



Trendspotting in asset markets

There is no way to predict if the prices of stocks and bonds will rise or fall in the next few days or weeks. But it is quite possible to foresee the broad course of these prices over longer periods, such as the next three to seven years. These surprising findings were made and analyzed by this year's Laureates, Eugene Fama, Lars Peter Hansen and Robert Shiller.

Beginning in the 1960s, Eugene Fama demonstrated that stock prices are extremely difficult to predict in the short run. This discovery not only had a profound impact on subsequent research but also changed market practice. The emergence of so-called index funds in stock markets all over the world is a prominent example.

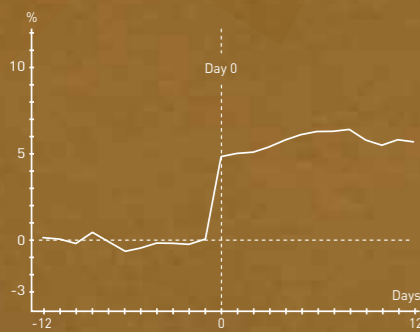
If Fama's results are right, then shouldn't it be even harder to make predictions over several years? The answer is no, as Robert Shiller discovered in the early 1980s. He found that stock prices fluctuate much more than corporate dividends, and that the ratio of prices to dividends tends to fall when it is high, and to increase when it is low. This pattern holds not only for stocks, but also for bonds and other assets.

One approach interprets these findings in terms of the response by rational investors to uncertainty in prices. High future returns

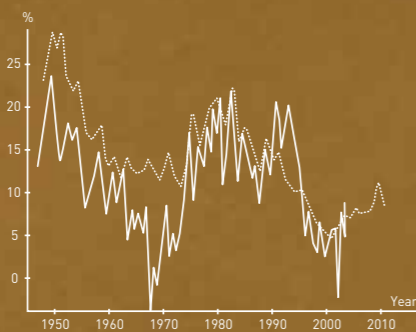
are then viewed in a rational theory as compensation for holding risky assets during unusually risky times. Lars Peter Hansen developed a statistical method that is particularly well suited to testing such theories. Using this method, Hansen and other researchers have found that modifications of the rational theory go a long way towards explaining asset prices.

Another approach focuses on departures from rational investor behavior. So-called behavioral finance takes into account both psychological factors and institutional restrictions, such as borrowing limits, which prevent rational investors from trading against any mispricing in the market.

The Laureates have laid the foundation for the current understanding of asset prices, which relies in part on fluctuations in risk and risk attitudes and in part on behavioral biases and market frictions.



The line shows how the average stock price develops in the 12 days before and 12 days after an announcement (at day 0) that dividends will increase. Such an announcement causes an upward jump in the stock price – but after the event, the price moves randomly, with no clear trend up or down. Source: Asquith and Mullins (1986).



The ratio of dividends relative to asset prices (the dashed line) shows good predictability for future returns when compared with the solid line, which shows the actual stock return over the next seven years. Source: Cochrane (2011).

$$\frac{1}{T} \sum_{t=1}^T [(\beta \frac{C_{t+1}}{C_t})^{\gamma} R_{t+1} - 1] \cdot z_{t+1} = 0$$

Lars Peter Hansen developed statistical methods for testing models of asset pricing.

There is no predictability in the short run, Eugene Fama found.

But there are regularities over longer time periods, Robert Shiller discovered.

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