

Abstract

This diploma thesis introduces the measures of network connectedness in the context of asset pricing. It proposes an asset pricing model in which the factor of connectedness is included as one of the risk factors together with the three Fama-French factors. The goal of the analysis is to examine whether the connectedness represents a significant risk factor that should be considered while determining the risk premium of the portfolio in different sectors in the market. Using the realized volatilities and returns of 496 assets of SP 500 index over the period 2005 – 2018, that are divided into 11 sectors, we firstly determine the linkages of connectedness between the assets in the same sector. Applying Fama-MacBeth two-step regression model, we explore the significance of the connectedness factor for the determination of the risk premium. We argue that the sector overall connectedness represents a significant risk in most of the sectors and should be therefore taken into account by the investors in all sectors. Moreover, the total directional connectedness that captures the spillover of shocks to one asset from the other assets in the sector, is a significant risk factor that should increase the risk premium of the portfolio, especially in sectors such as the financial, health care, consumer and real estate sector.

JEL Classification G10, G11, G12, C13, C58

Keywords financial network, connectedness, risk premium, asset prices, risk factors

Title Asset Prices, Network Connectedness, and Risk Premium