Chapter 8 - Stock Price Behavior and Market Efficiency

Three approaches to analysing the stock market:
1. Fundamental Analysis (Chp 6 & 7)
2. Technical Analysis (Chp 8)
3. Efficient Markets Hypothesis (Chp 8)

Technical Analysis - Predict the market based on:
@ historical prices and volumes
@ investor sentiment

"Bulls" - those with a positive outlook who believe stock prices will rise
Bull Market = A rising stock market

"Bears" - opposite of Bulls
Bears Market is a falling stock market.
- Usually means the market has fallen 20% from its previous high
- A decline of less than 10% is usually called "market correction"
Dow Theory - A way to study long term trends in the market. Does not consider daily price fluctuations.

Support Level - a price level (i.e. for index or individual stock) that the market is unlikely to fall below (often a previous low)

Resistance Level - A level which it's hard for the market to penetrate (often a previous high)

Support & Resistance are "psychological barriers"

Technical Indicators
Advance - Stock Price Up
Decline - Stock Price Down

Advance Ratio = \( \frac{\# \text{ of stocks up}}{\# \text{ of stocks down}} \)

"Helps measure the market breadth"
ARMS or TRIN
TRIN = TR and INDICATOR = TRading INDex

TRIN = \frac{\text{Declining Volume} \div \# \text{ of Declines}}{\text{Advancing Volume} \div \# \text{ of Advances}}

Measures \frac{\text{Average Volume of Declines}}{\text{Average Volume of Advances}}

If TRIN > 1 ⇒ BEARISH

Relative Strength - Price performance relative to another security or index.

Moving Average - Uses the average stock price over the past N days. Each day a new (the most recent) stock price is added and the oldest stock price is deleted from the calculation.

50 Day MA - shows short term trend
200 Day MA - shows the long run trend
High Low Close Chart - Shows daily high & low & close ( & possibly opening)

Candlestick Charts - Show the high low open & close. If close > open & open > close

Point & Figure Charts - Only show "significant" price changes. Does not show time.
Efficient Market Hypothesis

States that the stock market is informationally efficient. In other words, stock prices reflect the value of stocks.

Market Efficiency - Relationship between stock prices and the information that is available to investors, indicating whether it is possible to "Beat the Market." The result is a market is efficient you only beat (or lag) the market by luck.

Excess Return = Net return in excess of that earned by other investments of equal risk.

Beating the Markets means earning excess returns.

Levels of Efficiency

1. Weak Form Efficient - means that past prices and volumes are of no help in beating the market. I.e., Technical Analysis is useless if markets are Weak Form efficient.
I. Semi Strong Form Efficient - Any publicly available information is of no benefit in beating the market. (i.e. Fundamental Analysis does not help one beat the market)

II. Strong Form Efficient - Any privately available information, public or private, that can help you beat the market.

Why would the stock market be efficient?
1. Everyone is trying to beat the market, which makes it hard for anyone to beat the market. Prices quickly adjust to new information.

Book Example: Say Fidelity could earn 0.2% on Magellan by hiring a team of analysts. It would earn

0.2% x 100 billion = 200 million.

Therefore it may pay to try.
Implications for Market Efficiency

- Risk Tolerance still matters
- Asset allocation still matters
- Security selection & market timing don't matter.
- Minimize investment costs
- Minimize Taxes

Anomalies - Empirical facts that have no explanations if markets are efficient.

1. Day of the week effect - Monday has the lowest return, but we would expect it to have the highest.

2. January effect - Small stocks returns have been higher in January.

3. October 1987 crash - What information caused the crash?

NYSE Circuit Breakers - these are rules that slow or halt trading if the market declines too fast (put in after October 1987)

(Didn't bother with IQ #15)
Why is it impossible to determine whether markets are efficient?

1. Risk Adjustment - Beating the market means earning a higher risk adjusted return, but we have to measure risk correctly to see if we beat the market.

2. The relevant information problem. Efficiently is relevant to information and we may misspecify the information.

3. Dumb Luck Problem - Do people who win lotteries have more skill at picking the numbers or are they simply lucky?

4. Data Snooping Problem - If you apply 1000 trading rules over the past decade, you are sure to come up with at least one winner. But will it work in the future? E.g. Super Bowl Indicator
Performance of Professional Money Market Managers.

If the market was not efficient we would expect the professionals to beat individuals. Best Mutual Funds, anything, lag the market (see page 273-274).