



Citizen-Centered Approaches
to State and Market



Economic Tools Mapping

CARIBBEAN CATASTROPHE RISK INSURANCE FACILITY (CCRIF)

Market Building Initiative: A Program with the Aspen Institute

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Overview

Caribbean governments are highly vulnerable to natural disasters, with an average of 2% of GDP in damage costs since 1970. Only 3% of this loss is currently insured in comparison to 45% in developed countries which are far less vulnerable.¹ The first multi-country risk pool in the world, the CCRIF concept was prompted by 2004's Hurricane Ivan, which caused losses close to 200% of the national annual GDP of Grenada and the Cayman Islands. Realizing the importance of disaster management, CARICOM and international donors moved to find better planned and managed risk strategies that would allow for less severe impact to economic development in the case of disaster. CCRIF is a non-profit risk pooling facility owned, operated, and registered in the Caribbean for Caribbean sovereign benefit. It is designed to limit the financial impact of catastrophic weather on Caribbean economies by providing rapid and short-term liquidity when a policy is triggered. This allows a quick start to economic recovery without compromising government service delivery. The facility offers parametric insurance at very low prices and allows for more effective disaster planning for commercial activity within these nations to continue despite cataclysmic weather conditions.

CCRIF's more specific mission is to "serve Caribbean governments and their communities in reducing the economic impact of natural catastrophes. CCRIF provides immediate liquidity through a range of affordable insurance products in a way that is financially responsible and responsive to their needs."² Its operations touch not only on disaster management, but intergovernmental cooperation, accountability in governance, and responsible financial management.

Structure

A non-profit mutual insurance entity, CCRIF is operated as a public-private partnership based in the Cayman Islands. Sixteen governments are currently members of CCRIF: Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, and the Turks & Caicos Islands.³ Membership is projected to expand to other governments with comprehensive risk management plans given past success.

The CCRIF Board brings high-level expertise from the disaster insurance sector broadly, regional expertise, financial acumen, and donor representation for a comprehensive approach to issues of sovereign insurance in the Caribbean.⁴ The CCRIF team includes Caribbean Risk Managers Ltd. which is the facility supervisor, along with Sagicor Insurance managers Ltd. as insurance manager, Aon Benfield Group as reinsurance broker, London & Capital Ltd. as asset manager, EFG Bank-Caymans also as asset manager, Sustainability Managers as communication manager, and Guy Carpenter & Co. LLC. also as reinsurance broker. Box 4 details the organizational structure.

Available to member governments initially were policies for "1/15 year" hurricane insurance and "1/20 year earthquake insurance, with excess rain coverage added in the 2010-2011 season. Feasibility of flood

¹ See: <http://en.finnov.org/img/pdf/27%20CCRIF.pdf>

² CCRIF, About Us- Strategic Objectives, <http://www.ccrif.org/content/aboutus/strategic-objectives>

³ CCRIF, About Us- Board of Directors, <http://www.ccrif.org/content/aboutus/board-directors>

⁴ Ibid.

insurance offerings is currently being examined as are policies for agricultural sectors and utility companies.⁵ Payouts are parametrically determined in CCRIF insurance, meaning policies do not indemnify loss, but *ex ante* agree to make a payment upon the occurrence of a triggering event (catastrophe). This means that there is a reduced transaction cost and ability to rapidly disperse payment in an emergency situation, which is the primary advantage of the CCRIF program. Details on the benefits of parametric structures are explored in Box 3. The Facility is currently utilizing a second generation of hazard and loss modeling that is enabling modeling of more accurate loss rather than indexed parametrics. This will result in a reduction of basis risk, better capture of loss in models, and better definitions use for disaster. Specificity at the kilometer level will be possible with this iteration, for better aggregated estimates of catastrophic impact. This translates to more accurately priced contracts for specific territories and better estimation of site-specific hazard.⁶

Rules

Membership is open to governments only (no private sector actors) and, at the moment, only to CARICOM members (as a function of current membership reflection). Non-CARICOM members may be considered in the future. Members must be current on premium payments in order to receive payouts. Maximum Coverage is \$100 million per peril and cost of coverage is a direct function of the amount of risk transferred, ensuring that there is no cross- subsidization of premiums and a fair participatory price.⁷

Data for payout in the case of disaster is obtained from the National Hurricane Centre and the U.S. Geological survey. In procedural terms, a facility supervisor first calculates government losses using parametric equations or escrowed loss models using hazard information as a proxy with the final calculation taking place 14 days after the event. Loss which is in excess of the “attachment point”, which is essentially the deductible, is paid out. Amount is verified both internally and externally against the annual coverage limit purchased.

CCRIF faces strict financial reporting requirements including quarterly financial statements to the Board and the public, auditing and reporting obligations under the Cayman Islands Monetary Authority, and, via the Grant Agreement with the CCRIF Multi-donor Trust Fund at World Bank, submission to a variety of governance, financial, operational, and review oversight by the Bank.⁸ Briefs on what constitutes a triggering event in terms of earthquake magnitude, cyclone strength, etc. are circulated to all members and updated regularly.

Financing

CCRIF was developed through funding from the Japanese Government, and was capitalized through contributions to a multi-donor Trust Fund by the Government of Canada, the European Union, the World Bank, the governments of the UK and France, the Caribbean Development Bank and the governments of Ireland and Bermuda, as well as through membership fees paid by participating governments.⁹ The Facility functions as a mutual insurance company controlled by the 16 participating governments which

⁵ A Guide to Understanding CCRIF, CCRIF, 2011.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ CCRIF, About Us, <http://www.ccrif.org/content/about-us>

combine their emergency reserves in a larger pool in smaller amounts than they would for self-insurance. The 2009-2010 aggregate exposure of CCRIF was over \$600 million with \$20 million retained and \$132,500 million placed in reinsurance for capacity to meet claims.¹⁰ CCRIF maintains assets in a highly liquid form in order to ensure that rapid and adequate payment can be made if parametric parameters are met and the remainder is managed by a specialized investment company.

Operations and outcomes

Insurance pooling reduces the cost of risk management against catastrophic disaster. Instead of having to hold large reserves on its own to buffer against the chances of disaster, states can put forth a fraction of this capital for a pool in which approximately 1 to 3 states require payout, for the same or more coverage that they would have self-financed. This frees up additional capital for other risk planning activities and sovereign functions. CCRIF countries pay half the price for insurance that they would pay in approaching the reinsurance industry directly.¹¹ For countries where damage from catastrophe can amount to 200% of GDP or more, an operation such as CCRIF can make a substantial difference in the amount of available capital for economic development purposes and ability to recover market function and government services after disaster.

Because CCRIF policies are not enough to cover the entire amount for recovery, they are part of a larger program encouraging and assisting sovereigns as they invest in comprehensive disaster management programming. Provision of the newly implemented technical assistance program has focused on support for local disaster response initiatives, regional strategic knowledge building, and scholarship and development programs. CCRIF is also contributing to the technical discussions globally on the impact on climate change and the manner in which they impact economic resilience in Caribbean states.

Box 1- Payout Case- Haiti 2010

Haiti experienced a 7.0 magnitude earthquake in January 2010 just 25km SW of Port au Prince. This resulted in substantial damage, impact to productive capacity, loss of life, and infrastructure. IDB estimates place damage at \$85 billion or a GDP contraction of over 5%.

This disaster triggered the full policy limit for earthquake coverage under CCRIF. The government was able to obtain nearly \$8 million within 14 days of the earthquake, representing large and fast liquidity. This was particularly useful in comparison to some of the aid money which was not discretionary in early recovery. The figure dispersed represented 20 times the annual premium paid.

See: <http://en.fininnov.org/img/pdf/27%20-CCRIF.pdf>

¹⁰ A Guide to Understanding CCRIF, CCRIF, 2011.

¹¹ Ibid.

Box 2- CCRIF Past Payouts

In 2007, CCRIF paid out almost \$1 Million to the Dominican and St Lucian governments after the 29 November earthquake in the eastern Caribbean; in 2008, CCRIF paid out \$6.3 Million to the Turks & Caicos Islands after Hurricane Ike made a direct hit on Grand Turk; and in 2010, CCRIF made a payment of \$7.75 Million to the Government of Haiti after the 12 January earthquake. These amounts are generally not meant to cover the entire loss in value, but only to cover the immediate recovery requirements before longer-term funding can be processed. The listing of 2007-2010 payouts are as follows:

Event	Country Affected	Payouts (US\$)
Earthquake, 29 November, 2007	Dominica	528,021
Earthquake, 29 November, 2007	Saint Lucia	418,976
Tropical Cyclone Ike, September 2008	Turks and Caicos Islands	6,303,913
Earthquake, 12 January, 2010	Haiti	7,753,579
Tropical Cyclone Earl, August 2010	Anguilla	4,282,733
Tropical Cyclone Tomas, October 2010	Barbados	8,560,247
Tropical Cyclone Tomas, October 2010	Saint Lucia	3,241,613
Tropical Cyclone Tomas, October 2010	St. Vincent & the Grenadines	1,090,388
Total for the Period 2007 - 2010		US\$32,179,470

See: <http://www.miga.org/projects/index.cfm>, CCRIF Annual Report 2010-2011

Box 3- CCRIF Strategic Objectives



See: <http://www.ccrif.org/content/aboutus/strategic-objectives>

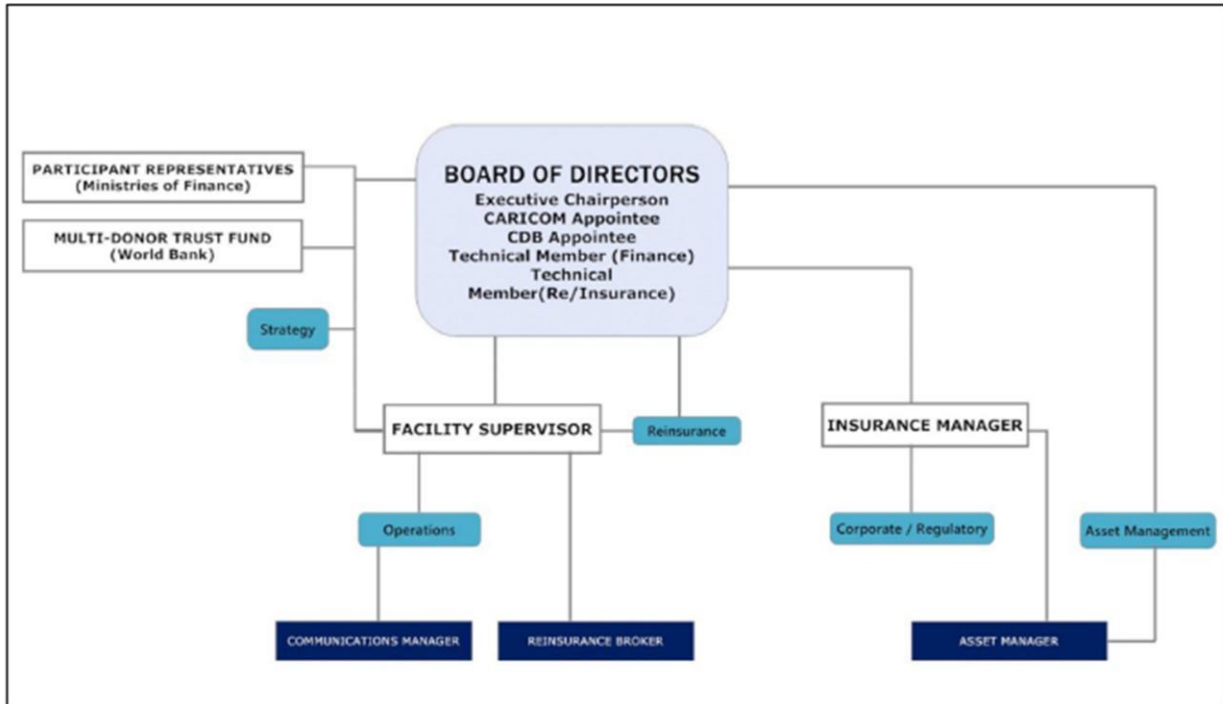
Box 4- Parametrics

Parametric payout structures provide a variety of coverage advantages:

- Parametrics are able to be calculated quickly without estimate damage which would take substantially longer
- Governments are not required to have costly, detailed asset accounts for pre-disaster conditions and have only one claims form for signing
- Calculation of payouts is objective, based on risk input parameters, transparently published in a public domain, and a set of formulae
- Risk is uniformly defined, which drives policy pricing, eliminating subjectivity in risk definitions

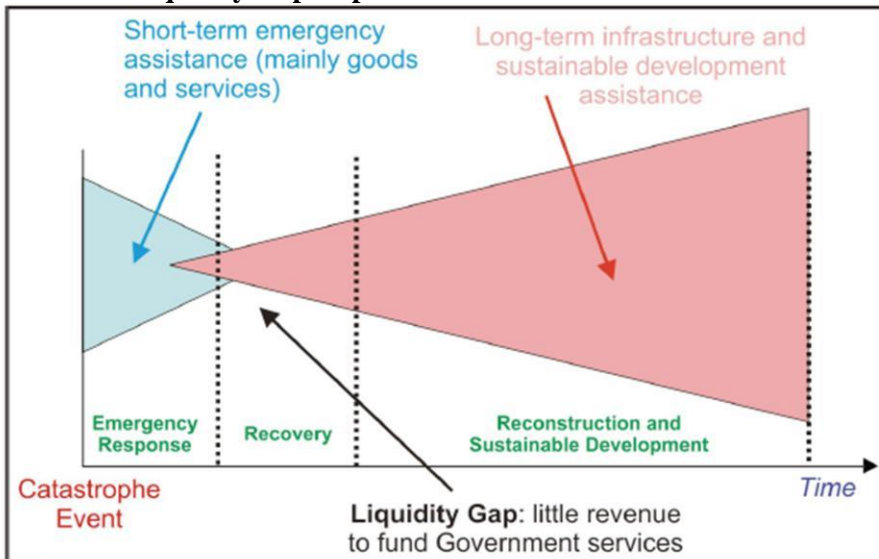
See: A Guide to Understanding CCRIF, CCRIF, 2011.

Box 5- Board Structure



See: 2010 Annual Report http://www.ccrif.org/sites/default/files/publications/CCRIFAnnualReport2010_2011.pdf

Box 6- Liquidity Gap Impact



See: www.CCRIF.com

Further Resources:

- CARICOM, <http://www.caricom.org/>
- CCRIF Publications, <http://www.ccrif.org/content/publications>
- CaribRM, <http://www.caribrm.com/>
- World Bank on CCRIF, <http://treasury.worldbank.org/cmd/htm/CCRIF2011.html>
- GFDRR, http://www.aseandrr.net/Portals/0/OK/DRF/CCRIF_Final.pdf