

**Title:** SYSTEMIC RISK AND THE MACROECONOMY

**Speaker:** Bryan Kelly, University of Chicago

**Importance:** Why this matters:

The Financial Crisis of 2008-2009 highlighted the importance of being able to identify periods of higher than average systemic risk in the Financial Services sector. It is important to understanding the behavior of the economy, but also important for asset allocation decisions.

**Investigation:** "Speaker analyzed XXX data to address the questions yyy, zzz, etc."

Kelly used a list of 17 previously proposed measures of systemic risk for the US, and 10 measures for the UK and EU. By aggregating the variables, and by using estimation techniques that focuses on the tail outcomes, he was able to construct a systemic risk factor that was strongly related to future macroeconomic outcomes.

**Innovation:** Are there new techniques of interest in the data or approach to the problem?

Kelly used Quantile Regressions to produce the results. Quantile regressions have the benefit of putting more weight on the extreme observations than traditional OLS regressions. It was important to aggregate the predictor variables. Each captured some aspect of financial distress, but none were robust on their own. To combine the variables, Kelly tested Principle Components and Partial Quantile Regressions (adding and weighting the variables in sequence). The Principle Components produced better results.

**Insights:** 1-2-3, what are the three most important things the speaker offered?

1. By aggregating the indicators of financial distress, and using quantile regressions, Kelly was able to develop a Systemic Risk factor that was strongly related to future downside risk.
2. In terms of a single indicator, the volatility of stocks in the financial sector is probably the most useful.
3. Kelly's measure was more predictive of future shocks than changes in the Fed Funds Rate, suggesting that suggesting that the Fed could be more proactive in responding to periods of heightened systemic risk.

**Audience rating:** 4.44