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Journal Name:	British Journal of Economics, Management & Trade
Manuscript Number:	Ms_BJEMT_26775
Title of the Manuscript:	The Complementary Compound Truncated Poisson-Weibull Distribution for Pricing Cat Bonds for Extreme Earthquakes
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Compulsory REVISION comments	1.- The Conclusion seems weak. In particular, the practical relevance of the proposed empirical model is not clear: does the author ultimately want to suggest that Governments (in "any country") should be involved in buying CAT bonds and/or determining their price? 2.-The English quality should be improved. Even the Abstract needs to be double-checked. Just to make a few examples (based upon the Abstract): a.- line 1: delete "the" before "catastrophic bonds"; b.- line 4: delete "it" before "is based"; c.- line 10: delete "," before "expresses". Please, note that according to SDI General Editorial Policy (Publication Criteria, 6., http://www.sciencedomain.org/page/sdi-general-editorial-policy) "the language in submitted articles must be clear, correct, and unambiguous". Let me stress the word "correct". 3.- Formal aspects require a very accurate proofreading. For instance: a.- Keywords: if the author writes "Extreme Earthquakes", then "bonds" should be replaced by "Bonds", "risk" by "Risk", "pricing" by "Pricing", and "last" by "Last"; the initial character of the word "Wiebull" should be the same throughout the text (W vs w); b.- page 1, Introduction, line 2: volcanoes are not disasters by themselves; their eruptions should be rather	1- The conclusion part is updated with the details of relevance of the proposed model in lines 272 to 280, which brings out the role of insurance companies and the governments. 2- The grammatical errors have been corrected and the entire paper has been revised keeping English quality in view. 3- a. The keywords have been updated in line 8. Necessary corrections for comments 3.b to 3.g have been made.



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	included in this category of events; c.- page 1, Introduction, line 5, “.” should be added after “individuals”; d.- page 2: “CAT bonds” should appear when/where catastrophe bonds are mentioned for the first time in the text (line 1 instead of the first line after Table 1.); e.- page 3: in the last two lines the author writes “cat” instead of “CAT” bonds; a choice must be made and then the same characters should be used everywhere; f.- page 2, line 5: “gape” should be corrected (“gap”); g.- two dates in Table 1 need to be rectified (see “52012” and “121988”). Please, note that these are just a few examples. 4.- As far as References, the same type of characters should be used to quote titles (again, capital vs small letters). The use of symbols “[]” – as in the text – is advisable for numbers (instead of simply having them followed by “-”). 5.- Sources should be clearly disclosed, for instance at the bottom of Table 1.	4. The numbering style of the references has been changed, as suggested. Please see lines 285 to 314. 5. The source is indicated in line 29.
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Minor REVISION comments	A wider and deeper description should be provided about extreme earthquakes, losses caused by them (as well as by other natural disasters) and ways (including CAT bonds) to manage implied risks. These issues are summarized in only 4 lines at the beginning of the Introduction (page 1). By the way, they may lead to believe that (all?) governments usually cover (all?) individual losses, which could hardly be the case. To stress this point, it can be argued that this paper falls within the study area “disaster management” (see http://sciencedomain.org/journal/20/about-journal), as BJEMT is not focused on math applications. Therefore, the content should result more consistent with the relevant field of expertise. For instance, what is meant by “extreme” (earthquakes)? Are economic losses the only/most relevant ones? What about the death toll caused by (extreme/all) earthquakes? Would it be appropriate to include anyhow casualties in the proposed model (as a part of the estimated amount of overall losses)? In other words, 80 extreme earthquakes that occurred between 1906 and 2015 are mentioned in the Abstract as being analysed by the author. However, Table 1 refers to 10 events only (the costliest ones) and to the period 1994-2012. For instance, where did they occur? What are consequently the countries that would mostly benefit from the empirical model that is proposed, based on past experience? It is also questionable that CAT bonds “need” to be issued in order to bridge the gap between losses and insurance/reinsurance coverage (see page 2, line 5): on the contrary, a low perceived risk might eventually	In this paper the complementary risk method is used, which requires the use of maximum losses. So it was realized losses from the occurrence of extreme losses, when more than one earthquake occurs during the year, the extreme earthquake is the one which caused the largest losses. About CAT bonds, the description is provided in lines 21, 31-33, 34-37 and 39-45. About extreme earthquakes, please see lines 61-64 This paper is concerned with analyzing the losses caused by extreme earthquakes only, without human injuries and deaths. This paper contributes to risk management losses of economics caused by extreme earthquake and I think this paper is not different from the areas focused by BJEMT. Forecasting of losses, calculations of probabilities of number of earthquakes & losses realized, and expected losses are based on analyzing previous earthquakes’ losses and past experience. Protection and prevention of risk is one of risk management techniques (such as improving preparedness and promoting resilient cities). However, there is a possibility of extreme earthquakes, as well as the probability of
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	induce to remain exposed to it. Furthermore, efforts could be made to mitigate risks (by improving preparedness and promoting resilient cities), instead of resorting to these securities in sight of passing the risk over to financial markets; a combination of these two approaches could also be acceptable. The literature review looks like a list of opinions that have been expressed by some authors; more attention should be paid to include critical comments and even a “true” discussion of existing literature. Please, note that according to General Guideline for Authors (http://www.sciencedomain.org/page/general-guideline-for-authors#Type_of_papers), research papers “normally should not exceed 25 double spaced pages of text (including references)”. This manuscript consists of 10 pages only, which means that space was not a constraint.	losses that are beyond the abilities of countries. Therefore we can depend on one or more techniques of risk management for risk management of natural disaster. This is indicated in lines 147 to 155. The studies referred in the literature review do not consider the losses related to extreme earthquakes, methodology and flexibility of the model presented. The same has been highlighted in lines 149 to 155. Yes, as noted rightly, the length of the manuscript is about 10 pages and the space is not a constraint.
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<u>Optional/General</u> comments	The underlying idea is interesting but this paper should be improved, at least to better disclose its practical implications, to solve formal problems, and to more extensively introduce the earthquake risk (as well as related losses, other preventive measures, etc.). (*) According to General Guideline for Authors (http://www.sciencedomain.org/page/general-guideline-for-authors#Type_of_papers), "Research Papers ... should follow the structure of Abstract, Introduction, Methodology, Results and Discussion, Conclusion, Acknowledgements, Competing Interests, Authors' Contributions, Consent (where applicable), Ethical approval (where applicable), and References plus figures and/or tables.) ". The manuscript under review does not contain any statement about ethical issues and competing interests; therefore, it is assumed that there are no such issues and interests.	This paper helps governments in risk management of extreme natural disasters by proposing a model to calculate the present value of CAT bonds to manage the gap or overall losses between economic losses and insured losses. This is indicated in lines 147 to 155. There are no ethical issues and issues of competing interests in this paper.
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