



**University of
Zurich^{UZH}**

**Statistical Evidence for the Determinants of Spreads at
the Time of Issuance in the Catastrophe Bonds Market**

Master Thesis

Department of Banking and Finance

University of Zurich

Supervised by Prof. Dr. Pablo Koch Medina

Co-supervised by Andrea Bergesio

Author:

Matteo Mencarelli

Handed in:

September 2020

Abstract

Catastrophe Bonds are securities allowing re/insurers to transfer risk to financial markets. Due to their connection to natural hazards and their relative independence from other asset classes, CAT Bonds prices obey to dynamics that markedly differ from those of other financial instruments. Firstly, these securities are investigated from a theoretical perspective by means of the approaches proposed by Froot (2001) and Nell and Richter (2000). Based on such theoretical premises, a comprehensive set of hypothesis is formulated with regards to the main determinants of issuance prices. The hypothesis are then tested on a comprehensive dataset of public Property & Casualty bonds issued between 2008 and 2019. The OLS regressions performed confirm many results reported in previous literature, restating the relevance of transaction-specific features such as the Expected Loss, the territory and peril covered, and the trigger applied. With respect to the latter, the results also indicate that substantial changes recently took place with regards to how the different types of triggers are perceived on the market. Moreover, data also suggest that macroeconomic elements like the stage of the reinsurance cycle and that of yields on comparable corporate bonds influence CAT Bonds prices. Finally, time fixed effects are included in the analysis to take into consideration the high volatility that characterized this market over the period considered.