GOVERNMENT OF JAMAICA

MOFPS

MINISTRY OF FINANCE AND THE PUBLIC SERVICE

MEDIUM-TERM DEBT MANAGEMENT STRATEGY

FY2022/23 - FY2025/26

Ministry Paper No:

February 10, 2022

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LIST OF ABBREVIATIONS

ABP	Annual Borrowing Plan
ATM	Average Time-to-Maturity
ATR	Average Time-to-Refixing
BIN	Benchmark Investment Note
BOJ	Bank of Jamaica
BOP	Balance of Payments
BPS	Basis Points
B-FXITT	Bank of Jamaica Foreign Exchange Intervention Trading Tool
CAD	Current Account Deficit
CaR	Cost at Risk
CBDC	Central Bank Digital Currency
CCaR	Conditional Cost at Risk
CCFaR	Conditional Cash Flow at Risk
CFaR	Cash Flow at Risk
CCRIF-SPC	Caribbean Catastrophe Risk Insurance Facility – Segregated Portfolio Company
COVID-19	Coronavirus Disease 2019
CPI	Consumer Price Index
CVaR	Conditional Value at Risk
CY	Calendar Year
DMB	Debt Management Branch
DRF	Disaster Risk Financing
DTI	Deposit Taking Institution
EM	Emerging Market
EMDE	Emerging Market and Developing Economy
EME	Emerging Market Economy
FAA Act	Financial Administration and Audit Act
FED	Federal Reserve Bank
FFF	Flexible Financing Facility
FITP	Fixed Income Trading Platform
FR	Fixed-Rate
FRAN	Fixed-Rate Accreting Notes
FRF	Fiscal Responsibility Framework
FSC	Financial Services Commission
FY	Fiscal Year
FX	Foreign Exchange
GDP	Gross Domestic Product
GGL	Government Guaranteed Loan

GOJ	Government of Jamaica
HQLA	High-Quality Liquid Asset
ICM	International Capital Market
IDB	Inter-American Development Bank
IMF	International Monetary Fund
IR	Investor Relations
IRP	Investor Relations Plan
IRU	Investor Relations Unit
JAMAN	Jamaica's Global Bonds
JAMCLEAR-CSD	Central Securities Depository
JMD	Jamaica Dollar
JSDA	Jamaica Securities Dealer Association
JSE	Jamaica Stock Exchange
LAC	Latin America and the Caribbean
LCR	Liquidity Coverage Ratio
LMO	Liability Management Operations
LIBOR	London Inter-Bank Offered Rate
MTDS	Medium-Term Debt Management Strategy
NIR	Net International Reserves
PB	Public Bodies
PBL	Policy-Based Loan
PBMA Act	Public Bodies Management and Accountability Act
PCDF	PetroCaribe Development Fund
PD	Primary Dealer
PDMA	Public Debt Management Act
SDR	Special Drawing Rights
SOFR	Secured Overnight Financing Rate
T-bill	Treasury Bill
USD	United States Dollar
VaR	Value at Risk
VR	Variable-Rate
WHO	World Health Organization

FOREWORD

During FY2021/22, the Government of Jamaica (GOJ) intensified its efforts to safeguard and strengthen the country's macro-fiscal environment from the on-going effects of the coronavirus pandemic. The continued implementation of the COVID-19 Allocation of Resources for Employees (CARE) programme assisted various sectors and individuals negatively impacted by the onset of the pandemic. Further, the GOJ's acquisition of vaccines and the timely roll-out of a vaccination programme by the Ministry of Health and Wellness helped pave the way for a return to normality.

Fiscal surpluses attained prior to the pandemic supported a swift response, enabling the Government to navigate the economic impacts, without significant increases in public debt. Following an 11.0 percent economic contraction in FY2020/21, and a resultant uptick in debt-to-GDP, Jamaica is on the path to recovery. Real GDP growth for FY2021/22 is projected at 7.9 percent and debt-to-GDP for end-FY2021/22 is estimated to be 96.3 percent, 13.4 percentage points lower than the outturn at the end of the previous fiscal year. This returns the ratio to a downward trajectory, on track to meeting the target of 60.0 percent or less by end-FY2027/28.

The Medium-Term Debt Management Strategy (MTDS) for FY2022/23 – FY2025/26, governed by the Public Debt Management Act (PDMA), assesses the relative cost and risks of the debt portfolio relative to established benchmarks for the period April to December 2021, and the strategies operationalized to manage these risks. The Annual Borrowing Plan (ABP), crafted based on consultations with market participants, is aligned to the preferred financing strategy whereby financing will be sourced mainly from the domestic market across all segments of the yield curve.

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.

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

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February 10, 2022

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February 10, 2022

ACKNOWLEDGEMENTS

As we enter FY2022/23, the Debt Management Branch (DMB) in the Economic Management Division of the Ministry of Finance and the Public Service continues to support the Government of Jamaica's fiscal operations and its macro-economic programme.

The Medium-Term Debt Management Strategy (MTDS) FY2022/23 – FY2025/26 will guide debt management operations over the medium-term to ensure that the GOJ's financing needs are satisfied at the lowest possible cost and prudent levels of risk. In the pursuit of transparency and accountability in debt operations, the DMB will continue to engage key stakeholders through a communication framework grounded in the core principles of openness, accessibility and consistency.

We want to express our sincere appreciation to the DMB team for their continued commitment to the development of the MTDS document. For the second year in a row, reviews and meetings were conducted via the virtual space due to the ongoing coronavirus pandemic. Nevertheless, the team remained undaunted in executing its tasks to ensure a comprehensive, in-depth analysis and reporting of debt dynamics.

Additionally, special thanks to: Miss Darlene Morrison, Financial Secretary and the members of the Public Debt Management Committee for their support, guidance and input.

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EXECUTIVE SUMMARY

During FY2021/22, the Government of Jamaica (GOJ) conducted debt operations in the context of challenges posed by the ongoing coronavirus pandemic. During the period April – December 2021, low vaccine uptake and case surges caused by mild to virulent strains of the virus prolonged the slowdown of some sectors and reduced revenue flows. At the same time, the Government extended resources to support the health and social services sectors.

The relaxation of the measures implemented to curb the spread of COVID-19 paved the way for the modest recovery being experienced in the economy. Following an uptick in FY2020/21, debt-to-GDP is expected to resume its downward trajectory and is projected at 96.3 percent for end-FY2021/22. Furthermore, real Gross Domestic Product (GDP) growth is projected to trend upwards from the -11.0 percent recorded last fiscal year to 7.9 percent at the end of the current fiscal year.

Despite the positive trends in some indicators, significant increases in international commodity and shipping prices as well as increases in agricultural and regulated prices pushed the country's annual point-to-point inflation rate above the targeted band of 4.0 – 6.0 percent, with an outturn of 7.8 percent projected for end-FY2021/22. In response, the Bank of Jamaica (BOJ) relaxed their accommodative monetary stance by increasing the policy rate on three occasions by a total of 200 basis points (bps) to 2.50 percent at end-December 2021. These adjustments influenced operations in the domestic market and led to a 286-basis point increase in the 3-month Treasury Bill yield relative to the 1.23 percent recorded in March 2021.

Accordingly, for FY2022/23, the Government remains committed to implementing strategies and policies in support of continued development of the domestic market. The preferred financing strategy, **S1**, selected based on the assessment of projected cost and risk indicators, will guide the Government to issue mainly local currency fixed-rate debt across all segments of the yield curve. Foreign currency risk remains the predominant risk in the portfolio, and the GOJ continues to proactively pursue liability management opportunities to mitigate this risk. In September 2021, consistent with the objective to manage costs and risk, the GOJ conducted a currency swap of a US$50.0 million Inter-American Development Bank (IDB) loan to local currency. This, along with the partial buyback of a global bond contributed to a US$58.1 million reduction in the stock of foreign currency-denominated debt. The GOJ will seek to ramp up efforts to de-dollarize the debt portfolio by exploring the feasibility of issuing local currency-denominated debt in the international capital markets (ICM), an initiative which was halted by the onset of COVID-19.

The portfolio's exposure to refinancing risk has declined, with the share of debt maturing in one year or less decreasing by 2.7 percentage points from the 6.3 percent recorded at end-March 2021. In addition, the portfolio's average time-to-maturity (ATM) was extended by 0.3 year to

11.5 years. In December 2021, the GOJ issued a 40-year 8.50% Fixed-Rate BIN, marking the longest tenor issuance in the domestic market. This supports the Government's strategy to extend and smooth the maturity profile at the lowest possible cost. The GOJ continues to manage interest rate risks, with the portfolio's average time-to-re-fixing increasing by 0.4 year relative to end-FY2020/21, and the share of variable-rate debt generally in line with targets at 27.2 percent at end-December 2021. The risk posed by Government guaranteed loans (GGLs) has also decreased, with the GGL-to-GDP ratio decreasing by 0.8 percentage point to 4.0 percent, well within the legislated ceiling for FY2021/22.

For the upcoming fiscal year, the GOJ's financing requirement is projected at $124,130.1 million, representing a decrease of $6,175.5 million, compared to $130,305.6 million which was estimated for FY2021/22. The ratio of domestic to external financing for FY2022/23 is projected to be mainly in line with the selected strategy (**S1**), as outlined in the Medium-Term Debt Management Strategy FY2022/23 – FY 2025/26.

Jamaica's continued commitment to fiscal consolidation and fiscal restraint, as well as the planned strategies implemented to cushion the country from the economic and financial risks resulting from the pandemic, was reflected in the positive ratings received from Standard and Poor's (S&P) and Moody's Ratings Agencies for FY2021/22. S&P Ratings Agency affirmed the GOJ's long- and short-term foreign and local currency sovereign credit ratings at 'B+' and 'B', respectively. The outlook was revised from "Negative" to "Stable". Similarly, Moody's Investor Service affirmed the GOJ's long-term issuer and senior unsecured ratings at 'B2', maintaining a "Stable" outlook. It is their expectation that the pace of economic recovery will continue for FY2022/23 and onwards.

For the new fiscal year, the Debt Management Branch (DMB) will continue to engage institutional investors through its comprehensive Investor Relations Programme (IRP) grounded in the core principles of openness, accessibility and consistency in debt operations. This is in keeping with the GOJ's commitment to conduct debt operations transparently.

SECTION I: INTRODUCTION

The Government of Jamaica's (GOJ) Medium-Term Debt Management Strategy (MTDS), updated on an annual basis, is developed within the context of the Fiscal Responsibility Framework (FRF) and guided by the Public Debt Management Act (PDMA). The MTDS for FY2022/23 – FY2025/26 examines cost and risks to the debt portfolio under alternative financing strategies relative to established targets. The MTDS is integral to the management of debt operations while supporting the macroeconomic programme.

The formulation of the strategy is geared towards:

- satisfying the Government's borrowing needs at the lowest possible cost and at prudent levels of risk;
- enhancing the development of the domestic capital market; and
- facilitating continued transparency in debt operations.

The GOJ continues its effort to lower exposure to risks—refinancing, interest rate and foreign currency—in the debt portfolio. Accordingly, the MTDS for FY2022/23 - FY2025/26, which includes the Annual Borrowing Plan (ABP) and Issuance Calendar, will continue to operationalize the strategy of borrowing mainly in the domestic market at fixed-rates across the yield curve.

The scope of the analysis covers 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 the GOJ.

The document is divided into eight sections. **Section I** covers the Introduction. **Section II** gives a review of the current composition of the debt portfolio, while **Section III** summarizes the cost and risk analysis of the portfolio inclusive of mitigation strategies. **Section IV** explains the key risk factors affecting the portfolio and estimates the portfolio's sensitivity to specific market risks. **Section V** speaks to the macroeconomic environment. **Section VI** describes the methodology for selection of the medium-term debt management strategy. **Section VII** itemizes the Annual Borrowing Plan (ABP) and issuance strategy, while **Section VIII** provides an update on domestic and financial market development.

SECTION II: PROFILE OF PUBLIC DEBT STOCK

At end-December 2021, the stock of total public debt[1] was $2,216,476.9 million, $78,906.2 million or 3.7 percent more than the $2,137,570.7 million recorded at end-March 2021. This was driven by increases in the domestic and external components of the Central Government debt portfolio, partially mitigated by a reduction in net public bodies' debt (see **Table 1**). Overall, the increases resulted from revaluation effects associated with the depreciation of the Jamaica dollar (JMD) relative to the United States dollar (USD) in the external portfolio and net financing inflows in the domestic portfolio. Total public debt at end-FY2021/22 is projected at $2,173,174.5 million or 96.3 percent of GDP. This debt-to-GDP represents a 13.4 percentage point decrease over the end-March 2021 position and is mainly due to the estimated 15.9 percent increase in nominal GDP during FY2021/22.

Table 1: Public Debt Profile

	Mar-21	(%) Total	Dec-21	(%) Total	YTD	
	J$ millions	Public Debt	J$ millions	Public Debt	J$ million	%
Total Debt	**2,137,570.7**	**100.0**	**2,216,476.9**	**100.0**	**78,906.2**	**3.7**
Total Central Government Debt	**2,090,497.8**	**97.8**	**2,182,436.9**	**98.5**	**91,939.2**	**4.4**
Central Government Domestic Debt	**795,225.0**	**37.2**	**824,074.0**	**37.2**	**28,849.0**	**3.6**
Marketable Securities	**795,224.9**	**37.2**	**824,073.9**	**37.2**	**28,849.0**	**3.6**
Bonds	784,924.9	36.7	813,773.9	36.7	28,849.0	3.7
Treasury Bills	10,300.0	0.5	10,300.0	0.5	0.0	0.0
Loans	**0.2**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**
Perpetual Annuities	0.2	0.0	0.2	0.0	0.0	0.0
Central Government External Debt	**1,295,272.7**	**60.6**	**1,358,362.9**	**61.3**	**63,090.1**	**4.9**
Marketable Securities	**754,745.3**	**35.3**	**795,264.3**	**35.9**	**40,519.0**	**5.4**
Bonds	754,745.3	35.3	795,264.3	35.9	40,519.0	5.4
Loans	**540,527.2**	**25.3**	**563,098.5**	**25.4**	**22,571.3**	**4.2**
Bilateral	**99,425.2**	**4.7**	**108,757.3**	**4.9**	**9,332.1**	**9.4**
OECD	2,969.7	0.1	2,211.7	0.1	(758.0)	(25.5)
Non-OECD	96,455.5	4.5	106,545.6	4.8	10,090.2	10.5
Multilateral	**441,102.0**	**20.6**	**454,341.2**	**20.5**	**13,239.2**	**3.0**
IDB	238,210.1	11.1	244,692.9	11.0	6,482.8	2.7
IBRD	152,771.5	7.1	164,670.7	7.4	11,899.1	7.8
Other	50,120.4	2.3	44,977.6	2.0	(5,142.8)	(10.3)
Gross Public Bodies' Debt	**240,401.4**	**11.3**	**251,188.3**	**11.4**	**10,786.9**	**4.5**
Guaranteed Loans	93,977.0	4.4	86,118.8	3.9	(7,858.2)	(8.4)
Loans from Central Gov't	116,817.1	5.5	135,071.4	6.1	18,254.2	15.6
Non-Guaranteed Loans	29,607.2	1.4	29,998.1	1.4	390.9	1.3
Total Cross Holdings	**193,328.4**	**9.0**	**217,148.3**	**9.8**	**23,819.9**	**12.3**
Net Public Bodies	**47,072.9**	**2.2**	**34,040.0**	**1.5**	**(13,033.0)**	**(27.7)**

Source: Ministry of Finance and the Public Service

[1] Public debt is defined as the consolidated debt of the Specified Public Sector (SPS), except that of the Bank of Jamaica (BOJ), net of any cross holdings.

2.1 Central Government Debt

As at end-December 2021, total Central Government debt stood at $2,182,436.9 million, an increase of $91,939.2 million or 4.4 percent relative to the $2,090,497.8 million recorded at end-March 2021. The change reflected increases in both the domestic and external portfolios. Central Government debt is estimated to be $2,143,041.5 million at end-FY2021/22.

The stock of outstanding Central Government domestic debt rose from $795,225.0 million at end-March 2021 to $824,074.0 million at end-December 2021, a $28,849.0 million or 3.6 percent increase (see **Table 1**). The increase reflected opportunistic net financing inflows from Benchmark Investment Notes (BINs). The stock of Central Government domestic debt is expected to decrease to $821,459.1 million by end-FY2021/22.

At end-December 2021, Central Government external debt was $1,358,362.9 million, an increase of $63,090.1 million or 4.9 percent relative to the amount at end-March 2021. This increase was mainly driven by valuation effects associated with the depreciation of the Jamaica dollar relative to the US dollar, which more than offset reductions in the stock in US dollar terms. Central Government external debt is projected at $1,321,582.4 million at end-FY2021/22.

2.2 Public Bodies Debt

Gross public bodies (PBs) debt was $251,188.3 million at end-December 2021, $10,786.9 million or 4.5 percent more than the $240,401.4 million recorded at end-March 2021. The increase was attributed to a 15.6 percent and 1.3 percent increase in Loans from Central Government and Non-Guaranteed Loans, respectively. The increase was partially offset by an 8.4 percent reduction in guaranteed loans from $93,977.0 million to $86,118.8 million over the review period.

The net or consolidated public bodies debt[2] at end-December 2021 was $34,040.0 million, a decrease of $13,033.0 million, or 27.7 percent compared to the $47,072.9 million recorded at end-March 2021. The reduction resulted from an increase in cross holdings attributed to Loans from Central Government, as well as the amortization of a US$50.8 million guaranteed syndicated credit facility for the National Water Commission (NWC) in December 2021. Net PBs debt is projected at $25,348.1 million at end-March 2022.

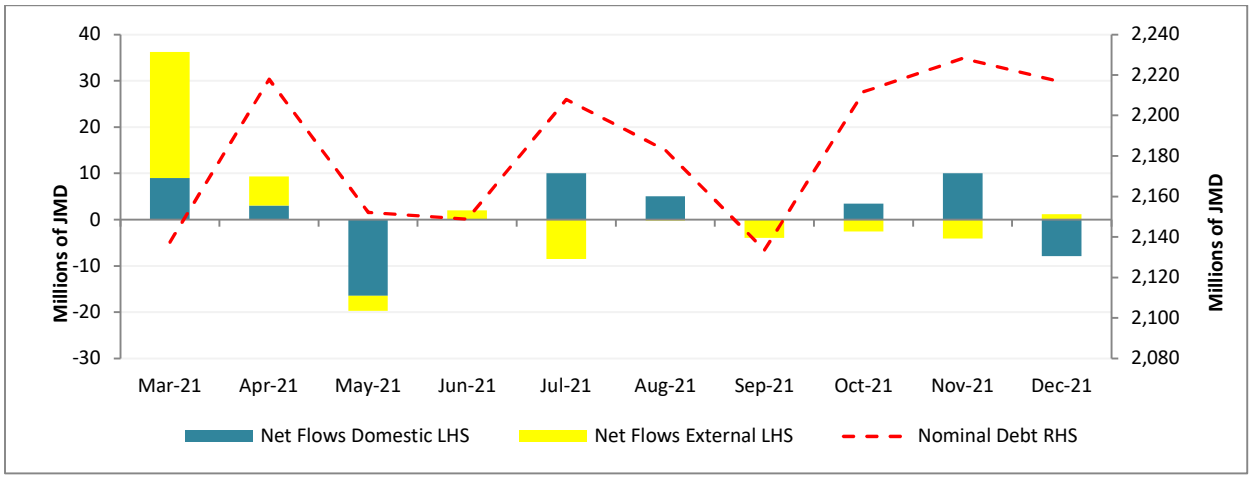
2.3 Public Debt Trajectory and Net Financing Flows

Figure 1 shows the net financing flows for the Central Government domestic and external debt portfolios and highlights the trajectory of the stock of public debt from end-March 2021 to end-December 2021. Net inflows of approximately $30,347.5 million to the Central Government

[2] Net public bodies debt is calculated as gross public bodies' debt less cross holdings. Cross holdings include loans from the Central Government or other PBs and PBs investment in GOJ securities.

debt portfolio reflected net inflows of approximately $14,251.8 million to the external portfolio and $16,095.7 million to the domestic portfolio. Overall, the trajectory of the total public debt stock has been upward over the review period, with variations mainly influenced by fluctuations in the exchange rate.

Figure 1: Trajectory of the Public Debt Stock

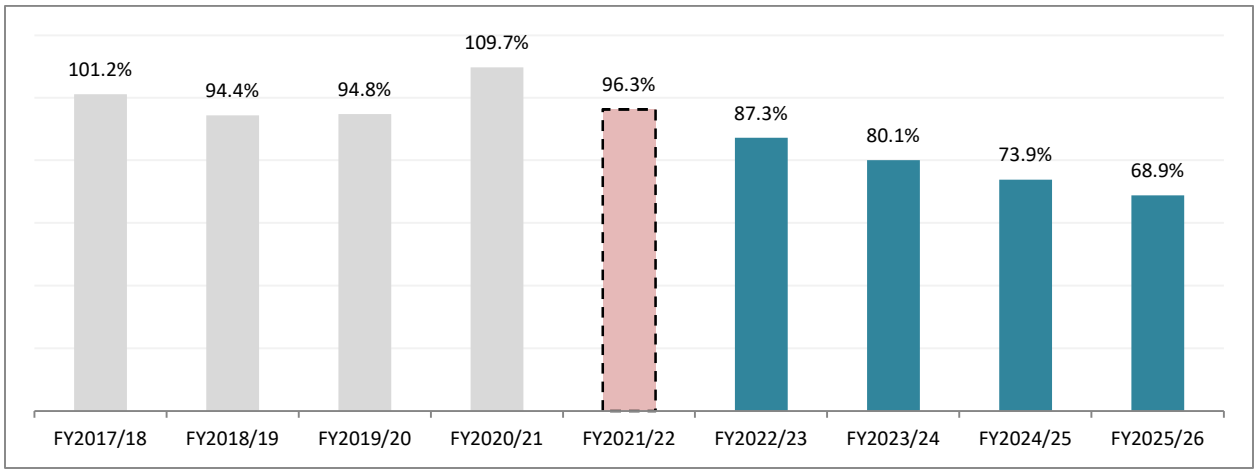


Source: Ministry of Finance and the Public Service

Much like the global economy, Jamaica is enjoying a modest recovery from the economic disruptions brought about by the COVID-19 pandemic. Recovery varied across fiscal indicators as detailed in the Central Government Operations projected for the period under review. Revenue and Grants for April 2021 to December 2021 fell short of the First Supplementary Estimates by $1,233.6 million, or 0.2 percent, while Expenditure for the period was below budget by $9,343.2 million, or 1.8 percent. For FY2021/22, Central Government Operations are programmed to generate a fiscal and primary surplus of 0.3 percent and 6.3 percent of GDP, respectively. This reflects a rebound from a fiscal deficit and a primary surplus of -3.1 percent and 3.5 percent of GDP, respectively, for FY2020/21.

Though economic output is still below the pre-pandemic levels, there has been significant improvement relative to the corresponding period last year. Driven by an uptick in the tourism and transportation sectors, economic output is expected to grow by 9.0 percent for FY2021/22 following a contraction of 11.0 percent for FY2020/21. Debt-to-GDP is projected to decline by 13.4 percentage points from 109.7 percent at end-FY2020/21 to an estimated 96.3 percent at end-FY2021/22. Further reductions in the debt ratio are anticipated as projected improvement in the macro-fiscal position will restore the downward trend, consistent with meeting the revised timeline to achieve debt-to-GDP of 60.0 percent or less by end-FY2027/28 (see **Figure 2**).

Figure 2: Debt-to-GDP Trajectory



Source: Ministry of Finance and the Public Service

Box 1: Liability Management Operations Executed in FY2021/22

Liability Management Operations

Pursuant to Section 7.3 of the MTDS FY2021/22-FY2024/25, the Government of Jamaica (GOJ) indicated its willingness to pursue "opportunistic" liability management operations (LMOs) during FY2021/22. In this regard, two LMOs were successfully executed in the international capital markets and through an official source, involving opportunities to repurchase a portion of the JAMAN 2025 bonds and to convert the outstanding loan balance of a multilateral USD loan to JMD, respectively. Despite the unfavourable market conditions resulting from the pandemic, the transactions were beneficial in terms of cost savings accruing, reduction in the nominal debt stock, mitigation of refinancing risk and the portfolio's exposure to foreign currency risk.

Buyback of Global Bonds

In September 2021, the GOJ repurchased US$20.0 million of nominal value of the 7.625% Amortizing Notes due 2025. The transaction was structured to be consistent with the broad strategic debt management objectives of managing costs and risks associated with high coupons and near-to-maturity bonds in the public debt portfolio, while contributing to debt reduction, net interest savings, and reducing the USD-denominated portion of the debt portfolio. The Government achieved interest savings estimated at US$1.19 million for the remaining tenor of the bond, and reduction in the nominal debt stock of US$20.0 million.

Despite volatile market conditions, the GOJ mitigated refinancing risk through the cancellation of the aforementioned portion of the series of 2025 bonds tendered in the transaction. This further contributed to the Government's objective to reduce bunching of maturities in the debt portfolio that is predominant in FY2024/25 and FY2028/29.

Fixed-Rate Currency Conversion

On September 23, 2021, the GOJ and the Inter-American Development Bank (IDB) executed a currency swap of the entire outstanding balance for a loan of US$50.0 million to local currency. The transaction became effective on September 30, 2021, and resulted in the following major achievements for the Government:

- Mitigated foreign currency risk by reducing the foreign currency component of the debt;
- Mitigated interest rate risk by swapping a multilateral variable-rate loan with a fixed-rate local currency loan; and
- Estimated net interest cost savings of US$194.3 million should be realized over the remaining tenor of the loan.

SECTION III: COST AND RISK ANALYSIS

The GOJ continues to monitor the relative costs and risks of the debt portfolio to assess the consistency of debt operations with the Government's objectives. While the risks to sovereign debt are varied, the MTDS places greater focus on market risks relating to changes in the exchange rate, interest rate and inflation rate, as well as refinancing risks and those related to contingent liabilities in the form of government guarantees.

Foreign currency risk remains predominant, and exposure was broadly unchanged over the review period. Portfolio interest costs have increased, resulting from higher domestic benchmark rates, while external rates have remained low. Given the current financial environment, changes in interest rates have become more crucial, but the portfolio's level of exposure has generally declined. Even as inflation rates are trending upwards, inflation risks remained subdued due to low exposure. A reduction in the share of total debt maturing within a year and an extension of the average time-to-maturity highlight lower refinancing risks. As the Government seeks to reduce the risk associated with contingent liabilities, government guarantees have remained well within established limits, on track to meet the legislated target for FY2021/22. **Table 2** highlights changes in the key cost and risk indicators for the Central Government debt portfolio over the review period.

Table 2: Central Government Debt Cost and Risk Indicators

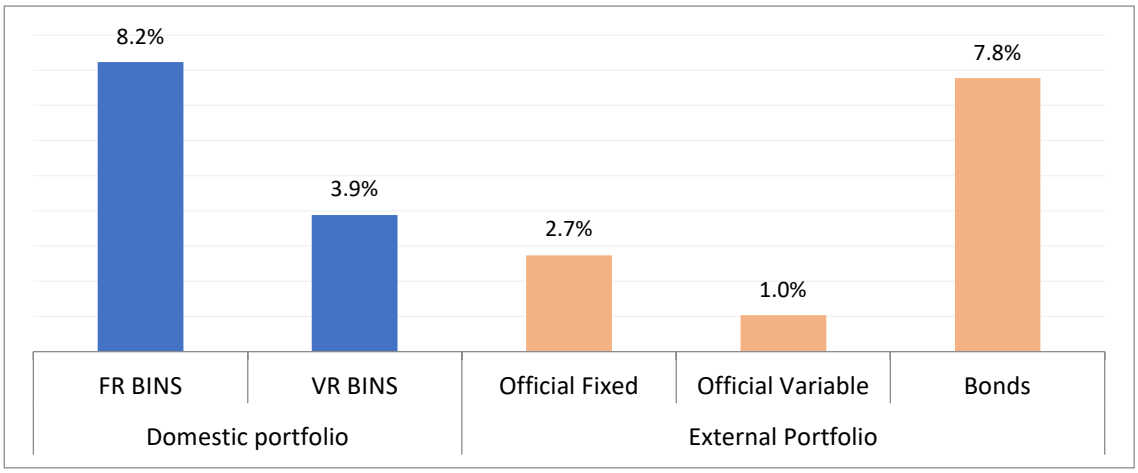
	Outcomes			Targets end-March 2022	
	End-March 2021	End-Dec 2021	Change	Min	Max
Implied Annual Interest Cost					
Domestic	6.6	7.2	0.6	-	-
External	5.2	5.2	-	-	-
Total	5.7	6.0	0.3	-	-
Interest Rate Risk					
Domestic					
Variable-rate Debt	23.3	22.8	(0.5)	28	30
Debt Refixing in 1 year (% of total)	29.9	25.2	(4.7)	-	-
Average Time to Refixing (Years)	8.7	9.5	0.8	-	-
External					
Variable-rate Debt	28.5	29.8	1.3	30	35
Debt Refixing in 1 year (% of total)	31.5	30.5	(1.0)	-	-
Average Time to Refixing (Years)	9.6	9.7	0.1	-	-
Total					
Variable-rate Debt	26.5	27.2	0.7	30	33
Debt Refixing in 1 year (% of total)	30.7	28.5	(2.2)	-	-
Average Time to Refixing	9.2	9.6	0.4	-	-
Refinancing Risk					
Domestic					
Debt maturing in 1 year (% of total)	6.6	3.6	(3.0)	-	-
ATM (Years)	10.7	10.5	(0.2)	-	-
External					
Debt maturing in 1 yr (% of total)	6.1	3.5	(2.6)	-	-
ATM (Years)	11.7	12.0	0.3	-	-
Total					
Debt Maturing in 1 yr (% of total)	6.3	3.6	(2.7)	-	<=10.0
ATM (Years)	11.2	11.5	0.3	>=9.0	-
Foreign Currency Risk					
FX debt as (% of total debt)	61.5	61.4	(0.1)		<=61
Inflation Risk					
CPI-Linked debt (% of total debt)	2.6	2.7	0.1	-	-
Contingent Liabilities					
Guaranteed Loans (% of GDP)	4.8	4.0	(0.8)	-	<=5.0

Source: Ministry of Finance and the Public Service

3.1 Interest Cost

At end-December 2021, the weighted average interest cost on Central Government debt was 6.0 percent. This reflects an increase of 0.3 percentage point when compared to end-March 2021 (see **Table 2**). This was due to an increase of 0.6 percentage point in the domestic interest cost from 6.6 percent at end-March 2021 to 7.2 percent at end-December 2021. External interest cost

Figure 3: Weighted Average Interest Cost by Instrument



Source: Ministry of Finance and the Public Service

Figure 3 shows the distribution of the weighted average interest cost by instrument. Fixed-rate BINs were the most costly debt instruments with a weighted average cost of 8.2 percent, a marginal decrease when compared to end-March 2021. The cost of variable-rate debt increased by 220 basis points from 1.7 percent to 3.9 percent at end-December 2021, consequent on increasing reset rates over the period[3].

JAMAN bonds were the most costly instruments in the external portfolio with a weighted average interest cost of 7.8 percent. The cost of fixed-rate Multilateral/Bilateral loans increased from 2.4 percent to 2.7 percent at end-December 2021 compared to end-March 2021. This was due to the repayment of lower cost external fixed-rate Multilateral/Bilateral debt during the review period. Official variable-rate instruments remain the least costly, with the weighted average interest cost decreasing from 1.1 percent to 1.0 percent as a result of decreasing external benchmark rates over the period.

[3] The Variable Rate BINS are repriced using the 3-month Treasury Bill rate.

3.2 Interest Rate Risk

Interest rate risk refers to the change in debt service cost arising from the variability in interest rates. Interest rate risk is usually measured by: the portfolio's share of floating-rate debt; share of debt re-fixing in 12 months; and the portfolio's average-time-to-re-fixing (ATR).

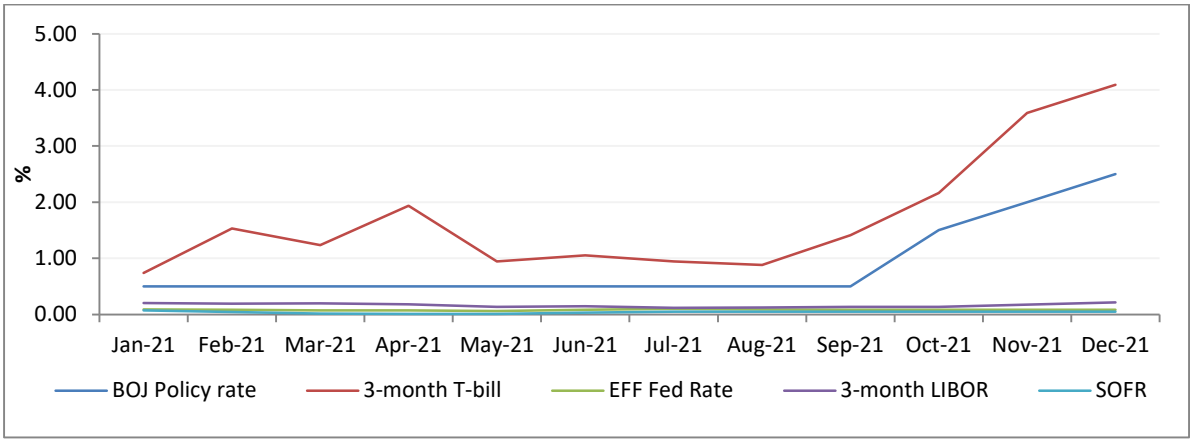
At end-December 2021, the share of floating-rate debt in the Central Government portfolio was 27.2 percent, a 0.7 percentage point increase when compared to end-March 2021. This increase was primarily attributable to the external portfolio, in which the share of variable-rate debt increased by 1.3 percentage points from 28.5 percent to 29.8 percent. This was partially offset by a 0.5 percent reduction in the share of floating-rate debt in the domestic portfolio.

The ATR for the debt portfolio was 9.6 years at end-December 2021, reflecting an increase by 0.4 year compared to end-March 2021. In the domestic portfolio, the ATR increased by 0.8 year to 9.5 years, while the ATR in the external portfolio increased by 0.1 year to 9.7 years. The share of debt re-fixing in 12 months or less for the overall portfolio decreased by 2.2 percent from 30.7 percent at end-March 2021 to 28.5 percent at end-December 2021. The share in the domestic portfolio decreased by 4.7 percentage points over the period, owing to the reduction in the amount of maturing fixed-rate debt in the short-term, while in the external portfolio, the share increased by 1.0 percentage point.

Figure 4 highlights the trajectory of benchmark interest rates for Calendar Year (CY) 2021. Prior to September 2021, the BOJ maintained its policy rate at 0.50 percent. Thereafter, in an effort to manage the increasing rate of inflation, the Central Bank abandoned its accommodative monetary policy stance and increased the policy rate by an initial 100 basis points in September 2021 and 50 basis points in both November and December to end the period at 2.50 percent. Consequently, the 3-month Treasury Bill yield increased by 332 basis points year-over-year to 4.09 percent. The US Federal Reserve (FED) maintained its accommodative monetary policy stance as part of the effort to support the recovery of economic activity to pre-COVID-19 levels and kept the target range for the Fed Funds rate at 0.00 percent to 0.25 percent per annum. As a result, external benchmark rates remained low over the period. The 3-month US Libor remained relatively flat, averaging 0.16 percent for the calendar year, while the Secured Overnight Financing Rate (SOFR)[4] averaged 0.04 percent.

[4] The United Kingdom's (UK's) Financial Conduct Authority (FCA), which is responsible for regulating LIBOR, has indicated that the publication of LIBOR is not guaranteed beyond 2021. As such, there has been a paced transition from the use of LIBOR in financial contracts. The Alternative Reference Rates Committee (ARRC), a group convened to help ensure a successful transition from the USD LIBOR, has identified the Secured Overnight Financing Rate (SOFR) as the rate that represents best practice for use in certain new USD derivatives and other financial contracts. SOFR is a broad measure of the cost of borrowing cash overnight collateralized by US Treasury securities in the repo market and is considered a better reflection of the way financial institutions fund themselves.

Figure 4: Reference and Benchmark Interest Rates for the Debt Portfolio



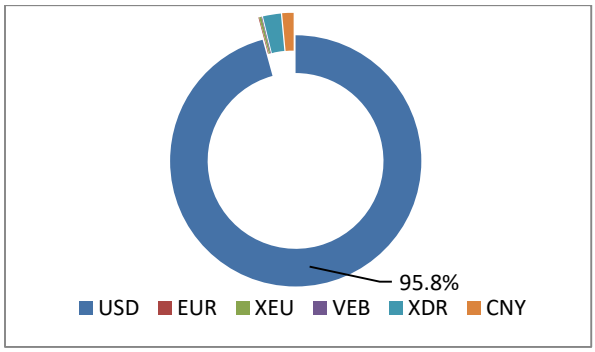
Source: Bank of Jamaica and the Federal Reserve Bank of St. Louis

3.3 Foreign Currency Risk

Foreign currency risk refers to the variability in the debt stock and the associated debt service costs resulting from fluctuations in foreign currency exchange rates. This level of risk can be measured by 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. Currently, foreign currency risk is limited to the external portfolio as the domestic portfolio is denominated entirely in local currency.

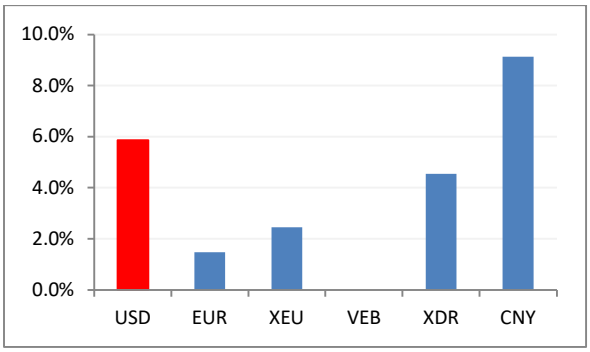
The Central Government debt portfolio was exposed to changes in six foreign currencies at end-December 2021, of which the United States (US) dollar accounted for 95.8 percent (see **Figure 5**). Given the level of exposure, the portfolio is most sensitive to changes in the JMD/USD exchange rate. **Figure 6** shows the rate of depreciation of the Jamaica dollar relative to these currencies over the review period.

Figure 5: Currency Composition of Foreign Currency-denominated Debt at end-December 2021



Source: Ministry of Finance and the Public Service

Figure 6: Rate of Depreciation of the JMD Relative to Foreign Currencies, end-March 2021 to end-December 2021



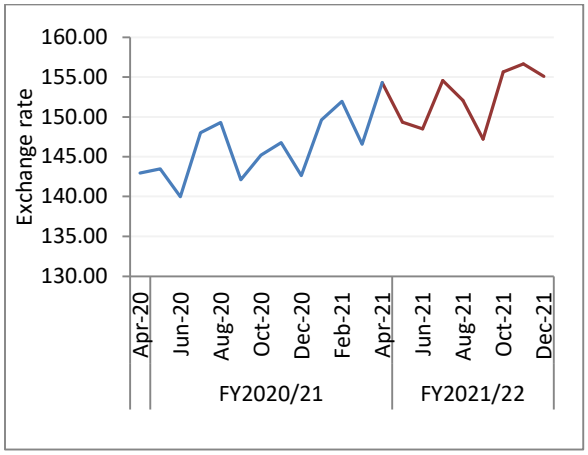
Source: Ministry of Finance and the Public Service

As at end-December 2021, the stock of foreign currency-denominated debt was US$8,647.2 million, a reduction of US$58.1 million, or 0.6 percent relative to end-March 2021. This reduction was supported by the conversion of a US$50.0 million Inter-American Development Bank (IDB) loan to local currency, as well as the partial buyback of global bonds valued at US$20.0 million (see **Box 1**). The reduction was partially offset by positive net inflows of foreign currency-denominated debt over the period. At end-December 2021, 61.4 percent of Central Government debt was denominated in foreign currencies, representing a marginal reduction of 0.1 percentage point when compared to 61.5 percent at end-March 2021 (see **Table 2**).

Figure 7 shows daily changes in the JMD/USD exchange rate for FY2020/21 as well as the period April 1, 2021 to December 31, 2021. For the current fiscal year to end-December 2021, the Jamaica dollar depreciated vis-à-vis the US dollar by 5.8 percent. The market-determined exchange rate was characterized by two-way movements with periods of sharp depreciation followed by periods of appreciation. The depreciation rate for the similar period last fiscal year was 5.4 percent.

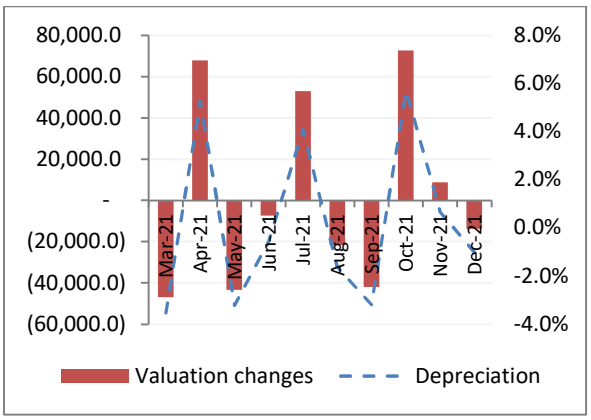
Figure 8 shows monthly movements in the JMD/USD exchange rate, as well as the associated valuation effects over the period. Despite a reduction in the stock of foreign currency-denominated debt in US dollar terms, the relative weakening of the Jamaica dollar resulted in a $73,576.75 million or 5.7 percent increase in the total outstanding debt stock in Jamaica dollar terms.

Figure 7: Daily JMD/USD Exchange Rate



Notes: The blue line represents actual exchange rate for FY2020/21 and the red line represents actual exchange rate for FY2021/22.
Source: Ministry of Finance and the Public Service

Figure 8: Monthly Depreciation Rate and Associated Valuation Effects



Notes: Monthly percentage change in the JMD/USD exchange rate on the right axis and the associated valuation effects for the debt stock in $mn on the left axis.
Source: Ministry of Finance and the Public Service

3.4 Inflation Risk

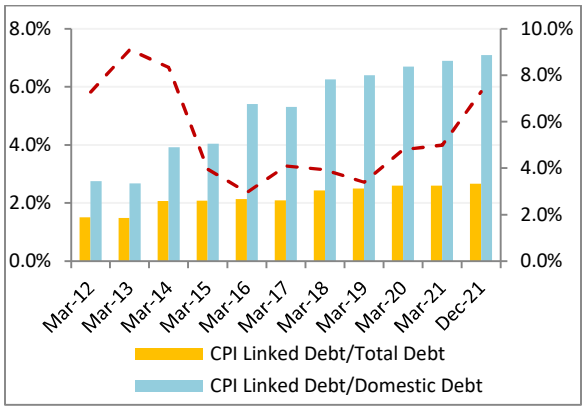
Inflation risk refers to the variability in the value of inflation-linked debt and the associated debt service costs occasioned by changes in the consumer price index (CPI). The impact of changes in the CPI on the debt stock is contingent on the level of exposure, measured by the share of inflation-linked debt in total debt, as well as the inflation rate.

Since September 2017, the BOJ has embarked on an inflation-targeting regime in which annual inflation is targeted at between 4.0 and 6.0 percent. Up to end-FY2020/21, low and stable inflation outturns were being maintained. However, due to ongoing global supply chain issues among other factors, the targeted band was breached during the second quarter of the fiscal year, with annual point-to-point inflation reaching a high of 8.5 percent in October 2021. Following policy response from the BOJ, annual point-to-point inflation at end-December 2021 fell to 7.3 percent, and is projected to close the fiscal year at 7.8 percent.

For the fiscal year to date, the value of CPI-linked debt increased by $4,372.5 million, or 8.2 percent to $57,700.8 million, and represented 7.1 percent of outstanding Central Government domestic debt and 2.7 percent of total Central Government debt (see **Figure 9**). Notably, the value of inflation-linked debt has increased by $20,998.2 million or 57.2 percent since original issuance due to movements in the CPI.

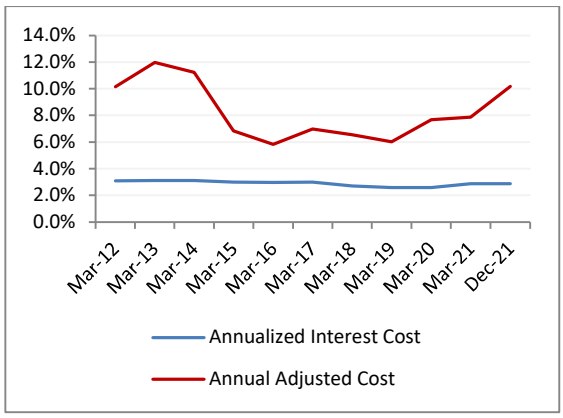
The weighted average annual implied interest cost on CPI-linked bonds was estimated at 2.9 percent at end-December 2021. The annualized adjusted cost, which takes into consideration inflation movements, was estimated at 10.2 percent at end-December 2021, which is now higher than the cost of fixed-rate BINs of comparable tenors (see **Figure 10**).[5]

Figure 9: Share of CPI Linked Debt in the Central Government Debt



Source: Ministry of Finance and the Public Service

Figure 10: Cost of CPI Linked Bonds



Source: Ministry of Finance and the Public Service

[5] The weighted cost of fixed-rate BINs with maturity in 2025, 2033 and 2040 is 9.6 percent. These instruments sum to $51.6 billion.

3.5 Refinancing Risk

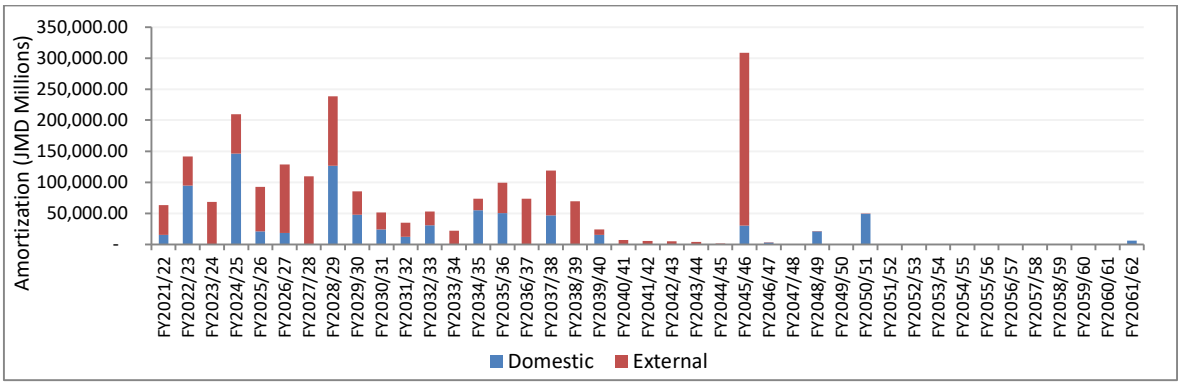
Refinancing risk is the probability that debt will have to be rolled over at an unusually high cost, or, in extreme cases cannot be rolled over. In general, refinancing risk indicators relate to the size or proportion of maturities due within some specified period. It is measured by the portfolio's average time-to-maturity (ATM), the share of debt maturing in one year or less and the redemption profile.

The share of debt maturing in one year or less was 3.6 percent at end-December 2021. This is 2.7 percentage points less than the 6.3 percent that obtained at end-March 2021. The decrease was attributed to reductions of 3.0 percentage points and 2.6 percentage points for the domestic and external portfolios, respectively. Accordingly, at end-December 2021, the share of domestic debt maturing in one year or less was 3.6 percent, while the share of external debt maturing in one year or less was 3.5 percent.

The ATM measures the weighted average time until all principal payments in the debt portfolio become due. A shortening of this indicator suggests that the portfolio is being rolled over more frequently, thereby increasing exposure to refinancing risk. The ATM for the Central Government debt portfolio increased by 0.3 year to 11.5 years at end-December 2021 when compared to end-March 2021. This was the net effect of an increase in the ATM of the external portfolio by 0.3 year to 12.0 years and a decrease in the ATM for the domestic portfolio by 0.2 year to 10.5 years (see **Table 2**).

Figure 11 shows the redemption profile of the Central Government debt portfolio at end-December 2021. The maturity of a $91,922.9 million Variable-Rate Step up BIN reflects bunching in FY2024/25, while the maturity pertaining to the $126,450.8 million Fixed-Rate Accreting Notes (FRAN) reflects bunching in FY2028/29. There is also significant bunching in FY2045/46 associated with the maturity of a fixed-rate global bond with principal outstanding of US$1,815.0 million in July 2045. As part of its strategy to alleviate bunching in the short- to medium-term, the Government executed a partial buyback of global bonds due 2025 in the amount of US$20.0 million (see **Box 1**). Additionally, in December 2021, the GOJ issued a domestic fixed-rate 8.50% BIN with scheduled maturity in FY2061/62. The maturity period of 40 years marks the longest tenor associated with a GOJ domestic market issuance and reflects continued efforts to extend the Central Government maturity profile at the lowest possible cost.

Figure 11: Redemption Profile of Central Government Debt at end-December 2021



Source: Ministry of Finance and the Public Service

3.6 Contingent Liability – Government Guaranteed Loans

Contingent liabilities are obligations that materialize if a particular event occurs. Government guaranteed loans (GGLs) are explicit contingent liabilities, which if called will increase the debt service costs of the GOJ. The stock of GGLs at end-December 2021 was $86,118.8 million, of which $62,917.5 million were external guarantees and $23,201.3 million were domestic guarantees (see **Table 3**). Compared to end-March 2021, the stock of total GGLs decreased by $7,858.1 million, or 8.4 percent. This was driven by the domestic portfolio, where the maturity of a US$50.8 million guaranteed loan in respect of the NWC, as well as a $1,592.9 million loan in respect of the Central Wastewater Treatment Company contributed to a stock reduction of $8,711.1 million, or 27.3 percent. The stock of external GGLs increased by $853.0 million, or 1.4 percent as a result of the depreciation in the Jamaica dollar relative to the US dollar.

Table 3: Stock of Government Guaranteed Loans

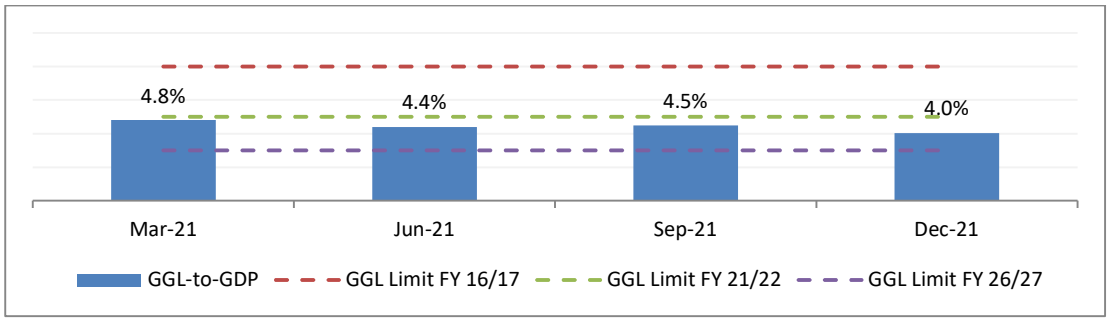
	Mar-21		Dec-21		Change	
	J$mn	% of total	J$mn	% of total	J$mn	% of total
External GGL	62,064.5	66.0%	62,917.5	73.1%	853.0	1.4%
Domestic GGL	31,912.4	34.0%	23,201.3	26.9%	(8,711.1)	(27.3%)
Total	93,976.9		86,118.8		(7,858.1)	(8.4%)

Source: Ministry of Finance and the Public Service

Figure 12 highlights the quarterly GGL-to-GDP relative to legislated ceilings[6]. At end-December 2021, the GGL-to-GDP ratio was estimated at 4.0 percent which is 0.8 percentage point lower than the ratio recorded at end-March 2021, and 1.0 percentage point below the legislated ceiling for end-FY2021/22.

[6] The PDMA limits the GGL-to-GDP ratio to 8.0 percent, 5.0 percent and 3.0 percent for end-FY 2016/17, end-FY2021/22 and end-FY2026/27, respectively.

Figure 12: Government Guaranteed Loans as a Share of GDP



Source: Ministry of Finance and the Public Service

3.7 Cost and Risk Indicators for the GGL Portfolio

The Government continued to monitor the GGL portfolio with respect to key cost and risk indicators. **Table 4** compares key cost and risk indicators for the GGL portfolio at end-March 2021 and end-December 2021.

Table 4: GGL Portfolio Risk Indicators

	Outcomes		
	End-Mar 2021	End-Dec 2021	Change
Implied Annual Interest Cost			
Domestic	5.2	5.0	(0.2)
External	5.8	5.8	0.0
Total	5.6	5.2	(0.4)
Interest Rate Risk			
Domestic			
Variable-Rate Debt	5.9	8.1	2.2
Debt Re-fixing in 1 year (% of total)	42.2	22.0	(20.2)
Average Time to Re-fixing (Years)	6.6	8.2	1.6
External			
Variable-Rate Debt	39.3	39.9	0.6
Debt Re-fixing in 1 year (% of total)	41.9	42.1	0.2
Average Time to Re-fixing (Years)	2.5	2.2	(0.3)
Total			
Variable-Rate Debt	28.0	31.3	3.3
Debt Re-fixing in 1 year (% of total)	40.2	36.6	(3.6)
Average Time to Re-fixing	3.6	3.8	0.2
Refinancing Risk			
Domestic			
ATM (Years)	6.3	8.3	2.0
External			
ATM (Years)	3.9	4.1	0.2
Total			
ATM (Years)	4.7	5.2	0.5
Foreign Currency Risk			
FX debt as (% of total GGLs)	77.3	74.5	(2.8)
Inflation Risk			
Inflation-linked debt (as % of total GGLs)	17.4	20.5	3.1

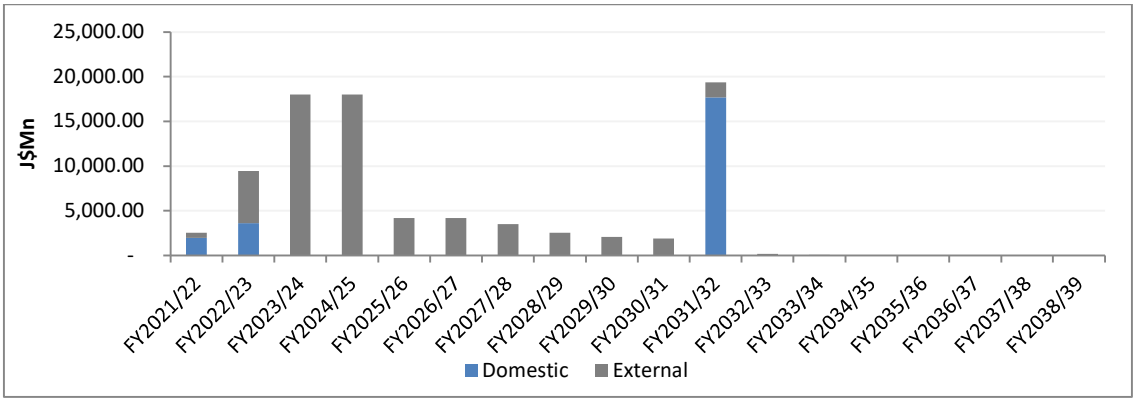
Source: Ministry of Finance and the Public Service

The interest cost for the GGL portfolio at end-December 2021 was 5.2 percent, which reflects a 0.4 percentage point reduction over the period. This resulted from a 0.2 percentage point reduction in the domestic GGL portfolio. The interest cost for the external GGL portfolio was unchanged over the review period.

At end-December 2021, there was a marginal improvement in the GGL portfolio's exposure to interest rate risk, reflected in an increase in the ATR and reduction in the share of debt-re-fixing in one year or less. At end-December 2021, the GGL portfolio's share of variable-rate debt was 31.3 percent, reflecting a 3.3 percentage point increase over the period. This was as a result of the maturity of fixed-rate guarantees. The ATR for the GGL portfolio was 3.8 years at end-December 2021, an increase of 0.2 year when compared to end-March 2021. This was due entirely to the domestic portfolio which increased by 1.6 years over the review period. Despite the increase in the share of variable-rate debt, the share of debt re-fixing in one year or less decreased by 3.6 percentage points at end-December 2021. This was mainly due to a 20.2 percentage point decrease in the share of debt re-fixing in one year or less for the domestic portfolio, resulting from a temporal shift in fixed-rate maturities.

The ATM for the GGL portfolio increased from 4.7 years at end-March 2021 to 5.2 years at end-December 2021 and was attributed to the ATM for the domestic and external portfolios increasing by 2.0 years and 0.2 year, respectively. The redemption profile in **Figure 13** highlights the concentration of maturities in the external GGL portfolio in FY2023/24 and FY2024/25 owing to amortizations of $13,821.57 million in each year.

Figure 13: Redemption Profile of GGLs at end-December 2021

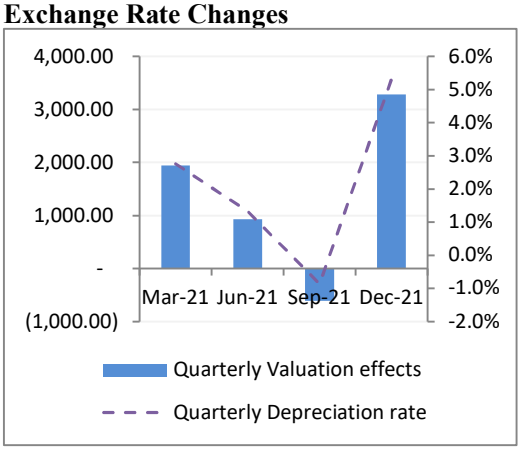


Source: Ministry of Finance and the Public Service

While there was a reduction in the nominal value of foreign currency-denominated GGLs, the portfolio is still significantly exposed to foreign currency risk. At end-December 2021, the share of foreign currency-denominated GGLs decreased by 2.8 percentage points to 74.5 percent. The reduction was attributed to a US$76.3 million reduction in the nominal value of foreign currency-denominated GGLs. However, over the review period, the depreciation in the Jamaica dollar relative to the US dollar increased the stock by $3,559.6 million (see **Figure 14**). The stock of

inflation-linked GGLs at end-December 2021 was $17,683.8 million, representing an increase of $1,356.8 million when compared to end-March 2021. The share of inflation-linked GGLs in total GGLs was 20.5 percent, an increase of 3.1 percentage points over the review period (see **Figure 15**). This increase was mainly due to the net amortization of non-inflation-linked debt over the period.

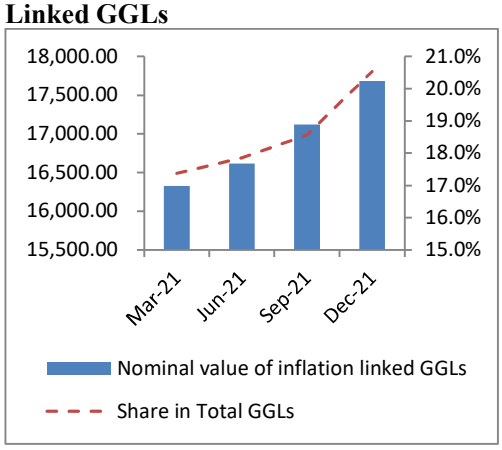
Figure 14: Quarterly Valuation Effects from Exchange Rate Changes



Notes: Valuation effects of changes in the exchange rate read from the left axis and the quarterly depreciation rate reads from the right axis.

Source: Ministry of Finance and the Public Service

Figure 15: Nominal Value of Inflation-Linked GGLs



Notes: Nominal value of inflation-linked GGLs reads from the left axis and the share of inflation-linked GGLs reads from the right axis.

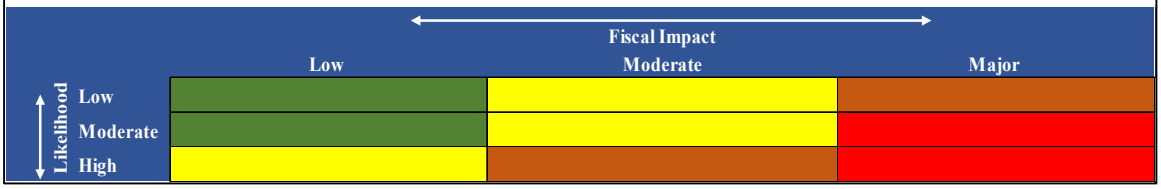
Source: Ministry of Finance and the Public Service

SECTION IV: RISK FACTORS AFFECTING THE DEBT PORTFOLIO

The macroeconomic and market variables which determine public debt dynamics are susceptible to various exogenous factors such as health crises, natural disasters, deteriorating social dynamics and financial crises. An assessment of the potential impact of these risks is crucial for effective risk management. The relative risk to the portfolio is contingent on the likelihood of occurrence, as well as the estimated fiscal or financial impact. **Figure 16** outlines selected risk factors, their likelihood of occurrence and the potential impact on the debt portfolio.

Figure 16: Selected Risks and Implications for the Debt Portfolio

Likelihood of Event	Fiscal Impact: Low	Fiscal Impact: Moderate	Fiscal Impact: Major
Low	**Public Private Partnerships (PPPs):** The use of PPPs as a modality to mobilize investment, particularly in infrastructure development and energy and water generation are common in many developing economies. These types of arrangements impose potentially significant fiscal risks if not properly managed and monitored. The GOJ's PPP Policy provides a framework to support the monitoring of PPPs in Jamaica. PPPs are adjudged to pose minimal risk to the debt portfolio at this point in time. However their growing popularity suggests increasing risks from PPPs over the medium term.	**Weakened Fiscal Accounts:** The fiscal balance is projected at 0.3 percent of GDP for FY2021/22. This represents a recovery compared to the -3.1 percent deficit recorded the previous year. A weaker than programmed economic recovery associated with the lingering effects of the pandemic could continue to impair the Government's fiscal accounts with mounting pressures also placed on the domestic financial markets. Given Jamaica's moderate economic recovery, the likelihood of weakened fiscal accounts has been reassessed as low, while the estimated impact remains moderate.	**Financial Crises:** Financial crises can have significant negative effects on the economy and the sovereign debt. The financial crisis in Jamaica is estimated to have cost upwards of 40 percent of GDP. While the pandemic has increased the possibility of financial crises, sustained strengthening of financial regulations and the adoption of best practices in Jamaica have provided a layer of protection against this risk.
Moderate	**Government Guaranteed Loans (GGLs):** Given the impact of COVID-19, the risk of crystallization of GGLs is more acute. Notwithstanding, consistent with the legislated limits as per the PDMA, the GOJ has been successfully reducing its exposure to risks from GGLs. The share of GGLs to GDP has decreased over the review period and is estimated at 4.0 percent at end-December 2021, 1.0 percentage point below the legislated target for end-FY2021/22.	**Shocks in Commodity Prices:** Adverse shocks in commodity prices, especially oil prices, can have major effects on the government's BOP and overall fiscal accounts. Though potentially large on the fiscal, the pass through to the debt portfolio is expected to be more moderate. Following demand disruptions caused by the onset of Covid-19, projections for oil prices are expected to rise throughout the medium-term, subject to increased demand associated with the reopening of economies.	**Natural Disasters:** Natural disasters (floods, hurricanes 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 26.0 percent of GDP. The adoption of a suite of disaster risk finance instruments including indemnity type insurance coverage, contingent lines of credit and most recently, the issuance of a catastrophe bond, will aid in reducing the fiscal impact of natural disasters.
High	**Digitization and Digital Division:** COVID-19 is forcing a rapid increase in the digitization of human interaction in the form of e-commerce, on-line schooling and remote work. The ability of governments to respond appropriately by, inter alia, building out the necessary IT infrastructure and developing the skills needed in the new economy, will determine the consequences for growth and development in a post COVID-19 environment. While the fiscal and debt implications may be relatively low in the near term, this is likely to grow exponentially over the medium to long term	**High Crime Rate:** High rates of crime pose a significant risk to prospects for improvements in productivity and economic growth. Some estimates of the direct impact of crime on the health system are as high as $12.0 billion. Higher crime-related expenditures will also impact the budget directly. The attendant impact on economic growth (GDP) will affect the fiscal through low revenue generation and potentially higher demand for social spending, which could lead to increases in Government borrowing.	**Market Volatility:** With global uncertainty at elevated levels, the risk to international financial markets and potential spillovers to domestic markets are significant. Volatility in macroeconomic and market variables can result in higher debt service costs and stock valuation. It also has implications for governments' ability to access markets for financing which could impose liquidity challenges. Given the current state of the global economy and given the direct impact of market volatility on the debt stock and debt operations, this risk is assessed to be a high probability with potentially major financial implications.



4.1 Comparative Static Simulations of Changes in Key Macroeconomic and Market Variables on the Debt Portfolio

Table 5 highlights the debt portfolio's sensitivity to changes in key macroeconomic and market variables. The results show that the debt portfolio has a heightened sensitivity to foreign exchange and interest rate movements. Notably, a 5.0 percent increase in the exchange rate will increase the debt stock and interest cost by $68,322.3 million and $3,364.8 million, respectively, and a 500-basis point increase in domestic and external benchmark interest rates will increase interest costs by $12,045.6 million and $20,927.0 million, respectively. A similar adjustment to the inflation rate would increase the stock of inflation-linked debt by $1,835.1 million. Estimated effects support the current debt management strategy which is geared at reducing exposure to foreign currency and interest rate risks.

Table 5: Estimated Portfolio Effects of Changes in Key Market Variables

		Change in Macroeconomic Variables		
		1.0%	3.0%	5.0%
		J$ Millions		
Foreign Exchange Depreciation				
	Effect on Debt Stock	13,664.5	40,993.4	68,322.3
	Effect on Interest Cost	673.0	2,018.9	3,364.8
	Total	14,337.4	43,012.3	71,687.1
	% of GDP	0.6%	1.7%	2.9%
Increase in Benchmark Interest Rates				
	Domestic	2,409.1	7,227.4	12,045.6
	External	4,185.4	12,556.2	20,927.0
	Total	6,594.5	19,783.5	32,972.6
	% of GDP	0.3%	0.8%	1.3%
Inflation Rate				
	Effect on Debt Stock	367.0	1,101.1	1,835.1
	Effect on Interest Cost	9.6	28.7	47.9
	Total	376.6	1,129.8	1,883.0
	% of GDP	0.0%	0.0%	0.1%
Aggregated Effects				
	Total	**21,308.5**	**63,925.6**	**106,542.7**
	% of GDP	**0.9%**	**2.6%**	**4.3%**

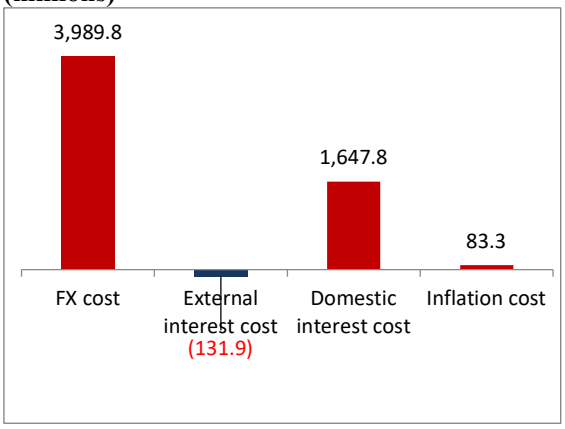
Source: Ministry of Finance and the Public Service

Figure 17 highlights the estimated portfolio costs associated with actual financing flows and the changes in key macroeconomic and market variables. Over the review period, the JMD/USD exchange rate depreciated by 5.8 percent, increasing the adjusted cost for external debt by $3,989.8 million. External benchmark rates remained relatively low as the US FED maintained its accommodative monetary policy. This resulted in a reduction in external interest costs of $131.86 million, which was lower relative to the similar period during the last fiscal year. In contrast, there was an increase in domestic benchmark rates towards the end of the review period

as the BOJ reduced monetary policy accommodation. Between March and December 2021, the 3-month T-bill rate increased by 286 bps and resulted in an estimated $1,647.8 million increase in domestic interest costs. The inflationary impact on debt service costs was marginal.

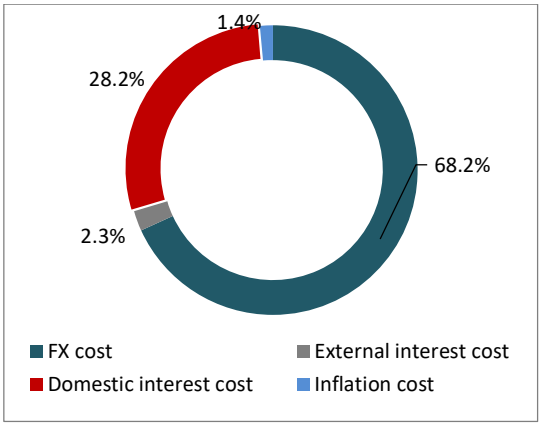
Over the review period, the depreciation in the Jamaica dollar relative to the US dollar accounted for 68.2 percent of the total variation in portfolio costs (see **Figure 18**). When compared to the previous year, this represents a 16.1 percentage point increase. Changes in the external and domestic benchmark interest rates accounted for 2.3 percent and 28.2 percent, respectively. The inflationary effects were constrained to the pass through to interest payments on CPI-linked bonds and accounted for 1.4 percent of the variation in portfolio costs.

Figure 17: Effects on Adjusted Costs from Changes in Macroeconomic and Market Variables, April to December 2021 (millions)



Source: Ministry of Finance and the Public Service

Figure 18: Relative Sensitivity to Changes in Macroeconomic and Market Variables, April to December 2021



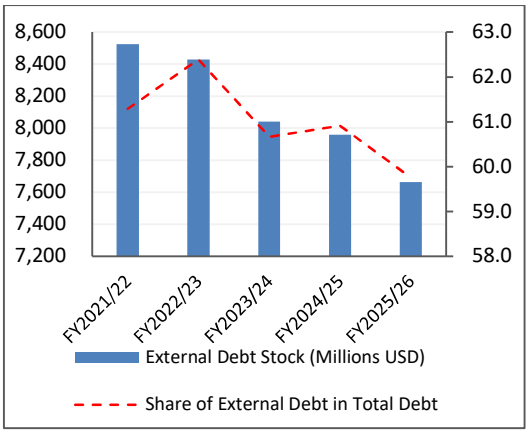
Source: Ministry of Finance and the Public Service

4.2 Dynamic Simulations of Changes in Key Macroeconomic Variables

In keeping with the strategic priority of reducing nominal exposure to foreign currency risk, the nominal value of foreign currency-denominated debt is expected to decrease by US$765.8 million or 9.1 percent over the medium-term, resulting in estimated savings of $14,291.5 million on a cost-adjusted basis. In tandem with this nominal reduction, the share of foreign currency-denominated debt in total debt is projected to decrease by 2.6 percentage points to 59.8 percent at end-FY2025/26 (see **Figure 19**).

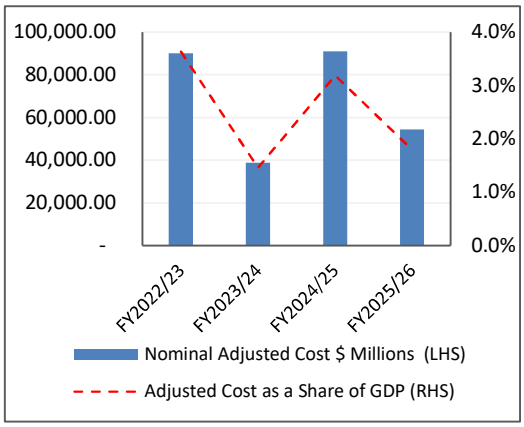
Figure 20 shows the revaluation effects associated with a 5.0 percent shock to the rate of depreciation of the JMD relative to the USD in each year. The impact ranges from $38,862.0 million in FY2023/24 to $90,990.8 million in FY2024/25, with the relatively large revaluation effects in FY2022/23 and FY2024/25 stemming from moderate declines in foreign currency-denominated debt, relative to the projected rate of depreciation in those years.

Figure 19: Change in Foreign Currency-Denominated Debt over the Medium-term



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

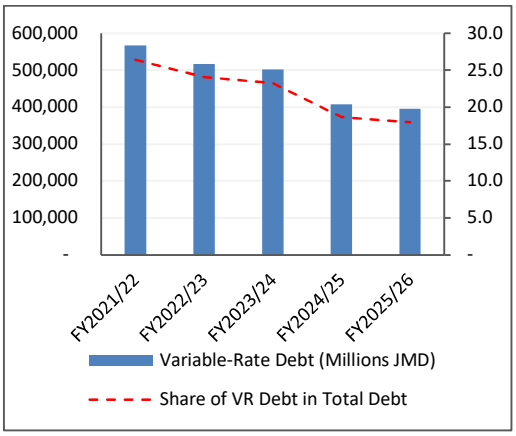
Figure 20: Sensitivity to Changes in the Exchange Rate over the Medium-Term



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

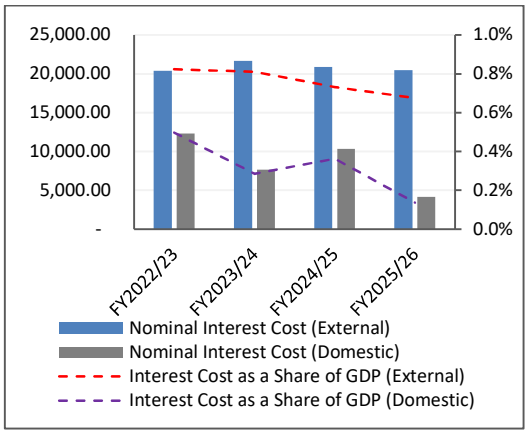
As the MTDS also seeks to reduce exposure to interest rate risks, the nominal value of variable-rate debt as well as its share in total debt is also projected to decline over the medium-term by $171,448.3 million, or 30.2 percent, and 8.5 percentage points, respectively (see **Figure 21**). Domestic variable-rate debt is expected to decrease by $133,566.2 million, or 72.7 percent, while a more modest decline of $37,882.1 million, or 9.9 percent is attributed to the external portfolio. Concomitantly, the domestic portfolio's sensitivity to changes in benchmark interest rates is expected to decrease by 0.4 percent of GDP, compared to a reduction of 0.1 percent of GDP for the external portfolio (see **Figure 22**).

Figure 21: 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 22: Portfolio Sensitivity to Interest Rate Changes over the Medium-Term



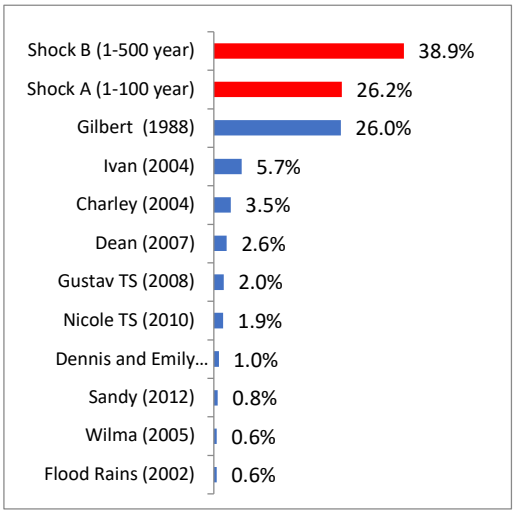
Notes: Simulation assumes a 500-basis point shock in baseline benchmark interest rates in each year. Figure shows nominal adjusted costs in millions of JMD on the left axis, and adjusted cost as a share of GDP on the right axis.
Source: Ministry of Finance and the Public Service

4.3 Natural Disaster Shock Simulation

The MTDS toolkit was used to simulate the impact of a storm with a return period of 1-in-100 years as well as a more devastating 1-in-500 year storm on key portfolio indicators and the medium-term debt trajectory. The modelled losses are estimated at US$4,352.0 million, or 26.2 percent of GDP and US$6,469.0 million, or 38.9 percent of GDP for the 1-in-100 year and 1-in-500 year events, respectively, and the shock is modelled to occur in FY2023/24. **Figure 23** compares the simulated effects of both shocks to historical losses incurred under major weather events in Jamaica.

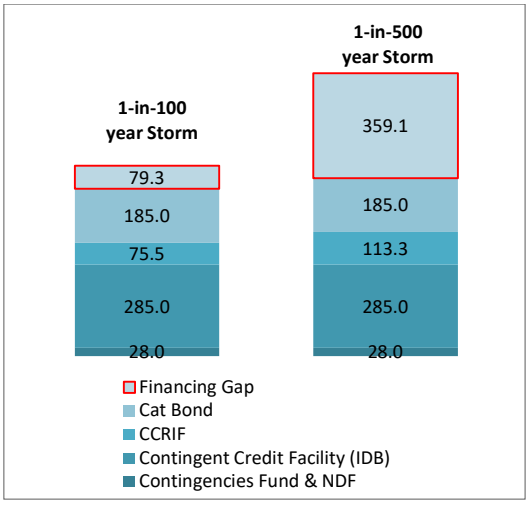
The simulation assumes that the direct fiscal cost is limited to emergency losses[7], estimated at US$652.8 million or 3.9 percent of GDP for the 1-in-100 year storm and US$970.0 million, or 5.8 percent of GDP for the 1-in-500 year storm. Additional expenditure arising from the shock is assumed to be financed from a suite of disaster risk financing (DRF) instruments currently available to the Government[8]. These resources are estimated at US$573.5 million in respect of the 1-in-100 year storm and US$611.3 million in respect of the 1-in-500 year event (see **Figure 24**). The resulting financing gaps of approximately US$79.3 million and US$359.1 million will be financed from ex-post borrowing in the external market, likely at less favourable financing terms.

Figure 23: Estimated Impact of Natural Disasters as a Share of GDP



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

Figure 24: Estimated Financing Gap for a Major Hurricane (US$mn)



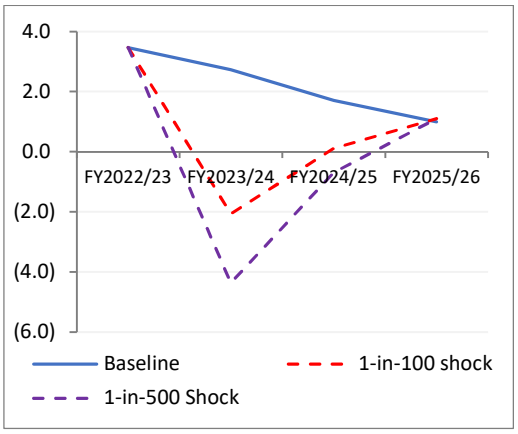
Notes: Figure shows estimates of the financing gap associated with a 1-in-100 year and a 1-in-500 year event given the DRF financing options that the GOJ currently has in place.
Source: Ministry of Finance and the Public Service

[7] These costs are inclusive of the costs associated with emergency repairs to public infrastructure, clean-up and relief and recovery activities as well as social expenditure to assist the indigent and other vulnerable populations.
[8] Current DRF instruments include a Catastrophe Bond, the Caribbean Catastrophe Risk Insurance Facility-Segregated Portfolio Company (CCRIF-SPC) insurance policy, IDB Contingent Credit Facility, the Contingencies Fund and the National Disaster Fund (NDF).

The associated impact on key macroeconomic and market variables was modelled using additive adjustments to baseline assumptions for real GDP growth, inflation, exchange rates, interest rates and the primary balance. The projected impact on real GDP growth is depicted in **Figure 25**. While baseline real GDP growth is projected to average 2.2 percent over the medium-term, the 1-in-100 year and 1-in-500 year shocks reduce this average to 0.7 percent and -0.1 percent, respectively. The simulations assume an increase in inflation beyond the target band in the year of impact and an initial exchange rate depreciation which exceeds baseline assumptions by 3.7 and 4.2 percentage points for the 1-in-100 year and 1-in-500 year shocks, respectively. An outward shift of the domestic yield curve by 300 bps in FY2023/24 and FY2024/25 is estimated based on increased credit risk following a disaster. JAMAN yields are also estimated to increase by 300 bps in both years, after which the risk spread is assumed to return to the baseline. Bilateral rates were adjusted by 50 bps while multilateral rates were unchanged.

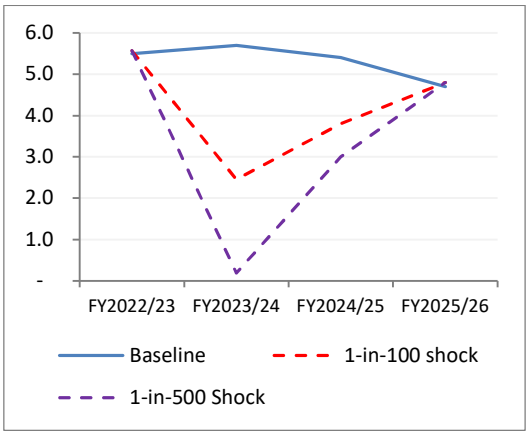
Under both shock scenarios, a deterioration in the primary balance is assumed since revenues are expected to underperform in the wake of slower economic activity, and expenditures are projected to increase to address disaster relief and recovery (see **Figure 26**). The pass-through is, however, tempered by the availability of funding from the Contingencies Fund and NDF, CCRIF-SPC and the Catastrophe Bond.

Figure 25: Real GDP Growth under Baseline and Shock Scenarios



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

Figure 26: Primary Balance-to-GDP under Baseline and Shock Scenarios

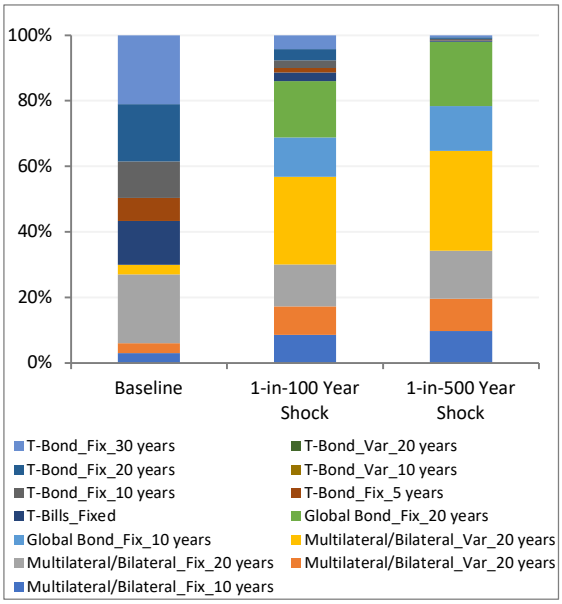


Source: Ministry of Finance and the Public Service

The attendant changes in the composition of the debt portfolio arises from the changes to key macroeconomic and market variables, as well as the additional financing requirements to address the costs associated with the disaster. Additional financing of $101,522.0 million in the case of the 1-in-100 year event, and $160,363.6 million for the 1-in-500 year event is assumed to be financed primarily from multilateral/bilateral sources and the international

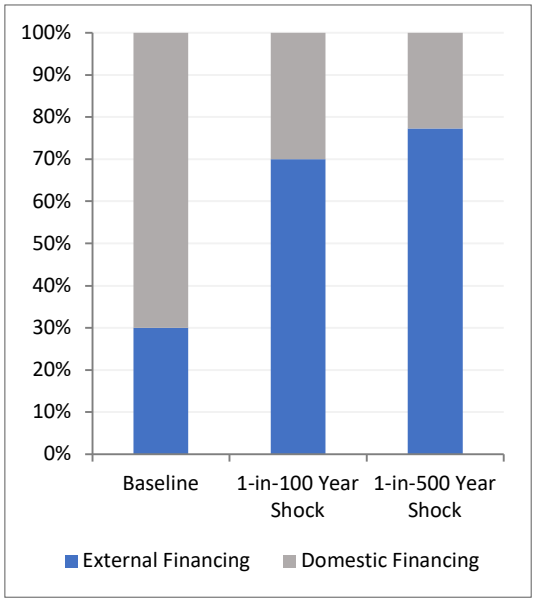
capital markets (ICM). The drawdown on a US$285.0 million contingent credit facility from the IDB represents variable-rate financing from a multilateral source. This results in the deviation from the current financing strategy, **S1**, in the year of impact to reflect increased external and variable-rate financing relative to the baseline (see **Figures 27** and **28**). Nonetheless, the strategy still places focus on fixed-rate financing at longer tenors.

Figure 27: Gross Financing by Instrument under Baseline and Shock Scenarios FY2023/24



Source: Ministry of Finance and the Public Service

Figure 28: External and Domestic Financing under Baseline and Shock Scenarios FY2023/24

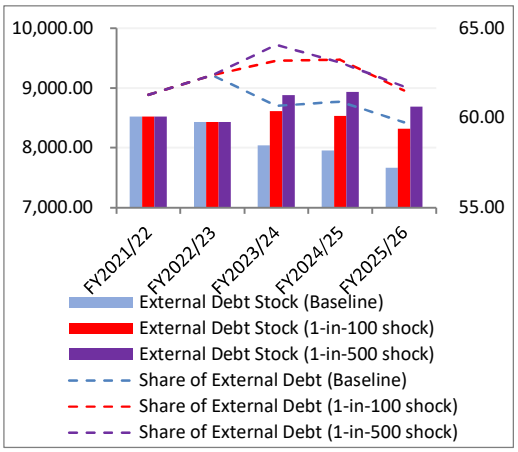


Source: Ministry of Finance and the Public Service

Figure 29 illustrates the projected change in foreign currency-denominated debt over the medium-term under the baseline and shock scenarios. While the stock of foreign currency-denominated debt is projected to decline by US$765.8 million, increased external borrowing under the shock scenarios result in a decline of only US$207.8 million, or 2.4 percent in the event of a 1-in-100 year shock, and an increase of US$160.9 million, or 1.8 percent in the case of the 1-in-500 year shock. Accordingly, the share of foreign currency-denominated debt in total debt is projected to increase by 1.8 and 2.0 percentage points relative to the baseline.

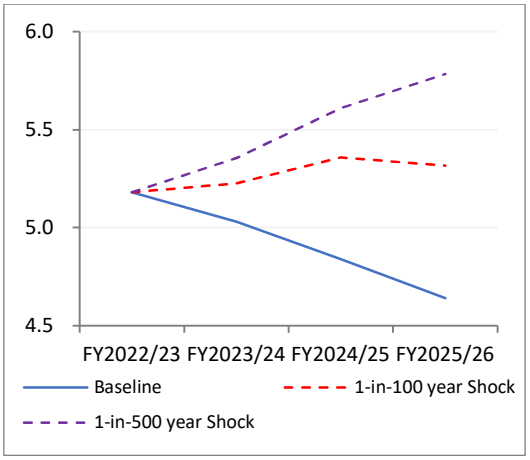
In the aftermath of a disaster, increased credit risk, as well as the need to seek relatively higher cost financing in the ICM are expected to increase interest cost-to-GDP over the period. Baseline interest cost-to-GDP is estimated at an average 4.9 percent. The 1-in-100 year and 1-in-500 year shocks increase this average to 5.3 percent and 5.5 percent, respectively (see **Figure 30**).

Figure 29: Change in Foreign Currency-Denominated Debt under Baseline and Shock Scenarios



Source: Ministry of Finance and the Public Service

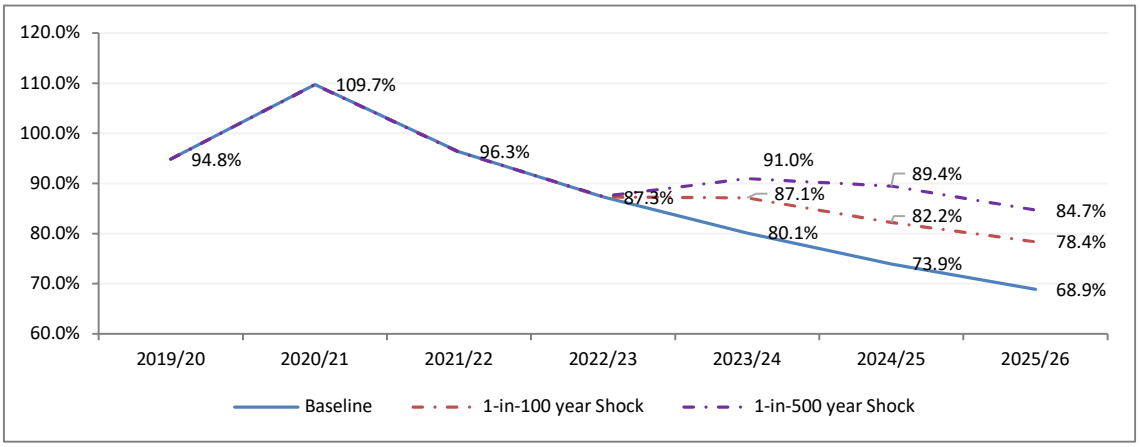
Figure 30: Interest Cost-to-GDP under Baseline and Shock Scenarios



Source: Ministry of Finance and the Public Service

Figure 31 highlights the estimated impact of the shocks on the trajectory of debt-to-GDP over the medium-term. The increase in nominal debt, paired with the economic contraction resulting from the shocks is estimated to increase debt-to-GDP at end-FY2025/26 by 9.5 percentage points under the 1-in-100 year shock, and 15.8 percentage points under the 1-in-500 year shock. This would significantly thwart the realization of the target of 60.0 percent or less by end-FY2027/28.

Figure 31: Trajectory of Debt-to-GDP under Baseline and Shock Scenarios



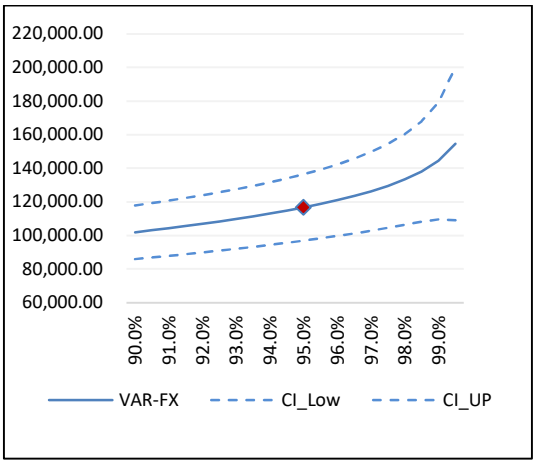
Source: Ministry of Finance and the Public Service

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

Value at Risk (VaR) and Cost at Risk (CaR) for the debt portfolio estimate the maximum increase in value and costs for a given level of confidence, resulting from changes in market variables over a given period. Conditional VaR (CVaR) measures tail risk by providing the average of the extreme values beyond the VaR or CaR levels. VaR estimates for FY2022/23 indicate that there is a 95.0 percent probability that changes in the JMD/USD exchange rate

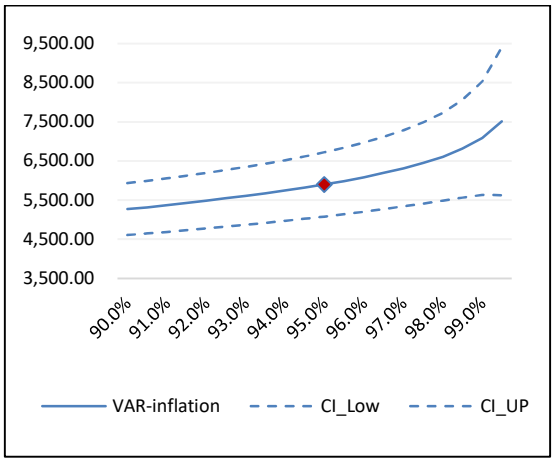
and the inflation rate will not increase the debt stock by more than $116,706.7 million and $5,900.5 million, respectively (see **Figures 32** and **33**). CVaR estimates for FY2022/23 at the 95.0 percent confidence level were $133,704.4 million for the JMD/USD exchange rate and $6,624.3 million for the inflation rate.

Figure 32: VaR JMD/USD Exchange Rate



Source: Ministry of Finance and the Public Service

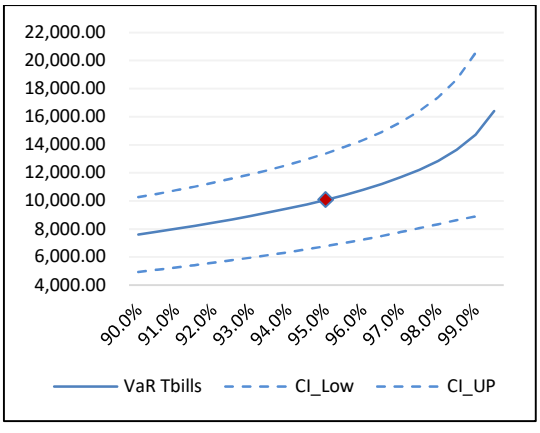
Figure 33: VaR Inflation Rate



Source: Ministry of Finance and the Public Service

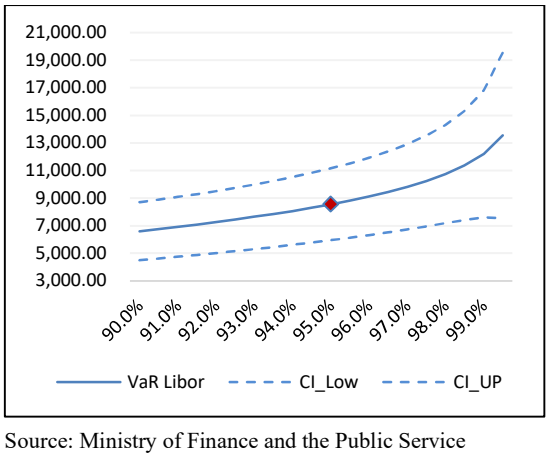
CaR estimates for FY2022/23 suggest that based on the historical changes in the 3-month US Libor, there is a 95.0 percent probability that debt service costs will increase by a maximum of $8,547.7 million compared to $10,082.7 million arising from changes in the 3-month T-bill. The conditional cost at risk (CCaR) for the 3-month T-bill is $12,922.2 million, which is $2,133.2 million higher than the 95.0 percent CCaR for the 3-month US Libor (see **Figures 34** and **35**). The CaR and CCaR estimates highlight the debt portfolio's exposure to more volatile interest rate movements in the domestic market in comparison to the external market.

Figure 34: CaR Domestic Benchmark Interest Rate



Source: Ministry of Finance and the Public Service

Figure 35: CaR External Benchmark Interest Rate

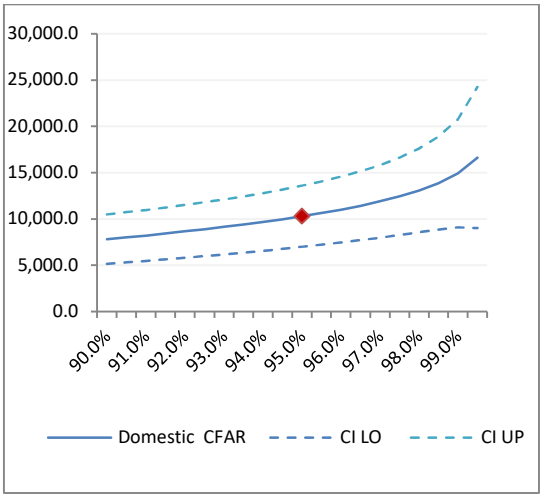


Source: Ministry of Finance and the Public Service

4.5 Cash Flow at Risk (CFaR) Estimates for FY 2022/23

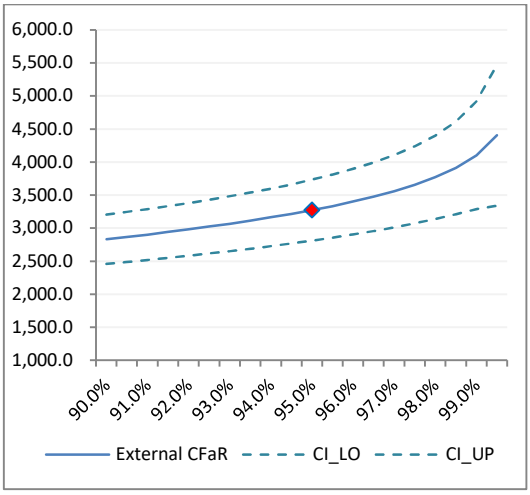
Cash flow at Risk (CFaR) assesses the maximum increase in debt service costs that is likely over a given period based on the historical realizations of market variables. The CFaR estimate for the domestic portfolio captures interest rate and inflation risks, while the estimate for the external portfolio accounts for foreign currency and interest rate risks. The 95.0 percent CFaR for the domestic and external portfolios were estimated at $10,284.7 million and $3,272.6 million, respectively (see **Figures 36** and **37**). The Conditional Cash Flow at Risk (CCFaR) for the domestic portfolio is estimated at $13,127.3 million and $3,779.9 million for the external portfolio.

Figure 36: CFaR for the Domestic Portfolio



Source: Ministry of Finance and the Public Service

Figure 37: CFaR for the External Portfolio



Source: Ministry of Finance and the Public Service

SECTION V: MACROECONOMIC OVERVIEW

At the close of 2021, the global economy saw a modest recovery from the impact of the COVID-19 pandemic. The recovery has been weakened, however, by the emergence of new and more contagious variants which undermine vaccine effectiveness, as well as a large disparity in vaccine access between advanced and emerging economies. Consequently, global supply chains in advanced economies were disrupted, hindering manufacturing activities and inflating commodity prices within the global market. Policy response has further exacerbated the divergence in economic recovery among developed and developing countries with advanced countries expected to exceed pre-pandemic levels by 2022 and emerging market economies (EMEs) still below pre-pandemic levels by 2024.

The global economy is projected to grow by 5.9 percent in 2021, down from the 6.0 percent estimated by the International Monetary Fund (IMF) in its April 2021 World Economic Outlook. The downward revision resulted from elevated unemployment rates, rising inflation, food insecurity, the setback to human capital accumulation, and climate change. The forecast for 2022 is 4.9 percent, reflecting subdued prices across most economies. Risks to the growth forecast include the persistence of the pandemic, inability of companies to adapt to the new economic environment and the effectiveness of governments' response measures, including countries' ability to access and effectively distribute vaccines.

Growth in EMEs for 2021 is projected at 6.4 percent, 0.3 percentage point lower than the April 2021 projection. The growth prospect was challenged by rising food prices, lagged effects of higher oil prices, and currency depreciation increasing the prices of imported goods. Conversely, Latin America and Caribbean (LAC) economies grew by approximately 6.3 percent for 2021, significantly above the IMF's April 2021 projection of 4.6 percent, and a marked recovery from the deep recession experienced in 2020. This growth prospect was buoyed by improved performance of some commodity exporters, resilient remittance inflows and strong domestic demand in key member states. Notwithstanding, GDP per capita is expected to remain below pre-pandemic levels in 2022, government deficits and debt have increased sharply and climate-induced shocks and natural disasters have been persistent throughout the sub-region.

In the global financial market, investors have become increasingly concerned amid rising virus infections and greater uncertainty around the recovery in emerging markets. Concerns that inflationary pressure may be more persistent than anticipated have contributed to the increase in global long-term yields, reversing the previous downward trend and prompting central banks to increase policy rates. Despite the negative economic impact of COVID-19 on the global financial market, financial stability risks have been contained, reflecting ongoing monetary and fiscal policy support. Corporate balance sheets have generally strengthened, profitability has improved and defaults and bankruptcies have declined across countries, firm sizes, and sectors.

Buoyant equity markets, tight credit spreads, and stable net flows to EMEs signal a broadly supportive global financial condition.

Despite the significant increase in COVID-19-related spending and reduced revenue inflows, Jamaica continues to benefit from the strong macro-fiscal environment created under the IMF fiscal reform programme. Projected estimates of the primary and fiscal balances suggest an increase from 3.5 percent and -3.1 percent of GDP recorded at end-FY2020/21 to 6.3 percent and 0.3 percent of GDP at end-FY2021/22. Improvements in the macro-fiscal accounts contributed to a decrease in the debt to GDP by an estimated 13.4 percentage points, returning the debt-to-GDP to a downward trajectory and on schedule to attaining the targeted 60.0 percent or less by end-FY2027/28.

At the beginning of the fiscal year, the BOJ, in an effort to boost the level of liquidity, removed the limits on amounts that deposit-taking institutions (DTIs) can borrow overnight without penalty; reduced both the local and foreign currency cash reserve requirements; implemented a longer-term lending facility to DTIs for periods of up to six months and reactivated the Emergency Liquidity Facility. The annual point-to-point inflation rate at end-December 2021 was 7.3 percent, reflecting an increase in the All Jamaica "All Divisions" Consumer Price Index from 109.0 in December 2020 to 117.0 in December 2021. The rate, which is showing its second sign of reduction since July 2021, breached the targeted band of 4.0 percent – 6.0 percent for the fifth consecutive month. The main contributors were Housing, Water, Electricity, Gas and Other Fuels, Transportation, and Restaurants and Accommodation Services. Inflation for FY2021/22 is projected to be 7.8 percent and 5.0 percent for the medium-term.

In the face of rising inflation, the BOJ abandoned its accommodative monetary policy stance, increasing the policy rate by 200 bps over the review period to 2.50 percent at end-December 2021. This action is expected to slow the rate of inflation, moderate the pace of currency depreciation and increase savings. As a result, yields on the benchmark 3-month T-bill averaged 4.09 percent in December 2021, 286 bps higher than the 1.23 percent recorded in March 2021 and 332 bps higher than the 0.77 percent recorded in December 2020.

The current account surplus of the balance of payments (BOP) for the 12-month period ending June 2021 was US$209.1 million, an improvement over the US$243.9 million deficit recorded in the previous year. The increase was bolstered by improvements in the Primary and Secondary income accounts, current transfer services and higher remittance inflows which were partially offset by a decline in the Goods and Services account. In the near-term, the current account balance is expected to deteriorate, predicated on growth in imports, higher investment income outflows and lower remittance inflows, before improving over the medium-term. The Net International Reserves (NIR) was US$3,999.7 million at end-December 2021, an increase of US$680.4 million relative to

end-March 2021. The increase was bolstered by the IMF's Special Drawing Rights (SDR) allocation of US$520.0 million in August 2021.

The relaxation of some of the more stringent measures employed to stem the spread of COVID-19 and, in particular, the reopening of sectors such as tourism, has vastly improved the country's growth prospects. Real GDP is currently projected to grow by 7.9 percent for FY2021/22, following an 11.0 percent contraction in FY2020/21. The growth is expected to be driven by expansions in Hotels and Restaurants, Other Services, Transportation, Storage and Communication, Wholesale and Retail, and Trade and Manufacture. In the medium-term, real GDP growth is expected to average in the range of 2.0 percent to 3.0 percent predicated on improvement in employment levels, increased external demand arising from the gradual recovery of the global economy and continued recovery in most local industries. Potential downside risks include adverse weather conditions, plant downtime in industrial sectors, and slower than anticipated growth in the global economy (see **Table 6**).

Table 6: Medium-Term Macroeconomic Framework

	FY2019/20 Actual	FY2020/21 Estimated	FY2021/22 Projected	FY2022/23 Projected	FY2023/24 Projected	FY2024/25 Projected	FY2025/26 Projected
Nominal GDP ($mn)	2,121,087.3	1,948,639.4	2,257,739.5	2,476,988.2	2,672,056.6	2,853,687.9	3,026,336.0
Nominal GDP Growth Rate (%)	3.3	-8.1	15.9	9.7	7.9	6.8	6.1
Real GDP Growth Rate (%)	-0.1	-11.0	7.9	3.5	2.7	1.7	1.0
Annual Inflation Pt. to Pt.	4.8	5.2	7.8	5.0	5.0	5.0	5.0
Fiscal Balance (%)	0.9	-3.1	0.3	0.3	0.7	0.8	0.7
Primary Balance (%)	7.1	3.5	6.3	5.5	5.7	5.4	4.7
Benchmark Interest Rates							
90-day Treasury Bill Yield (average)	1.71	1.13					
90-day Treasury Bill Yield (eop)	1.85	1.23					
Net International Reserves (NIR) (US$mn)	3,237.7	3,319.3	3,470.9	3,294.9	3,054.2	3,579.3	3,712.0
Currenct Account Balance (% GDP)	-1.3	-1.0	0.4	-2.7	-1.1	-0.8	-0.9
Oil Prices (WTI) Average US$/barrel)	54.85	42.3	73.3	67.5	60.5	60.8	61.1

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

SECTION VI: MODELLING OF THE MEDIUM-TERM DEBT MANANGEMENT STRATEGY

The Medium-Term Debt Management Strategy (MTDS) for FY2022/23-FY2025/26 is developed using the IMF/World Bank MTDS Toolkit, which enables a quantitative assessment of five alternative strategies geared towards meeting established medium-term targets for key debt and risk indicators. The analysis utilizes the stock of 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 relies on baseline assumptions of the Government's fiscal balances as well as key macroeconomic and market variables to produce medium-term estimates for portfolio cost and risk indicators under varied financing strategies[9]. To determine sensitivity of the main portfolio indicators under the respective strategies, stress tests were conducted, 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 a moderate shock to interest rates in year two, and assumes 1.00-, 2.00- and 1.25- percentage point increases in interest rates (across the entire yield curve) for multilateral/bilateral loans, global bonds and domestic issuances, respectively;
- **Scenario 3** is an extreme interest rate shock and applies similarly to **Scenario 2**, but is twice 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 2**.[10]

6.2 Medium-Term Targets

Table 7 outlines the projected outturns for key risk indicators for FY2021/22 alongside the targets set out in the MTDS FY2021/22-FY2024/25, and new targets established for FY2022/23 and the medium-term (FY2025/26). The indicators are expected to be generally in line with targets, with debt-to-GDP projected to be 3.7 percentage points lower than targeted, on track to meet the medium-term target of 70.0 percent or less. The share of foreign currency-denominated debt in total debt is projected to end the fiscal year at 61.3 percent, 0.3 percentage point higher than the targeted upper bound. The Government will continue to

[9] In the absence of projected rates for the SOFR, projections for the 3-month US Libor are used as reference rates for external variable-rate instruments.
[10] All shocks are applied as additive adjustments to baseline assumptions for interest and exchange rates.

manage foreign currency risk exposure over the medium-term in order to meet the target of 58.0 percent or less at end-FY2025/26.

Table 7: Key Portfolio Targets for FY2022/23 and the Medium-Term

	Projected	Targets		
Risk Indicators	End-Mar 2022	End-Mar 2022	End-Mar 2023	End-Mar 2026
Nominal Debt-to-GDP (%)	**96.3**	**100.0**	**<=88**	**<=70**
Refinancing Risk				
Average Time-to-Maturity (ATM - years)	10.7	>=9	>=9	>=9
Share Maturing within one year (%)	6.7	<=10.0	<=10.0	<=10.0
Interest rate risk				
Domestic				
Share Variable-Rate (%)	22.0	30.0	30.0	25.0
Debt Refixing in 1 year (%)	29.5	35.0	35.0	30.0
Average Time-to-Refixing (ATR - years)	8.5	8.0	8.0	10.0
External				
Share Variable-Rate (%)	28.9	30.0	30.0	25.0
Debt Refixing in 1 year (%)	30.6	30.0	30.0	30.0
Average Time-to-Refixing (ATR - years)	9.1	8.0	8.0	10.0
Total				
Share Variable-Rate (%)	26.4	30.0	30.0	25.0
Debt Refixing in 1 year (%)	30.2	32.0	32.0	32.0
Average Time-to-Refixing (ATR - years)	8.9	8.0	8.0	10.0
Foreign Currency Risk				
Share of Foreign Currency Debt (%)	61.3	<=61.0	<=61.0	<=58.0

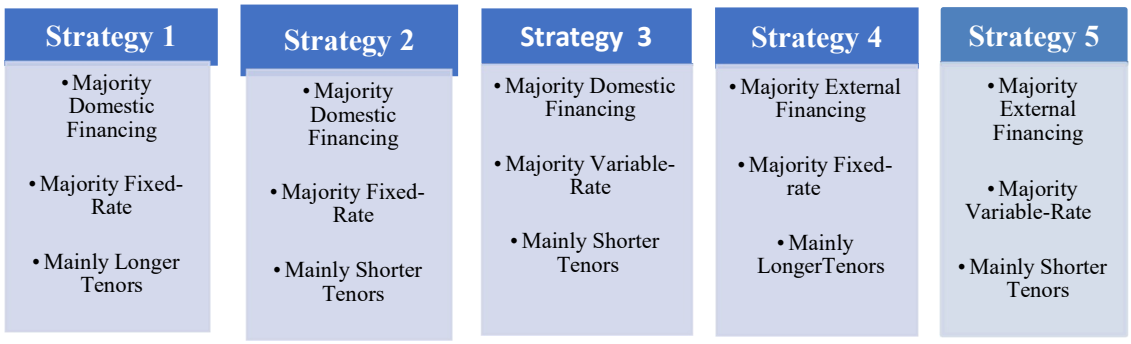
Source: Ministry of Finance and the Public Service

Risks to the achievement of the medium-term targets include a higher-than-projected rate of depreciation of the Jamaica dollar relative to the US dollar, slower-than-anticipated economic growth, and exogenous shocks such as natural disasters or the realization of other contingent liabilities.

6.3 Financing Strategies

The MTDS Analytical Toolkit is used to assess cost/risk trade-offs of alternative financing strategies, in order to arrive at a preferred option. Five contending strategies were formulated based on discussions with market participants and multilateral partners, as well as expectations regarding domestic and external market conditions over the medium-term. Three of the five strategies focus on majority domestic financing as a means of developing the domestic debt market and reducing foreign currency risk in the debt portfolio (see **Figure 38**).

Figure 38: Summary of Alternative Medium-Term Financing Strategies



Under **Strategy 1 (S1)**, 70.0 percent of total financing over the medium-term will be sourced from the domestic market. While financing in the domestic market is programmed along all segments of the yield curve to further develop the domestic debt market, the strategy seeks to reduce the portfolio's exposure to refinancing risks by borrowing at longer tenors in the external market. The strategy features mainly fixed-rate debt, though external financing is programmed through a mix of variable-rate and fixed-rate multilateral/bilateral loans in order to benefit from cost savings associated with low-cost variable-rate debt.

Strategy 2 (S2) also assumes an operating target for domestic financing of 70.0 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**. External financing under this strategy is programmed through multilateral/bilateral fixed-rate loans.

Strategy 3 (S3) also assumes an operating target for domestic financing of 70.0 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 total financing requirements and as such, 70.0 percent of total financing needs will be sourced from the external market.

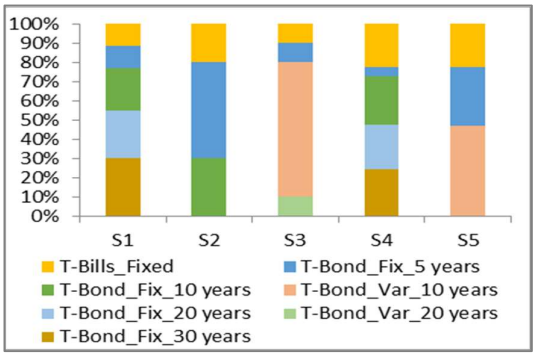
S4 assumes most of the external financing will be sourced from private creditors through issuances in the ICM and a smaller amount from official multilateral/bilateral partners. This strategy further assumes that all external financing will be at fixed-rates. The focus on ICM financing may be supported based on the strong performance of JAMAN bonds in the ICM.

S5 assumes less favourable conditions in the ICM as investors become cautious about investing in emerging market (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.

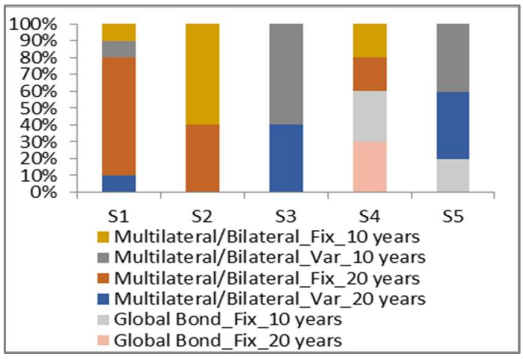
Financing details for domestic and external borrowing for all five strategies are summarized in **Figures 39 and 40**.

Figure 39: Domestic Financing by Instrument



Source: Ministry of Finance and the Public Service

Figure 40: External Financing by Instrument

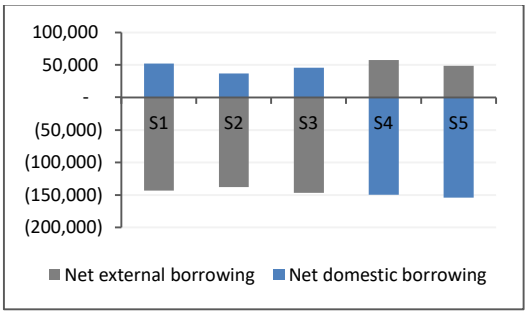


Source: Ministry of Finance and the Public Service

6.4 Toolkit Output – Results for Alternative Financing Strategies

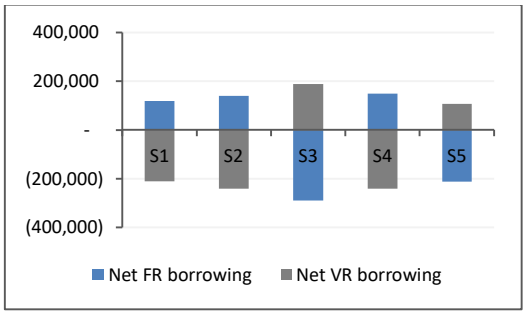
The MTDS Toolkit is used to assess the effectiveness of the five financing strategies in fulfilling medium-term debt management objectives. Key among these is the reduction in exposure to foreign currency and interest rate risks. **Figures 41** and **42** show net financing flows to the domestic and external portfolios, and the fixed-rate and variable-rate portfolios, respectively. **S1**, **S2** and **S3,** which prioritize domestic issuances, record net inflows to the domestic portfolio, and outflows from the external portfolio (see **Figure 41**). The opposite obtains for **S4** and **S5**. As it relates to the fixed-rate and variable-rate portfolios, **S1**, **S2** and **S4** record net inflows to the fixed-rate portfolio and outflows from the variable-rate portfolio, while **S3** and **S5** depict the opposite (see **Figure 42**). Overall, all financing strategies result in net outflows from the debt portfolio over the medium-term, consistent with debt reduction goals.

Figure 41: Net Financing Flows to the External and Domestic Portfolio



Source: Ministry of Finance and the Public Service

Figure 42: Net Financing Flows to the FR and VR Portfolio



Source: Ministry of Finance and the Public Service

Table 8 outlines key cost and risk indicators projected for end-FY2025/26 for each strategy, as well as the quantitative score assigned to each strategy. Based on a quantitative score of 8.2 out of 10, **S1** is selected as the preferred financing strategy. The strategy performs best in managing exposure to refinancing and foreign currency risks, but results in higher interest costs, as domestic interest rates tend to be higher than those in the external market. As it concerns interest rate risk, the strategy performs second best to **S4**, as it includes variable-rate financing in the external market, while **S4** utilizes only fixed-rate financing. Nonetheless, an 8.5 percentage point reduction in variable-rate debt as a percentage of total debt is projected. The share of foreign currency-denominated debt in total debt is expected to decline by 1.5 percentage points to 59.8 percent under **S1**, while **S4** and **S5** which focus mainly on external financing would result in an increase of 7.7 percentage points. Overall, **S3** performed second-best with a quantitative score of 7.5 out of 10. While the cost outturn is lower than that projected for **S1**, the strategy's feature of mainly variable-rate debt heightens interest rate risks, with the share of variable-rate debt projected to increase to 36.4 percent over the medium-term.

Table 8: Cost and Risk Indicators for Alternative Financing Strategies

Cost and Risk Indicators		end-FY2021/22 (est)	as at end-FY2025/26				
			S1	S2	S3	S4	S5
Cost	Interest payment (% of GDP)	5.7	4.6	4.4	4.4	4.6	4.4
	Implied interest rate (%)	6.0	6.4	6.1	6.0	6.3	5.9
Refinancing risk	Debt maturing in 1yr (% of total)	6.7	6.9	7.3	6.9	6.8	6.9
	Debt maturing in 1yr (% of GDP)	6.8	5.0	5.3	5.0	5.0	5.0
	ATM External Portfolio (years)	11.3	9.7	9.4	9.4	9.9	9.3
	ATM Domestic Portfolio (years)	9.5	12.0	7.7	9.0	10.6	8.7
	ATM Total Portfolio (years)	10.7	10.6	8.7	9.3	10.1	9.1
Interest rate risk	ATR (years)	8.9	9.5	7.7	6.6	9.1	6.8
	Debt re-fixing in 1yr (% of total)	30.2	23.5	22.5	41.7	21.9	38.1
	Fixed-rate debt (% of total)	73.6	82.1	83.4	63.6	83.5	67.2
FX risk	FX debt (% of total)	61.3	59.8	60.3	59.9	69.0	69.0

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	0.15	0.2	1.2	1.4	0.4	1.5
Third Best Outcome	6	Refinancing risk	0.25	2.3	0.3	2.0	2.3	1.8
Fourth Best Outcome	4	Interest rate risk	0.10	0.7	0.7	0.1	0.9	0.4
Least Favoured Outcome	1	FX risk	0.50	5.0	3.0	4.0	0.5	0.5
			1.00	**8.2**	**5.2**	**7.5**	**4.1**	**4.2**

Source: Ministry of Finance and the Public Service

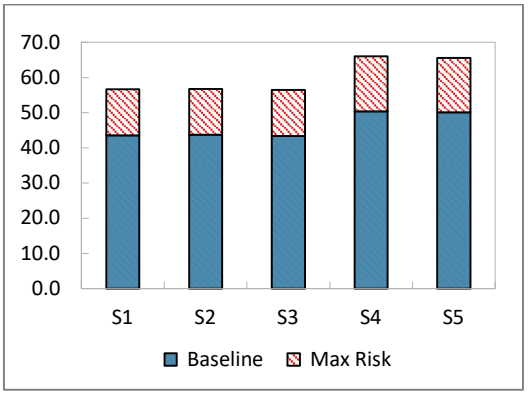
6.4.1 Risk to Baseline Projections for the Respective Strategies under Stress Scenarios

The maximum risk for key portfolio indicators under each of the five financing strategies is depicted in **Figures 43** to **46**. Using projected outturns for end-FY2025/26, the maximum risk is determined by the largest impact on each of the indicators arising from the four stress scenarios discussed in **Section 6.1**. External debt-to-GDP is highest under **S4** with a projected outturn of 50.4 percent. This compares to the lowest projected outturn of 43.4 percent under **S3**. Similarly, **S4** projects the highest maximum risk of 15.6 percentage points, while the

lowest, 13.0 percentage points is projected under **S3**. The baseline outturn and maximum risk for **S1** are only marginally higher than that of **S3** at 43.5 percent and 13.1 percentage points, respectively (see **Figure 43**).

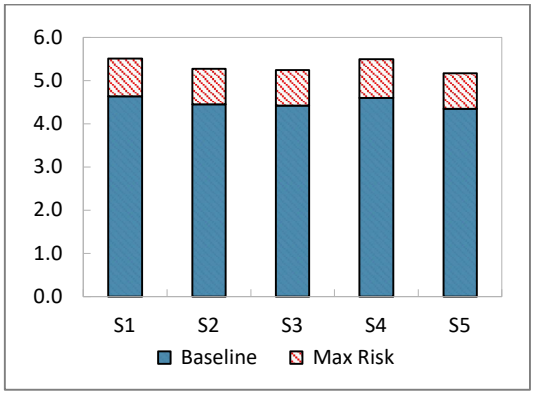
While interest cost-to-GDP under **S1** is higher than the cost-minimizing strategy by 0.2 percentage point, maximum risk is only marginally higher by 0.1 percentage point (see **Figure 44**). Total debt service-to-GDP is lowest under **S5**, stemming from lower-cost variable-rate external debt and shorter-tenor financing. However, **S1** performs second best, with a projected outturn of 8.3 percent, only 0.1 percentage point higher than **S5**, and similar maximum risk of 1.7 percentage points. **S2** is the worst performing strategy for this indicator, resulting in a baseline outturn of 8.8 percent and maximum risk of 1.8 percentage points (see **Figure 45**). External debt service-to-reserves is lowest under **S2** and **S3**, with **S1** projecting the second lowest outturn of 23.8 percent and maximum risk of 7.0 percentage points (see **Figure 46**). Overall, assessment of the cost-risk trade-offs support the selection of **S1** as the optimal strategy.

Figure 43: Sensitivity of External Debt-to-GDP to Shocks



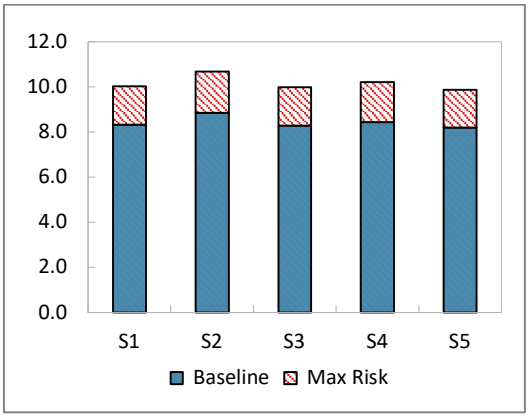
Source: Ministry of Finance and the Public Service

Figure 44: Sensitivity of Interest Cost-to-GDP to Shocks



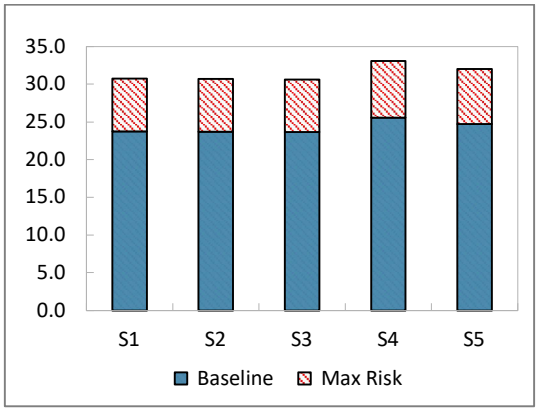
Source: Ministry of Finance and the Public Service

Figure 45: Sensitivity of Debt Service-to-GDP to Shocks



Source: Ministry of Finance and the Public Service

Figure 46: Sensitivity of External Debt Service-to-Net International Reserves



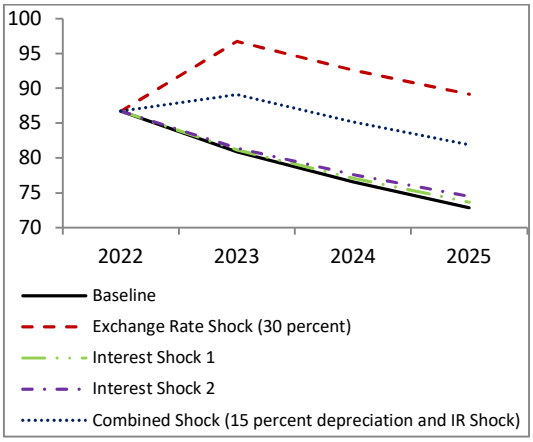
Source: Ministry of Finance and the Public Service

6.4.2 Dynamic Effects of Shocks to Baseline Macroeconomic Variables

Figures 47 to **50** show the dynamic effects of the four shock scenarios outlined in **Section 6.1** on baseline projections for **S1** over the medium-term. Results show that shocks to the exchange rate have the most significant impact on the debt portfolio.

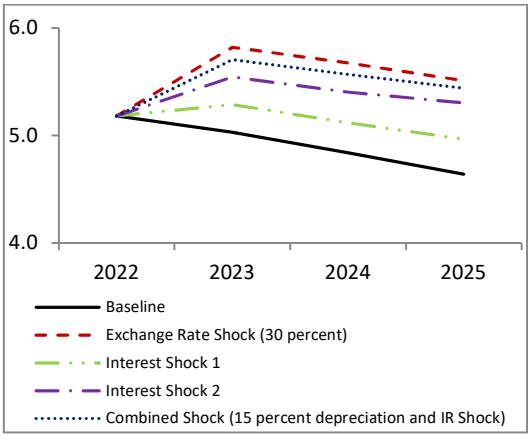
Scenario 1, which applies a 30.0 percent shock to the baseline exchange rate assumption for FY2023/24 is projected to add 16.3 percentage points to baseline debt-to-GDP at end-FY2025/26. The combined shock described in **Scenario 4** increases the baseline by 9.1 percentage points. Shocks to the interest rate are less significant, with **Scenarios 2** and **3** adding 0.8 percentage point and 1.7 percentage points, respectively (see **Figure 46**). Baseline interest cost-to-GDP is projected to average 4.9 percent over the medium-term. When a 30.0 percent shock is applied to the exchange rate (**Scenario 1**), this average increases by 0.6 percentage point to 5.5 percent, given the portfolio's high composition of foreign currency-denominated debt. The moderate and extreme interest rate shocks add 0.2 and 0.5 percentage point, respectively, to the medium-term average, and the combined shock increases the average by 0.6 percentage point (see **Figure 47**). Debt service-to-GDP and External debt service are similarly affected, with the medium-term average for debt service-to-GDP increasing by as much as 1.3 percentage points, and external debt service by as much as US$203.9 million (see **Figures 48** and **49**).

Figure 47: Dynamic Sensitivity of Debt-to-GDP to Shocks



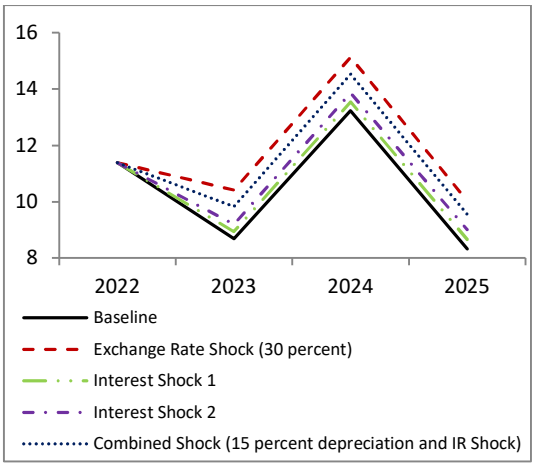
Source: Ministry of Finance and the Public Service

Figure 48: Dynamic Sensitivity of Interest Cost-to-GDP to Shocks



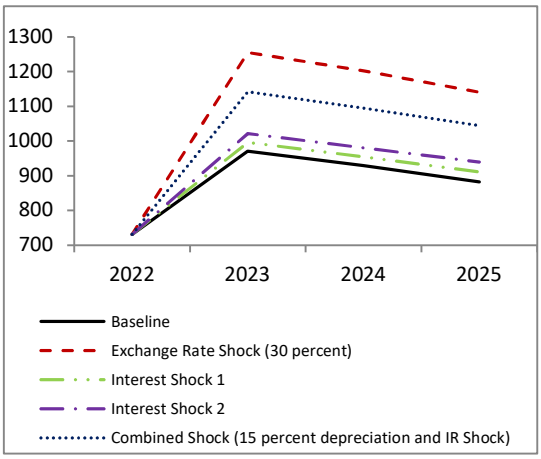
Source: Ministry of Finance and the Public Service

Figure 49: Dynamic Sensitivity of Debt Service-to-GDP to Shocks



Source: Ministry of Finance and the Public Service

Figure 50: Dynamic 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) is developed to satisfy the Government's borrowing requirement consistent with the MTDS for FY2022/23 – FY2025/26. The ABP outlines the projected domestic and external funding sources that will cover the Government's gross financing obligation which is projected at $124,130.1 million, or 5.0 percent of GDP, for FY2022/23. This financing obligation represents a decrease of $6,175.5 million or 4.7 percent compared to the $130,305.6 million that was estimated for FY2021/22.

The Government's financing is expected to be funded from the domestic and external markets in the amounts of $92,047.6 million and $32,082.5 million, respectively. The financing component from domestic sources is broken down into $70,447.6 million and $21,600.0 million, representing Domestic Bonds and Treasury Bills, respectively. Scheduled disbursements from the external sources comprise funding from Policy-Based Loans and Investment Loans totalling $4,715.4 million and $27,367.1 million, respectively. (See **Table 9** and **Figure 51**)

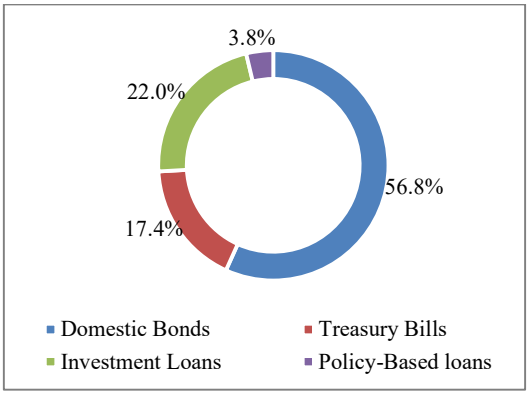
Consistent with the preferred medium-term debt strategy (**S1**), the GOJ will continue to mitigate refinancing risk and pursue the de-dollarization of the total debt portfolio. For FY2021/22, the ratio of domestic to external financing was projected at 70:30. This proportion is projected to remain unchanged for FY2022/23, despite the negative effects of the ongoing pandemic which has contributed to increased uncertainty and higher borrowing costs in the domestic and international capital markets.

Table 9: GOJ's Annual Borrowing Plan for FY2022/23

Financing Sources	Budgeted ($mn.)	% Total
Domestic Financing	**92,047.6**	**74.2**
Domestic Bonds	70,447.6	56.8
Treasury Bills	21,600.0	17.4
External Financing	**32,082.5**	**25.8**
Investment Loans	27,367.1	22.0
Policy-Based loans	4,715.4	3.8
Total	**124,130.1**	**100.0**

Source: Ministry of Finance and the Public Service

Figure 51: Annual Borrowing Plan FY2022/23



Source: Ministry of Finance and the Public Service

7.1 Issuance Strategy for FY2022/23

During FY2022/23, the Government intends to issue mainly local currency fixed-rate debt, in keeping with Strategy 1 (**S1**). This Issuance Strategy is a continuation of the issuance strategies that have been implemented over the past four years, and will comprise the following:

- GOJ will maintain its presence in the market as per the issuance calendar in order to continue the further development of the domestic debt market while satisfying borrowing requirements;
- The auction mechanism will continue to be the primary means by which GOJ instruments are to be issued to the market in order to enhance competitive and efficient pricing;
- The issuance of debt instruments will continue to be maintained along the short, medium and long segments of the yield curve;
- Upcoming maturities may be replaced with mainly long-term instruments to avoid further bunching of maturities between FY2024/25 and FY2028/29;
- Focus on primary dealers' obligations as market makers and distributors of GOJ securities; and
- The GOJ will continue to issue three- and six- month Treasury bills on a monthly basis, while the nine-month Treasury bill will continue to be issued at least once per quarter.

It is anticipated that the issuances will be supported by increased liquidity levels in the market arising from the Jamaica dollar proceeds of three maturing Benchmark Investment Notes during the fiscal year.

7.2 Challenges to the Issuance Strategy

Favourable market conditions are essential to the implementation of the issuance strategy. However, debt management operations are susceptible to systemic risks, which are potential challenges to the success of the strategy:

- During the first two quarters of FY2021/22, significant increases in international commodity prices and shipping costs resulted in a higher-than-expected pass-through effect to local prices and contributed to further increases in inflation expectations. The situation was exacerbated by the passage of Tropical Storms Grace and Ida in August 2021, which resulted in higher prices for agricultural commodities and heightened inflation expectations. As a result, there are concerns that the current movement in the rate of inflation is not transitory, and that elevated inflation may continue throughout FY2022/23. This may cause continued uncertainty which could result in a high level of risk aversion among investors, hence higher than projected costs of financing;
- Between August 2019 and September 2021, the Central Bank maintained its policy rate at 0.5 percent. However, since August 2021, the monthly inflation rate has exceeded BOJ's targeted range of 4.0 percent to 6.0 percent. As a result, BOJ increased the policy rate by a total of 200 bps, or 400.0 percent to 2.5 percent between 1st October, 2021 and 21st December, 2021. It is anticipated that these significant increases in the policy rate

will continue to have a negative impact on the levels of borrowing, the price of credit in the banking sector, and interest rates in general. This may lead to further reductions in bond prices, and increases in bond yields;

- As at 31st March, 2021, the exchange rate of the Jamaica dollar vis-à-vis the US dollar was 146.5813, but depreciated by 5.8 percent to 155.0878 on 31st December, 2021. A sustained depreciation of the Jamaica dollar could result in a shift in investors' preference from Jamaica dollar-denominated instruments to US dollar-denominated instruments, which may lead to re-direction of liquidity from the domestic market to the external markets;
- An increase in geopolitical tensions and/or a perpetuation of the pandemic over the medium-term may result in uncertainty, instability, and reduction in trade and economic activities that may limit the prospects for economic growth. These consequences may be exacerbated if the GOJ decides to reinstate the work from home and lockdown mandates. As a result, the curtailment of economic activity may have a negative impact on GOJ's proposed issuances. Additionally, revenue performance could be negatively affected, and may result in adjustment of the borrowing plan. Financing from bilateral creditors may also be constrained due to the deteriorating economic position of partner countries; and
- Competition from high yield corporate bonds may reduce demand for GOJ issuances, introducing demand-side risk in the portfolio.

7.3 Active Liability Management Operations

In keeping with the objective to pursue the desired composition of the debt portfolio, the Government of Jamaica is committed to exploring opportunistic liability management operations (LMOs) in FY2022/23 that are consistent with the medium-term debt targets. The intent is to prudently manage cost/risk exposure relative to the medium-term debt targets against prevailing market conditions that are highly influenced by the on-going pandemic. In accordance with Section 6 of the PDMA, the Minister with responsibility for Finance is authorized to undertake LMOs geared towards managing the debt through the mitigation of risks, and controlling cost aimed at achieving the medium-term debt targets.

The lingering effects of the pandemic have resulted in market uncertainties, economic downturns, rising interest rates, and higher borrowing costs globally. Over the short-term, interest rates are expected to continue increasing based on the outlook of the Jamaican economy, factoring the forecast for inflation, and the continued challenges of global supply chain shocks which are expected to result in higher global prices in both the domestic and external markets. Consequently, the GOJ will continue to monitor the capital markets in pursuit of opportunities to reduce the debt, realize net interest cost savings, and to extend the maturity profile.

During FY2022/23, the Government intends to utilize liability management tools to capitalize on opportunities that may arise in the markets to manage costs and risks related to the debt portfolio. These tools include buybacks, swaps, switches, exchanges and roll-overs.

Table 10: Proposed Issuance Calendar for BINs during FY2022/23

SUBSCRIPTION DATE	INSTRUMENT TYPE	METHOD OF ISSUE
Q1		
April 12, 2022	3-month and 6-month T-Bill Tenders	Auction
April 29, 2022	**New Issue:** FR BIN 2027 – **5-yr**	Auction
May 11, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
May 27, 2022	Reopen FR BIN 2027 – **5-yr** Reopen FR 12.25% BIN Due 2050 – **28-yr**	Auction Auction
June 8, 2022	3-month and 6-month T-Bill Tenders	Auction
Q2		
July 13, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
July 27, 2022	Reopen FR 10.00% BIN Due 2037 – **15-yr**	Auction
August 10, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
August 26, 2022	Reopen FR 5.675% BIN Due 2029 – **7-yr**	Auction
September 7, 2022	3-month and 6-month Treasury Bill Tenders	Auction
Q3		
October 12, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
October 27, 2022	Reopen FR 8.50% BIN Due 2061 – **39-yr**	Auction
November 9, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
November 25, 2022	Reopen FR 10.00% BIN Due 2037 – **15-yr**	Auction
December 7, 2022	3-month and 6-month Treasury Bill Tenders	Auction
Q4		
January 11, 2023 January 17, 2023	3-month and 6-month Treasury Bills Tenders Re-open FR BIN 2027 – **4-yr** Re-open FR 9.625% BIN-Due 2031- **9-year**	Auction Auction Auction
February 8, 2023	3-month, 6-month and 9-month T-Bill Tenders	Auction
March 8, 2023	3-month and 6-month T-Bill Tenders	Auction
March 24, 2023	Reopen FR 9.625% BIN-Due 2031- **9-year** **New Issue:** FR BIN-Due 2043- **20-year**	Auction Auction

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

Table 11: Proposed Schedule for Treasury Bills

For Fiscal Year 2022/23		
Proposed Treasury Bill Tranche	**Proposed Tender Date**	**Proposed Issue Date**
Quarter 1		
3 & 6 month T/Bills	April 12, 2022	April 14, 2022
3, 6 & 9 month T/Bills	May 11, 2022	May 13, 2022
3 & 6 month T/Bills	June 8, 2022	June 10, 2022
Quarter 2		
3, 6 & 9 month T/Bills	July 13, 2022	July 15, 2022
3, 6 & 9 month T/Bills	August 10, 2022	August 12, 2022
3 & 6 month T/Bills	September 7, 2022	September 9, 2022
Quarter 3		
3, 6 & 9 month T/Bills	October 12, 2022	October 14, 2022
3, 6 & 9 month T/Bills	November 9, 2022	November 11, 2022
3 & 6 month T/Bills	December 7, 2022	December 9, 2022
Quarter 4		
3 & 6 month T/Bills	January 11, 2023	January 13, 2023
3, 6 & 9 month T/Bills	February 8, 2023	February 10, 2023
3 & 6 month T/Bills	March 8, 2023	March 10, 2023

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 MARKET

8.1 Government Domestic Debt Market

One of the four National Goals of Vision 2030 Jamaica is that the country will have a prosperous economy. Sustainable economic development is essential to the achievement of this long-term goal. An important attribute that may contribute to further development of the financial sector and ultimately achieving this pivotal national goal is the further development of an efficient domestic debt market. This objective is vital to the Government and its medium-term debt strategy to de-dollarize the debt portfolio, while aiming to achieve the legislated debt-to-GDP target of 60.0 percent or less by end-March 2028.

A well-functioning and sophisticated domestic debt market plays a central role in pooling and allocating private capital to support productive investments which drive economic growth. While exogenous factors may not be unavoidable, the ability to borrow in local currency from the domestic market may reduce the need to borrow in foreign currency from the external markets, thereby minimising currency mismatches in the debt portfolio. Furthermore, a deep and liquid domestic market may sufficiently support borrowing activities that may lower overall funding costs through the mitigation of foreign currency risk or limiting the cost associated with the depreciation of the local currency. Therefore, local currency financing provides governments with a reliable non-inflationary source of financing and helps to establish a market-determined yield curve which assists in the efficient pricing of benchmarks. Additionally, a well-developed domestic debt market facilitates the maintenance of macroeconomic stability and minimises fiscal risk.

Over the years, Jamaica's domestic debt market has transitioned into an efficient one, which is supported by sound legal, tax, and regulatory infrastructure, comprising a national payment system, a relatively stable financial market, and a diversified investor base. During FY2022/23, the Government will continue its role in market development while aiming to satisfy its funding requirements at the lowest possible cost with a prudent degree of risk. The Government will continue to focus on enhancing an efficient and functional secondary market, improving price discovery and transparency, while placing priority on coordination with major stakeholders to achieve the level of market activity that will drive growth, protect investors and create incentives to trade.

8.2 Financial Market Development

The Jamaican financial system continues to display remarkable resilience despite the challenges resulting from the on-going COVID-19 pandemic. While the pandemic impacted the loans and credit performance of many financial institutions, the financial system remains sound, profitable, adequately funded, and capitalised. The intention of the Government is to maintain the integrity of the financial market, advance its development and continue to

undertake the necessary legislative and regulatory reforms to facilitate financial deepening and inclusion to mitigate systemic risk.

In order to ensure that GOJ is sufficiently funded in FY2022/23, the Government intends to continue regular issuances of marketable securities (T-bills and BINs) in line with the Proposed Issuance Calendar utilizing the auction modality. The GOJ intends to maintain the strategy of replacing maturing T-bills and issuing BINs along all segments of the yield curve to satisfy investors with different time horizons while contributing to enhancing the efficiency of the domestic yield curve.

The Government recognises that a robust secondary market is integral to the success of a well-functioning domestic market. It is the major pricing mechanism or platform for Government securities. In order to enhance secondary market trading, expand the investor base and ultimately reduce market cost and risk, a well-established regulated Primary Dealers (PDs) System is required. To accomplish this, the review of the current PDs system is paramount. The challenges associated with the on-going pandemic stymied plans to undertake the review in FY2021/22. Notwithstanding, GOJ is committed to reforming the PDs system after the pandemic has ended, and in FY2022/23 could resume efforts to achieve this important objective.

The review of the PDs system will be conducted by a Working Group chaired by the MOFPS with BOJ, the Financial Services Commission (FSC) and PDs. While the review is being undertaken, PDs will continue to be assessed monthly on their trading activities under the existing PDs' agreement.

In order to gain greater efficiencies in the domestic market, the GOJ has embarked on the development of a Fixed Income Trading Platform (FITP) to support secondary market trading. The implementation of the FITP will provide a formal platform for the listing and managing of Government securities to increase market participation and provide greater efficiency. This will be achieved by, *inter alia,* reduced transaction and settlement risks, a more transparent market that facilitates easier trading, and the ability to attract international investors. These will serve to broaden the investor base and facilitate an efficient yield curve for securities. It is anticipated that the implementation of the FITP will also drive secondary market trades which will increase liquidity.

The implementation of the FITP was expected to have been completed during FY2021/22; however, due to unforeseen challenges this expectation may not materialise. In FY2022/23, the Government will continue to work in tandem with the Jamaica Stock Exchange (JSE), BOJ and FSC to implement the platform.

During FY2022/23, GOJ intends to resume exploration of the feasibility of issuing local currency-denominated debt in the ICM. This initiative was tempered mainly by the onset of the pandemic. The Government will revisit plans to engage an international clearance and

settlement agency regarding the viability of interfacing the Central Securities Depository (JamClear-CSD) and the agency's platform. The issuance of local currency-denominated debt in the ICM would satisfy one of GOJ's strategic medium-term objectives; that is, to de-dollarize the debt portfolio.

In August 2021, BOJ minted $230.0 million worth of Central Bank Digital Currency (CBDC) to be issued to deposit-taking institutions and authorized payment service providers. CBDC is a digital form of central bank-issued currency and is therefore a legal tender which has the same value as physical cash. The Bank of Jamaica has declared its CBDC pilot programme a success, setting the stage for a national rollout throughout the first quarter of 2022.

The anticipated benefits of CBDC for stakeholders such as Jamaican residents, businesses, deposit-taking institutions, BOJ and the Government include increased financial inclusion and an easier-to-access means of efficient and secured payments. It also presents an opportunity to improve cash management processes and costs and make it cheaper and faster to conduct monetary transactions. Additionally, the efficiencies of CBDC may contribute to the enhancement of secondary market trading of GOJ securities.

In October 2020, BOJ, as part of its monetary policy operations introduced the Liquidity Coverage Ratio (LCR), developed by the Basel Committee on Banking Supervision. The LCR is a stress test that is intended to ensure that deposit-taking institutions and other financial institutions remain sustainable with sufficient liquidity to meet their short-term obligations by holding high-quality liquid assets which are easily converted to cash within thirty days. During FY2022/23, it is expected that the LCR will assist in stimulating and increasing the demand for and listing of high-quality liquid assets including GOJ's Benchmark Investment Notes and Treasury Bills on the JSE which will add further depth to the financial market. Further, the LCR may assist in increasing liquidity in the market as well as boosting secondary market trade and enhancing price discovery of Government securities.

During the upcoming fiscal year, the GOJ will collaborate with the BOJ and the FSC to further enhance and upgrade the JamClear-CSD.

Additionally, during FY2022/23, the GOJ will:

- Continue to maintain a presence in the domestic market, in keeping with the MTDS objectives to manage costs and risks;
- Continue to offer securities through a competitive bidding process;
- Continue to publish a Schedule of Domestic Debt Securities and GOJ T-bill Tenders for FY2022/23;

- Continue its policy of conducting debt operations openly, equitably and transparently through the provision of timely reports and statistics on debt activities via a range of communication channels;

- Continue to have frequent consultations with key market stakeholders, prior to market issuances outlined in the GOJ's Issuance Calendar, to obtain valuable input towards the GOJ's debt issuances; and

- Explore the possibility of introducing new types of instruments to the market.

8.3 Investor Relations

Institutional investors constitute a government's key funding source to supplement revenues. It is therefore beneficial for governments to maintain regular dialogue to engage sovereign debt stakeholders. The implementation of a comprehensive Investor Relations (IR) Programme provides the platform from which to establish a two-way dialogue with investors and obtain market intelligence pertinent to debt management operations. The data gathered is generally used for developing and implementing funding strategies and broader financial sector policy. Accordingly, the GOJ's IR programme is critical to the achievement of Government's debt management objectives of raising adequate budgetary financing and furthering the development of the domestic debt market.

For fiscal year 2021/22, due to the continuing effects of the pandemic, the GOJ organized and conducted its Investor Relations (IR) activities utilizing various digital media/communication tools. IR activities for the period included:

- Expanding the pool of financial sector stakeholders for one-on-one meetings prior to market issuances outlined in the GOJ's Issuance Calendar;

- Continued engagement with the credit rating agencies regarding the review of the country's creditworthiness; and

- Dissemination of market data and information through the Debt Management Branch (DMB) website.

For FY2022/23, the launch of the revamped DMB website is expected to be completed after delays arising from technological challenges. The DMB will continue to pursue and implement IR best practices that will enable the GOJ to disclose comprehensive and timely data and information in the interest of accountability and transparency.

SECTION IX: CONCLUSION

The Government of Jamaica's (GOJ's) Medium-Term Debt Management Strategy for FY2022/23 – FY2025/26 assesses portfolio costs and risks associated with alternative financing strategies. The medium-term strategy selected is aligned with the Government's debt management objectives of raising adequate financing at the lowest possible cost and prudent levels of risk, while supporting the development of the domestic debt market. As such, the financing strategy for the medium-term prioritizes domestic financing at fixed rates, along all segments of the yield curve.

Jamaica's modest economic recovery from the impact of the COVID-19 pandemic has facilitated a return to the downward trajectory of debt-to-GDP. A 7.9 percent expansion in real GDP is projected to reduce the debt-to-GDP ratio by 13.4 percentage points to 96.3 percent at end-FY2021/22, on track to meet the target of 60.0 percent or less by end-FY2027/28.

The reversal of the Bank of Jamaica's accommodative monetary policy stance contributed to an increase in domestic interest costs over the first three quarters of FY2021/22. Nonetheless, there was reduced exposure to interest rate and refinancing risks over the period. Despite a nominal reduction in foreign currency-denominated debt supported by opportunistic liability management operations, foreign currency risk exposure was broadly unchanged and remains a priority for the Government. Consistent with meeting the legislated target for end-FY2021/22, there was a decline in exposure to the risks posed by contingent liabilities.

Though delayed by COVID-19, critical reforms to the Primary Dealers system remain on the agenda for FY2022/23. The development of a Fixed Income Trading Platform is aimed at, *inter alia,* enhancing market-making, boosting secondary market trading, and establishing an efficient and reliable domestic BIN yield curve. The GOJ will continue to explore the possibility of issuing local currency-denominated instruments in the international capital markets as part of its efforts to de-dollarize the debt portfolio.

The Debt Management Branch is committed to maintaining stakeholder engagement through the use of virtual technology so long as the pandemic persists. The new DMB website which will enhance the dissemination of market data, stakeholder engagement and transparency in debt operations is slated for launch during FY2022/23.

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.

Catastrophe Bond

Catastrophe (Cat) bonds are insurance-linked securities that transfer risks, usually from a catastrophe or natural disaster, from an issuer to investors. Depending on how a cat bond is structured, if losses reach the threshold specified in the bond offering, the investor may lose all or part of the principal or interest. Cat bonds do not constitute a part of a government's debt stock.

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.

Contingent Line of Credit

A contingent line of credit is a loan which is prepared in advance, but disbursed after a specified occurrence, for example, a natural disaster.

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.

High-Quality Liquid Asset

Assets which are liquid in market during a time of stress, and can be converted into cash at minimal or no loss of value in private markets to meet liquidity needs.

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.

Liquidity

Liquidity refers to the ease with which an asset, or security, can be converted into ready cash without affecting its market price.

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.

Special Drawing Rights

Special Drawing Rights (SDRs) are an international reserve asset, created by the International Monetary Fund (IMF) in 1969 to supplement its member countries' official reserves. It serves as the unit of account of the IMF.

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.