

A Network Approach to Analyzing Financial Markets

Authors : Yusuf Seedat

Abstract : The necessity to understand global financial markets has increased following the unfortunate spread of the recent financial crisis around the world. Financial markets are considered to be complex systems consisting of highly volatile movements whose indexes fluctuate without any clear pattern. Analytic methods of stock prices have been proposed in which financial markets are modeled using common network analysis tools and methods. It has been found that two key components of social network analysis are relevant to modeling financial markets, allowing us to forecast accurate predictions of stock prices within the financial market. Financial markets have a number of interacting components, leading to complex behavioral patterns. This paper describes a social network approach to analyzing financial markets as a viable approach to studying the way complex stock markets function. We also look at how social network analysis techniques and metrics are used to gauge an understanding of the evolution of financial markets as well as how community detection can be used to qualify and quantify influence within a network.

Keywords : network analysis, social networks, financial markets, stocks, nodes, edges, complex networks

Conference Title : ICSCSM 2022 : International Conference on Social Computing and Social Media

Conference Location : Rome, Italy

Conference Dates : July 21-22, 2022