**Market Efficiency – Chapt. 14 in RWJJ**

Market Efficiency – the extent to which market prices incorporate available information.

An efficient market is one where asset prices reflect new information quickly and rationally.

**The Random Walk Theory** - Stock prices follow a random walk. That is, they change randomly with no predictable patterns or trends (the same can be said of bond prices).

Each movement is entirely independent of past movements and cannot be predicted in advance.

Pt+1 = Pt + E(R) + ε

A market is efficient with respect to information if there is no way to make abnormal risk-adjusted profits by using that information.

There are 3 forms based on what is considered relevant information

**1.** **Weak-Form Efficiency** – Market prices accurately reflect all information contained

in the history of past prices and trading volumes.

1. **Semi-Strong-Form Efficiency** – Market prices accurately reflect all publicly available information.
2. **Strong-Form Efficiency** – Market prices accurately reflect all information – both public and private.

**Technical Analysts –** Peoplewho attempt to find undervalued or overvalued securities by looking at patterns in stock prices and trading volume. Also called chartists.

**Fundamental Analysts** – People who attempt to find undervalued or overvalued securities by looking at publicly available information about firms (and the economy) such as earnings reports, financial statements and inventory levels. Most stock analysts are fundamental analysts.

## If markets are efficient, what causes price changes?

New information (the error term in the Random Walk Theory equation)

New information can change

1. Expectations of future cash flows
2. The cost of capital we should use to discount the expected future cash flows

According to the efficient market hypothesis, new information is immediately incorporated into the current stock price, so you cannot profit from the information after it is released.

According to the efficient market hypothesis, the current price includes the market’s expectations about future events.

Any news which is **different from expectations** will cause the stock price to change.

The efficient market hypothesis says that news only impacts stock prices if it is **unexpected**.

Efficient Market Hypothesis does not say that you can’t make money by investing in stocks.

It says that you cannot consitantly earn excess returns.

**Excess Returns** – More than the expected return for the level of risk in the investment.

Also referred to as “abnormal returns”

In other words, if markets are efficient, each investor should, on average, earn the expected return that is found in an accurate asset pricing model.

Note though that any test of market efficiency then becomes a dual test of the accuracy of the pricing model that is used – thus simple empirical testing becomes problematic.

Most everyone will agree that you cannot earn excess returns unless you:

1. Are **smarter** than other investors

2. Are **luckier** than other investors

or

3. Have **inside information**

The Efficient Market Hypothesis says that no one can be consistently smarter or luckier and that you run the risk of prison-time if you trade on inside information.

If there are thousands of institutional money managers, should we be surprised when a few of them do extremely well?

Is it luck or skill?