How are catastrophic shocks shared between countries in the presence of solvency constraints?*

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Abstract

In this paper, we explore how an extremely large and persistent catastrophic shock is shared between two countries, employing the theoretical framework proposed by Lustig (2007) in which markets are complete, but solvency constraints are present. In the insurance contract made prior to catastrophic events, solvency constraints severely limit the insurance transfer from a nondamaged country to a damaged one. In the aftermath, however, a damaged country can finance most uncovered losses by intensively building short positions in Lucas trees and long positions in state contingent claims. This paper demonstrates that such *ex post* cross-border financial transactions with heavily leveraged positions would serve as an effective instrument to insure against a country-specific persistent catastrophic shock in the presence of severe enforcement problems.

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