TrAffic LIght System for Systemic Stress: TALIS^3

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Abstract

For the purposes of financial stability, it is important to identify financial institutions that, when in distress, could have a large adverse impact on financial markets. We propose a TrAffic LIght System for Systemic Stress (TALIS-cube) that provides a comprehensive color-based classification for grouping companies according to both the stress reaction level of the system when the company is in distress and the company's level of stress. TALIS^3 has the ability to integrate multiple signals coming from the interaction between different risk metrics. Starting from specific risk indicators we classify companies by combining two loss functions, one for the system and one for each company, evaluated over time and as a cross-section. From the color-based classification of companies we also obtain an aggregated index. TALIS^3 can be used to enhance the performance and robustness of the current systemic risk measures. We provide an empirical analysis of the US market.

Keywords: (B) Risk Analysis, Systemic Risk, CoVaR, Company rankings, Aggregated index
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