

[Efficient Market or Predictable Patterns?](#)

By [Roger Keays](#), 25 November 2014

I'm doing [Yale's "Financial Markets" course](#) on [Coursera](#) at the moment and for one of the assignments we had to review a paper by Eugene Fama defending his theory of efficient markets. It was kind of interesting, so I wanted to post my summary here for you guys...

In "[Market efficiency, long-term returns, and behavioral finance](#)", Eugene Fama reports that anomalies which appear to contradict the [Efficient Market Hypothesis](#) are in fact predicted by the hypothesis itself. The hypothesis is therefore not falsified by the observation of these anomalies.



Fama discusses several patterns that have been published and seem to reflect an inefficient market:

- Past winners tend to be future losers and visa versa (DeBondt and Thaler, 1985)
- Long term returns are poor on IPOs and seasoned equity offerings (Ritter, 1991; Lougran and Ritter, 1995)
- Stocks with high returns over the past year tend to have high returns over the following three to six months (Jagadeesh and Titman, 1993)
- Divesting firms post above-average returns
- Firms doing a stock-split post above-average returns.

He notes that although alternatives to the efficient market model such as the BSV and DHS behavioural models can be used to explain individual trends, they are unable to explain all the trends satisfactorily.

Fama argues that despite the presence of the above trends they **do not bias either positive or negative returns**, hence the expected deviation due to abnormalities is zero as predicted by efficient market hypothesis. He also explains how some of the above results can be the result of rational pricing. E.g. mean-regression may a reaction caused by an exaggerated risk-premium for winners and losers - a rational strategy producing an observable 'anomaly'.

When considering an individual long-term return anomaly there are several possible explanations for its existence:

1. It is statistically normal and simply the result of chance.
2. It is the result of poor methodology to determine expected normal returns.
3. It is a statistical fluke.
4. It is caused by an inefficient market.

Fama finds that 1, 2 and 3 account for enough of the anomalies to conclude that the market is in fact efficient, although he does not claim that his hypothesis perfectly models the market.

Finally Fama discusses the problem of determining a firm's expected return such that anomalies can be accurately identified. There are several problems:

- Expected return determined relative to market return ignores events specific to the firm.
- Expected return determined internally ignores events systematic to the whole market.
- [CAPM](#) doesn't accurately describe expected return for small stocks (Banz, 1981)
- Averaging compounded returns using different methods (AAR, CAR, BHAR) opens the data up to significant misinterpretation.
- When measured differently abnormal returns may appear normal.

Although Fama does not directly reject the possibility of predictable patterns appearing in the market, he does dispute the conclusion that their existence invalidates Efficient Market Hypothesis.

About Roger Keays



Roger Keays is an artist, an engineer, and a student of life. He has no fixed address and has left footprints on 40-something different countries around the world.

Roger is addicted to surfing. His other interests are music, psychology, languages, the proper use of semicolons, and finding good food.