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A Fresh Look at Integration of Risks in the International Stock Markets: A Wavelet Approach

Hardik A. Marfatia*†

Abstract

Increasing inter-linkages across global financial markets mean that integration of stock market risks across borders play a central role in international portfolio diversification and broader economic policy making. Combining the superior features of parametric and nonparametric methods, this paper undertakes a novel approach on international volatility spillovers across 22 leading stock markets of the world. The approach is to combine wavelet techniques with time-varying conditional volatility and study the comovement of risks at the country level and regional level. Evidence suggests that comovement of risks between the U.S. market and European markets are strong mostly at lower frequencies (in the long-run) only. At higher frequencies (in the short-run), the integration of stock market risks of a country is more connected to the region to which the country belongs and less with the U.S. or other global markets. Further, during the recent financial crisis, common knowledge suggests that the spillover of risks was largely a global phenomenon, but our approach provides new insights that the spillover of risks was mostly limited at lower frequencies. In fact for countries like China, India and Malaysia even at lower frequencies there is limited evidence of spillover of risks.

JEL Classifications: C40, E32, G15, F30.

Keywords: Wavelet Analysis, Volatility Clustering, Stock Returns, International Transmission.

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