CASE STUDY

# World Bank Provides Chile with $630 million Insurance Cover for Earthquake Events

**In March 2023, the World Bank executed a dual catastrophe bond and swap transaction that provides the Republic of Chile with $630 million of insurance cover for earthquake events - $350 million of catastrophe bonds and $280 million of catastrophe swaps.**

This is World Bank's largest catastrophe (cat) risk transfer transaction for a single country, its nineteenth catastrophe bond and the second for Chile.

Photo Credit: REUTERS/Ivan Alvarado

## Background

Chile has a long history of earthquakes and tsunamis and is one of the most earthquake-prone countries in the world. In March 2018, the Government of Chile, along with the three other Pacific Alliance countries, Colombia, Mexico, and Peru, collectively accessed the Insurance Linked Securities (ILS) market, using the World Bank Capital at Risk Notes (CAR) program, with the largest ever sovereign cat bond transaction for a total of US$1.36 billion. The transaction provided Chile with $500 million of insurance cover against severe earthquakes for a period of three years.

To mitigate the impact of infrequent yet devastating earthquake events, Chile requested support from the World Bank to renew and potentially expand the earthquake cover that expired in February 2021. This would provide Chile with better protected and resilient public finances and was part of a comprehensive strategy towards fiscal responsibility. It would reduce the need to raise debt in the aftermath of a disaster and would potentially complement a contingency fund for natural disasters (that would cover more frequent events) that is under discussion in the Chilean senate.

## Financial and Project Objectives

- Cover severe earthquake events that generate high recovery needs and impact the fiscal balance
- Optimize the cat-in-a-grid parametric structure, and provide quick payouts after an earthquake event
- Expand the coverage from the 2018 transaction

## Financial Solution

The World Bank simultaneously marketed and executed a $350 million cat bond and $280 million of cat swaps. The bond and swaps were written on the exact same financial terms, the cat bond with bond investors and the cat swaps with (re)insurance companies. Combined they provide Chile with $630 million of earthquake (including resulting tsunamis) insurance cover for three years.

Chile pays an insurance premium for the overall coverage, which the World Bank transfers to the cat bond investors and cat swap counterparties. The insurance premium is fixed for the three years of cover, removing any cost uncertainty for Chile.

The World Bank will provide insurance payouts to Chile based on the physical parameters of an earthquake event, which were defined based on the requirements of Chile. Therefore, there is no need to wait for incurred losses to be assessed before the insurance would payout.

If a qualifying event occurs, Chile will issue a notice to the independent calculation agent (AIR Worldwide) who will determine the payout amount based on the location, magnitude, and depth of an earthquake. The World Bank will transfer the payouts to Chile as soon as a calculation report is available, within approximately one month after an earthquake occurs.

Given the large size objectives of Chile and tight cat bond market liquidity in the second half of 2022, the team agreed to explore simultaneous placement in the cat bond and (re)insurance markets. This tight liquidity reflected investor losses in bond and equity markets that spurred a rebalancing of investors' portfolios, high inflation driving up coverage needs with sponsors competing for scarce capital, and the impact of Hurricane Ian on Florida exposed cat bonds that eroded investable capital.

## Outcome

Through marketing the risk simultaneously in cat bond and (re)insurance markets, the World Bank was able to build price tension across the two books and maximize size for Chile. This transaction priced at the low end of guidance at 4.75% per annum and for 26% greater coverage than in 2018.

It is the largest single country cat bond transaction, the first cat bond and first World Bank bond listed on the Hong Kong Exchange, and it was supported by the Hong Kong Insurance Authority.

## World Bank's Role

The World Bank issued the cat bond and entered into cat swaps with (re)insurance companies in order to provide insurance cover to Chile. The World Bank managed the structuring, documentation, marketing, and execution of these transactions leveraging its experience and reputation, large institutional investor base, and bond issuance infrastructure including its capital-at-risk notes program. The World Bank procured external service providers for the transaction including Aon Securities, GC Securities and Swiss Re Capital Markets as lead managers and AIR Worldwide as risk modeler and calculation agent.

The World Bank is also supporting Chile with a grant application from the Hong Kong Insurance Authority to support the cat bond transaction costs.

## Investor Base

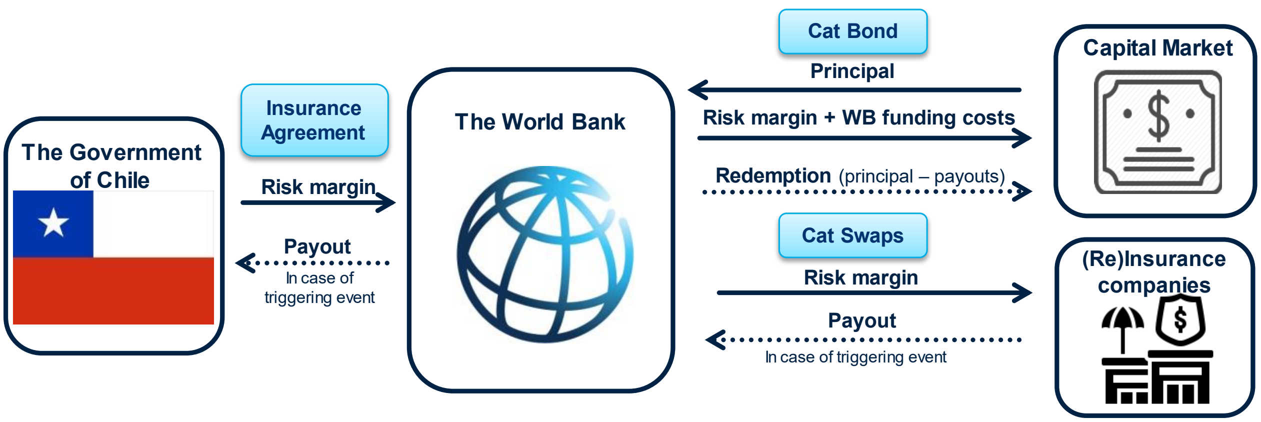
The transaction attracted a diverse base of 24 bond investors and 4 (re)insurance companies.

*Cat bond distribution:*

| Geographic Distribution | | Investor Type | |
|---|---|---|---|
| **Europe** | 54% | **ILS Fund** | 76% |
| **North America** | 40% | **Asset Managers** | 15% |
| **Bermuda** | 4% | **Pension Fund** | 6% |
| **Asia** | 2% | **Insurer / Reinsurer** | 3% |

*(Re)insurance company cat swap regional distribution:*
Europe – 60%, North America – 36%, and Bermuda – 4%

## Transaction Structure




## Transaction Summary

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|---|---|
| **Peril** | Chile Earthquake |
| **Coverage Amount** | $630 million (US$350 million bond principal and US$280 million swap notional) |
| **Risk Period** | 3 years |
| **Trigger Type** | Parametric CAT-in-a-grid |
| **Payout Structure** | Linear sliding scale based on earthquake severity with a payout of 30%, 70%, 100% of principal |
| **Risk Statistics (Annual)** | Expected Loss: 1.00%; Attachment Probability: 1.48% |
| **Risk Margin** | 4.75% |

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