

Portfolio Similarity and Asset Liquidation in the Insurance Industry*

Mila Getmansky[†] Giulio Girardi[‡] Kathleen W. Hanley[§]
Stanislava Nikolova[¶] Loriana Pelizzon^{||}

This Draft: April 15, 2017

Abstract

Certain large insurers have been designated as Systemically Important Financial Institutions (SIFI) under the assumption that the forced liquidation of their common holdings could lead to systemic risk. We construct a measure of commonality in portfolio holdings using cosine similarity, and confirm that insurers with more similar portfolios have larger common sales regardless of their size. We also document that during the financial crisis, potential SIFIs with greater portfolio similarity of illiquid and downgraded securities have greater sales commonality. Our measure is easily implementable and can be used by regulators to identify insurers who may contribute to asset liquidation channel vulnerabilities.

Keywords: Interconnectedness, Asset liquidation, Similarity, Systemic Risk, Financial Stability, Insurance Companies, SIFI

*We thank Mark Flannery, Pab Jotikasthira, Anastasia Kartasheva, Ralph Koijen, Yijia Lin and participants at the American Finance Association Meeting (AFA 2017), IIF Colloquium on International Insurance Regulatory Issues, London Quantitative Finance Seminar, MIT CSRA Meeting, and Temple University Workshop on Systemic Risk and the Insurance Industry for helpful comments. We thank Nicola Mano, Max Riedel, and Matteo Sottocornola for excellent research support. The Securities and Exchange Commission, as a matter of policy, disclaims responsibility for any private publication or statement by any of its employees. The views expressed herein are those of the author and do not necessarily reflect the views of the Commission or of the author's colleagues on the staff of the Commission.

[†]Isenberg School of Management, University of Massachusetts, Amherst, MA 01003. Email: msherman@isenberg.umass.edu.

[‡]Division of Economic and Risk Analysis, U.S. Securities and Exchange Commission, Washington DC 20549-9040. Email: girardig@sec.gov.

[§]College of Business and Economics, Lehigh University, Bethlehem, PA 18015. Email: kwh315@lehigh.edu.

[¶]College of Business Administration, University of Nebraska-Lincoln, Lincoln, NE 68588. Email: snikolova2@unl.edu.

^{||}Goethe University Frankfurt - Center of Excellence SAFE and Ca' Foscari University of Venice, Department of Economics, 30100 Venice, Italy. Email: pelizzon@unive.it.