



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 22-Jan-2020 | Report No: PIDC28323

BASIC INFORMATION
A. Basic Project Data

Country Jamaica	Project ID P173012	Parent Project ID (if any)	Project Name Jamaica Catastrophe Bond for increased Financial Resilience to Natural Disasters and Climate Shocks (P173012)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date Jan 13, 2020	Estimated Board Date Mar 31, 2020	Practice Area (Lead) Finance, Competitiveness and Innovation
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance and Public Service	Implementing Agency Ministry of Finance and Public Service	

Proposed Development Objective(s)

To expand Government of Jamaica's portfolio of disaster risk finance (DRF) instruments and its financial preparedness to climate and disaster shocks.

PROJECT FINANCING DATA (US\$, Millions)
SUMMARY

Total Project Cost	14.85
Total Financing	14.85
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS
Non-World Bank Group Financing

Trust Funds	14.85
Global Facility for Disaster Reduction and Recovery	14.85

Environmental and Social Risk Classification

Low

Concept Review Decision

Track I-The review did authorize the preparation to continue

B. Introduction and Context

Country Context

Between 1993 and 2003, 26 natural disasters have resulted in total losses of US\$2.22 billion, or 1.5 percent of Jamaica's average annual GDP over the period.¹ This serves to demonstrate that Jamaica is highly exposed to natural hazards, including hurricanes, tropical storms, earthquakes, droughts, floods, and landslides, which occur frequently and at varying intensities. These events pose a significant threat to Jamaica's macroeconomic outlook.² After Hurricanes Dean and Gustav, Jamaica's inflation rate peaked at over 20 percent. The increase in inflation closely mirrors the rate of change in the debt-to-GDP ratio over the past 15 years.³ The World Bank estimates that the government would need to cover losses of approximately US\$121 million annually (J\$16 billion), or 0.84 percent of Jamaica's 2015 GDP, to address its contingent liabilities related to hurricanes and floods. This is equivalent to 3.09 percent of total government expenditures in 2016. Average annual losses from hurricanes to infrastructure is likely to amount to US\$67 million (J\$9 billion). In addition, disasters continue to increase Jamaica's sovereign debt level, prompting requests for loans and/or tax increases to finance unplanned post-disaster expenditures.

Since 2013, Jamaica has undertaken significant measures for fiscal consolidation, coupled with a broad structural reform agenda to reduce debt and accelerate growth. In February 2013, after Hurricane Sandy, the country was on the brink of financial crisis.⁴ GDP contracted for five consecutive quarters, and the Jamaican dollar depreciated rapidly with dwindling international reserves. To avert a debt crisis, the government launched an ambitious fiscal consolidation program, supported by the International Monetary Fund (IMF) and backed by reforms to strengthen its macro-fiscal policy framework, transform the public sector, and improve the investment climate. The results of this effort are becoming increasingly visible as the economy continues to grow and the country exhibits much greater macro-fiscal stability. Fiscal improvement is evidenced by an annual average surplus of 7 percent of GDP for five consecutive years; this trend caused the public debt stock to drop from 140 percent of GDP in 2013/14 to a projected 98.7 percent in 2018/19. Furthermore, the country now has lower inflation rates, manageable external deficits, and increased employment.

The occurrence of a natural disaster could derail, in just a few hours or days, the economic and social gains achieved and plunge the country into the economic distress experienced prior to 2013. It is therefore very important for Jamaica to address, mitigate and minimize the negative effects of natural disaster to achieve social, physical, fiscal and economic resilience. This project hence focusses on putting in place ex-ante financial instruments to protect against the negative consequences of natural disasters.

¹ World Bank, 2018. Advancing Disaster Risk Finance in Jamaica.

² International Monetary Fund, "2014 Article IV Consultation Fourth Review Under the Extended Fund Facility and Request for Modification of Performance Criteria," IMF Country Report no. 14/169, June 2014.

³ Juan Montecino and Jake Johnson, "Update on the Jamaican Economy," CEPR Reports and Issue Briefs 2012-15, 2012.

⁴ Hurricane Sandy resulted in losses and damages estimated at US\$107 million in 2012 U.S. dollars. Government of Jamaica, "Jamaica Macro Socio-Economic and Environmental Assessment of the Damage and Loss Caused by Hurricane Sandy," Planning Institute of Jamaica, January 2013.

Sectoral and Institutional Context

Jamaica has prioritized a comprehensive approach to enhance fiscal, economic growth, social, and physical resilience to natural disasters. The National Public Financial Management Policy Framework for Natural Disaster Risk Financing was approved by Jamaica's Cabinet in November 2018. A National Disaster Risk Financing Policy, drawing from the framework, is expected to be submitted to Parliament by the end of 2019. The policy framework provides the state's vision and sets out the enabling environment needed to ensure that adequate resources are available to address ex post financing requirements through a mix of instruments. The policy framework considers cost-effectiveness, timeliness, and sound administrative arrangements for reducing the fiscal impact of natural disasters by proposing a risk-layering strategy that combines risk retention and transfer instruments. Several efforts are ongoing toward implementation of the forthcoming policy framework.

Jamaica has taken a proactive approach to disaster risk financing (DRF), but additional financial instruments are required to reduce the gap and optimize the portfolio of financial instruments to cover losses arising out from earthquake, tropical cyclone, and excess of rain. Preliminary analysis⁵ suggests that Jamaica, from such three perils, could sustain a national reconstruction loss, with an annual probability of 1%, in excess of US\$4.3 billion.

While GoJ has been improving its financial protection, existing financial instruments leave Jamaica exposed to losses resulting from natural disasters. Over the past year, the GoJ has subscribed to three main ex-ante financial instruments available to finance public post-disaster expenditures: (i) a National Disaster Reserve Fund (US\$15 m)⁶, (ii) an IADB Parametric Contingent Credit line (US\$285 m), and (iii) CCRIF SPC insurance policies against earthquake, tropical cyclone, and excess of rain (for a coverage US\$ 238.6 m⁷).

A cost-benefit analysis (CBA)⁸ conducted by the World Bank in October 2019 shows that, for post-disasters emergency expenditure only, the financing gap ranges from US\$266m to US\$618m. Moving forward, Jamaica is exploring a Cat-Bond, an innovative risk transfer instrument. Upon GoJ's request, the World Bank has successfully secured US\$14.85m in Global Risk Financing Facility (GRiF) resources toward expanding risk transfer financial instruments against climate and natural disaster risk.

Relationship to CPF

The Project is well aligned with the objectives of Jamaica's Country Partnership Strategy for FY14-FY17⁹ (Report No. 85158-JM) and the latest Jamaica's CPS Performance and Learning Review (PLR)¹⁰ ((Report No. 112663-JM) both of which are deeply anchored in Jamaica's long-term national development plan, "Vision 2030 Jamaica". The CPS focuses on establishing the necessary conditions for broad-based, private-sector-led growth while improving public-sector efficiency and reducing vulnerability. The project objectives are specifically aligned with CPS, **Pillar III Strengthening social and**

⁵ The figures are based on the CCRIF SPC cat models' SPHERA and XSR 2.5, analysis and results on annex 1: "Natural Disaster Risk: Framework for Quantification and Evaluation of Contingent Liabilities and Financing Strategies – Jamaica".

⁶ In March 2019 GoJ recognized the need to increase its budget for frequent, low-intensity events, allocating US\$15 million to a Contingencies Fund for natural disasters. It is expected that this will become the country's National Disaster Reserve Fund (NDRF), with an additional annual allocation of US\$4 million a year for the next three years. This allocation was enabled by a resolution by the Parliament in April 2019, amending the Finance Accountability Act to lift the maximum limits of the Contingency Fund.

⁷ On June 1st, 2019 the CCRIF insurance coverage was increased to US\$ 238.6 m from US\$175.2 m.

⁸ Annex 1: "Natural Disaster Risk: Framework for Quantification and Evaluation of Contingent Liabilities and Financing Strategies – Jamaica"

⁹ The CPF was extended to 2019 in May 2017

¹⁰ The 2017 Performance and Learning Review extended the CPS through FY19.

climate resilience and will focus on expanding the range of financial instruments available to the GoJ respond to climate change events and natural disasters thereby building greater financial, social, fiscal, economic growth, and physical resilience.

C. Proposed Development Objective(s)

To expand Government of Jamaica's portfolio of disaster risk finance (DRF) instruments and strengthen its financial preparedness to climate and disaster shocks.

Key Results (From PCN)

The achievement of the PDO will be measured by the following key indicators:

1. Cat-Bond instrument placed on international capital markets
2. Increased financial coverage against natural disasters

At the outcome and impact level, it is expected that the CAT Bond will reduce the current financial gap and together with the other DRF instruments in the portfolio, provide an efficient risk layering strategy and increased protection against natural disasters and climatic shocks. The Cat Bond is expected to provide additional coverage in excess of \$100Million.

D. Concept Description

After rigorous technical analysis of multiple types of risk transfer instruments and in consultation with the GoJ, a CatBond with a parametric trigger was selected. This analysis also took into consideration the design and structure of the current portfolio of instruments and how this new instrument would be complementary. The Team explored and discussed with the GoJ, several instrument options in terms of quality (i.e. basis risk), feasibility (i.e. issuance by June 1st, 2020), trigger transparency, market requirements and appetite and costs. For example, while an Industry Loss Index¹¹ and Indemnity¹² options, would reduce basis risk, after discussions with the market, it was determined that its development would require more than 1 year and as such not meet the target deadline of June 2020. On the other hand, a parametric¹³ Cat-Bond, in particular, cat-in-the-grid trigger, is feasible and will reduce the basis risk against other parametric trigger options. It was concluded with the GoJ that, given that CCRIF insurance policies are triggered under a modelled-loss approach, a cat-in-the-grid trigger should be explored.

¹¹ An industry loss index provides an estimate of the total indemnity losses experienced in the insured area by the insurance industry after a catastrophic event. An industry loss CAT bond would trigger if industry loss estimates exceed a pre-defined level. The majority of Industry Loss CAT bonds have been executed by private insurance companies.

¹² Under an Indemnity trigger Cat-Bond, the triggering event is the actual losses incurred by the insured following the occurrence of a specified catastrophe event, in a specified geographic region, for a specified set of exposures. Most indemnity transactions have been executed by Private insurance companies.

¹³ Under a parametric trigger Cat-Bond, the physical characteristics of a catastrophe event are used as the trigger. For example, a pure parametric bond might trigger if an earthquake with a magnitude greater than 7 occurs within a 50-km radius of Mexico City. Most sovereign transactions have chosen this sort of trigger. In the case of transactions intermediated by the World bank, the trend has been moving from Cat in a Box to Cat in a Grid.

The technical analysis used for the instrument selection is based upon a preliminary¹⁴ gap and cost benefit analysis (CBA) that was conducted with the Government of Jamaica, the IMF, and the World Bank Treasury to identify options to inform the preliminary design of risk transfer instruments, including the identification of attachment points, average annual losses, and indicative insurance premiums (See Annex 1). Additionally, a commercial catastrophe risk modeling firm¹⁵ is currently developing a national risk profile and an evaluation of various parametric trigger options for the instrument. It should be noted here that there are stringent catastrophe risk modeling requirements that underpins financial transactions and CAT Bonds in particular. This is because the financial markets need to ensure that estimated losses are correctly priced.

The preliminary gap and cost-benefit analysis will be re-visited, and upon the completion of the catastrophe risk modelling technical pricing can will be shared with the Government of Jamaica. However, it should be noted that the indicative pricing is for information purposes only and that market prices may vary when the final instrument is presented to the market.

Flow of Funds. The project design will be a recipient executed trust fund (RETF)/ IPF. A bond will be issued by the World Bank on behalf of the GoJ. The funds will flow from the WB administered MDTF, GRIF, to the World Bank Treasury (WBT) on behalf of the GoJ (the recipient and beneficiary of the coverage) for the purposes of paying the premiums. Such premiums will be held in an account at WBT and then paid to the final private sector risk-carriers, noting that the WB is not a risk carrier. WBT will also pay the fees to the syndicate of service providers. The proceeds of the bond will be held by the WB. If a covered event occurs and a payout is triggered, the proceeds of the bonds will be paid to the GoJ by the WBT. The WB will not retain any risk on its balance sheet.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

CONTACT POINT

World Bank

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Borrower/Client/Recipient

Ministry of Finance and Public Service
 Trevor Anderson

¹⁴ The analysis is preliminary as the final will consider, at the moment of the transaction, both the actual market prices and other instruments values, also the cat modelling firm will provide inputs to evaluate the IADB parametric contingent loan.

¹⁵ The procurement of the cat modelling firm was conducted on a global competitive basis (Selection No. 1262405).

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APPROVAL

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