contributed to a reduction in the portfolio's external vulnerability as reflected in the fall in the share of short-term external debt to NIR (see **Figure 11**).

**Figure 10: Debt-Service-to-Revenues**




Notes: Figure shows total debt service cost in $millions on the left axis and interest and principal payments as a share of revenue on the right axis
Source: Ministry of Finance and the Public Service (MoFPS).

**Figure 11: Short Term External Debt-to-NIR**




Notes: Figure shows NIR in US$ Millions on the left axis and short term debt-to-NIR on the right axis.
Source: Ministry of Finance and the Public Service (MoFPS).

## 3.6 Refinancing Risk

Refinancing risk is the probability that debt will have to be refinanced at unfavourable terms, or in extreme cases cannot be refinanced at all. Refinancing risk is measured by assessing: the share of debt maturing in one year or less; the average-time-to-maturity (ATM) of the debt portfolio; and the maturity profile to identify the concentration of debt maturing within a given period.

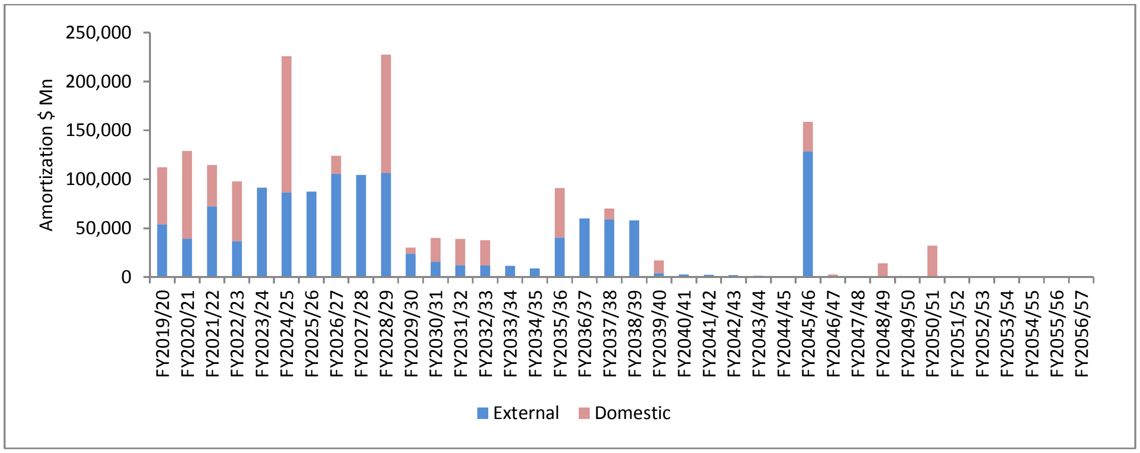
The share of debt maturing in one year or less gives an indication of the immediate refinancing risk in the debt portfolio. At end-December 2018, the share of debt maturing in one year or less was 3.6 percent, a decrease of 0.1 percentage point when compared to end-March 2018, but well within the upper limit of 10.0 percent. This decrease was entirely attributable to a 1.3 percentage point reduction in the domestic portfolio which was partially offset by a 0.7 percentage point increase in the external portfolio.

The average-time-to-maturity (ATM) measures how long it takes on average to roll over the debt portfolio. The ATM for the total debt portfolio increased marginally from 11.0 years at end-March 2018 to 11.3 years at end-December 2018. This was mainly driven by an increase in the ATM for the domestic portfolio from 9.7 years at end-March 2018 to 10.3 years at end-December 2018. The ATM for the external portfolio increased from 11.8 years to 11.9

years over the review period. The Government's financing strategy of issuing longer-tenor debt contributed to the increase in the portfolio's ATM over the review period.

Despite the improved ATM, Figure 10 highlights significant bunching in the portfolio. The bunching is predominant in FY2024/25 and FY2028/29, attributed to large maturities of the $91.9 billion Variable-Rate Step-Up BIN and the Fixed-Rate Accreting Investment Notes (FRAN) with current outstanding amount of $121.2 billion. Given the existing redemption profile, the GOJ will continue to pursue strategies to smooth and extend the maturity profile.

**Figure 12: Redemption Profile of Public Debt at end-December 2018**




Source: The Ministry of Finance and the Public Service (MoFPS).

## 3.7 Contingent Liability – Government Guaranteed Loans

Contingent liabilities are a major source of fiscal risk. Government guaranteed loans (**GGLs**) are explicit contingent liabilities that if called or assumed by the Government will directly impact the Central Government debt service costs. **Table 3** highlights the stock of GGLs and the external and domestic components at end-March 2018 and end-December 2018. GGLs at end-December 2018 were $111.5 billion, a reduction of $10.4 billion or 8.5 percent when compared to end-March 2018. This reduction was due to a 10.8 percent or $9.3 billion decrease in the external portfolio, and was attributable to scheduled amortizations and the early redemption of existing guarantees. Domestic GGLs decreased by 3.1 percent to $34.4 billion at end-December 2018 compared to $35.5 billion at end-March 2018.

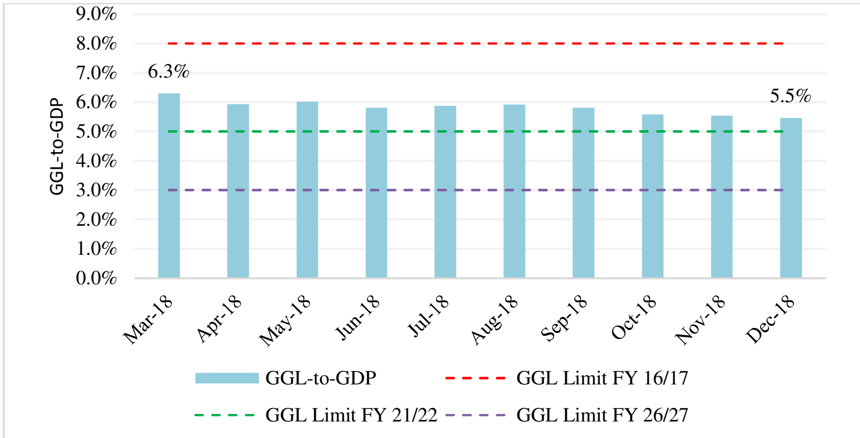
**Table 3: Government Guaranteed Loans end-December 2018**

| | Mar-18 | | Dec-18 | | Change | |
|---|---|---|---|---|---|---|
| | J$Bn | % of Total | J$Bn | % of Total | J$Bn | % |
| External GGLs | 86.4 | 70.9 | 77.1 | 69.1 | (9.3) | (10.8) |
| Domestic GGLs | 35.5 | 29.1 | 34.4 | 30.9 | (1.1) | (3.1) |
| Total | 121.9 | | 111.5 | | (10.4) | (8.5) |

Source: The Ministry of Finance and the Public Service (MoFPS)

The Public Debt Management Act (**PDMA**)) mandates that the GGL-to-GDP ratio be maintained within legislated targets.[3] As highlighted in **Figure 13**, GGL-to-GDP has been on a downward trajectory. At end-December 2018, GGL-to-GDP is estimated at 5.5 percent, approximately 0.5 percentage point above the legislated ceiling for FY2021/22.

**Figure 13: GGL-to-GDP**




Source: Ministry of Finance and the Public Service (MoFPS).

[3] The PDMA limits the GGL-to-GDP to 8.0 percent, 5.0 percent and 3.0 percent for end-FY 2016/17, end-FY 2021/22 and end-FY 2026/27, respectively.

## SECTION IV: RISK FACTORS AFFECTING THE DEBT PORTFOLIO

Adverse changes in underlying macroeconomic and market variables can negatively impact the fiscal and debt dynamics. The risk to the portfolio will depend on the likelihood of occurrence and the fiscal or financial impact of the change. **Figure 14** highlights selected risk factors, their likelihood of occurrence and their potential impact on the debt portfolio.

**Figure 14: Selected Risks and Implications for the Debt Portfolio**

| Likelihood of Event \ Fiscal Impact | Low | Moderate | Major |
|---|---|---|---|
| Low | **Government Guaranteed Loans (GGLs):** GGLs are a potential fiscal risk to the Government. The impact on the debt will depend on the probability that a GGL will be called or assumed by the GOJ and the value of the guarantee. Consistent with the legislated limits as per the PDMA, the GOJ has been reducing its exposure to risks from GGLs. Accordingly, the share of GGLs to GDP has been decreasing and is estimated at 5.5 percent at December 2018, only 0.5 percentage point above the legislated target for FY2021/22. | **Fiscal Management:** Weak institutional frameworks in many developing economies precipitate unsustainable and irresponsible fiscal and monetary policies by country governments. This has led to fiscal slippage, economic contractions and ballooning public debt across these countries. However, implementation of structural and economic reforms in Jamaica has resulted in stronger fiscal and monetary policy institutions. Further, the improved macroeconomic conditions in Jamaica suggest that the potential fallout from poor policies may have a moderate impact on the debt portfolio in the short run. | **Financial Crises:** Financial crises can have significant negative effects on the economy and the sovereign debt. The financial crisis in Jamaica is estimated to have cost upwards of 40 percent of GDP. However the adoption of stronger financial regulations and best practices reduces the likelihood of a reoccurrence. |
| Moderate | **Public Private Partnerships (PPPs):** The use of PPPs as a modality to mobilize investment, particularly in infrastructure development and energy and water generation are common in many developing economies. These types of arrangements impose potentially significant fiscal risks if not properly managed and monitored. The GOJ's PPP Policy provides a framework to support the monitoring of PPPs in Jamaica. PPPs are adjudged to pose minimal risk to the debt portfolio at this point in time. However their growing popularity suggests increasing risks from PPPs over the medium term. | **Shocks in Commodity Prices:** Adverse shocks in commodity prices, especially oil prices, can have major effects on the government's BOP and overall fiscal accounts. Though potentially large on the fiscal, the pass through to the debt portfolio is expected to be more moderate. The thrust towards energy diversification - achieving a 50-50 mix by 2030, will reduce Jamaica's vulnerabilities to oil price shocks over the medium to long term. The advancement of the Government's Energy Management and Efficiency Project will also aid in reducing costs in the short-term. | **Natural Disasters:** Natural disasters (floods, hurricane and earthquakes) pose significant fiscal risks to the GOJ. The annual average fiscal cost associated with hydrogeological events is estimated at 0.85 percent of GDP but has been as high as 26 percent of GDP. The adoption of a suite of disaster risk finance instruments including indemnity type insurance coverage and contingent lines of credit will aid in reducing the fiscal impact of natural disasters. |
| High | | **Low Growth and High Crime Rates:** High rates of crime pose a significant risk to prospects for improvements in productivity and economic growth. Some estimates of the direct impact of crime on the health system are as high as $12.0 billion. Higher crime related expenditures will also impact the budget directly. Low rates of economic growth (GDP) will impact the fiscal through low revenue generation and potentially higher demand for social spending, which could lead to increases in Government borrowing. However, an increased focus on crime fighting and strong and improving macroeconomic fundamentals support projections for economic growth of 2 percent over the medium-term. | **Market Volatility:** Volatility in macroeconomic and market variables can result in higher debt service costs and stock valuation. Estimates of the 95 percent VaR and CaR for the debt portfolio suggest possible maximum expected losses of over $300.0 billion. Ongoing reforms of the BOJ, including the move toward an independent central bank and the adoption of an inflation targeting regime could aid in the stabilization or reduction in the volatility of domestic market rates thereby reducing the risks to the debt portfolio. |

| Likelihood \ Fiscal Impact | Low | Moderate | Major |
|---|---|---|---|
| Low | | | |
| Moderate | | | |
| High | | | |

Notes: The risks to the debt portfolio are ranked based on the severity of outcome and probability of the event. High probability and high impact events are the most impactful and are coded in red. Low probability and low impact events are the least impactful and are coded green. Yellow and brown highlights more moderate and major risks to the debt portfolio.

**Table 4** highlights the sensitivity of the debt portfolio to changes in key macroeconomic and market variables. A one percent depreciation in the Jamaica dollar relative to the US dollar will increase the debt stock in Jamaica dollar terms by an estimated $12.3 billion and interest payments by $741.6 million, an overall increase in adjusted debt service costs of approximately $13.0 billion. The portfolio is also sensitive to variability in interest rates. A 100 basis points increase in external and domestic benchmark interest rates will increase debt service costs by an estimated $3.5 billion and $3.4 billion, respectively. Compared to exchange rate and interest rate movements, changes in the CPI have a much smaller impact on the debt portfolio. A one percent increase in the CPI is estimated to increase the debt stock by $367.0 million with an associated increase in interest payments of $9.6 million, an overall increase in adjusted debt service costs of $376.6 million. Static estimates of the effect of contemporaneous changes in the exchange rate, interest rate and inflation rate suggest that an increase of between one percent and five percent in all three variables will increase adjusted debt service costs by between $20.3 billion and $101.3 billion or 0.9 percent and 4.7 percent of GDP.

**Table 4: Changes in Market Variables and Adjusted Debt Service Costs**

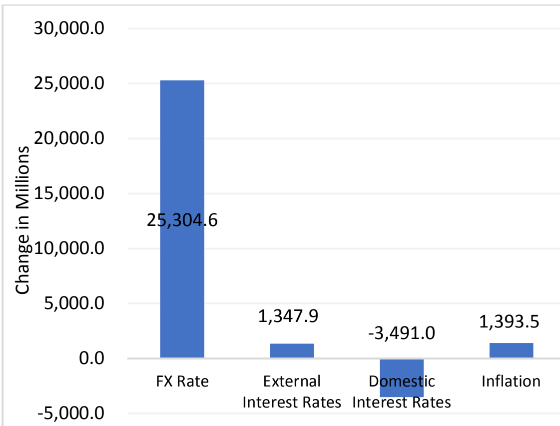
| | Change in Macroeconomic Variables | | |
|---|---|---|---|
| | **1.0%** | **3.0%** | **5.0%** |
| | | J$ Millions | |
| **Foreign Exchange Depreciation** | | | |
| Effect on Debt Stock | 12,276.6 | 36,829.8 | 61,383.0 |
| Effect on Interest Cost | 741.6 | 2,224.8 | 3,708.1 |
| **Total** | **13,018.2** | **39,054.7** | **65,091.1** |
| **Total (% of GDP)** | **0.6%** | **1.8%** | **3.0%** |
| **Increase in Benchmark Interest Rates** | | | |
| Domestic | 3,491.0 | 10,473.0 | 17,455.0 |
| External | 3,369.7 | 10,109.1 | 16,848.5 |
| **Total** | **6,860.7** | **20,582.1** | **34,303.5** |
| **Total (% of GDP)** | **0.3%** | **1.0%** | **1.6%** |
| **Inflation Rate** | | | |
| Effect on Debt Stock | 367.0 | 1,101.1 | 1,835.1 |
| Effect on Interest Cost | 9.6 | 28.7 | 47.9 |
| **Total** | **376.6** | **1,129.8** | **1,883.0** |
| **Total (% of GDP)** | **0.0%** | **0.1%** | **0.1%** |
| **Aggregated Effects** | | | |
| **Total** | **20,255.5** | **60,766.6** | **101,277.7** |
| **Total (% GDP)** | **0.9%** | **2.8%** | **4.7%** |

Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 15** summarizes the results from the comparative static simulations, based on the movements in the key macroeconomic and market variables over the period end-March 2018 to end-December 2018. Notwithstanding the variability in exchange rate movements during the period, point-to-point depreciation was only 1.9 percent. This resulted in an overall increase in adjusted debt service costs of approximately $25.0 billion. The reduction in benchmark interest rates in the domestic market by approximately 91 basis points between

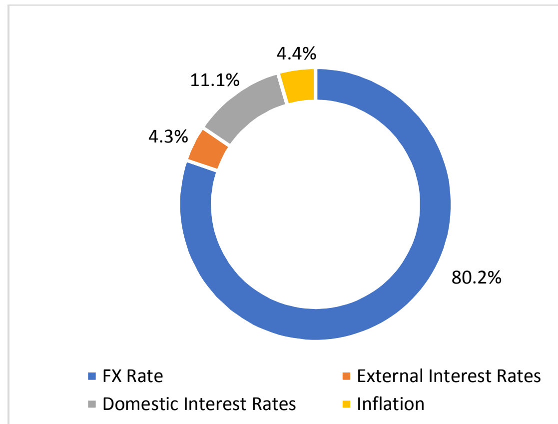
March 2018 and December 2018 lowers annual debt service costs by approximately $3.1 billion. Inflation of 3.5 percent and a marginal increase in the external benchmark interest rates by 44 basis points over the period increase annual adjusted debt service cost and annual interest cost by $1.4 billion and $1.3 billion, respectively. **Figure 16** highlights the impact on the portfolio from changes in the respective variables between March 2018 and December 2018 and confirms the higher sensitivity to foreign currency risk, relative to interest rate and inflation risks.

**Figure 15: Portfolio Effect from Changes in Macroeconomic and Market Variables**




Notes: Estimates based on the change in macroeconomic and market variables between March 2018 and December 2018.
Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 16: Portfolio Sensitivity to Changes in Macroeconomic Variable**

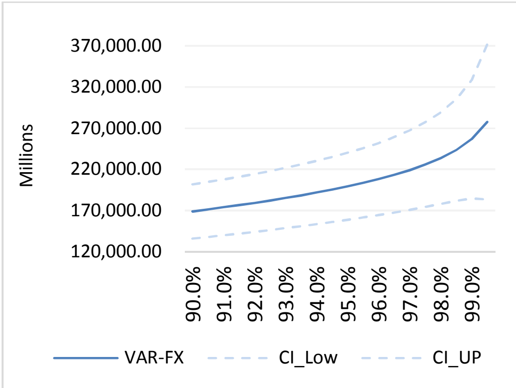



Notes: Estimates based on the change in macroeconomic and market variables between March 2018 and December 2018.
Source: Ministry of Finance and the Public Service (MoFPS)

## 4.1 Value at Risk (VaR) and Cost at Risk (CaR) Estimates

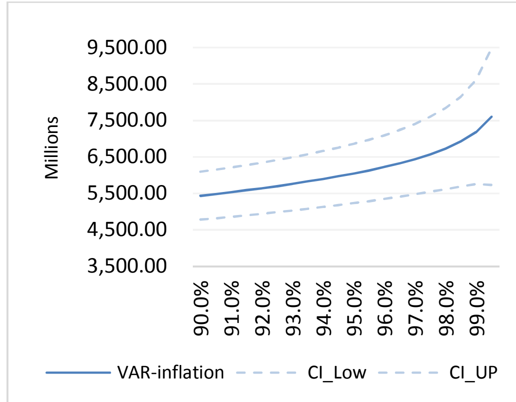
The static estimates in **Table 4** do not necessarily consider historical realizations of changes in the macroeconomic and market variables when estimating the potential impact on the debt portfolio. **Figures 17 - 20** give value at risk (VaR) and cost at risk (CaR) estimates associated with changes in the respective variables, using data for the last 20 years. VaR and CaR estimates the maximum year-on-year change in the value and costs of the debt portfolio, associated with historical changes in respective macroeconomic and market variables over a specific period. VaR estimates for the exchange rate and inflation rate suggest that there is a five percent chance that changes in the respective variables will result in increases in the value of the debt stock by more than $200.0 billion (**see Figure 17**) and $10.0 billion (**see Figure 18**), respectively. CaR estimates for changes in benchmark interest rates in the domestic and external markets suggest that there is a five percent chance that changes in the 3-month Libor and 3-month T-Bill will increase debt service costs by more than $9.0 billion (**see Figure 19**) and $17.0 billion (**see Figure 20**), respectively.

**Figure 17: VaR JMD/USD Exchange Rate**



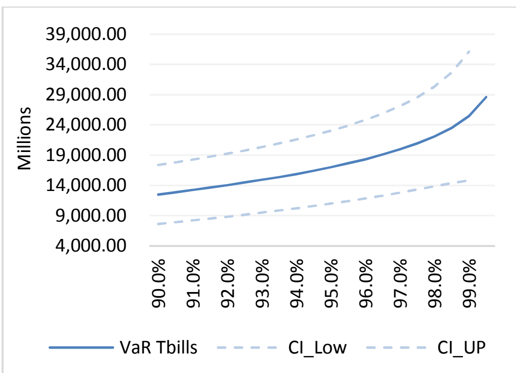

Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 18: VaR Inflation Rate**



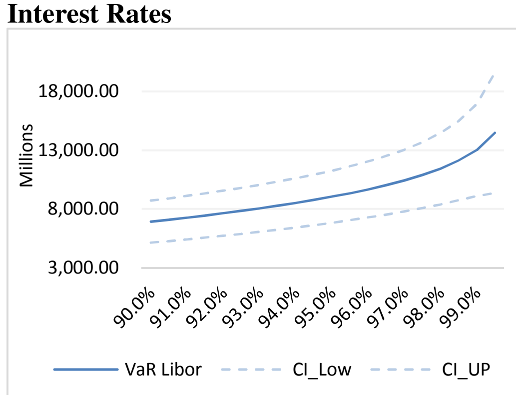

Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 19: CaR Domestic Benchmark Interest Rate**




Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 20: CaR External Benchmark Interest Rates**

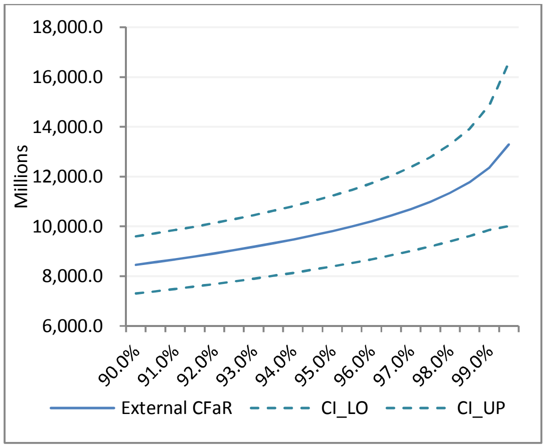



Source: Ministry of Finance and the Public Service (MoFPS)

## 4.2 Cash Flow at Risk (CFaR) Estimates for FY 2019/20

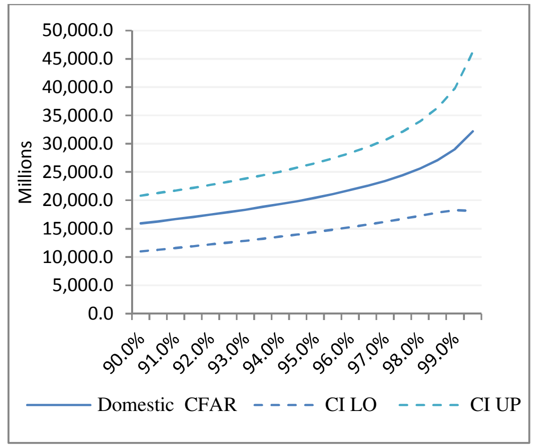
The management of debt service cash flows is integral to the debt operations of the Government. Cash Flow at Risk (CFaR) estimates the maximum increase over expected debt service costs for a given period, based on historic realizations of market variables. **Figure 21** and **Figure 22** estimate the CFaR for FY2019/20 for the external and domestic portfolios, respectively. The CFaR for the domestic portfolio is estimated at $20.5 billion, $10.6 billion higher than the CFaR for the external portfolio. The relatively higher CFaR for the domestic portfolio is due to larger variability in Treasury Bill (T-Bill) rates compared to the USD Libor over the sample period.

**Figure 21: CFaR for the External Portfolio**




Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 22: CFaR for the Domestic Portfolio**

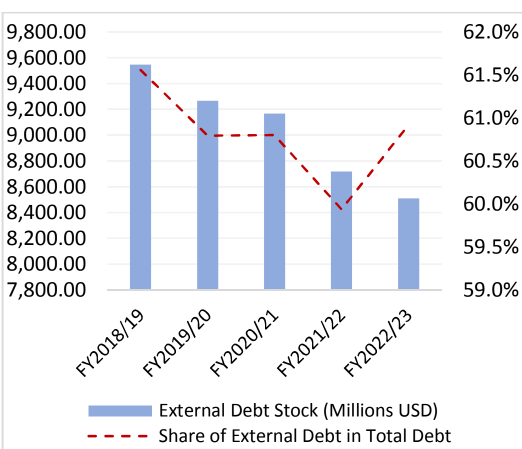



Source: Ministry of Finance and the Public Service (MoFPS)

## 4.3 Dynamic Simulations of Changes in key Macroeconomic Variables

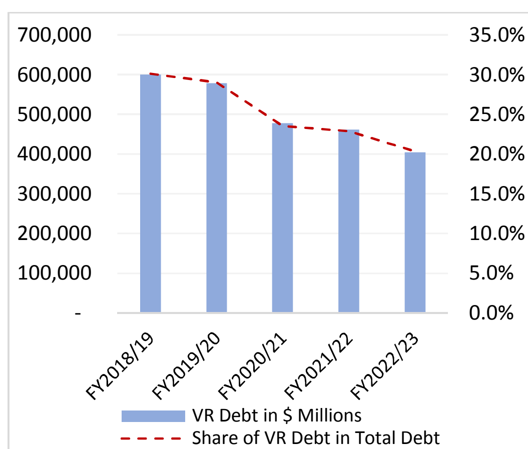
Given the relative sensitivities to changes in the respective macroeconomic variables, the current medium-term debt management strategy prioritizes the rebalancing of the debt portfolio towards domestic fixed-rate debt. **Figure 23** and **Figure 24** highlight dynamic changes in the foreign currency and interest rate exposure under the current strategy. The nominal value of foreign currency debt is projected to decrease by approximately US$1.0 billion or 10.8 percent over the medium-term. This reduction will save the Government an estimated $14.3 billion on an adjusted cost basis. Under the current strategy, the nominal value as well as the share of variable rate debt is decreasing over the medium-term, therefore reducing the portfolio's sensitivity to interest rate risk.

**Figure 23: Change in Foreign Currency Debt over the Medium-Term**




Notes: Figure shows foreign currency debt in billions of USD on the left axis and share of foreign currency debt in total debt on the right axis.
Source: Ministry of Finance and the Public Service (MoFPS).

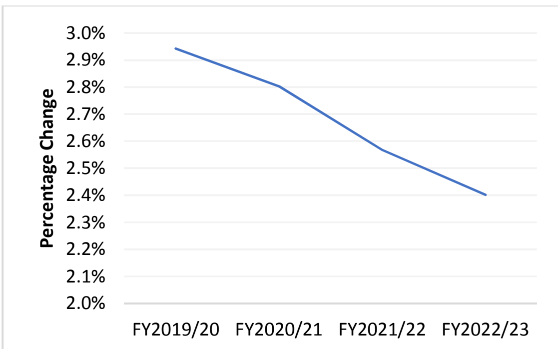
**Figure 24: Change in Variable-Rate Debt over the Medium-Term**




Notes: Figure shows variable debt in millions of JMD on left axis and share of variable rate debt in total debt on the right axis.
Source: Ministry of Finance and the Public Service (MoFPS).

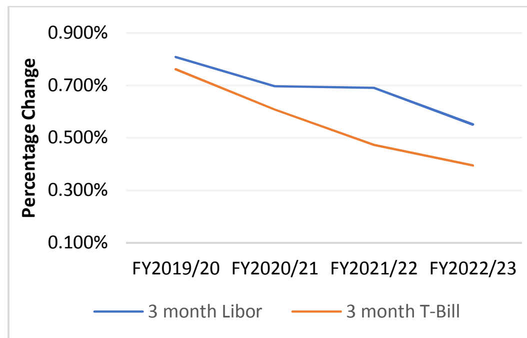
**Figures 25** and **26** highlight the results from dynamic simulations of the effects on the debt portfolio from changes in the key macroeconomic and market variables. The simulations assume a five percent and a 500 basis point change in the exchange rate and interest rates, respectively. Further, the simulations also assume that the Government will continue with its current financing strategy—majority domestic financing at fixed-rates across the yield curve–over the medium-term. Overall, the portfolio's sensitivity to changes in the exchange rate and interest rates are expected to decrease over the medium-term. The active strategy to borrow mostly from the domestic market and at fixed-rates contributed to the relatively larger reduction in interest rate sensitivity in the domestic portfolio relative to the external portfolio.

**Figure 25: Effect of FX Change on Debt-to-GDP**




Notes: Simulation assumes a 5.0 percent depreciation in the Jamaica dollar relative to the US dollar.
Source: Ministry of Finance and the Public Service

**Figure 26: Effect of Change in Benchmark Rates on Interest Cost as a share of GDP**




Notes: Simulations assume a 500 basis point increase in domestic and external benchmark interest rates.
Source: Ministry of Finance and the Public Service

## SECTION V: MACROECONOMIC OVERVIEW

Growth in the global economy was moderate during 2018 due to, *inter alia*, growing geopolitical tensions, a slowdown in international trade, tighter financing conditions and lower rates of investment in both advanced and emerging market economies (EMEs). Looming uncertainties surrounding the possible escalation of geopolitical tensions and financial market stress stymied investor sentiment and softened growth prospects for 2019.

A major risk for emerging market economies (EMEs) in the current financial environment is the increased tightening of credit conditions arising from the acceleration of monetary policy normalization across advanced economies. During the review period, the tightening of monetary policy in advanced economies triggered capital outflows from EMEs which adversely impacted equity prices and currencies, while significantly raising borrowing costs and reducing monetary policy space.

While there was generally more tepid demand for emerging market assets during the review period, country-specific characteristics influenced the performance of individual EM sovereigns in the international capital markets. Continued strengthening of Jamaica's macroeconomic environment, supported by sustained improvement in the fiscal accounts and advances in monetary policy effectiveness, contributed to the strong performance of Jamaica's global bonds (JAMAN) compared to other regional economies.

Jamaica's economic performance was buoyed by continued macroeconomic stability, anchored by sound fiscal and monetary policy reforms under the International Monetary Fund Precautionary Standby Arrangement (PSBA). It is expected that all quantitative fiscal and monetary performance targets under the PSBA, except for the inflation target, will be met through to December 2018.

Strong revenue performance and more measured expenditure growth contributed to a fiscal surplus of 0.5 percent of GDP in FY2017/18. A fiscal surplus of 0.3 percent of GDP is projected for FY2018/19 with a gradual increase over the medium-term to 2.3 percent in FY2022/23. Strict adherence to a primary balance target of 7.0 percent of GDP over the medium-term will ensure continuance of the downward trajectory in the debt-to-GDP consistent with the legislated target of no more than 60.0 percent by end-March 2026.

At end-December 2018, the All Jamaica Consumer Price Index was at 254.7, bringing the calendar year inflation rate to 2.4 percent. The lower inflation was influenced by an increase in supplies of agricultural produce, as well as a reduction in the prices of petrol and electricity, sewage and water rates. Inflation for FY2018/19 is projected at 3.7 percent and is expected to average between 4.0 and 6.0 percent over the medium-term, within with the BOJ's target band.

Continued improvement in the current account of the Balance of Payments (BOP) reflected in a reduction of the current account deficit (CAD) to 2.6 percent of GDP at end-September

2018 from 2.9 percent recorded at end-September 2017. The CAD is projected to improve over the medium-term. The net international reserves (NIR) declined by US$110.4 million from US$3,137.1 million at end-September 2017 to US$3,026.7 million at end-September 2018. Further weakening of the NIR is projected through end-March 2019, with subsequent strengthening over the medium-term.

Growth in the Jamaican economy continues to be subdued by structural obstacles, including crime, bureaucratic processes and uncompetitive labor force. In FY2017/18, the economy grew by 0.9 percent, reflecting an improvement in net external demand, augmented by increases in investment and private consumption. Improvement in the goods-producing industries made the largest contribution to real GDP growth, particularly increases in the production of the mining and bauxite sector. Improvement in the hotel and restaurant industry also contributed to the economic expansion. Growth is expected to increase over the medium-term, leveling off at 2.0 percent up to FY2022/23.

**Table 5: Medium-term Macroeconomic Profile**

| | 2017/18 Actual | 2018/19 Proj. | 2019/20 Proj. | 2020/21 Proj. | 2021/22 Proj. | 2022/23 Proj. |
|---|---|---|---|---|---|---|
| Nominal GDP (J$bn) | 1,933.0 | 2,034.2 | 2,156.2 | 2,319.7 | 2,482.0 | 2,658.7 |
| Nominal GDP growth rate (%) | 8.1 | 5.2 | 6.0 | 7.6 | 7.0 | 7.1 |
| Real GDP growth rate (%) | 0.9 | 1.8 | 1.5 | 2.6 | 2.0 | 2.0 |
| Inflation: Annual Pt to Pt (%) | 3.9 | 3.7 | 4.3 | 5.0 | 5.0 | 5.0 |
| Interest Rates: | | | | | | |
| 90-day Treasure Bill (average) | 4.72 | | | | | |
| 30-day CD Rate (average) | 3.99 | | | | | |
| Fiscal Balance (% GDP) | 0.5 | 0.3 | 0.7 | 1.0 | 1.8 | 2.3 |
| Primary Balance (% GDP) | 7.4 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Average Selling Exchange Rate (J$=US$1) | 127.97 | | | | | |
| NIR (US$mn) | 3,074.5 | 2,914.1 | 3,044.9 | 3,133.6 | 3,266.0 | 3,530.6 |
| Gross International Reserves (in weeks of imports) | 24.5 | 23.3 | 22.2 | 21.8 | 21.3 | 21.8 |
| Current Account (%GDP) | -3.0 | -2.5 | -1.5 | -2.0 | -1.7 | -1.6 |
| Oil Prices (WTI) (Average US$/barrell) | 53.7 | 62.0 | 54.9 | 57.8 | 58.5 | 59.2 |

Source: Ministry of Finance and the Public Service (MoFPS)

## SECTION VI: MODELLING OF THE MEDIUM-TERM DEBT MANAGEMENT STRATEGY

Quantitative modelling of the cost and risks for alternative financing strategies is done using the IMF/World Bank Medium-Term Debt Strategy (MTDS) Toolkit. The stock of debt used in this analysis includes Central Government debt and Government guaranteed loans currently being serviced by the Government. The period of analysis spans four years from FY2019/20 - FY2022/23.

### 6.1 Baseline Assumptions and Exogenous Shock Scenarios

The MTDS is based on a set of assumptions regarding the trajectory of key macroeconomic and market variables over the medium-term. Additionally, stress tests were conducted whereby exogenous shocks were applied to the baseline exchange rate and interest rate assumptions in order to gauge the sensitivity of the portfolio to changes in market variables for the respective strategies. Four shock scenarios were examined as follows:

- **Scenario 1** represents an extreme shock to the exchange rate and assumes 30.0 percent depreciation in the Jamaica Dollar/US Dollar exchange rate in year two;
- **Scenario 2** is an extreme shock to interest rates and assumes 2.0, 4.0 and 2.5 percentage points increase in interest rates across the entire yield curve for multilateral/bilateral loans, global bonds and domestic issuances, respectively;
- **Scenario 3** is a moderate interest rate shock and applies similarly to **Scenario 2**, but is half the size; and
- **Scenario 4** combines a moderate exchange rate shock of 15.0 percent in year two with the moderate interest rate shock described under **Scenario 3**.[4]

[4] All shocks are applied as additive adjustments to baseline assumptions for interest and exchange rates.

## 6.2 Medium-Term Targets

Given the gross financing requirement of the Government and the baseline assumptions and possible shock scenarios, specific quantitative targets for key risk indicators have been established in **Table 6**.

**Table 6: Medium-Term Debt Targets**

| Risk Indicators | Targets | |
|---|---|---|
| | End-Mar 2020 | End-Mar 2023 |
| **Nominal Debt as % of GDP** | **<=96.0** | **<=75.0** |
| **Refinancing Risk** | | |
| Average Time to Maturity (ATM - years) | >=9 | >=9 |
| Share Maturing within one year (%) | <=10 | <=10 |
| **Interest rate risk** | | |
| Domestic | | |
| Share Variable Rate (%) | 30.0 | 30.0 |
| Debt Refixing in 1 year (%) | 40.0 | 35.0 |
| Average Time to Refixing (ATR - years) | 8.0 | 10.0 |
| External | | |
| Share Variable Rate (%) | 30.0 | 30.0 |
| Debt Refixing in 1 year (%) | 30.0 | 25.0 |
| Average Time to Refixing (ATR - years) | 8.0 | 10.0 |
| Total | | |
| Share Variable Rate (%) | 30.0 | 30.0 |
| Debt Refixing in 1 year (%) | 35.0 | 30.0 |
| Average Time to Refixing (ATR - years) | 8.0 | 10.0 |
| **Foreign Currency Risk** | | |
| Share of Foreign Currency Debt (%) | <=62.0 | <=58.0 |

Source: Ministry of Finance and the Public Service (MoFPS)

**Foreign Currency Risk:** The share of foreign currency debt in total debt is targeted at no more than 62.0 percent by end-March 2020 and 58.0 percent by end-March 2023. The ideal strategy should successfully rebalance the portfolio towards local currency at the rate implied by the established targets. Greater reliance on domestic market financing vis-a-vis external financing and/or the switching or refinancing of external debt through local currency issuances are critical to achieving this objective.

**Interest Rate Risk:** Variable-rate debt is targeted to be no more than 30.0 percent of domestic, external and total debt over the medium-term. The achievement of these targets is consistent with a strategy of refinancing maturing debt with fixed-rate issuances.

**Refinancing Risk:** Debt maturing in one year or less is expected to be no more than 10.0 percent over the medium-term. To achieve this target, the Government will focus on issuing longer-tenor instruments in order to avoid further bunching over the medium-term. Additionally, the Government will continue its strategy of executing opportunistic liability management operations to smooth and extend the existing maturity profile with a view to ensuring that the established target for the ATM of nine years or more is maintained.

## 6.3 Financing Strategies

The Medium-Term Debt Management Strategy Analytical Toolkit provides a diagnostic framework through which alternative financing strategies are evaluated. The model considers five alternative financing strategies. The preferred strategy is adjudged based on the results of a quantitative assessment of the relative costs and risks and its performance relative to established strategic debt targets.

The strategies were formulated based on discussions with the market and expectations regarding future movements in key macroeconomic and market variables within the context of the overarching debt management objectives of the Government. **Figure 27** highlights the key features of the alternative strategies and **Table 7** outlines financing details for the strategies considered.

**Figure 27: Summary of Alternative Medium-Term Financing Strategies**

**Strategy 1**
- Majority Domestic Financing
- Majority Fixed-Rate
- Mainly Longer Tenors

**Strategy 2**
- Majority Domestic Financing
- Majority Fixed-Rate
- Mainly Shorter Tenors

**Strategy 3**
- Majority Domestic Financing
- Majority Variable-Rate
- Mainly Shorter Tenors

**Strategy 4**
- Majority External Financing
- Majority Fixed-rate
- Mainly LongerTenors

**Strategy 5**
- Majority External Financing
- Majority Variable-Rate
- Mainly Shorter Tenors

**Table 7: Financing Details for Alternative Strategies**

| Financing Sources | S1 | S2 | S3 | S4 | S5 |
|---|---|---|---|---|---|
| **External Financing** | **20.0%** | **20.0%** | **20.0%** | **70.0%** | **70.0%** |
| Multi/Bilateral_10YR_Fixed | 10.0% | 10.3% | 10.0% | 14.0% | 0.0% |
| Multi/Bilateral_10YR_Floating | 0.0% | 0.0% | 0.0% | 0.0% | 27.4% |
| Multi/Bilateral_20YR_Fixed | 10.0% | 10.3% | 10.0% | 14.0% | 0.0% |
| Multi/Bilateral_20YR_Floating | 0.0% | 0.0% | 0.0% | 0.0% | 27.4% |
| Global Bond_10YR | 0.0% | 0.0% | 0.0% | 14.0% | 0.0% |
| Global Bond_30YR | 0.0% | 0.0% | 0.0% | 14.0% | 0.0% |
| Global Bond_Fix_5 years | 0.0% | 0.0% | 0.0% | 14.0% | 13.7% |
| **Domestic Financing** | **80.0%** | **80.0%** | **80.0%** | **30.0%** | **30.0%** |
| T-Bill_Fix_1 year | 6.8% | 25.2% | 16.7% | 6.8% | 6.7% |
| T-Bond_Fix_5 years | 12.0% | 28.7% | 4.0% | 1.5% | 9.2% |
| T-Bond_Fix_10 years | 20.0% | 25.5% | 0.0% | 7.5% | 0.0% |
| T-Bond_Var_10 years | 0.0% | 0.0% | 42.1% | 0.0% | 13.5% |
| T-Bond_Fix_20 years | 20.0% | 0.0% | 0.0% | 6.8% | 0.0% |
| T-Bond_Var_20 years | 0.0% | 0.0% | 17.1% | 0.0% | 0.0% |
| T-Bond_Fix_30 years | 21.1% | 0.0% | 0.0% | 7.4% | 0.0% |

Source: Ministry of Finance and the Public Service (MoFPS)

Under **Strategy 1 (S1),** 80.0 percent of total financing over the medium-term will be sourced from the domestic market. This strategy corresponds with the current medium-term debt management strategy as it seeks to rebalance the debt portfolio towards greater reliance on domestic debt vis-à-vis external debt. The strategy also seeks to reduce the portfolio's exposure to interest rate and refinancing risks by borrowing only at fixed-rates across mainly longer tenors in the domestic market. To satisfy domestic market demand for shorter-tenor instruments, the GOJ will also issue securities with maturities of five years or less over the medium-term. Overall, the issuance strategy is spread across the yield curve and should augur well for further developing the domestic debt market. External financing is programmed through multilateral/bilateral loans at fixed interest rates. The relatively high levels of domestic market liquidity and strong demand for GOJ securities in the domestic market indicate that this is a feasible strategy.

**Strategy 2 (S2)** also assumes an operating target for domestic financing of 80.0 percent, all at fixed-rates. However, this strategy seeks to anchor the yield curve by increasing short term issuances over the medium-term. While mitigating exposure to foreign currency risk and interest rate risk, this strategy increases refinancing risk. The focus on shorter tenors is expected to result in lower costs but higher refinancing risk relative to **S1**. The assumptions regarding external financing are the same as under **S1**.

**Strategy 3 (S3)** also assumes an operating target for domestic financing of 80.0 percent. However, it assumes financing mainly through variable-rate and short-term instruments in the domestic market. Compared to S1, this strategy poses greater refinancing and interest rate risks but potentially lower costs over the medium-term.

**Strategies 4 (S4)** and **5** (**S5**) exacerbate the imbalance in the debt portfolio by increasing reliance on external financing. Both strategies assume that the domestic market is not sufficiently deep and liquid to absorb the total financing requirements and as such, 70.0 percent of the total financing needs will be sourced from the external market.

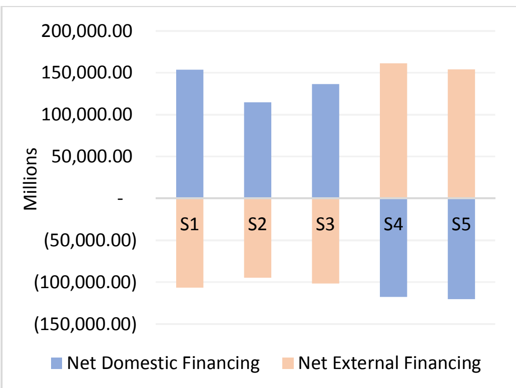
**S4** assumes most of the external financing will be sourced from private creditors through issuances in the International Capital Markets (ICM) and a smaller amount from official multilateral/bilateral partners. Given the upward trend in the US LIBOR and the continued monetary policy tightening by the FED, this strategy further assumes that all external financing will be at fixed-rates. The focus on ICM financing may be supported based on the strong performance of GOJ global bonds in the ICM.

**S5** assumes less favourable conditions in the ICM as investors become cautious about investing in emerging markets (EM) bonds. This strategy therefore assumes that external financing will be programmed through official multilateral/bilateral sources, at fixed- and variable-rates.

## 6.4 Toolkit Output - Results for Alternative Financing Strategies

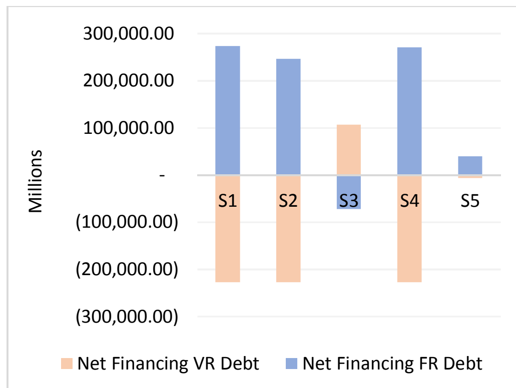
The outcomes from the respective strategies will depend on the extent to which each strategy reduces the portfolio's exposure to key risk factors over the medium-term. **Figure 28** and **Figure 29** highlight the net financing flows for the domestic and external portfolios and the variable-rate and fixed-rate portfolios, respectively. Strategies **S1**, **S2** and **S3** effectively rebalance the portfolio towards more domestic debt, as evidenced by the relatively large net outflows and net inflows for the external and domestic portfolios, respectively. The converse is true for strategies **S4** and **S5**. Strategies **S1**, **S2** and **S4** more effectively rebalance the portfolio towards more fixed-rate debt, as evidenced by the larger net outflow and net inflow for the variable-rate and fixed-rate portfolios, respectively. **S3** increases the variable-rate component of the debt stock.

**Figure 28: Net Financing Flows to the External and Domestic Portfolios**




Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 29: Net Financing Flows to the VR and FR Portfolios**




Source: Ministry of Finance and the Public Service (MoFPS)

**Table 8** highlights the main cost and risk indicators for the debt portfolio for alternative financing strategies under the baseline assumptions. The strategies are evaluated based on their relative cost/risk trade-off.

On the balance of the relative cost/risk tradeoffs, and in keeping with the overarching debt management objectives of the Government, **S1** is identified as the preferred strategy. Given the high sensitivity of the portfolio to foreign currency risk, strategies **S4** and **S5** are unlikely choices. While **S2** and **S3** offer marginally lower interest costs compared to **S1**, exposure to refinancing and interest rate risks are higher. Both strategies **S1** and **S2** are expected to support the development of the domestic market through issuances across the yield curve.

**Table 8: Results for Cost and Risk Indicators for Alternative Strategies**

| Cost and Risk Indicators | | 2019 | As at end 2023 | | | | |
|---|---|---|---|---|---|---|---|
| | | Current | S1 | S2 | S3 | S4 | S5 |
| Cost | Interest payment as % of GDP | 6.0 | 5.3 | 5.1 | 5.1 | 5.2 | 5.0 |
| | Implied interest rate (%) | 6.1 | 6.6 | 6.4 | 6.4 | 6.5 | 6.3 |
| Refinancing risk | Debt maturing in 1yr (% of total) | 5.6 | 5.2 | 7.1 | 6.2 | 5.2 | 5.3 |
| | Debt maturing in 1yr (% of GDP) | 5.5 | 4.2 | 5.8 | 5.1 | 4.3 | 4.3 |
| | ATM External Portfolio (years) | 10.8 | 8.5 | 8.5 | 8.5 | 9.0 | 8.1 |
| | ATM Domestic Portfolio (years) | 9.4 | 11.8 | 7.2 | 9.2 | 10.4 | 8.3 |
| | ATM Total Portfolio (years) | 10.2 | 9.9 | 7.9 | 8.8 | 9.4 | 8.2 |
| Interest rate risk | ATR (years) | 8.2 | 8.9 | 7.0 | 6.3 | 8.5 | 6.0 |
| | Debt refixing in 1yr (% of total) | 34.4 | 22.7 | 24.8 | 39.3 | 22.6 | 40.1 |
| | Fixed rate debt (% of total) | 69.9 | 81.4 | 81.1 | 65.8 | 81.4 | 63.8 |
| FX risk | FX debt as % of total | 61.6 | 57.6 | 58.9 | 58.1 | 70.2 | 70.2 |

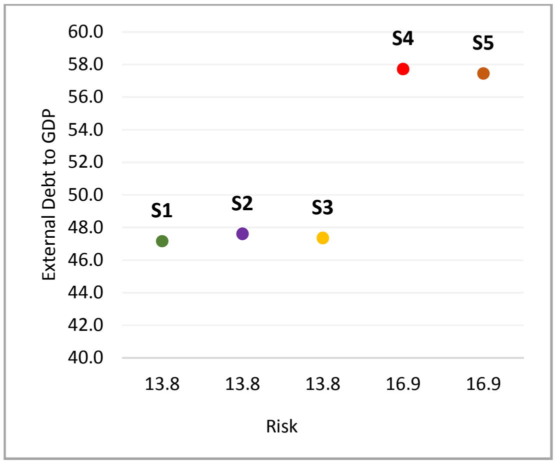
| Key | |
|---|---|
| Most Favoured Outcome | |
| Second Best Outcome | |
| Third Best Outcome | |
| Fourth Best Outcome | |
| Least Favoured Outcome | |

**Strategy S1** has lower refinancing risk compared to all other strategies. The share of debt maturing within one year at end-March 2023 is projected at 5.2 percent under **S1** and **S4**, 1.9 percentage points less than the projection under **S2**. Further, the ATM under **S1** is projected at 9.9 years, compared to 9.4 years and 7.9 years for **S4** and **S2**, respectively (see **Table 8**).

Higher exposure to foreign currency risk increases the portfolio's vulnerability to external shocks. Compared to the other strategies, **S1** recorded the lowest exposure to foreign currency risk, reducing the share of foreign currency debt in total debt by 4.0 percentage points over the medium-term. This compares to **S4** and **S5** where the foreign currency exposure is projected to increase by 8.6 percentage points, from 61.6 percent to 70.2 percent over the same period. This is 12.6 percentage points higher than **S1**. Strategies **S2** and **S3** also reported marked reductions in foreign currency exposure, consistent with greater reliance on domestic financing.

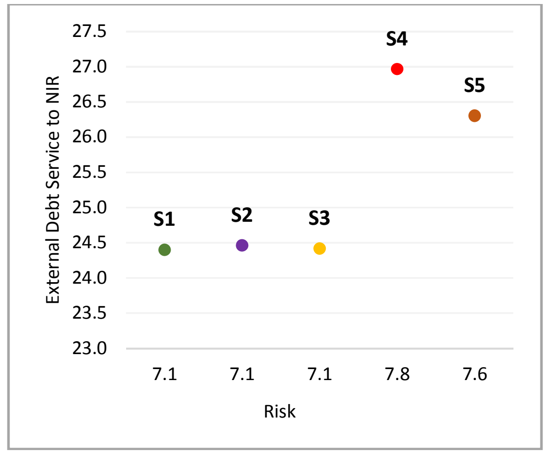
**Figure 30** highlights the portfolio's sensitivity to FX shocks under each strategy. Under **S4** and **S5**, an extreme exchange rate shock will increase the debt stock by an estimated 16.9 percent of GDP, compared to 13.8 percent under **S1**, **S2**, and **S3**. External debt service cost to gross reserves is an indicator of the Government's ability to meet its external debt service obligations. As highlighted in **Figure 31,** the share of external debt service cost in gross reserves is higher under **S4** and **S5**, with potentially higher costs associated with an exchange rate shock being an indication of higher liquidity risks in respect of external debt service obligations.

**Figure 30: External Debt-to-GDP**




Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 31: External Debt Service-to-Reserves**

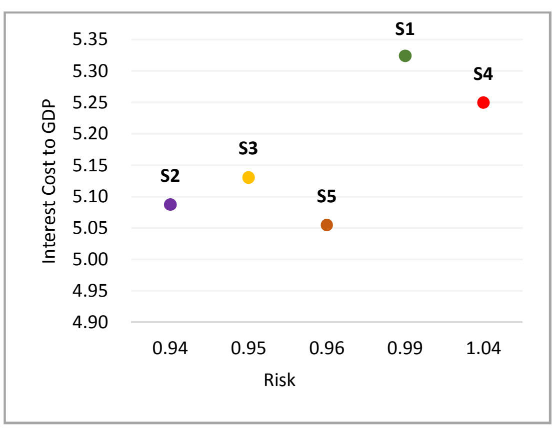



Source: Ministry of Finance and the Public Service (MoFPS)

Interest rate risk is lowest under **S1** and is reflected in overall reductions in the ATR, debt re-fixing in one year and share of variable-rate debt in total debt. Strategy **S4** also reported marked reductions in exposure to interest rate risk, but had a higher ATR compared to **S1**. These results are consistent with a strategy of borrowing primarily at fixed-rates in both the domestic and external markets.

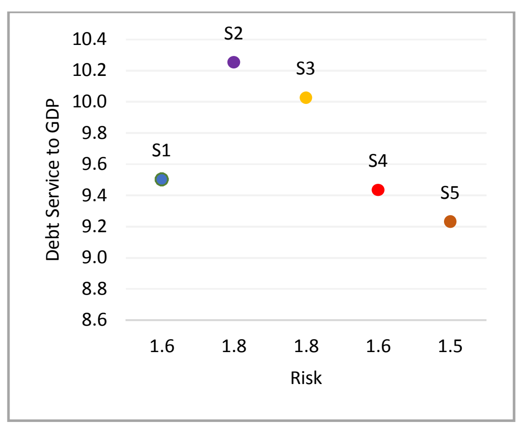
Though outperforming the other strategies with respect to key risk indicators, **S1** is marginally more expensive. Interest-cost-to-GDP under **S1** is projected at 5.3 percent, 0.3 percentage points above the cost-minimizing strategy **S5** (**see Figure 32**). The relatively higher interest cost for **S1** highlights the cost/risk trade-off and reflect the premium required by the market for longer-tenor, fixed-rate securities. Notwithstanding the higher interest cost, total debt service costs are lower under **S1,** compared to **S2** and **S3**, owing to the relatively smaller amortization obligations for the former (**see Figure 33**).

**Figure 32: Interest Cost-to-GDP**




Source: Ministry of Finance and the Public Service (MoFPS).

**Figure 33: Debt-Service-to-GDP**



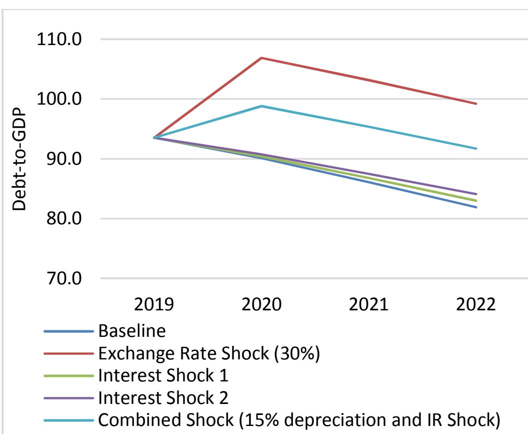

Source: Ministry of Finance and the Public Service (MoFPS).

### 6.4.1 Dynamic Simulations for Key Debt Indicators for Selected Strategy

**Figures 33** to **36** highlight the dynamic effects of the different shock scenarios on key debt indicators for the selected strategy **(S1)**, over the medium-term. Changes in the exchange rate between the JMD and the US dollar have the largest impact on debt-to-GDP and debt service costs. A 30.0 percent shock (Scenario 1) in the baseline exchange rate assumption in year two is projected to increase debt-to-GDP by 17.3 percentage points at end-March 2023, above the trajectory required to meet the target for end-March 2026 (see **Figure 34**). Notably, an exchange rate shock of above 12.0 percent will jeopardize the achievement of the internal debt-to-GDP target of 96.0 percent for end-March 2020.

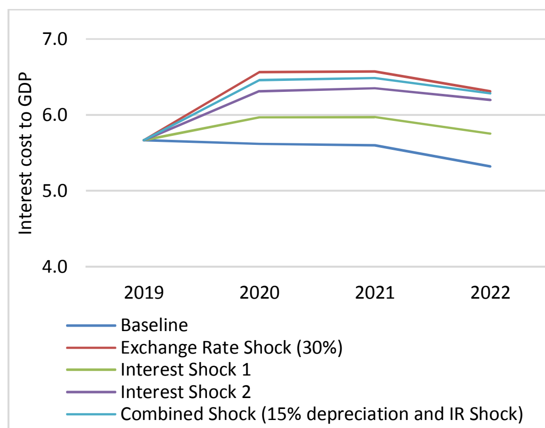
Shocks in market variables will have immediate fiscal implications through the impact on debt service costs to the Government. Interest-to-GDP is projected to increase by 1.0 percentage point to 6.3 percent at end-March 2023 under the extreme exchange rate and the combined exchange rate and interest rate shock scenarios, compared to 5.3 percent under the baseline scenario (see **Figure 35**). The extreme exchange rate shock (**Scenario 1**) and the combined exchange and interest rate shock (**Scenario 4**) have the largest effects on debt service costs. Debt service costs as a share of GDP (see **Figure 36**) and external debt service costs (see **Figure 37**) are projected to increase by 1.3 percentage points and $231.0 million at end-March 2023 under the extreme exchange rate shock compared to the baseline.

**Figure 34: Sensitivity of Debt-to-GDP to Shocks**



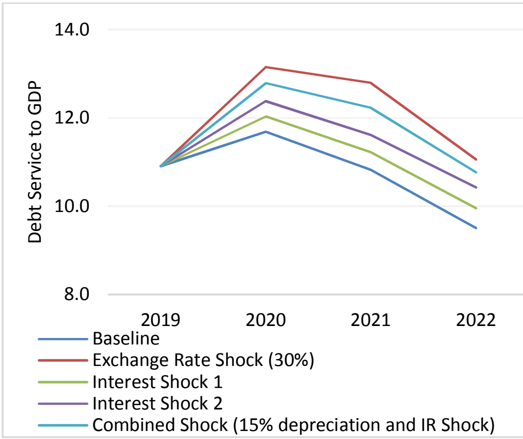

Source: Ministry of Finance and the Public Service (MoFPS).

**Figure 35: Sensitivity of Interest Costs to Shocks**



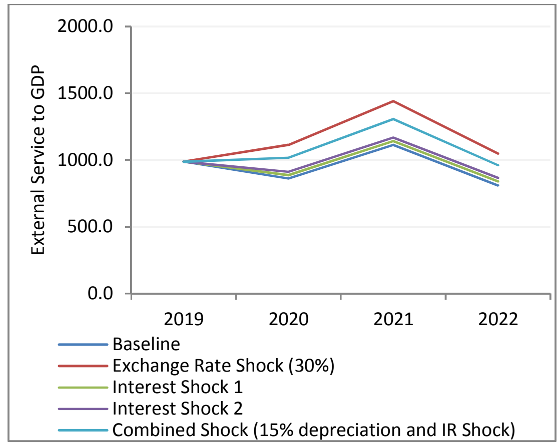

Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 36: Sensitivity of Debt Service Costs**




Source: Ministry of Finance and the Public Service (MoFPS).

**Figure 37: Sensitivity of External Debt Service Costs**




Source: Ministry of Finance and the Public Service (MoFPS).

## SECTION VII: ANNUAL BORROWING PLAN

The financing requirement of the Central Government for FY2019/20 informs the Annual Borrowing Plan (ABP) for the fiscal year. This is derived after projected revenues and expenditures are programmed and the financial gap in the overall fiscal position is determined. The ABP provides details on the allocation from external and domestic funding sources.

The ABP is congruent with the Medium-Term Debt Management Strategy for FY2019/20 – FY2022/23, the Estimates of Expenditure for FY2019/20, and the Revenue Estimates for FY2019/20. The Government's financing requirement is projected at $102,736.4 million or 4.8 percent of GDP. This represents a decrease of $461.9 million or 0.02 percent of GDP below the financing requirement of $103,198.3 million or 5.1 percent of GDP projected for FY2018/19.

Over the past two fiscal years, the Government's financing requirement declined by 35.6 percent, which was as a result of the continued implementation of sound macro-economic policies and fiscal discipline resulting in robust revenue performance. The borrowing plan is anchored on the Government's overarching objective of reducing the debt-to-GDP to 60.0 percent or less by FY2025/26.

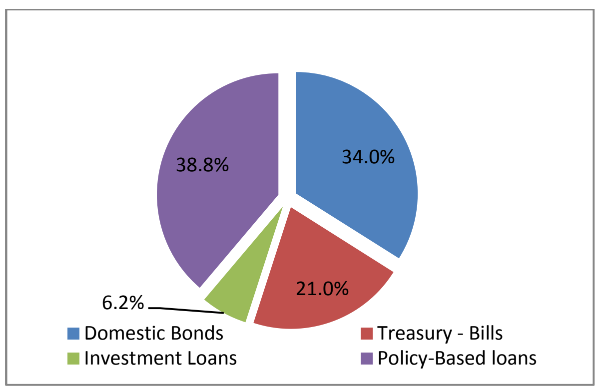
Funding from external official sources will amount to $46,254.3 million (or approximately 45.0 percent). This will include loans from multilateral and bilateral partners in the form of budget support and investment loans totaling $39,900.0 million and $6,354.3 million, respectively. **(See Table 9** and **Figure 38).**

**Table 9: GOJ's Annual Borrowing Plan for FY2019/20**

| Financing Source | Budgeted (J$mn) |
|---|---|
| **Domestic Financing** | **56,482.10** |
| Domestic Bonds | 34,882.10 |
| Treasury - Bills | 21,600.00 |
| | |
| **External Financing** | **46,254.30** |
| Investment Loans | 6,354.30 |
| Policy-Based loans | 39,900.00 |
| | |
| **Total** | **102,736.40** |

Source: Ministry of Finance and the Public Service (MoFPS)

**Figure 38: Annual Borrowing Plan for FY2019/20**




Source: Ministry of Finance and the Public Service (MoFPS)

## 7.1 Issuance Strategy

The issuance strategy provides a synopsis of the implementation plan for market issuances outlined in the ABP. The GOJ will continue to focus on securing the majority of financing from the domestic market throughout the medium-term. During FY2019/20, the continued focus on Jamaica dollar issuances will contribute to the realignment of the portfolio in favour of local currency. In executing the issuance strategy, the GOJ will:

- Regularly tap the market at all segments of the yield curve, issuing mainly fixed-rate debt. Through this strategy, the GOJ will achieve its objectives of satisfying borrowing requirements, maintaining a presence in the domestic market as a part of further market development;
- Increase the issuance of short-term securities within the 2- to 5-year bucket; this will also assist in reducing the net short-term deficit of GOJ securities within this segment of the curve and may help to stimulate secondary market trading;
- Continue to issue 3- and 6-month Treasury bills on a monthly basis, while the 9-month Treasury bill will continue to be issued six times during the fiscal year. The subscription amount for the 3-month and 6-month tranches will remain at $700.0 million each, while the 9-month tranche will be increased by $100.0 million, or 14.3 percent, from $700.0 million to $800.0 million. The total offer amount will be increased to $21.6 billion in FY2019/20 from $21.0 billion offered in the preceding fiscal year. This will assist financial institutions in meeting liquid asset requirements. The total stock of T-Bills outstanding as at December 2018 was $8,815.2 million;
- Schedule long-term instruments for maturity beyond the peak repayment period FY2025/26 to FY2028/29 in order to avoid further bunching; and
- Issue all securities via the auction mechanism. This will facilitate continued price discovery.

## 7.2 Challenges to the Issuance Strategy

Debt management operations are conducted in a dynamic financial environment influenced by exogenous factors. As a result, the successful implementation of the issuance strategy is dependent on favourable market conditions and expected guaranteed inflows from official creditors. However, the Government is cognizant of the following potential challenges to the implementation of the ABP:

- The expected financing from multilateral and bilateral creditors could be reduced as a result of slow project execution;

- A significant depreciation of the Jamaica dollar vis-à-vis the US dollar could result in a shift in investors' preference to US dollar-denominated investments, resulting in investors re-directing liquidity from the domestic market;
- Revenue performance could result in the adjustment of the borrowing plan; and
- Competition from high-yielding corporate bonds could decrease demand for GOJ issuances, introducing demand-side risk in the portfolio.

## 7.3 Active Liability Management Programme

The Government's liability management operations (LMO) programme is authorised by Sections 6 and 10 of the Public Debt Management Act (PDMA), which empowers the Minister with responsibility for Finance to undertake portfolio management operations to achieve the medium-term cost/risk targets and the desired composition of the debt portfolio.

During FY 2018/19, international interest rates have gradually increased, and the demand for Emerging Market (EM) bonds has declined; a trend that could continue throughout the medium-term.

Despite prevailing external market instability, Jamaica's global bonds continue to trade at premium prices. This, coupled with the compression in bond yields relative to yields on the US Treasury Notes, constrains the possibility of successfully executing LMOs that are favourable to the Government in terms of: net savings; debt reduction; extension in the maturity profile of the Government's debt portfolio; or switches into local currency debt. On the domestic side, within the context of declining interest rates, the support for LMOs is affected by investors' desire for high yields and to hold securities to maturity. Notwithstanding, the GOJ will continue to explore opportunities to execute LMOs in the form of buybacks, swaps, switches, and roll-overs during FY2019/20.

## Table 10: Proposed Issuance Calendar for BINs for FY2019/20

| SUBSCRIPTION DATE | INSTRUMENT TYPE | METHOD OF ISSUE |
|---|---|---|
| **Q1** | | |
| April 16, 2019 | 3-month and 6-month Treasury Bill Tenders | Auction |
| April 26, 2019 | **New Issue** FR BIN* Due 2024 – **5-yr** | Auction |
| May 15, 2019 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| May 24, 2019 | Reopen FR 7.25 % BIN Due 2021- **2-yr**<br>Reopen FR 5.675 % BIN Due 2029– **10-yr** | Auction |
| June 12, 2019 | 3-month and 6-month T-Bill Tenders | Auction |
| **Q2** | **INSTRUMENT TYPE** | |
| July 12, 2019 | Reopen FR 5.50 % BIN Due 2023 – **4 yr**<br>Reopen FR 6.25 % BIN Due 2048 – **29-yr** | Auction<br>Auction |
| July 17, 2019 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| August 14, 2019 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| August 23, 2019 | Reopen FR BIN Due 2024- **5 yr**<br>Reopen FR 10.00 % BIN Due 2037 – **18-yr** | Auction<br>Auction |
| September 11, 2019 | 3-month and 6-month Treasury Bill Tenders | Auction |
| **Q3** | **INSTRUMENT TYPE** | |
| October 16, 2019 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| October 25, 2019 | **New Issue** FR BIN Due 2033 – **14-yr** | Auction |
| November 13, 2019 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| November 22, 2019 | Reopen FR 7.25 %BIN Due 2021 – **2-yr**<br>Reopen FR 9.50 % BIN Due 2048 – **29-year** | Auction<br>Auction |
| December 11, 2019 | 3-month and 6-month Treasury Bill Tenders | Auction |
| **Q4** | **INSTRUMENT TYPE** | |
| January 15, 2020 | 3-month and 6-month Treasury Bills Tenders | Auction |
| January 24, 2020 | Reopen FR 5.50 % BIN Due 2023- **3 yr**<br>Reopen FR BIN Due 2033 – **14-yr** | Auction<br>Auction |
| February 12, 2020 | 3-month, 6-month and 9-month T-Bill Tenders | Auction |
| March 11, 2020 | 3-month and 6-month T-Bill Tenders | Auction |
| March 26, 2020 | Reopen FR 5.50 % BIN Due 2023 - **3 yr**<br>Reopen FR 10.00 % BIN Due 2037 – **17 yr** | Auction<br>Auction |

*Benchmark Investment Note (BIN)
Note: Schedule is subject to change.
Source: Ministry of Finance and the Public Service

**Table 11: Proposed Schedule for Treasury Bills**

| For Fiscal Year 2019/20 | | |
|---|---|---|
| **Proposed Treasury Bill Tranche** | **Proposed Tender Date** | **Proposed Issue Date** |
| **Quarter 1** | | |
| 3 & 6 month T/Bills | April 16, 2019 | April 18, 2019 |
| 3, 6 & 9 month T/Bills | May 15, 2019 | May 17, 2019 |
| 3 & 6 month T/Bills | June 12, 2019 | June 14, 2019 |
| **Quarter 2** | | |
| 3, 6 & 9 month T/Bills | July 17, 2019 | July 19, 2019 |
| 3, 6 & 9 month T/Bills | August 14, 2019 | August 16, 2019 |
| 3 & 6 month T/Bills | September 11, 2019 | September 13, 2019 |
| **Quarter 3** | | |
| 3, 6 & 9 month T/Bills | October 16, 2019 | October 18, 2019 |
| 3, 6 & 9 month T/Bills, | November 13, 2019 | November 15, 2019 |
| 3 & 6 month T/Bills | December 11, 2019 | December 13, 2019 |
| **Quarter 4** | | |
| 3 & 6 month T/Bills | January 15, 2020 | January 17, 2020 |
| 3, 6 & 9 month T/Bills, | February 12, 2020 | February 14, 2020 |
| 3 & 6 month T/Bills | March 11, 2020 | March 13, 2020 |

**Notes:** Please note that the Schedule is subject to change. The actual amounts in each tender will be determined at the time of invitation to tender.

Source: Ministry of Finance and the Public Service

# SECTION VIII: DEVELOPMENT OF THE DOMESTIC DEBT MARKET

## 8.1 Government Domestic Debt Market

An important objective of the Government is to further develop an efficient domestic debt market which satisfies the needs of all stakeholders. The level of development of the market may be determined by the presence and extent of the following characteristics:

- Improved access to domestic financing;
- Low transaction costs;
- Competitive market processes;
- Sound market infrastructure;
- A large and diversified investor base; and
- Financial instruments that are substitutable.

An efficient domestic market is deep, liquid and supports monetary policy transmission, finances development and growth, promotes economic stability and enhances financial market development. A well-developed debt market also facilitates an enabling environment for companies to diversify sources of funding and reduce the cost of borrowing.

The GOJ continues to expend resources and efforts to further develop the domestic debt market to meet these internationally accepted standards. This thrust has been strengthened by the Government's commitment to fiscal and monetary policy reforms under the economic programme. The Jamaican economy has continued to achieve marked improvements in some critical macroeconomic variables such as interest rate, inflation, GDP and the NIR, which are pivotal to market development.

## 8.2 Financial Market Developments

Over the medium-term, the Government in coordination with the BOJ, Financial Services Commission (FSC), Jamaica Securities Dealers' Association (JSDA), Primary Dealers (PDs) and other market players will continue to promote market development while satisfying its funding requirements. The GOJ will continue to maintain a presence in the market by issuing securities along all segments of the yield curve. Furthermore, to continue price discovery, the auction mechanism will be utilized. During FY2019/20, the Government intends to partially refinance large maturities, thereby facilitating a crowding-in effect, while enhancing liquidity in the financial market.

A revised Primary Dealers Agreement was executed in September 2018 by the Bank of Jamaica, the Government (acting through the MOFPS) and PDs. The objective of the Agreement is to promote an efficient and effective PD System to facilitate the development and maintenance of an efficient market for BOJ and GOJ securities. During FY2019/20, the GOJ in collaboration with the BOJ will continue to monitor the PDs' performance in fulfilling their obligations as market makers to: 1) broaden the investor base for GOJ and BOJ securities; 2) decrease the market and refinancing risks of the GOJ; 3) lower the cost of funding to the Government; 4) enhance price discovery; and 5) build secondary market liquidity. Additionally, the GOJ will encourage the PDs to meet the obligation to support the debt management strategy and further develop the domestic market through continued dialogue with the MOFPS regarding critical market issues. The PDs will be recognized by incentives pursuant to the agreement.

To enhance the market infrastructure, the BOJ in coordination with the GOJ, the FSC and other market players embarked on the upgrade of the Central Securities Depository (JamClear-CSD). On October 8, 2018, phase one of the upgrade of the CSD was implemented. This has partly modernized the existing system for the Government's fixed-income securities. It is anticipated that further efficiencies will be realized in issuances, secondary market trading, and custody and settlement arrangements as a result of this upgrade. Phase two implementation is projected for completion by end-December 2019. The upgrade will entail, *inter alia*, valuation of financial instruments, and the foreign exchange auction mechanism.

On October 17, 2018, T-bills were dematerialized into the JamClear-CSD and became registered instruments with investors' holdings in electronic form[5]. The dematerialization of the Treasury Bills is expected to improve operational efficiency, provide a higher level of reliability through greater transparency and facilitate trading and real-time price discovery. The amount offered on each tranche of the T-bill was increased from $600,000,000.00 to $700,000,000.00 in April 2018.

In an effort to foster and deepen short-term liquidity in the domestic debt market, the GOJ and the BOJ will continue the synchronization of short-term issuances. During FY2019/20, the GOJ intends to issue the 3-month, 6-month and 9-month Treasury Bills, as scheduled (see **Issuance Calendar**). Over the last three years, the nominal amount on each tranche of the T-Bills has been gradually increased from $400.0 million to $700.0 million. The GOJ intends to continue steadily increasing the supply of T-bills to create a more liquid T-bill market as well as to satisfy investor demand for short-term instruments. During FY2019/20, the Government will increase the subscription amount of the 9-month tranche of the T-bills by $100.0 million or 14.29 percent. This will assist the PDs with satisfying liquid asset requirements.

Over the medium-term, the GOJ will seek to further broaden and diversify the domestic market investor base geographically through foreign investors' participation in the local currency issuances in the domestic market. The Ministry will commence exploratory talks with an

[5] Treasury Bills issues that were outstanding as at September 14, 2018 were not immobilized into the JamClear-CSD but are retained as paper certificates until maturity.

international clearance and settlement agency and the Bank of Jamaica, regarding the possibility of establishing a link between JamClear CSD and the agency's platform.

Opportunistic Liability Management Operations (LMO) will also be explored in the domestic market during FY2019/20 through the execution of buybacks, switches or swaps of high-cost illiquid off-the-run securities, market conditions permitting. This will help to rebalance the portfolio by reducing bunching, thereby smoothing the maturity profile, creating a more efficient yield curve and enhanced price discovery.

Despite improved economic performance, and robust investor demand for GOJ instruments in the primary market, secondary market trading remains sluggish as investors continue to hold GOJ securities to maturity. This is partly attributable to the current deficit of shorter-tenor securities in the domestic debt market which has constrained real price discovery as well as the realignment towards a more efficient domestic market yield curve.

During FY2019/20, the GOJ in collaboration with the BOJ, FSC and the Jamaica Stock Exchange (JSE) will embark on incremental reforms to implement a Fixed Income Trading Platform. The reforms will commence with the BOJ's upgrade of the CSD to include functionalities that will enable a transparent and efficient yield curve and valuation of financial instruments. However, this is intended to be a temporary solution to create a platform for electronic secondary market trading of debt securities until the JSE platform is implemented by end-December2019. Additionally, the menu of instruments on offer in the GOJ issuance calendar seeks to increase liquidity in the short- to medium-term segment of the curve to engender and foster greater secondary market trading.

The low interest rate environment continued during FY2018/19. The Central Bank lowered the signal rate three times during the fiscal year; from 2.75 percent to 2.50 percent, 2.00 percent and 1.75 percent, respectively on May 17, 2018, June 28, 2018 and December 21, 2018, respectively. The signal rate influences other rates in the market including the T-bill rate. In the latter part of the third quarter of the fiscal year, the T-bill rates began converging with the signal rate as investors sought higher yields in alternative investment instruments. The low interest rates had a positive effect on domestic interest cost and the overall cost of borrowing for the Government. Despite the uptick over the 2-month period of December 2018 to January 2019, interest rates are expected to remain low during FY2019/20. In keeping with the MTDS objectives of raising debt at minimum cost with a prudent degree of risk, the GOJ will take advantage of the low interest rate environment by maintaining a presence in the market with regular issuances of fixed-rate securities along all segments of the curve.

In order to further the development of the domestic debt market, during FY2019/20, the Government will continue its policy to:

- Conduct debt operations openly, equitably and transparently;
- Provide timely reports and statistics on the debt and on the DMB's operations;
- Publish a Schedule of Domestic Debt Securities and T-bill tenders and results for FY2019/20; and
- Continue the dialogue with all players on debt management issues.

## 8.3 Investor Relations

Effective management of the investor relations programme is critical to successfully achieving the Government's debt management objectives. The Investor Relations (**IR**) Programme consistently engages with investors through various media in an effort to gauge investor sentiment, disseminate information to the market and build investor confidence.

The GOJ, as a part of its medium-term debt management objective to maintain and encourage further development of the domestic market, continued its IR programme to promote best practices in stakeholder engagement. With institutional investors being a significant source of funding for governments, the GOJ remains committed to accountability and transparency in debt management operations through the delivery of comprehensive and timely disclosure of data and information.

In keeping with the Investor Relations Plan (IRP) for FY2018/19, the GOJ:

- Conducted several one-on-one meetings along with a general market meeting in December 2018 with institutional investors.
- Administered market surveys, which provided critical insight into investors' appetite regarding GOJ's debt issuances;
- Met with a cross-section of investors on its annual non-deal roadshow to the United States of America and Europe to provide updates on the country's economy;
- Continued engagement with the credit rating agencies regarding the review of the country's creditworthiness;
- Disseminated market data and information through the Debt Management Branch (DMB) webpage; and
- Continued the project to revamp the DMB webpage.

During FY2019/20, the DMB will continue to pursue investor relations best practices that will enable the GOJ to continue meeting its debt management objectives of conducting debt operations transparently, and supporting the Government's National Financial Inclusion Strategy.

# SECTION IX: CONCLUSION

The Medium-term Debt Management Strategy for FY2019/20-FY2022/23 outlines the Government's strategic priorities for the management of the public debt over the medium-term. It provides an assessment of the relative costs and risks for the debt portfolio and considers alternative financing strategies to meet the broad objectives of raising adequate funding at the lowest possible costs at prudent levels of risk.

During FY2018/19, the Government continued to realize improved fiscal performance and strong macroeconomic fundamentals. This supported improvements in key cost and risk indicators for the debt portfolio as reflected in the improved indicators for interest rate and refinancing risks. Low domestic interest rates offset increases in external interest rates and resulted in a marginal reduction in interest costs over the review period. The nominal value of foreign currency debt decreased over the review period; however, larger net redemptions in the domestic portfolio relative to the external portfolio contributed to a marginal increase in the indicator for the share of foreign currency debt in total debt. Notwithstanding, the improvements in the risk profile of the public debt portfolio, foreign currency, and refinancing risks remain the chief concerns of the Government.

The financing strategy for FY2019/20 continues to focus on rebalancing the portfolio towards a greater proportion of domestic debt vis-à-vis external debt while at the same time reducing exposure to refinancing and interest rate risks, by borrowing mainly at fixed-rates across the yield curve in the domestic market. An important element of the proposed financing strategy this fiscal year is the increased focus on shorter-tenor issuances. This should assist in reducing the deficit of short-term securities and augurs well for secondary market trading; and by extension, the further development of the domestic debt market.

Market development initiatives undertaken in FY2018/19, including the dematerialization of T-bills, the revision of the primary dealers (PD) agreement and the upgrade of the Central Securities Depository (JamClear-CSD) will also facilitate further development of the domestic market. Additionally, the Government will continue to deepen its engagement with the market through, *inter alia*, initiatives advanced through the DMB's Investor Relations Programme.

## GLOSSARY

**Amortization**

Amortisation refers to principal repayments on loans. These repayments reduce the borrowed money by portions, which are usually fixed amounts or expressed as a percentage of the whole.

**Auction**

An auction is a system by which securities are bought and sold on a competitive bidding process. The auctions are conducted on a multiple-price-bidding basis, which means that the successful investor will receive stocks at the price he bids.

**Benchmark Bonds**

These are bonds that are sufficiently large and actively traded, such that their prices serve as reference for other bonds of similar maturities. More specifically, the benchmark is the latest issue within a given maturity. For a comparison to be appropriate and useful, the benchmark and the bond being measured against it should have a comparable liquidity, issue size and coupon. Government bonds are almost always used as benchmark.

**Cash Flow at Risk (CFaR)**

Cash Flow at Risk of the debt portfolio estimates the maximum increase in debt service cash flows relative to the expected costs due to changes in market variables, with a given probability over a given period.

**Contingent Liabilities**

Contingent liabilities are obligations that materialise if a particular event occurs. They can be explicit, if the sovereign contractually acknowledges its responsibility to cover the beneficiary under specific circumstances, or implicit, when the government is expected to do so because it has a "moral" obligation to act, in most cases related to a high opportunity cost of not intervening.

**Cost at Risk (CaR)**

Cost at Risk of the debt portfolio estimates the maximum increase in interest costs relative to the expected costs due to changes in market variables, with a given probability over a given period.

**Debt Service Payments**

Debt service payments cover interest charges on a loan. Some sources also include amortisation under debt service payments. These payments liquidate the accrued interest (and loan obligations if amortisation is included).

**Dematerialisation**
Dematerialisation is the process through which physical securities are converted into electronic format and held in a securities depository.

**Eurobond**
A bond underwritten by international investors and sold in countries other than the country of the currency in which the issue is denominated. Usually, a eurobond is issued by a corporate or sovereign and categorised according to the currency in which it is denominated. In July 1997 Jamaica issued a five-year US$200mn Eurobond, which was its first ever.

**Fiscal Responsibility Framework**
The Fiscal Responsibility Framework, which came into effect October 1, 2010, is an encompassing framework which has, at its centre, fiscal rules that are designed to achieve desired fiscal outcomes, most notably, a reduction in, and maintenance of, a sustainable level of debt.

**Inflation-Indexed Bonds**
Inflation-Indexed bonds are securities with the principal linked to the Consumer Price Index. The principal changes with inflation, guaranteeing the investor that the real purchasing power of the investment will keep pace with the rate of inflation. Although deflation can cause the principal to decline, at maturity the investor will receive the higher of the inflation-adjusted principal or the principal amount of the bonds on the date of the original issue.

**Investment Loan**
The terms refer to loans, which fund capital development activities. The term capital refers to lasting systems, institutions and physical structures. Investment loans are typically funded from foreign sources by bilateral arrangements and multilateral institution.

**Official Creditor**
Official Creditor is a government or international organization that lends mainly to another government or international organization. This includes multilateral and bilateral creditors.

**Price Discovery**
Price discovery is the process whereby the price of a security, commodity, or currency is efficiently determined through market driven factors such as supply, demand and investors risk attitude at the time of transaction.

**Public Debt**
Public debt is defined as the consolidated debt of the Specified Public Sector except that of the Bank of Jamaica, net of any cross holdings.

**Public Debt Charges**

Public debt charges are interest payments on the loan obligations and include related incidental expenses such as service fees, late payment penalties and commitment fees.

**Sovereign Rating**

A sovereign rating is an assessment of the default risk for medium and/or long-term debt obligations issued by a national Government (denominated in foreign currency), either in its own name or with its guarantee. Ratings are produced by independent agencies (Moody's Investors Service, Standard & Poor's and others). The ratings provide a guide for investment risk to capital market investors.

**Treasury Bills**

Treasury Bills are short-term debt obligations backed by the government with maturities less than one year. The Government of Jamaica issues Treasury Bills with 30-, 60- and 180-day tenors. Treasury Bills are issued through a competitive bidding process at a discount from par, which means that rather than paying fixed interest payments like conventional bonds, the appreciation of the instrument provides the return to the holder.

**Value at Risk (VaR)**

Value at Risk of the debt portfolio estimates the maximum increase in the debt stock due to changes in market variables, with a given probability over a given period.

**Yield Curve**

A line graph showing the interest rates at specific points in time by plotting the yields of all securities with the same risk but with maturities ranging from the shortest to the longest available. The yield curve for Government securities is often used as a benchmark for pricing other debt in the market. The curve is also used as an indicator of macroeconomic conditions.