



*Efficient Market
Hypothesis &
Behavioral Finance*

Supervision: Ing. Luděk Benada

Prepared by: Danial Hasan

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EMH & Behavioral Finance

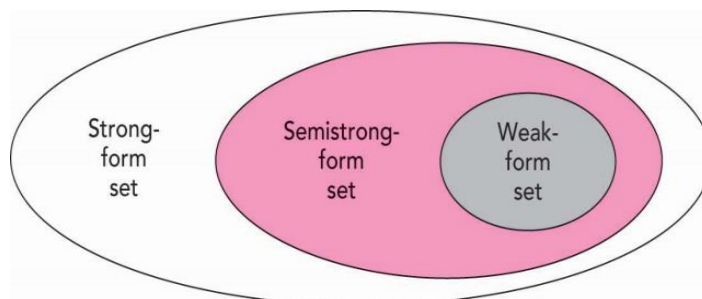
1. Introduction:

For decades, studying the financial market efficiency has been a controversial issue for many researchers and economists. Besides, analyzing the fluctuations of stock prices in modern finance had a great concern, and for that purpose many theories have been issued. One of the most accredited ones is the Efficient Market Hypothesis “EMH” which is related to Behavioral Finance from the opponents’ view of this theory.

2. Efficient Market Hypothesis (EMH):

The theory states that all new information the market is fully reflected in stock prices and investors cannot exceed the average market return in a risk-adjusted basis. In other words, the prices follow a random walk in which price changes are random and unpredictable so no one can outperform the market by predicting the price patterns. Furthermore, all investors are rational as for expectations and updating them in appropriate manners which leads to the fact that stocks are traded in their fair values.

3. Versions of the EMH:



3.1. Weak-form efficiency:

In the weak version, there is no point of using the historical information to obtain an abnormal return because prices reflect all past information such as price and volume. Thus, technical analysis will be of no use in predicting the future prices and investors will not earn more than the average market return by trading on the market information.

3.2. Semi-strong efficiency:

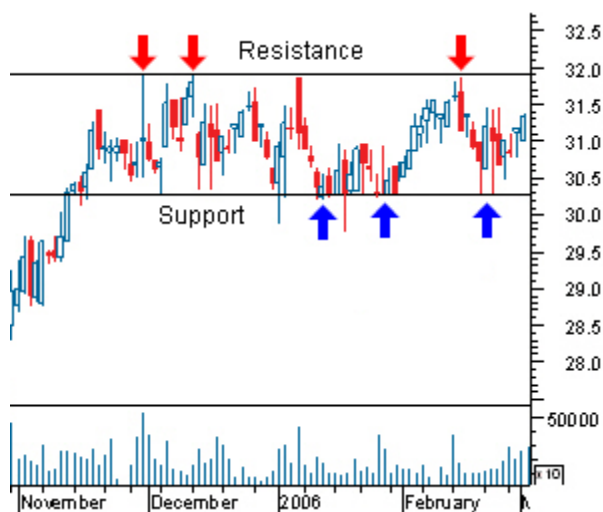
Semi-strong efficiency implies that the historical information as well as the publicly issued information will be fully reflected in the stock prices such as news and public release. Moreover, no abnormal returns will be earned by trading on the public information. Thus, neither technical nor fundamental analysis will allow investors to obtain abnormal returns.

3.3. Strong-form efficiency:

As for the strong-form, all information including past, public and private information are fully reflected in stock prices. Though, investors cannot excess the market even if they have inside information because it will be already known to everyone .However, many studies revealed that markets are not of the strong-form efficiency version.

4. Implications of the EMH:

4.1. Technical Analysis: This analysis implies using past information (volume & prices) to predict future prices. However, the EMH stated that this investment strategy as a part of active strategy is useless as the markets reveal informational efficiency. Investors in this type of analysis use charts and graphs to determine any possible trends for the stock prices. As for, two lines that should be recognized: Resistance level: a price level that is supposedly unlikely for stock prices to rise above. Support level: a price level that is supposedly unlikely for stock prices to fall below.



4.2. Fundamental Analysis: This analysis is also a part of the active strategy in which investors attempt to exploit the mispriced securities using accounting information such as earnings, dividends, risk and interest rate. Once again, the EMH implies that you cannot beat the efficiency of the market.

4.3. Passive Management: Throughout this Investment strategy, investors buy a well-diversified portfolio and follow the market. Attempting to take advantage of mispriced securities is useless as the EMH advocates the passive strategy. Investors cannot outperform the market, therefore they either buy and hold or just apply the indexing, and the hybrid strategy is also possible.

5. Behavioral Finance:

Are markets efficient...? Researchers and scientists have been trying to answer this question through many theoretical and empirical tests that examine the different forms of efficiency. Many anomalies with regards that the proponents explained in terms of EMH and the opponents disputed the hypothesis based on the inconsistency of the investors' behavior. For instance, Warren Buffet seems to beat the market most of the time, the stock crash in 1987 where DJ industrial average fell 20% in one day, and the late 2000's crisis. All these situations require further studies as for the validity of the EMH. In this paper, some of the behavioral biases are explained and financial market anomalies will be discussed later.

Behavioral finance starts with the fact that investors might not be rational and treat information incorrectly. Some of these informational inconsistency decisions is: overconfidence, conservatism, sample size neglected, framing and mental accounting.

5.1. Overconfidence: People often overestimate their abilities with regards to their choices and decisions. For example, during quizzes majority of people are more confident by their answers but a 40% of wrong answers show the opposite situation. In investing, investors believe that they will do better than others in their strategies and volume of trading. In fact, this behavioral bias derives whether choosing active or passive strategies among investors.

5.2. Conservatism: in which people tend to slowly accept the new information and insist on their own. Thus, the information won't be reflected immediately and people underreact to it which can result in the idea of momentum investing.

5.3. Sample size neglected: generally people don't concern about the sample size in which they can judge the large or the main sample wrongly. For instance, investors may be influenced with a short term increase in returns and ignore the whole period that correspond to the representativeness bias by which investors rely heavily on their recent experiences of trading.

5.4. Framing & Mental accounting: investors got influenced by the frame of choices they made. For example, one may accept a bet if it is framed in the way of gaining a profit if is the position will end up with a loss. Also, as for taking risks the investors are willing to bear more risk in their money and avoid taking it if it is for their children given the fact that it is one portfolio.

6. References:

- Alex Kane, Zvi Bodie & Alan Marcus, *Essentials of Investment*, 8th edition.
- Burton G. Malkiel, Princeton University, *CEPS Working Paper* No. 91 ,April 2003.
- Investopedia [online] available from , <http://www.investopedia.com/university/concepts/concepts6.asp> (data accessed September 2014) .
- Jay R. Ritter, “*Pacific-Basin Finance Journal*” Vol. 11, No. 4, (September 2003) pp. 429-437.
- Wikipedia [online] available from, http://en.wikipedia.org/wiki/Efficient-market_hypothesis (data accessed September 2014).