

1125-62-1214      **Morgan G Escalera\*** ([escalem@rose-hulman.edu](mailto:escalem@rose-hulman.edu)). *Sovereign Adaptive Risk Modeling*.

In the wake of the 2008 financial crisis, the FSB (Financial Stability Board) and the BCBS (Basel Committee on Banking Supervision) created a list of Globally Systematically Important Banks with the intention of determining which financial institutions were important enough to the global market that their failure would result in total systemic collapse. The purpose of this research paper is to use econometrics and statistical analysis to create a mathematical model that generalizes the BCBS's five criteria that define the financial institutions and apply them to governmental bodies. These five criteria are size, interconnectedness, cross-jurisdictional activities, complexity, and substitutability. The model is created by utilizing a series of weighted directed graphs to analyze the interconnectedness of central banks in the system as well as creating a "market valuation" of each country based on their one-year bond yields and a complete regard of their holdings. The original application of the model was for the troubled economy of Greece in the Eurozone. Time permitting, we plan to discuss the cases of other countries such as Argentina or Saudi Arabia. (Received September 15, 2016)