Is Index Trading Benign?

Shmuel Baruch, University of Rome Tor Vergata
Xiaodi (Eddie) Zhang, University of Central Florida

Executive Summary

Shmuel Baruch and Xiaodi Zhang point out that investors costlessly observe noisy signals that are readily available in their environment. Sources of these signals can be, for example, experience with the customer services of firms, enthusiasm about products of certain brands, or even noting how full retailers' parking lots are. Each of these signals can hardly be called informative. However, when all the signals in the economy are aggregated, valuable information emerges.

The researchers develop a conditional Capital Asset Pricing Model (CAPM) in which some investors, called index investors, confine themselves to combinations of the market portfolio and the risk-free asset. Because these index investors do not trade individual securities, some private information does not make its way into prices. The trade of index investors only reflects their information about the market as a whole. For example, if an investor is bearish on "half" the stocks and bullish on the other half, then it follows the investor's sentiment about the market as a whole is neutral. It is impossible to trace back the sources of the investor's neutral sentiment about the market, and the consequence is that prices of individual assets become less efficient.

The researchers show, among other things, that as the fraction of index investors increases, the proportion of idiosyncratic risk to market risk increases, the correlation among asset prices increases, and the statistical fit (measured by R2) of the CAPM regression decreases. In the extreme case in which all investors are indexers, only information pertaining to the market as a whole is incorporated into prices.