

A common risk factor in global credit and equity markets: An exploratory analysis of the subprime and the Sovereign-Debt crises

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Abstract-

This paper investigates the existence of a common risk factor across asset classes and geographical areas, focusing on the crises and post-crisis periods. This factor has important implications for diversification in investor's portfolios. We assess a worldwide sample of assets: Equity, Corporate CDS and Sovereign CDS from fourteen countries across Europe, US and Asia, and focus the analysis to a time window where diversification was crucial: the crises and post-crisis periods. To identify the factors that underlie asset movements and their composition, a Principal Component Analysis (PCA) is applied. We find that there is supporting evidence for the existence of a common risk factor that underlies 86 percent of our sample's assets movements and reflects a global non-diversifiable risk that permeates the financial system. The uncovered risk factor is robust across periods, and it is evenly distributed across assets and countries, with the noticeable exception of Japan, which follows a divergent risk pattern. This is also true, to a lesser extent, for the US, Canada and China. Within the Eurozone financial assets a higher commonality is uncovered. In addition, we confirm that the common risk factor becomes more important in times of crisis. The existence of a common risk factor limits the possibilities of diversification, in particular during turmoil periods when correlations among assets' movements rise. However, the fact that some geographies display a lower commonality can be used to improve the risk profile of diversified portfolios.

Index Terms- Economics; Systematic risk; Corporate structural model; Contingent claim analysis; Principal component analysis; Credit default swaps

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