

# Truth revealed in rare disaster theory

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(PhysOrg.com) -- Research that supports a theory that investors need to account for rare disasters when making decisions on the stockmarket has been accepted for publication in the international top journal in finance.

Professor Ben Jacobsen, of the University's School of Economics and Finance, worked with two former colleagues on the paper *Time-varying Rare Disaster Risk and Stock Returns* will feature in the *Journal of Financial Economics*.

They showed there is truth behind the theory that crises – such as wars, financial meltdowns, earthquakes or epidemics – do need to be factored in because of their effect on world markets.

Professor Jacobsen, who is a member of the University's Institute for Advanced Study, says the research will have a major impact on the study of financial markets and expects the measure they have developed to be used in the development of further theory.

"The validity of this theory is an important fundamental breakthrough and while this is still laboratory and drawing board work, it will play a major part in our thinking on financial markets in years to come," he says.

He carried out the research with Professor Henk Berkman and Dr. John Lee of the University of Auckland backed by a Marsden Fund grant.

Using data from 447 international political crises from 1918 to 2006,

they discovered fluctuations in probability can explain large movements in stock return and stock volatility.

Professor Jacobsen says the theory sheds light on two key issues in finance. The first is the equity premium puzzle, that returns on stocks are too high relative to other investments, and the second is that the volatility of stockmarkets is too high to be explained by economic variables.

“For decades people have tried to explain these puzzles but, so far, not convincingly. However, this new theory would explain both. According to this [theory](#), if [investors](#) account for a small probability of a rare disaster and if this probability fluctuates over time these two puzzles can be explained.

“For the moment, a practical implication is that time-varying disaster risk is an important risk factor to take into account when valuing stocks and bonds. "Over the years we will probably develop better models on how to do that.”

Provided by Massey University

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