Predicting Asset Value Performance through Web Trend Analysis

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Including sentiment for stock valuation has a long history even among economists such as John Maynard Keynes who famously compared the stock market to a beauty contest where the goal was not to guess who you thought was the most beautiful but to guess who everyone else would think was the most beautiful. In this paper we describe how we measure Web Buzz around a concept (country name, company name) over time to predict that country's or company's economic performance. As an approximation for the relative importance of a concept on the Web, in Blogs, and online forums, we calculate the betweenness centrality of this concept using degree-of-separation search, constructing a back-link network of bloggers and Web sites. The betweenness metrics represent the general buzz on the concept from the Web and from bloggers. We hypothesize that these will be useful independent variables because they are unconscious signals about a concept's popularity and could be linked to the risk premium required by economic agents. Our results indicate that part of the fluctuation of tradable assets such as the S&P500 index, individual stock prices, and currency movements can indeed be explained by this Web buzz after controlling for usual risk factors.