

MARKET STRUCTURE

Market Efficiency, Long-Term Returns, and Behavioral Finance

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In studies of long-term stock return anomalies, overreaction to new information is as common as underreaction, and postevent continuation is as frequent as postevent reversal. This finding is consistent with market efficiency. Many of the apparent anomalies disappear when a different model of normal returns or different statistical method is used. Taken together, the studies of return anomalies do not provide reason to reject market efficiency.

A growing body of literature reports anomalies in long-term share returns. These abnormal returns are usually interpreted as evidence of market inefficiency because they seem to indicate that the market overreacts or underreacts to new information.

Fama reviews this literature and finds a roughly even split between studies finding overreaction and studies finding underreaction, which he argues is consistent with efficiency. In an efficient market, the expected value of abnormal returns is zero. Chance generates some apparent anomalies, evenly split between overreaction and underreaction.

Fama also criticizes the studies because they rarely test an alternative return-generating model to the efficiency model. He finds two

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studies that present alternative models; both models predict short-term continuation in share returns and long-term reversal in the returns. Fama reviews the results from these studies of return anomalies. He finds a pattern consistent with that predicted by the two models in terms of long-term return reversals and also returns to contrarian investment strategies, seasoned equity offerings, new exchange listings, and acquiring firms in mergers. This pattern is not the norm because studies of dividend initiations, dividend omissions, stock splits, proxy contests, and spin-offs show the opposite pattern—long-term return continuation.

One of the models predicts that the announcement effect of certain events will be of the same sign as the subsequent abnormal long-term returns. Fama finds this pattern in studies of seasoned equity offerings, dividend initiations, dividend omissions, share repurchases, stock splits, and spin-offs. He does not find this pattern for new exchange listings, proxy fights, initial public offerings, and acquiring firms in mergers. The two models are good at predicting the effects of some events and not others, and there is no explanation when they will work. A valid model should produce predictions that capture the anomalous effects of events better than market efficiency could. The existing models fail in this regard.

Fama discusses some of the technical problems of drawing inferences about long-term returns. Studies of abnormal returns require a model of normal returns. With an increase in the return horizon, errors from bad-model specification will grow at a faster rate than the volatility of returns. Bad-model problems thus cause particularly severe problems for long-term return studies.

Fama concludes with a discussion of individual anomaly studies. He shows that the anomalies reported in these studies disappear or become marginal if different models of normal returns are used or different statistical models are used to study the effects.

Taken together, the studies reporting anomalies in long-term returns do not provide a reason to reject market efficiency.

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