

From Efficient Markets Theory to Behavioral Finance

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The author discusses the rise of behavioral finance during the past three decades and explains why the ideas behind it are increasingly necessary to describe how real markets work.

Proponents of behavioral finance view finance from a broad social science perspective that includes psychology and sociology. Unlike efficient market theorists, they believe that asset prices are not always driven by rational expectations of future returns. The author maintains that behavioral finance has become a vital research topic because it addresses many market anomalies that efficient market theory ignores.

The most significant market anomaly that efficient market theory fails to explain is excess volatility. The idea that stock prices change more than they rationally should is more troubling for efficient market theorists than any other anomaly, such as the January effect or the day-of-the-week effect. If most of the volatility in the stock market is unexplained, then efficient market theory can be easily challenged. Efficient market theory says that asset prices can be forecast using the present discounted value of future returns. Yet because of excess volatility, forecasts of stock prices based on this idea tend to be more unreliable than the prices themselves. Some efficient market theorists argue that prices are efficient at the individual stock level but not at the aggregate market level, but others concede that the level of volatility in the overall stock market cannot be explained with any variant of the efficient market model.

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Editor's note: For more from this author, visit the Additional Publications section of aimrpubs.org. Shiller's article "Current Estimates and Prospects for Change I" is part of the *Equity Risk Premium Forum*, an online-only AIMR publication that includes short presentations and roundtable discussions by some of the brightest minds in the investment world.

In contrast to efficient market theory, one of the oldest ideas in behavioral finance, going back three centuries to Holland's tulip mania, is that of price-to-price feedback. In other words, prices go up because prices went up. Speculators talk of "new era" theories to justify price increases, but a bubble can be sustained only by expectations of further price increases; at the first instance that the expectation is proven false, the bubble bursts. This feedback theory, largely ignored by those in finance, is supported by psychological and "natural" experiments, as in the case of pyramid schemes.

One of the criticisms of feedback theory is that price changes are strongly serially correlated, but that is not the case. Feedback models incorporate exponentially declining weights on past prices through time, as well as other shocks to the system, to explain price changes. The price effect operates at a low frequency that can be observed only over a long period of time. The shocks affect day-to-day price changes.

Efficient market theory suggests that prices are kept in line with rational expectations by the interaction between "smart money" and "ordinary investors." Accordingly, the smart money sells when the irrationally optimistic ordinary investor buys, and buys when the irrationally pessimistic ordinary investor sells. This theory, however, requires smart money to engage in short selling, which is often not possible, at least not in the volume required to offset the irrational optimists. Thus, irrational price changes occur. Again, the author argues, the efficient market theory is unable to reconcile this fact.

In light of such discrepancies, the author concludes that to better understand the markets, behavioral finance must be incorporated into new economic models. Efficient market models, although useful as ideals, cannot provide accurate descriptions of real markets. In addition, the author warns that we should "distance ourselves from the presumption that financial markets always work well and that price changes always reflect genuine information."

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