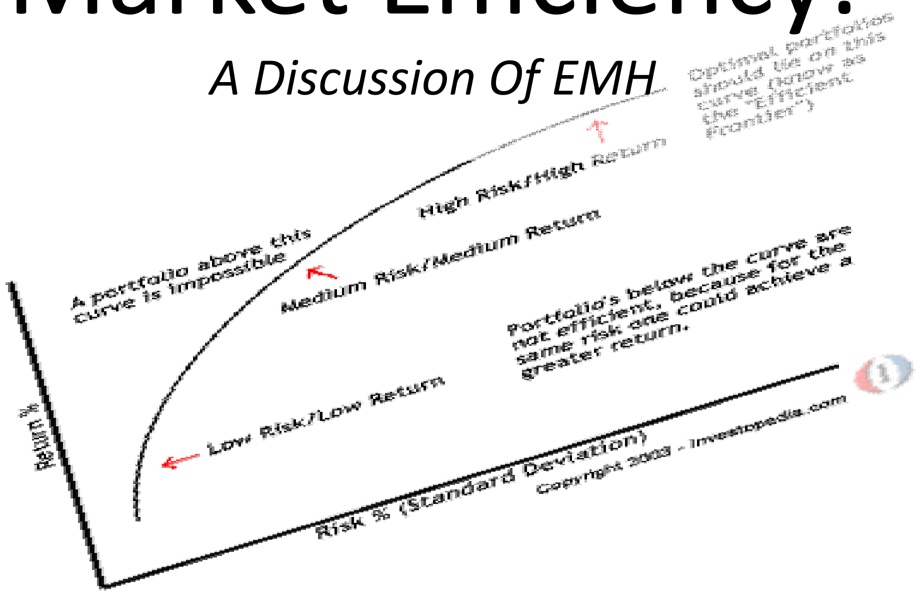
Market Efficiency:

A Discussion Of EMH



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Efficient Market Hypothesis (EMH)

Assumptions:

- "A large number of profit-maximizing participants analyze and value securities." (Reilly & Brown, 2008, p. 170)

- "New information regarding securities comes to the market in a random fashion." (Reilly & Brown, 2008, p. 170)

- "Profit-maximizing investors adjust security prices rapidly to reflect the effect of new information." (Reilly & Brown, 2008, p. 170)

- **Investors are "rational"**

Efficient Market Hypothesis (EMH)

- "If prices are determined rationally, then only new information will cause them to change." (Bodie, Kane, & Marcus, 2008, p. 345)

- "The notion that stocks reflect all available information is referred to as the efficient market hypothesis." (Bodie, Kane, & Marcus, 2008, p. 346)

Competition & Efficiency

- Based on the assumptions, competition is the source of efficiency

- "Aggressive analysts ensure that, as a general rule, stock prices ought to reflect available information regarding their proper levels." (Bodie, Kane, & Marcus, 2008, p. 347)

Versions of the EMH

- Weak-form Hypothesis
- Semistrong-form Hypothesis
- Strong-form Hypothesis

Weak-form Hypothesis

•**Weak-form** states: “stock prices already reflect all information that can be derived by examining market trading data (i.e. past prices, volume, short interest). (Bodie, Kane, & Marcus, 2008, p. 348)

•“The results of most studies consistently supported this hypothesis.” (Reilly & Brown, 2008, p. 196)

Semistrong-form Hypothesis

- **Semistrong-form** states: "all publically available information regarding the prospects of a firm must be reflected already in the stock price." (Bodie, Kane, & Marcus, 2008, p. 348)

- "Results for almost all event studies consistently supported this hypothesis." (Reilly & Brown, 2008, p. 196)

- "Several studies that examined the ability to predict rates of return on the basis of unexpected quarterly earnings, P/E ratios, size, and other anomalies, generally did not support this hypothesis." (Reilly & Brown, 2008, p. 196)

Market Anomalies

- Small-Firm-in-January Effect
- Neglected-Firm Effect
- Book-to-market Effects
- Post-Earnings –Announcement Price Drift
- Low P/E Outperformance

- Unexplained puzzles or data mining?

Strong-form Hypothesis

- **Strong-form** states: "Stock prices reflect all information relevant to the firm, even including information available to company insiders." (Bodie, Kane, & Marcus, 2008, p. 349)

- "Studies that examined the results of corporate insiders and stock exchange specialists do not support the strong-form hypothesis." (Reilly & Brown, 2008, p.197)

Efficient Markets & Portfolio Management

- Proponents of the EMH recommend a passive investment strategy that does not attempt to "outsmart" the market.

- Proponents believe active management is a wasted effort and can be very expensive.

Efficient Markets & Portfolio Management

In an efficient market, a portfolio manager must:

- Select a well-diversified portfolio
- Provide the desired systematic risk level
- Rebalance portfolio assets
- Enforce constraints (i.e. tax minimization)

Conclusion

"Studies have indicated that the majority of professional money managers cannot beat a buy-and-hold policy on a risk adjusted basis." (Reilly & Brown, 2008, p. 196)

Do superior analysts exist?

Sources

Reilly, F., & Brown, K. (2008). *Investment Analysis and Portfolio Management* (8^{th} ed.)Cengage Learning: New York.

Zvi, B., Kane, A., & Marcus, A. (2008). *Investments* (8^{th} ed.) McGraw-Hill: New York.