

July 12, 2023

Best's Methodology and Criteria

Rating Natural Catastrophe Bonds



Emmanuel Modu
908 882 2128
Emmanuel.Modu@ambest.com

Matt Tuite
908 882 2403
Matt.Tuite@ambest.com

Mira Laze
908 882 2003
Mira.Laze@ambest.com



Our Insight, Your Advantage™

Rating Natural Catastrophe Bonds

Outline

- A. Market Overview
- B. Rating Considerations
- C. The Assignment of a Rating

The following criteria procedure should be read in conjunction with *Best's Insurance-Linked Securities & Structures Methodology (BILSM)* and all other related BILSM-associated criteria procedures. The BILSM provides a comprehensive explanation of AM Best's rating process for insurance-linked securities and insurance-linked structures.

A. Market Overview

A catastrophe bond is a structured debt instrument that transfers risks associated with low-frequency/high-severity events to investors. The insurance industry has utilized catastrophe bonds as an alternative to traditional reinsurance and retrocession contracts. Depending on the risk appetite of investors, specific layers of risks are bundled together and transferred to the capital markets through traditional securitization methods. This criteria procedure discusses the factors that AM Best considers in rating catastrophe bonds covering earthquakes, hurricanes, windstorms, and other weather-related catastrophic events.

The rating assigned to a catastrophe bond is *Best's Issue Credit Rating*, which is an independent opinion of credit quality assigned to issues that gauges the ability to meet the terms of the obligation.

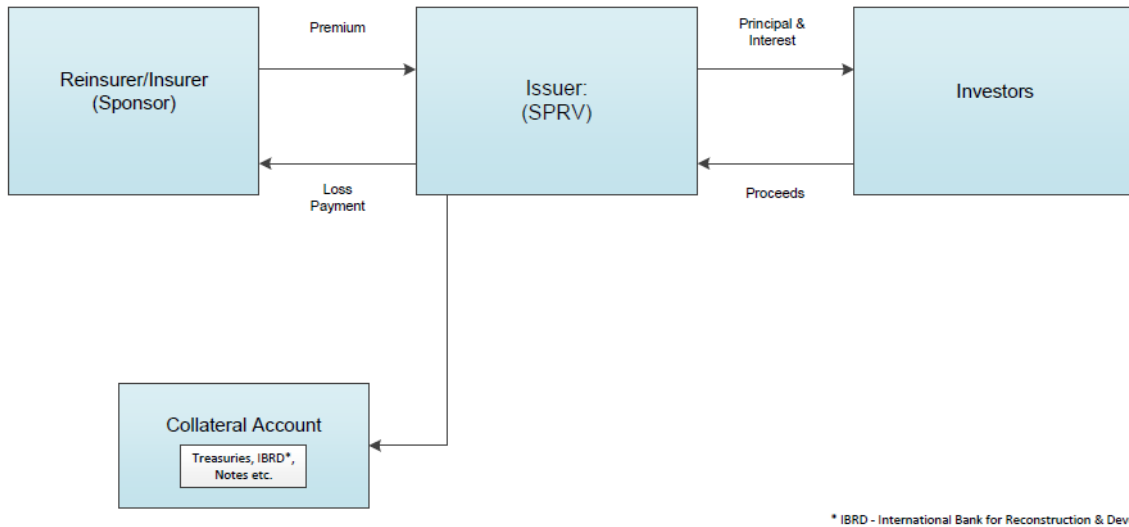
Catastrophe Bond Structure

Securitization of insurance risk typically is achieved through the use of a special-purpose reinsurance vehicle (SPRV). The insurance or reinsurance company seeking catastrophic risk coverage pays premiums to the SPRV, which is effectively a third-party reinsurer. The SPRV raises funds from investors, which are deposited into a collateral account and invested in high-quality securities. These funds are available to satisfy any catastrophic losses reinsured by the SPRV.

The coupon/interest payment to the investors is derived from: (1) the premium paid to the SPRV for the reinsurance coverage and (2) investment income earned on the deposit in the collateral account.

Rating Natural Catastrophe Bonds

Exhibit A.1: Securitization Diagram



Catastrophe bonds have four types of triggers underlying the bond structure:

- Indemnity trigger – payouts are based on the actual losses of the sponsor
- Pure parametric trigger – payouts are triggered by actual reported physical events (e.g., wind speed of hurricane, magnitude of earthquake, location of earthquake, etc.)
- Industry loss index trigger – payouts are triggered by an estimate of industry losses by a third party entity
- Modeled loss trigger – payouts are determined by loading event parameters into a predetermined and fixed model to calculate losses

Rating Natural Catastrophe Bonds

B. Rating Considerations

AM Best's rating on catastrophe bonds relies primarily on data and information from transaction sponsors, their representatives or experts, and independent peril modelers. In general, AM Best's catastrophe bond rating criteria procedure takes into consideration the risk characteristics of the underlying perils covered (as reflected in the attachment probabilities), reviews of the models used and results of stresses on key modeling factors. A list of the items reviewed, evaluated, or monitored include, but are not limited to, the following:

- Structural, regulatory, legal, and all third party related documentations
- The specific peril(s) included in the transactions (e.g., U.S. earthquake, U.S. hurricane, European windstorm, Japanese earthquake, Japanese typhoon)
- The granularity of exposure data gathered for the risk model
- Model outputs developed by the applicable peril modeling firm
- Results from stress testing in the peril model
- The presence of multiple event triggers in the bond legal structure (e.g., second or third event triggers)
- The credit risk of the entity paying the premiums to the SPRV
- Other items reviewed include, but are not limited to, the following: the risk period of the coverage, the annual re-setting of attachment points to address changes in the covered portfolio (such as changes in demographics and exposure), extension options, and the model archiving policy.

C. The Assignment of a Rating

In conjunction with other factors discussed in the criteria, the rating assigned to a catastrophe bond is generally based on the associated cumulative default rate corresponding to the term of the debt. This default rate is based on *Best's Idealized Issue Default Matrix* found in *Best's Insurance-Linked Securities and Structures Methodology* (BILSM).

Published by A.M. Best Rating Services, Inc.
METHODOLOGY AND CRITERIA

A.M. Best Rating Services, Inc.

Oldwick, NJ

PRESIDENT & CEO Matthew C. Mosher

EXECUTIVE VICE PRESIDENT & COO James Gillard

EXECUTIVE VICE PRESIDENT & CSO Andrea Keenan

SENIOR MANAGING DIRECTORS Edward H. Easop, Stefan W. Holzberger, James F. Sneek

AMERICAS

WORLD HEADQUARTERS

A.M. Best Company, Inc.
A.M. Best Rating Services, Inc.
1 Ambest Road, Oldwick, NJ 08858
Phone: +1 908 439 2200

MEXICO CITY

A.M. Best América Latina, S.A. de C.V.
Av. Paseo de la Reforma 412, Piso 23,
Col. Juárez, Alcaldía Cuauhtémoc, C.P. 06600, México, D.F.
Phone: +52 55 1102 2720

EUROPE, MIDDLE EAST & AFRICA (EMEA)

LONDON

A.M. Best Europe - Information Services Ltd.
A.M. Best Europe - Rating Services Ltd.
12 Arthur Street, 8th Floor, London, UK EC4R 9AB
Phone: +44 20 7626 6264

AMSTERDAM

A.M. Best (EU) Rating Services B.V.
NoMA House, Gustav Mahlerlaan 1212, 1081 LA Amsterdam, Netherlands
Phone: +31 20 308 5420

DUBAI*

A.M. Best - MENA, South & Central Asia*
Office 102, Tower 2, Currency House, DIFC
P.O. Box 506617, Dubai, UAE
Phone: +971 4375 2780
*Regulated by the DFSA as a Representative Office

ASIA-PACIFIC

HONG KONG

A.M. Best Asia-Pacific Ltd
Unit 4004 Central Plaza, 18 Harbour Road, Wanchai, Hong Kong
Phone: +852 2827 3400

SINGAPORE

A.M. Best Asia-Pacific (Singapore) Pte. Ltd
6 Battery Road, #39-04, Singapore
Phone: +65 6303 5000

Best's Financial Strength Rating (FSR): an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. An FSR is not assigned to specific insurance policies or contracts.

Best's Issuer Credit Rating (ICR): an independent opinion of an entity's ability to meet its ongoing financial obligations and can be issued on either a long- or short-term basis.

Best's Issue Credit Rating (IR): an independent opinion of credit quality assigned to issues that gauges the ability to meet the terms of the obligation and can be issued on a long- or short-term basis (obligations with original maturities generally less than one year).

Best's National Scale Rating (NSR): a relative measure of creditworthiness in a specific local jurisdiction that is issued on a long-term basis and derived exclusively by mapping the NSR from a corresponding global ICR using a transition chart.

Rating Disclosure: Use and Limitations

A Best's Credit Rating (BCR) is a forward-looking independent and objective opinion regarding an insurer's, issuer's or financial obligation's relative creditworthiness. The opinion represents a comprehensive analysis consisting of a quantitative and qualitative evaluation of balance sheet strength, operating performance, business profile, and enterprise risk management or, where appropriate, the specific nature and details of a security. Because a BCR is a forward-looking opinion as of the date it is released, it cannot be considered as a fact or guarantee of future credit quality and therefore cannot be described as accurate or inaccurate. A BCR is a relative measure of risk that implies credit quality and is assigned using a scale with a defined population of categories and notches. Entities or obligations assigned the same BCR symbol developed using the same scale, should not be viewed as completely identical in terms of credit quality. Alternatively, they are alike in category (or notches within a category), but given there is a prescribed progression of categories (and notches) used in assigning the ratings of a much larger population of entities or obligations, the categories (notches) cannot mirror the precise subtleties of risk that are inherent within similarly rated entities or obligations. While a BCR reflects the opinion of A.M. Best Rating Services, Inc. (AM Best) of relative creditworthiness, it is not an indicator or predictor of defined impairment or default probability with respect to any specific insurer, issuer or financial obligation. A BCR is not investment advice, nor should it be construed as a consulting or advisory service, as such; it is not intended to be utilized as a recommendation to purchase, hold or terminate any insurance policy, contract, security or any other financial obligation, nor does it address the suitability of any particular policy or contract for a specific purpose or purchaser. Users of a BCR should not rely on it in making any investment decision; however, if used, the BCR must be considered as only one factor. Users must make their own evaluation of each investment decision. A BCR opinion is provided on an "as is" basis without any expressed or implied warranty. In addition, a BCR may be changed, suspended or withdrawn at any time for any reason at the sole discretion of AM Best.

