

# Catastrophe (CAT) Bonds

## Background

Natural disasters have been increasing over time (see table) and as a result the cost of repairing damaged infrastructure and providing support to the affected private sector is becoming more difficult each year. This cost which is quite significant is borne by the Government and in a situation where the revenue base is severely weakened, providing basic amenities to a stricken population might seem a daunting task. Even more so for developing countries like in the Caribbean who do not have access to vast resources as do developed nations like the United States and Canada. A problem like this may seem hard to deal with but the solution is quite simple. CAT Bonds.

	1950-59	1960-69	1970-79	1980-89	1990-99	2000-05
Number of events	21	27	47	63	91	57
Statistics Courtesy IMF						
(billion dollars; constant 2005 prices)						
Overall Losses	48.1	87.5	151.7	247.0	728.8	575.2
Average Losses	2.3	3.2	3.2	3.9	8.0	10.1



Photo taken of Haiti's capital Port-au-Prince during a joint Red Cross Red Crescent / ECHO aerial assessment mission on 13 January 2010. The devastating destruction that was caused by a 7.3 magnitude earthquake on 12 January 2010 is clearly visible.



Member of the Chilean Red Cross working in the recovery of the country after the earthquake

## What are CAT Bonds?

Catastrophe (CAT) Bonds are high-yield debt instruments that are usually insurance linked and meant to raise money in case of a catastrophe such as a hurricane or earthquake. It has a special condition that states that if the issuer (Insurance or Reinsurance Company) suffers a loss from a particular pre-defined catastrophe, then the issuer's obligation to pay interest and/or repay the principal is either deferred or completely forgiven. What this basically does is transfer some of the risk involved in dealing with natural events from the Government to the issuers of the policy i.e. the insurers. This way the Government does not have to bear the full cost of a catastrophe enabling it to provide much needed support to the economy, and other social structures, without continuous exposure to the risks involved.

Examples of similar insurance structures being implemented around the world include the Catastrophe Risk Transfer Vehicle (CRTV) for public assets and housing in Costa Rica, Swiss RE which was one of the main Companies that dealt with the recent Chile earthquake and AIR Worldwide a catastrophe modeling and CAT Bond insurer that has clients across many of the world's high risk areas including Tokyo, San Francisco and Beijing.

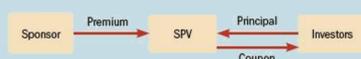
## Advantages of CAT Bonds

- Cat bonds are a kind of insurance securitization which transfer risk from issuers to investors, in return from a premium yield.
- By presenting an alternative to traditional reinsurance, the development of cat bonds has forced re-insurers to become more competitive with pricing.
- These bonds can present opportunities for fixed income managers to gain a yield pickup, in return for a theoretically low risk of income and capital loss.
- Cat bonds can provide excellent diversification opportunities for bond portfolios, given that cat bonds insurance risk categorization shows little or no correlation with either equities or conventional bonds.

## Disadvantages of CAT Bonds

- Catastrophe bonds are available only to institutional investors.
- The market in cat bonds generally suffers from lower levels of liquidity relative to mainstream bonds.
- The dramatic recent growth in the catastrophe bond market has in turn spurred the launch of some new insurance related businesses which could potentially undermine the long term growth prospects of the cat bond market.

### A. Transaction



### B. Possible end positions



Diagram showing basic structure and outcomes of CAT Bonds

\*SPV – Special Purpose Vehicle



Image showing the financial district, downtown Port of Spain Trinidad