



PDHonline Course G279 (8 PDH)

A Guide to the Financial Markets for Architects, Engineers and Surveyors

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Module #1: Introduction

We all have a vested interest in the securities in our retirement portfolio. Moreover, many of us have direct control over these portfolio assets and how the funds are allocated across asset classes. Some would say that nothing has changed when it comes to smart investing, advocating the buying of a broad mix of quality assets and allowing them time to appreciate in value. However, there have been changes on the financial scene recently. Some have called them radical changes and they include an explosion in the sheer number and kind of instruments available for the average individual investor. So, contemplating the management of one's own portfolio can be an unsettling thought, especially given the 2008 collapse in the financial markets.

Whether one decides to become deeply involved with investment management decisions or delegates them to a professional investment manager, a basic knowledge of the financial markets and the tools that are used in investing and trading these markets is vital to the long-term success of your portfolio. If you choose the professional management route, this financial domain knowledge will increase your comfort level in dealing with financial investment recommendations. On the other hand, if you choose to decide to become an active trader and/or investor, this basic knowledge will be the prerequisite for digging deeper into the resources listed later in this course. Some may even consider a profession change by taking a look at the certifications and specialized university degree programs also discussed in later sections.

The goal of this course is to provide this basic domain knowledge of the financial markets that is prerequisite to becoming an informed investor.

Module #2: The Securities Markets

The securities markets can be viewed from several perspectives. First of all, they can be divided into money markets and capital markets. Money markets include commercial paper, certificates of deposit and Treasury bills, whereas the capital markets provide opportunities for the buying and selling of stocks, bonds and various derivatives.

Securities markets can also be categorized into primary and secondary markets. The primary markets are concerned with the initial issue of stocks. After this initial offering the secondary markets offer the opportunity for these shares to be traded within the investment community.

Finally, the securities markets can be divided into broker markets and dealer markets. The significant difference between these two markets is in how the trades are executed. In the broker

market, the buyer and seller are brought together by specialists or broker representatives and a trade takes place on the floor of an exchange. These broker markets are auctions.

In the case of the dealer markets, securities are never directly exchanged between the buyer and seller. Rather, securities dealers who act as market makers execute, buy and sell orders separately. For example, each market maker on the NASDAQ is required to give a firm bid and ask price that they will honor. The market makers are competitive among themselves and provide an environment of competitive prices for individual investors.

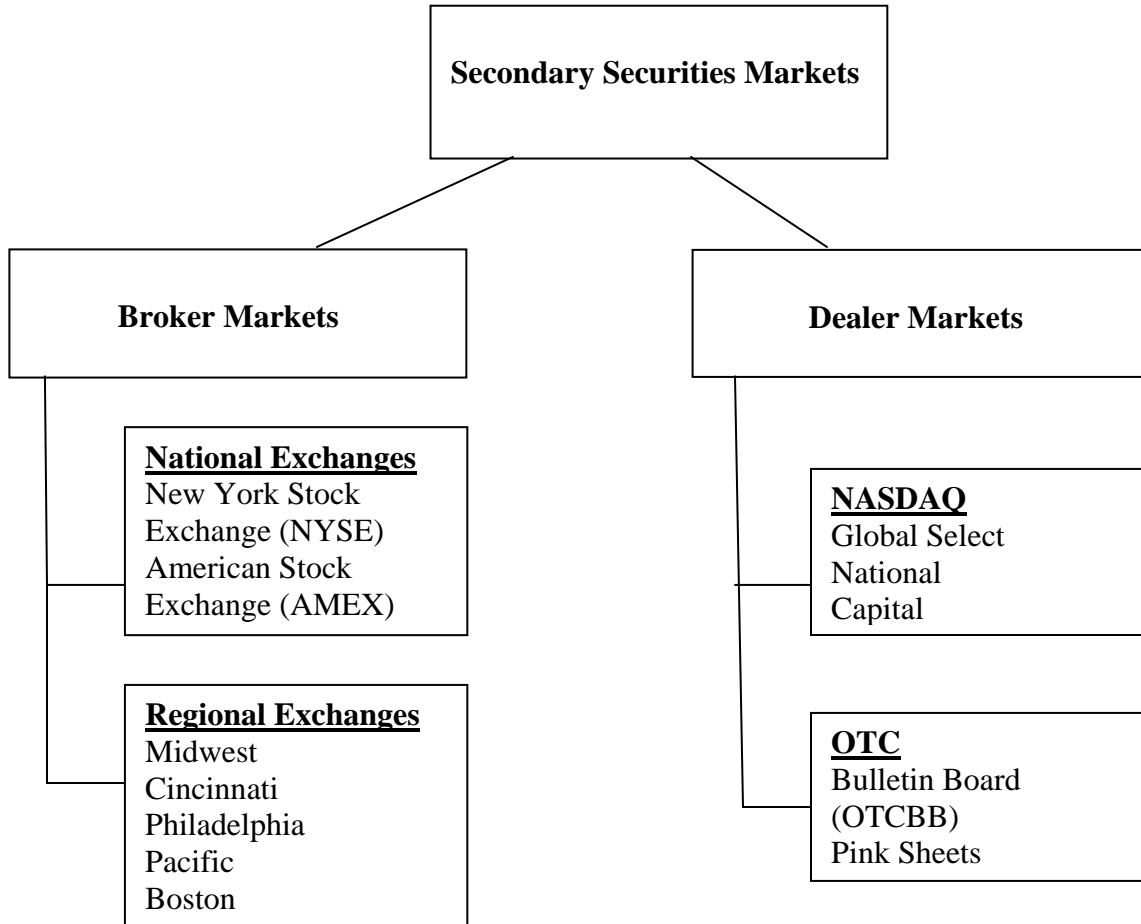


Figure 1: The Securities Markets in the United States

Figure 1 provides a graphical view of the securities markets in the United States. The New York Stock Exchange (NYSE), often called “the big board”, is what most people think of when the term “stock market” and is certainly the largest player. The American Stock Exchange (AMEX), also located in New York, is also a major player. These two, along with the regional exchanges shown, all have centralized trading floors where the trading takes place. The largest of the regional exchanges is the Midwest, located in Chicago.

The NASDAQ is by far the largest of the dealer markets, with the categories of Global Select, National and Capital having to do with various listing standards. The Over the Counter (OTC) market is not part of NASDAQ and includes primarily small companies that do not meet the NASDAQ requirements or prefer an OTC listing. These companies are traded either on the OTC Bulletin Board (OTCBB) or in what is called Pink Sheets. The OTCBB is regulated by the Securities and Exchange Commission (SEC), whereas the OTC Pink Sheets represent the unregulated market. The Pinks are so named as a carryover from the days when the quotes for this market were printed on pink sheets and can be categorized into two tiers. The largest group is all those small and frequently questionable companies that provide little information about their operations. The remaining smaller group choose to provide audited financial statements.

Stocks listed on the NYSE and AMEX are coded with symbols of one, two or three letters, whereas NASDAQ stocks will have four letters. There is no significance to the length of these symbol codes. However, suffix letters are meaningful. For example, if the company has more than one type of common stock, a stock class suffix is added. For example, Berkshire Hathaway comes in two forms, BRK.A and BRK.B. If a stock is trading on the Pink Sheets or the OTCBB, the symbol will have a suffix of PK or OB respectively. A fifth letter may be added to the NASDAQ symbol if the stock fails to meet certain exchange requirements, with the suffix Q meaning the company is in bankruptcy proceedings.

New Specialty and Mini-Exchanges

New small online exchanges have been created to facilitate a market for commodities and more esoteric assets such as energy credits as well as small companies with a limited probability of growing to the size of justifying a public offering. Some use a virtual bulletin board for postings of buyers and sellers and others use an auction system. Some examples of these new exchanges are given below.

- Second Market: A marketplace for illiquid assets. <http://www.secondmarket.com>
- SharesPost: Provides a market for private companies like eHarmony, Tesla Motors and Facebook. <http://www.sharespost.com>
- Flett Exchange: Facilitates the market for green energy credits. <http://www.flettexchange.com>
- Houston Mercantile Exchange: Allows businesses to hedge prices on commodities such as chemicals, plastics and metals and other industrial materials. <http://www.houstonmerc.com>
- Parity Energy: Supports business hedging of small volumes of natural gas and crude oil. <http://www.parityenergy.com>

Securities Markets Reflect a Global Economy

The U.S. economy is part of an increasingly interconnected global economy where goods and services are produced in one country and sold in other countries. In addition to international trade, the world economy is becoming more interconnected by the emergence of huge transnational corporations that consist of several multinational firms from different countries.

The lowering of trade barriers around the world is also facilitating the globalization process. Add to all of the above the fact that the high-speed networked financial systems that underlie and support this global economy have arguably reached the tipping point of complexity wherein even the limits of the “high priests” of finance are being reached. What does all this mean to the future of the securities market?

Observers have pointed out that financial crashes have occurred with increasing and unprecedented frequency over the past 25 years. These unpredictable “black swan” events seem to be the result of an increasingly sensitive and complex financial system. Indeed Alan Greenspan has already predicted that it will happen again, for different and unforeseen reasons and David Smick’s book entitled “The World is Curved: Hidden Dangers to the Global Economy” captures this same notion of worrisome unpredictability. Although there is talk in some quarters about reversing the globalization engines, that prospect seems rather remote.

Foreign Securities Markets

More than 100 countries outside the U.S. have securities exchanges. The list below includes some of the most cited and watched.

FTSE in London

XETRA-DAX in Frankfurt

CAC in Paris

HANG SENG in Hong Kong

NIKKEI in Tokyo

ASX in Sydney

With the high levels of financial globalization, what is happening in other economies has never been more important. Since the European and London exchange activities precede the U.S. exchange trading day, some traders use this level of activity as one indicator of how the U.S. markets will perform.

Brokers and Investment Managers

In recent years the older designations of full-service, discount and online brokerage services have been increasingly blurred. For example, online services are now available with almost all full-service and discount brokerage firms. Full-service brokers can offer research and advisory help and these services command higher fees than the discount or online categories. Some discount brokers now offer services once only available from the full-service firms.

Online services are now very popular. Powerful desktop, laptop and smart phone software and the high speed broadband connectivity of the Internet make it possible for the individual to trade anywhere anytime. Commissions vary widely within the full-service and discount categories. Individuals who are comfortable with dealing with technology rather than people can benefit from dramatically lower commissions of online services.

For more details on evaluating brokers see the following website:

<http://www.investopedia.com/articles/pf/06/evaluatebroker.asp?partner=worldnow>

On the topic of investment managers, the Madoff fraud casts a long dark shadow over this subject. It is indeed a story that is stranger than fiction but reinforces the old adage of customer beware. Even though on the surface Bernard Madoff epitomized trustworthiness, having been chairman of NASDAQ, there were red flags to be seen deeper down. The following guidelines are recommended to avoid frauds of this sort.

- Funds should be held separately in the custody of a large broker-dealer firm regulated by the Financial Industry Regulatory Authority and backed by the Securities Investor Protection Corporation and not be given directly to the manager or to a firm under the manager's direct control.
- Beware of a manager who boasts a track record that is amazing and steadily so over the long term.

Investing vs Trading

Even though the terms investing and trading have similar connotations, the differences are important. Investors are typically concerned with ownership of a high quality company stock that has good potential for increasing in value in the long term whereas a trader's primary interest is in turning a profit in the short or medium term time frame. Trading timeframes are typically viewed in terms of the following four categories, ranked from shortest to longest.

- **Scalping:** The goal of this timeframe is to exploit very short trading opportunities in which buying and selling may span a few minutes or even seconds. Scalpers tend to trade many times a day accumulating tiny profits and hopefully fewer tiny losses. Tight price spreads and high speed connections are needed.
- **Day Trading:** Day trading means opening and closing all positions within a one day timeframe. No positions are held overnight. Day traders look for indications of high probability price movement and tend to wait for good trading opportunities to form, requiring intense monitoring of price charts.
- **Swing Trading:** In this trading style positions are typically held for a few days to a week with the objective of profiting from the early identification of trends. With less monitoring required, this trading approach can be taken by individuals who work full-time.
- **Position Trading:** Position traders are looking for medium to long-term trends with durations of several weeks to a few months. A common approach is to enter a trailing stop that automatically closes the position if the price retraces down by a specified value.

Module #3: Equities

The stock market is the core of our financial system and equities are the core of the stock market where corporations raise money by issuing shares of stock and thus part ownership of the corporations. The equities landscape can be viewed from various perspectives as described below.

Capitalization

Capitalization, sometimes called float, is defined as the share price multiplied by the number of shares available for trading, thus providing an estimate of the value of the company. In some cases (e.g. indices such as the S&P 500), the number of shares used in the calculation is the number available for public trading, excluding private holdings.

Although there is no official definition, companies are classified into categories with respect to market capitalization. These categories change over time and also vary from country to country. Here is an example list.

- Large cap: \$10B - \$200B
- Mid cap: \$2B - \$10B
- Small cap: \$300M - \$2B
- Micro cap: \$50M - \$300M
- Nano cap: Below \$50M

Market Sector

A market sector is a segment of the economy consisting of a collection of companies that compete with similar services or products. The boundaries between these company groupings are fuzzy and there are different definitions of sectors out there, even though there is a Global Industry Classification Standard (GICS) of four levels of increasing specialization.

GICS Levels

Level	Number
Sectors	10
Industry Groups	24
Industries	68
Sub-Industries	154

The first level of ten sectors is shown as an example below. The remaining levels can be viewed at website <http://www.metastocktools.com/downloads/Gics.htm#groups>.

GICS Sectors

1. Energy
2. Materials
3. Industrials
4. Consumer Discretionary
5. Consumer Staples
6. Health Care
7. Financials
8. Information Technology
9. Telecommunications Services
10. Utilities

Almost 50% of stock performance is attributed to the sector to which it belongs. So looking for a winning sector and the winning stock in that sector is one stock picking strategy. Nice visualizations of sector performance data can be found at <http://www.finviz.com> and <http://support.stockcharts.com/forums/30077/entries/21295>.

As seen in the graphic below, the stock market (red line) is a leading indicator of the economy (green line) and some investment strategies, called sector rotation, make use of this information to rotate in and out of sectors at different times during the business cycle.

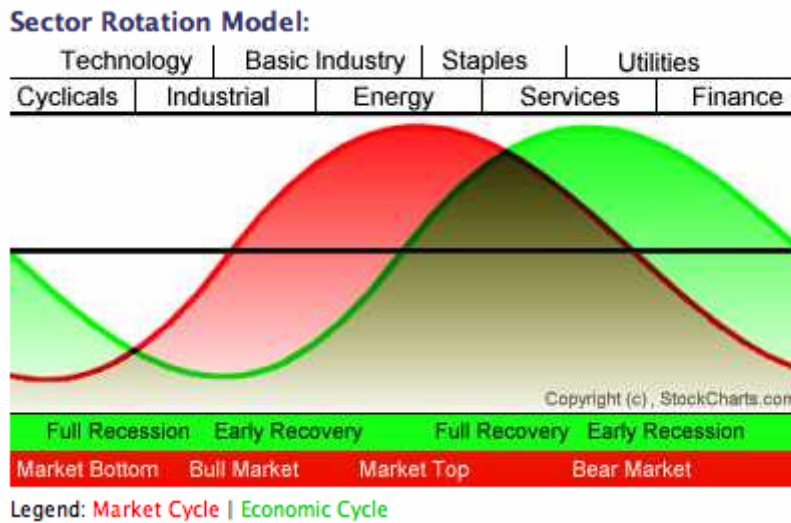


Chart courtesy of StockCharts.com

Growth-Value-Income

Another way to classify stocks is shown below and is sometimes related to what is called “investment style”, which we will discuss later.

- Growth Stocks: Stocks that have earnings increases that outpace the average earnings tend to be more volatile and often do not pay dividends.

- Value Stocks: This category of stocks is selling at a price that is below its worth or true value. The challenge here is research to ascertain what is called the “intrinsic value” of the company and this takes a significant amount of research effort.
- Income Stocks: Those interested in this category are looking for a steady income stream and stocks that pay regular dividends. These stocks are typically less volatile.

Module #4 Economic Indicators

There is a host of economic indicators that act as a set of exogenous variables that contribute to the complexities of market prices. Because of the potential market impact, the values of these indicators are highly guarded secrets prior to their public announcement. The weight of influence of these indicators varies widely and some online economical calendars such as Bloomberg at website <http://www.bloomberg.com/markets/ecalendar/index.html> show codes relating to the relative level of market impact expected by each. Indicators that produce these “market moving events” are important factors to include in short term trading strategies. A list of some example economic indicators is given in the table below. Another website with useful information about economic indicator announcements is and <http://www.econoday.com>.

Example Economic Indicators

Name	Situation	Frequency	Release Time	Website
Employment Report		Monthly	8:30 A.M. ET on the first Friday of each month	http://stats.bls.gov
Weekly Unemployment	Claims for Insurance	Weekly	8:30 A.M. ET every Thursday	http://www.ows.doleta.gov
Consumer Price Index (CPI)		Monthly	8:30 A.M. ET second or third week following the month being covered	http://www.bls.gov
Retail Sales		Monthly	8:30 A.M. ET two weeks after month ends	http://www.census.gov
Consumer Confidence and Sentiment Surveys		Monthly	10:00 A.M. ET last Tuesday of month being surveyed	http://www.conference-board.org
GDP		Quarterly	8:30 A.M. ET final week of January, April, July and October	http://www.bea.gov

Module #5: Information for Building Strategies

So how does one take information about the markets and formulate long-term investment and short-term trading strategies? Clearly some individuals may choose to commit only to long-term planning but for the sake of generality we will assume what some call a “core and satellite”

framework where a large core of the total available funds is invested using a long-term strategy and a much smaller fraction is allocated to short or intermediate term trading.

There are many strategies for investing in the stock market but most can be encompassed within one of the three categories of buy and hold, fundamental analysis and technical analysis.

Buy and Hold Strategy

This strategy provides the returns if one were buying and holding the entire stock market or a close approximation like the S&P 500 stocks or an index fund that is designed to reflect the S&P 500, for the long term. The buy and hold approach is often used as a benchmark for evaluating investment approaches and the return above the market return is called an excess return which is used as a measure of the added value of the approach and is expected to require higher levels of risk.

Two types of risk are defined in Modern Portfolio Theory (MPT) and relate to the volatility of the stock.

- Systematic: the risk resulting from general market action
- Unsystematic: the risk unique to the specific nature of the company or stock

Clearly there is nothing the investor can do about systematic risk but MPT states that unsystematic risk of a portfolio can be greatly reduced by asset diversification. The standard deviation of an asset price is often used as a measure of risk. The key to reducing portfolio risk is to choose assets that are uncorrelated.

An interesting approach to the development of a diversified portfolio is offered by the RiskMetrics Group at website <http://www.riskgrades.com> which uses a risk metric called RiskGrades that is a variation of standard deviation. The movement of all the world's equities during the "normal" market period 1995 – 1999 were averaged and assigned a standard deviation value of 100 and all other standard deviations are expressed as a percentage of that number. You may want to use some of the tools on this website to gain insights into portfolio diversification strategies.

A variation on the buy and hold strategy are the increasingly popular "life cycle funds", which are designed to make long-term investing easier, especially for those who see retirement investing as a pain. These fund of funds are available from mutual fund companies. The basic strategy is to have a different mix of risk/reward assets at different stages of one's lifetime. For example, early stages would have more higher risk growth stocks and later stages would shift to low risk income type assets near and during retirement. These funds take care of the shifts in the distribution of assets over time to achieve this type of lifetime strategy.

Lifecycle funds can be classified into the following two categories:

- Target-date funds: The driving parameter of these funds is your retirement date and an asset allocation formula over time is calculated based on this date. For example, over

time it might automatically shift from an allocation of 75% stocks, 20% bonds and 5% cash to say 25% stocks, 60% bonds and 15% cash.

- Target-risk funds: This category gives the investor the freedom to move the investment assets over time into three types of funds that are based on risk described as aggressive, moderate or conservative.

The challenge of choosing a lifecycle fund is finding one that fits your needs among the packages available. Dig into the details of the asset allocation strategies. “Off-the-shelf” packages may or may not match your needs.

Here are some example websites with more details.

<https://personal.vanguard.com/us/FundsByObjectiveDetail?category=LifeCycle>

<http://www.tiaa-cref.org/products/mutual/lifecycle/>

Interestingly, ETFs are moving into the target date fund world with ETFs in place of mutual funds. Barclays Global Investors (iShares family of ETFs) and XShares in partnership with TD Ameritrade (the TDAX Independence ETFs) were the first two entries into this market.

Fundamental Analysis

Fundamental analysis uses a set of tools to determine an estimate for a security’s intrinsic value by evaluating both quantitative and qualitative factors. The two primary assumptions of fundamental analysis are:

- The “real” value of a stock is not reflected in the price of a stock.
- The stock market will reflect the fundamentals of the stock in the long run. Unfortunately the timeframe of the term “long run” is unknown.

We discuss some of the more popular factors to consider but a much larger list can be found at this web site <http://www.investopedia.com/university/fundamentalanalysis> :

- Earnings – the company’s bottom line after payment of taxes and dividends to preferred stockholders. Earnings are reported quarterly. Should check to make sure that the number reported results from routine company operations and not one-time events.
- Price to Earnings Ratio (P/E) – Many consider this information to be the single most important fact you can know about a stock. It is calculated by dividing a stock’s share price by its earnings per share. It is a measure of how much investors are willing to pay for each dollar of a company’s earnings. The P/E is sometimes called earnings multiple or price multiple. A low current P/E does not automatically signal a good stock value. Compare current P/E against its historical P/E, the industry P/E and market P/E. You should also be aware that there are many variations of the P/E calculation. Here are some of the more common ones:

- P/E Trailing Earnings – Uses the most recent 12 months of reported earnings
- P/E Current Earnings (Used primarily by Value Line) – denominator is most recent two quarters of earnings per share plus the estimated earnings per share for the next two quarters.
- P/E Forward (Estimated) Earnings – Calculated using the fiscal year earnings estimate of an analyst or consensus of analysts. As the fiscal year passes, the earnings estimates are revised taking into account quarterly earnings reports as they become available.
- P/E Average Price – Uses the average market price divided by the earnings per share for the fiscal year. Use of the average is intended to smooth out market volatility.
- P/E Median – The mid-value of a list of annual P/E ratios in rank order. Median is seen as more useful than average because median is not distorted by extreme values.
- P/E Relative – Dividing the company's P/E by the market's P/E. The S&P500 is often used as a proxy for the market.

NOTE: Some have noted that in a depressed market such as late 2008, company earnings may be low or non-existent in many cases, so the P/E/ ratio may not always be as useful as price

- Dividend Yield – The company's dividend expressed as a percentage of the price of a share of stock. A good long term investment strategy: Look for a combination of rising dividends together with rising earnings.
- Book Value Per Share – Book value, also called shareholder's equity, is a company's assets minus its liabilities. A stock price that is below book value per share should not be seen as an attractive investment unless confirmed by other parameters of evaluation. For some categories of companies, such as financial and software, the book value per share may not be as significant since their greatest assets are their employees and expertise. For a long term investment, look for stocks that have a book value per share that is in the same range as other companies in the same industry group.
- Return on Equity - The company's net profit after taxes divided by its book value. This is a measure of how much the company is earning on the shareholder's equity in the company. Look for consistently high return on equity compared with other companies in the same industry group.
- Debt-Equity Ratio – Company debt divided by the shareholder's equity. A good rule of thumb often offered is to look for companies that have a debt-equity ratio of no more than 0.35, debts that are no more than 35% of shareholder equity.
- Price Volatility – A popular measure of stock price volatility is called beta. It is calculated from recent price data and compares how much the stock moves relative to

the market as a whole, usually represented by the S&P 500 which is given a value of 1.00. Thus a stock with a beta of 1.25 is 25% more volatile than the S&P 500 index.

Stock screen tools are available at many web sites (e.g. <http://www.msnmoney.com>) that will allow the input of important fundamental analysis parameters such as the ones discussed above and will filter out the stocks from the thousands of stocks in the database that meet the input constraints. Simple screens are available free. More complex ones require a monthly subscription fee.

A popular resource for stock selection is the “Investor’s Business Daily” (IBD) that publishes five rating parameters for companies and a single composite of these ratings in sorted order. <http://www.investors.com>

Calculations for a variety of stock evaluation models are available at Moneychimp. See website <http://www.moneychimp.com> . In addition, a fundamental analysis tool called StockGrader is available from Barron’s at website <http://www.barrons.com>.

Technical Analysis

In the previous section we have seen that fundamental analysis focuses on finding good stocks based on their intrinsic value. Technical analysis (TA) is a very different approach that involves the study of market movement with the goal of predicting price trends. The idea is to identify entry points at the beginning of trends and exiting near the end.

TA is usually associated with intermediate and short term trading where buying and selling takes place over a period of a few months or even within a single day, rather than the more long term investing strategies of fundamental analysis. Trading decisions are based on very objective, predefined rules in a trading plan that involve price, volume and risk/reward tradeoffs.

Three basic assumptions are often given as underlying the technical approach to market analysis.

- Market prices discount everything. Traders and investors are motivated by information that is available to them and also act on changes in their expectations of events. Therefore, it is assumed that all the factors that could affect prices are already incorporated into the current price.
- Market prices move in trends. Up trends are preceded by a period of accumulation and down trends are preceded by a time of distribution and a top before declining.
- Patterns of the past will be repeated. The two basic human emotions of greed at market tops and fear at market bottoms will not change in the future.

Since price patterns are represented by charts, they are the tools of the technician. We will discuss some of the most popular of these charts in the following sections.

Point and Figure Charts

Point and Figure (P&F) Charts are one of the earliest methods of tracking price action in support of trading and represents a study of pure price movement since time is not taken into account when plotting price. It is a language of two symbols from the set {X , O}, where an X represents a unit of price increase and a O a unit of price decrease, regardless of how much time it happens to take for these changes to occur. The price change unit is called the “box size” and is a fixed parameter for a given chart. Charts are columns of these Xs and Os, with a column of Xs representing a period of increasing price and Os a time of decreasing price.

These X and O columns will always alternate and the criteria for a column change, called a “reversal amount”, is also a chart parameter. A reversal occurs when there is a price change equivalent to 3 boxes or more. For example, if the box size is 5 points a reversal would occur when the price changed by 15 points or more.

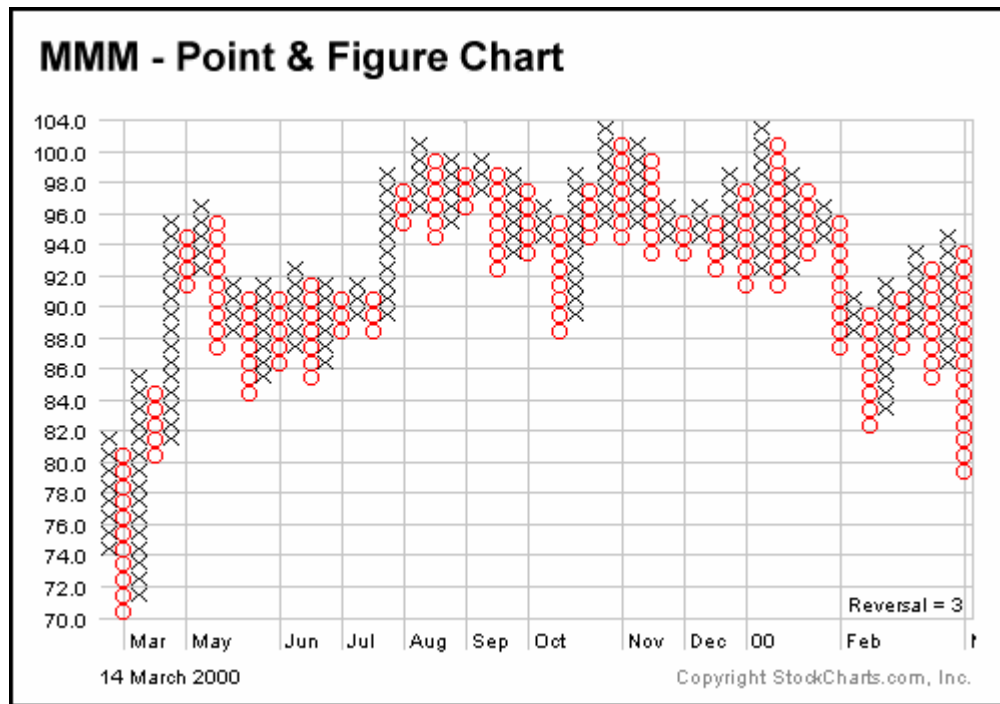


Chart courtesy of StockCharts.com

Candlestick Charts

Candlestick chart users like to point out that this method of representing price action dates back to their original very successful use in the 17th century Japanese rice trade. They can be created from any dataset that contains open, high, low and close values for each time frame. As shown in the diagram below, the body is delineated by the values of the close and open and upper and lower shadow lines extend to the high and low values for the time frame.

The color of the body codes for whether the candle represents an up time period by opening low and closing high or a down time period by opening high and closing low. Color codes vary with up candles being white and down candles being dark or up days green and down days red. The Cisco Systems chart below illustrates the use of candlesticks.

Some of the common observations and interpretations of candlesticks are listed below.

- Long white real bodies represent strong buying pressure.
- Long black real bodies represent strong selling pressure
- Small real bodies of either type represent indecision in the market and possibly a change in the market trend.

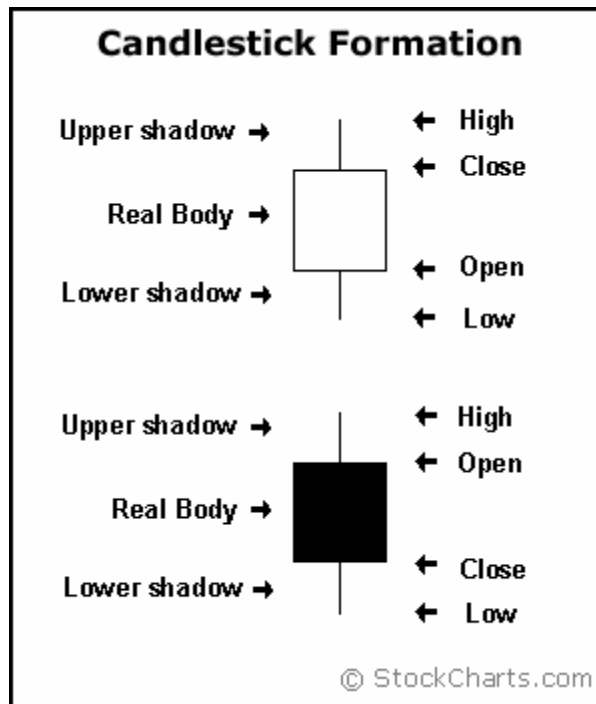


Chart courtesy of StockCharts.com



Bar Charts

Bar charts may be the most popular form of price representation. They can be used to represent a higher density of data points than candlesticks since they have a narrow profile. The chart for Sun Microsystems below demonstrates the use of this type of chart. For each time frame, the high, low, open and close are represented as shown on the graphic inset in the chart below. If prices decrease during the time frame of the bar, with the open being higher than the close, the bar can be colored red and similarly black for a price increase.



Line Charts

For those who feel that one parameter such as the closing value is the most important, then line charts may be the preferred chart. The Cisco Systems chart below illustrates the use of this representation. As shown, the periods of price increase can be coded as a black line and red segments for price decreases.



Support and Resistance

Prices are driven by the forces of supply and demand of the auction process. When supply exceeds demand, prices fall whereas when demand surpasses supply, prices rise. As shown by the green line in the chart below for Amazon.com, there are price levels called support where the demand is sufficiently strong to prevent the price from moving lower. Because of price volatility this level is clearly fuzzy and is much easier to see in retrospect than predicted.



Similarly, as demonstrated by the red line in the chart below for Eli Lilly & Co. below, there are also price levels representing resistance at which selling pressure is believed to be sufficiently strong to limit prices from rising higher.



Price Trend Indicators

We have observed trends on a chart but another popular way to identify trends is the use of moving averages (there are many variations) of the price data. A simple moving average is the arithmetic average of a price parameter, for example the closing price of the bars for a given timeframe like the daily chart below for Cisco Systems, Inc. The period of a moving average is the number of bars over which the average is calculated, with a point on the 10 day moving average being the average of the previous 10 days. The 10, 50 and 200 day average on the Cisco Systems chart illustrates the increasing degree of smoothing produced. The 200 day moving average has become a popular benchmark for whether a stock or index is on an upward move. If price is above this moving average, it is declared to be trending upward.

A simple trading system can be built around two moving averages (ma) of different periods. Buy, when the faster ma crosses above the slower ma and sell when the faster ma moves below the slower ma. For example, notice on the Cisco Systems chart that buying when the 10 ma crossed upward over the 50 day ma on July 17, 2009 would allow one to capture some profit from the trend beginning on July 13. When you experiment with the ma period you find that the longer the period, the later you enter the trend. However, shortening the period to capture more of the trend will eventually produce what is called the “whipsaw” effect where price moves just enough in one direction to produce a buy signal and then suddenly changes direction, triggering a sell and taking you out of the upward trend. Information on support and resistance levels should also be included in your trading decision making to increase the effectiveness of ma crossover strategies.



Chart courtesy of StockCharts.com

A popular variation of the ma is the exponential ma that views more recent prices as being more significant and therefore calculated with a higher weighting factor than earlier prices.

Volume

Volume is important because it is an independent variable from price and is an indication of the extent of participation in the price changes of the day and therefore can add reliability to trading decisions. Volume is said to confirm direction, and when volume increases one should be alert for a possible change in direction as illustrated in the Cisco Systems chart below. This is the same chart used earlier to illustrate moving averages and now has the volume data shown as a bar chart and the most well-known of volume indicators called On Balance Volume (OBV). OBV is the cumulative volume where volume is added when prices increase and subtracted when prices drop. It should be clear from this chart that a volume indicator such as OBV can add important information.



Chart courtesy of StockCharts.com

Overbought and Oversold Indicators

Expectations are formed when stock movements are observed. When prices move up rapidly they are expected to stop and reverse direction. Stocks that have had an unusual increase in price are called “overbought” and a stock that has similarly dropped in price is referred to as

“oversold”. Indicators have been designed to help identify these overbought and oversold conditions and one of the most popular examples is the relative strength index. It expresses the relative strength of price movement as increasing over a range of 0 to 100. The formula is given below.

$$RSI = 100 - \frac{100}{1 + RS}$$

where $RS = \frac{\text{Average of } x \text{ days up closes}}{\text{Average of } x \text{ days down closes}}$

A common value for x is 14 as in the Cisco Systems chart below and the overbought level is above 70 and the oversold level is below 30. The overbought level is indicated by the shaded area and thus the time to consider selling.



Chart courtesy of StockCharts.com

Risk Management

No element of a trading system is more important than risk management since it is essential for survival and success. It is the element of protection and discipline needed against the emotional factor that so often enters trading processes. By the way, many volumes have been written about the extreme importance of mental discipline and maintaining consistency with the rules of your trading plan. The following approach is helpful in this regard.

Limit the risk (maximum loss) of each trade to 2% of your total trading capital, not your core retirement account. One way to do this is by entering a protective stop order which will automatically sell the stock if it drops to a specified level. Stops can be implemented in a variety of ways including a fixed number, a percentage of price or even a trailing stop that will lag a fixed percentage behind the current price. A trailing stop can move up but never retreat.

To illustrate how this risk management can be applied, suppose your trading account is \$50,000 and you are interested in stock ABC that is selling at \$40 and you want to set the protective stop at \$36. This means that if you buy ABC at \$40 and the stock goes down, the stop will automatically sell at \$36 and limit your losses to \$4 a share.

If you adopt the above rule of 2% risk per trade, this means that the maximum loss you are willing to take on this trade is \$1,000. So how many shares do you buy? You have said you will risk \$4 a share on this trade, so divide the \$1,000 total risk by the per share risk of \$4 and get 250 shares. Notice that the advantage of this approach is that each trade is limited to small losses and a trailing stop strategy has the potential for letting the profits run.

Another word about protective stops is in order. They sound nice and safe, but in fact they are not. They are reliable a large percentage of the time. However, if you look at charts long enough you will notice a phenomenon called gapping, discontinuities that can sometimes be significantly large. If your stop order gets caught in a gap, the protection can be considerably compromised. If you are concerned about gapping in a given trading situation, you might want to investigate using a put option discussed elsewhere in this course.

Random Walk Theory

Technical analysis is a controversial topic in some quarters. There are many in the academic community that believe in the “random walk” theory of the markets, which is closely related to the Efficient Market Hypothesis (EMH). This theory holds that there is no sequential correlation in the direction of price movement from any one timeframe to the next. That is, short term prices will respond to supply and demand factors in either an unpredictable manner or instantaneously and that the mathematical expectation of the stock speculator is zero. That is, if traders make money they are just lucky and in the long run they will lose as much as they win and the variations they trade are simply noise around the long term averages. EMH people cite many academic empirical studies to support their position that the best investment strategy is realizing the market returns of the long term buy and hold strategy. They also cite as evidence the unimpressive record of active funds run by experts who seek to beat the market.

So anyone anticipating using TA as a basis for trading must look very carefully at why these beliefs are held so strongly by many and build trading systems with this in mind. At the very least, the implication is that successful trading using TA will be a major challenge. If you have spent any time around traders you may have already heard someone say: “Trading is a hard way to make easy money” or “Only ten percent of individual traders using TA consistently make a profit”. So, if the efficient market people are not 100% correct, where are the cracks in the theory that make TA-based trading success possible, albeit difficult?

An important observation is that the efficient market theory assumes that investors and traders are rational human beings who always strive to maximize profits and minimize losses. Adherents of TA point out that trading and investing is partly rational and partly emotional and therefore there are times in the market when greed and fear rule. In particular, the TA community takes the position that there is more emotion involved in market trending times than during flat trading-range times when the markets seem to be more rational and therefore efficient.

Also, when looking at price movements of “runs” of time when it is moving in the same direction, the price data has a “fat tail” distribution not consistent with a normal distribution. This fact is taken by the TA community as a reason that certain TA methodologies based on the “cut losses short and let profits run” work. If there are a few very large gains possible out in the fat tails, this makes it possible to achieve a net profit even if the number of trades that are profitable is less than 50%.

If many of your trades are losses, it takes some serious psychological adjustment to routinely deal with strings of losses. “Paper trading” practice accounts offered by many online brokers help but the real emotion is just not there. The markets are often called battlegrounds and as you move closer to the right edge of the charts you find yourself in what some call the “fog of war”, no certainty only odds. You should have only two goals: to make money and to document and learn from every trade. (from my favorite trading book “Come Into My Trading Room” by Dr. Alexander Elder). If you are interested in digging deeper, one of the best books discussing the TA controversy is “Evidence-Based Technical Analysis” by David Aronson. He applies the scientific method and statistical inference to trading signals. Be prepared for a long read.

NOTE: We should point out that a new field called behavioral finance is beginning to emerge which holds the more realistic hypothesis that the market consists of investors and traders who vary in their degree of rationality. This is good science. When the old theory is broken a new one is needed but the transition between the old and the new is always a stormy one.

Trading Systems and Platforms

We gave an example earlier of a simple trading system using moving average crossovers. To summarize, a trading system should be as complete and precise as possible, consist of the components below, written down and followed with unrelenting discipline.

- Markets to trade: decision of what markets to buy and sell.

- Position sizing: rule or algorithm for the size of your trades.
- Rules for trade entry and exit.
- Rules for exiting a losing position.
- Rules for exiting a profitable position.
- How to buy and sell. This is the important skill of the mechanics of executing trades by proper execution of trading orders.

If human judgment is used in implementing a trading system, it is called “discretionary”. It is said that the most successful traders use a mechanical trading system that automates the entire process of trading, removing all subjective judgment and emotion. A fully automated trading system is said to support “systematic trading” or a “black box” system. If you have a high level of confidence in your system, you can consider selling your trade signals at Collective2 at <http://preview.collective2.com>.

Some of the popular trading platforms available for system development are listed below. Costs and capabilities of trading platforms vary significantly. Paper trading accounts and backtesting on historical data are particularly useful features. Some also find the built-in statistical and mathematical functions of Excel and MATLAB useful in backtesting. Those who are already familiar with MATLAB may be interested in the book “Quantitative Trading” by Ernest Chan since it includes MATLAB code.

- Tradestation
<http://www.tradestation.com>
Award-winning premier rules-based trading platform for stocks, options, futures or forex
- eSignal
<http://www.esignal.com>
Premium online software for charting and trading of stocks, currencies and options.
- Metastock
<http://www.metastock.com>
A popular award-winning platform for trading analysis for stocks, futures, options and forex.
- Interactive Brokers
<http://www.interactivebrokers.com>
A low cost platform that supports trading of stocks, options, futures and forex as well as optional APIs built on Excel, Java or C++ for customizing trading strategies. A favorite of the author.
- Sharebuilder
<http://www.sharebuilder.com>

An interesting platform that is designed for long-term investing that will automatically buy stocks of your choice at the frequency of your choice and periodically take the funds from your checking or savings account

Short Selling

Short selling is a way to profit from the decrease in price of a security and involves some unique risks. Whether you actually plan to do any short selling or not, it is very important to understand the process, because many major players in the market place are doing so. Going “long” on a security means buying it with the belief that the price will increase, while going “short” is with the expectation of a price decrease.

Going short is selling a security that you do not own, but is loaned to you by a broker or brokerage firm. The shares are sold and the cash is credited to your account. At some point in the future you must buy back the same number of shares, an event called “covering”. If the security price falls, you can buy back the stock for a profit or if it rises and you have to cover at a higher price, you lose money. Short selling requires a margin account in which you must have a specified level of cash in case of losses. The two primary reasons to sell short are to simply make money by speculation and hedging. Investors can use shorting as a hedge to protect long positions. The total number of stocks or commodity shares in accounts or in the markets that have been sold short but not yet closed by covering is called “short interest”. This value can be used as a market indicator since a higher level of short interest suggests that more market participants expect a drop in the market.

Short selling people are seen by some as “betting against the home team”, but a more realistic concern is the “short and distort” tactic when stocks are targeted in a bear market and sold short by a trader who then uses Internet forums and other stock trading communities to put out questionable negative or outright false information that drives the price down precipitously to the traders gain. Some of these tactics perpetrated on banks during the 2008 financial crisis made local newscasts.

The risky reputation of short selling is legendary. It is often said that potential losses for long trades are the value of the stock sale since stock prices cannot go lower than 0, whereas losses for short sales can theoretically be infinite since there is no upper limit to stock prices. A common phenomena that can causes losses is the “short squeeze” that is caused by short sellers moving quickly to cover when stock prices rise, causing an imbalance in supply and demand and driving prices up even faster.

It should be noted that short selling is not allowed in retirement accounts. Of course you can now buy inverse ETFs that have many of the advantages of short selling. They are discussed later.

Market Strength Measures

Market indicators are formulas that are designed to provide information on groups of securities such as the various markets (e.g. NYSE and NASDAQ), sectors or even industries. These indicator graphs are not positioned above or below charts as technical indicators but are the quantities being charted with their own symbols for each group of stocks for which it is being calculated. For example, the bullish percent index has symbol \$BPSPX for the S&P 500 and \$BPNDX for the Nasdaq 100.

These market indicators are important trading resources since 80% of the movement of a stock is attributed to the movement of the market as a whole and the sector to which it belongs. Some of the popular market indicators are described below.

- Bullish Percent Index (BPI): An indicator of market breadth that is calculated by the formula below.

$$BPI = \frac{\text{Number of stocks in the group that are currently trading with point and figure buy signals}}{\text{Total number of stocks in the group}}$$

BPI values above 70% are considered an indication of a high risk environment and appropriate risk management techniques should be considered. BPI values below 30% are considered a low risk environment and appropriate wealth accumulation techniques are in order.

- Arms Index (TRIN): The TRIN has an inverse relationship with the market given the nature of the formula calculation which is given below.

$$I = \frac{\text{Advancing issues}}{\text{Declining issues}}$$

$$V = \frac{\text{Advancing volume}}{\text{Declining volume}}$$

$$TRIN = \frac{I}{V}$$

In general, a falling TRIN is bullish and a rising TRIN is bearish. A TRIN above 1.0 indicates that the volume in declining stocks is greater than the volume in advancing stocks whereas a value of TRIN below 1 indicates the more attractive situation of volume in advancing stocks outpacing the volume of declining stocks. Some prefer to use a moving average such as 10 day and consider values below 0.8 as overbought and above 1.2 as oversold.

- Advance and Decline Line (AD Line): An indicator of market breadth that includes price data from the entire stock market. The AD Line is a running cumulative total of the number of advancing stocks minus the declining stocks, so an upward moving AD Line indicates that most stocks are on an upward move. Since the purpose of the AD Line is to help determine market direction, a divergence of the AD Line (an indicator for the

entire market) from a market average such as the S&P 500 might be an early clue that a trend reversal was imminent.

Social Networks of Traders

We live in an age of social networks and traders have their own versions of these network meeting places to learn and share. Some examples of these Internet collaboration sites are listed below:

- Motley Fool CAPS: User stock predictions are posted and evaluated by the site. Participants are ranked against their peers and CAPS provides a stock screener which uses CAPS ratings as well as financial data elements. <http://caps.fool.com>
- Currensee: A Forex trading community supporting the sharing of trading ideas and strategies. <http://www.currensee.com>
- FINVIZ: A website that is best known for its sophisticated visualizations but also supports a private discussion platform where traders and investors can share and discuss their market knowledge. <http://finviz.com/collaborate.ashx>
- Wikinvest: An abundance of user contributed information related to investing and trading. <http://www.wikinvest.com>

Model Investment Portfolios and Management Tools

If you have browsed the Internet lately looking for online stock recommendations, you have seen the jungle of online newsletters and stock picking services with subscription fees that range all over the map. Needless to say, this is a fertile field for con artists, so beware. Given that caveat, those interested in considering the stock picking and portfolio building services of others may want to consider the following resources for portfolio building and management:

- American Association for Individual Investors (AII): Membership in this organization at website <http://www.aaii.com> is very nominal and is well worth the cost. The website is rich with good investment information and a conference is sponsored every two years in Orlando. (The author must confess a positive bias here since he is a member and has attended the Orlando conference.) The website maintains information on several model portfolios and over 50 stock market investment strategies, many of which correspond to popular newsletter gurus, and these strategies are updated monthly with companies that pass the screens.
- The Hulbert Financial Digest: This monthly service tracks the performance of over 500 stock and mutual fund portfolios from almost 200 newsletters. In addition, the Hubert Interactive service accepts a stock symbol as input and produces a list of the newsletters currently holding the security, the number of those services that have recently upgraded or downgraded that security and which other stocks in the same industry that newsletters

may also be recommending. In addition, a list of those stocks or funds most recommended can be obtained. See the following website for more information.

http://store.marketwatch.com/webapp/wcs/stores/servlet/PremiumNewsletters_HulbertFinancialDigest

- Portfolio Management Tools: These tools are useful for tracking investments and their performance and are also handy at tax time. Most available tools have a graph and print feature. They come in two flavors described below.
 - Software-based portfolio management systems. You will find the most sophisticated tools in this category providing the most flexibility and types of reports. These systems reside on your hard drive and all analysis takes place on your local machine. Two examples are:
 - BetterInvesting Portfolio Manager 5 (<http://www.betterinvesting.org>)
 - Microsoft Money Premium 2007 (<http://www.microsoft.com/money>)
 - On-line portfolio managers. Although becoming more full-featured, the online portfolio managers typically have a subset of the capabilities of the software-based systems. Two websites supporting this category are:
 - Morningstar (<http://www.morningstar.com>)
 - MSN Money (<http://www.msnmoney.com>)

Module #6: The Indexes

A stock market index is a metric for measuring a segment of the market and the concept is widely used as a benchmark against which to measure portfolio performance. Two of the most popular indexes are the Dow Jones Industrial Average (DJIA) and the Standard and Poor Index (S&P 500). Many index funds and ETFs that track indexes are available, providing opportunities to “buy the market” or various segments thereof.

- DJIA: The most quoted market indicator in the news media and dates back to 1896. It consists of 30 large, frequently traded stocks that are price weighted and therefore understandable to most people. The DJIA has several index funds that track it as well as an ETF called the Dow Diamonds with symbol DIA.
- S&P 500: A market capitalization weighted index of 500 stocks selected from the NYSE, AMEX and NASDAQ. Stocks selected are leading companies in leading industries in the U.S. economy and is a component of the U.S. Department of Commerce’s Index of Leading Economic Indicators. It has the status of “the index to beat” by investors. The number 500 accounts for about 70% of the U.S. market and offers great diversification but the top 45 companies make up more than 50% of its value

and there is very little foreign representation. There are several index funds for the S&P 500 and the ETF for it is the Standard & Poor's Depository Receipts (SPY).

- **NASDAQ Composite Index:** All the stocks that trade on the NASDAQ (over 4,000) are represented in this index. These include primarily technology and Internet-related but there are also financial, industrial and biotechnology stocks. Because of the high weight of the more speculative technology stocks, they are seen as carrying greater risk than the stocks on the New York Stock Exchange and this index therefore tends to be more volatile than the other broad indexes. There are several index funds that track the Nasdaq composite and the ETF that tracks the Nasdaq 100 is the QQQ.
- **Wilshire 5000 Total Market Index:** Includes all stocks on the New York Stock Exchange and a majority of those on the Nasdaq and Amex, actually a total of more than 6,500. Only companies headquartered in the U.S. are included and the top 10% of those companies in the index make up more than 75% of the value of the index. The SPDR Dow Jones Wilshire Total Market ETF is TMW.
- **Russell 2000 Index:** This is a well-diversified market capitalization index made up of small cap stocks from various industries usually not included in the large indexes, excluding stocks priced below \$1. Another more precise definition of this index is the smallest 2,000 companies in the Russell 3000 index. Many funds are available that track this index and the Russell 2000 ETF is IWM.
- **Country indexes:** All large countries have an index that tracks its stock exchange. For example, FTSE 100 (United Kingdom), DAX (Germany) and Hang Seng (Hong Kong).
- **Other indexes:** If you are inclined to explore the index universe, a good place to begin would be the Dow Jones indexes, over 3,000 in fact. <http://www.djindexes.com>

One of the most interesting recent indexes is the weather. You may not be able to do anything about it, but now you can buy it. More information at this website. <http://www.investopedia.com/articles/optioninvestor/05/052505.asp>

Module #7: Bonds

Bonds are debt instruments used by companies and governments to raise funds for their use from public markets. A bond is basically a loan for which you are the lender. The issuer of the bond commits to repay the amount borrowed called face value (also called par value or principal) at a date in the future called the maturity date and each year prior to the maturity date to pay interest payments at a predetermined rate called the coupon. Bonds are classified as fixed income securities since the exact amount of money you will receive if you hold the bond to maturity is known.

Bonds are debt as contrasted with stocks that are equity. The distinction is important since owning stock means becoming an owner of the company whereas purchasing bonds means becoming a creditor to the company. An advantage of being a creditor is a higher claim on the assets than shareholders. This means if the company goes into bankruptcy, those who hold bonds will be paid before those who own stocks. Of course the bondholders do not share in the profits if the company prospers. So, bonds, in general, are less risky than stocks and with this lower risk comes a lower return. However, if a company is having difficulties, the bonds issued may be more risky than average and therefore need to be offered at a higher interest rate to attract investors. In such extreme cases these bonds are sometimes called “junk bonds”.

To help investors evaluate the credit risks of companies, bond rating “report cards” have been created and bond ratings are assigned. The following table summarizes two of these rating systems:

Bond Ratings

S&P and Fitch	Moody's	Risk	Grade
AAA	Aaa	Highest quality	Investment
AA	Aa	High quality	Investment
A	A	Strong	Investment
BBB	Baa	Medium grade	Investment
BB,B	Ba,B	Speculative	Junk
CCC,CC,C	Caa,Ca,C	Highly speculative	Junk
D	C	In default	Junk

This table illustrates the fact that not all bonds are equal in terms of risk and some may be even more risky than stocks.

The price of bonds changes daily in the marketplace just as any other publically traded security and the primary factor that drives these changes is the prevailing interest rates. Bond prices and interest rates vary inversely. For example, when interest rates increase, bond prices decrease, thus increasing the yield of older bonds and bringing them in line with more recent bonds issued with higher coupons (interest rates).

Bonds are classified into categories of government, municipal and corporate.

- U.S. Government: These securities can be grouped as follows:
 - Treasury bonds – maturity date in more than 10 years
 - Treasury notes – maturity date in one to 10 years
 - Treasury bills – maturity date of less than one year (Strictly speaking not a bond because of the short term)
- Municipal bonds: Sometimes called “munis” and issued by local governments. They are known for their Federal Income Tax exemption status and some government issuers make these bonds non-taxable for residents as well. Because of this tax free status the yield on a muni is usually lower than on a taxable bond. Also note that munis are not allowed in retirement accounts.

- Corporate bonds: Yields on corporate bonds are higher than those issued by a government because the risk of a company default is higher. Also note that the higher the quality rating, the lower the interest rate. Convertible bonds can be converted into stock and callable bonds allow the company to redeem an issue before maturity.
- Zero coupon bonds: These bonds are issued at a deep discount without a coupon, paying the face value at maturity. Because all the returns on this bond occur at the maturity date, the market value of these bonds tend to be more volatile.

Sometimes brokers will increase the price of bonds in lieu of charging a commission.

No single source is available for a complete listing of all bond issues available. The websites listed below provide extensive listings and provide educational information. Note that the website TreasuryDirect allows individual investors to buy recently issued Treasuries and savings bonds directly from the U.S. Treasury with no commission charges.

- FINRAA Bond Market Data: <http://cxa.marketwatch.com/finra/BondCenter/Default.aspx>
- InvestinginBonds.com: <http://www.investinginbonds.com>
- TreasuryDirect: <http://www.treasurydirect.gov>

Module #8: Futures

Futures markets are best known and understood by producers and users of commodities such as grain, gold, crude oil and the like, but today this market encompasses a wide variety of financial products including stocks, stock indexes and even interest rates that are available on exchanges around the world. One of the attractive features of futures is the ability to leverage and to buy or sell short with equal ease.

A futures contract is defined as: “an obligation to buy or sell an underlying product at a specific price at a specific time in the future”. When futures are traded, no underlying product is actually bought or sold and traders are buying and selling the right to a contract representing a given quantity of a product, typically with the expectation of making a profit before contract expiration. In addition to commodities futures, a popular category is stock index futures.

The Standard and Poor’s 500 Index is a popular index of 500 large-capitalization stocks that is capitalization-weighted, meaning that those stocks with the most outstanding shares at the highest prices have the most influence on index value changes. The S&P500 futures contract’s value is \$250 times the index value. In 1997 a smaller version of this contract, called the E-mini S&P500 futures contract was introduced valued at \$50 times the index and has been extremely popular. Similar futures contracts and E-mini versions are available for the Nasdaq 100 and Dow Jones Industrial Average.

Futures can increase portfolio diversification since they have the ability to perform well in a variety of economic climates, including inflation and bear market conditions. Commodity futures ETFs are available to spread the risk among commodity categories and managed futures firms that specialize in an array of non-correlated markets can also be considered.

Module #9: Foreign Exchange (Forex)

Forex is often referred to as the largest and most liquid of all markets of the world. It is also a 24 hour market and almost six days a week. Notice that this means that the forex market is almost continuously sensitive to political and economic developments. In the forex market the objects of interest are the exchange rates of currencies of countries and trading takes place over a global network of buyers and sellers of currencies with trading done over-the-counter with no central exchange and clearinghouse for orders, also called the spot market. Forex has recently become more attractive as an alternative asset class for portfolios.

Here is a list of some of the most actively traded currencies together with their currency codes:

EUR – euro
GBP – Great Britain pound
USD – U.S. dollar
JPY – Japanese yen
CHF – Swiss franc
CAD – Canadian dollar
AUD – Australian dollar
NSD – New Zealand dollar

Currencies are always traded in pairs with the first currency in the pair called the “base currency” and the second the “counter” or “terms” currency. For example, the US dollar and Great Britain pound (USD/GPD). The smallest unit of change in an exchange rate is called a “pip” which stands for “percentage in point”. For example, 1 pip is 0.0001 for USD/CHF and 0.01 for USD/JPY. It is probably obvious that you need to be keenly aware of the political and economic activities in the countries whose currencies you are planning to trade along with any economic announcements that could impact the timing of your trades. An example of resources dedicated entirely to forex news are FX Street <http://www.fxstreet.com> and FX World Trade <http://www.fxworldtrade.com>.

Trading the forex has been called a “high-risk endeavor”, but also is known to offer some of the smoothest trends available in any market. Another advantage to spot currency trading is that you work directly with a dealer, who is a primary market-maker who often does not charge their customers for trading forex, so commission-free trading is available.

In the forex market traders buy and sell “lots” and the smallest position a trader can take is one lot, which consists of 100,000 units of currency. Therefore, if you bought one lot of the EUR/USD currency pair, you are actually long 100,000 euros and short the same amount of U.S. dollars. Forex trading accounts are normally allowed leverage ranging as high as 100 or even

200. Many dealers provide what is called a “mini account” for beginners, allowing the purchase of “mini lots” of only 10,000 units. Specialized forex trading platforms and free practice accounts are available. Example sites are Forex Capital Markets at <http://www.fxcm.com> and FXSolutions <http://www.fx solutions.com>.

In general, the trading methods and systems approaches for trading stocks can be used with forex markets, trading now off the prosperity of countries rather than companies. However, it should be noted that the term “volume” has a different meaning, since the forex market is decentralized and it is impossible to track all the amounts and sizes of contracts in a particular day. So volume is measured by the number of “ticks” or changes in price during the session, reflecting the number of contracts executed to move the price one way or the other.

Another way to participate in the forex market is through the available currency ETFs. The value of ETF shares is 100 times the current exchange rate for the currency being held. For example, if the current exchange rate for the EUR/USD is 1.2933, then the ETF (CurrencyShares Euro Trust – FXE) price would be \$129.33.

Some resources to consider for more information on forex trading can be found at the following websites:

- MoneyTec Traders Community Forum - <http://www.moneytec.com>
- Forex Factory – <http://www.forexfactory.com>
Contains a nice calendar with events that affect currencies along with a code for the expected magnitude of the impact.

Module #10: Mutual Funds

A mutual fund offers a pool of securities as a single investment instrument and the share price of the fund represents the market value of the securities held by the fund. Mutual funds are seen as a cost-effective approach to portfolio diversification and professional investment management. Their popularity is demonstrated by the emergence of literally tens of thousands of various funds, exceeding the number of stocks. When first introduced, mutual funds were seen as a way of simplifying investment strategies for the small investor but even mutual funds have a financial jargon all of their own that one must understand to be successful.

Profits can be generated from mutual funds in three ways:

- Sale of shares of the fund if they increase in price
- Earned income of the fund from either stock dividends or interest on bonds. This income is usually passed on to the investor as a distribution.
- Sale by the fund of securities within the fund that have increased in price. These capital gains are usually passed to investors as a distribution.

Most funds provide the option of receiving the above distributions as a check or reinvestment in the fund in the form of more shares.

In evaluating mutual funds it is important to point out that each fund has different risks and rewards. As with stocks, a higher expected return is accompanied by a higher level of risk. Even though some funds are seen as low risk, it should be recognized that it not possible to diversify away all risk. Each fund has an investment objective that shapes its investment strategies and an overview of some of the categories are given below.

- Money market funds: Usually short term debt like Treasury bills and frequently used for protection of capital.
- Fixed income funds (bonds): Usually used to provide a predictable cash flow income and can consist of many different types of bonds or bond funds.
- Weighted funds: The objective is to maintain a balance between fixed income and equities. This balance can be fixed at, say 50% fixed income and 50% equities, or the fund objective may allow the portfolio manager to change this ratio over time as in the case of life cycle funds, which target a retirement date for the holder and shift the ratio down a “glide path” from a high percentage of equities to high percentage fixed income at retirement time
- Equity funds (stocks): The largest category and the investment objective is usually long-term capital appreciation. However, the spectrum of equity funds is wide indeed and a style box is sometimes useful to better understand the equity fund category.

	Investment Style		
	Value	Blend	Growth
Large Cap			
Mid Cap			
Small Cap			

As indicated in the box above, the idea is to classify funds in terms of the capitalization of the company and the investment style of the portfolio manager. The investment styles are typically described as follows:

1. Value: High dividend rates, low P/E and price-to-book ratios
2. Growth: Companies have strong sales, cash flow and earnings growth.
3. Companies that do not fit neatly in the value or growth styles, but are a blend of the two.

For example, a fund that invests in high tech start-up companies that have good growth potential would be small cap and growth (lower right box).

- International funds: Funds that invest outside the U.S. and are often have high volatility and special risks associated with the countries involved but are becoming more popular as a source of diversification given the global economy.
- Sector funds: Target particular sectors of the economy or a few related industries such as information technology, energy or financials. Sector funds are clearly not diversified and therefore have higher risk.
- Socially responsible: Designed to meet certain guidelines such as the exclusion of certain industries like alcoholic beverages, tobacco, etc.
- Alternative energy/clean energy funds
- Index funds: Funds that are designed to track the performance of a broad market index such as the S&P 500 or the Dow Jones Industrial Average and therefore have low fees. They are also popular with investors who believe that most portfolio managers cannot beat the market.
- Municipal bond funds: Fund that hold tax-exempt municipal bonds that are exempt from federal income tax and in some cases from taxes in specific states.

The major complaint with mutual funds are the costs since they reduce returns. Expense ratios range from a low of 0.2% for index funds to as high as 2%, with funds such as international being highest because of the specialized management expertise required. In addition, the list of fees and expenses associated with a fund can be long and sometimes confusing. SEC rules require funds to disclose both shareholder fees and operating expenses in a “fee table” near the front of the prospectus, which can be found on the SEC EDGAR database system at the following website: <http://www.sec.gov/edgar/searchedgar/mutualsearch.htm>

Here is a list of the type of fees you can expect to find on a mutual fund prospectus fee table:

- Front-end load: A sales charge on purchases that typically goes to the broker that sells the mutual fund shares. This fee comes off the top and reduces the amount that is available to invest in shares of the fund.
- Purchase fee: A fee charged by some funds that is paid to the fund (not the broker) to cover costs associated with the purchase.
- Load (Deferred sales charge): Also known as “back-end load” fee that is paid when the fund shares are sold. The amount of this type of load usually depends on how long the investor holds the shares and typically decreases to zero if the shares are held long enough.

- Redemption or exchange fee: A fee paid to the fund when investors sell their shares or transfer to another fund within a “family of funds” and is used to cover the costs of the sale or transfer.
- Management fees: Used to cover costs of portfolio management.
- Distribution fees (“12b-1” fees): Fees paid out of the fund’s assets to cover the costs of marketing and selling shares and sometimes to cover the costs of providing shareholder services. (By the way, the commonly used term “12b-1” gets its name from a section in the Investment Company Act of 1940)

FIVE IMPORTANT MUTUAL FUND BEWARES:

1. Beware of fund names. A fund named ABC Stock Fund can, by SEC rules invest in up to 20% of the assets in other assets than the name in the fund implies.
2. Beware of taking a fund’s past performance too seriously. Studies show that the future is often different and this year’s “number one” fund can quickly become next year’s below average fund.
3. Beware of the tax consequences of mutual funds. For the case of stocks and bonds, you must pay income tax each year on the dividends and interest received, but no capital gains tax until you sell and make a profit. Not so with mutual funds. When you buy and hold mutual fund shares, you owe income tax on any ordinary dividends in the year you receive or invest them. You would expect to pay capital gains when you sell mutual fund shares but you may also have to pay taxes each year on the fund’s capital gains as the portfolio manager buys and sells assets. Of course these tax considerations do not apply to 401K, IRA type monies.
4. Beware of assuming that the “get what you pay for rule” holds with respect to mutual fund expenses. Many studies have shown no correlation between high expense ratios and high returns.
5. Beware of “no-load” funds. This means that the fund does not charge any type of sales load. However, such a fund may charge fees that are not sales loads, such as purchase fees and account fees, redemption fees and exchange fees.

Compare the costs of up to three mutual funds by using the tool at the following website: <http://apps.finra.org/fundalyzer/1/fa.aspx> . More detailed information on mutual funds can be found at the Mutual Fund Investor’s Center <http://www.mfea.com>. Morningstar at <http://www.morningstar.com> is also considered an excellent mutual fund resource. A specific example of a good free mutual fund screening service is the MSN Money Deluxe Screener at <http://moneycentral.msn.com/investor/finder/customfunds.asp> . Finally, another resource with extensive information for evaluating mutual funds can be found at <http://investopedia.com/university/quality-mutual-fund/>

Net asset value (NAV) is the assets of the fund minus the liabilities and is the value of the mutual fund. The number quoted for investor purchase is the NAV per share and when buying shares you pay the current NAV per share plus any sales front-end load and similarly the sale of shares is the NAV per share price minus any back-end load.

In view of the earlier discussion of the new instabilities of the global economic system in recent decades, you should look carefully at the rules for investment that must be followed by mutual funds before purchasing.

Module #11: Exchange Traded Funds (ETFs)

An ETF is a basket of securities that provides the investor with exposure to a specific area of the market. The number and popularity of ETFs is growing rapidly because of the following factors:

- Similar to a mutual fund but can be traded like a stock.
- An easy way to introduce diversification into a portfolio.
- Efficient and low cost.
- Tax advantage over mutual funds since capital gains taxes are usually only triggered at the time of ETF sale. Tax considerations do not apply to 401K, IRA monies.
- Avoidance of time-consuming financial analysis of individual company financial data and the pitfalls associated with individual stock evaluation and picking.
- Allow the interesting idea of investment in a basket of risky related stocks rather than one risky stock.
- Supports a top-down approach to investment planning.
- Some ETFs have options that can be traded.

There are also a few caveats that should be entered here.

- Some ETFs have low trading volume which may contribute to wider bid/ask spreads thus potentially reducing profits.
- The number of shares in an ETF basket may be skewed toward a small number of securities.
- When constructing an ETF portfolio be aware of redundant securities across baskets

The concept of ETFs was motivated by the observed fact that individuals and even mutual fund managers do not outperform the broader market for extended periods of time. So why not provide a way to “buy the market” without the overhead of professional management? This was exactly the logic behind the introduction of the first ETF which was designed to track the S&P 500 index. It is called the S&P 500 SPDR (“spider”) with trading symbol SPY and its explosive success motivated the introduction of literally hundreds of other ETFs that track other market indexes, sectors, industries, investment styles, currencies, bonds, commodities etc.

Good ETF screens and analytic tools are available at the following websites:

<http://smartmoney.com> (cited by AAII as the best ETF screen on the web – it's free)

<http://www.bloomberg.com>

<http://www.ETFtrends.com>

<http://www.finviz.com>

More details on how ETFs are constructed can be found at the following online tutorial:

http://www.investopedia.com/university/exchange-traded-fund/default.asp?ad=ETF_Feat

A good general resource and complete lists of ETFs by category:

<http://etf.stock-encyclopedia.com/>

Sector Rotation ETFs

Sector rotation ETFs are designed to frequently move funds from one industry sector to another with the goal of following the highest performing sectors. For example, ValueLine Industry Rotation ETF (PYH) is designed to follow the ValueLine Industry Rotation Index. This index selects the 50 highest ranked stocks for Timeliness from the 50 highest ranked industries and the second highest ranked stock for Timeliness from the 25 highest rated industries. The index is redefined and rebalanced each quarter.

Leveraged and Short ETFs

Leveraged ETFs return a multiple (two or three at the time of this writing) of the return of the market index price, with an accompanying multiple of the daily volatility. Similarly, short ETFs are designed to return a multiple (one, two or three times) the inverse of the market index price. It is important to note that these multiples of performance are designed only for the daily timeframe and will not be valid for the long term. Leveraged ETFs are constructed using financial derivatives such as options and index futures and are small in number but increasing. Major index ETFs and a number of sector ETFs have leveraged counterparts.

Commodity and Currency ETFs

Alternative asset classes such as commodities in your portfolio have the advantage of adding diversification since they exhibit low correlation with traditional stock and bond categories thus reducing the overall volatility of the portfolio. Moreover, the correlation across individual commodity sectors tends to be low. Examples of commodity categories are: energy, industrials, precious metals, livestock and softs(cocoa, coffee, sugar). Commodities are usually considered a trading vehicle and not part of the long-term core investment strategy.

Fixed Income ETFs

A number of bond ETFs are available, work like the stock counterparts and some replicate bond indexes. Bond ETF portfolios need to be rebuilt frequently since bonds have a fixed lifespan before maturity and this process could produce some capital gains distributions. For a list of

available bond ETFs see the following website. <http://etf.stock-encyclopedia.com/category/bond-etfs.html>

Current Status of ETFs and Example Portfolios

On June 1, 2009, the manager of the world’s largest bond fund (Pimco) introduced its first ETF with an expense ratio of 0.09% as contrasted with the 0.65% of the first ETFs offered by State Street (SPDRs) in 1998. Clearly ETFs are becoming more attractive as they increase in number and as competition brings the down the expense ratios.

To provide some detailed perspective of this increasingly attractive investment instrument, we give two example portfolios from Kiplinger’s September 2009 Retirement Report. The first portfolio focuses on growth and income and in the fall of 2009 had a yield of 5.8%.

Growth and Income (For those who want good yields)

Percentage To Own	ETF	Symbol
20%	iShares IBoxx \$ Inv Grade Corp	LQD
20%	iShares DJ Select Dividend	DVY
10%	iShares S&P/Citi Intl Treas Bond	IGOV
10%	iShares iBoxx \$ High Yld Corp	HYG
10%	SPDR S&P Intl Dividend	DWX
10%	Utilities Select Sector SPDR	XLU
10%	Vanguard Dividend Appreciation	VIG
10%	Vanguard REIT	VNQ

The second portfolio has the goal of maximizing income and was providing a yield of 6.4% during the fall of 2009.

Maximum Income: For those seeking fat yields

Percentage to Own	ETF	Symbol
25%	iShares IBoxx \$ Inv Grade Corp	LQD
15%	iShares iBoxx \$ High Yld Corp	HYG
15%	Powershares Em Mkts Sov Debt	PCY
15%	Vanguard REIT	VNQ
10%	iShares DJ Select Dividend	DVY
10%	Powershares 1-30 Laddered Treas	PLW
10%	Utilities Select Sector SPDR	XLU

If you are into Twitter, you might want to check out the ETF connection with this community at the website below.

<https://twitter.com/signup?follow=ETFtrends&commit=Join+today!>

Module #14: Hedge Funds

As many say, “Hedge funds are not for everyone”. They are private partnerships that have strict requirements set by the Securities and Exchange Commission, specifically, that you must have a net worth of \$1 million dollars or an annual income of \$200,000 (\$300,000 with a spouse). Hedge funds are often in the news and seem to be a bit mysterious because they are so lightly regulated. The level of regulation could change in the future. The typical goal of a hedge funds is to use a number of investment strategies to invest in a wide variety of assets to produce a higher return for a given level of risk than what is anticipated of average investments.

You can see from this goal description that the hedge fund manager has wide ranging freedom and client expectations are high. Because of the low level of regulation, hedge fund managers can use a number of investment techniques that would not be permitted in a more tightly regulated environment. Examples are short selling, leverage and speculation in a variety of derivatives available around the world. Many hedge funds are organized around the so-called “2 and 20 rule”, which means that the manager receives an annual fee of two percent of the assets and 20 percent of all profits generated. This performance bonus feature is very attractive to many investors. The typical required minimum investment is \$250,000.

An alternative lower entry point way to participate in the hedge fund game is to investigate what are called Funds of Funds, which is are investments that pool money from multiple investors and invests in multiple hedge funds. The minimum requirement may be as low as \$25,000 for these opportunities. Apart from the lower entry requirement, there are clearly advantages of diversification across several hedge funds and the hopefully good due diligence of the fund of funds manager in evaluating and monitoring the portfolio of hedge funds. On the negative side, you have high fees (some call them “fees of fees funds”), limited redemption rights and complicated tax structure. Each investor is a “limited partner” in the hedge fund partnership.

For those readers so inclined, more details about hedge funds can be found at website <http://www.hedgefund.net>.

Module #13: Options

Options are definitely in the advanced investor/trader tool category and experience with stocks should be a prerequisite for their use and many would say they are too risky and complex. However, in my opinion, a basic knowledge of options is essential for anyone who is directly involved with investing because of the versatility they offer and can actually be used as conservatively or speculatively as you wish. Paper trading account experience will prepare you for that special time when you need them. Even if you decide to never use them it is always good to understand how any widely used tool being used by others.

An option is the right to buy or sell an underlying asset at a specific price for a limited time period. Options are derivatives, which means they derive their value from the underlying asset.

It is also important to note that the owner of an option is not obligated to exercise it. The cost of an option is called the premium and the strike price is the price you are willing to buy or sell the underlying asset. If the option is not exercised, it expires worthless on the expiration date. Those who buy options are called holders and those who sell them are called writers. Buyers hold long positions and sellers hold short positions.

There are two types of options.

- Call option: Gives the holder the right to buy an underlying asset at the strike price anytime before the expiration date. If the underlying asset is a stock, the holder is buying an option with the expectation that the stock will increase in price.
- Put option: Gives the holder the right to sell an underlying asset at the strike price anytime before the expiration date. If the underlying asset is a stock, the holder is buying an option with the expectation that the stock will decrease in price.

Notice that there are buyers and sellers of calls and buyers and sellers of puts. Options traded on an exchange are called listed options and if the underlying asset is a stock, the listed option represents 100 shares and is frequently called a contract. In the case of call options, they are said to be in-the-money if the underlying stock price is higher than the strike price and similarly, a put option is in-the-money if the stock price is below the strike price. The market value of an option is a complex function of many factors including, the strike price, stock price, volatility and time remaining until the expiration date which is time value.

The uses of options are frequently classified into the categories of speculation and hedging.

- Speculation: Betting on the movement of the underlying asset going up or down. Making money in this way is called risky since you must be right about many factors: movement of the underlying asset, how much the price will change, and the timeframe in which all this will transpire. However, it is all about leverage since controlling 100 shares of stock with one contract can produce large profits without a great deal of stock price movement.
- Hedging: Use of options to insure investments from downturn risks. For example, if you are trading volatile markets in which gapping is common you might want to consider buying protective puts rather than using stop losses which might be gapped over when the stock falls precipitously.

To illustrate how options work, the following table is constructed with data from a fictional market situation which we will now discuss. Suppose that you have noticed on July 1 that the stock of company XYZ is selling for \$77 and the premium for a September 80 Call is \$3.12. The term “September 80 Call” means that the expiration date is the third Friday in September and the strike price is \$80. Also remember that the price of one contract is based on 100 shares of stock and in this case is $100 \times \$3.12 = \312 . A strike price of \$80 means the underlying stock will need to increase to \$80 for the option to be worth anything. You decide to buy one contract for \$312.

On July 14 suppose you notice that XYZ stock is now \$84 (\$4 in the money) and the call option is now worth \$4.52 for a total contract value of \$452, a profit of \$140 which is a 44% profit ($\$140/\312×100). At this point you could sell the option for the \$4.52 price or you could hope for it to go higher. However, instead of moving higher, the XYZ stock price could move down below the strike price of \$80 (out of the money) to \$71 and stay in that range unto the expiration date and thus expire worthless.

Dates	Stock Price	Option Price	Contract Price	Paper Gain/Loss
July 1	\$77	\$3.12	\$312	\$0
July 14	\$84	\$4.52	\$452	\$140
Expiry Date	\$71	\$0	\$0	-\$312

An option's price is sometimes referred to as the sum of an intrinsic and time value. The intrinsic value is how much the option is in-the-money. In the case of our example we can see that this value is \$4 on July 14 since the underlying stock price is \$4 above the option strike price. The time value is a function of the volatility of the underlying stock with high volatility stocks producing high time values and vice versa. The time value of the option in our example on July 14 is \$0.52.

Some general observations are in order at this point:

- Our example has illustrated how options can provide high leverage by controlling 100 shares of the underlying stock. For \$312 one can control 100 shares of a stock that would cost \$7,700 if the stock was bought directly. Notice if you had bought the 100 shares of XYZ for \$7,700 and sold it on July 14 at \$84 you would have made \$400, a 5% profit compared to the 44% profit in the option example above.
- Don't forget that this high leverage can produce high profits or high losses.
- In option trading the most you can lose is the entire premium. Some see this fact as attractive and use it in risk planning.

It is worth mentioning that there are several types of options that we define briefly below:

- American options: These options can be exercised anytime between the purchase and expiration date and most exchange-traded options are in this category, including our above example.
- European options: These options can only be exercised on their expiration dates.
- Long-term equity anticipation securities (LEAPS): Options with expiration dates measured in years rather than months.

There is much more to the subject of options and more extensive information can be found at the following websites: <http://www.optionsxpress.com>, <http://www.finance.yahoo.com>, <http://www.cbot.com>, <http://www.theoptionsguide.com>. and <http://www.crimsonmind.com>. Interactive Brokers also has a specialized options trading tool and analyzer at <http://www.interactivebrokers.com>.

It should be noted that the use of options in retirement accounts is usually limited to covered calls and the use of put options as a protective hedge. Covered calls are a special case in which the investor also owns the underlying instrument.

Module #14: Real Estate

Real estate is an important possible component of investment diversification and there are a number of ways to invest in real estate. My preference is to invest directly and personally in rental property that is professionally managed. This can be single family houses, duplexes, multifamily apartments or office buildings.

Over the years we have acquired single family houses in our hometown and placed them under local professional management. We adopted this strategy as part of our financial planning for retirement with the idea that the mortgages would be paid off by retirement and that the rental income would become a retirement income component. Under this arrangement the management company is responsible for all maintenance and repairs needed and finding new tenants when vacancies when they occur. Very importantly, they are also responsible for setting the rental rates and increasing this rate when appropriate using their rental market expertise.

It is highly advisable to establish a level of involvement with property management that includes the understanding that major expenditures will require your approval. Detail review of monthly statements of income and expenses are also a must. This strategy is much easier using after tax dollars since it is a challenge to find a custodian that will accept retirement dollars to invest this way.

An alternative to buying real estate directly is to invest in a Real Estate Investment Trust (REIT) that is traded like a stock on the exchanges and invests in properties, mortgages or combinations (hybrid REITS) of both. REITs may invest in shopping malls, office buildings, hotels and apartment complexes and may specialize in a specific geographic region, state or county or may restrict their investments to a particular type of property such as apartment complexes. The following website is a good beginning point for additional information about all things REIT. <http://www.reit.com>. Yes, there is a number of REIT ETFs and they are listed at this site. REIT Wrecks (<http://www.reitwrecks.com>) is a blog that covers high-yield REITs and commercial real estate and offers analysis of market segments and discussions of individual REITs as well as a REIT directory.

Module #20: Certifications and University Degrees

For those interested in extending their knowledge broader and/or deeper, there are financial planning certifications and special graduate degree program opportunities in hard core financial modeling and programming.

Computational Finance

The term computational finance (sometimes called financial engineering) has emerged as an interdisciplinary field to meet the increasing needs of full service institutional financial firms for those skilled in the use of numerical methods and computer simulations in the development and execution of trading, investment and hedging decisions. Individuals holding these credentials are sometimes called “quants”. Because of the extensive need for software libraries, C++ has become the dominant language of the computational finance community.

For information on university degree program opportunities in financial engineering and computational finance see the following websites:

<http://www.gradschools.com/Subject/Financial-Engineering/161.html>

http://www.global-derivatives.com/index.php?option=com_content&task=view&id=55

There is also an International Association of Financial Engineers (IAFE).

<http://iafe.org>

Financial Certifications

The term financial planning is usually taken to mean setting long-term financial goals, evaluating your current situation and then developing a systematic plan for meeting those goals. Certified financial planners are individuals that have met the requirements of this certification by passing an examination preparing them to provide professional services that assist in meeting your financial goals.

- Certified Financial Planner (CFP): The requirements for a CFP are a bachelor’s degree from an accredited college or university and passing a 10 hour examination covering topics such as: general principles and financial planning, insurance planning, employee benefits planning, investment and securities planning, state and federal income taxes planning, estate tax, gift tax and transfer tax planning, asset protection planning, retirement planning and estate planning. Three years of experience in the field is also required. See the following website for more information. <http://www.cfp.net>
- Chartered Financial Analyst (CFA): To earn the CFA designation you must master a graduate-level self-study program of content and pass a series of three examinations. The content includes: quantitative methods, economics, financial reporting and analysis, corporate finance, equity investments, fixed income, derivatives, alternative investments and portfolio management and wealth planning. See the following website for more information. <http://www.cfainstitute.org/cfaprogram/courseofstudy/topic.html>

Course Summary

This course covers a variety of introductory topics about the financial markets with the goal of providing the reader with the domain knowledge needed to be a more informed investor. Topics discussed include an overview of the markets, investment and trading strategies, various investment opportunities such as equities, bonds, futures, mutual funds, ETFs, real estate and a brief introduction to options. Finally, foreign exchange trading is discussed as well as some information about financial certifications and specialized university degree programs.

General Market Information Sources

These two websites are worth your time browsing. Many websites have similar information but sometimes presented in different ways. For example, Barron's has a great visualization of sector performance. You will find some unique tools here as well.

Wall Street Journal
<http://www.wsj.com>

Barron's
<http://www.barrons.com>

Professional Organizations

Market Technicians Association
<http://www.mta.org>

National Association for Investors Corporation (NAIC)
<http://www.better-investing.org>

Trading Periodicals

Technical Analysis of Stocks and Commodities Magazine
<http://www.traders.com>

SFO: Stocks, Futures and Options Magazine
<http://www.sfomag.com>

Futures Magazine
<http://www.futuresmag.com>

Currency Trader Magazine (Free)

<http://www.currencytradermag.com>

Active Trader Magazine

<http://www.activetradermag.com>

Automated Trader Magazine

<http://www.automatedtrader.net>

Traders World Magazine

<http://www.tradersworld.com>

Commodities Now Magazine

<http://www.comodities-now.com>

Futures and Options Trader Magazine (Free)

<http://www.futuresandoptionstrader.com>

References

This list of books is a selection that you may find helpful in developing investment and trading strategies. Before buying a book you may find the customer reviews for books available on Amazon.com to be helpful in your evaluation. If you use the Amazon resource for this purpose, keep in mind there are some clever self serving marketing tactics there as well.

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