GOVERNMENT OF JAMAICA

MEDIUM-TERM DEBT MANAGEMENT STRATEGY FY2021/22 – FY2024/25

(AS PRESENTED)

Ministry Paper No:
February 18, 2021

TABLE OF CONTENTS

List of Tables

List of Figures

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
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
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
T-bill	Treasury Bill
USD	United States Dollar
VaR	Value at Risk
VR	Variable-Rate
WHO	World Health Organization

FOREWORD

Jamaica was impacted by the COVID-19 pandemic at a point where the country had strong macro-fiscal fundamentals. This enabled the Government of Jamaica (GOJ) to swiftly respond to both the medical and economic impact of the pandemic on the population. The GOJ launched the COVID-19 Allocation of Resources for Employees (CARE) Programme to provide support to individuals whose income stream was negatively impacted by the pandemic as well as to businesses, particularly micro, small and medium-sized enterprises (MSMEs). Significant allocations were also made to the Ministry of Health and Wellness to support its response to the pandemic.

The macroeconomic effects of the pandemic have disrupted the downward trend in the debt/GDP trajectory, which the GOJ had maintained since FY2014/15. Debt-to-GDP for FY2020/21 is estimated to be 110.1 percent, 15.3 percentage points higher than the outturn for FY2019/20. To facilitate a strong response to the pandemic, the GOJ made prudent fiscal decisions including reducing the primary surplus from 5.4 percent to 3.0 percent of GDP. With anticipated rollout of the COVID-19 vaccine programme, the macro-fiscal position is expected to strengthen, restoring the downward trend of the debt/GDP ratio to a trajectory consistent with meeting the revised timeline to achieve debt-to-GDP of 60.0 percent or less by FY2027/28.

The Medium-Term Debt Management Strategy (MTDS) for FY2021/22 – FY2024/25 guided by the macro-fiscal forecast, assesses the relative costs and risks of the debt portfolio relative to established benchmarks over the period April to December 2020 and identifies the optimal strategy consistent with the Government's cost-/risk preferences. The GOJ will continue to operationalize a strategy anchored by mainly domestic fixed rate financing across the yield curve. GOJ will also continue to support implementation of planned initiatives to advance the development of the domestic debt market. The Annual Borrowing Plan (ABP) outlined in the MTDS highlights the planned financing programme for FY2021/22 and was crafted after consultations with key stakeholders.

Within the context of the COVID-19 pandemic, consistent stakeholder engagement has become even more critical. In light of this, the Debt Management Branch (DMB) continues to adapt to the use of alternative media/technology to strengthen its engagement with key stakeholders in both the external and domestic space. The GOJ remains committed to the exercise of transparent and prudent fiscal policy and will pursue strategies that support sustainable growth and development of Jamaica.

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

Nigel Clarke, DPhil, MP
Minister of Finance and the Public Service
February 18, 2021

Darlene Morrison
Financial Secretary
February 18, 2021

ACKNOWLEDGEMENTS

The Medium-Term Debt Management Strategy (MTDS) continues to be an integral part of the management of the Government of Jamaica's fiscal operations and its macro-economic programme. The execution of planned activities, guided by the MTDS, plays a significant role in the achievement of the GOJ's public debt management operational goals and objectives.

The MTDS FY2021/22-FY2024/25 will guide debt management operations over the medium-term to ensure that the GOJ's financing needs are satisfied at prudent levels of risk. The DMB, in keeping with its commitment to conduct debt operations transparently, will continue to engage key stakeholders through a communications framework grounded in the core principles of transparency, openness, accessibility and consistency. This is to bolster efforts in sustaining stakeholders' appetite for GOJ's issuances

I want to express my sincere appreciation to the DMB team for their continued commitment to the preparation of the document. The production of this document occurred against the backdrop of the COVID-19 pandemic where much of the work, especially the review, took place using virtual technology. Despite the challenges, the team remained steadfast in its efforts to be proactive in the execution of strategies regarding the management of the public debt.

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

Dian Black
Principal Director
Debt Management Branch
Economic Management Division
February 18, 2021

EXECUTIVE SUMMARY

As the Government of Jamaica (GOJ) entered FY2020/21, it was faced with the impact of the coronavirus 2019 pandemic, which presented economic and social challenges to public health, the world of work and education. The GOJ allocated budgetary resources to finance the health and economic response required to address the effects of the pandemic through an early first supplementary estimates.

The macroeconomic effects of the pandemic interrupted the steady downward trend of the debt/GDP trajectory since FY2014/15. Debt-to-GDP for end-FY2020/21 is now estimated to be 110.1 percent, 22.9 percentage points higher than that estimated during preparation of the 2020/21 budget. Real economic output for FY2020/21 is expected to decline by 11.6 percent rather than the pre-COVID-19 anticipated growth of 1.2 percent. The impact of the pandemic is also reflected in the reduction of the primary surplus from 5.4 percent to 3.0 percent, to facilitate a strong response to the pandemic while accounting for the associated loss in revenue. It is envisaged that with rollout of the COVID-19 vaccine programme moderate recovery will commence, strengthening the macro-fiscal outlook.

The negative economic impact of the pandemic resulted in a suspension of the fiscal rules for FY2020/21 as well as an adjustment of the timeline to achieve the legislated debt target of debt-to-GDP at 60.0 percent or lower from end-FY2025/26 to end-FY2027/28. This enhanced the Government's ability to direct expenditure at activities to mitigate the COVID-19 impact and to expand the necessary social and public infrastructure, to support recovery of the economy during FY2021/22.

Despite improvements in key portfolio cost and risk indicators for FY2020/21, exposure to foreign currency risk remains significant with approximately 61.1 percent of the total Central Government debt denominated in foreign currencies. The portfolio remains sensitive to fluctuations in the exchange rate between the US dollar and the local currency, as the US dollar accounts for the largest share of foreign currency-denominated debt. The nominal value of foreign currency-denominated debt in US dollars declined by US$21.4 million or 0.2 percentage point to US$8,683.9 million at end December 2020 from US$8,705.3 million at end-March 2020 mainly due to a currency swap. For FY2021/22, the GOJ will continue to use strategic liability management operations (LMOs), where possible, as one of the measures to reduce the portfolio's exposure to foreign currency risk.

Refinancing risk in the portfolio has declined. The share of debt maturing in one year or less decreased by 2.1 percentage points from 7.4 percent recorded at end-March 2020 to

5.3 percent at end-December 2020. This reduction was attributable to the share of the domestic portfolio decreasing by 8.3 percentage points, partially offset by a 2.1 percentage point increase in the external portfolio. The portfolio's average time to maturity increased by 0.3 year to 11.4 years at end-December 2020, when compared to the 11.1 years reflected at end-March 2020. For FY2021/22, the GOJ will continue to pursue strategies to extend and smooth the maturity profile.

For the upcoming fiscal year, GOJ's financing requirement is projected at $130,305.60 million. This represents a decrease of $85,223.30 million, compared to the revised figure of $215,528.90 million projected for FY2020/21. The ratio of domestic to external financing for FY2021/22 is projected to be generally in line with the selected medium-term debt strategy (S1), as outlined in the Medium-Term Debt Management Strategy FY2021/22 – FY 2024/25, through the adoption of a 70:30 rule where 70.0 percent of total financing over the medium-term will be sourced from the domestic market. This deviation from the previous target of "80:20" was prompted by a reassessment of the appropriate financing options within the context of the pandemic, which highlighted a need for increased external financing over the near to medium-term. The strategy also seeks to spread domestic issuances across the yield curve which should augur well for further development of the domestic debt market.

During FY2021/22, the DMB will continue to engage key stakeholders 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 conducting debt operations transparently. The DMB's website design and implementation project remains a work in progress as the finalization and subsequent launch is programmed for the first quarter of FY2021/22.

SECTION I: INTRODUCTION

The Medium-Term Debt Management Strategy (MTDS) is the Government of Jamaica's (GOJ's) policy document detailing its plan of action over the medium-term to ensure the Government's financing needs are met at the lowest possible cost with prudent levels of risk. This document, which is updated on an annual basis, is underpinned by the Fiscal Responsibility Framework (FRF) and legislated under the Public Debt Management Act (PDMA). The strategy is an integral part of the management of the fiscal operations and the Government's macro-economic programme.

Contextual guidelines for the formulation of the MTDS include:

- Minimizing cost;
- Mitigating foreign currency risk;
- Mitigating refinancing risk;
- Promoting the development of the domestic debt market; and
- Developing a monitoring framework for managing contingent risks from government guaranteed loans (GGLs).

Within the context of the ongoing COVID-19 pandemic, the Government has placed increased priority on health and social expenditures as well as providing financial support for businesses, particularly medium small and micro enterprises (MSMEs). These expenditures have been largely channelled through the COVID-19 Allocation of Resources for Employees (CARE) Programme. These expenditures were accompanied by lower revenue arising from a contraction in real GDP growth. The significant reduction in GDP, estimated at 11.6% is the main contributor to an estimated increase in the debt to GDP by 15.3 percentage points. Given the magnitude of the impact of the shock and the fiscal space required for the Government to effectively respond to the social and economic impact, the fiscal rules were suspended for FY2020/21 with an associated adjustment to the target date for the achievement of a debt to GDP ratio of 60.0 percent or less which was extended by two years to FY2027/28.

Despite the challenges created by the pandemic, the relative costs and risks in the debt portfolio were generally improved over the review period. Accommodative monetary policies supported lower interest costs in the external and domestic markets. Accompanying measures implemented by the BOJ to boost domestic market liquidity supported strong demand for GOJ securities over the review period.

Overall, exposure to interest rate and refinancing risks were moderated. Despite some amount of bunching, improvements in refinancing risk indicators were reflected in the lengthening of the portfolio's average-time-to-maturity (ATM) and a reduction in debt maturing within a year.

Notwithstanding a reduction in the nominal value of USD-denominated debt, foreign currency risk remained significant and has been exacerbated since the onset of COVID-19. Inflation risk remained low. Exposure to contingent liabilities associated with Government guarantees though marginally increased, remained moderate and were within the established legislated targets. Notwithstanding, COVID-19 has contributed to an increase in the risk that the guarantee on GGLs could be called (crystallization).

The MTDS for FY2021/22 - FY2024/25, which includes the Annual Borrowing Plan, 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** consists of the Introduction. **Section II** gives a summary of the profile of the debt portfolio. **Section III** provides a cost and risk analysis of the portfolio, as well as risk mitigation strategies. **Section IV** explains the key risk factors affecting the portfolio and estimates the portfolio's sensitivity to specific market risks. **Section V** provides an update of the macroeconomic environment. **Section VI** lays out the design as well as discusses the selection of a strategy for the medium-term, while **Sections VII** and **VIII** synopsize the Annual Borrowing Plan and domestic market developments, respectively

SECTION II: PROFILE OF PUBLIC DEBT STOCK

At end-December 2020, the stock of total public debt[1] was $2,072,505.7 million, $60,645.6 million or 3.0 percent more than the $2,011,860.1 million recorded at end-March 2020. 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-FY2020/21 is projected at $2,144,453.5 million or 110.1 percent of GDP. This debt/GDP represents a 15.3 percentage point increase over the end-March 2020 position and is mainly due to the estimated 11.6 percent decline in real GDP during FY2020/21.

Table 1: Public Debt Profile

	Mar-20	(%) Total	Dec-20	(%) Total	YTD	
	J$ millions	Cen. Gov't	J$ millions	Cen Gov't	J$ million	%
Total Debt	**2,011,860.1**	**100.0**	**2,072,505.7**	**100.0**	**60,645.6**	**3.0**
Total Central Government Debt	**1,946,799.5**	**96.8**	**2,025,113.1**	**97.7**	**78,313.6**	**4.0**
Central Government Domestic De	**761,804.6**	**37.9**	**776,483.2**	**37.5**	**14,678.7**	**1.9**
Marketable Securities	**761,653.7**	**37.9**	**776,432.8**	**37.5**	**14,779.1**	**1.9**
Bonds	751,353.7	37.3	766,132.8	37.0	14,779.1	2.0
Treasury Bills	10,300.0	0.5	10,300.0	0.5	0.0	0.0
Loans	**150.8**	**0.0**	**50.4**	**0.0**	**(100.4)**	**(66.6)**
Public Sector	150.6	0.0	50.2	0.0	(100.4)	(66.7)
Perpetual Annuities	0.2	0.0	0.2	0.0	0.0	0.0
Central Government External Del	**1,184,994.9**	**58.9**	**1,248,629.9**	**60.2**	**63,634.9**	**5.4**
Marketable Securities	**697,217.9**	**34.7**	**734,499.8**	**35.4**	**37,281.9**	**5.3**
Bonds	697,217.9	34.7	734,499.8	35.4	37,281.9	5.3
Loans	**487,777.0**	**24.2**	**514,130.0**	**24.8**	**26,353.1**	**5.4**
Bilateral	**98,591.6**	**4.9**	**103,599.1**	**5.0**	**5,007.5**	**5.1**
OECD	4,271.6	0.2	3,436.4	0.2	(835.2)	(19.6)
Non-OECD	94,320.0	4.7	100,162.6	4.8	5,842.6	6.2
Multilateral	**387,763.8**	**19.3**	**410,531.0**	**19.8**	**22,767.2**	**5.9**
IDB	207,799.2	10.3	224,768.2	10.8	16,969.1	8.2
IBRD	129,287.4	6.4	134,860.6	6.5	5,573.3	4.3
Other	50,677.3	2.5	50,902.1	2.5	224.8	0.4
Commercial Banks	**1,421.6**	**0.1**	**0.0**	**0.0**	**(1,421.6)**	**(100.0)**
Gross Public Bodies' Debt	**224,496.0**	**11.2**	**232,703.7**	**11.2**	**8,207.6**	**3.7**
Guaranteed Loans	93,784.7	4.7	93,065.7	4.5	(718.9)	(0.8)
Loans from Central Gov't	81,269.8	4.0	109,678.6	5.3	28,408.8	35.0
Non-Guaranteed Loans	49,441.5	2.5	29,959.3	1.4	(19,482.2)	(39.4)
Total Cross Holdings	**159,435.4**	**7.9**	**185,311.0**	**8.9**	**25,875.6**	**16.2**
Net Public Bodies	**65,060.7**	**3.2**	**47,392.7**	**2.3**	**(17,668.0)**	**(27.2)**

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 crossholdings.

2.1 Central Government Debt

As at end-December 2020, total Central Government debt stood at $2,025,113.1 million, an increase of $78,313.6 million or 4.0 percent relative to the $1,946,799.5 million recorded at end-March 2020. The change reflected increases in both the domestic and external portfolios. Central Government debt is estimated to be $2,095,330.4 million at end-FY2020/21.

The stock of outstanding Central Government domestic debt increased from $761,804.6 million at end March 2020 to $776,483.2 million at end-December 2020, a $14,678.6 million or 1.9 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 increase to $787,346.1 million by end-FY2020/21.

At end-December 2020, Central Government external debt was $1,248,629.9 million, an increase of $63,634.9 million or 5.4 percent relative to the amount at end-March 2020. 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 $1,307,984.3 million at end-FY2020/21.

2.2 Public Bodies Debt

Gross public bodies' (PBs) debt was $232,703.7 million at end-December 2020, $8,207.6 million or 3.7 percent more than the $224,496.0 million recorded at end-March 2020. The increase was attributed to higher balances for loans from Central Government partially offset by a decrease in guaranteed and non-guaranteed debt. The net or consolidated public bodies' debt at end-December 2020 was $47,392.7 million, a decrease of $17,668.0 million or 27.2 percent compared to the $65,060.7 million recorded at end-March 2020, reflecting a more than proportionate increase in crossholdings compared to gross public bodies' debt.[2] Net PBs debt is projected at $49,123.0 million at end-March 2021.

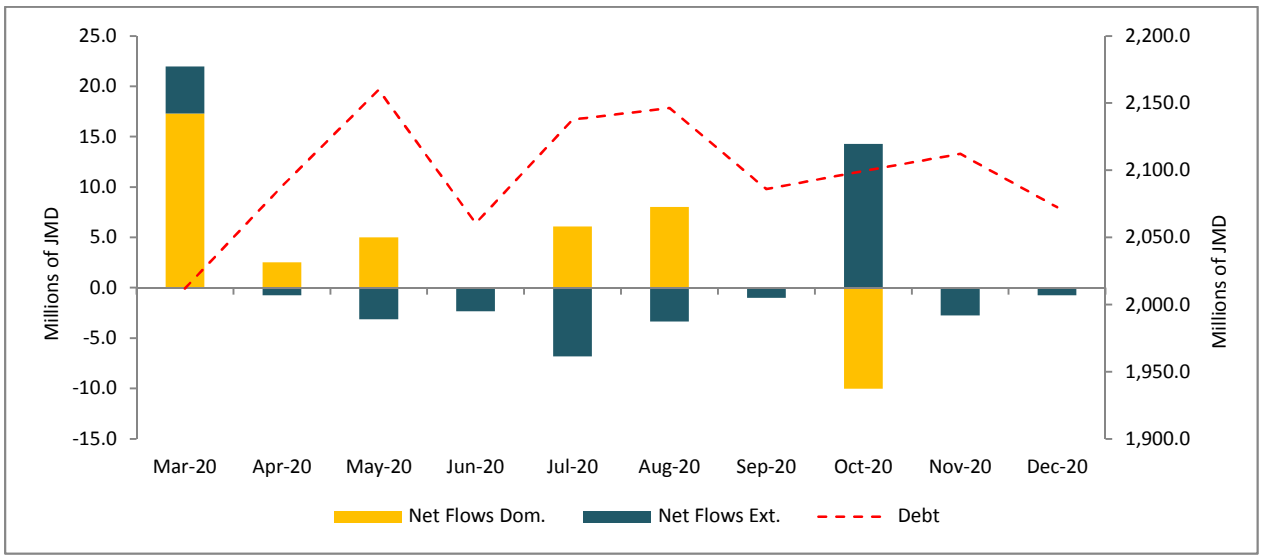
2.3 Public Debt Trajectory and Net Financing Flows

The net financing flows for the Central Government domestic and external debt portfolios, as well as the trajectory of the stock of total public debt from end-March 2020 to end-December 2020 are highlighted in **Figure 1**. Net inflows of approximately $5,825.5 million to the Central Government debt portfolio reflected the balance of net outflows of approximately $5,762.3 million from the external portfolio and net inflows of approximately $11,587.7 million

[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.

to the domestic portfolio. Overall, the trajectory of the total public debt stock has been marginally upwards over the review period, with variations from trend mainly influenced by fluctuations in the exchange rate.

Figure 1: Trajectory of the Public Debt Stock



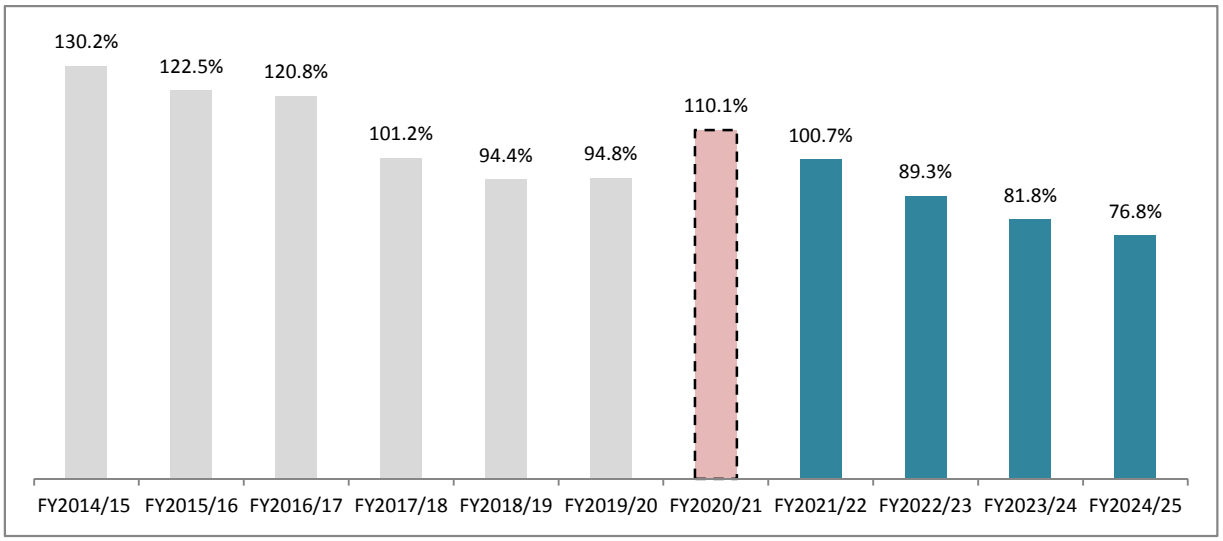
Note: Net financing inflows for the domestic portfolio in March 2020 were due to special issuances of BINs to the BOJ in support of the Bank's recapitalization programme.
Source: Ministry of Finance and the Public Service

In the context of the ongoing COVID-19 pandemic, the Government has placed increased priority on health and social expenditures. Additionally, given the attendant effect on economic activity, financial support for businesses (particularly MSMEs and those operating in the tourism sector) have also been provided. These expenditures are largely channelled through the COVID-19 Allocation of Resources for Employees (CARE) Programme to the tune of $19,691.4 million. Concomitantly, the pandemic is expected to result in lower than originally programmed revenue inflows of approximately $84,415.4 million. To effectively address the impact of the pandemic, the Central Government's operations were revised to target a primary surplus of 3.0 percent of GDP rather than the 5.4 percent of GDP originally programmed.

Economic output for FY2020/21 is expected to decline by 11.6 percent compared to an initial pre-COVID-19 growth forecast of 1.2 percent. The combined fiscal and broader macroeconomic effects of the pandemic have disrupted the consistent downward trend in the debt trajectory. Debt-to-GDP for FY2020/21 is now estimated at 110.1 percent, 22.9 percentage points higher than that estimated when the FY2020/21 budget was tabled. Notwithstanding, it is projected that improvements in the macro-fiscal position in subsequent years will restore the downward trend in

the debt ratio, consistent with meeting the revised timeline to achieve debt-to-GDP of 60.0 percent or less by FY2027/28[3] (see **Figure 2**).

Figure 2: Debt-to-GDP Trajectory



Source: Ministry of Finance and the Public Service

[3]The fiscal response required in the financial year 2020/21 to address the impact of the Covid-19 pandemic is estimated to generate a deviation in the Central Government fiscal balance as a percent of GDP of 4.0 percentage points. An amendment was made to the Financial Administration and Audit Act to extend the timeline for the achievement of the targeted debt-to-GDP of 60.0 percent or less from FY2025/26 to FY2027/28.

SECTION III: COST AND RISK ANALYSIS

Continuous assessment of the relative costs and risks of the debt portfolio is integral in evaluating the operationalization of the debt management strategy, and ensuring consistency with the Government's preferences regarding the tradeoff between portfolio costs and risks. While recognizing the varied risks that impact sovereign debt, the MTDS places greater focus on market and refinancing risks as well as those related to contingent liabilities in the form of government guarantees.

The main market risks evaluated relate to changes in the exchange rate, interest rate and inflation rate. Notwithstanding deliberate efforts to reduce the portfolio's exposure to foreign currency risk, this remains dominant and has been exacerbated by the effects of the pandemic. Despite a reduction in interest rate risk in the domestic portfolio, within the context of historically low benchmark interest rates, there was a marginal increase in the weighted average interest cost. An increase in the share of VR debt and reduction in external benchmark interest rates contributed to a reduction in the weighted average interest cost in the external portfolio. Inflation risk remained subdued due to low exposure and relatively low and stable inflation. 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 over the review period. Contingent liabilities associated with Government guarantees remained well within established limits. **Table 2** highlights changes in the key cost and risk indicators for the debt portfolio over the review period.

Table 2: Public Debt Cost and Risk Indicators

	Outcomes			Targets end-March 2021	
	End-March 2020	End-Dec 2020	Change	Min	Max
Implied Annual Interest Cost					
Domestic	6.1	6.6	0.5	-	-
External	5.7	5.2	(0.5)	-	-
Total	5.8	5.7	(0.1)	-	-
Interest Rate Risk					
Domestic					
Variable-rate Debt	36.1	23.9	(12.2)	28.0	30.0
Debt Refixing in 1 year (% of total)	38.0	29.6	(8.4)	-	-
Average Time to Refixing (Years)	7.5	8.9	1.4	-	-
External					
Variable-rate Debt	28.5	29.1	0.6	35.0	40.0
Debt Refixing in 1 year (% of total)	30.1	32.7	2.6	-	-
Average Time to Refixing (Years)	10.2	10.1	(0.1)	-	-
Total					
Variable-rate Debt	31.4	27.2	(4.2)	30.0	33.0
Debt Refixing in 1 year (% of total)	33.2	31.5	(1.7)	-	-
Average Time to Refixing	9.1	9.7	0.6	-	-
Refinancing Risk					
Domestic					
Debt maturing in 1 year (% of total)	13.1	4.8	(8.3)	-	-
ATM (Years)	9.1	10.2	1.1	-	-
External					
Debt maturing in 1 yr (% of total)	3.6	5.7	2.1	-	-
ATM (Years)	12.3	12.1	(0.2)	-	-
Total					
Debt Maturing in 1 yr (% of total)	7.4	5.3	(2.1)	-	<=10.0
ATM (Years)	11.1	11.4	0.3	>=9.0	-
Foreign Currency Risk					
FX debt as (% of total debt)	60.5	61.1	0.6	61.0	65.0
Inflation Risk					
CPI-Linked debt (% of total debt)	2.6	2.6	-	-	-
Contingent Liabilities					
Guaranteed Loans (% of GDP)	4.3	4.7	0.4	-	<=5.0

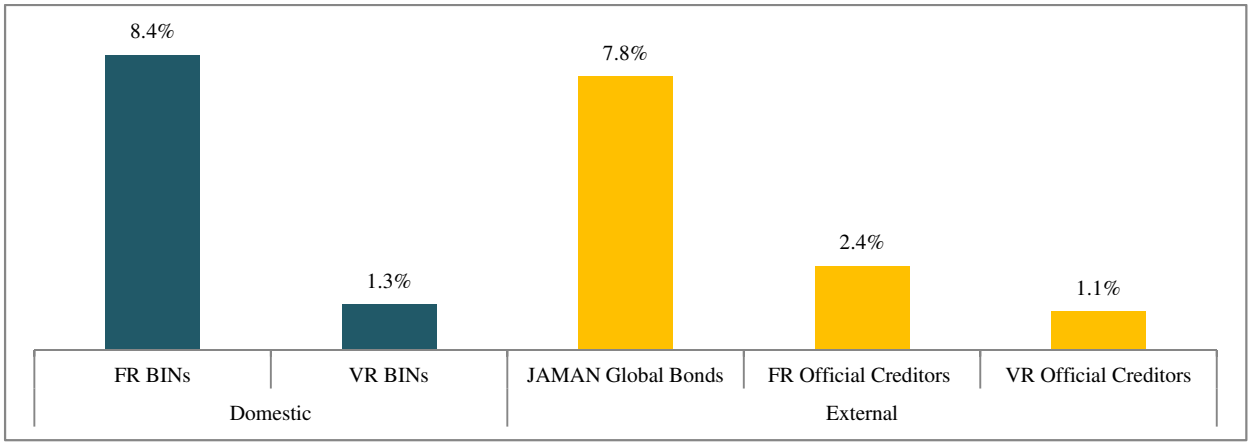
Source: Ministry of Finance and the Public Service

3.1 Interest Cost

The weighted average interest cost for Central Government debt at end-December 2020 was 5.7 percent, a reduction of 0.1 percentage point when compared to end-March 2020. This was attributed to the external portfolio decreasing from 5.7 percent at end-March 2020 to 5.2 percent at end-December 2020, while the maturity of a low cost $89.5 billion VR BIN contributed to an increase in the weighted average interest cost for the domestic portfolio by 50 basis points (bps).

Figure 3 highlights the distribution of the weighted average interest cost by instrument. Domestic fixed-rate bonds were the most costly with an average interest cost of 8.4 percent. This compares to an average interest cost of 1.3 percent for domestic variable-rate bonds. JAMAN bonds were the second most costly instruments with an average interest cost of 7.8 percent. External variable-rate Multilateral/Bilateral loans were the most cost-effective with an average interest cost of 1.1 percent, which was 1.3 percentage points lower than external fixed-rate Multilateral/Bilateral loans.

Figure 3: Weighted Average Annual Interest Cost by Instrument



Source: Ministry of Finance and the Public Service

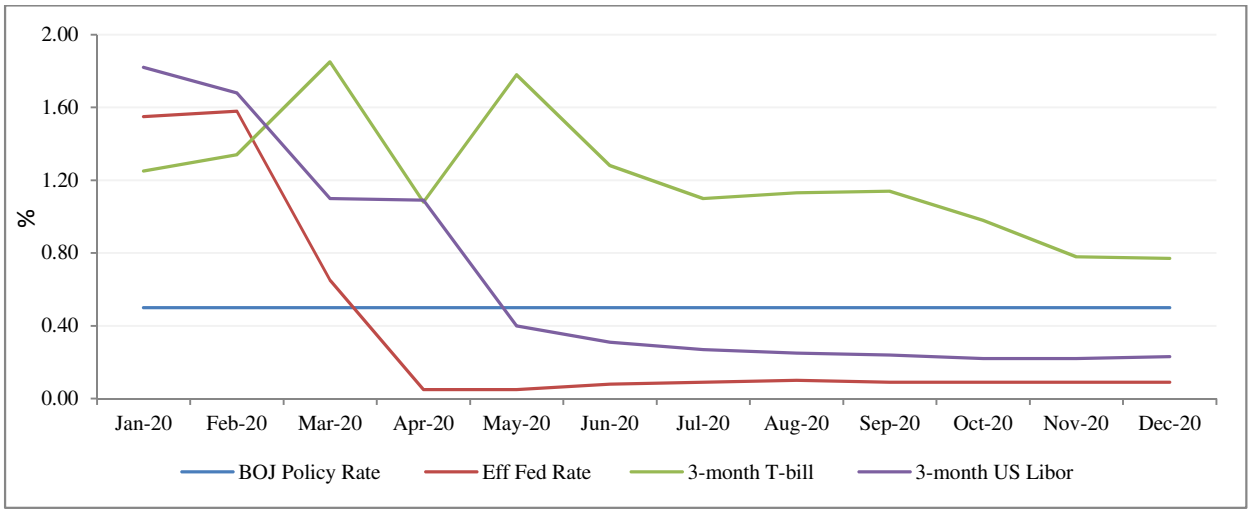
3.2 Interest Rate Risk

Interest rate risk refers to changes in debt service costs arising from the variability in market interest rates and is measured by: the portfolio's share of variable-rate debt, the share of debt re-fixing in 12 months and the portfolio's average-time-to-re-fixing (ATR).

Figure 4 highlights the trajectory of benchmark interest rates for CY2020. The Bank of Jamaica (BOJ) continued its accommodative stance and maintained its policy rate at 0.50 percent. The 3-month Treasury bill yield was 0.77 percent for December 2020, a reduction of 48 bps when compared to January 2020. The Federal Reserve (FED) of the United States has also adopted accommodative monetary policy aimed at supporting recovery of economic activity impacted by the COVID-19 pandemic. During CY2020, the FED reduced the federal funds rate twice by a

total of 150 bps to a target range of 0.00 to 0.25 percent. This contributed to a downward trend in the 3-month US Libor which was 0.23 percent at end-December 2020, representing an 87 bps decrease when compared to end-March 2020. Overall, while the adjustments in policy and benchmark interest rates have been generally downward in the domestic and external markets, the rate of reduction has been steeper in the latter.

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



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

The share of variable-rate debt in the portfolio decreased from 31.4 percent at end-March 2020 to 27.2 percent at end-December 2020. This was entirely attributed to the domestic portfolio in which the share reduced by 12.2 percentage points, owing to the maturity of the $89.5 billion VR BIN in October 2020. The share of variable-rate debt in the external portfolio at end-December 2020 was 29.1 percent, an increase of 0.6 percentage point relative to end-March 2020 (see **Table 2**).

The share of debt re-fixing in one year or less also improved over the period, decreasing by 1.7 percentage points to 31.5 percent at end-December 2020. This reflected a reduction in the domestic portfolio of 8.4 percentage points, which was partially offset by a 2.6 percentage point increase in the external portfolio. The ATR for the debt portfolio also improved (marginally) from 9.1 years at end-March 2020 to 9.7 years at end-December 2020. This was mainly attributed to the domestic portfolio increasing by 1.4 years, while the ATR for the external portfolio decreased by 0.1 year.

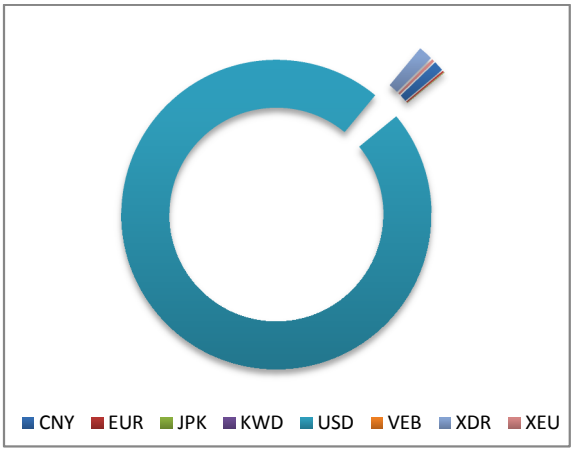
3.3 Foreign Currency Risk

Foreign currency risk refers to the variability in the debt stock and the associated debt service costs resulting from fluctuations in foreign exchange rates. The 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.

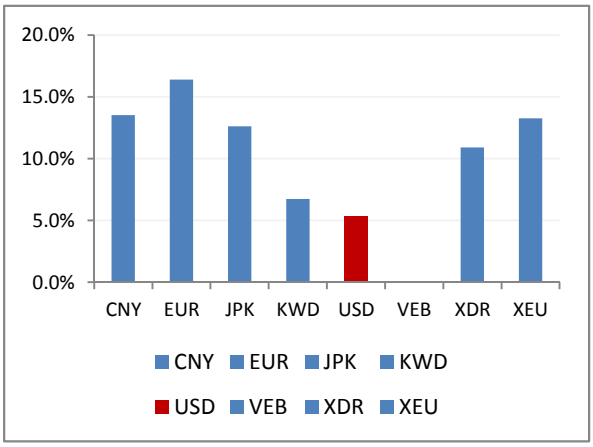
The composition of Central Government foreign-currency denominated debt at end-December 2020 is highlighted in **Figure 5.** The debt portfolio was exposed to changes in eight foreign currencies, of which the US dollar accounted for 96.9 percent. **Figure 6** shows the rate of depreciation of the Jamaica dollar relative to these currencies over the review period. Though the US dollar accounted for the largest share of foreign currency-denominated debt, its appreciation relative to the Jamaica dollar was the smallest recorded at 5.4 percent. The Euro, which accounted for 0.2 percent of foreign currency-denominated debt, appreciated by 16.4 percent relative to the Jamaica dollar. Given the relative levels of exposure, the portfolio is most sensitive to fluctuations in the US dollar.

Figure 5: Foreign Currency Composition of the CG Debt Portfolio, end-December 2020



Source: Ministry of Finance and the Public Service

Figure 6: Rate of Depreciation of the JMD Relative to Foreign Currencies, end-March to end-December 2020



Source: Ministry of Finance and the Public Service

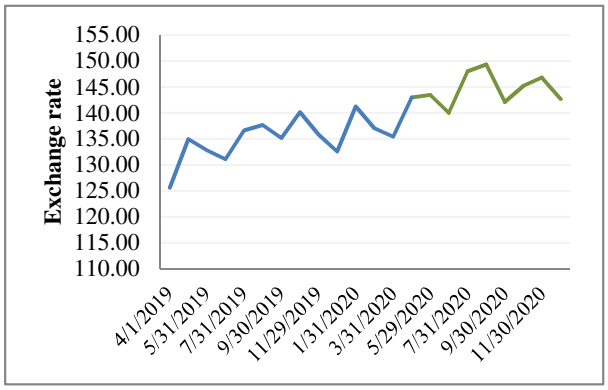
During the period end-March 2020 to end-December 2020, the nominal value of foreign currency-denominated debt in US dollar terms decreased by US$21.4 million or 0.2 percent from US$8,705.3 million to US$8,683.9 million. This was due to a currency swap executed as part of the Government's ongoing foreign currency risk management programme. In July 2020, the GOJ, in partnership with the Inter-American Development Bank (IDB), executed an opportunistic currency-swap which saw the conversion of US$25.0 million of a US$50.0 million outstanding loan balance to local currency[4]. This reduction was partially offset by net inflows over the period.

[4] There were two similar transactions in FY2019/20 in which US$50.0 million was converted to local currency in two tranches.

Figure 7 compares daily changes in the JMD/USD exchange rate for the fiscal year to end-December 2020 to the similar period in FY2019/20. The 5.4 percent rate of depreciation recorded this fiscal year was slower than the 7.8 percent recorded in FY2019/20 when the exchange rate moved from J$125.60: US$1 to J$142.58: US$1.

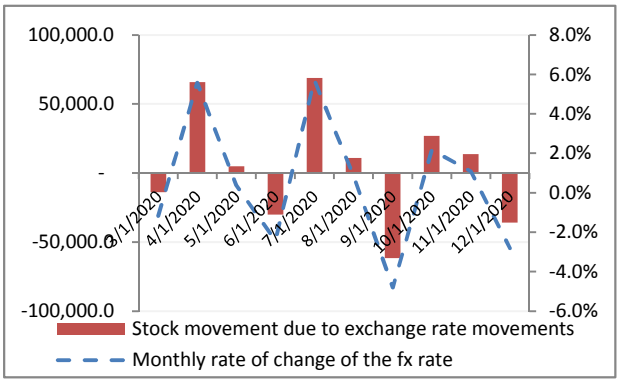
Despite a reduction in the stock of Central Government external debt in US dollar terms, the relative weakening of the Jamaica dollar resulted in a $63,003.0 million or 5.1 percent increase in the external debt stock in Jamaica dollar terms, and a marginal increase in the share of external debt in total debt from 60.5 percent at end-March 2020 to 61.1 percent at end-December 2020. **Figure 8** shows monthly movements in the JMD/USD exchange rate, as well as the associated valuation effects over the period. The impact was most significant during July 2020, when exchange rate movements resulted in a 5.4 percent increase in the foreign currency-denominated debt, when expressed in Jamaica dollar terms.

Figure 7: Daily JMD/USD Exchange Rate



Notes: The blue line represents actual exchange rate for FY2019/20 and the green line represents actual exchange rate for FY2020/21
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

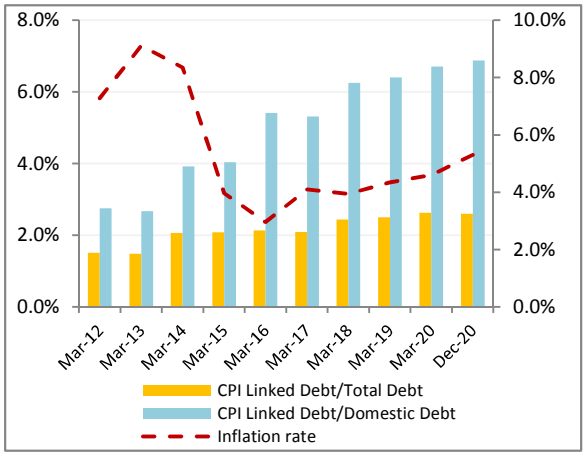
Inflation risk refers to the variability in the stock of debt and associated debt service costs occasioned by changes in the consumer price index (CPI). The impact of changes in the CPI on the debt stock is contingent on the level of exposure, measured by the nominal amount and the share of inflation-linked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

The BOJ's recent adoption of an inflation targeting framework has contributed to low and stable inflation for the Jamaican economy. The inflation rate for FY2020/21 is projected at 6.3 percent, and is expected to decrease to 5.0 percent over the medium-term, within the established target band of 4-6 percent.

Over the period April 1, 2020 to December 31, 2020, the value of CPI-linked debt increased by $2,217.2 million, or 4.3 percent to $53,331.2 million, and represented 6.9 percent of outstanding Central Government domestic debt and 2.6 percent of total Central Government debt (see **Figure 9**). The value of inflation-linked debt increased by $16,628.6 million or 45.3 percent, since original issuance, due to increases in the CPI.

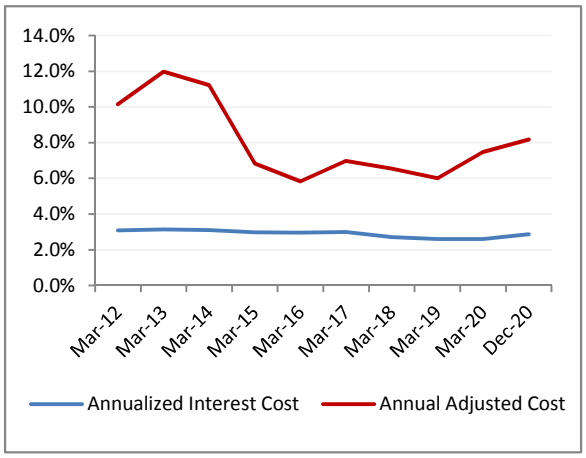
The weighted average annual implied interest cost on CPI-linked bonds was estimated at 2.9 percent at end-December 2020. The annualized adjusted cost, which takes into consideration inflation movements, was estimated at 8.2 percent, which is lower than the average annual cost of fixed-rate BINs of comparable tenors (see **Figure 10).**

Figure 9: Share of CPI-Linked Debt in Total CG Debt



Source: Ministry of Finance and the Public Service

Figure 10: Adjusted Cost of CPI-Linked Debt



Source: Ministry of Finance and the Public Service

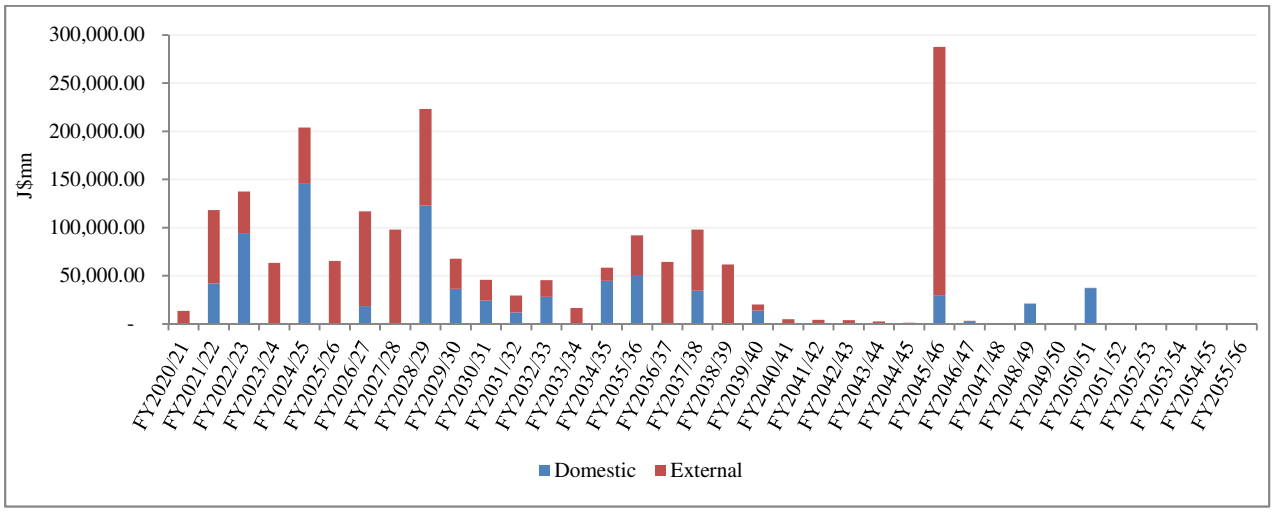
3.5 Refinancing Risk

Refinancing risk is the probability that debt may have to be rolled over at a higher 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. The share of debt maturing within a year and the average-time-to-maturity (ATM) are common indicators of refinancing risk.

The share of debt maturing in one year or less was 5.3 percent at end-December 2020, a decrease of 2.1 percentage points over the review period. This reduction was attributed to the domestic portfolio, where the share decreased by 8.3 percentage points, partially offset by a 2.1 percentage point increase in the external portfolio. The ATM measures how long it takes on average to roll over the debt portfolio. The ATM for the overall debt portfolio increased by 0.3 years to 11.4 years at end-December 2020, when compared to end-March 2020. The ATM for the domestic portfolio increased by 1.1 years to 10.2 years on account of repayment of a maturing domestic BIN in conjunction with the issuance of longer tenor debt instruments. There was a marginal reduction in the ATM of the external portfolio (see **Table 2**).

The redemption profile highlights the concentration of maturities across years for the domestic and external portfolios at end-December 2020 (see **Figure 11**). The bunching in FY2024/25 and FY2028/29 reflect maturities of the $91,922.9 million Variable-Rate Step-up BIN and the Fixed-Rate Accreting Notes (FRAN) with a current outstanding amount of $123,031.3 million, respectively. 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. Given the temporal distribution of the maturities, the GOJ will continue to pursue strategies to extend and smooth the maturity profile.

Figure 11: Redemption Profile for Central Government Debt at end0December 2020



Source: Ministry of Finance and the Public Service

3.6 Contingent Liability – Government Guaranteed Loans

Government guaranteed loans (GGLs) are explicit contingent liabilities which, if called or assumed by the Government, will increase debt service. The stock of GGLs at end-December 2020 was $93,065.7 million, of which $60,874.7 million represented external guarantees and $32,191.0 million represented domestic guarantees. When compared to end-March 2020, total GGLs decreased by $719.0 million or 0.8 percent, reflecting marginal reductions in both the external and domestic portfolios.

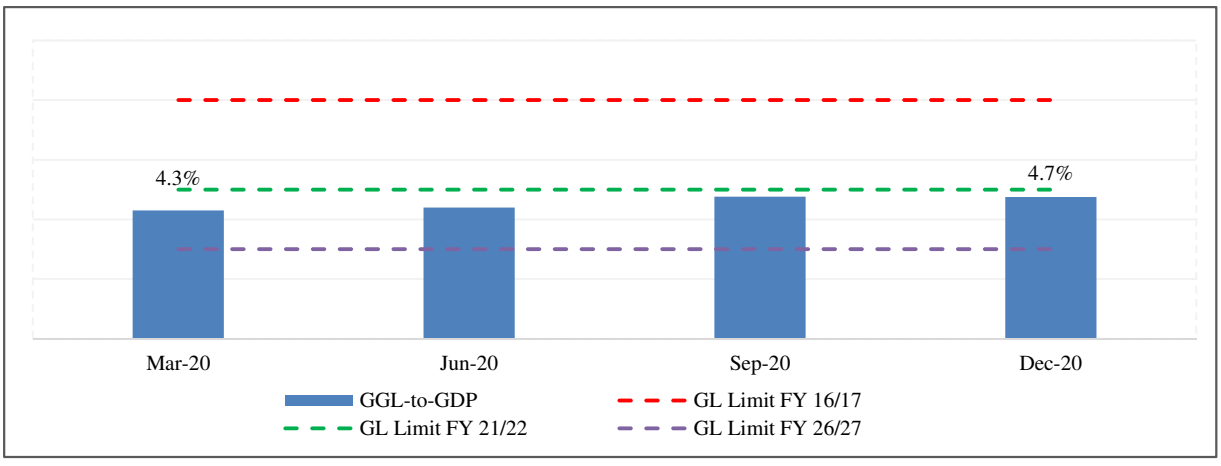
Table 3: Stock of Government Guaranteed Loans

	Mar-20		Dec-20		Change	
	J$mn	% of total	J$mn	% of total	J$mn	%
External GGL	61,286.8	65.3	60,874.7	65.4	(412.1)	(0.7)
Domestic GGL	32,497.9	34.7	32,191.0	34.6	(306.9)	(0.9)
Total	**93,784.7**		**93,065.7**		(719.0)	(0.8)

Source: Ministry of Finance and the Public Service

Figure 12 highlights the quarterly GGL-to-GDP from end-March 2020 through end-December 2020, relative to legislated ceilings[5]. At end-December 2020, the GGL-to-GDP ratio is projected at 4.7 percent which is 0.4 percentage point higher than the ratio at end-March 2020 and 0.3 percentage point below the 5.0 percent legislated target for end-FY2021/22. GGL-to-GDP is projected to remain unchanged at end-FY2020/21.

Figure 12: Government Guaranteed Loans as a Share of GDP



Source: Ministry of Finance and the Public Service

[5] The PDMA limits the GGL-to-GDP to 8.0 percent, 5.0 percent and 3.0 percent for end-FY2016/17, end-FY2021/22 and end-FY 2026/27, respectively.

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 risk indicators for the GGL portfolio at end-March 2020 and end-December 2020.

Table 4: Government Guaranteed Loans Cost and Risk Indicators

	Mar-20	Dec-20	Change
Implied Interest Cost			
Domestic	5.7	5.2	(0.5)
External	6.2	5.8	(0.4)
Total	6.0	5.6	(0.4)
Interest Rate Risk			
Domestic			
Variable-rate (%)	5.8	5.9	0.1
Debt Re-fixing in 1 year (%)	16.9	16.9	-
Average time to re-fixing (years)	6.7	7.2	0.5
External			
Variable-rate (%)	39.9	39.7	(0.2)
Debt Re-fixing in 1 year (%)	42.6	41.7	(0.9)
Average time to re-fixing (years)	2.7	2.8	0.1
Total			
Variable-rate (%)	28.1	28.0	(0.1)
Debt Re-fixing in 1 year (%)	33.7	33.1	(0.6)
Average time to re-fixing (years)	4.1	4.3	0.2
Refinancing Risk			
Domestic			
ATM (years)	6.9	7.3	0.4
External			
ATM (years)	4.6	4.9	0.3
Total			
ATM (years)	5.4	5.7	0.3
Foreign Currency (FX) Risk			
FX debt (as % of total GGLs)	78.0	77.0	(1.0)
Inflation Risk			
Inflation debt (as % of total GGLs)	16.6	17.6	1.0

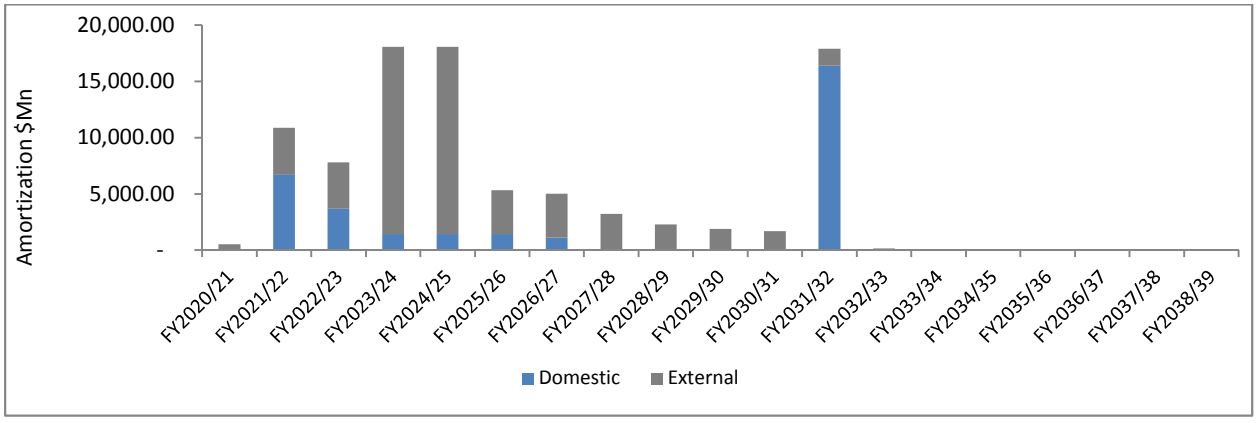
Source: Ministry of Finance and the Public Service

The portfolio recorded a weighted average interest cost of 5.6 percent at end-December 2020, which reflects a 0.4 percentage point decline over the review period. The reduced cost was attributed to a 0.5 and 0.4 percentage point reduction in the domestic and external portfolios, respectively.

Over the review period, there was a marginal improvement in the GGL portfolio's exposure to interest rate risk, reflected in an increase in the ATR, and a reduction in the share of debt-re-fixing in one year or less. The ATR increased by 0.2 year to 4.3 years at end-December 2020. This was due to increases in the domestic and external portfolios of 0.5 and 0.1 year, respectively. Additionally, the share of debt re-fixing in one year or less decreased marginally by 0.6 percentage point at end-December 2020, due mainly to a 0.9 percentage point decrease in the share of debt re-fixing in one year or less for the external portfolio. The share of variable-rate debt was 28.0 percent at end-December 2020, reflecting a marginal reduction over the period.

The portfolio also improved in its exposure to refinancing risk. The ATM increased to 5.7 years owing to a 0.4 and 0.3 year increase in the domestic and external portfolios, respectively. Though there was an extension in the portfolio's ATM, the redemption profile in **Figure 13** shows that the scheduled amortization of a guaranteed external bond amounting to $12,737.3 million in FY2023/24 and FY2024/25, and the scheduled maturity of a $16,403.2 million domestic guaranteed loan in FY2031/32 result in bunching in those years.

Figure 13: Redemption Profile of GGLs at end-December 2020

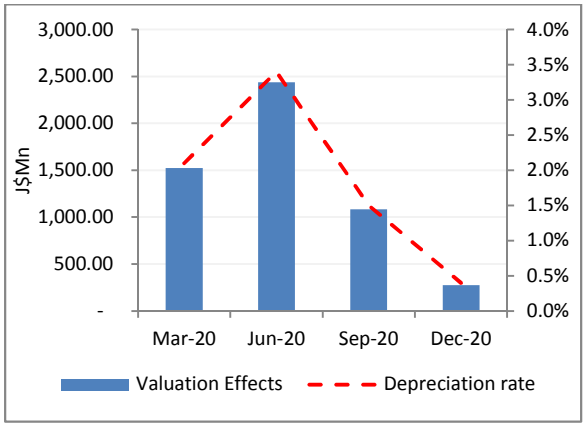


Source: Ministry of Finance and the Public Service

When compared to end-March 2020, the share of foreign currency-denominated GGLs decreased by 1.0 percentage point to 77.0 percent. This was attributed to a US$38.2 million, or 7.1 percent reduction in the nominal value of foreign-currency GGLs. Despite this reduction, the portfolio remains significantly exposed to foreign currency risk. **Figure 14** shows the quarterly valuation

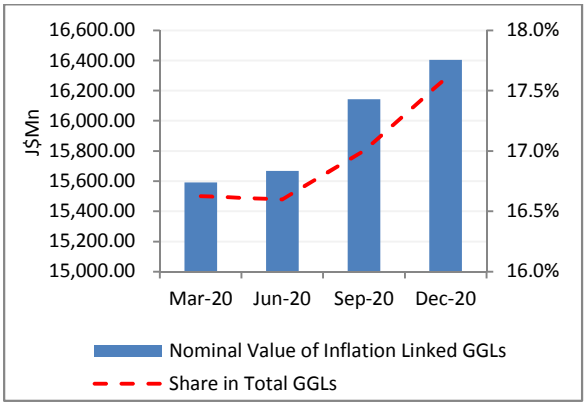
effects from changes in the JMD/USD exchange rate over the period. At end-December-2020, the 5.4 percent depreciation in the Jamaica dollar relative to the US dollar increased the stock of GGLs in Jamaica dollar terms by $3,642.4 million. The portfolio was also exposed to changes in the CPI over the period. At end-December 2020, the stock of inflation-linked GGLs was $16,403.2 million, an increase of $811.5 million or 5.2 percent when compared to end-March 2020. Inflation-linked GGLs represented 17.6 percent of total GGLs, an increase of 1.0 percentage point over the review period (see **Figure 15**).

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 in total GGLs reads from the right axis.
Source: Ministry of Finance and the Public Service

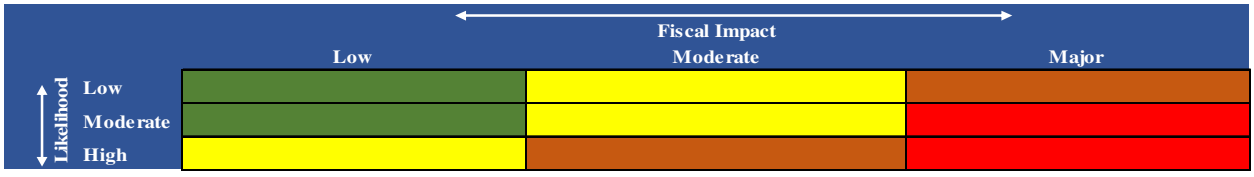
SECTION IV: RISK FACTORS AFFECTING THE DEBT PORTFOLIO

The onset and spread of COVID-19 has exposed the frailties and exacerbated the risks to the global economy. Major global risk factors identified include the spread of infectious diseases, climate change and climate action failure, IT infrastructure breakdown, financial market volatility and looming debt crises. These risks are more heightened in emerging market and developing economies (EMDEs) owing to structural deficiencies including high levels of informality, poor infrastructure, weak institutions as well as increased vulnerability to exogenous shocks (such as natural disasters).

An assessment of the potential impact on debt dynamics arising from the materialization of the aforementioned risks is critical for the effective management of the cost and risks in the portfolio. The portfolio effects are transmitted through adverse changes in key macroeconomic and market variables. The relative risk to the portfolio from the realization of an event will depend on the likelihood of occurrence and the magnitude of fiscal or financial impact. **Figure 16** highlights selected risk factors, their likelihood of occurrence and their potential impact on the debt portfolio.

Figure 16: Selected Risk and Implications for the Debt Portfolio

Likelihood of Event	Low	Moderate	Major
		Fiscal Impact	
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.	**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. Projections are for oil prices to remain relatively low in the near term, with balanced risks depending on the efficacy of the distribution of vaccines.	**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 are 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 increased marginally over the review period and is estimated at 4.7 percent at end-December 2020.	**Weakened Fiscal Accounts:** The fiscal balance is projected at -4.0 percent of GDP for FY2020/21 compared to a surplus of 0.7 percent 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 the weakened macro-fiscal environment and the impending risks associated with the containment of the pandemic, the risks from the fiscal has been increased to moderate with the expected impact on the debt portfolio also assessed as moderate.	**Natural Disasters:** Natural disasters (floods, hurricane and earthquakes) pose significant fiscal risks to the GOJ. The annual average fiscal cost associated with hydrogeological events is estimated at 0.85 percent of GDP but has been as high as 26 percent of GDP. The adoption of a suite of disaster risk finance instruments including indemnity type insurance coverage and contingent lines of credit will aid in reducing the fiscal impact of natural disasters.
High	**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 (within a year or so), 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 impact 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 spill overs 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 compares the portfolio's sensitivity to adverse changes in key macroeconomic and market variables. Results from the comparative static simulations highlight more acute sensitivity to changes in the exchange rate compared to proportional changes in the interest and inflation rates. A 5.0 percent depreciation in the Jamaica dollar relative to the US dollar will increase the annual adjusted costs by an estimated $69,033.6 million. This compares to $33,095.5 million and $1,883.0 million from a 500 bps increase in benchmark interest rates (domestic and external) and the inflation rate, respectively. Heightened sensitivity to adverse movements in the foreign exchange rate and the magnitude of the impact on adjusted portfolio costs supports the current debt management strategy which seeks to reduce the portfolio's exposure to foreign currency risk.

Table 5: Estimated Portfolio Effects of Changes on key Market Variables

	Change in Macroeconomic Variables		
	1.0%	3.0%	5.0%
	J$ Millions		
Foreign Exchange Depreciation			
Effect on Debt Stock	13,145.2	39,435.6	65,726.1
Effect on Interest Cost	661.5	1,984.5	3,307.6
Total	13,806.7	41,420.2	69,033.6
% of GDP	0.6%	1.9%	3.2%
Increase in Benchmark Interest Rates			
Domestic	2,684.0	8,052.0	13,420.0
External	3,935.1	11,805.3	19,675.5
Total	6,619.1	19,857.3	33,095.5
% of GDP	0.3%	0.9%	1.5%
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%	0.1%	0.1%
Aggregated Effects			
Total	**20,802.4**	**62,407.3**	**104,012.2**
% of GDP	**1.0%**	**2.9%**	**4.8%**

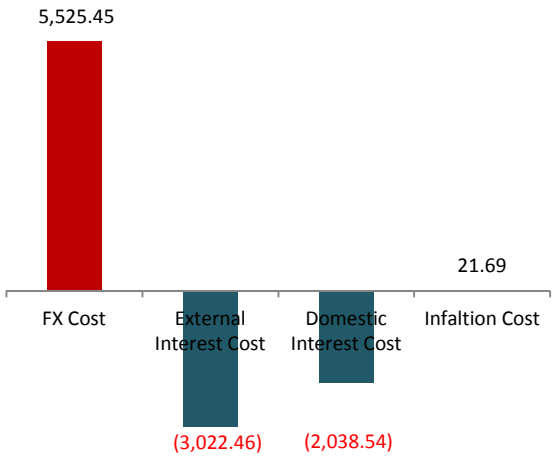
Source: Ministry of Finance and the Public Service

Notwithstanding the comparative static results, actual changes in these variables over the review period were somewhat varied. A 5.4 percent depreciation in the Jamaica dollar relative to the US dollar between April 2020 and December 2020 increased the adjusted cost for the external portfolio by an estimated $5,525.5 million. Relatively aggressive monetary policy actions by

central banks across advanced economies and EMDEs aimed at mitigating the economic effects associated with the spread of COVID-19 pushed benchmark interest rates to their lowest levels in recent history. Reductions in domestic and external benchmark interest rates by 107 bps and 122 bps over the review period, reduced interest cost in the respective portfolios by an estimated $2,038.5 million and $3,022.5 million (see **Figure 17**).

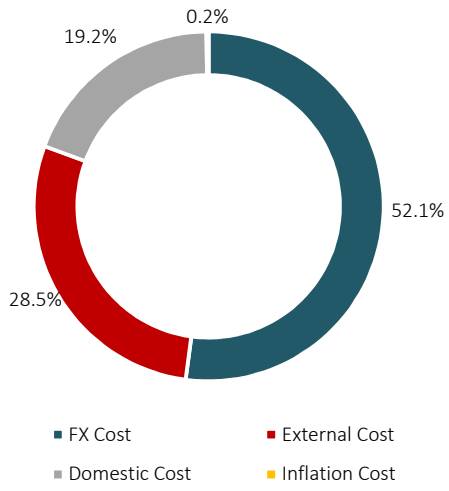
Compared to the previous year, the proportion of the variability in the adjusted portfolio costs associated with changes in the exchange rate decreased while that associated with changes in benchmark interest rates increased (see **Figure 18**). Over the period April 2020 to December 2020, depreciation of the Jamaica dollar relative to the US dollar accounted for an estimated 52.1 percent of the total variation in adjusted portfolio cost. Changes in the external and domestic benchmark interest rates are estimated to account for 28.5 percent and 19.2 percent, respectively. The inflationary effects were constrained to the pass-through to interest payments on CPI-Linked bonds and accounted for only 0.2 percent of the total variation in portfolio costs for the review period.

Figure 17: Effects on Adjusted Costs from Changes in Macroeconomic and Market Variables, April to December 2020



Source: Ministry of Finance and the Public Service

Figure 18: Relative Sensitivity to Changes in Macroeconomic and Market Variables, April to December 2020



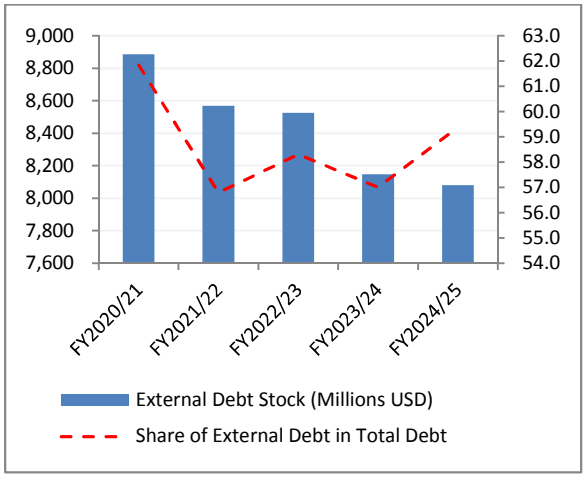
Source: Ministry of Finance and the Public Service

4.2 Dynamic Simulations of Changes in Key Macroeconomic Variables

Reducing the nominal exposure to foreign currency and interest rate risks remains a strategic objective of the MTDS. The nominal value of foreign currency debt in the Central Government portfolio is expected to decrease by US$806.4 million, or 9.1 percent over the medium-term (see **Figure 19**). This will result in estimated savings of approximately $12,509.8 million on an adjusted cost basis over the period. Concomitantly, the share of foreign currency-denominated debt in total debt is expected to decrease to 59.4 percent at end-FY2024/25, 2.4 percentage points lower than the end-FY2020/21 projection.

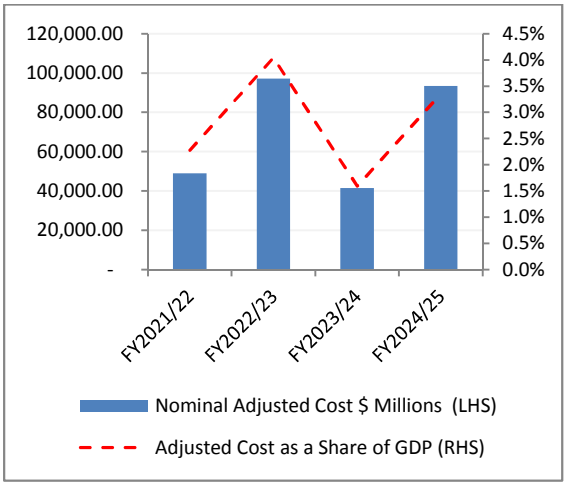
The revaluation effects on the debt stock associated with a 5.0 percent shock to the depreciation rate in each year range between $41,510.7 million or 1.6 percent of GDP and $97,157.1 million or 4.0 percent of GDP (see **Figure 20**). The relatively large revaluation effects in FY2022/23 and FY2024/25 are associated with modest declines in foreign currency-denominated debt, relative to the rate of depreciation in those years.

Figure 19: Change in Foreign Currency 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

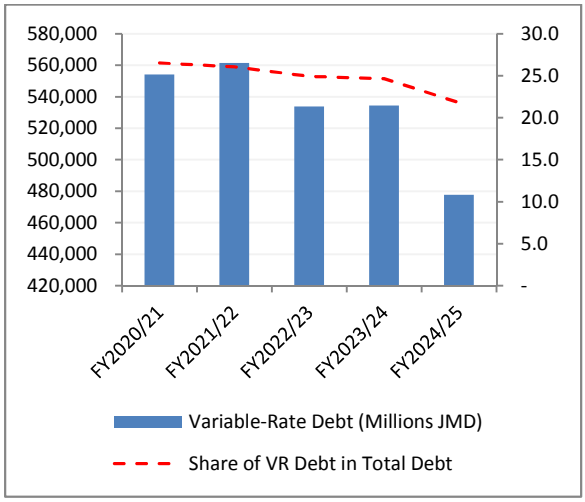
Figure 20: Sensitivity to Changes in the Exchange Rate over the Medium-Term



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

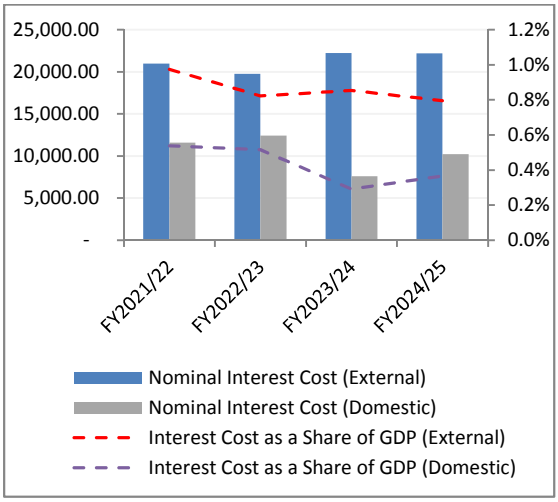
The nominal value of variable-rate debt as well as its share in total debt is also expected to decrease over the medium-term by approximately $76,460.7 million, or 13.8 percent, and 4.7 percentage points, respectively (see **Figure 21**). This reduction is led by the domestic portfolio, where the nominal variable-rate debt is expected to decline by $137,346.0 million, or 72.7 percent, partially offset by an increase in the external portfolio of $60,885.3 million, or 16.7 percent. **Figure 22** highlights the reduction in the portfolio's sensitivity to changes in benchmark interest rates for the domestic and external portfolios over the medium-term by 0.1 and 0.2 percent of GDP, respectively.

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

In general, natural disasters can be classified into three main categories; climate-related, earth-related and biological disasters. While all three categories are important and can have significant deleterious effects on lives and livelihoods, climate-related disasters pose the greatest challenge, recording more significant increases in frequency and intensity over the last 40-50 years. The Caribbean region is the most vulnerable to climate-related disasters, with an estimated annual average damage of 2.0-3.0 percent of GDP. Jamaica is highly susceptible to the impulses of nature, particularly hydro-meteorological events such as tropical cyclones and floods. Given the increase in the probability of occurrence and the intensity of impact, the fiscal and broader economic effects of these events can be significant and necessitates the mainstreaming of disaster risk assessments in the public policy landscape.

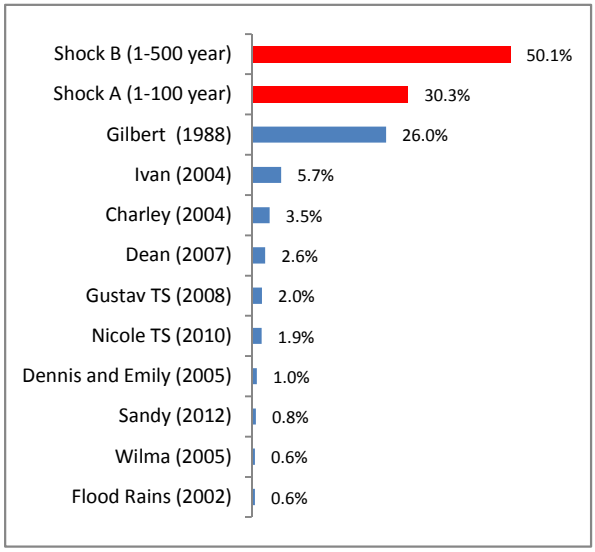
The effect of a natural disaster shock– a major hurricane, was simulated to assess the potential impact on key portfolio indicators and the debt trajectory over the medium-term. Two scenarios were considered, one which examined the potential impact of a 1-in-100 year hurricane and the other which examined the impact of a more devastating event with an estimated return period of 1-in-500 years. **Figure 23** compares the simulated effects of the shocks to that of major weather events in Jamaica over the last three decades. The modelled losses are estimated at between 30.0 percent and 50.0 percent of GDP in the year of impact (FY2022/23).

The simulation assumes that the direct fiscal impact of the event is limited to emergency losses only[6]. These costs are estimated at US$652.8 million or 4.2 percent of GDP and US$970.4 million or 6.2 percent of GDP for a 1-in-100 year and 1-in-500 year storm, respectively. These expenditures are assumed to be partly financed through ex-ante disaster risk financing (DRF) resources currently available to the Government. Total ex-ante resources are estimated at approximately US$390.9 million and US$441.2 million in respect of the 1-in-100 year and 1-in-500 year events, respectively (see **Figure 24**)[7]. The excess of emergency losses over available ex-ante DRF resources of approximately US$261.9 million and US$529.2 million will be financed ex-post from external sources, presumably at less favourable terms compared to the ex-ante financing options.

[6] 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 expenditures to assist the indigent and other vulnerable populations.

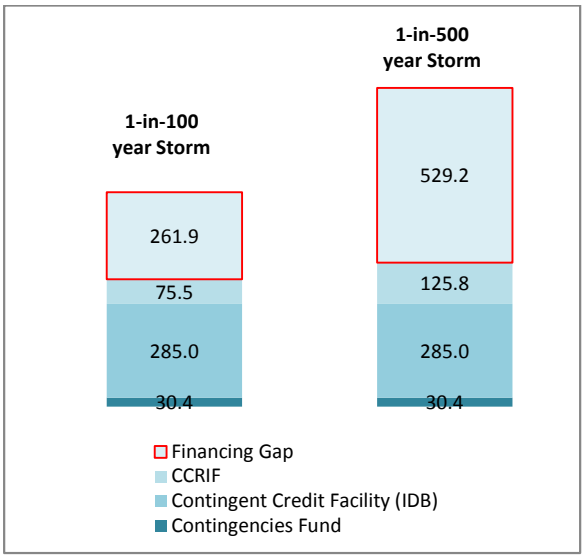
[7] Current ex-ante DRF resources available to the GOJ include the Caribbean Catastrophe Risk Insurance Facility-Segregated Portfolio Company (CCRIF-SPC) insurance policy, IDB Contingent Credit Facility and the Contingencies Fund.

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)



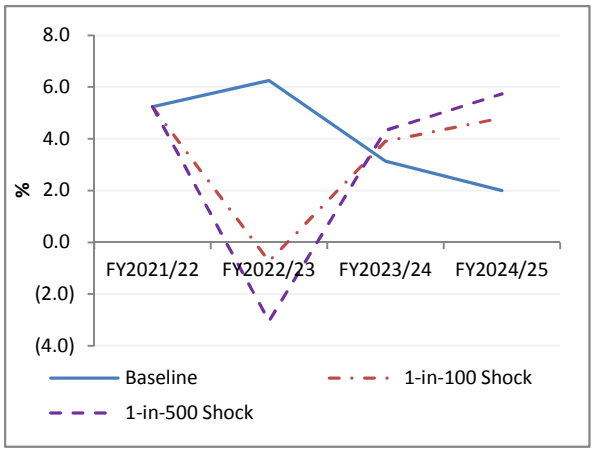
Notes: Figure shows estimates of the financing gap associated with a 1-in-100 year and a 1-in-500 year event given the DRF financing options the GOJ currently has in place.
Source: Ministry of Finance and the Public Service

The associated impact on key macroeconomic and market variables was modelled using additive adjustments to baseline assumptions for real GDP growth, inflation, exchange rates, interest rates and the primary balance. **Figure 25** highlights the projected impact on real GDP growth over the medium-term under the baseline and the shock scenarios. Average real economic growth over the medium-term is expected to decline from a baseline of 4.2 percent to 3.3and 3.1 percent under the 1-in-100 year, and 1-in-500 year shocks, 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. The model further assumes a parallel outward shift in the domestic yield curve by 300 bps, highlighting increased credit risk in the aftermath of the disaster. The risk spread for JAMAN global bonds was also increased by 300 bps in FY2022/23 and FY2023/24, after which it is assumed to return to the baseline. A minor adjustment of 50 bps was made to bilateral rates while multilateral rates are assumed unchanged.

The deterioration in the primary balance relative to the baseline in the first two years results from increased expenditures associated with disaster relief and recovery and the attendant weaker revenue performance due to slowing economic activity post disaster (see **Figure 26**). However, the pass-through in the year of impact is tempered by available funding from the Contingencies Fund and the CCRIF-SPC. The trajectory of the primary balance implies a suspension of the fiscal rule (utilizing the escape clause in the Financial Administration and Audit (FAA) Act) in

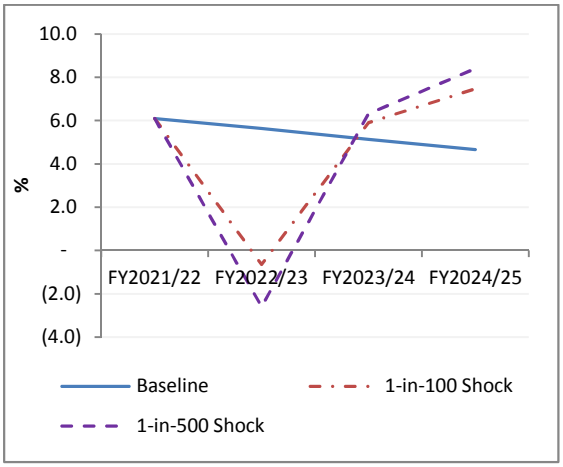
the year of and the year after the event. The higher primary balance in the third year is consistent with the requirement to ensure a return to a sustainable debt path.

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

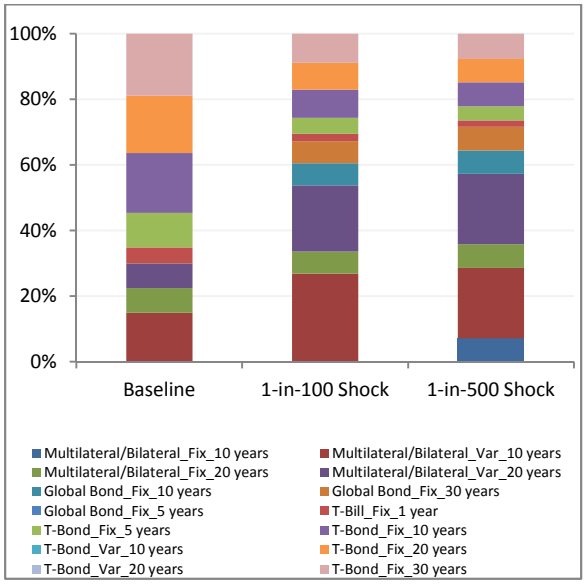
Figure 26: Primary Balance-to-GDP under Baseline and Shock Scenarios



Source: Ministry of Finance and the Public Service

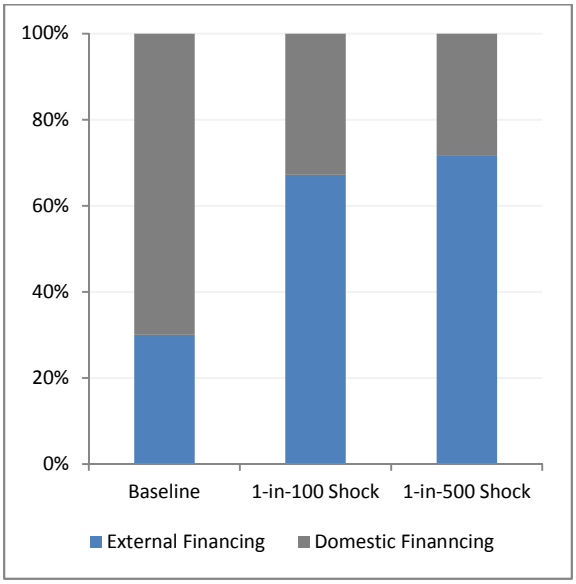
The simulated impact on the debt portfolio is contingent on the severity of the event, the effects on key market and macroeconomic variables and the financing strategy of the GOJ in a post-disaster environment. The model assumes deviations from the current financing strategy (**S1**) in the year of impact to reflect additional financing requirements estimated at $154,387.3 million resulting from the 1-in-100 year event, and $199,382.5 million for the 1-in-500 year event. It is assumed that the additional financing will be funded primarily from multilateral/bilateral sources and the international capital markets (ICM). The drawdown on the contingent credit facility from the IDB in the year of the shock represents variable-rate financing from a multilateral source amounting to US$285.0 million. This results in higher external and variable-rate financing relative to the baseline **S1** in both scenarios. Nonetheless, the strategy maintains the position of majority fixed-rate financing, with longer tenors, but results in majority external financing in the year of impact (see **Figures 27 and 28**).

Figure 27: Gross Financing by Instrument under Baseline and Shock Scenarios FY2022/23



Source: Ministry of Finance and the Public Service

Figure 28: External and Domestic Financing under Baseline and Shock Scenarios FY2022/23

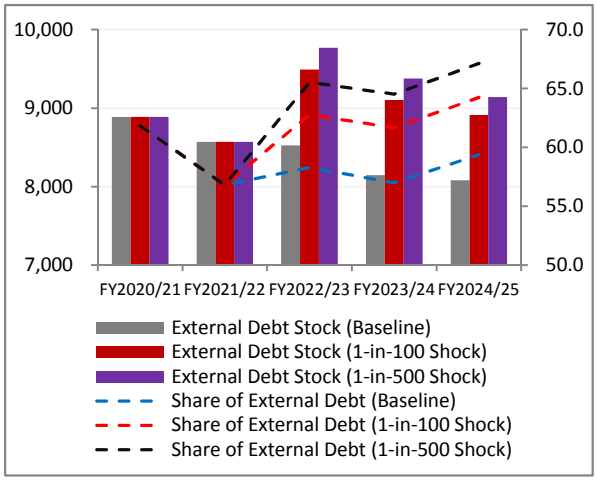


Source: Ministry of Finance and the Public Service

Figure 29 highlights the projected change in foreign-currency denominated debt over the medium term under the baseline and shock scenarios. Whereas the foreign currency-denominated debt stock is expected to decrease by US$806.4 million, or 9.4 percent over the medium term, a 1-in-100 year shock would result in an increase of US$26.9 million, or 0.3 percent. The 1-in-500 year shock would have a more material impact, increasing the stock by US$254.2 million, or 2.9 percent over the medium term. Concomitantly, the share of foreign currency-denominated debt in total debt at end-FY2024/25 is expected to increase by 4.9 and 7.7 percentage points relative to the baseline under the 1-in-100 year and 1-in-500 year shock, respectively.

Given the increased credit risk post-disaster, and the need to seek financing in the ICM, interest cost-to-GDP is expected to increase relative to the baseline. Under the baseline, interest cost-to GDP is expected to decrease over the period, averaging 5.1 percent. The 1-in-100 year and 1-in-500 year shocks increase this average to an estimated 5.4 and 5.5 percent, respectively (see **Figure 30**).

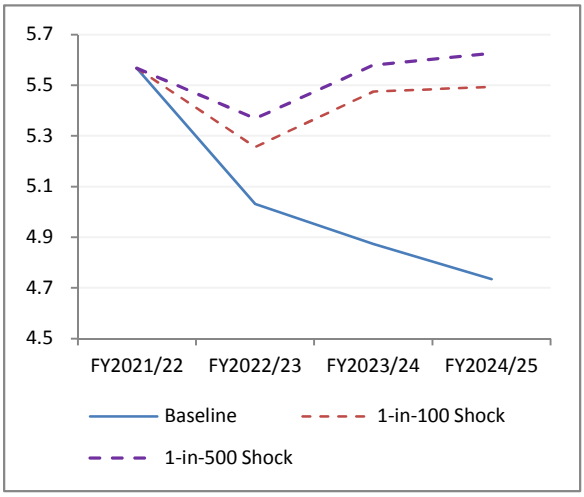
Figure 29: Change in Foreign Currency Denominated Debt under Baseline and Shock Scenarios



Notes: External debt stock in US$ millions on the LHS and share of external debt in total debt on the RHS

Source: Ministry of Finance and the Public Service

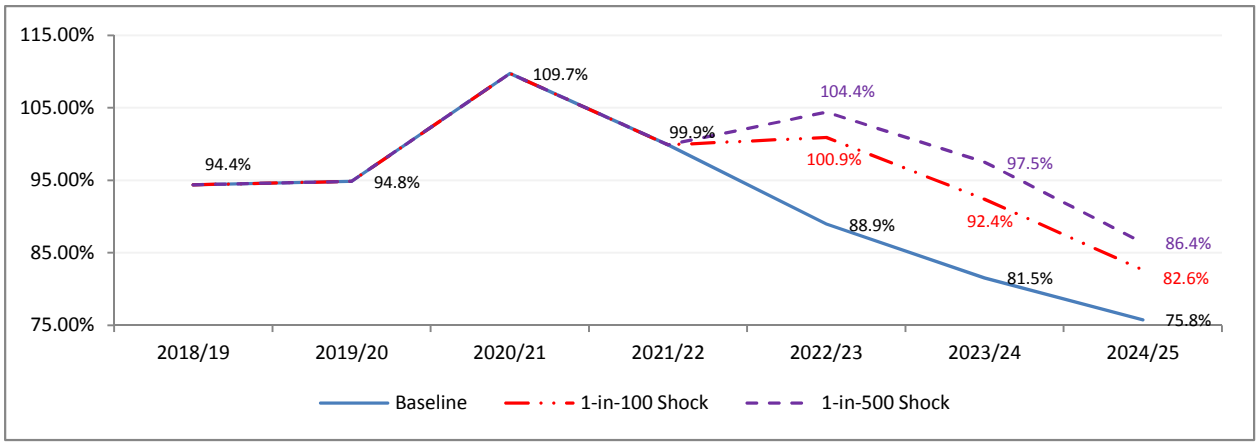
Figure 30: Interest Cost-to-GDP under Baseline and Shock Scenarios



Source: Ministry of Finance and the Public Service

Figure 31 shows the projected impact of the shock on the debt-to-GDP trajectory over the medium-term. A higher debt burden and the contraction in nominal GDP relative to the baseline is estimated to increase the debt over-hang at end-FY2024/25 by 6.9 percentage points under the 1-in-100 year shock and 10.6 percentage points under the 1-in-500 year shock. The higher debt-to-GDP trajectory under both shock scenarios would significantly jeopardize the realization of the debt-to-GDP target of 60.0 percent or less by FY2027/28.

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

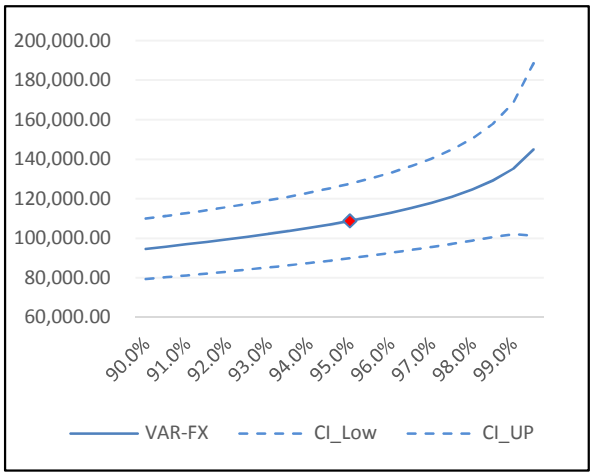


Source: Ministry of Finance and the Public Service

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

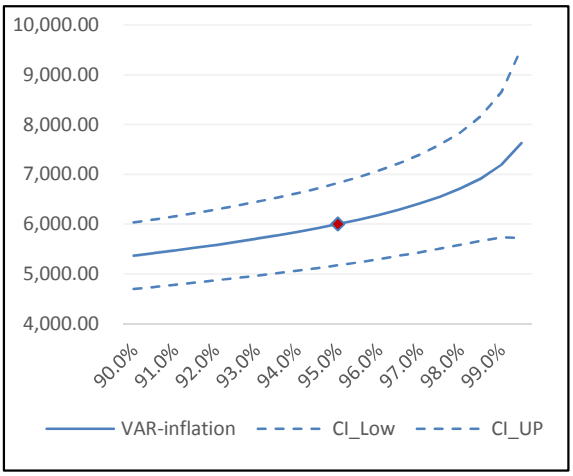
Value at Risk (VaR) and Cost at Risk (CaR) estimates provide an indication of the maximum increase in value and costs for the debt portfolio for a given confidence level based on the historical performance[8] of macroeconomic and market variables. Conditional VaR (CVaR) and Conditional CaR (CCaR) measure tail risk as it captures the average of extreme values beyond the VaR or CaR level. VaR estimates for FY2021/22 suggest that there is a 95.0 percent probability that the debt stock will not increase by more than $108,786.6 million and $6,000.7 million over a one-year period, in response to changes in the exchange rate and inflation rate, respectively (see **Figures 32 and 33**). CVaR estimates for FY2021/22 at the 95.0 percent confidence level was $125,014.6 million for the JMD/USD exchange rate, and $6,729.8 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

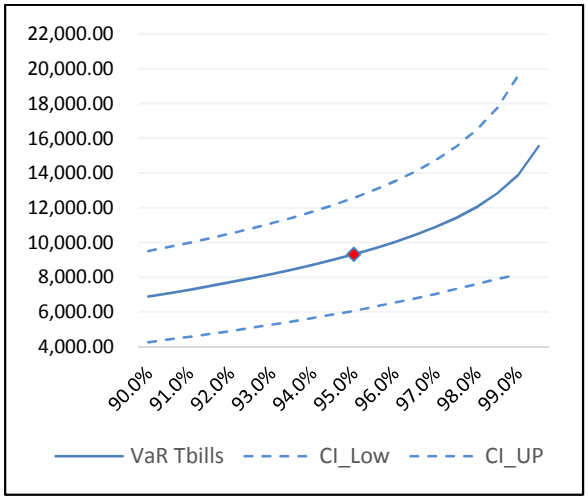


Source: Ministry of Finance and the Public Service

CaR estimates for changes in benchmark interest rates in the domestic and external markets suggest that there is a 95.0 percent likelihood that changes in the 3-month T-bill and 3-month US Libor will increase debt service costs by a maximum of $9,319.3 million and $7,667.4 million, respectively (see **Figures 34 and 35**). This compares to conditional cost at risk (CCaR) estimates of $12,114.0 million for the 3-month T-bill and $9,680.6 million for the 3-month US Libor. The CaR and CCaR estimates highlight that the debt portfolio is exposed to higher levels of interest rate volatility in the domestic market than the external market.

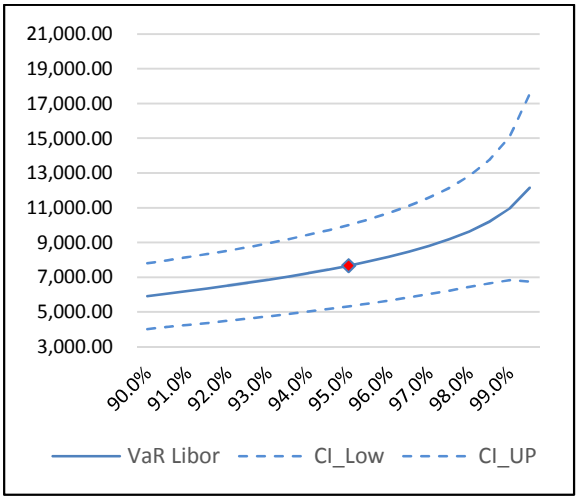
[8] VaR, CaR and CVaR estimates were calculated using the last 20 years of historical data.

Figure 34: Domestic Benchmark Interest Rate



Source: Ministry of Finance and the Public Service

Figure 35: CAR External Benchmark Interest Rate

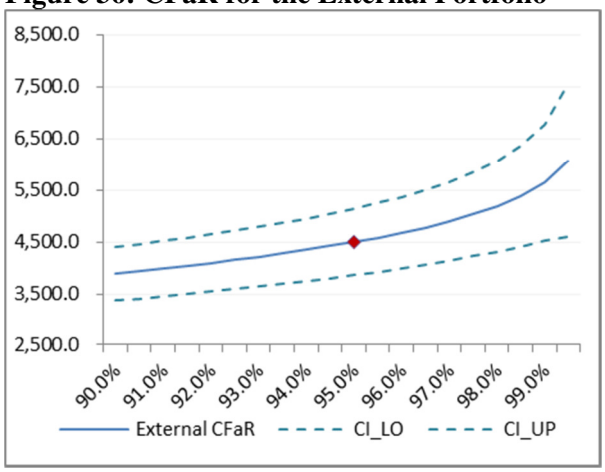


Source: Ministry of Finance and the Public Service

4.5 Cash Flow at Risk (CFaR) Estimates for FY 2021/22

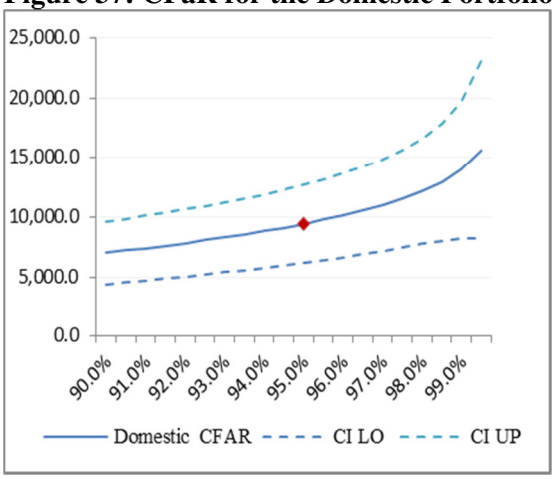
Figure 36 and **Figure 37** highlight the CFaR for FY2021/22 for the external and domestic portfolios. The CFaR estimate for the external portfolio captures both foreign currency and interest rate risk, while the estimate for the domestic portfolio accounts for interest rate and inflation risk. The 95.0 percent CFaR for the external and domestic portfolios were estimated at $4,498.9 million and $9,452.4 million, respectively. Conditional cash flow at risk for the domestic portfolio is estimated at $12,246.7 million compared to $5,202.5 million for the external portfolio.

Figure 36: CFaR for the External Portfolio



Source: Ministry of Finance and the Public Service

Figure 37: CFaR for the Domestic Portfolio



Source: Ministry of Finance and the Public Service

SECTION V: MACROECONOMIC OVERVIEW

The onset and spread of COVID-19 has significantly disrupted the global economy, resulting in the deepest global recession since World War II. Rapid growth in infections, hospitalizations and COVID-19 related deaths prompted the WHO to declare the outbreak as a Public Health Emergency of International Concern in January 2020 and a pandemic in March 2020. Efforts to combat the spread of the virus were accelerated in March 2020, and manifested in what has been described as the "great lockdown", which saw the closure of international borders and the implementation of stay at home orders across some countries. The gradual reopening of most economies in June 2020 provided a fillip to economic activity, however, a sharp resurgence infections saw some economies reverting to full or partial lockdown.

The global economy is projected to contract by 3.5 percent in 2020, reflecting negative output gaps and elevated unemployment rates associated with the pandemic. The forecast, however, is improved relative to earlier projections, buoyed by multiple vaccine approvals and the initiation of inoculation processes across several countries. Global growth is projected to recover to 5.5 percent in 2021, reflecting varied rates of recovery across economies. However, risks to the growth forecast depend on the persistence of the pandemic, particularly given recent discoveries of new strains of the virus and the effectiveness of governments' response measures, including countries ability to access and effectively distribute vaccines.

Emerging market economies (EMEs) were more susceptible to the impact of the pandemic than advanced economies. This was due partly to the relatively high level of informality within these economies, which retards the effectiveness of the fiscal and monetary policy responses of the respective governments. Structural factors, including a dependence on commodity exports (oil in particular) and on contact intensive sectors such as tourism serve as compounding factors. Growth among EMEs is forecasted to contract by 2.4 percent in 2020 but is expected to rebound to 6.3 percent in 2021. Among the group of EMEs, Latin America and Caribbean (LAC) economies were the most severely impacted with growth projected at -7.4 percent for 2020 and a recovery to 4.1 percent in 2021. Overall, the sharp downturn for LAC economies reflects the disproportionate effect of the pandemic on countries with fragile healthcare systems with heavy dependence on the services industries such as tourism.

The negative economic impact of COVID-19 on the global financial market was evident as market volatility reached its highest level since 2008. At the start of the pandemic, EMEs suffered a significant decline in capital flows as investors sought safe haven assets in which to invest. The extensive dollar liquidity stimulus by the US Federal Reserve which provided access to its US dollar liquidity swap to several EMEs, assuaged investors' concerns to some extent and

contributed to a redirection of capital back to the EMEs. EMEs also benefited from an unprecedented monetary policy response across advanced and other emerging economies in which central banks implemented several countercyclical measures including: lowering policy rates, expanding the range of assets accepted as collateral, large scale asset purchase, and direct credit provision to large investment-grade companies. Notwithstanding these measures, recovery in the financial markets remains subdued with currency depreciation across many countries, considerable reductions in remittances, rising debt levels and widening of spreads on high-yield securities.

Jamaica entered the pandemic with strong macro-fiscal fundamentals. However, significant increases in expenditures on COVID-19 related activities and significantly lower revenue inflows have impaired the Government's fiscal accounts. Estimates of the fiscal impact of the virus saw the projected FY2020/21 primary and fiscal balances reducing from 6.5 percent and 0.7 percent pre-pandemic to 3.0 percent and -4.0 percent, respectively. The combined effects of deteriorated fiscal accounts and a sharp contraction in growth contributed to an increase in the debt to GDP by an estimated 15.3 percentage points. Given the magnitude of the impact of the shock and the fiscal space needed for Government to effectively respond to the social and economic fallout, the target date for the achievement of a debt to GDP ratio of 60.0 percent or less was extended by two years to FY2027/28.

Annual point-to-point inflation at end-November 2020 was 4.3 percent, which was lower than the 6.3 percent recorded at end-June 2020 and within the targeted band of 4.0 percent – 6.0 percent. This decrease resulted from lower domestic agricultural food prices induced by improvements in agricultural supplies and reduction in education costs. Inflation is expected to track within the targeted band over the medium-term.

In response to the pandemic, the BOJ has been proactive in ensuring adequate supply of liquidity to the financial markets. The Bank maintained its accommodative monetary policy stance, keeping the policy rate at 0.50 percent. Accompanying measures implemented by the BOJ to boost the level of liquidity included a reduction in the foreign and domestic currency cash reserve requirement by 2.0 percentage points, the implementation of a bond buyback programme and the establishment of a liquidity window for financial institutions. These measures have contributed to a general reduction in money market interest rates and yields on GOJ treasuries. Short-term interest rates fell to historic lows with yields on the benchmark 3-month T-bill averaging 0.76 percent in December 2020, 109 bps lower than the 1.85 percent recorded in March 2020 and 56 bps lower than the 1.32 percent recorded in December 2019.

The current account deficit (CAD) for the 12-month period ending June 2020 was US$294.8 million, US$117.9 million less than the previous year. The reduction was bolstered by improvements in the goods balance reflecting a fall in exports that was outweighed by reductions in imports and a strong performance in remittance inflows. This was mitigated by a decline in tourism resulting in a lower services balance. Over the near-term, the CAD is expected to deteriorate, before improving over the medium-term due to lower imports and higher inflows of remittances. Foreign currency outflows from GOJ and net B-FXITT sales contributed to a reduction in the net international reserves (NIR) which stood at US$3,126.13 million at end-December 2020, a decrease of US$111.54 million relative to end-March 2020.

Lower output from the tourism, construction and mining and quarrying sectors contributed to an economic contraction of 0.1 percent for FY2019/20. An assessment of the economic impact of the pandemic highlights a further contraction of an estimated 11.6 percent in FY2020/21. Real GDP is expected to grow by approximately 5.2 percent in FY2021/22 and 6.2 percent in FY2022/23. Notwithstanding the potential risks to growth, which includes adverse weather conditions, plant downtime in industrial sectors, and slower than anticipated growth in the global economy, growth is projected to average in the range of 3.0 percent to 4.0 percent over the medium-term (see **Table 6**).

Table 6: Medium-Term Macroeconomic Framework

	FY2019/20 Actual	FY2020/21 Projected	FY2021/22 Projected	FY2022/23 Projected	FY2023/24 Projected	FY2024/25 Projected
Nominal GDP ($mn)	2,121,190.7	1,948,019.2	2,154,021.9	2,403,647.9	2,603,185.6	2,788,778.0
Nominal GDP Growth Rate (%)	3.4	-8.2	10.6	11.6	8.3	7.1
Real GDP Growth Rate (%)	-0.1	-11.6	5.2	6.2	3.1	2.0
Annual Inflation Pt. to Pt.	4.8	6.3	5.1	5.0	5.0	5.0
Fiscal Balance (%)	0.9	-4.0	0.3	0.3	0.3	0.3
Primary Balance (%)	7.1	3.0	6.1	5.6	5.1	4.7
Benchmark Interest Rates						
90-day Treasury Bill Yield (average)	1.71					
90-day Treasury Bill Yield (eop)	1.85					
Net International Reserves (NIR) (US$mn)	3,237.7	2,942.4	2,582.6	2,921.2	2,626.9	2,870.8
Currenct Account Balance (% GDP)	-1.6	-1.7	-3.3	-4.3	-3.9	-2.7
Oil Prices (WTI) Average US$/barrel)	54.85	37.8	45.6	53.3	56.3	56.7

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 FY2021/22-FY2024/25 is derived from a quantitative assessment of five alternative strategies geared towards meeting established medium-term targets for key debt and risk indicators, using the IMF/World Bank MTDS Toolkit. The stock of debt used in this analysis includes Central Government debt and Government guaranteed loans currently serviced by the Government.

6.1 Baseline Assumptions and Exogenous Shock Scenarios

The modelling of the MTDS utilizes forecasts of the Government's fiscal balances as well as key macroeconomic and market variables to produce baseline estimates for portfolio cost and risk indicators under varied financing strategies over the medium-term. To determine the sensitivity of main portfolio indicators under the respective strategies, stress tests were carried out, whereby exogenous shocks were applied to the baseline interest and exchange rate assumptions. Four stress scenarios were examined:

- **Scenario 1** represents an extreme shock to the JMD/USD exchange rate and assumes that the rate depreciates by an additional 30.0 percent in year two of projections;
- **Scenario 2** is a moderate shock to interest rates in year two, and assumes 1.0, 2.0 and 1.25 percentage points 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 3**.[9]

6.2 Medium-Term Targets

The strategic objectives established in the MTDS require consistent monitoring and assessment to ensure convergence of portfolio indicators with clearly established targets over the medium-term. **Table 7** highlights the projected outturn for key risk indicators for FY2020/21, relative to the targets established in the MTDS FY2020/21-FY2023/24, as well as new targets set for FY2021/22 and the medium-term (FY2024/25). In general, the indicators are expected to be in line with targets for FY2020/21. However, debt-to-GDP is projected to end the fiscal year

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

above target, given the severe economic effects of the COVID-19 pandemic. As the economy rebounds, debt-to-GDP is expected to improve, consistent with the target set for the medium-term.

Table 7: Key Portfolio Targets for FY2021/22 and the Medium-Term

Risk Indicators	Projected	Targets		
	End-Mar 2021	End-Mar 2021	End-Mar 2022	End-Mar 2024
Nominal Debt-to-GDP (%)	**110.1**	**88.0**	**100.0**	**85.0**
Refinancing Risk				
Average Time-to-Maturity (ATM - years)	10.9	>=9	>=9	>=9
Share Maturing within one year (%)	5.8	<=10.0	<=10.0	<=10.0
Interest rate risk				
Domestic				
Share Variable-Rate (%)	23.7	30.0	30.0	30.0
Debt Refixing in 1 year (%)	29.1	35.0	35.0	35.0
Average Time-to-Refixing (ATR - years)	8.5	8.0	8.0	10.0
External				
Share Variable-Rate (%)	28.3	30.0	30.0	30.0
Debt Refixing in 1 year (%)	32.4	30.0	30.0	25.0
Average Time-to-Refixing (ATR - years)	9.3	8.0	8.0	10.0
Total				
Share Variable-Rate (%)	26.5	30.0	30.0	30.0
Debt Refixing in 1 year (%)	31.1	32.0	32.0	30.0
Average Time-to-Refixing (ATR - years)	9.0	8.0	8.0	10.0
Foreign Currency Risk				
Share of Foreign Currency Debt (%)	61.8	<=61.0	<=61.0	<=58.0

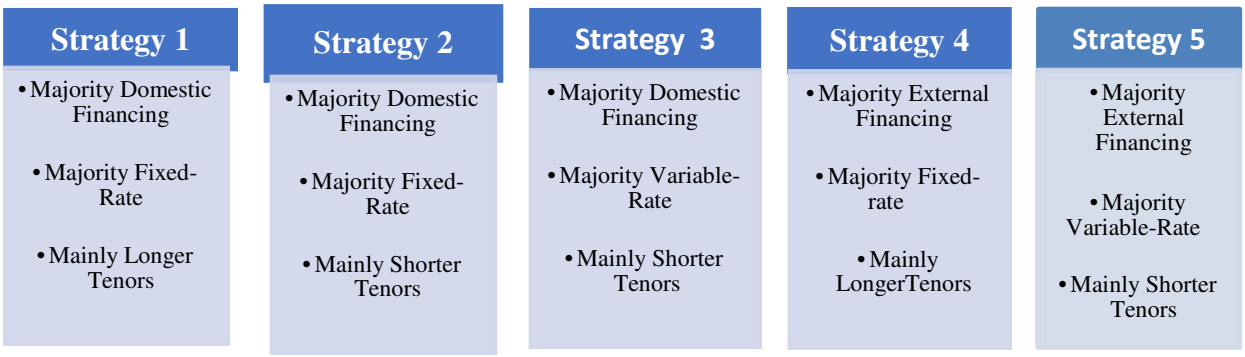
Source: Ministry of Finance and the Public Service

Among the risks to the achievement of the established targets are: slower economic recovery resulting from more prolonged impact of the health crisis than expected; a higher rate of depreciation of the Jamaica dollar relative to the US dollar; tightening of financial market conditions; 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



Source: Ministry of Finance and the Public Service

Under **Strategy 1 (S1)**, 70.0 percent of total financing over the medium-term will be sourced from the domestic market. This alters the current medium-term debt management strategy (which targets 80.0 percent domestic market financing), in that it entails an increased reliance on external debt relative to the current strategy. The adoption of a "70:30" rule in respect of the ratio of domestic to external financing represents a departure from the previous medium-term target of "80:20". The adjustment was induced by a reassessment of the appropriate financing options in the context of the pandemic, which highlighted a need for increased external financing over the near to medium-term.

The strategy also seeks to reduce the portfolio's exposure to refinancing risks by borrowing across mainly longer tenors. To satisfy domestic market demand for shorter-tenor instruments, the GOJ will also issue securities with maturities of five years or less over the medium-term. Overall, domestic issuances are spread across the yield curve and should augur well for further developing the domestic debt market. Unlike the current debt management strategy which features only fixed-rate debt, 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.

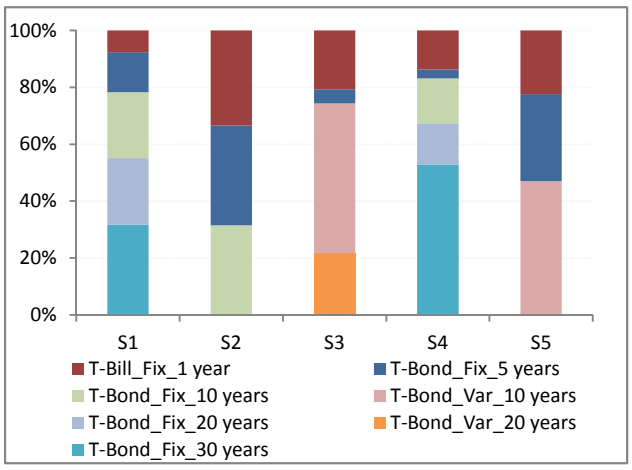
Strategies 4 (S4) and **5 (S5)** exacerbate the imbalance in the debt portfolio by increasing reliance on external financing. Both strategies assume that the domestic market is not sufficiently deep and liquid to absorb total financing requirements and as such, 70.0 percent of total financing needs will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

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

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

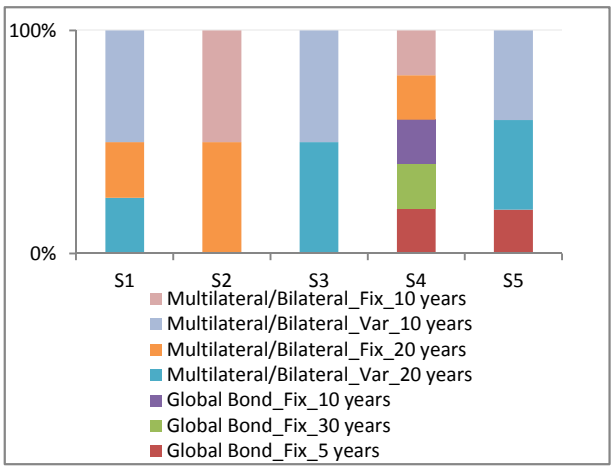
Financing details for domestic and external borrowing for all five strategies are summarized in **Figures 39 and 40**.

Figure 39: Domestic Financing by Instrument



Source: Ministry of Finance and the Public Service

Figure 40: External Financing by Instrument



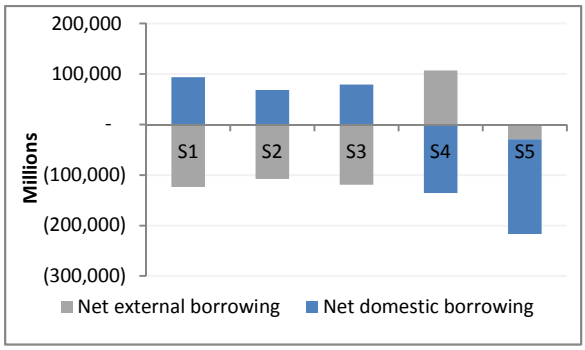
Source: Ministry of Finance and the Public Service

6.4 Toolkit Output – Results for Alternative Financing Strategies

The financing strategies are evaluated on their effectiveness in satisfying debt management objectives over the medium-term. Among these objectives is the reduction in exposure to foreign

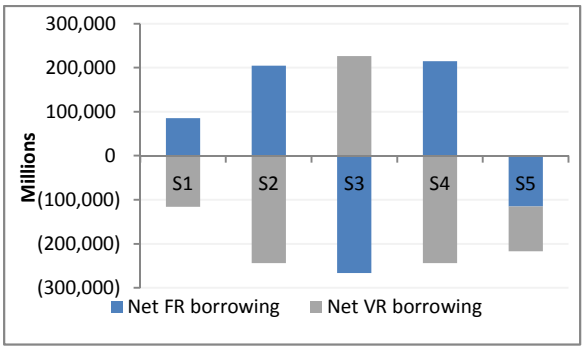
currency and interest rate risks. **Figures 41** and **42** show the net financing flows to the domestic and external portfolios, and the fixed-rate and variable-rate portfolios, respectively. **S1, S2** and **S3** result in net outflows from the external portfolio, as these strategies prioritize mainly domestic borrowing. In contrast, **S4** and **S5**, which prioritize external borrowing, result in large outflows from the domestic portfolio, relative to the external portfolio (see **Figure 41**). As depicted in **Figure 42**, **S1**, **S2** and **S4** result in large net outflows from the variable-rate portfolio and net inflows to the fixed-rate portfolio. This is in contrast to **S3** which results in net outflows from the fixed-rate portfolio and inflows to the variable-rate portfolio. While **S5** shows net outflows from both portfolios, the outflows from the fixed-rate portfolio outweigh those from the variable-rate portfolio.

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

The five financing strategies were assessed based on the cost and risk indicators projected for the end of the review period. The indicators, as well as the quantitative scores for the strategies are outlined in **Table 8**. **S1** is selected as the preferred financing strategy, with a quantitative score of 8.7 out of 10. The strategy's composition of mainly domestic debt instruments results in a marginally higher interest cost than the cost-minimizing strategy, **S5**, as domestic market rates tend to be higher than those in the external market. Notwithstanding, **S1** outperforms the other four strategies in addressing concerns of refinancing and foreign currency risks. As it relates to interest rate risk, **S1** is ranked second to **S4** as it incorporates variable-rate debt instruments in the external market, whereas **S4** focuses only on fixed-rate instruments. However, a reduction in variable-rate debt is expected over the medium-term under both strategies, with **S1** projecting an outturn of 21.8 percent at end-FY2024/25. While **S5** minimized cost, the strategy performed poorly in the area of foreign currency risk mitigation, with a projected outturn of 70.0 percent for the share of foreign currency-denominated debt in total debt. Under **S1**, 59.4 percent of the debt portfolio is projected to be denominated in foreign currency at end-FY2024/25. **S3** performed second-best with an overall score of 6.6 out of 10. However, given the strategy's focus on mainly variable-rate debt, interest rate risks are heightened, and the share of variable-rate debt to total debt is projected to increase to 37.7 percent over the medium-term.

Table 8: Cost and Risk Indicators for Alternative Financing Strategies

Cost and Risk Indicators		end-2021 (est)	As at end-2025				
			S1	S2	S3	S4	S5
Cost	Interest payment (% of GDP)	6.2	4.7	4.6	4.6	4.8	4.5
	Implied interest rate (%)	5.7	6.1	5.9	6.0	6.1	5.9
Refinancing risk	Debt maturing in 1yr (% of total)	5.8	4.3	7.2	5.9	4.4	4.5
	Debt maturing in 1yr (% of GDP)	6.3	3.4	5.6	4.6	3.5	3.5
	ATM External Portfolio (years)	11.5	9.8	9.8	9.8	10.3	9.7
	ATM Domestic Portfolio (years)	9.8	12.3	7.7	9.6	11.2	9.9
	ATM Total Portfolio (years)	10.9	10.9	9.0	9.8	10.6	9.8
Interest rate risk	ATR (years)	9.0	9.5	8.0	6.8	9.6	8.1
	Debt refixing in 1yr (% of total)	31.1	24.8	21.7	42.2	18.8	29.9
	Fixed rate debt (% of total)	73.5	78.2	84.2	62.3	84.3	73.1
FX risk	FX debt (% of total)	61.8	59.4	60.4	59.8	70.0	70.0

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	0.2	0.5	1.4	1.2	0.2	1.5
Third Best Outcome	6	Refinancing risk	0.3	2.5	0.3	1.3	2.0	1.7
Fourth Best Outcome	4	Interest rate risk	0.1	0.7	0.7	0.1	1.0	0.5
Least Favoured Outcome	1	FX risk	0.5	5.0	3.0	4.0	0.5	0.5
			1.0	**8.7**	**5.3**	**6.6**	**3.7**	**4.1**

Source: Ministry of Finance and the Public Service

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

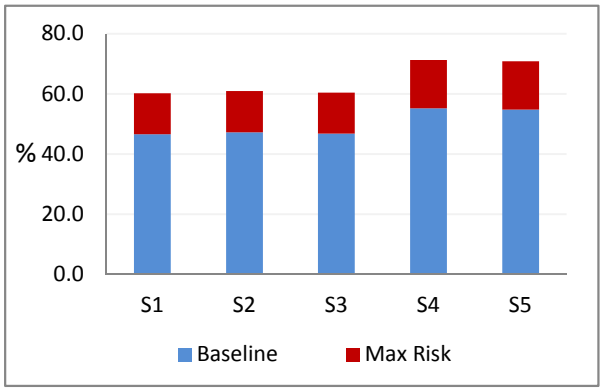
Figures 43 to **46** highlight the maximum risk[10] for key portfolio indicators under each of the five strategies, using the projected outturns for end-FY2024/25. Baseline external debt-to-GDP is highest under **S4** at 55.2 percent, with a maximum risk of 16.1 percentage points. **S1** projects the lowest baseline outturn, 46.7 percent, as well as the lowest maximum risk of 13.6 percentage points (see **Figure 43**). External debt service-to-NIR is highest under **S4**, with a baseline projection of 33.9 percent. This is 1.9 percentage points higher than the projections for **S1** and **S3**. The maximum risk under **S4** is also highest at 10.0 percentage points, compared to 9.4 percentage points for **S1** and **S3** (see **Figure 44**).

As it relates to interest cost, **S1** results in a marginally higher baseline interest cost-to-GDP than the cost-minimizing strategy, **S5** (see **Figure 45)**, but both record similar levels of risk at 0.8 percentage points. Total debt service under **S1** is relatively low, second only to **S5** (see **Figure 46**). This is attributed to smaller amortization obligations associated with longer tenor

[10] Maximum risk is determined by the largest impact on each of the portfolio indicators from the four stress scenarios discussed previously.

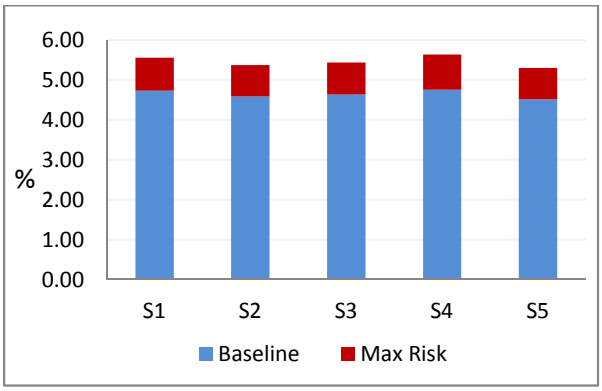
debt instruments, which is a key feature of the preferred strategy. **S2**, which prioritizes short term borrowing, is most sensitive with maximum risk of 2.1 percentage points, compared to 1.8 percentage points under **S1**. Overall, the cost and risk analysis of the five financing strategies supports the selection of **S1** as the optimal strategy.

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



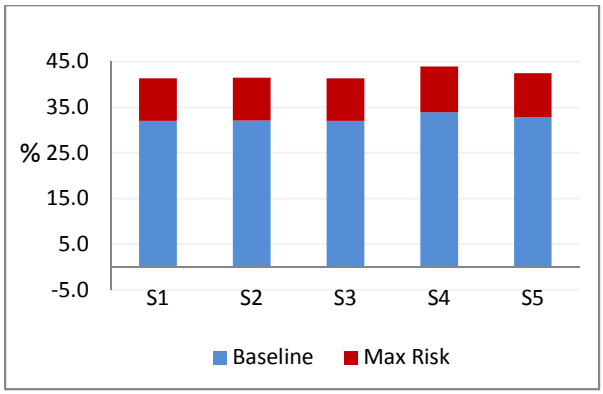
Source: Ministry of Finance and the Public Service

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



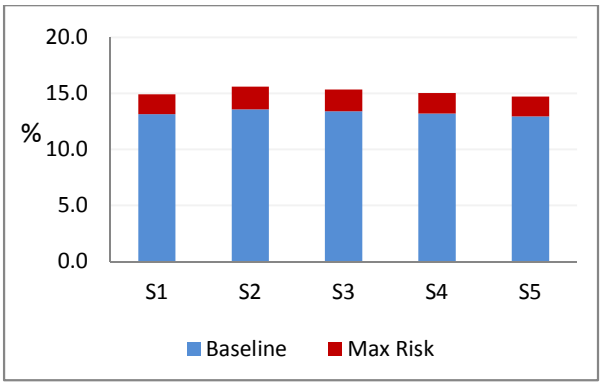
Source: Ministry of Finance and the Public Service

Figure 45: Sensitivity of External Debt Service-to-Net International Reserves



Source: Ministry of Finance and the Public Service

Figure 46: Sensitivity of Debt Service-to-GDP to Shocks



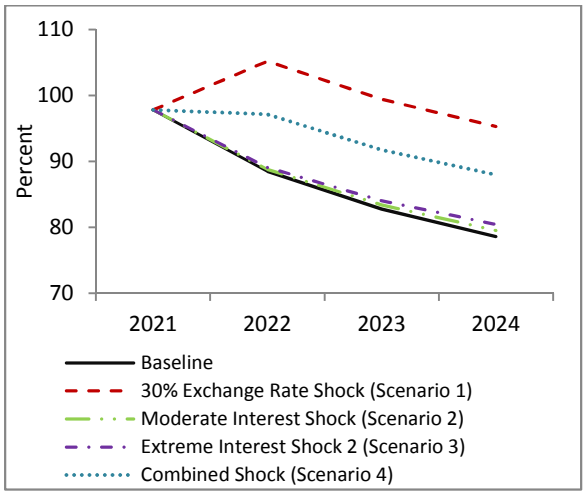
Source: Ministry of Finance and the Public Service

6.4.2 Dynamic Effects of Shocks to Baseline Macroeconomic Variables

Figures 47 to **50** show the dynamic effects of the four shock scenarios on baseline projections for **S1** over the medium-term. Results highlight that the debt portfolio is most susceptible to shocks to the exchange rate.

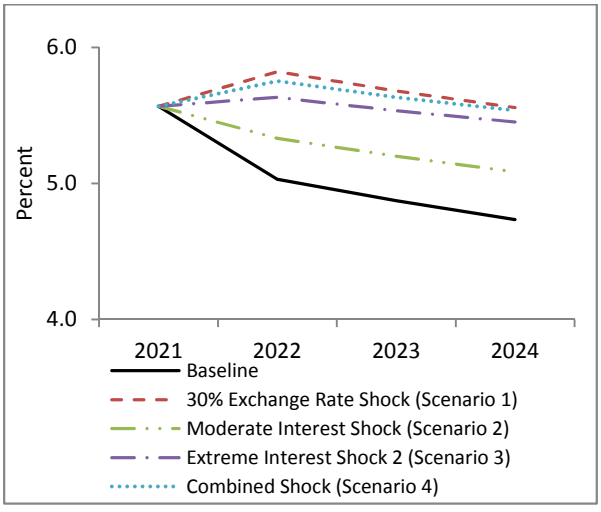
A 30.0 percent shock to the baseline exchange rate assumption for FY2022/23 is projected to increase debt-to-GDP by 16.7 percentage points at end-FY2024/25, relative to the baseline. The combined shock (**Scenario 4**) also had a significant impact, increasing the baseline estimate by 9.4 percentage points (see **Figure 47**). As it relates to debt service costs, the exchange rate shock is again most significant. Over the medium-term, baseline interest cost-to-GDP is projected to average 5.1 percent. **Scenario 1** increases this average by 0.6 percentage point, even more than the moderate and extreme interest rate shocks (**Scenarios 2** and **3**) which raise the average interest cost by 0.2 and 0.4 percentage point, respectively. **Scenario 4** which combines a more moderate exchange rate shock with the interest rate shock described in **Scenario 3** also had a considerable impact on interest cost-to-GDP, increasing the medium-term average by 0.5 percentage point. The order of the impacts is similar for shocks to debt service-to-GDP and nominal external debt service, with the medium-term averages increasing by as much as 1.3 percentage points and US$192.0 million, respectively, relative to the baseline (see **Figures 49** and **50**).

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



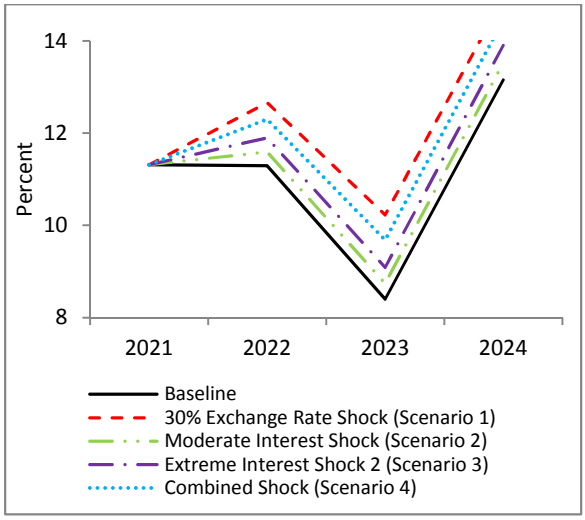
Source: Ministry of Finance and the Public Service

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



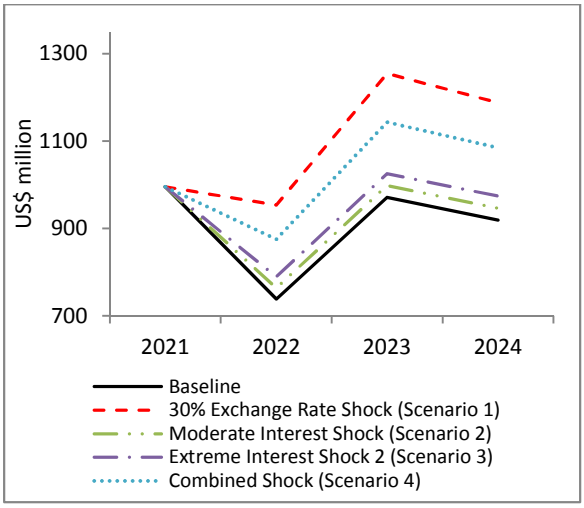
Source: Ministry of Finance and the Public Service

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 Central Government's fiscal gap for FY2021/22 will be supported by the Annual Borrowing Plan (ABP) which comprises the sources of funding that the Government intends to utilize to satisfy its programmed financing needs. The expected inflows will be accessed from the domestic market and official sources in proportions consistent with the medium term debt management strategy.

The coronavirus pandemic resulted in a reduction in expected revenue inflows during FY2020/21. Given the need to address the impact of the pandemic, the Government increased its level of borrowing during the year. Consequent on the negative economic effect of the pandemic, the timeline to achieve the legislated debt target of reducing the debt-to-GDP to 60.0 percent or lower was adjusted from end-FY2025/26 to end-FY2027/28. This allows the Government greater flexibility to access increased financing to cover expenditures associated with measures aimed at mitigating the negative effects of COVID-19 and to expand the necessary social and public infrastructure, to support a recovery of the economy during FY2021/22.

The Government's financing requirement for FY2021/22 is projected at $130,305.60 million or 6.0 percent of GDP, representing a decrease of $85,223.30 million or 39.5 percent, compared to the revised $215,528.90 million that was projected for FY2020/21. The decline in the financing gap estimated for FY2021/22 is as a result of lower debt burden.

The ratio of domestic to external financing for FY2021/22 is projected to be generally in line with the selected medium-term debt strategy (S1). Overall, the financing programme indicates increased reliance on multilateral lending, though majority financing is expected from domestic inflows. Notwithstanding the estimated increase in multilateral inflows, the Government is committed to the de-dollarization of the debt portfolio and the reduction of total public debt over the medium-term.

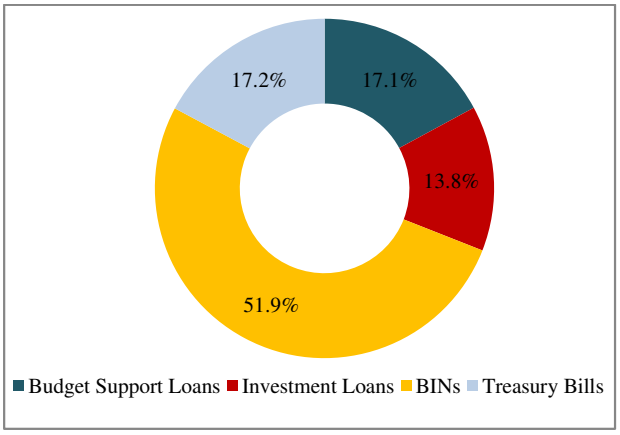
The projected disbursements from the Policy-Based Loans and Investment Loans in the amount of $22,302.0 million and $18,024.1 million, respectively, represent programmed inflows totalling $40,326.1 million that will comprise funding from Official Creditors. The programmed domestic financing is projected at $89,979.5 million, representing Domestic Bonds and Treasury Bills, totalling $67,579.5 million and $22,400.0 million, respectively. (See **Table 9 and Figure 51**)

Table 9: GOJ's Annual Borrowing Plan for FY2021/22

Financing Sources	Budgeted ($mn)
Domestic Financing	**89,979.5**
Benchmarck Investment Notes	67,579.5
Treasury Bills	22,400.0
External Financing	**40,326.1**
Investment Loans	18,024.1
Policy Based Loans	22,302.0
Total	**130,305.6**

Source: Ministry of Finance and the Public Service

Figure 51: Distribution of Gross Financing for FY2021/22



Source: Ministry of Finance and the Public Service

7.1 Issuance Strategy for FY2021/22

The Government intends to satisfy its borrowing plan through the implementation of Strategy 1 **(S1).** The strategy is predicated on the issuance of local currency fixed-rate debt which is aimed at: realigning the currency component of the total debt portfolio in favour of local currency; satisfying market players' needs; and reducing interest rate risk.

In compliance with the Issuance Strategy the GOJ will undertake the following:

- Broaden Primary Dealers' obligations, focusing on their marketing and distribution roles in relation to GOJ securities;
- Maintain the issuance of fixed-rate debt instruments along all segments of the yield curve;
- Focus on enhancing the liquidity levels of the benchmark investment notes along the short, medium and long segments of the yield curve. It is anticipated that this will result in increased secondary market trading;
- Continue the issuance of 3- and 6-month Treasury bills upon maturity on a monthly basis during the fiscal year, while the 9-month Treasury bill will continue to be issued at least once per quarter. The subscription amount for the 3-month and 6-month tranches will remain at $700.0 million, while the subscription amount for the 9-month tranche will be $800.0 million. As a result, the Treasury bill offer amount for FY 2021/22 is expected to be $22.4 billion.

- Schedule long-term instruments for maturity beyond the peak repayment period FY2024/25 to FY2028/29 in order to avoid further bunching; and
- Continue to utilize the auction mechanism to issue all securities. This will facilitate continued efficiency in price determination.

7.2 Challenges to the Issuance Strategy

A successful market issuance strategy is not only dependent on the support of market stakeholders but also favourable market conditions. As a result, debt management operations may be affected by exogenous factors. To this end, the following represent potential challenges to the market issuance strategy:

- Uncertainty surrounding the continued spread of the virus and issues related to access and distribution of vaccines and other therapeutic medicines pose a risk to the issuance strategy. Slower than anticipated economic recovery could retard revenue inflows. Spread of variants of the virus may prompt requests for additional spending on health and social expenditures. These could result in increased financing requirements. Additionally, there may be implications for the market which could impact the demand for GOJ securities;
- Over the past few years, oil prices have experienced great volatility with significant declines from time to time. The prevailing pandemic caused a sharp decrease in world oil prices, which accompanied an over-supply of oil. However, during the third quarter of FY2020/21, oil prices increased sharply, with the WTI (West Texas Intermediary) crude oil spot price rising from a low of negative USD 36.98 on 20th April, 2020 to USD 48.35 per barrel by 31st December, 2020. If oil prices continue to rise, the cost of the country's oil imports will increase. This may have a negative impact on the Balance of Payments;
- Worldwide geopolitical tensions may result in uncertainty, instability, and may reduce prospects for economic growth over the medium term. This in turn may have a negative impact on revenues, and may result in further adjustment of the borrowing plan. This could be exacerbated by deteriorating economic position of partner countries, which in turn may limit financing from bilateral creditors;
- Depreciation of the Jamaica dollar vis-à-vis the US dollar may cause domestic market assets to be less attractive to investors, and could re-direct liquidity from the domestic market to US dollar-denominated investments;
- Increased activity in the equity market and competition from high- yield corporate bonds could cause a decrease in the demand for GOJ securities;

- Negative real return on JMD investments relative to USD investment throughout the past twelve months. US Treasury rates and domestic interest rates remained relatively low, while the domestic inflation rate outturn was within the range of 4.0 to 6.0 percent. The yields on USD assets will therefore be more attractive to investors;
- Slow project execution may result in a reduction of expected financing from multilateral and bilateral creditors; and
- The negative impact of natural disasters could disrupt the economy.

7.3 Active Liability Management Operation

Amidst the crippling effects of the coronavirus pandemic on the economy, and the uncertainty surrounding the normalization of activities that contribute to economic growth, the Government will remain steadfast and prepared to explore any available opportunity for undertaking liability management operations (LMOs) in FY2021/22. Subject to Section 6 and 10 of the Public Debt Management Act (PDMA), the Minister with responsibility for finance is empowered to undertake LMOs that are aligned with the Government's strategic debt management objectives for the medium-term.

In light of the significant decline in global interest rates, borrowing costs are lower and are projected to remain low for the short- to medium-term. Notwithstanding, the borrowing costs for emerging markets (EMs) could increase due to, *inter alia*, sovereign credit ratings downgrade which affects a country's credit worthiness and borrowing costs, as well as the lingering effects of the pandemic that continue to hamper economic growth. Jamaica maintained its credit ratings during FY 2020/21 despite the negative social and economic effects of COVID-19.

Continuation of the pandemic could hamper Jamaica's ability to execute successful LMOs. Despite the limitation of the prevailing market conditions, consistent with its cost and risk preferences, the Government will continue to embrace the objective of de-dollarization of the debt portfolio, while monitoring the activities of the capital markets. The main objectives to be pursued are debt reduction, net savings and extension of the maturity profile of the debt through the execution of opportunistic LMOs that aim to satisfy both the GOJ and investors. Therefore, the Government will continue to explore the use of opportunistic tools, namely, buybacks, swaps, switches, exchanges and roll-overs during FY2021/22.

Table 10: Proposed GOJ Issuance Calendar for BINS for FY2021/22

SUBSCRIPTION DATE	INSTRUMENT TYPE	METHOD OF ISSUE
Q1		
April 14, 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
April 23, 2021	**New Issue:** FR BIN 2025* – **4-yr**	Auction
May 12 , 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
May 21, 2021	Reopen FR BIN Due 2025 – **4-yr** Reopen FR 5.675% BIN Due 2029 – **8-yr**	Auction Auction
June 9, 2021	3-month and 6-month T-Bill Tenders	Auction
Q2		
July 14, 2021	3-month and 6-month T-Bill Tenders	Auction
July 23, 2021	Reopen FR 10.00% BIN Due 2037 – **16-yr**	Auction
August 11, 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
August 27, 2021	Reopen FR 12.25% BIN Due 2050 – **29-yr**	Auction
September 8, 2021	3-month and 6-month Treasury Bill Tenders	Auction
Q3		
October 13, 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
October 29, 2021	Reopen FR 5.675% BIN Due 2029 – **8-yr**	Auction
November 10, 2021	3-month, 6-month and 9-month T-Bill Tenders	Auction
November 26, 2021	Reopen FR 10.00% BIN Due 2037 – **16-yr**	Auction
December 8, 2021	3-month and 6-month Treasury Bill Tenders	Auction
Q4		
January 12, 2022	3-month, 6-month and 9-month Treasury Bills Tenders	Auction
January 21, 2022	Reopen FR 9.625% BIN Due 2031 – **10-yr**	Auction
February 9, 2022	3-month, 6-month and 9-month T-Bill Tenders	Auction
February 11, 2022	Reopen FR BIN Due 2025 – **3-yr** Reopen FR 9.625% BIN Due 2031 – **10-yr**	Auction Auction
March 9, 2022	3-month and 6-month T-Bill Tenders	Auction
March 25, 2022	Reopen FR 10.00% BIN Due 2037 – **15-yr** Reopen FR 12.25% BIN Due 2050 – **29-yr**	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 2021/22		
Proposed Treasury Bill Tranche	**Proposed Tender Date**	**Proposed Issue Date**
Quarter 1		
3, 6 & 9 month T/Bills	April 14, 2021	April 16, 2021
3, 6 & 9 month T/Bills	May 12, 2021	May 14, 2021
3 & 6 month T/Bills	June 9, 2021	June 11, 2021
Quarter 2		
3 & 6 month T/Bills	July 14, 2021	July 16, 2021
3, 6 & 9 month T/Bills	August 11, 2021	August 13, 2021
3 & 6 month T/Bills	September 8, 2021	September 10, 2021
Quarter 3		
3, 6 & 9 month T/Bills	October 13, 2021	October 15, 2021
3, 6 & 9 month T/Bills	November 10 2021	November12, 2021
3 & 6 month T/Bills	December 8, 2021	December 10, 2021
Quarter 4		
3, 6 & 9 month T/Bills	January 12, 2022	January 14, 2022
3, 6 & 9 month T/Bills	February 9, 2022	February 11, 2022
3 & 6 month T/Bills	March 9, 2022	March 11, 2022

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

The Government is committed to fulfilling its role in developing a more efficient domestic debt market while satisfying its funding requirements and investors' expectations, despite the uncertainties surrounding the Covid-19 pandemic. The intention is to continue promoting a deep and liquid market to support fund raising activities at the lowest possible cost with a prudent degree of risk over the medium-term. Supported by the legislated reforms, tax and regulatory infrastructures as well as secure depository and settlement arrangements, the Government is resolute to achieve this integral strategic objective.

The Government is cognizant that a domestic capital market that is deep, well-regulated and efficient will create access to sustainable local-currency financing. This will strengthen the GOJ reliance on the domestic market and bodes well with the strategic objective to de-dollarize the debt portfolio. However, while Jamaica's domestic debt market is characterized by a robust and efficient primary market, the secondary market continues to show marginal growth. Notwithstanding, the market stakeholders are collectively progressing well to establish the necessary infrastructure to support the secondary market activities.

During the upcoming fiscal year, the Government will continue to place priority on coordination with major stakeholders to achieve the level of market activity that will drive secondary market growth, increase efficiency, enhance the price discovery process and transparency of the markets while protecting investors and creating incentives to trade.

8.2 Financial Market Development

The financial environment in Jamaica is evolving into a sophisticated marketplace. Investors are savvier and are demanding more investment options in order to diversify their investment portfolios. Consequently, GOJ issuances are facing greater competition from alternative investment options such as corporate bonds and the equity market. In light of this, the Government recognizes the need for a paradigm shift in its operations and engagement of the market stakeholders. The aim is to preserve the progress made in market, while seeking further development and strengthening.

Additionally, the impact of the COVID-19 pandemic on the global financial markets has further reinforced the need to establish a well-developed and efficient domestic debt market; this is important in order to satisfy the mandate of ensuring that the Government is sufficiently funded.

The Government has taken the decision to digitize its operations; this is in line with the adaptation of some major market players who have started to digitize their operations. The adoption of technology advances is paramount in the development of the domestic debt market. The technological blueprint and its benefits are truly a part of the attestation on efficient financial markets existing in advanced economies.

In FY2021/22, the Government intends to maintain a presence in the domestic market. The proposed issuance calendar highlights planned issuances of Benchmark Investment Notes along all segments of the yield curve, while the mode of issuance will be, as is customary, through the auction mechanism.

Another focus of the Government is development of the secondary market. Primary Dealers (PDs) play an integral role in market development as their main purposes are to: (1) assist with the building of a stable and reliable source of demand for GOJ securities; (2) provide liquidity in the secondary market to increase trading; (3) build distribution channels by acting as intermediaries for GOJ bonds; (4) devote capital resources to fund the occasional shortfall in liquidity; and (5) provide market information including prices, volumes and spreads between bids and offers to facilitate the creation of a dependable GOJ securities yield curve. The review of the current PD system was an important objective for GOJ in FY2020/21; however, the review was not undertaken owing to the effects of the coronavirus pandemic. Instead, GOJ refocused efforts on development of the Fixed Income Trading Platform (FITP).

During the upcoming fiscal year, subject to resolving the challenges resulting from the pandemic, the Government intends to embark on the review of the PD system. The review will be conducted by a Working Group chaired by MOFPS with BOJ, FSC and PDs. Although the PD system will be reviewed, market players are still assessed monthly on their trading activities under the existing Primary Dealers Agreement. Further, during the fiscal year, discussions will be held with PDs and other market players in relation to the Government's issuance strategy in order to identify investors' horizons while promoting an active and efficient secondary market.

Another priority of the Government in FY2021/22 is the development of a FITP. The Government in coordination with the Jamaica Stock Exchange, BOJ and FSC will continue to work to make this a reality in the short-to-medium term. The project is well-advanced and the implementation is expected to be completed during FY2021/22. The implementation of the trading platform for GOJ securities is anticipated to increase the value of the GOJ bonds as a result of improved liquidity, enhanced transparency and the equitable determination of market prices for securities.

Additionally, implementation of the trading platform is expected to further diversify the investor base by providing wider access to GOJ securities while improving market practices. It is

expected that the Government will gain benefits in medium-term debt management and experience less demand-side pressure for increased volumes and coupon rates from a potentially larger pool of well-informed investors.

On December 22, 2020, the Bank of Jamaica (Amendment) Act, 2020 was passed. The legislation will make the BOJ an independent body capable of setting monetary policy. Pursuant to Section 37 (2) of the Act, the Bank will be restricted from purchasing GOJ securities in the primary market. Notwithstanding, according to Section 37 (3), the Bank may purchase GOJ securities in the secondary market. These amendments of the BOJ Act are expected to assist in the GOJ's objective of satisfying, as much as possible, the Primary Dealers' demand by making available more securities, which previously would have been purchased by the Bank on the primary market. Additionally, GOJ anticipates that with BOJ purchasing securities on the secondary market, there will be an uptick in secondary trading as well as improved liquidity.

Further, BOJ fully transitioned to the Liquidity Coverage Ratio (LCR) requirement in October 2020. The primary objective of the LCR is to support and improve the short-term resilience of the liquidity profile of financial institutions by ensuring that they have sufficient high-quality liquid assets (HQLAs) to sustain any significant stricture to funding sources lasting 30 calendar days. Under the LCR, licensees are required to maintain a stock of HQLAs of at least 100.0 percent of total net cash outflows at all times. Level 1 assets that are used to calculate the stock of HQLAs include Benchmark Investment Notes and Treasury Bills issued or guaranteed by the Government of Jamaica, and denominated in domestic or foreign currency.

Resulting from the strain caused by the impact of COVID-19, BOJ, in an effort to boost liquidity levels in the domestic market, reduced the cash reserve requirements of deposit-taking institutions (DTIs) by two percentage points on May 15, 2020. The domestic currency cash reserve requirement was reduced from 7.0 percent to 5.0 percent and is now aligned to the statutory minimum for prescribed liabilities. These reserve requirements indicate the amount of cash DTIs are required to hold against prescribed liabilities at the BOJ. The reduction in the domestic currency cash reserve requirement was anticipated to release approximately J$14.0 billion to DTIs. This completes the series of reductions that the Bank initiated in 2019. Consequently, the domestic currency cash reserve requirement will cause the overall domestic currency liquid asset requirement to reduce to 19.0 percent from 21.0 percent.

During FY2021/22, the coordinated effort among the GOJ, BOJ and FSC to complete phase two of the enhancement project to the JamClear CSD is intended to modernize government fixed-income securities transactions. It is anticipated that the enhancement of the JamClear CSD will further realize increased settlement efficiencies and market liquidity, while decreasing

settlement time and trading risk. The primary objective of a entral securities Ddpository is to reduce risk and improve efficiencies in the government bond market.

During the upcoming fiscal year, transparency in GOJ's domestic debt operations and borrowing programme will continue to be facilitated through:

- Frequent consultations with market stakeholders;
- Offerings of securities through a competitive bidding process;
- Annual Schedule of Domestic Debt Securities and GOJ Treasury Bill Tenders;
- Timely dissemination of the terms and conditions of instruments to the market prior to subscription days; and
- Publication of the results of market issues at the latest one business day after settlement.

8.3 Investor Relations

The primary objective of an investor relations programme is to disseminate reliable and accurate data and information on a country's macroeconomic outlook, debt policies and transactions to investors. The institutional investor grouping represents one of the Government's key investor bases for financing. A diverse investor base, broadly grouped into individual or retail investors, domestic institutional investors, and foreign institutional investors, is central to ensuring strong and stable demand for government debt securities.

The Government of Jamaica (GOJ) engages these key stakeholders through its comprehensive Investor Relations Programme (IRP). The GOJ's IR programme is grounded in the core principles of openness, transparency, accessibility and consistency. It defines the framework through which all avenues, aligned to investor relations best practices for transparency and accountability, are utilized to disseminate information. This is critical in maintaining confidence in government securities in support of one of the DMB's objectives to satisfy the GOJ's budgetary needs. Another key strategic objective of the MTDS, which depends on sound investor relations practices, is the development of a deep and liquid domestic debt market. This facilitates improved efficiency with regards to issuances.

During FY2020/21, the DMB continued to administer market surveys and host one-on-one meetings with key market stakeholders prior to planned GOJ market issuances. These discussions were critical in yielding information on prevailing market conditions, the market's appetite for GOJ securities and the specific instrument(s) required to satisfy stakeholder investment needs.

The importance of an IRP is deemed crucial during periods of crisis, where timely and accurate information and constant communication become even more critical in reassuring investors and other stakeholders. With the onset of and the uncertainties surrounding the potential economic impact of COVID-19, lines of communication were kept open with stakeholders to address the implications for the fiscal and GOJ's financing strategy. In light of this, the DMB proactively hosted a special domestic market meeting on July 15, 2020, with a guest presenter from Moody's Ratings Agency. Additionally, the Investor Relations Unit (IRU) organized virtual meetings with the ratings agencies and stakeholders to facilitate emergency reviews of the country's sovereign risk.

With respect to the external portfolio, due to the emergence of the coronavirus pandemic early in CY2020, the GOJ halted all overseas travel and this included the annual non-deal road show to Europe and the United States of America.

The DMB's website design and implementation project remains a work in progress as the finalization and subsequent launch was delayed by operational and resource challenges, some of which were as a result of COVID-19. It is anticipated that the website will be launched in the first quarter of the new fiscal year.

During FY2021/22, the DMB through the IRU will continue to pursue best practice strategies and activities targeting external and domestic market stakeholders, enabling the GOJ to continue meeting its debt management objective of conducting debt operations transparently.

SECTION IX: CONCLUSION

The Medium-Term Debt Management Strategy (MTDS) for FY2021/22-FY2024/25 examines the relative portfolio costs and risks associated with alternative financing strategies. The selected strategy is consistent with the Government's cost-risk preferences and prioritized majority domestic fixed-rate financing across the yield curve.

Primarily as a result of the sharp decline in GDP, debt-to-GDP is projected to increase by 15.3 percentage points to 110.1 percent at end-FY2020/21 relative to the previous year. Improvements in the macro-fiscal position in subsequent years is expected to restore the downward trend in the debt ratio, consistent with meeting the revised timeline to achieve debt-to-GDP of 60.0 percent or less by FY2027/28.

Despite the challenges associated with the pandemic, the cost and risk indicators for the debt portfolio were generally improved over the review period. Accommodative monetary policy responses across countries and accompanying measures implemented by the BOJ to boost domestic market liquidity bolstered demand for GOJ securities and contributed to lower financing costs.

Overall, exposure to interest rate and refinancing risks were moderate, while CPI exposure was unchanged over the review period. Notwithstanding a reduction in the nominal value of USD denominated debt, foreign currency risk remained significant and has been exacerbated since the onset of COVID-19. Exposure to contingent liabilities associated with Government guarantees, though marginally increased, remained moderate within the established legislated targets. Notwithstanding, COVID-19 has contributed to an increased likelihood of crystallization of GGLs.

Work to advance the development of the domestic debt market, though slowed by COVID-19, will continue in FY2021/22. Critical reforms to the primary dealer system aim to *inter-alia* enhance market-making, boost secondary market trading and establish an efficient and reliable domestic BIN yield curve. These outcomes will be supported by the development of the fixed income trading platform.

Consistent stakeholder engagement will be pursued, with the DMB adapting to the use of virtual technology to continue its engagement with key stakeholders in the external and domestic space. Several virtual meetings were held to update stakeholders on the potential impact of the pandemic on the fiscal accounts and the macroeconomic outlook, which contributed to their assessment of the credit quality and demand for GOJ issuances. The new DMB website is slated to go live during the first quarter of FY2021/22 and will support further deepening of stakeholder engagement.

GLOSSARY

Amortization

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

Auction

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

Benchmark Investment Notes

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

Cash Flow at Risk (CFaR)

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

Central Government

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

Conditional Cash Flow at Risk (CCFaR)

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

Conditional Cost at Risk (CCaR)

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

Conditional Value at Risk (CVaR)

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

Contingent Liabilities

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

Cost at Risk (CaR)

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

Currency Conversion/Swap

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

Debt Service Payments

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

Emerging Market Economy

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

Fiscal Responsibility Framework

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

Fiscal Risk

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

Global/Euro bond

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

Government Guaranteed Loans

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

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.

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.