



GOVERNMENT OF JAMAICA



# MEDIUM-TERM DEBT MANAGEMENT STRATEGY

FY2020/21 – FY2023/24

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## LIST OF ABBREVIATIONS

<b>ABP</b>	Annual Borrowing Plan
<b>ATM</b>	Average Time-to-Maturity
<b>ATR</b>	Average Time-to-Refixing
<b>BIN</b>	Benchmark Investment Note
<b>BOJ</b>	Bank of Jamaica
<b>BOP</b>	Balance of Payments
<b>BPS</b>	Basis Points
<b>B-FXITT</b>	Bank of Jamaica Foreign Exchange Intervention Trading Tool
<b>CAD</b>	Current Account Deficit
<b>CaR</b>	Cost at Risk
<b>CCaR</b>	Conditional Cost at Risk
<b>CCFaR</b>	Conditional Cash Flow at Risk
<b>CFaR</b>	Cash Flow at Risk
<b>CPI</b>	Consumer Price Index
<b>CVaR</b>	Conditional Value at Risk
<b>CY</b>	Calendar Year
<b>DMB</b>	Debt Management Branch
<b>EM</b>	Emerging Market
<b>EME</b>	Emerging Market Economies
<b>FAA Act</b>	Financial Administration and Audit Act
<b>FED</b>	Federal Reserve Bank
<b>FFF</b>	Flexible Financing Facility
<b>FITP</b>	Fixed Income Trading Platform
<b>FR</b>	Fixed-Rate
<b>FRAN</b>	Fixed-Rate Accreting Notes
<b>FRF</b>	Fiscal Responsibility Framework
<b>FY</b>	Fiscal Year
<b>FX</b>	Foreign Exchange
<b>GDP</b>	Gross Domestic Product
<b>GGL</b>	Government Guaranteed Loan

<b>GOJ</b>	Government of Jamaica
<b>ICM</b>	International Capital Market
<b>IDB</b>	Inter-American Development Bank
<b>IMF</b>	International Monetary Fund
<b>IR</b>	Investor Relations
<b>IRP</b>	Investor Relations Plan
<b>JAMAN</b>	Jamaica's Global Bonds
<b>JAMCLEAR-CSD</b>	Central Securities Depository
<b>JMD</b>	Jamaica Dollar
<b>JSDA</b>	Jamaica Securities Dealer Association
<b>JSE</b>	Jamaica Stock Exchange
<b>LMO</b>	Liability Management Operations
<b>LIBOR</b>	London Inter-Bank Offered Rate
<b>MTDS</b>	Medium-Term Debt Management Strategy
<b>NIR</b>	Net International Reserves
<b>PB</b>	Public Bodies
<b>PBL</b>	Policy-Based Loan
<b>PBMA Act</b>	Public Bodies Management and Accountability Act
<b>PCDF</b>	PetroCaribe Development Fund
<b>PD</b>	Primary Dealer
<b>PDMA</b>	Public Debt Management Act
<b>PSBA</b>	Precautionary Standby Arrangement
<b>T-bill</b>	Treasury Bill
<b>USD</b>	United States Dollar
<b>VaR</b>	Value at Risk
<b>VR</b>	Variable-Rate

## FOREWORD

During FY2019/20, the Government successfully maintained the debt-to-GDP on a downward trajectory, underpinned by the positive performance of key macroeconomic indicators and proactive debt management strategies. The debt-to-GDP is projected to be 91.5 percent at end-March 2020, 2.9 percentage points lower than the 94.4 percent recorded at end-March 2019 and remains on track to meet the legislated target of 60.0 percent or less by FY2025/26.

The Medium-term Debt Management Strategy (MTDS) FY2020/21 – FY2023/24, governed by the Public Debt Management Act (PDMA), will continue to align with the GOJ's public debt strategic priorities and policy objectives. Notwithstanding marked improvements in cost and risk indicators, the Government remains vigilant as it relates to the level of exposure to foreign currency, interest rate and refinancing risks in the debt portfolio. As such, the GOJ will continue to operationalize the strategy of borrowing mainly in the domestic market at fixed-rates across the yield curve to support efforts in mitigating these risks.

The Annual Borrowing Plan (ABP), included in the MTDS outlines the planned financing programme for FY2020/21. The plan also increases the transparency of debt operations and provides an opportunity for prospective investors to configure their portfolios to successfully participate in GOJ issuances.

In keeping with the objective of inclusiveness and open dialogue with stakeholders, the GOJ will continue to deepen its engagement with the market through the DMB's Investor Relations Programme.

The GOJ remains committed to ensuring that Jamaica continues to be fiscally responsible and pursues strategies for attaining higher levels of sustainable growth.

Your comments on the document are welcome at: [invrelinfo@mof.gov.jm](mailto:invrelinfo@mof.gov.jm)



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February 11, 2020



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## ACKNOWLEDGEMENTS

The Medium-Term Debt Management Strategy (MTDS) continues to play a significant role in the achievement of the GOJ's public debt management operational goals and objectives.

The MTDS FY2020/21-FY2023/24 will guide debt management operations over the medium-term to ensure that the GOJ's financing needs are satisfied at prudent levels of risk. It also reaffirms the Government's commitment to continued stakeholder engagement in the effort to engender sustained support for GOJ's issuances.

Accordingly, the preparation of the document involves the technical process of utilizing an analytical toolkit to model and assess alternate financing scenarios, from which an optimal borrowing strategy is selected for execution.

Sincere appreciation and thanks to the DMB team for their valuable contribution and continued commitment to the preparation of the document. The team remains steadfast in its efforts to be innovative and proactive in the execution of strategies regarding the management of the public debt.

Special thanks to: Miss Darlene Morrison, Financial Secretary; Mr. Courtney Williams, Deputy Financial Secretary, Technical Advisory Coordination (Acting); IMF consultants and the Public Debt Management Committee for their support, guidance and input.



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## EXECUTIVE SUMMARY

The design and implementation of sound debt management strategies help to: (i.) reduce macro-financial risks; (ii.) reinforce fiscal sustainability; (iii.) complement prudent monetary policy implementation; and (iv.) advance financial sector development by supporting a functioning government securities market.

The Government of Jamaica's (GOJ's) Medium-Term Debt Management Strategy (MTDS FY2020/21 – FY2023/24) prioritizes the reduction of the portfolio's exposure to foreign currency, interest rate and refinancing risks. Accordingly, the financing programme focuses mainly on domestic fixed-rate issuances across the yield curve. The strategy also aims to facilitate further development of the domestic debt market and proposes an issuance modality geared towards increasing efficiency and liquidity in the GOJ securities market.

Despite a relaxing of the primary surplus target to 6.5 percent, the debt trajectory remains downward, projected at 91.5 percent at end-FY2019/20, less than the 94.4 percent recorded at the end of the previous fiscal year. Strict adherence to the primary surplus target is expected to support continued reduction in the debt-to-GDP in line with the legislated target of 60.0 percent or less by FY2025/26.

Sustained improvements in the macro economy and strong fiscal performance continue to support the successful implementation of GOJ's debt management strategy. Debt operations during FY2019/20 were consistent with the Government's strategy to borrow mainly at fixed-rates over longer tenors in the domestic market. Favourable financing conditions in both the external and domestic markets coupled with strong demand for GOJ securities contributed to improvements in key portfolio indicators evidenced by a general reduction in portfolio exposure to interest rate and refinancing risks. Notwithstanding a depreciation of the Jamaica dollar relative to the US dollar, a reduction in the stock of US dollar-denominated debt highlighted a reduction in the portfolio's nominal exposure to foreign currency risk over the review period. These improvements were realized in the context of generally lower annualized interest costs in the domestic and external portfolios.

Government's exposure to explicit contingent liabilities also decreased over the period, as reflected in a 13.7 percent reduction in the stock of Government guaranteed loans (GGLs) at end-December 2019 relative to end-March 2019. The concomitant reduction in the GGL-to-GDP ratio to a projected 4.4 percent puts the GOJ ahead of the legislated ceiling of 5.0 percent for end-FY2021/22.

During FY2020/21, the GOJ will focus on advancing the development of an enhanced Primary Dealer System, wherein stakeholders' roles and expectations will be clearly defined. Additionally, the GOJ, through the DMB's Investor Relations Programme, will continue to deepen its engagement with the market, thereby consolidating the strong relationship with investors and other key stakeholders to ensure continued confidence in GOJ securities.

## 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 FY2020/21-FY2023/24 examines the costs and risks for the debt portfolio relative to established benchmarks, under a baseline and stress scenarios, for alternative financing strategies. The selected strategy informs a financing programme which most adequately aligns with the Government's cost and risk preferences and best meets the following broad strategic debt management objectives:

- 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.

Jamaica continues to benefit from the economic reforms undertaken through two consecutive IMF agreements. This is reflected in sustained improvements in key macroeconomic indicators and strong fiscal performances over the last few years. These gains have served to anchor the debt trajectory firmly downwards, projected at 91.5 percent for end-FY2019/20, on track to achieving the legislated target of 60.0 percent or less by end-FY2025/26.

The Government's strategy to borrow mainly at fixed rates over longer tenors in the domestic market contributed to improvements in the respective cost and risk indicators for the debt portfolio. Strong domestic demand for GOJ securities, amidst monetary policy easing by the Bank of Jamaica (BOJ), enabled issuances across the curve and resulted in reduced exposure to interest rate and refinancing risks and lower annual interest costs in the domestic debt portfolio.

Similar successes were realized in the external portfolio, where costs and risks were simultaneously lowered over the review period. Foreign currency risk was mitigated as net amortizing outflows, the consolidation of PetroCaribe Development Fund (PCDF) holdings of GOJ securities and the execution of liability management operations (LMOs), all contributed to a reduction in the stock of US dollar-denominated debt over the period. Notwithstanding the reduction in the nominal stock, depreciation of the Jamaica dollar mitigated the pass-through to the portfolio in Jamaica dollar terms.

Despite 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 FY2020/21-FY2023/24, which includes the Annual Borrowing Plan and Issuance

Calendar, will continue to operationalize a strategy of borrowing mainly in the domestic market at fixed rates across the yield curve.

The scope of the analysis covers total public debt, which includes Central Government debt and that of specified public bodies, except the BOJ, net of any cross holdings. The stock of debt used in the analytical toolkit includes Central Government debt 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 DEBT STOCK

At end-December 2019, the stock of total public debt outstanding was \$1,999,491.1 million, \$61,477.6 million or 3.2 percent more than the figure at end-March 2019 (see **Table 1**). The change reflected an increase in net public bodies' debt partially offset by reductions in Central Government domestic and external debt over the review period. The share of net public bodies' debt in total public debt increased to 4.5 percent at end-December 2019 from 0.5 percent at end-March 2019. Total public debt is projected to be \$1,943,904.4 million or 90.2 percent of GDP at end-March 2020, and remains on track to meet the 60.0 percent of GDP ceiling by March 2026.

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

	Mar-19	Dec-19	Change	
	J\$ millions	J\$ millions	J\$ million	%
<b>Total Debt</b>	<b>1,938,013.5</b>	<b>1,999,491.1</b>	<b>61,477.6</b>	<b>3.2</b>
<b>Total Central Government Debt</b>	<b>1,928,767.0</b>	<b>1,909,196.4</b>	<b>(19,570.7)</b>	<b>(1.0)</b>
<b>Central Government Domestic Debt</b>	<b>755,977.7</b>	<b>743,902.1</b>	<b>(12,075.6)</b>	<b>(1.6)</b>
<b>Marketable Securities</b>	<b>755,776.7</b>	<b>743,751.3</b>	<b>(12,025.4)</b>	<b>(1.6)</b>
Bonds	745,976.7	733,451.3	(12,525.4)	(1.7)
Treasury Bills	9,800.0	10,300.0	500.0	5.1
<b>Loans</b>	<b>201.0</b>	<b>150.8</b>	<b>(50.2)</b>	<b>(25.0)</b>
Commercial Banks	0.0	0.0	0.0	
Public Sector	200.8	150.6	(50.2)	(25.0)
Perpetual Annuities	0.2	0.2	0.0	0.0
<b>Central Government External Debt</b>	<b>1,172,789.3</b>	<b>1,165,294.3</b>	<b>(7,494.9)</b>	<b>(0.6)</b>
<b>Marketable Securities</b>	<b>716,844.3</b>	<b>682,777.3</b>	<b>(34,067.0)</b>	<b>(4.8)</b>
Bonds	716,844.3	682,777.3	(34,067.0)	(4.8)
<b>Loans</b>	<b>455,945.0</b>	<b>482,517.0</b>	<b>26,572.0</b>	<b>5.8</b>
<b>Bilateral</b>	<b>86,820.6</b>	<b>103,236.8</b>	<b>16,416.2</b>	<b>18.9</b>
OECD	5,882.0	4,548.0	(1,333.9)	(22.7)
Non-OECD	80,938.6	98,688.8	17,750.2	21.9
<b>Multilateral</b>	<b>364,644.9</b>	<b>377,884.8</b>	<b>13,239.9</b>	<b>3.6</b>
IDB	196,943.9	206,679.7	9,735.8	4.9
IBRD	109,240.6	117,412.3	8,171.7	7.5
Other	58,460.4	53,792.8	(4,667.6)	(8.0)
<b>Commercial Banks</b>	<b>4,479.5</b>	<b>1,395.4</b>	<b>(3,084.2)</b>	<b>(68.8)</b>
<b>Gross Public Bodies' Debt</b>	<b>334,137.6</b>	<b>250,359.9</b>	<b>(83,777.8)</b>	<b>(25.1)</b>
Guaranteed Loans	109,410.7	94,374.0	(15,036.7)	(13.7)
Loans from Central Gov't	162,313.2	79,785.9	(82,527.4)	(50.8)
Non-Guaranteed Loans	62,413.7	76,200.0	13,786.3	22.1
<b>Total Cross Holdings</b>	<b>324,891.2</b>	<b>160,065.2</b>	<b>(164,826.0)</b>	<b>(50.7)</b>
<b>Net Public Bodies</b>	<b>9,246.5</b>	<b>90,294.7</b>	<b>81,048.2</b>	<b>876.5</b>

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

## 2.1 Central Government Debt

Total Central Government debt outstanding at end-December 2019 was \$1,909,196.1 million, a decrease of \$19,570.9 million or 1.0 percent compared to the \$1,928,767.0 million recorded at end-March 2019. This resulted from reductions in the domestic and external portfolios which decreased by 1.6 percent and 0.6 percent, respectively.

The stock of Central Government external debt decreased from \$1,172,789.3 million at end-March 2019 to \$1,165,294.3 at end-December 2019. The realization of net amortizing outflows, the consolidation of PetroCaribe Development Fund (PCDF) holdings of GOJ securities and the execution of liability management operations (LMO's) all contributed to the reduction in the stock by approximately US\$533.4 million. However, depreciation in the value of the Jamaica dollar mitigated the pass-through of this reduction to the portfolio in Jamaica dollar terms. The stock of Central Government external debt is expected to decrease to \$1,110,802.5 million by end-March 2020.

The domestic portfolio decreased from \$755,977.7 million at end-March 2019 to \$743,902.1 million at end-December 2019. Domestic bonds, which accounted for the largest share of Central Government domestic debt, recorded the largest reduction, reflecting net outflows associated with relatively large amortizations of Benchmark Investment Notes (BINs) over the review period. Central Government domestic debt is projected at \$763,584.7 million at end-March 2020.

## 2.2 Non-Central Government Debt

The Non-Central Government sector comprises public bodies, excluding those certified by the Auditor General as primarily carrying out functions that are of a commercial nature. Gross public bodies' (PBs) debt at end-December 2019 of \$250,359.9 million was \$83,777.8 million or 25.1 percent less than the \$334,137.6 million recorded at end-March 2019. This decrease was attributed to reductions in loans from Central Government and Government guaranteed debt, mitigated by an increase in non-guaranteed debt. Net PBs debt<sup>1</sup> at end-December 2019 was \$90,294.7 million, an increase of \$81,048.2 million compared to end-March 2019. This increase partly resulted from a reduction in cross holdings subsequent to the incorporation of PCDF into Central Government.<sup>2</sup> Net PB's debt is projected at \$69,517.3 million at end-March 2020.

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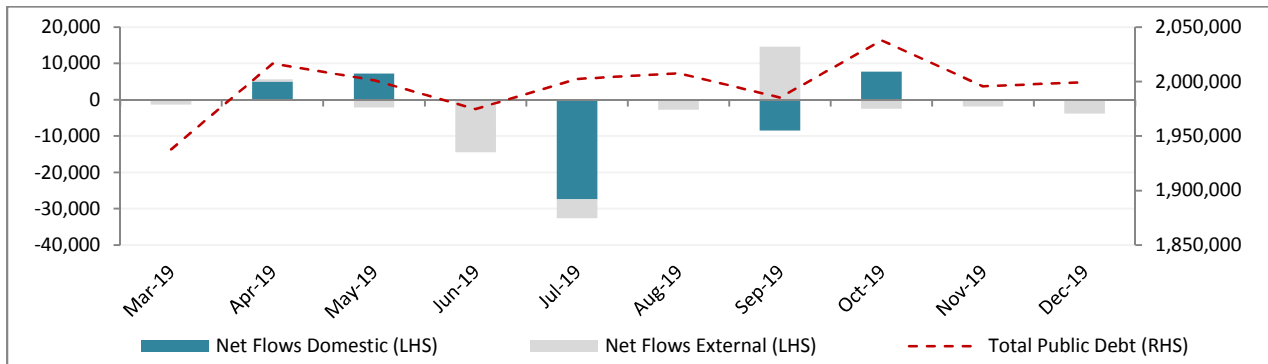
<sup>1</sup> Net public bodies' debt is calculated as gross public bodies' debt less cross-holdings. Cross-holdings include loans from Central Government or other PBs and PBs investments in GOJ securities.

<sup>2</sup> The increase in net PBs debt also reflected a US\$205.0 million increase in liabilities on NROCCs balance sheet, associated with the assumed ownership of Trans Jamaica Highway (TJH). This increase will fall away upon completion of the TJH initial public offering (IPO) during the fourth quarter of FY2019/20.

## 2.3 Public Debt Trajectory

**Figure 1** highlights the net financing flows for the Central Government domestic and external debt portfolios and the trajectory of the stock of total public debt from end-March 2019 to end-December 2019. Financing activities of the GOJ over the review period reflected a well-thought-out strategy to reduce net financing inflows. Amortization of a fixed-rate domestic BIN in July 2019 of \$40,523.5 million, a fixed-rate external BIN in June 2019 of \$11,586.8 million and net inflows of approximately \$16,043.6 million from the re-opening of the 2045 JAMAN global bond in September 2019 were major contributors to net financing outflows of \$30,647.5 million for the period. Net outflows from the Central Government domestic and external debt portfolios were \$16,006.8 million and \$14,640.6 million respectively.

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

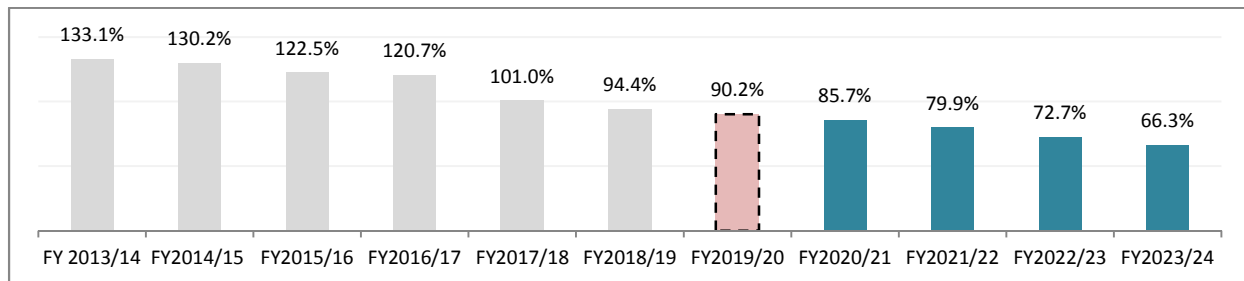


Notes: Financing flows and total public debt are in millions of Jamaica dollars.

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

Throughout the review period, financing operations were consistent with GOJ's objective to reduce the debt-to-GDP. As highlighted in **Figure 2**, debt-to-GDP is expected to continue trending downwards and is projected at 90.2 percent at end-FY2019/20, a reduction of 4.2 percentage points, compared to the 94.4 percent recorded at end-FY2018/19. With continued commitment to strong fiscal discipline and prudent debt management, the GOJ is on track to realize further reductions in the debt-to-GDP consistent with the legislated target of 60.0 percent or less by FY2025/26.

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



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

## **Box 1: Liability Management Operations (LMOs) for FY2019/20**

### **Tender-switch**

Section 7.3 of the MTDS FY2019/20-FY2022/23 outlined the GOJ's intention to undertake "opportunistic" liability management operations during FY2019/20. In this regard, a LMO was successfully executed in the international capital markets in September 2019. The transaction had two components. Firstly, investors were invited to tender any or all of the outstanding global bonds due 2022, 2025 (2 series) and 2028 for cash. The second component involved the issuance of new bonds through the reopening of the global bond due 2045.

The transaction was structured consistent with the broad strategic debt management objectives of managing costs and risks in the public debt portfolio, while raising adequate funding to satisfy the GOJ's financing needs. Due to the high demand for the 2045 bonds, low buyback premiums were offered on the trading levels for the targeted bonds. This, in addition to the high price of the 2045 bonds, contributed to annual interest cost savings of US\$18.2 million, and a net reduction in the nominal debt stock of US\$34.2 million. The average-time-to-maturity of the value of the debt stock involved in the transaction was increased by 18.7 years. Despite volatile market conditions, the transaction was successful in mitigating refinancing risk. This further contributed to the Government's objective to reduce bunching of maturities in the debt portfolio which is prevalent in FY2024/25 and FY2028/29.

### **Currency Conversion**

The GOJ collaborated with the Inter-American Development Bank (IDB) in the execution of two currency-swap liability management transactions totalling US\$50.0 million, in two equal tranches of US\$25.0 million during the fiscal year. The GOJ achieved the following:

- Mitigated foreign currency risk by reducing the foreign currency composition of the debt;
- Mitigated interest rate risk by swapping a multilateral variable-rate loan to a fixed-rate local currency loan; and
- Realized net savings estimated at J\$466.9 million.



### SECTION III: COST AND RISK ANALYSIS

Establishing an appropriate balance between costs and risks is vital to the effective management of the public debt portfolio. The MTDS provides a diagnostic framework through which costs and risks of alternative financing strategies are assessed. 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 which affect 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 2019 and end-December 2019, relative to established fiscal year targets. Overall, the key cost and risk indicators were generally in line with the targets and improved compared to end-March 2019. Interest cost decreased over the period as a reflection of current market conditions. Foreign currency risk continues to be the main risk in the debt portfolio, however, the share of foreign currency debt in total debt decreased marginally between end-March 2019 and end-December 2019, and remained within target. Refinancing risk also reduced over the review period, with improvements in specific indicators for the domestic and external portfolios, which all fell within the target range. The portfolio's overall exposure to interest rate variability also decreased.

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

	Outcomes			Targets end-March 2020	
	End-Mar 2019	End-Dec 2019	Change	Min	Max
<b>Implied Annual Interest Cost</b>					
Domestic	6.3	6.2	(0.1)	-	-
External	5.9	5.8	(0.1)	-	-
Total	6.1	5.9	(0.2)	-	-
<b>Interest Rate Risk</b>					
<b>Domestic</b>					
Variable-Rate Debt	37.5	37.0	(0.5)	28.0	30.0
Debt Refixing in 1 year (% of total)	44.0	37.5	(6.5)	-	-
Average-Time-to-Refixing (Years)	7.6	8.0	0.4	-	-
<b>External</b>					
Variable-Rate Debt	28.9	30.8	1.9	35.0	40.0
Debt Refixing in 1 year (% of total)	29.2	28.6	(0.6)	-	-
Average-Time-to-Refixing (Years)	9.1	10.9	1.8	-	-
<b>Total</b>					
Variable-Rate Debt	32.1	33.1	1.0	30.0	33.0
Debt Refixing in 1 year (% of total)	34.8	32.0	(2.8)	-	-
Average-Time-to-Refixing	8.5	9.8	1.3	-	-
<b>Refinancing Risk</b>					
<b>Domestic</b>					
Debt maturing in 1 year (% of total)	7.8	13.4	5.6	-	-
ATM (Years)	9.8	10.1	0.3	-	-
<b>External</b>					
Debt maturing in 1 yr (% of total)	1.1	0.5	(0.6)	-	-
ATM (Years)	11.3	13.2	1.9	-	-
<b>Total</b>					
Debt Maturing in 1 yr (% of total)	3.6	5.4	1.8	-	<=10.0
ATM (Years)	10.7	12.0	1.3	>=9.0	-
<b>Foreign Currency Risk</b>					
FX debt as (% of total debt)	60.8	60.7	(0.1)	61.0	65.0
<b>Inflation Risk</b>					
CPI-Linked debt (% of total debt)	2.5	2.6	0.1	-	-
<b>Contingent Liabilities</b>					
Guaranteed Loans (% of GDP)	5.3	4.4	(0.9)	-	<=5.0

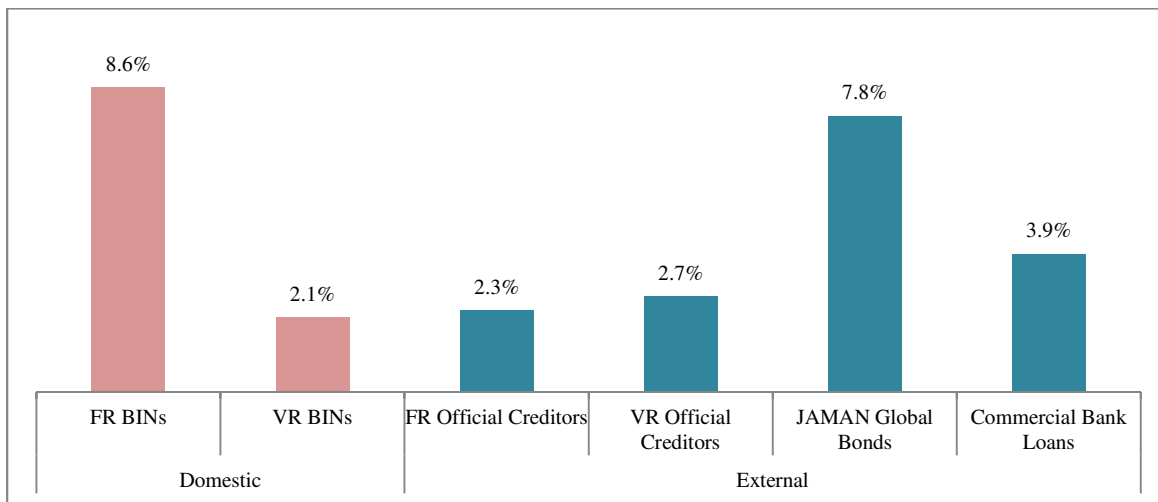
Source: Ministry of Finance and the Public Service

### 3.1 Interest Cost

**Table 2** depicts a weighted average interest cost of 5.9 percent for Central Government debt at end-December 2019, which represented a 0.2 percentage point reduction when compared to end-March 2019. The reduced interest cost was attributed to a 0.1 percentage point reduction in both the domestic and external portfolios. This lower borrowing cost was driven by the accommodative monetary policy stance of the Federal Reserve (FED) and the BOJ, as well as high levels of domestic market liquidity and increased investor demand for GOJ securities during the review period.

Domestic fixed-rate bonds were the most costly instruments with an average interest cost of 8.6 percent at end-December 2019. The average interest cost on domestic variable-rate bonds was 6.5 percentage points lower than domestic fixed-rate bonds. Global fixed-rate bonds were the second most expensive cost drivers for the debt portfolio with an average interest cost of 7.8 percent. Fixed-rate multilateral/bilateral loans were the least costly instruments in the external portfolio with an average interest cost of 2.3 percent, approximately 0.4 percentage point lower than variable-rate multilateral/bilateral loans (see **Figure 3**).

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



Source: Ministry of Finance and the Public Service

### 3.2 Interest Rate Risk

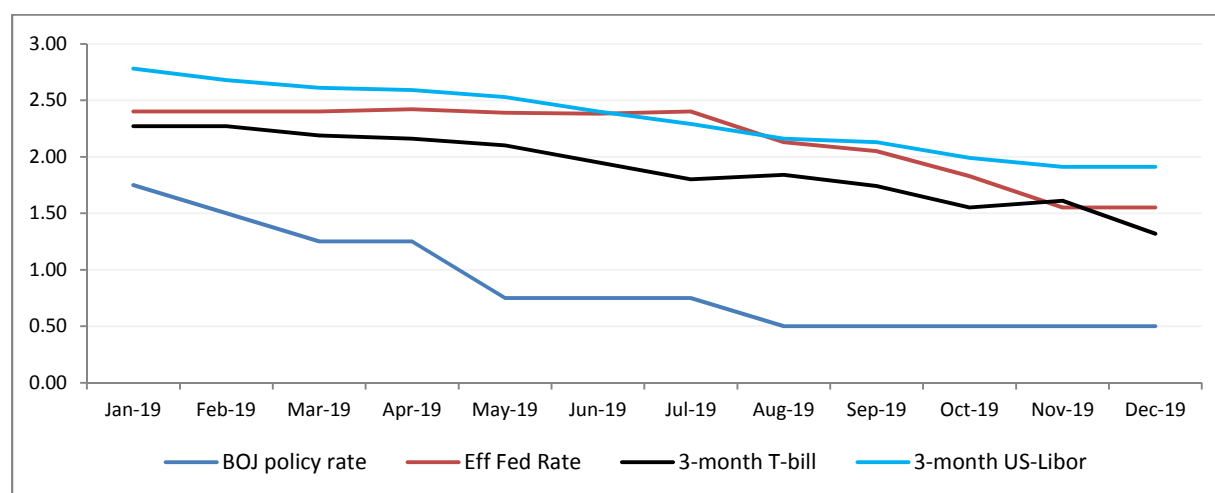
Interest rate risk relates to changes in debt service costs resulting from variability in market interest rates.<sup>3</sup> A portfolio's exposure to interest rate risk is usually determined by the share of

<sup>3</sup> The 3-month T-bill rate and the US-Libor serve as reference rates for domestic and external debt, respectively.

existing floating-rate debt and fixed-rate debt that falls due within 12 months and needs to be rolled over.

**Figure 4** highlights a downward trend in benchmark interest rates for the debt portfolio during calendar year 2019. The BOJ reduced its policy rate four times, from 1.75 percent to its current level of 0.50 percent per annum. This monetary easing was geared towards stimulating the expansion of private sector credit in order to spur a higher level of economic activity. In an effort to mitigate the potentially negative effects on the US economy from increased geopolitical tensions, rising trade uncertainty and slowing global growth, the Fed reduced its policy rate three times, cumulatively by 75 basis points (bps) during calendar year (CY) 2019. The policy actions of both monetary authorities resulted in downward trends in the 3-month Treasury bill (T-bill) rate and the 3-month US dollar Libor (see **Figure 4**). The 3-month T-bill rate was 1.32 percent in December 2019, 95 bps lower than January 2019. This compared to an 87 bps reduction in the 3-month US Libor to 1.91 percent at end-December 2019.

**Figure 4: Reference Rates for the Debt Portfolio**



Source: Bank of Jamaica and the Federal Reserve Bank of St. Louis

There was general improvement in the portfolio’s exposure to interest rate risk, reflected in increases in the average-time-to-re-fixing (ATR) and debt re-fixing within one year. The ATR measures the weighted average time until all principal payments in the debt portfolio become subject to a new interest rate. Over the review period, the ATR for Central Government debt portfolio increased by 1.3 years from 8.5 years at end-March 2019 to 9.8 years at end-December 2019. This was as a result of a 0.4 year and 1.8 years increase in the domestic and external debt portfolios, respectively.

The share of debt re-fixing in one year or less captures the proportion of debt, which is subject to a new interest rate within the next twelve months. The share of debt re-fixing in one year or less decreased to 32.0 percent at end-December 2019 from 34.8 percent at end-March 2019. This was driven by a 6.5 percentage points and 0.6 percentage point reduction for the domestic and external portfolio, respectively.

Notwithstanding these improvements, the share of variable-rate debt in total public debt increased marginally over the review period. This increase was entirely attributable to the external portfolio, where the share of external variable-rate debt increased by 1.9 percentage points to 30.8 percent at end-December 2019. Contrastingly, the share of domestic variable-rate debt decreased from 37.5 percent at end-March 2019 to 37.0 percent at end-December 2019 (see **Table 2**).

### **3.3 Foreign Currency Risk**

Foreign currency risk is the financial risk associated with changes in the exchange rate and the potential impact on the value of foreign currency-denominated debt and the associated debt service costs. The level of risk is a function of the share and nominal exposure of foreign currency-denominated debt in the portfolio and the volatility of the exchange rate between the local currency and foreign currencies. A depreciation of the Jamaica dollar will increase the stock valuation as well as debt service costs in Jamaica dollar terms, in respect of foreign currency-denominated debt.

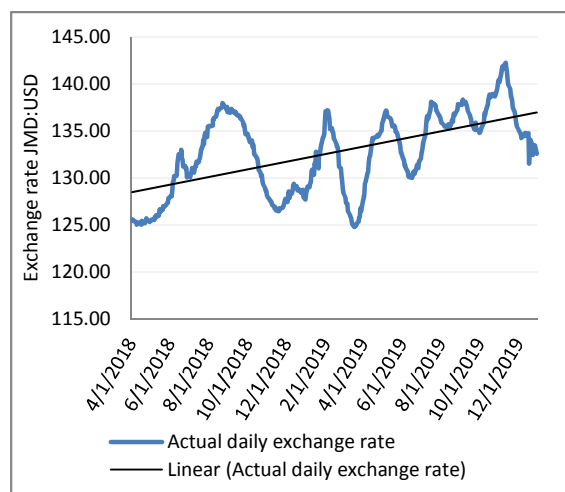
The strategy of greater reliance on local currency financing vis-a-vis foreign currency financing helped to reduce the portfolio's nominal exposure to foreign currency risk. During the period end-March 2019 to end-December 2019, the nominal value of foreign currency-denominated debt decreased by 5.8 percent from US\$9,273.5 million to US\$8,740.1 million. Notwithstanding the nominal reductions, the share of foreign currency debt relative to total debt was 60.7 percent at end-December 2019, broadly unchanged from the 60.8 percent outturn at end-March 2019 and below the limit established in the MTDS FY2019/20-FY2022/23.

The Government also took proactive steps to reduce foreign currency risk. In September 2019, a major LMO was conducted in the external market in which near-to-maturity USD-denominated bonds were offered for early redemption, resulting in a net reduction in foreign currency-denominated debt of US\$34.2 million. The Government also executed a currency swap in which a variable-rate loan from the Inter-American Development Bank (IDB) totaling US\$50.0 million was converted to Jamaica dollars in two tranches of US\$25.0 million

each (see **Box 1**). Both transactions contributed to 15.8 percent of the total reduction in the nominal foreign currency-denominated debt.

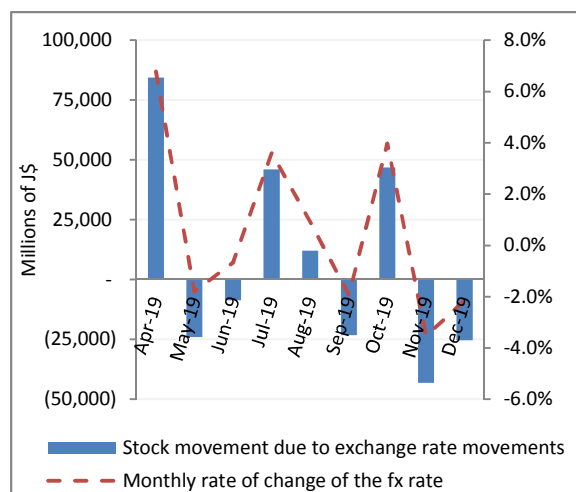
Notwithstanding the reduction in the portfolio’s exposure to foreign-currency risk, there was increased volatility in the exchange rate (see **Figure 5**). Between April 1, 2019 to December 31, 2019, the Jamaica dollar depreciated by 4.8 percent vis-à-vis the US dollar, moving from J\$126.47: US\$1.00 to J\$132.57: US\$1.00. This was faster than the corresponding period in FY2018/19 when the rate of depreciation was 1.7 percent and the exchange rate moved from J\$125.01: US\$1.00 to J\$127.72: US\$1.00.

**Figure 5: Actual Daily JMD-USD Exchange Rate**



Source: Ministry of Finance and the Public Service

**Figure 6: Monthly Depreciation Rate and Associated Valuation Effects**



Notes: Change in the outstanding foreign currency-denominated debt due to exchange rate movements on the left axis and the monthly rate of change in the exchange rate on the right axis.  
Source: Ministry of Finance and the Public Service

Large variability in the foreign exchange rate translated into changes in the debt stock with the increase being as high as \$84,421.0 million in April 2019. Despite intermittent appreciations, currency movements added \$64,929.2 million to the outstanding stock of debt over the review period (see **Figure 6**).

### 3.4 Inflation Risk

Inflation risk in the debt portfolio relates to changes in the stock of public debt and debt service costs resulting from movements in the Consumer Price Index (CPI). Inflation-linked debt instruments are attractive to potential investors in the context of high and unpredictable inflation as they provide an opportunity to hedge against increases in the inflation rate, thus preserving the real return on investments. Upward movements in the inflation rate will increase the nominal

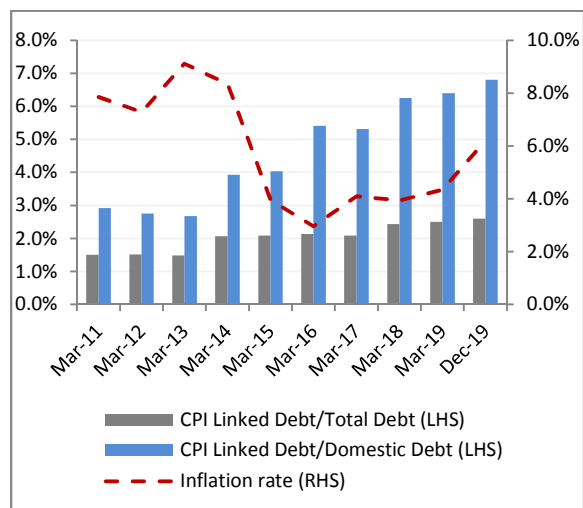
value of inflation-linked debt as well as the associated debt service costs to the GOJ. The extent of the impact will depend on the change in the inflation rate and the portfolio's exposure.

In recent times, the BOJ has embarked on the monetary policy stance of inflation targeting, with the aim of maintaining a low and stable inflation rate within a lower limit of 4.0 percent and an upper limit of 6.0 percent. The inflation targeting regime is expected to translate into lower uncertainty regarding unexpected changes in the price level.

Currently, exposure to inflation risk is contained in the domestic portfolio. As at end-March 2019, total inflation-linked debt was \$48,418.15 million, or 6.4 percent of total outstanding Central Government domestic debt. CPI movements over the period April 1, 2019 to December 31, 2019, resulted in an increase in the value of CPI-linked debt by \$1,780.8 million to \$50,198.95 million, representing 6.8 percent of outstanding domestic debt. The share of CPI-linked debt as a percentage of total Central Government debt was 2.6 percent at end-December 2019, broadly unchanged from end-March 2019 (see **Figure 7**).

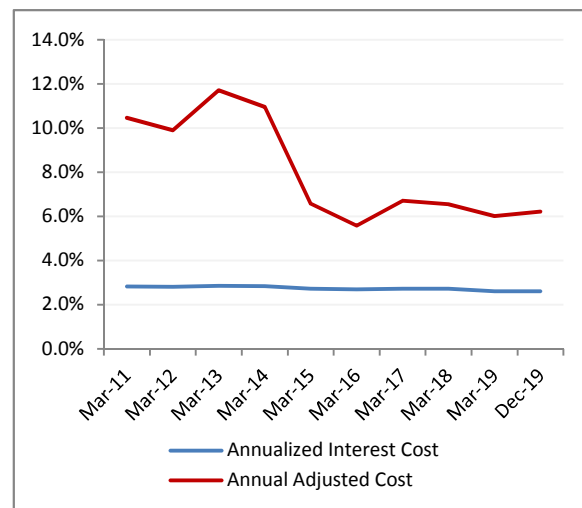
Annualized average implied cost on CPI-linked bonds was estimated at 2.7 percent at end-December 2019 which is lower than the cost of fixed-rate BINs of comparable tenors. However, the annualized adjusted cost, which takes into consideration inflation movements, was estimated at 6.2 percent at end-December 2019, 0.3 percentage point higher than the implied cost of the fixed-rate BINs (see **Figure 8**).

**Figure 7: Share of CPI-Linked Debt in the Central Government Debt**



Source: Ministry of Finance and the Public Service

**Figure 8: Cost of CPI-Linked Bonds**



Source: Ministry of Finance and the Public Service

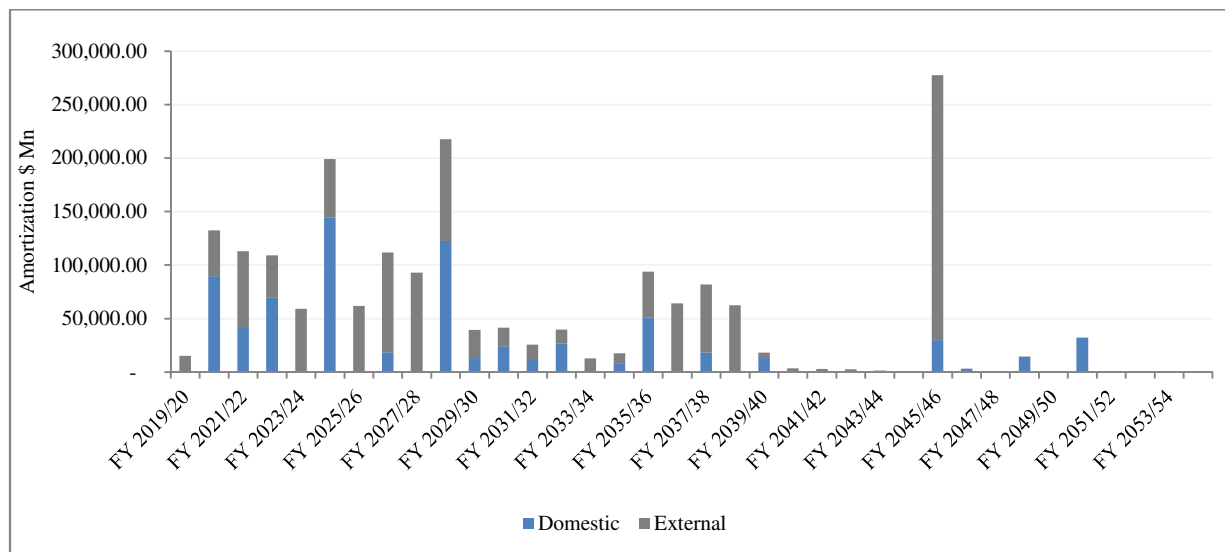
### 3.5 Refinancing Risk

Refinancing risk is the probability that debt will have to be rolled over at an unusually high cost, or, in extreme cases cannot be rolled over. Refinancing risk is measured by: the portfolio’s average time to maturity (ATM), the share of debt maturing in one year or less and the redemption profile which shows the concentration of maturities in a year or period.

The share of debt maturing in one year or less for the debt portfolio increased from 3.6 percent at end-March 2019 to 5.4 percent at end-December 2019. This was entirely attributable to the domestic portfolio increasing by 5.6 percentage points due mainly to the scheduled maturity of the \$89.5 billion Variable-rate BIN in October 2020. The share of debt maturing in one year or less for the external portfolio decreased by 0.6 percentage point to 0.5 percent at end-December 2019.

The ATM measures the average time taken to roll over the debt portfolio. At end-December 2019, the ATM for the debt portfolio was 12.0 years, an increase of 1.3 years over the review period. The main contributor to the increase was the external portfolio which increased by 1.9 years at end-December 2019. The improved ATM for the external portfolio was largely due to the liability management transaction by the GOJ in September 2019 (see **Box 1**). The domestic portfolio’s ATM increased from 9.8 years at end-March 2019 to 10.1 years at end-December 2019. Notwithstanding this improvement, bunching remains in the debt portfolio in FY2024/25, FY2028/29 and FY2045/46 (see **Figure 9**).

**Figure 9 Redemption Profile of Central Government Debt at end-December 2019**



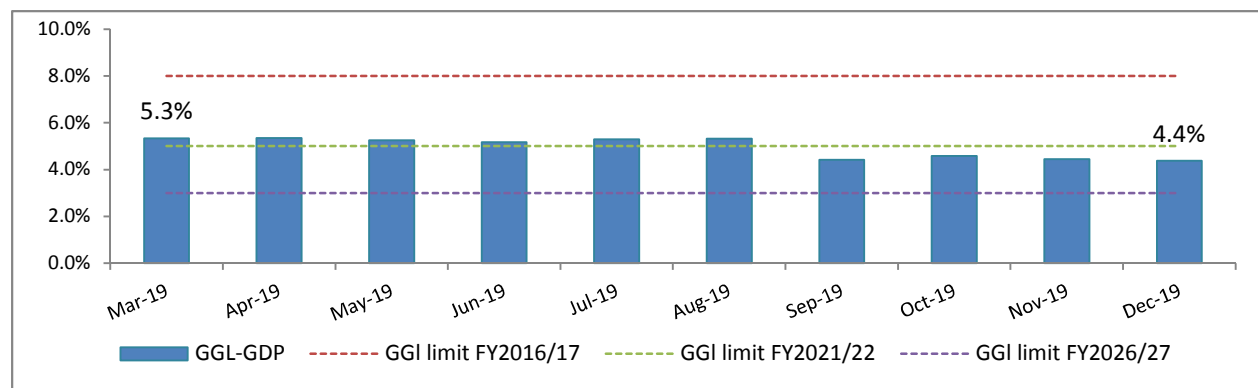
Source: Ministry of Finance and the Public Service



### 3.6 Contingent Liability- Government Guaranteed Loans

Contingent liabilities are a major source of fiscal risk. Government guaranteed loans (GGLs) are explicit contingent liabilities which, if called or assumed by the Government, will increase debt service costs as the GOJ is obligated to assume these liabilities. The stock of GGLs at end-December 2019 was \$94,374.0 million or an estimated 4.4 percent of GDP, a reduction of 0.9 percentage point over the review period and 0.6 percentage point below the FY2021/22 legislated target of 5.0 percent (see **Figure 10**).

**Figure 10: Government Guaranteed Loans as a Share of GDP**



Source: Ministry of Finance and the Public Service

The end-December 2019 stock was \$15,036.73 million, or 13.7 percent less than the stock at end-March 2019. Outstanding external and domestic GGLs decreased by \$14,468.04 million or 19.1 percent, and \$568.7 million or 1.7 percent, respectively (see **Table 3**). The integration of PCDF into Central Government, and the resultant consolidation of the Fund’s holdings contributed to a decrease in the reported external GGL portfolio of US\$115.6 million, while the decrease in the domestic portfolio was attributed to net amortization payments during the period.

**Table 3: Stock of External and Domestic GGLs**

	Mar-19		Dec-19		Change	
	J\$mn	% of total	J\$mn	% of total	J\$mn	%
External GGL	75,892.85	69.4	61,424.81	62.0	(14,468.04)	(19.1)
Domestic GGL	33,517.85	30.6	32,949.15	38.0	(568.70)	(1.7)
<b>Total</b>	<b>109,410.70</b>		<b>94,373.96</b>		<b>(15,036.73)</b>	<b>(13.7)</b>

Source: Ministry of Finance and the Public Service

### 3.7 Debt Vulnerability Indicators

A sustainable fiscal framework is complementary and paramount to the execution of sound debt management practices. Adverse deviations in revenues or imprudent management of expenditure could compromise the Government’s ability to fulfil its debt obligations in the short-, medium- and long-term and could lead to increased borrowing. **Table 4** outlines liquidity ratios which measure the Government’s ability to meet its short-term obligations, and gives an indication of the level of vulnerability of the current debt portfolio. Deterioration in key variables could restrict or impair a country’s ability to access the capital markets.

**Table 4: Debt Vulnerability Indicators**

			Est.	Proj.	Proj.	Proj.
	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23
<b>Liquidity Ratios</b>						
Debt service/revenue and loan inflows	47.9%	35.3%	43.0%	37.5%	36.2%	35.2%
Debt service/Tax revenue	74.0%	48.3%	55.1%	50.5%	45.9%	42.4%
Total interest/Tax revenue	27.2%	23.8%	24.2%	21.8%	20.6%	18.8%
Total interest/Expenditure	24.5%	21.4%	21.7%	20.3%	19.6%	18.4%
External debt service/Exports of Goods and Services and Current transfers	10.5%	9.3%	13.0%	9.2%	10.6%	7.7%
Short-Term External Debt/NIR	16.5%	13.6%	13.4%	9.5%	17.5%	8.4%

Source: Ministry of Finance and the Public Service and Bank of Jamaica

Liquidity ratios are expected to improve over the medium-term. This is underpinned by increasing cash resources in the fiscal accounts and balance of payments, despite high and consistent scheduled debt service in which amortization is projected to account for the majority of the total debt service cost. Interest payments and total debt service costs as a share of tax revenue are decreasing with expected outturns of 42.4 percent and 18.8 percent respectively, in FY2022/23, compared to 55.7 percent and 24.4 percent in FY2019/20. The improved liquidity ratios will enhance fiscal space and support increased growth-enhancing and socially uplifting spending. This is evident in the declining ratio of interest payments to expenditure over the period.

External debt service as a percentage of exports of goods and services and current transfers is projected to be relatively low over the medium-term. However, external amortization is scheduled to increase in FY2021/22 relative to previous years, causing a commensurate increase in the ratio. The ratio of short-term external debt to net international reserves (NIR) also suggests relatively low levels of external vulnerability over the medium-term, though fluctuations in the NIR and short-term external debt have resulted in volatility in the ratio over the period.

## SECTION IV: RISK FACTORS AFFECTING THE DEBT PORTFOLIO

Identifying and quantifying the main risk factors and their impact are important prerequisites for effectively managing the risks to the debt portfolio. Adverse changes in key macroeconomic/market variables and other exogenous shocks (example: natural disasters) can negatively impact the fiscal and debt dynamics. The relative risk to the portfolio from the realization of an event will depend on the likelihood of occurrence and the fiscal or financial impact. **Figure 11** highlights selected risk factors, their likelihood of occurrence and their potential impact on the debt portfolio.

**Figure 11: Selected Risks and Implications for the Debt Portfolio**

		Fiscal Impact		
		Low	Moderate	Major
Likelihood of Event	Low	<b>Government Guaranteed Loans (GGLs):</b> 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 4.4 percent at December 2019, 0.6 percentage point below the legislated target for FY2021/22.	<b>Fiscal Management:</b> 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.	<b>Financial Crises:</b> 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	<b>Public Private Partnerships (PPPs):</b> 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.	<b>Shocks in Commodity Prices:</b> 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.	<b>Natural Disasters:</b> 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		<b>Low Growth and High Crime Rates:</b> High rates of crime pose a significant risk to prospects for improvements in productivity and economic growth. 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.	<b>Market Volatility:</b> 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.

		Fiscal Impact		
		Low	Moderate	Major
Likelihood	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.

## 4.1 Comparative Static Simulations of Changes in Key Macroeconomic and Market Variables

Comparative static simulations of changes in key macroeconomic and market variables on the debt portfolio confirm that foreign currency and interest rate risks are preeminent and are reflected in much higher potential costs compared to variability in the inflation rate (see **Table 5**). A 3.0 percent depreciation in the JMD-USD exchange rate will increase the stock of foreign currency debt and associated interest payments in Jamaica dollar terms by an estimated \$37,598.3 million and \$1,975.5 million, respectively, an increase in annual adjusted costs of \$39,573.8 million or 1.8 percent of GDP. A 300 bps increase in domestic and external benchmark interest rates will increase annual debt service costs by an estimated \$8,762.5 million and \$10,517.5 million, respectively, an increase in total annual interest cost of \$19,280.0 million, or 0.9 percent of GDP. A similar adjustment in the inflation rate will increase the value of CPI-linked debt by an estimated \$1,101.1 million and associated interest costs by \$28.7 million, an increase in annual adjusted costs of \$1,129.8 million, or 0.1 percent of GDP. Contemporaneous changes in the exchange, interest and inflation rates of between 1.0 percent and 5.0 percent will increase adjusted debt service costs by between \$19,994.5 million and \$99,972.7 million, or 0.9 percent and 4.6 percent of GDP. The relative costs associated with changes in the respective variables support the prioritization of a risk management strategy which seeks to limit the portfolio's exposure to foreign currency and interest rate risks.

**Table 5: Changes in the Market Variables and Adjusted Debt Service Cost**

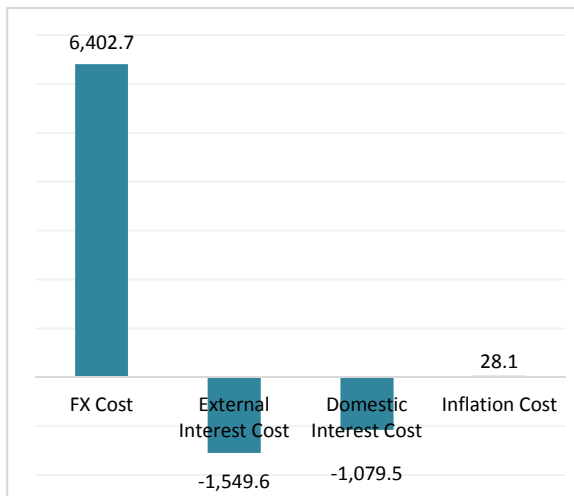
	Change in Macroeconomic Variables		
	1.0%	3.0%	5.0%
J\$ Millions			
<b>Foreign Exchange Depreciation</b>			
Effect on Debt Stock	12,532.8	37,598.3	62,663.8
Effect on Interest Cost	658.5	1,975.5	3,292.5
<b>Total</b>	<b>13,191.3</b>	<b>39,573.8</b>	<b>65,956.3</b>
<b>Total (% of GDP)</b>	<b>0.6%</b>	<b>1.8%</b>	<b>3.1%</b>
<b>Increase in Benchmark Interest Rates</b>			
Domestic	2,920.8	8,762.5	14,604.2
External	3,505.8	10,517.5	17,529.2
<b>Total</b>	<b>6,426.7</b>	<b>19,280.0</b>	<b>32,133.4</b>
<b>Total (% of GDP)</b>	<b>0.3%</b>	<b>0.9%</b>	<b>1.5%</b>
<b>Inflation Rate</b>			
Effect on Debt Stock	367.0	1,101.1	1,835.1
Effect on Interest Cost	9.6	28.7	47.9
<b>Total</b>	<b>376.6</b>	<b>1,129.8</b>	<b>1,883.0</b>
<b>Total (% of GDP)</b>	<b>0.0%</b>	<b>0.1%</b>	<b>0.1%</b>
<b>Aggregated Effects</b>			
<b>Total</b>	<b>19,994.5</b>	<b>59,983.6</b>	<b>99,972.7</b>
<b>Total (% GDP)</b>	<b>0.9%</b>	<b>2.8%</b>	<b>4.6%</b>

Source: Ministry of Finance and the Public Service

**Figure 12** estimates the impact on the debt portfolio associated with actual financing flows and changes in key macroeconomic and market variables over the period April 2019 to December 2019. Depreciation and heightened volatility in the JMD-USD exchange rate inflated debt service payments for foreign currency-denominated debt in Jamaica dollar terms by an estimated \$6,402.7 million. Conversely, reductions in the external and domestic benchmark interest rates over the review period are estimated to have reduced interest costs on financing inflows by \$1,549.6 million and \$1,079.5 million, respectively. The inflationary impact on debt service costs for CPI-linked bonds was minimal.

**Figure 13** highlights the proportional impact on the debt portfolio from the aforementioned changes in the macroeconomic and market variables. Depreciation of the Jamaica dollar relative to the USD accounted for an estimated 70.7 percent of the total variation in portfolio costs over the period. Changes in the external and domestic benchmark interest rates are estimated to account for 17.1 percent and 11.9 percent of the variation in portfolio costs, respectively. The inflationary effects were constrained to the pass through to interest payments on CPI-Linked bonds and accounted for only 0.3 percent of the total variation in portfolio costs for the review period.

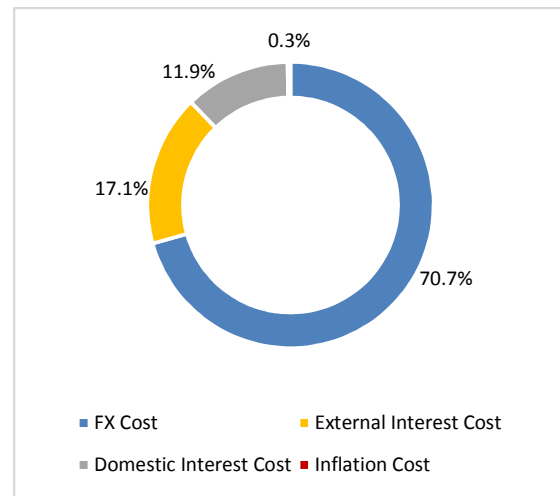
**Figure 12: Effects on Portfolio Costs from Changes in Macroeconomic and Market Variable**



Notes: Estimates are in J\$ millions and are based on changes in the respective variables and actual payments made during the period April 2019– December 2019.

Source: Ministry of Finance and the Public Service

**Figure 13: Relative Sensitivity of Portfolio Costs to Changes in the Macroeconomic and Market Variables**



Notes: The estimates compare the proportion of the absolute impact on portfolio costs explained by changes in the respective market variables.

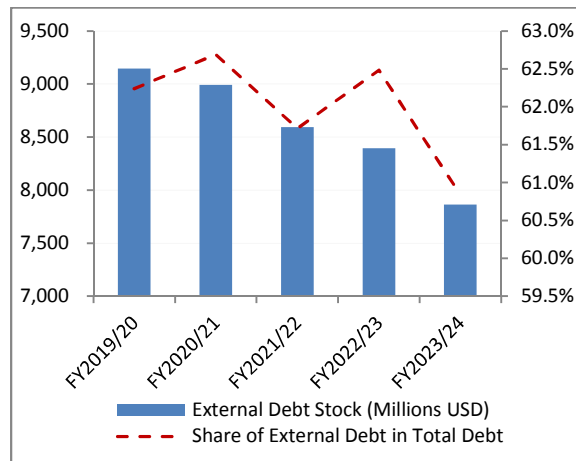
Source: Ministry of Finance and the Public Service

## 4.2 Dynamic Simulations of Changes in Key Macroeconomic Variables

Key strategic objectives of the MTDS include the reduction of the portfolio’s exposure to foreign currency and interest rate risks over the medium-term. **Figures 14 to 17** highlight projected changes in foreign currency and interest rate risk exposure. Over the referenced period, the nominal value of Central Government foreign currency debt in USD terms is expected to decrease by US\$1,283.94 million, or 14.0 percent relative to end-FY2019/20 (see **Figure 14**). This will result in estimated savings of approximately \$23,467.36 million on an adjusted cost basis over the period. The share of foreign currency-denominated debt in total debt displays volatility throughout the period, with spikes in FY2020/21 and FY2022/23 resulting from large domestic amortizations relative to external amortizations during those years.

The lower exposure implies reduced overall sensitivity to changes in the exchange rate. The revaluation effects on the debt stock associated with a 5.0 percent shock in the depreciation rate in each year is estimated to decline from \$65,418.47 million or 2.9 percent of GDP at end-March 2021 to \$63,676.53 million or 2.3 percent of GDP at end-March 2024 (see **Figure 15**). The increase in the adjusted cost in FY2022/23 mirrors that of the foreign currency share of total debt in that year, and results from the expectation that the rate of depreciation in that year will exceed the percentage decrease in foreign currency debt in USD terms.

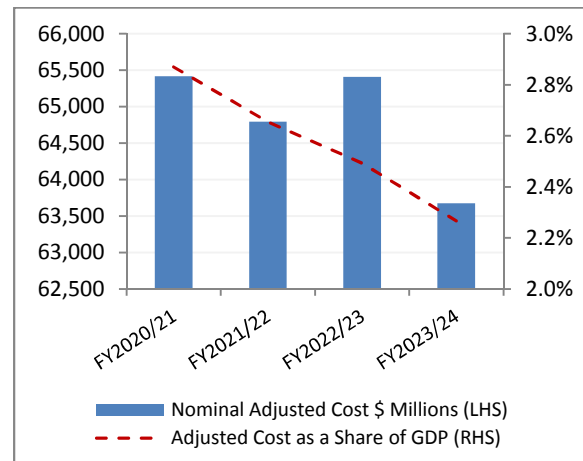
**Figure 14: Change in Foreign Currency Debt over the Medium-Term**



Notes: Figure shows foreign currency debt in millions 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

**Figure 15: Sensitivity to Exchange Rate Changes over the Medium-Term**

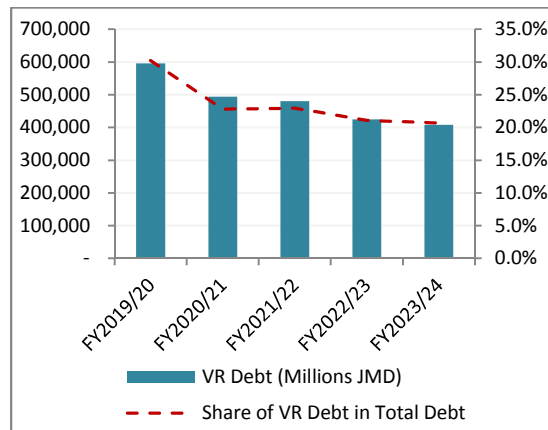


Notes: Figure shows nominal adjusted cost in millions of JMD on the left axis, and adjusted cost as a share of GDP on the right axis. Simulation assumes a 5.0 percent shock in the baseline exchange rate in each year.

Source: Ministry of Finance and the Public Service

The nominal value of variable-rate debt as well as its share in total debt is also expected to decrease over the medium-term by approximately \$187,486.2 million or 31.5 percent and 9.5 percentage points, respectively (see **Figure 16**). **Figure 17** highlights the concomitant reduction in the portfolio’s sensitivity to changes in benchmark interest rates for the domestic and external portfolios over the medium-term. The steeper reduction in the domestic portfolio’s sensitivity to interest-rate changes is driven by relatively large redemptions of variable-rate notes in the domestic market scheduled over the next two fiscal years.

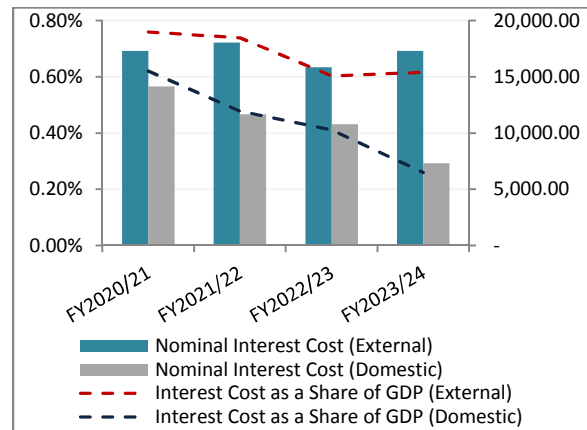
**Figure 16: Change in Variable-Rate Debt over the Medium-Term**



Notes: Figure shows variable-rate debt in millions of JMD on the left axis and share of variable-rate debt in total debt on the right axis.

Source: Ministry of Finance and the Public Service

**Figure 17: Sensitivity to Interest Rate Changes over the Medium-Term**



Notes: Simulation assumes a 500 basis point shock in baseline benchmark interest rates in each year. Figure shows nominal interest costs on the right axis, and interest cost as a share of GDP on the left axis.

Source: Ministry of Finance and the Public Service

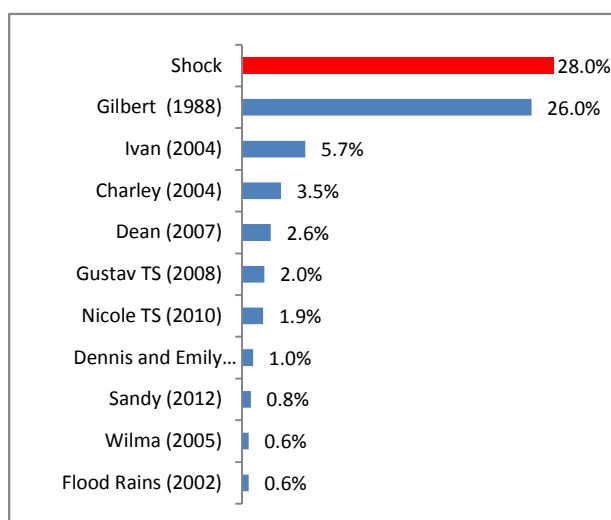
### 4.3 Natural Disaster Shock Simulation

Like most small-island developing states (SIDS), Jamaica is highly susceptible to the vagaries of natural disasters, particularly hydrogeological events such as tropical cyclones and floods. Given the increased frequency and severity of these events, the fiscal and broader economic effects can be significant and necessitates the mainstreaming of disaster risk assessments in the public policy landscape.

The effect of a natural disaster shock was simulated to assess the potential impact on key portfolio indicators and the debt trajectory over the medium-term. The shock scenario is based on a set of plausible assumptions regarding the potential economic and fiscal impact of a 1 in 100-year storm on the Jamaican economy. **Figure 18** compares the simulated effects of the shock to that of major weather events in Jamaica over the last three decades. The model results project an economic cost of roughly US\$4,352.0 million, or 28.0 percent of GDP in FY2021/22, comparable to Hurricane Gilbert in 1988 when considered as a share of GDP.

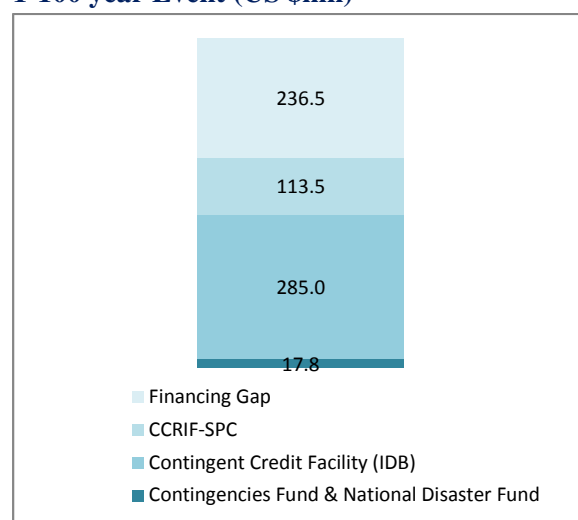
The simulation assumes that the direct fiscal impact of the event is limited to emergency losses, inclusive of the costs associated with damage to public infrastructure and expenditures on relief and recovery activities as well as social expenditures to assist the indigent and other vulnerable populations. These costs are estimated at US\$652.8 million or 4.2 percent of GDP in the year of impact and are assumed to be partly financed through ex-ante disaster risk financing (DRF) resources currently available to the Government. Total ex-ante resources are estimated at approximately US\$416.3 million (see **Figure 19**)<sup>4</sup>. The excess of emergency losses over available DRF resources of approximately US\$236.5 million will be financed ex-post from external sources, at less favourable terms compared to the ex-ante financing options.

**Figure 18: Estimated Impact of Natural Disasters as a Share of GDP**



Source: Planning Institute of Jamaica and Ministry of Finance and the Public Service

**Figure 19: Estimated Financing Gap for the 1-100 year Event (US \$mn)**



Source: Ministry of Finance and the Public Service

The associated impact on key macroeconomic and market variables was modelled using additive adjustments to baseline assumptions for real GDP growth, inflation, interest rates and the primary balance. **Figure 20** highlights the projected impact on real GDP growth over the medium-term under the baseline and the shock scenario. Average real economic growth over the medium-term is expected to decline from a baseline of 1.9 percent to 0.04 percent. The simulation assumes an increase in inflation beyond the target band in the year of impact and an initial exchange rate depreciation which exceeds baseline assumptions by 4.2 percentage points. The model further assumes a parallel outward shift in the domestic yield curve by 300 bps, highlighting increased credit risk in the aftermath of the disaster. The risk spread for JAMAN global bonds was also increased by 300 bps in FY2021/22 and FY2022/23, after which it is assumed to return to the

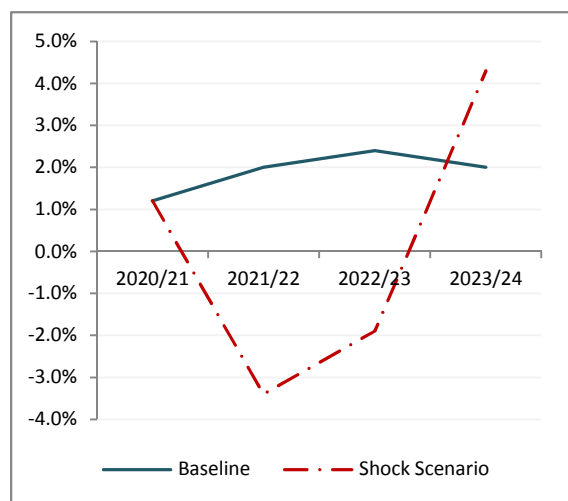
<sup>4</sup> Current ex-ante DRF resources available to the GOJ include the Caribbean Catastrophe Risk Insurance Facility-Segregated Portfolio Company (CCRIF-SPC) policy, IDB Contingent Credit Facility, National Disaster Fund and the Contingencies Fund.



baseline. A minor adjustment of 50 bps was made to bilateral rates while multilateral rates are assumed unchanged.

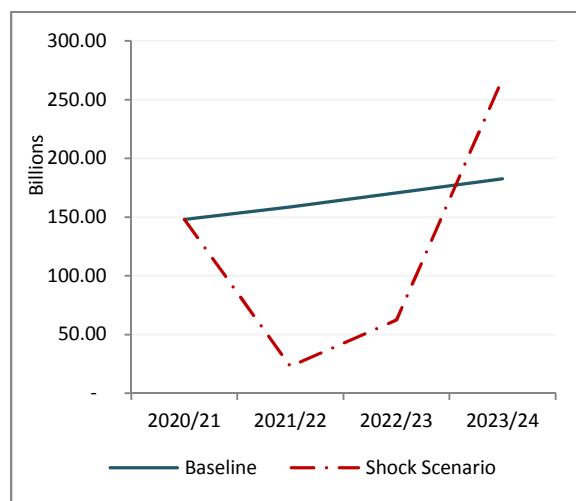
The deterioration in the primary balance relative to the baseline in the first two years results from increased expenditures associated with disaster relief and recovery and the attendant weaker revenue performance due to slowing economic activity post disaster (see **Figure 21**). The trajectory of the primary balance implies a suspension of the fiscal rule (utilizing the escape clause in the FAA Act) in the year of and the year after the event<sup>5</sup>. The higher primary balance in the third year is consistent with the requirement to ensure a return to a sustainable debt path.

**Figure 20: Real GDP Growth under Baseline and Shock Scenario**



Notes: Pass-through to real GDP growth under the shock scenario was modelled by the Planning Institute of Jamaica  
 Source: Ministry of Finance and the Public Service, Planning Institute of Jamaica, Bank of Jamaica

**Figure 21: Nominal Primary Balance under Baseline and Shock Scenario**

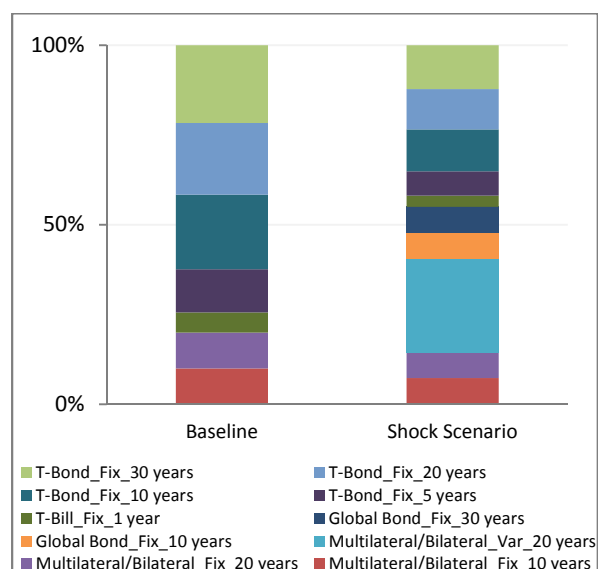


Source: Ministry of Finance and the Public Service

The simulated impact on the debt portfolio is contingent on the financing strategy of the GOJ in a post-disaster environment. The model assumes deviations from the current financing strategy (**S1**) in the year of impact to reflect an additional financing requirement estimated at \$137,195.1 million, which will be funded primarily from multilateral/bilateral sources and the ICM. The drawdown on a contingent credit facility from the IDB represents variable-rate financing from a multilateral source. Otherwise, the strategy maintains the position of majority fixed-rate financing, with longer tenors, but results in majority external financing (see **Figures 22 and 23**).

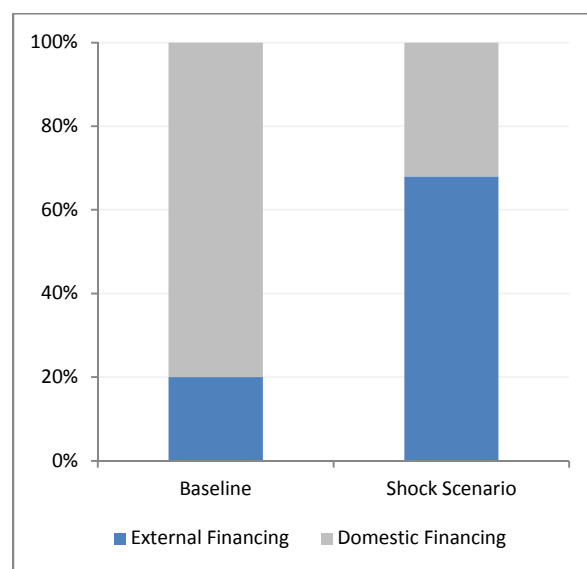
<sup>5</sup> The escape clause is triggered by the occurrence of an event with an impact of at least 1.5 percent of GDP. The suspension of the fiscal rules may last for at least one year, but no more than two years. At the end of the period of suspension, the Minister of Finance is required to table, in both Houses of Parliament, recommendations for recalibration of the fiscal balance.

**Figure 22: Gross Financing by Instrument under Baseline and Shock Scenario FY2021/22**



Source: Ministry of Finance and the Public Service

**Figure 23: External and Domestic Financing under Baseline and Shock Scenario FY2021/22**



Source: Ministry of Finance and the Public Service

**Table 6** highlights the most material impacts of a natural disaster shock on the debt portfolio at end-March 2024. The increased reliance on external financing in the year of impact and the deterioration in the exchange rate results in an estimated 2.6 percentage points increase in foreign currency debt as a share of total debt. Given the higher sovereign credit risk post-disaster, the average interest cost is expected to increase by approximately 0.2 percentage point.<sup>6</sup>

**Table 6: Estimated Impact of a Natural Disaster Shock on Selected Portfolio Indicators**

	S1 (Baseline)	Shock Scenario	Change
<b>Interest Cost</b>			
Interest payment (% of GDP)	4.6	6.0	1.4
Implied interest rate (%)	6.5	6.7	0.2
<b>Foreign Currency Risk</b>			
FX debt as % of total	60.8	63.4	2.6

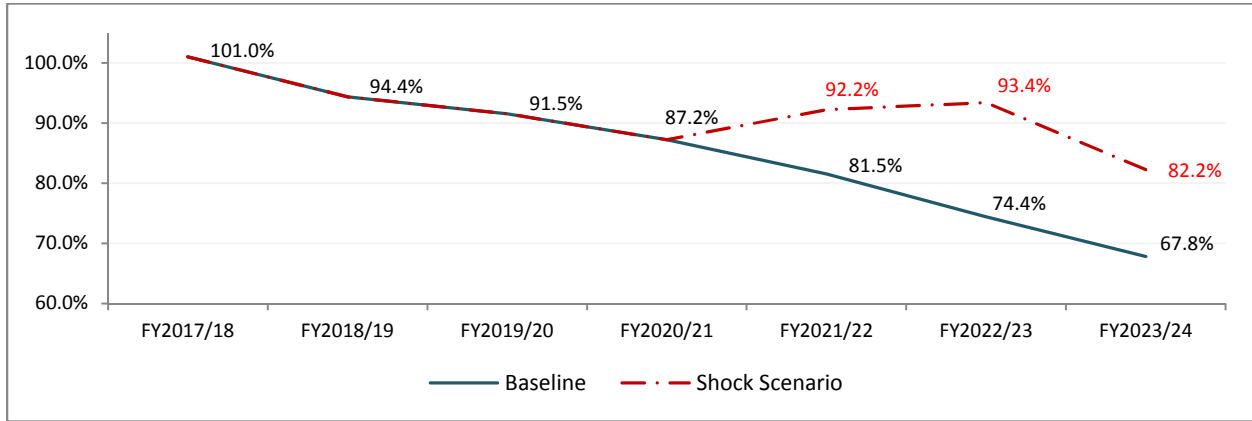
Source: Ministry of Finance and the Public Service

**Figure 24** shows the projected impact of the shock on the debt-to-GDP trajectory over the medium-term. Higher debt burden and the contraction in nominal GDP relative to the baseline is estimated to increase the debt over-hang by 14.4 percentage points. The higher debt-to-GDP

<sup>6</sup> The increase in average interest cost is tempered due to the assumption that majority external financing will come from multilateral sources where lending rates are assigned to country groupings rather than to individual countries.

trajectory would significantly jeopardize the realization of the debt-to-GDP target of 60.0 percent or less by FY2025/26.

**Figure 24: Trajectory of Debt-to-GDP under Baseline and Shock Scenarios**

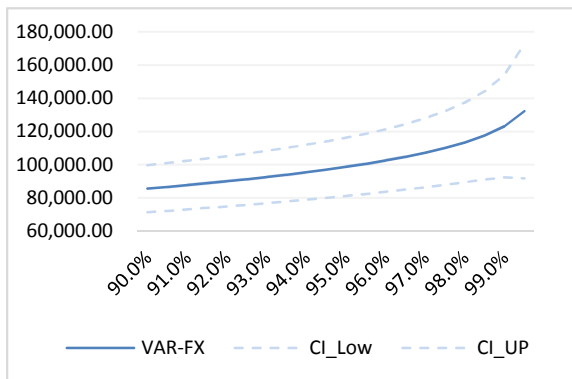


Source: Ministry of Finance and the Public Service

#### 4.4 Value at Risk (VaR), Cost at Risk (CaR) and Conditional VaR

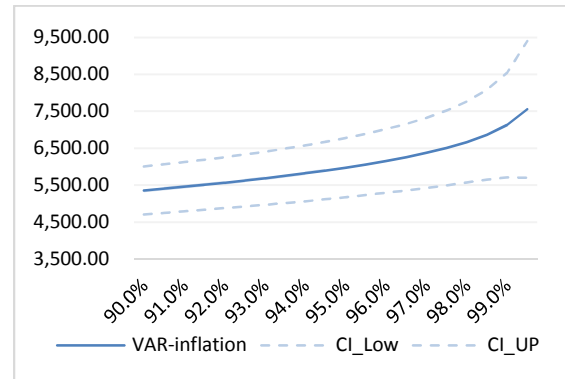
Value at risk (VaR) and cost at risk (CaR) are measures of the maximum likely increase in value and costs of the debt portfolio for a specific period. Using historical data from the last 20 years, VaR estimates show that there is a 95.0 percent chance that changes in the JMD/USD exchange rate and the inflation rate can increase the value of the debt portfolio in FY 2020/21 by as much as \$98,866.8 million (see **Figure 25**) and \$5,996.7 million (see **Figure 26**), respectively. Conditional VaR (CVaR) quantifies the amount of tail risk in a portfolio by averaging the extreme values in the tail beyond the VaR or CaR cut-off point. CVaR estimates at the 95.0 percent confidence level for the JMD/USD exchange rate and the inflation rate were \$197,230.5 million and \$6,652.2 million, respectively.

**Figure 25: VaR JMD/USD Exchange Rate**



Source: Ministry of Finance and the Public Service

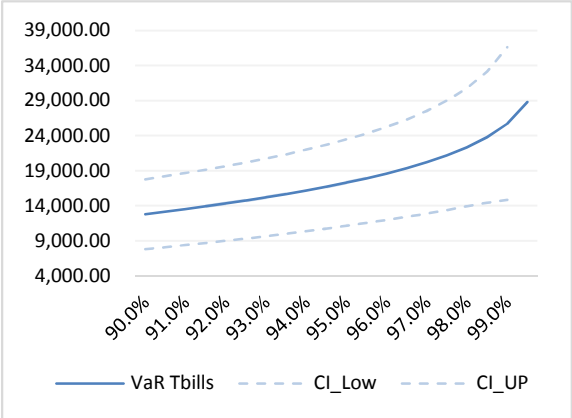
**Figure 26: VaR Inflation Rate**



Source: Ministry of Finance and the Public Service

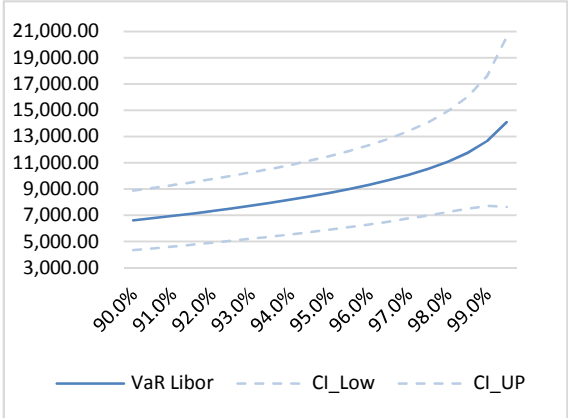
CaR estimates for FY 2020/21 suggest that based on historical changes in the 3-month US Libor there is a 95 percent probability that debt service cost could increase by as much as \$8,709.6 million compared to \$17,277.6 million arising from changes in the 3-month T-bill (see **Figures 27 and 28**). The historical movements in external benchmark interest rates suggest a conditional cost at risk (CCaR) of \$44,916.4 million, which is approximately \$47,732.8 million lower than the CCaR estimates for the 3-month T-bill. The relatively higher CaR and CCaR for changes in the 3-month T-bill rate is reflective of high interest rate volatility in the domestic market at the start of the period compared to the more stable, low interest rate volatility environment of the external market.

**Figure 27: CaR Domestic Benchmark Interest Rate**



Source: Ministry of Finance and the Public Service

**Figure 28: CaR External Benchmark Interest Rate**

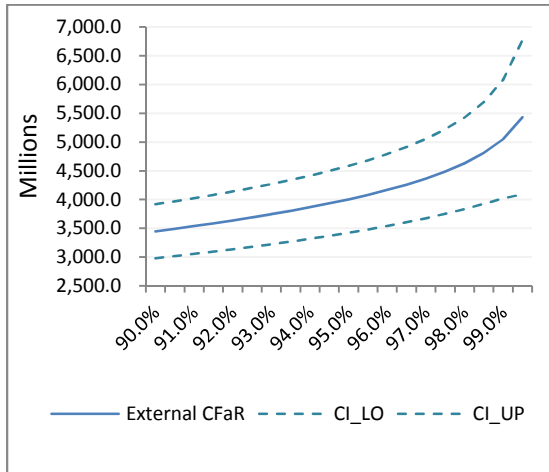


Source: Ministry of Finance and the Public Service

**4.5 Cash Flow at Risk (CFaR) Estimates for FY 2020/21**

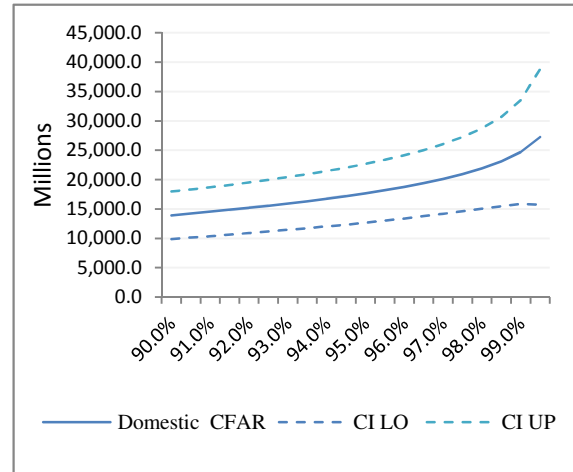
Cash Flow at Risk (CFaR) estimates the maximum increases over expected debt service costs for a given period, based on historical realizations of market variables. The CFaR for the domestic portfolio is approximately \$17,670.8 million with a 95.0 percent level of confidence, compared to \$4,004.9 million for the external portfolio (see **Figures 29 and 30**). Conditional cash flow at risk (CCFaR) at the 95.0 percent confidence level for the domestic and external portfolios were estimated at \$75,369.8 million and \$9,100.0 million, respectively. The variation in the CFaR estimates for the domestic and external portfolios, like the CaR, is attributed to more volatile rates in the domestic market relative to the external market.

**Figure 29: CFaR for the External Portfolio**



Source: Ministry of Finance and the Public Service

**Figure 30: CFaR for the Domestic Portfolio**



Source: Ministry of Finance and the Public Service

## **SECTION V: MACROECONOMIC OVERVIEW**

Projections for global growth have been revised downward to 3.0 percent for 2019, reflecting carryover from the weakened outturn during the second half of 2018, which was only partially mitigated by a slight improvement during 2019. The general constraints to global growth during the period included weaknesses in international manufacturing, deceleration in investment and a re-escalation of trade tensions among major economies, the effects of which were moderated by the adoption of more accommodative monetary policy across emerging market and advanced economies.

Growth in emerging market economies (EMs) is expected to moderate to 3.9 percent in 2019 relative to initial projections of 4.4 percent, due in part to slowing global trade and persistent policy uncertainties in key economies. Additionally, elevated debt levels and weak fiscal positions across EMs sullied the investment climate and weakened business and consumer confidence during the year. Growth in the Latin American and Caribbean (LAC) region is projected at 0.2 percent for CY2019, significantly lower than the 1.4 percent previously estimated.

Capital flows to EMs were generally robust during 2019. In response to the weakened growth performance, central banks across major economies reduced monetary policy rates resulting in an easing of global financial conditions. This contributed to increased capital flows to some emerging market economies. Uncertainty surrounding the growth dynamics across advanced economies (USA, Euro Area and Japan) informed investors' portfolio realignments away from equities toward hard currency bonds, buttressing the demand for EM assets during the period. Notwithstanding the increased portfolio flows to EMs, investors continued to differentiate across individual economies due to idiosyncrasies with regard to economic and political fundamentals.

Jamaica continued to realize benefits from the economic and structural reforms implemented under the IMF Precautionary Stand-by-Arrangement (PSBA). The Government's commitment to fiscal prudence is expected to result in a fiscal surplus of 0.2 percent of GDP for FY2019/20 and is projected to increase gradually over the medium-term. Strict adherence to the primary balance target of 6.5 percent of GDP supported by moderate growth levels will ensure continued reduction in the debt-to-GDP, at a rate consistent with achieving the legislated target of no more than 60.0 percent by end-FY2025/26.

Economic activity remained relatively buoyant during the review period, reflecting in a record low unemployment rate of 7.2 percent in October 2019. At end-December 2019, the All Jamaica Consumer Price Index was 270.6, bringing the calendar year inflation rate to 6.2 percent. This rate reflected higher agricultural food prices partially offset by reductions in energy and transport

prices. Inflation for FY2019/20 is projected at 5.0 percent and is expected to remain within the targeted band of 4.0 – 6.0 percent throughout the medium-term.

The Balance of Payments (BOP) showed a widening of the current account deficit with an increase of US\$43.3 million to US\$237.1 million at end-September 2019 relative to end-September 2018. The increase resulted from a decline in exports driven by reductions in alumina prices and production, due mainly to the temporary closure of the JISCO/Alpart alumina refinery and slowing external demand. This was partially offset by a less than proportional increase in tourism earnings. The current account deficit is expected to remain within sustainable levels, averaging 1.7 percent of GDP over the medium-term. The net international reserves (NIR) increased by US\$71.3 million from US\$3,026.7 million at end-September 2018 to US\$3,098.05 million at end-September 2019. The NIR levels equate to 22.8 weeks of goods and services import cover and highlights Jamaica’s increased capacity to withstand external shocks. The NIR at end-FY2019/20 is estimated at US\$3,029.4 million and is projected to increase to approximately US\$3,739.40 million by FY2023/24.

Despite improvements in the country’s overall macroeconomic indicators, economic growth remained subdued due primarily to structural impediments. Growth projections for FY2019/20 were revised downward to 0.6 percent from 1.5 percent, owing largely to lower output in the mining and quarrying industry. Expansion in the hotel and tourist industry, increased activity in the manufacturing industry and partial recovery from drought conditions in the agriculture sector contributed positively to economic growth over the period. Growth is projected to average 1.9 percent over the medium-term, increasing from 1.2 percent in FY2020/21 to 2.0 percent in FY2023/24 (see **Table 7**).

**Table 7: Medium-Term Macroeconomic Profile**

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
	Actual	Projected	Projected	Projected	Projected	Projected
Nominal GDP (\$mn)	2,053.2	2,155.6	2,278.8	2,441.4	2,624.2	2,809.1
Nominal GDP growth rate %	6.5	5.0	5.7	7.5	7.0	7.0
Real GDP growth rate %	2.0	0.6	1.2	2.0	2.4	2.0
Inflation Annual Pt. to Pt.	3.4	5.0	4.4	5.0	5.0	5.0
Fiscal Balance (% GDP)	1.2	0.0	0.7	1.2	1.8	2.1
Primary Balance (% GDP)	7.5	6.5	6.5	6.5	6.5	6.5
<i>Interest Rate</i>						
90-day Treasury Bill (average)	2.16					
90-day Treasury Bill (eop)	2.19					
Average selling Exchange Rate	130.58					
Net International Reserves (US \$mn)	3,084.8	3,029.4	3,344.4	3,266.0	3,530.6	3,739.4
Current Account (% GDP)	-2.5	-1.5	-2.0	-1.7	-1.6	-1.6
Oil Prices (WTI)	62.8	55.9	54.5	58.5	59.2	56.1
<i>(Average US\$/Barrel)</i>						

Source: Bank of Jamaica

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

The Medium-Term Debt Management Strategy (MTDS) for FY2020/21-FY2023/24 is derived from a quantitative assessment of five alternative strategies geared towards meeting established medium-term targets for key debt and risk indicators, using the IMF/World Bank MTDS Toolkit. The stock of debt used in this analysis includes Central Government debt and Government guaranteed loans currently serviced by the Government.

### 6.1 Baseline Assumptions and Exogenous Shock Scenarios

The modelling of the MTDS takes into account assumptions regarding key macroeconomic and market variables over the medium-term. To determine the sensitivity of key cost and risk indicators under the respective strategies, stress tests were carried out, whereby exogenous shocks were applied to the baseline interest and exchange rate assumptions. Four stress scenarios were examined:

- **Scenario 1** represents an extreme shock to the JMD/USD exchange rate and assumes that the rate depreciates by an additional 30.0 percent in year two of projections;
- **Scenario 2** is an extreme shock to interest rates in year two, and assumes 2.0, 4.0 and 2.5 percentage points increases 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 an additional 15.0 percent in year two with the moderate interest rate shock described under **Scenario 3**.<sup>7</sup>

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<sup>7</sup> All shocks are applied as additive adjustments to baseline assumptions for interest and exchange rates.



## 6.2 Medium-Term Targets

The strategic objectives established in the MTDS require consistent monitoring and assessment to ensure convergence of portfolio indicators with clearly established targets over the medium-term. In general, the financing programme and complementary liability management operations supported the achievement of the established targets for FY2019/20.

**Table 8** highlights the projected outturn for key portfolio indicators for FY2019/20 relative to target, as well as the established targets for FY2020/21 and the medium-term (FY2023/24). The portfolio indicators are projected to be in line with the established targets for FY2019/20. Overall, the expectation is for gradual improvement in the respective indicators over the medium-term consistent with the targets for FY2023/24.

**Table 8: Key Portfolio Targets for FY2020/21 and the Medium-Term**

Risk Indicators	Projected	Targets		
	End-Mar 2020	End-Mar 2020	End-Mar 2021	End-Mar 2024
<b>Nominal Debt-to-GDP (%)</b>	<b>90.7</b>	<b>96.0</b>	<b>88.0</b>	<b>75.0</b>
<b>Refinancing Risk</b>				
Average-Time-to-Maturity (ATM - years)	10.9	>=9	>=9	>=9
Share Maturing within one year (%)	7.2	<=10.0	<=10.0	<=10.0
<b>Interest rate risk</b>				
Domestic				
Share Variable-Rate (%)	36.7	30.0	30.0	30.0
Debt Refixing in 1 year (%)	38.0	40.0	35.0	35.0
Average-Time-to-Refixing (ATR - years)	7.3	8.0	8.0	10.0
External				
Share Variable-Rate (%)	26.3	30.0	30.0	30.0
Debt Refixing in 1 year (%)	28.2	30.0	30.0	25.0
Average-Time-to-Refixing (ATR - years)	10.0	8.0	8.0	10.0
Total				
Share Variable-Rate (%)	30.2	30.0	30.0	30.0
Debt Refixing in 1 year (%)	31.9	35.0	32.0	30.0
Average-Time-to-Refixing (ATR - years)	9.0	8.0	8.0	10.0
<b>Foreign Currency Risk</b>				
Share of Foreign Currency Debt (%)	62.2	<=62.0	<=61.0	<=58.0

Source: Ministry of Finance and the Public Service

The main risks to the achievement of the established targets include higher than expected rate of depreciation in the Jamaica dollar relative to the US dollar, and tightening of financial conditions in the external and domestic markets. Additionally, exogenous shocks such as natural disasters also pose a risk to the realization of the targets.

## 6.3 Financing Strategies

The MTDS Analytical Toolkit allows for the evaluation of alternative financing strategies. The contending strategies were formulated based on discussions with market participants and multilateral partners. The design of the strategies was also informed by expectations regarding domestic and external market conditions over the medium-term. A prominent feature of three of the five strategies was the focus on majority domestic financing as a means of developing the domestic debt market, as well as limiting the portion of the debt portfolio denominated in foreign currency (see **Figure 31**).

**Figure 31: Summary of Alternative Medium-Term Financing Strategies**

Strategy 1	Strategy 2	Strategy 3	Strategy 4	Strategy 5
<ul style="list-style-type: none"> <li>• Majority Domestic Financing</li> <li>• Majority Fixed-Rate</li> <li>• Mainly Longer Tenors</li> </ul>	<ul style="list-style-type: none"> <li>• Majority Domestic Financing</li> <li>• Majority Fixed-Rate</li> <li>• Mainly Shorter Tenors</li> </ul>	<ul style="list-style-type: none"> <li>• Majority Domestic Financing</li> <li>• Majority Variable-Rate</li> <li>• Mainly Shorter Tenors</li> </ul>	<ul style="list-style-type: none"> <li>• Majority External Financing</li> <li>• Majority Fixed-rate</li> <li>• Mainly Longer Tenors</li> </ul>	<ul style="list-style-type: none"> <li>• Majority External Financing</li> <li>• Majority Variable-Rate</li> <li>• Mainly Shorter Tenors</li> </ul>

Source: Ministry of Finance and the Public Service

Financing details for domestic and external borrowing for all five strategies are summarized in **Figures 32 and 33**.

Under **Strategy 1 (S1)**, 80.0 percent of total financing over the medium-term will be sourced from the domestic market. This 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. The relatively high levels of domestic market liquidity and strong demand for GOJ securities in the domestic market suggest 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 more firmly 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**.

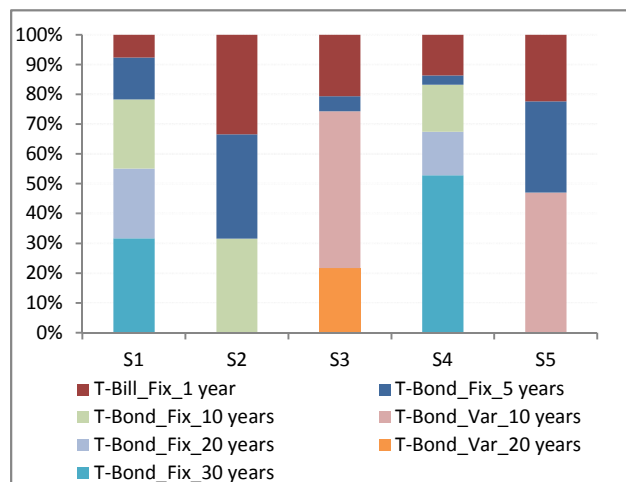
**Strategy 3 (S3)** also assumes an operating target for domestic financing of 80.0 percent. However, it assumes financing mainly through variable-rate and short-term instruments in the domestic market. Compared to **S1**, this strategy poses greater refinancing and interest rate risks but potentially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

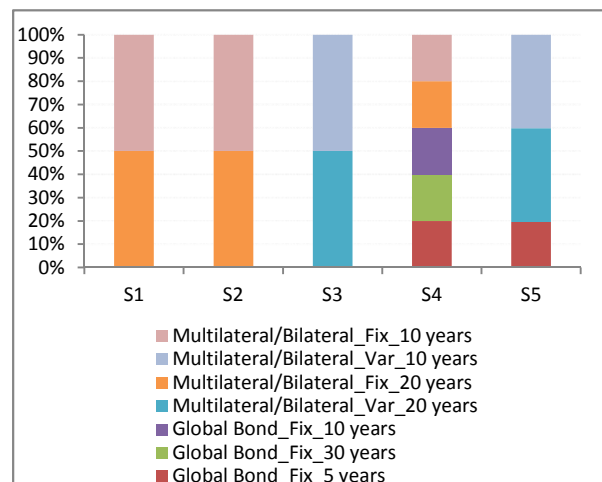
**S5** assumes less favourable conditions in the ICM as investors become cautious about investing in EM bonds. This strategy therefore assumes that external financing will be programmed mainly through official multilateral/bilateral sources at variable-rates, with a smaller amount from short term fixed-rate global bonds.

**Figure 32: Gross Domestic Financing by Instrument**



Source: Ministry of Finance and the Public Service

**Figure 33: Gross External Financing by Instrument**

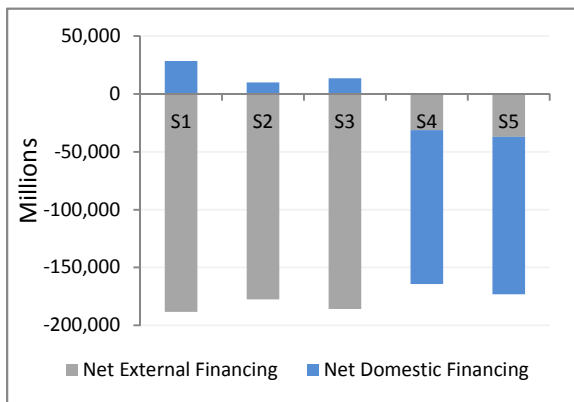


Source: Ministry of Finance and the Public Service

## 6.4 Toolkit Output – Results for Alternative Financing Strategies

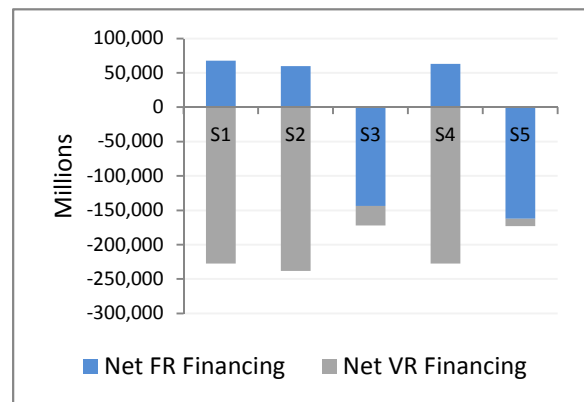
The respective strategies are assessed based on their effectiveness in reducing the portfolio’s exposure to key risk factors over the medium-term, at the lowest possible cost. **Figures 34** and **35** highlight the net financing flows to the domestic and external portfolios, and the variable-rate and fixed-rate portfolios, respectively, over the medium-term. **S1, S2** and **S3** show large net outflows for the external portfolio, contrasting the net inflows to the domestic portfolio. This is reflective of the strategies’ focus on increasing domestic borrowing relative to external borrowing (see **Figure 34**). While **S4** and **S5** show net outflows for both portfolios, net domestic outflows far outweigh net external outflows. **S1, S2,** and **S4** rebalance the portfolio towards more fixed-rate debt as depicted in **Figure 35**. While there are net outflows for the variable-rate portfolio under **S3** and **S5**, they are far outweighed by the net outflows for the fixed-rate portfolio<sup>8</sup>.

**Figure 34: Net Financing Flows to the External and Domestic Portfolios**



Source: Ministry of Finance and the Public Service

**Figure 35: Net Financing Flows to the FR and VR Portfolios**



Source: Ministry of Finance and the Public Service

The cost and risk indicators derived under all five strategies, and their quantitative scores are outlined in **Table 9**.

The output from the MTDS Analytical Toolkit supports selection of **S1** as the preferred financing option. Based on a quantitative ranking of the performance of the respective strategies, **S1** scored 8.6 out of a maximum of 10.0. Though resulting in a marginally higher interest cost, the strategy effectively mitigates refinancing, interest rate, and foreign currency risk, out-performing the four alternative strategies in these areas, while supporting the development of the domestic market. While interest cost is lowest under **S5**, the strategy performed poorly as it relates to interest rate and foreign currency risk, given the high composition of variable-rate and foreign currency debt.

<sup>8</sup> It should be noted that net outflows for the debt portfolio exceed net inflows over the medium-term in support of the Government’s debt reduction priorities.

**S2** and **S3** also perform better than **S1** as it relates to interest cost, but given the focus on short-term financing, the strategies do not augur well for the mitigation of refinancing risk. While **S4** employs longer tenor instruments, resulting in a high score for refinancing risk, the strategy's poor performance is due mainly to the composition of majority external financing.

**Table 9: Cost and Risk Indicators for Alternative Financing Strategies**

Cost and Risk Indicators		2020	As at end 2024					
		Current	S1	S2	S3	S4	S5	
Cost	Interest payment (% of GDP)	5.4	4.6	4.4	4.4	4.5	4.3	
	Implied interest rate (%)	6.0	6.5	6.3	6.3	6.4	6.2	
Refinancing risk	Debt maturing in 1yr (% of total)	7.2	11.8	12.7	12.3	11.8	12.0	
	Debt maturing in 1yr (% of GDP)	6.6	8.3	8.9	8.6	8.3	8.4	
	ATM External Portfolio (years)	12.1	10.2	10.2	10.2	10.3	9.7	
	ATM Domestic Portfolio (years)	8.9	10.2	7.0	8.4	9.0	7.6	
	ATM Total Portfolio (years)	10.9	10.2	9.0	9.5	9.9	9.1	
Interest rate risk	ATR (years)	9.0	9.2	8.0	7.6	8.9	7.3	
	Debt refixing in 1yr (% of total)	31.9	26.7	27.6	37.4	26.6	38.2	
	Fixed rate debt (% of total)	69.8	79.3	79.2	69.0	79.4	67.7	
FX risk	FX debt (% of total)	62.2	60.8	61.6	61.4	69.1	69.1	
Quantitative Ranking of Alternative Strategies			S1	S2	S3	S4	S5	
Key	Scores							
Most Favoured Outcome	10	Portfolio Indicators	Weights	Scores				
Second Best Outcome	8	Cost	0.2	0.2	1.2	1.2	0.9	1.5
Third Best Outcome	6	Refinancing risk	0.3	2.5	0.3	1.5	2.3	1.7
Fourth Best Outcome	4	Interest rate risk	0.1	0.9	0.6	0.4	0.9	0.1
Least Favoured Outcome	1	FX risk	0.5	5.0	3.0	4.0	0.5	0.5
			<b>1.0</b>	<b>8.6</b>	<b>5.1</b>	<b>7.1</b>	<b>4.6</b>	<b>3.8</b>

Source: Ministry of Finance and the Public Service

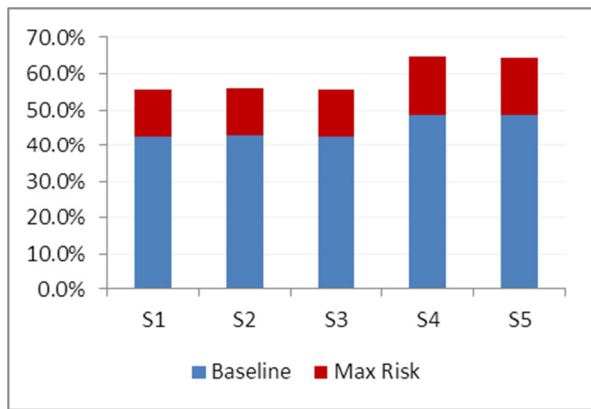
### 6.4.1 Risk to Baseline Projections for the Respective Strategies under Stress Scenarios

**Figures 36 to 39** highlight the maximum risk for key portfolio indicators under each of the five strategies using the projected outturns for FY2023/24. In all instances, the largest impact on the debt portfolio resulted from the extreme exchange rate shock (**Scenario 1**). Under **S4** and **S5**, external debt-to-GDP is highest and at risk of increasing by as much as 16.1 percentage points. This compares to approximately 13.0 percentage points under **S1**, **S2** and **S3** (see **Figure 36**). **S4** and **S5** have the highest external debt service cost as a percentage of NIR and are also the most sensitive, with maximum risk of 8.9 and 8.7 percentage points, respectively, compared to 8.4 percentage points under the remaining three strategies (see **Figure 37**).

As it relates to interest-cost-to-GDP (**Figure 38**), **S1** has an expected outturn which is 0.3 percentage point higher than the cost minimizing strategy, **S5**. This is reflective of the higher

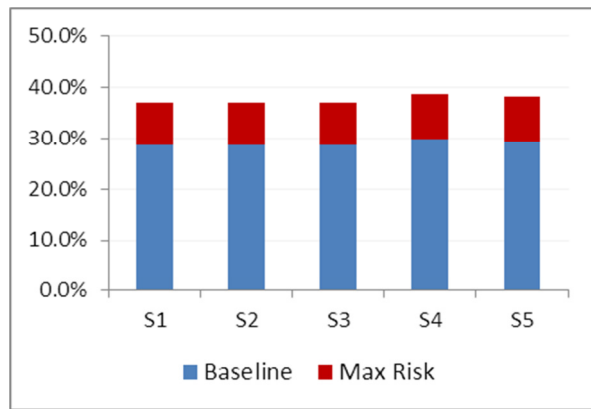
cost associated with longer tenor debt and the relatively higher cost of debt in the domestic market than in the external market. Despite the difference in cost, all five strategies display similar levels of sensitivity with maximum risk of 0.9 percentage point. Although interest cost is highest under **S1**, total debt service is low compared to **S2** and **S3**, owing to smaller amortization obligations associated with the longer tenor issuances under this strategy (see **Figure 39**). Debt service cost associated with **S2** is most sensitive, with maximum risk of 2.2 percentage points, compared to 1.9 percentage points under **S1**. Overall, the analysis supports the selection of **S1** as it minimizes the portfolio’s sensitivity to key risk factors, compared to alternatives.

**Figure 36: Sensitivity of External Debt-to-GDP to Shocks**



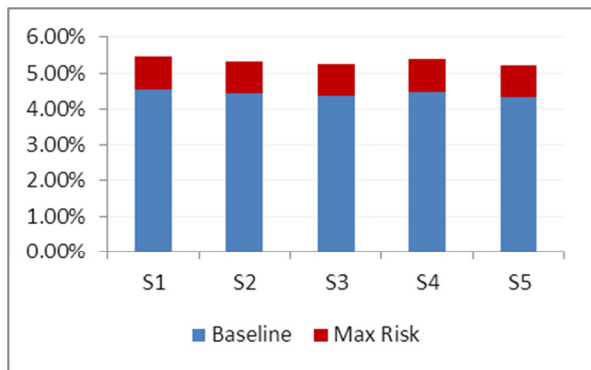
Source: Ministry of Finance and the Public Service

**Figure 37: Sensitivity of External Debt Service-to-Net International Reserves to Shocks**



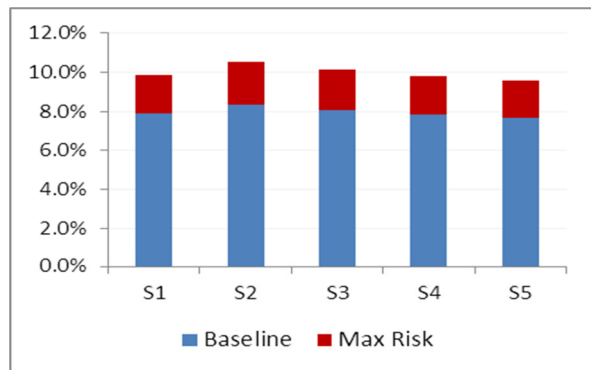
Source: Ministry of Finance and the Public Service

**Figure 38: Sensitivity of Interest Cost-to-GDP to Shocks**



Source: Ministry of Finance and the Public Service

**Figure 39: Sensitivity of Debt Service-to-GDP to Shocks**



Source: Ministry of Finance and the Public Service

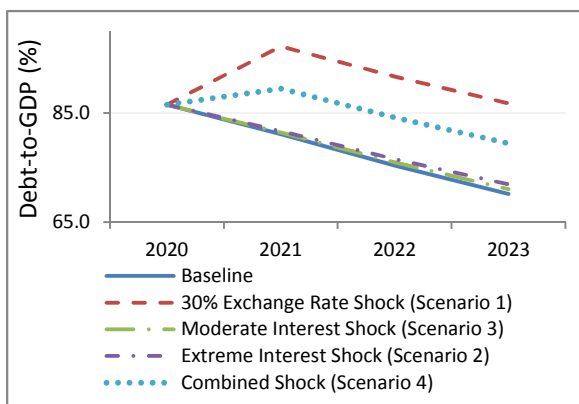
## 6.4.2 Dynamic Simulations for Key Debt Indicators

**Figures 40 to 43** highlight the dynamic effects of the different shock scenarios on key debt indicators for **S1** over the medium-term. The portfolio is most sensitive to foreign currency risk

as changes in the exchange rate between the JMD and the USD have the largest impact on debt-to-GDP and debt service costs (see **Figure 40**). A 30.0 percent shock to the baseline exchange rate assumption in FY2021/22 (**Scenario 1**) is projected to increase debt-to-GDP by approximately 16.6 percentage points relative to the baseline. The combined shock described in **Scenario 4** also had a significant impact, increasing debt-to-GDP by an estimated 9.2 percentage points relative to the baseline. Though the impact under this scenario is less significant, such a shock is still likely to compromise the debt-to-GDP target of 60.0 percent or less by end-March 2026.

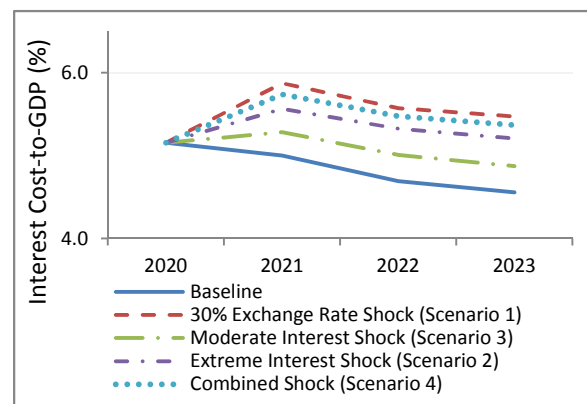
It is expected that increases in interest and exchange rates will have negative implications for the Government’s debt service costs. This is demonstrated in **Figures 41 to 43**. Where interest costs are concerned (**Figure 41**), the exchange rate shock seems to be the most significant. Baseline interest-cost-to-GDP averages 4.9 percent over the medium-term. In **Scenario 1**, this average increases by 0.7 percentage point. The impact of this scenario exceeds even that of **Scenarios 2 and 3** in which extreme and moderate shocks to interest rates increase average interest cost-to-GDP by 0.5 and 0.2 percentage point, respectively. This further demonstrates the risk that exchange rate movements pose to the debt portfolio. The rank of impacts tends to hold for debt service-to-GDP and external debt service with the medium-term average for debt service-to-GDP rising by 1.3 percentage points (see **Figure 42**) and the external debt service average increasing by US\$210.9 million (see **Figure 43**) under **Scenario 1**.

**Figure 40: Sensitivity of Debt-to-GDP to Shocks**



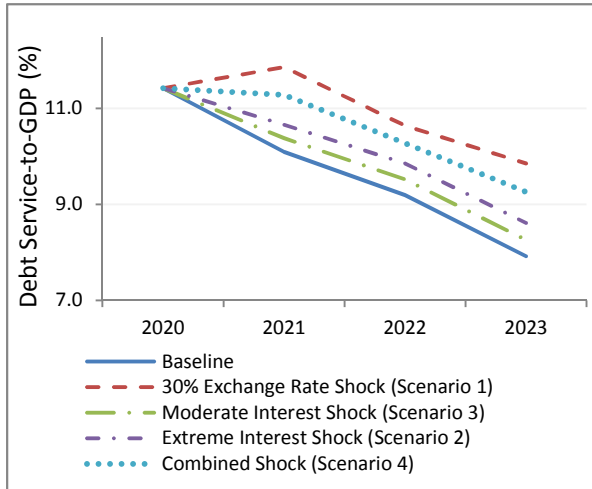
Source: Ministry of Finance and the Public Service

**Figure 41: Sensitivity of Interest Costs to Shocks**



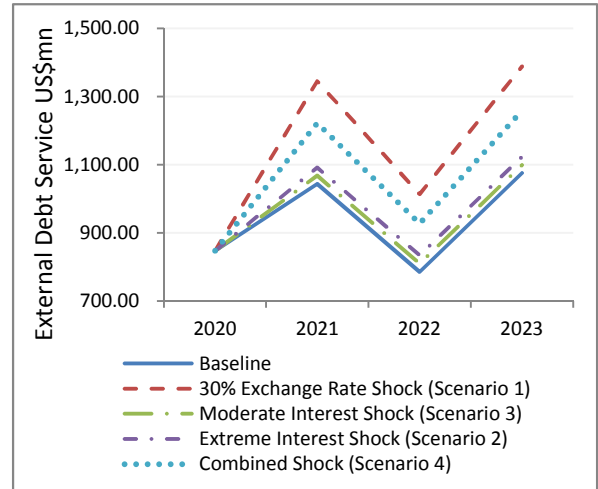
Source: Ministry of Finance and the Public Service

**Figure 42: Sensitivity of Debt Service-to-GDP to Shocks**



Source: Ministry of Finance and the Public Service

**Figure 43: Sensitivity of External Debt Service to Shocks**



Source: Ministry of Finance and the Public Service



## SECTION VII: ANNUAL BORROWING PLAN

The Annual Borrowing Plan (ABP) for FY2020/21 is developed based on the Government of Jamaica’s (GOJ) Medium-term Debt Management Strategy for FY2020/21 – FY2023/24 and the financing requirement for the fiscal year. The ABP details the projected allocation from external and domestic funding sources that will cover the financing gap related to the overall fiscal position after the Revenue Estimates and the Estimates of Expenditure for FY2020/21 are programmed.

The Government’s gross financing requirement for FY2020/21 is projected at \$143,602.93 million or 6.3 percent of GDP. In line with the medium-term debt strategy (S1), the GOJ will continue to reduce borrowing in the external market while increasing domestic financing. For FY2019/20, the ratio of domestic to external financing is projected at 63.0:37.0. The ratio of domestic to external financing for FY2020/21 is projected at 76.1:23.9. This strategic approach of decreasing external inflows relative to domestic inflows is expected to continue throughout the medium-term.

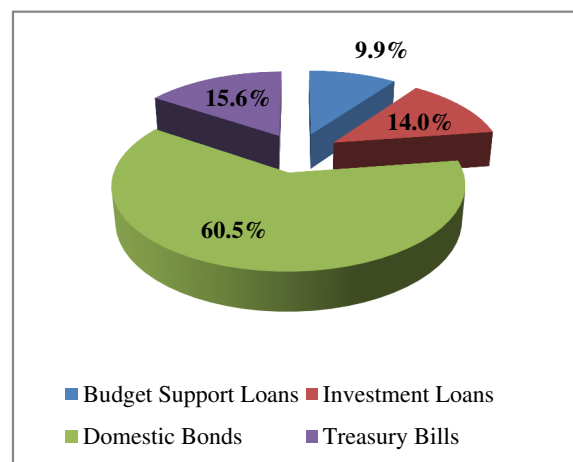
The funding from external sources includes scheduled disbursements totalling \$34,378.50 million from loans. These inflows constitute multilateral and bilateral loans, representing Policy-Based Loans and Investment Loans totalling \$14,245.35 million and \$20,133.15 million, respectively. On the other hand, the financing expected from domestic sources is projected at \$109,224.43 million, representing Domestic Bonds and Treasury Bills totalling \$86,824.43 million and \$22,400.00 million, respectively. (See **Table 10 and Figure 44**)

**Table 10: GOJ's Annual Borrowing Plan for FY2020/21**

Financing Sources	Budgeted (\$mn)
<b>Domestic Financing</b>	<b>109,224.43</b>
Domestic Bonds	86,824.43
Treasury Bills	22,400.00
<b>External Financing</b>	<b>34,378.50</b>
Investment Loans	20,133.15
Policy-Based loans	14,245.35
<b>Total</b>	<b>143,602.93</b>

Source: Ministry of Finance and the Public Service

**Figure 44: Annual Borrowing Plan FY2020/21**



Source: Ministry of Finance and the Public Service

## 7.1 Issuance Strategy

During FY 2020/21, the market issuance strategy will be guided by Strategy 1 (S1), which focuses on securing 80.0 percent of financing from the domestic market throughout the medium-term. The continued focus on local currency issuances will help to rebalance the currency composition of the portfolio while facilitating a vibrant market. In execution of the Issuance Strategy, the GOJ will:

- Streamline the application process for GOJ issuances to be made through primary dealers;
- Issue debt instruments along all segments of the yield curve, thereby achieving the GOJ's objectives of satisfying the borrowing requirements and maintaining a presence in the domestic market while facilitating the development of the market;
- Focus on building liquidity by developing benchmarks along the short-, medium- and long- segments of the yield curve. It is anticipated that this will result in increased secondary market trading;
- Continue to issue 3- and 6-month T-bills on a monthly basis, while the 9-month T-bill will continue to be issued at least once per quarter 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 remain at \$800.0 million. As a result, the T-bill offer amount for FY2020/21 is expected to be \$22,400.0 million. This will assist financial institutions in meeting liquid asset requirements;
- Schedule long-term instruments for maturity outside the peak repayment periods FY2024/25 and FY2028/29 in order to avoid further bunching ; and
- Issue all securities via the auction mechanism. This will facilitate efficiency in pricing.

## 7.2 Challenges to the Issuance Strategy

Exogenous factors inherent in the dynamic financial environment, which are outside the remit of DMB, could affect debt management operations. As a result, the success of the issuance strategy is dependent on favourable market conditions. Notwithstanding the existence of programmed inflows from official creditors, as well as favourable investor appetite for GOJ debt instruments, the Government is cognizant of the following potential challenges to the implementation of the ABP:

- Escalating geopolitical tensions over the medium-term may lead to uncertainty, instability, and reduced prospects for economic growth. Revenue performance could be negatively affected. Additionally, financing from bilateral creditors may be limited due to the deteriorating economic position of partner countries;

- Negative effects of natural disasters;
- A significant depreciation of the Jamaica dollar vis-à-vis the US dollar and relatively low yields on GOJ securities relative to USD investments could result in a shift in investors' preference to US dollar-denominated investments. This could lead to investors re-directing liquidity from the domestic market;
- Competition from high-yield corporate bonds could decrease demand for GOJ issuances, introducing demand-side risk in the portfolio; and
- The expected financing from multilateral and bilateral creditors could be reduced as a result of slow project execution.

### **7.3 Active Liability Management Operation**

The Government of Jamaica (GOJ) will continue to execute opportunistic liability management operations (LMOs) in FY2020/21 in an effort to manage costs/risks in the public debt portfolio. Authorized by Sections 6 and 10 of the Public Debt Management Act (PDMA), the Minister with responsibility for Finance may conduct portfolio management activities which are geared towards ensuring that the financing needs and the payment obligations of the Government are met at the lowest possible cost over the medium-term so as to achieve the fiscal targets.

The GOJ will remain prudent in monitoring the financial environment for any opportunity that could improve the composition of the debt portfolio, while enhancing fiscal sustainability. All liability management tools, including buybacks, exchanges, swaps, switches, and roll-overs may be utilized to achieve the objectives. In this regard, the GOJ remains committed to consider unsolicited proposals comprising the utilization of the aforementioned tools that may assist in the achievement of the medium-term debt targets.

**Table 11: Proposed issuance Calendar for BINs for FY2020/21**

<b>SUBSCRIPTION DATE</b>	<b>INSTRUMENT TYPE</b>	<b>METHOD OF ISSUE</b>
<b>Q1</b>		
April 15, 2020	3-month, 6-month and 9-month T-Bill Tenders	Auction
April 24, 2020	Reopen FR 5.50% BIN Due 2023 – <b>3-yr</b>	Auction
May 13, 2020	3-month, 6-month and 9-month T-Bill Tenders	Auction
May 22, 2020	Reopen FR 10.00% BIN Due 2037 – <b>17-yr</b>	Auction
June 10, 2020	3-month and 6-month T-Bill Tenders	Auction
<b>Q2</b>		
July 24, 2020	Reopen FR 5.675% BIN Due 2029 – <b>9-yr</b>	Auction
July 15, 2020	3-month, 6-month and 9-month T-Bill Tenders	Auction
August 12, 2020	3-month, 6-month and 9-month T-Bill Tenders	Auction
August 28, 2020	Reopen FR 6.25% BIN Due 2048 – <b>28-yr</b>	Auction
September 9, 2020	3-month and 6-month Treasury Bill Tenders	Auction
<b>Q3</b>		
October 7, 2020	Reopen FR 5.675% BIN Due 2029 – <b>9-yr</b> Reopen FR 5.80% BIN Due 2034 – <b>14-yr</b>	Auction
October 14, 2020	3-month and 6-month T-Bill Tenders	Auction
November 11, 2020	3-month, 6-month and 9-month T-Bill Tenders	Auction
November 25, 2020	Reopen FR 5.50% BIN Due 2023 – <b>3-yr</b> Reopen FR 10.00% BIN Due 2037 – <b>17-yr</b>	Auction Auction
December 9, 2020	3-month and 6-month Treasury Bill Tenders	Auction
<b>Q4</b>		
January 13, 2021	3-month, 6-month and 9-month Treasury Bills Tenders	Auction
January 29, 2021	Reopen FR 5.675% BIN Due 2029 – <b>9-yr</b>	Auction
February 10, 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
March 10, 2021	3-month and 6-month T-Bill Tenders	Auction
March 26, 2021	Reopen FR 5.80% BIN Due 2034 – <b>14-yr</b> Reopen FR 6.25% BIN Due 2048 – <b>28-yr</b>	Auction Auction

\*Benchmark Investment Note

Note: Schedule is subject to change.

Source: Ministry of Finance and the Public Service

**Table 12: Proposed Schedule for Treasury Bills  
For Fiscal Year 2020/21**

<b>Proposed Treasury Bill Tranche</b>			<b>Proposed Tender Date</b>	<b>Proposed Issue Date</b>
<b>Quarter 1</b>				
	3, 6 & 9 month T/Bills		April 15, 2020	April 17, 2020
	3, 6 & 9 month T/Bills		May 13, 2020	May 15, 2020
	3 & 6 month T/Bills		June 10, 2020	June 12, 2020
<b>Quarter 2</b>				
	3, 6 & 9 month T/Bills		July 15, 2020	July 17, 2020
	3, 6 & 9 month T/Bills		August 12, 2020	August 14, 2020
	3 & 6 month T/Bills		September 9, 2020	September 11, 2020
<b>Quarter 3</b>				
	3, & 6 month T/Bills		October 14, 2020	October 16, 2020
	3, 6 & 9 month T/Bills,		November 11 2020	November13, 2020
	3 & 6 month T/Bills		December 9, 2020	December 11, 2020
<b>Quarter 4</b>				
	3, 6 & 9 month T/Bills		January 13, 2021	January 15, 2021
	3, 6 & 9 month T/Bills,		February 10, 2021	February 12, 2021
	3 & 6 month T/Bills		March 10, 2021	March 12, 2021

**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**

The Government remains steadfast in its pursuit of continuing to develop an efficient domestic debt market throughout the medium-term. This includes the facilitation of a deep and liquid bond market that provides low-cost financing to the Government and supports the development of efficient fixed-income markets, which can support economic growth. In support of a liquid and well-functioning market, the Government will continue to promote transparency and consistency in the debt market.

To achieve these objectives, the GOJ is aiming to enhance the market structure/relationship framework that facilitates domestic debt activities. The role and expectations of stakeholders will be adjusted to support a more efficient Primary Dealer System.

On the backdrop of an improved framework, the GOJ will continue to pursue initiatives that will enhance benchmark-building of securities, diversify the investor base and implement a secondary-market infrastructure to promote greater liquidity and enhanced price discovery.

### **8.2 Financial Market Developments**

During the upcoming fiscal year, the GOJ will continue to prioritize improved coordination among stakeholders to encourage further development of the domestic debt market while satisfying its financing requirements. To this end, the Government will maintain a presence in the debt market and utilize the auction mechanism to issue securities along all segments of the yield curve, while facilitating price discovery. Further, in an effort to drive secondary market trading, the GOJ intends to introduce a clear benchmark building process in selected securities. This is anticipated to enhance liquidity in these securities and facilitate trading that may result in a more efficient yield curve.

Over the medium-term, the GOJ will examine the possibility of issuing local currency-denominated debt in the ICM. In order to achieve this objective, the Government will undertake discussions with an international clearance and settlement agency, regarding the feasibility of establishing a local link between JamClear-CSD and the agency's platform. The issuance of local currency-denominated debt in the ICM may reinforce efforts to de-dollarize the debt portfolio.

Consequent on sentiments expressed by foreign investors to participate in the domestic debt market, the GOJ is considering the establishment of an institutional framework for promoting,

coordinating and organizing economic and social investments by the Jamaican Diaspora. This initiative is aimed at broadening and further diversifying the domestic market investor base.

During FY2020/21, the GOJ in collaboration with the BOJ and the Financial Services Commission (FSC) will conduct a review of the Primary Dealers (PD) System. Arising from an IMF Technical Assistance Mission undertaken in December 2019, it was agreed that a PD Working Group should be established with participants from the MOFPS, BOJ, FSC and PDs. The Working Group will be chaired by the MOFPS with the BOJ and FSC providing technical assistance in the areas of market surveillance, performance assessment, and regulation and compliance.

Under the review, emphasis will be on the development of the secondary market. PDs' obligations will be broadened with more importance focused on market-making and distribution roles in relation to GOJ securities. The obligations will be aligned with GOJ market development objectives such as the establishment of a reliable Government securities yield curve based on firm quotes/transaction data. During the fiscal year, the GOJ will conduct discussions with PDs regarding its issuance modality in order to increase secondary market liquidity and boost trading. The GOJ will implement a system of reward and recognition.

During FY2020/21, the Jamaica Stock Exchange (JSE) in coordination with the GOJ and BOJ will advance plans to implement a Fixed-Income Trading Platform. The listing of GOJ securities on the platform is envisaged to support the further development of the domestic capital market through advanced market intelligence, equitable trading, transparency and checks and balances of the system in respect of access privilege. It is also expected to promote deeper and more liquid markets and enable real-time price discovery.

In an effort to further the development of the domestic debt market, the GOJ will collaborate with the BOJ and FSC to further enhance and upgrade the Central Securities Depository (JamClear-CSD). It is expected that the functionality in relation to the yield curve will be implemented in the JamClear-CSD by end-FY2019/20.

Additionally, during FY2020/21, the GOJ will:

- ❖ Provide timely reports and statistics on the debt and DMB's operations; and
- ❖ Continue to publish a Schedule of Domestic Debt Securities and T-bill Tenders for FY2020/21.

### 8.3 Investor Relations

Institutional investors are regarded as a government's key source of funding. Accordingly, these key sovereign debt stakeholders are regularly engaged through the execution of a comprehensive Investor Relations (IR) Programme. The strategies and activities undertaken are critical to the successful achievement of governments' debt management objective(s) of raising adequate budgetary financing and furthering the development of the domestic debt market.

During the review period, the GOJ remained 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 IRP 2019/20, the GOJ:

- Disseminated market surveys and convened one-on-one meetings with key stakeholders in the financial sector, prior to market issuances outlined in the GOJ's Issuance Calendar, to obtain valuable input towards the GOJ's debt issuance(s);
- Met with a cross-section of investors on its annual non-deal roadshow to the United States of America and Europe to update external stakeholders on the country's economic successes and progress;
- 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) website; and
- Continued the revamping of the DMB website to be launched at the end of FY2019/20.

During FY2020/21, the DMB will continue to pursue best practices that will enable the GOJ to continue meeting its debt management objectives of conducting debt operations transparently.



## **SECTION IX: CONCLUSION**

The Government of Jamaica's (GOJ) Medium-Term Debt Management Strategy (MTDS) for FY2020/21-FY2023/24 examines the costs and risks for the debt portfolio relative to established benchmarks for alternative financing strategies. The financing plan selected is consistent with the Government's broad strategic objectives of raising adequate financing at prudent levels of risk and lowest possible costs, while facilitating continued development of the domestic debt market. Accordingly, the medium-term financing strategy focuses on majority domestic financing at fixed rates across the yield curve.

Adherence to a primary surplus target of 6.5 percent of GDP has anchored the debt trajectory firmly downwards, projected at 91.5 percent at end-FY2019/20, consistent with the legislated ceiling of 60.0 percent by end-FY2025/26.

Sustained macro-economic stability and favourable financing conditions in the domestic and external markets contributed to improvements in the portfolio cost and risk indicators during the first three quarters of FY2019/20. This resulted in reduced exposure to interest rate and refinancing risks and lower annual interest costs for the overall portfolio. Notwithstanding increased volatility in the foreign exchange rate, net amortizing outflows, the consolidation of PetroCaribe Development Fund (PCDF) holdings of GOJ securities and the execution of liability management operations (LMOs) all contributed to a reduction in the stock of US dollar-denominated debt.

Market development initiatives including reform of the PD system and deeper engagement with market participants remain priorities for FY2020/21. Reforms include the broadening of the PDs' obligations with particular focus on their role as market-makers, with a view to increasing secondary market activity. As a complement to these reforms, the GOJ will continue discussions with PDs regarding its issuance modality, in particular the benchmark building programme, which is critical for the growth of secondary market liquidity.

During FY2020/21, the GOJ, in collaboration with the Jamaica Stock Exchange (JSE) and the BOJ, will advance plans for the development of a fixed-income trading platform (FITP) for GOJ securities. Consistent with international standards and best practices, the FITP will facilitate listing of GOJ bonds on the Jamaica Stock Exchange (JSE) and will integrate the JSE's platform with the JamClear-CSD infrastructure. The planned listing of GOJ securities on the JSE is expected to improve operational efficiency through greater transparency and a higher level of security, promote deeper and liquid markets, facilitate real-time price discovery, improve market information and fair trading; and consequently, support the development of the domestic debt market.

## **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 Investment Notes**

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.

### **Central Government**

Central Government includes ministries, departments and agencies which are responsible for carrying out core government functions.

### **Conditional Cash Flow at Risk (CCFaR)**

Conditional Cash Flow at Risk is the extended risk measure of cash flow at risk that quantifies the average increase in debt service cash flows in unlikely scenarios over a specified time period (see **Cash Flow at Risk**).

### **Conditional Cost at Risk (CCaR)**

Conditional Cost at Risk is the extended risk measure of cost at risk that quantifies the average increase in interest costs in unlikely scenarios over a specified time period (see **Cost at Risk**).

## **Conditional Value at Risk (CVaR)**

Conditional Value at Risk is the extended risk measure of value at risk that quantifies the average increase in debt stock in unlikely scenarios over a specified time period (see **Value at Risk**).

## **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.

## **Currency Conversion/Swap**

A currency swap, sometimes referred to as a cross-currency swap, involves the exchange of interest – and sometimes of principal – in one currency for the same in another currency. The agreement consists of swapping principal and interest payments on a loan made in one currency for principal and interest payments of a loan of equal value in another currency.

## **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).

## **Emerging Market Economy**

An emerging market economy refers to a developing nation that is becoming more engaged with global markets as it grows. Countries classified as emerging market economies are those with some, but not all, of the characteristics of a developed market.

## **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.

### **Fiscal Risk**

Fiscal risk refers to the probability that an actual fiscal outturn will deviate from that which is expected or budgeted.

### **Global/Euro bond**

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 global/euro bond 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 global bond, which was its first ever.

### **Government Guaranteed Loans**

The term government guaranteed loans refers to the debt of public bodies for which the Central Government is required to assume obligations in the event that the public entity defaults.

### **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 Loans**

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.

### **Liability Management Operation**

Liability management (LM) is the process of rebalancing outstanding debt in order to improve the composition of the public debt portfolio. LM operations have five main functions: (i) to increase liquidity in government securities markets, (ii) to manage risks in the debt portfolio, (iii) to decrease the cost of new funding, (iv) to correct and/or take advantage of market distortions, and (v) to stabilize the market during periods of stress.

### **MTDS Analytical Toolkit**

The MTDS analytical toolkit is designed to assist country authorities in developing a sound debt management strategy, by analyzing cost and risk tradeoffs inherent in alternative financing strategies. The tool was developed by the International Monetary Fund and the World Bank Group.

**Non-Central Government Debt**

Non-central government debt refers to the debt of public bodies, excluding those certified by the Auditor General as carrying out functions of a commercial nature. In the case of Jamaica, non-central government debt is included in total public debt.

**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.

**Policy-Based Loan**

This term refers to loans which fund or support policy reforms and/or institutional changes in particular sectors. Policy based loans are usually funded by multilateral 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.

**Primary Dealers**

Primary dealers are security dealers who have been given the right to participate in initial issuances or reopening of GOJ and BOJ securities to the market.

**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.

**Tender-Switch**

A tender-switch is a form of liability management operation in which a government retires a portion of its debt securities, and makes an offer to holders of those securities to repurchase a predetermined number of bonds at a specified price.

**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.