

---

[Download](#)

Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHORS AND/OR EDITORS

[León-Rincón, Carlos Eduardo](#) [Ron J. Berndsen](#) [Luc Renneboog](#)

Publication Date:

Tuesday, 14 de October de 2014

An interacting network coupling financial institutions' multiplex (i.e. multi-layer) and financial market infrastructures' single-layer networks gives an accurate picture of a financial system's true connective architecture. We examine and compare the main properties of Colombian multiplex and interacting

---

financial networks. Coupling financial institutions' multiplex networks with financial market infrastructures' networks removes modularity, which augments financial instability because the network then fails to isolate feedbacks and limit cascades while it retains its robust-yet-fragile features. Moreover, our analysis highlights the relevance of infrastructure-related systemic risk, corresponding to the effects caused by the improper functioning of FMI or by FMI acting as conduits for contagion.