

## Optimal Combination of International and Inter-temporal Diversification of Disaster Risk: Role of Government

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### Synopsis

This paper aims at recalling the role of the government in the financial management of disaster risk, instead of emphasizing on the importance of insurance industry. It tries to check whether a combined approach of inter-generational and international disaster risk diversification would help to optimize social welfare. In this study, a one-goods, two-country and two-period-overlapping-generations model is set up to make comparative analysis on this combined instrument and traditional instruments. In the model, the disaster risk could be diversified by the open capital market, the private insurance contract or the combined instrument, disaster reserve fund plus international loan. The result shows that the intervention from the government could successfully diversify disaster risk among generations and then increase the expected utility of the households.

**Keywords:** disaster risk diversification, disaster reserve fund, overlapping-generations model, role of government

### 災害リスクの国際的・世代間分散の最適組み合わせ：政府の役割

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### 要 旨

近年、中国では災害保険の重要性が増している。しかし保険市場は横断的にリスクを配分するシステムであり、一定の限界をもっている。本研究では2国・2期間生存・世代重複モデルを定式化し、はじめに資本市場におけるリスク配分、2国間の保険契約による災害リスクの分散効果について分析する。次いで政府が災害基金システムを用いて災害リスクを世代間で分散することによって、家計の期待効用を高めることができることを示す。

**キーワード：** 災害リスク分散，災害基金，世代重複モデル，政府の役割