# Investments Outline

Lindenwood College

Winter 2010

Kevin C. Kaufhold, Adjunct

**IBA32020 Investments**

This course is a survey of the basic concepts of investing with an emphasis on common stocks. Students will be required to prepare a report on an investment in an assigned company based on economic, industry, and company specific factors.

For Quiz 1 – Ch 11; pp on Ch 11 Divers & Allocation; some questions from ch 1-5 that are more relevant to investments

For Quiz 2 – Ch 12 and Ch 13

# Week 1 – The History of Finance

Working Paper 2006.9.3

## Quote ---

"Those who cannot remember the past are condemned to repeat it."

* George Santayana, a Spanish-born American author, Life of Reason, Reason in Common Sense, Scribner's, 1905, page 284"

## Early History

* Hunter-gather society;
  + Subsistence levels;
  + 10,000 years ago, agrian-based society developed, w small villages
    - Beginnings of specialization of labor by occupation;
    - Increase in productivity made nec by running out of room & resources
* Oral knowledge for eons;
* Sumerian writings 4,000 years ago
* Written notations on commerce appeared
  + Code of Hammaurabi --- legal and financial edicts
  + Talmud --- wealth in 3 divisions, RE, merchandise, money (allocation !!!)
  + Old testament --- discussion of business activities; early reference to an option
  + Ancient Greece & Rome
* Barter economy (fish for goat)
* Coins (gold, bronze, but even stone) was known in ancient world;
  + beginnings of a medium of exchange; largely based on value of the coin itself.
* Math was cumbersome with Roman numerals (no concept of zero)
* 500 AD, Hindus devised current numbering system
  + By 620 AD, Arab mathematicians were using it
  + Zero was part of this system
  + Took until 1500’s for regular usage to occur in Europe
* Smithy’s (and then financial place) would store your gold, iron, bronze, etc, and issued paper credits
  + Practice was in use during the by Crusades
  + Paper backed by gold and other items held at a private bank; beginnings of a private money
* Gradual development of publicly issued coins and paper money
  + Rome was very advanced, with coins issued by emperors
  + Paper money eventual developed to alleviate the weight of coins
* In Middle Ages, commercial credit was common, although religions had some restrictions
* 13th C, Venice, first use of perpetual payments on municipal debt, called “prestiti”
  + 1st publicly traded debt based security in world
* 1400’s, double booking developed in Italy
* 1440 Gutenberg Press
* 16th C, Genoa perpetual security, “Loughi”;
  + Debt-based security with variable dividend
  + Security and dividend could be traded; 1st example of a derivative
* Sophisticated money exchange developed at Antwerp in 16th C (1st money market )
* Tuilpmania in 1630’s; rampant speculation --- earliest example of a bubble
* 1st publicly traded stock – Dutch East India Company traded on the Amstel River bridge in Amsterdam (shops on the bridge)
  + Shorting invented as a hedge against the bubble developing in that stock
* Bank of England – private bill market for LT notes and annuities
* Exchequer bills in 1700’s in London with fixed interest rates
* Consul Bonds issues by Britain in 1750; then perpetual bonds
* Gold standard developed in UK, 1717
* England outlawed options 1733, but London became center for options market
* Utility theory began in 1738 --- decisions under uncertainty
* Lloyds of London started 1771 ---- insurance pooling
* 1st mutual pool developed 1774
* Wealth of Nations published 1776
  + The invisible hand; self-interest and rationality

## Emergence of a National Economy

* The Buttonwood agreement 1792 laid down asset exchange rules in NYC
* NYSE exchange began nearby on Wall Street
  + Commodities traded initially
  + Revolutionary scrips were the first financial commodities or products traded
  + Bank of NA fist publicly traded equity or stock traded there
* First investment trusts developed in 1822 in Netherlands;
  + Prudent man standard developed in 1830 in Boston
* The Madness of Crowds published 1852 --- emotion, not rationality
* Tremendous industrial activity in US in 1800’s ---- industrial revolution
  + Transition by 1871 from agrian based nation to industrial based
* Forward contracts used by US farmers by 18th c; to arrive K’s used in EU
* Commodity trading developed in Chicago 1848; futures market by 1860’s
* Charles Dow publishing in NYC in 1880’s
* Modern day mutuals developed by 1899
* Mathematical theories developed in 1880’s to early 1900’s --- formed basis of economic modeling
* Cartels and trusts developed in late 1800’s
  + Economy based on Shopkeepers and ag of 1700’s evolved into industrial process by 1800’s controlled by cartels and monopolies
  + Era of trust busters --- govt regulation
* Classical economic theories developed of self-correction
* First market weighted stock index developed in 1923 by predecessor of S&P
* First true mutual 1924
* Common stock theory of investment 1924 --- law of compound return

## Modern Era of Commerce

* By 1925 Us transformed from isolated industrial economy to worldwide pol, mil, econ power
  + WWI and aftermath
* 1st ADR 1927 J.P. Morgan
* US stock market bubble developing late 1920’s
* Babson break “terrific crash” --- Irving Fisher permanent plateau
* Stock Market Crash in Oct, 1929
* Chamberlain --- stocks were speculative in nature
* Little economic theory at the time
  + Interest rates increased;
  + money pulled out of circulation
  + Congress raised taxes to balance the budget
  + Import and tariff fees
  + Yet another market crash thereby developed into a Depression
* UK went off gold in 1931, floating their monetary policy; US suspended gold 1933
* Benjamin Graham wrote at Columbia – Security Analysis – father of value investing
* 1936 John Maynard Keynes “General Theory”
  + Natural equilibrium point could occur at less than full employment
  + Argued for govt involvement in the macro economy
  + Keynes also had a concentrated portfolio at King’s College
* Early versions of S&P Index developed by Cowles Commission in 1938
* WWII --- had the economic effect of turning on the US economic engine
* Mixed economy developed with govt agencies regulating the economy from unfettered competition
* After the war, US signed the Breton Woods agreement
  + US dollar pegged to gold at fixed arte of $35 / ounce (today at 1200 + ounce)
* ENIAC in 1946 !
* World’s first hedge fund in 1949
* Value-Line & NAIC
* Diners card in 1950; paid in full every month
* 1952 first true credit card with interest payments
* 1958 American Express began; MasterCard 1070; Discover 1986

## Development of Finance Theory

* Economic theory developed in 1940’s and 1950’s
  + Von morganson with utility; Samuelson w optimization & math
  + Markowitz – 1952 “portfolio Selection”
  + 1959 dissertation led to MPT
  + Bellman 1953 dynamic equations
  + 1954 technical analysis manual by John Magee
* S&P Index 1957
* Growth principles set forth in 1958 by Phil Fisher
* 1958 M&M corporate finance theories
* 1964- 1966 CAPM Sharpe, Littner, Mossin
* Fama in 1963 first paper with market efficiency; fully involved paper 1970
* Index investing started in 1969 wells fargo
* Buffett started in 1950’s
* 1971 US went off the gold closing the gold window of Breton Woods
* Mortgage backed securities 1970’s
* NASDAQ traded first time 1971
* Black-Scholes option formula 1973
* Option trading 1973 at CBOE, with federal preemption
* 1974 Wilshire 5000 index developed
* 1975 stagflation recession
  + Stockbrokers began using finance theories
  + Diversify; cant beat the market – indexes
  + Seek out higher return in express recognition of higher risk
* Random Walk Malikel 1973
* Index funds exploded with activity
* 1977 Dreman Psychology and the Stock Market; Contrarian Investment Strategy
* Currency swap 1970’s
* Interest rate swaps 1981
* Friedman 1970s’ and 1980’s with Monetarist theories
  + Monetarist activity rose in the Fed to stamp out inflation
  + Reduced role for fiscal activity

## Behavior and the Economy

* Kahneman & Tversky 1979 “Prospect Theory” Israeli psychologists
  + People are not always rationale in their economic decision making
* Increasing computer power led to quant funds developing
* Reemergence of technical analysis and momentum via math quants
* Stock index futures 1982
* October 1987 NYSE 508 point drop
  + Almost total failure of equity markets
  + Market efficiency questioned
* Value studies were also showing outperformance
* F&F 1992 paper on 3 factor modeling
* SPDR index unit trusts 1993
* Behavioral finance more fully developed
* First interent IPO 1995
* TIPS bonds 1997

## Present Times

* Irrational exuberance 1996 Greenspan
* Shiller and Siegel writings
* Stock high March 2000
  + Stocks begin descent thereafter - another stock market bubble
    - Wildly inflated valuations (Home Depot 99:1 PE)
  + Efficiency again questioned; but still, how do we make any money off of it?
* Sept 11, 2001 attacks
  + Markets closed; tremendous selling after re-opening; market recover over a month
* Financial regulatory reforms commenced; lawsuits, too
* RE led implosion starting in 2007
  + Recession 2008 – 2009
  + Another example of speculation?
  + Calls for more regulation
  + Massive fiscal and monetary stimulus
  + Largest recession since Depression
  + Counter --- 2010 elections expressed frustrations over budget & govt involvement

## Conclusion

* Rationality to emotion;
* Indexes to value and stock picking
* Risk – return trade-off vs multi-dimensional view adding in behavior and time horizons
* Civilization advances impacting the world of finance and investments
* Government involvement in macro-economy & financial arenas

## Critical Thinking Issues

1. How has major civilization advances affected (and possibly been affected by) the development of economic and financial system?
2. Trace how financial innovations have been developed over the ages. Have they come about in a vacuum or as a result of some economic need or desire?
3. Describe the various and competing financial theories of investment. How have such ideas been influenced by historical events?
4. Describe the changing role of government in the economy and financial arenas. Has government activity also been influenced by historical events?
5. Do you believe there has been a connection between competing economic and political systems? If so, please describe and detail.

# Week 2 - Thinking Patterns (of LT investors)

What separates successful investors from everyone else??

What separates a millionaire from everyone else?????

* Net worth concepts
  + Enhance net worth
* Thinking of millionaires
  + Savings not spending mentality
  + Not huge incomes
  + Not flashy people
  + Most noted factors --- hard work, integrity, discipline, social skills, supportive spouse
    - High return on stocks is way down on survey list
* Zen of investing
  + Becomes a way of life
* Invest throughout your life
  + Get a job
  + Start savings
  + Life cycle
* Anyone can do it
  + NAIC, AAII
* Gather financial info
* Invest in the LT
  + ***Investment occurs in the Long-Term. Speculation occurs everywhere else.***
* Seek highest return to net worth
  + Consider tax effect of capital gains
* Invest to control your future
* Invest regularly
  + Dividend reinvestment
  + Dollar cost averaging
* Living below ones means
* Invest in businesses
  + Private --- consider active issues and higher risk
  + Treat public stocks and bonds as business investments, not passive investments
    - Buffett example
* Preserve capital and wealth
* Psychology / behavior
  + Rational mind
  + Behavioral finance
    - Hardwired to not be rational
* Probability theory
  + Unpredictable behavior at the aggregate level is very predictable !
  + Over LT, rationality sets in
* 3 D viewer
  + Risk vs return
  + Time too !
  + Taxes (bogle) --- part of return
  + Liabilities
* Keep it simple

# Chapter 11 – Investment Planning

## Objectives / Rewards

* Investing is the process of utilizing assets in a way to receive some future benefit
* Speculation occurs with highly uncertain returns
* Average investor is risk averse
  + Expects higher return for higher risk
* Develop a savings plan (need savings to have investment)
  + Worksheet 11.1 --- determining the amount of investment capital for an investment goal
* Investment plans provide direction (355-356)
  + Written statement explaining how you will accumulate assets to reach a fin goal
  + Look at current income; expenditures; retirement; taxes
* Ways to invest
  + Stocks (common)
  + Bonds (govt and corp)
  + Preferred stocks and convertible bonds / stocks
  + Mutual funds / ETFs
  + RE
  + Alternatives (private Equity; etc)

## Securities Markets

* Primary market (IPO)
  + Prospectus
  + Initial raising of capital
* Secondary market (NYSE)
* Markets
  + Broker market – brokers with a physical presence of the parties
    - OTC; NASDAQ
  + Dealer market – thru securities dealers
    - Exchanges like the NYSE
    - Bid price and ask price
    - Spread
* Regulations
  + Securities act of 1933 (SEC created)
  + Investment Company act of 1940 (for mutuals)
  + Sarbanes – Oxley Act of 2002
* Bull and bear markets
  + Hx performance, p. 364

## Transactions

* Selecting a Stockbrokers
  + Full service, discount, on-line
  + Brokerage fees
  + Investor protection act of 1970
    - Protects against failure of broker
    - Not against stock losses
    - Bad advice can be arbitrated, but subject to various legal standards
* High freq trading box, p. 366
* Trades
  + Market order
  + Limit order – buy or sell at a specified price
  + Stop loss order – sell when the market drops below a certain price
    - Can be for a day, for x days, or good to cancelled
  + Margin
    - Can use borrowed money to buy an asset
    - Leverage
    - Margin call and maintaince
    - RISK
  + Short sale
    - Sell first with borrowed equities; then buy later
    - Bet against the market or an asset, with high sale and then lower buy
    - RISK

## Information

* economic developments
* Current events
* Current interest rate and price quotes
* Review personal investment plan and strategies
* Annual report
* Financial press
* Market data
  + DJIA
  + S&P 500
  + Others (Wilshire 5000; Lehman bond aggregate)
  + Industry, company data
  + Stock report (p. 377) --- example for the investment paper !

## On-line Investing

* Motley fool
* Morningstar – lots of info on stocks, funds
* Zacks reports
* Fidelity has planning tools
* Kiplinger – lots of info on companies

## Managing Investments

* Portfolio
  + Pitfalls box – p. 382
* Diversification – combining securities together will reduce overall risk
* Allocation – dividing portfolio into different asset classes
* Keeping track of investments --- worksheet 11.2, p. 387

# Chapter 11 – Diversification and AA

## Diversification

* basic concept noted briefly, text, at 381
* “Don’t put all your eggs in one basket”
* Is process of choosing assets with dissimilar risk-return characteristics
* Can reduce or eliminate firm-specific “unique” risk
* Leaves only systematic risk felt by an entire asset market
  + Maintains return, but minimizes risk to market-level volatility
* May be the closest thing there is to a “free lunch”

How many assets are needed to be diversified?

* Older studies / commentary suggest as few as 10 to 30 securities
* Some recent studies suggest 50 – 75 securities
  + Graph on risk dropping as number of assets are added
* Adding international assets can reduce risk to WORLD-WIDE systematic levels
  + Graph on this too
* Firm-level risk can be eliminated by diversification ---

## Asset Allocation

* Cannot eliminate systematic risk
* But can at least manage it through a process known as Asset Allocation
* text, a 381 – 386
* AA is a financial plan for dividing or allocating money between different asset classes
* Emphasis is on preserving capital (e.g. Thinking Patterns paper)
* AA is not a plan to buy or sell individual assets
  + AA IS a plan to allocate % of portfolio across asset classes

Why do we allocate?????

* Most of a portfolio’s risk-return structure comes from allocation across asset classes
* And NOT individual asset selection
* Up to 90% of return variability (i.e. risk) of a portfolio comes from the allocation decision
* Only 10% comes from individual assets

Allocate between Stocks, Bonds, Cash

* And possibly, RE and other alternative assets
* But, what percentages? text, at 381 –

To determine appropriate AA levels, consider

* risk tolerances
* holding period
* net worth
* age
* family factors
* Many other social and economic influences

Maintain AA percentages

* To preserve capital consistent with your financial plan !

Periodically rebalance AA % back to target levels

* “automatic” market timing effect
* Takes money away from assets mostly highly valued
* And puts money into assets most under-valued
* Fully diversified portfolios with extensive allocations can then ---
  + Produce risk similar to 100% US government bonds
  + But with much higher return structure

# Chapter 12 – Stocks and Bonds

## Risks and Rewards of Investing

Various types of risk

* Business risk
  + Degree of uncertainty of the FCF of a firm and ability to meet operating expenses
  + FCF definition
  + Aka fundamental risk
* Financial risk
  + Amount of debt used to finance the firm and ability to meet obligations on time
* Market risk
  + Price volatility of an asset
* Purchasing power risk
  + Price level changes (inflation) which may impact investment returns
  + Stocks and bonds move in relation to inflation
  + Some assets will be most profitable in times of rising prices (many equities, bonds);
  + Other assets will be preferred (having fixed incomes) in times of declining prices
* Interest rate risk
  + Fixed income securities (bonds, preferred equities, notes) most affected by interest rate shocks
* Liquidity risk
  + Inability to liquidate an asset at a reasonable price (RE)
* Event risk
  + Risk that an unexpected major risk will impact value of an investment
  + Terrorist attack; political risk;

Returns from investing

* Current income
* Capital gains
* Interest on interest (graph at 397)
* Box on p. 396 on 7 steps towards successful investing

Risk – Return Trade-off

* Graph at 398 (This is the CML)
* Risk --- return between US T bills, ST T notes, LT bonds, stocks, RE, options, commodities
* RFRR --- return of T bill (91 day ) that is free from any type of risk
  + It does still have some small amount of volatility (market risk)

What makes a good investment

* Expected future return
* Look at future income stream and future capital appreciation
* Approximate yield – measures the compound rate of return
  + = (current income + (F price – current price) / N) /( (current P + future price) / 2)
  + Easier to use FV on the financial calculator
  + (KCK: This calculation still needs future price estimates, which of course is dependent on FCF and dividend stream probability)
* Required rate of return (book calls this desired return)
  + The minimum return an investor needs as compensation for the assumed risk

## Common Stock

* This is a fractional share of ownership in a business that is publicly traded.
* Residual owners – profits and dividends after all expenses have been paid
* Higher risk, higher return
  + Text has a graph of NASDAQ since 1999 showing high volatility
  + Market risk is the risk that the market will be down when you need the money
* Publicly traded issues
* Voting rights
* Proxies can be assigned to mgt to vote (do not do this !)
* Dividends and capital gains taxed at same rate (15%), but that has not always been the case
  + Taxes on gains only when the gain actually occurs

Dividend yield

* % return provided by dividends paid on common
* Div yield = annual div received per share / market price per share
* KCK: This is a measure of valuation --- as dividend yield increases, that means the stock may be undervalued (relative value)
* KCK: Also a more direct measure of value (intrinsic) by taking future dividend stream back to PV

Stock dividend

* Company issues stocks as a dividend rather than cash
* More stocks for same business, so share pricing usually drops
* KCK: Better to buy back shares instead, this will increase share pricing with fewer shares for same business; represents a good alternative to cash dividends

Measures of performance

* Book value = shareholder equity in a firm per share
  + Measure of owner overall worth as a going concern
  + Accounting concept that shows up as business net worth per share
  + Good measure for businesses with a lot of assets; for industries without much assets, not a very good measure (software)
* Net profit margin= Net profit / sales
  + Measure of profitability
  + Look for a stable to growing net profit margin
* Return on equity (ROE) = net profit / equity
  + Reflects overall profitability from owners viewpoint
  + Measure of success the firm has in managing assets and capital structure
  + Related to profit margin, growth, dividends
  + High leverage generates a high ROE, so be careful to look at debt loads too
  + But high ROE generally shows high competitive position
  + Look for stable to increasing ROE
* Earnings per share (EPS)
  + EPS = (net profit after taxes – preferred div pd) / shares outstanding
  + Profit per share, essentially
  + Preferred must be paid first, so that’s why preferred is subtracted
* Price to earnings ratio
  + Relative value measure
  + Measure of consumer confidence and expectations
  + Can be industry specific
  + Very high PE relative to historic PE for firma and industry shows that business may be over valued
  + others RV measures exist too, such as EP ratio (making the ratio directly comparable to a earnings yield of a bond)
* Beta –
  + = volatility of share pricing
  + Statistical measure of risk comparing pricing volatility of stock to pricing volatility of entire asset market
  + Beta = 1.00 is the market; 1.5 beat is more volatile than the market; 0.5 is less volatile than the market
  + 0.8 is 80% of the volatility than the market (index)
  + Useful for diversification purposes
* Investing lessons from the financial crisis box, p. 407

Types of common stock

* Blue chip stocks
  + A business so solid that it is expected to provide uninterrupted dividend stream
  + IBM, wal-mart, MSFT, Merck, Exxon,
  + Often are income producers, with stable (and high) share pricing
* Growth stocks
  + Earnings have regularly grown over time
  + Little or no dividends paid out bc rapid growth needs all of the earnings of the firm
* Tech stocks are an example of growth
  + But also can be very speculative in nature, with little earnings prospects in sight
* Income stocks
  + Stable producers of dividend and income stream (utilities)
  + Dividends of these companies often increase over time
* Speculative stocks
  + Highly variable earnings, revenues, PE, etc
* Cyclical stocks
  + Pricing movements coincide with business cycle
  + Autos, steel, lumber
  + Invest during the expansion; then sell post-peak; and then buy again as a new expansion emerges
* Defensive stock is counter-cyclical
  + Consumer goods (P&G; utilities; KO; Kraft; McDonalds)
* Large, Mid, Small cap, micro
  + 10 Billion; 2 Billion; 300 million
  + (I usually use 5 B; 1B; 250 million)
  + Large caps = 80% of market value on stock exchanges, but there are only a few of them
  + Mid caps have higher price volatility and are on their way to large status (Sirus)
    - But may get squeezed out before they get bigger
  + Small caps have higher volatility but are typically the fast growers

Globalization

* In 1970, US companies = 2/3 of world capital market
* Current = US is 35% of world capital market
* Diversification potential

Investing in stocks

* For source of vale;
* to accumulate capital;
* To provide income
* Advantages
  + potential pricing accumulation; dividend income
  + highly liquid
* disadvantages
  + problem of being down in pricing at sale
  + higher risk
  + significant risk-return trade-off exists
  + dividends are not even guaranteed
* investing myths box, p. 411
  + generally true but not always in the ST or even over 10 year periods

Valuation

* any business or asset should be considered a viable investment only when it can generate an attractive rate of return
* p. 413 again uses a Future pricing type of equation fro NIKE
  + also uses the fin calculator
* analysts forecasts box, p. 413
  + EPS forecast over optimistic
  + Forecast accuracy decreases over forward period
  + Accuracy is greater with larger more predictable firms
  + Accuracy is greater at industry levels
  + Herding behavior among analysts
* Timing
  + Most investors are better off investing consistently rather than trying to time the market
  + Difficult to sell at market tops and but at bottoms;
    - Don’t know where they are
    - And psychology factors
  + Chart at p. 414 showing returns when you missed best 10 to 40 days
    - It is bc of quick and unexpected movements in the equities that returns are linked to a few great days
    - Very difficult to time these movements
* Dividend reinvestment
  + DRPS are plans with the company; no broker needs be involved
  + General idea of dividend reinvestment is compound returns (interest on interest)
  + Chart on p. 415 shows power of dividend reinvestment over 20 years

## Bonds

* Bonds are liabilities of the business – debt

Box on bonds, p. 416

* IT bonds deliver 80% of return on long bonds but at 50% of the risk of long bonds
* This is bc long bonds are highly influenced by interest rate movements
* Bonds are more stable in terms of pricing, and thus make good diversification (and AA) objectives
* Bonds will tend to reduce portfolio risk by more than they will reduce portfolio return

Invest in bonds bc

* Current income; can still produce capital gains
* Bonds are inversely related to interest rates
* When interest rates go down, bonds go up (capital gains)
* This is bc bond returns become comparatively more attractive when interst rates drop and there are no alternative interest bearing accounts around
* This is called oppty costs

Stocks vs bonds

* Bonds have a big sacrifice compared to stock return
* KCK: over LT, bonds may not outrun inflation; only equities will do that
* Stock vs bond return graph from 1989 to current, p. 417

Bond characteristics

* Bonds may interest every 6 months, usually
* Coupon is the annual interest payment (2 coupon stubs per year, in old days)
  + 8% coupon vs $80 coupon
* Par value = principal value
* Pricing with vary from par, depending on interest rates, inflation, etc
* Discount bonds = prices lower than par;
* Premium bonds = prices higher than par
* Types of bonds
  + Mortgage bonds (collateral is a house)
  + Equipment rust bonds (RR engine may be the collateral)
  + Debenture – unsecured debt issued on the general creditworthiness of the business
  + Sinking fund – how will the bond be paid off
    - Annual repayment schedule
    - Some bonds do not have any repayment schedule – the firm can pay them off or not early on; payment in whole at maturity
  + Call features
    - Freely callable = issuer can retire or call the bond in whenever it wants
    - Noncallable – issuer cannot call the bond in
    - Deferred call - can be called after a certain time
    - Call in a bond to retire high interest rate bonds and replace them with bonds having lower interest rates
      * Call premium is used to induce early retirement

Bond market

* US bond market is huge - $27 trillion
  + Bigger than stock markets in many countries
* Treasury bonds
  + Backed by full faith and credit of US govt
  + Treasury notes are 2, 3, 5, 10 year maturities
    - 20 year notes have not been issued since 1986
    - 30 year bonds were stopped and then reissued in 2006
  + Min denominations of $1,000
  + Exempt from state and federal income taxes
  + Current Treasuries are noncallable
* TIPS bonds
  + 5, 10, 20 years
  + Inflation indexed
  + Low interest rates (3.5%) but inflation indexed; T Bonds may be at 7% but not indexed
* Agency bonds
  + Not supported by full faith of US govt
  + TVA, Fannie Mae, Freddie mac, Ginnie Mae
  + Agency bonds can be mortgage backed however, for collateral purposes
* Municipal bonds
  + Issued by a muni;
  + Usually exempt from federal taxes on the dividend yield (taxed on capital gains)
  + Table showing impact of tax free status, p. 421
  + Returns are lower than taxable bonds
  + Taxable yield = muni yield / (1 – tax rate)
  + Serial obligations – bonds broken down into series of smaller bonds, all with separate maturity dates
  + Revenue bonds – guaranteed by a specific source of muni revenues (water bills for a water tower)
  + GOB – guaranteed only on muni revenues itself
* Corporate bonds
  + Issued by a business; is the debt of the firm
  + Large range of conditions and features
* Zero Coupon bonds
  + Pays no interest but sells at a discount to pay;
  + The difference between the price and par = effective yield
  + Can also sell above and below the original effective yield
  + No tax impact until sale;
  + Compound return without intervening taxes (tax free compounded until sale)
  + Discounting is similar to the 91 T bill
  + Many forms of Treasury notes are zeros
  + Treasury Strips, fro example (the coupon is stripped from the bond and sold separately)
* Convertible bonds
  + Can be converted into an equity
  + Conversion privilege --- after a certain time, with certain other restrictions
  + Conversion ratio ---
    - Number of shares a bond will convert to
  + Conversion value
    - Given the conversion ratio, what would the bond trade at if converted into common (use the common price per share \* # of shares each bond is worth)
  + Conversion premium
    - Bond market price – conversion value
    - Common for bonds to be priced slightly higher than their conversion value
  + Convertibles appeal to investors who want price potential of a stock but with the risk protection of a bond

Bond ratings

* Bonds receive ratings
* Moody’s; S&P; Fitch
* Based on ability of entity to service its debt in a prompt and timely manner
* Aaa (Moody’s) --- AAA (S&P) chart on 423
* Junk bonds (high yield) are highly speculative bonds that receive low ratings;
  + Not considered investment grade
  + Ba or BB
* Many assets that defaulted were highly rated in 2007 however
  + Possible conflicts of interest
* New bonds and older issues are all reviewed for creditworthiness
* Need higher yields on the lower ratings to induce investors to buy a bond

Bond Pricing

* Pricing is not widely circulated
* 1 point = $10; 85 = $850
* Par is often $1000
* Pricing is related to coupon (interest rate) and the maturity
* ‘bonds are priced in decimals, 87.562 = $875.62.
* US Treasuries have been priced in 1/32 of a point; 94:16 = 94.5% of par
* Interest rates and bond prices are inversely related
* Graph at 425.
  + At par so long as market interest rate = bond coupon
  + Pulls to par as te bond approaches maturity
  + Premium (discount) bond = bond market value is higher (lower) than par
    - When bond is priced at a premium, bond yield will be below value (bc price is higher, sending the yield lower)
* Current yield = current income / bond market price
  + 6% coupon with a $910 price = current yield of 6.59% = 60 / 910
* Yield to maturity = compound rate of return that a bond would yield if held to maturity
  + If bond is bought at face value, YTM = stated interest rate
  + If bond is purchased at discount, YTM > stated coupon rate
  + Approximate yield formula (above) or a financial calculator can be used here
  + Market usually uses semi-annual interest to calculate the approx yield, but the difference between semi-annual and annual is usually small
  + Approx Yield to Maturity = (CI + (1000 – CP) / N) / ((CP + 1000) / 2)
    - Where CI = current income and CP = current pricing
    - This uses annual income, not semi-annual
  + On calculator, page 427
    - Higher the YTM, the more attractive the investment

# Chapter 13 – Mutual Funds and RE

## Basics of Mutual Funds

* Financial product that is sold to the public by a investment company
* Usually a widely diversified portfolio of assets managed by the investment co
* $9.7 Trillion by early 2009
  + More mutual funds (7,800, with 25,000 funds for different loads) than there are equities in the US (10,000)
* 19% of all HH fin assets held in mutuals; almost 45% of all HH own at least one mutual
* Pooled diversification of all individual investors of the mutual

Why invest in mutuals?

* Diversification even with very little assets (min is often 3K)
* Prof mgt
* Returns --- performance box, sorted by type, p. 437
* Convenience

Mutual Organization

* Mgt company runs daily operations (Fidelity, Vanguard, etc)
* Investment advisor buys and sells the assets in the portfolio
  + Money mgrs who run the portfolio
  + Finl advisors (CFA)
  + Traders who execute trades
* Distributor sells fund shares (brokers)
* Custodian holds the assets (i.e. bank or trustee)
* Transfer agent keeps track of purchases and redemptions
* Mgt company never actually handles the cash
  + Each mgt company has a bd of dir elected by the shareholders

Open vs Closed ended

* Open fund can buy and sell any number of shares and assets, moving assets into and out of fund
  + 95% of funds are open-ended
  + NAV = current market value of all assets in the fund less liabilities on a per share basis
  + Determined at the end of the trading day (3PM NY)
* Closed end investment company has a fixed number of shares
  + Then, traded like any other stock
  + Do not usually issue new shares
  + The business of the company is an investment company;
  + 640 closed end funds as of 2008; $190 Billion
  + Trading of closed end funds occurs in the open market between investors
    - Do not have to worry about redemptions or new money inflows
    - Can concentrate on a set portfolio and watch it grow
    - Share pricing = NAV + - premium or discount in the market from S & D

Exchange Traded Funds (ETF)

* Mutual fund listing on an exchange
* Most are index funds; some are now actively managed
* Offer money mgt of an index and liquidity of a market transaction
* Can buy and sell fund during the day, and pricing is NAV + - market S & D
* Normally is closed end, but has flexibility to also create or redeem shares
  + This has the effect of minimizing the + - from NAV (unlike closed end mutuals)
* 725 ETF’s as of 2008, %532 Billion; 2% of HH own ETF’s
* Popular with institutional, can buy ETF’s as a hedge against broad movements in the capital markets
* Can be T bill ETF’s, stocks, all over the world, commodities, gold, etc
* Advantages
  + like closed end, can be bought and sold at any time
  + low cost like open-end mutuals, since they are usually index funds
  + no taxation unless capital gain occurs or dividend exists in the ETF itself (low amounts of such activity with index funds) or until ETF is sold by investor
* Disadvantages
  + can have higher costs, turnover than mutuals
  + need to buy shares and incur broker fees when dividend reinvestment occurs, unlike open-end mutuals
* ETF vs Mutual comparison box, p. 440

Cost considerations

* Load funds charge a fee at purchase
  + Sales commission, effectively
  + Fidelity, American Funds are examples
* Low-load funds charge a lower fee at purchase
* Back-end load charges a commission at redemption
* No-load fund charges no sales fee
  + Vanguard is the biggest example
  + Can still charge 12-b-1 fee
* 12-b-1 fees
  + Annual fee charged by investment mgt company for promotion and selling expenses
  + 70% of open end funds charge a 12-b-1 fee
  + Can be as high as 1% of assets under mgt
* Classes of funds
  + Class A have front end loads
  + Class B no front end buy big back end along with 12-b-1 fees
  + Class C small back end and modest 12-b-1
* Mgt fees
  + Money mgrs charge a mgt fee
  + From 0.5% to 3 or 4%
  + Size of mgt fee is statistically unrelated to fund performance (as is the load)
  + Actively mgd funds charge higher fees (2%+); while index funds charge low fees(0.2%)
* Disclosure of fees required by SEC
* Fee table on mutual funds, box, p. 443
* Suggestions for mutual fund investors, box at 444.

## Types of Funds

* growth funds
* Aggressive growth funds
* Value funds
* Equity Income --- emphasis on current income of equities
* Growth and income --- I + GC as objective
* Balanced (stocks and bonds)
* Bond funds
  + Govt bonds
    - US
    - foreign
    - Municipal bond funds
  + Mortgage backed funds
  + High grade corp bonds
  + Junk corp bonds (high yield)
  + Convertible bond funds – can be converted to common
  + IT bond funds
* MM funds
  + Genl purpose
  + Tax exempt funds
  + Govt securities money fund
* Index funds
* Sector funds
* Socially responsible funds
* International funds
* Asset allocation funds
  + Life cycle funds, box at 449

Services offered

* Automatic investment plans
* Automatic reinvestment plans (DRPS)
  + Reinvesting graph, at 451
* Systematic and regular withdrawal plans
* Conversion privileges from fund to fund in one family of funds
* Retirement plans inside a fund family

## Making Mutual Fund Investments

* Selection process
* Objectives and motives for using funds
* What do funds offer?
* Book recommends no load or low load funds
* KCK reference to studies in more advanced investment books ---
  + COSTS MATTERS !
  + TAXES MATTERS, too !
  + No citation to mutual fund studies
    - No load funds outperform high load funds
    - Low mgt fee funds outperform high mgt fee funds
    - Index funds outperform active funds, LT average
* Mutual fund facts, box at 456
* Choosing mutual funds for your 401k, box at 457
* Measuring fund performance
* Approx yield equation again, p. 459
  + Approx Yield = ( Div + CG distr + (EV – BV) / 1 yr time period) / ((EV + BB)/2)
  + Can do this easier on the fin calc as FV, p. 460

## RE Investing

Basic matters

* After-tax CF depends on revenues generated from properties
* Provides a large depreciation tax deduction
  + Lower taxable income, but not nec FCF
  + RE can be seen as tax sheltered income
* Passive deduction rule --- depr can be deducted ONLY to extent of income generated from ALL passive vehicles (can pool RE investments for this calculation)
* Valuation of RE investment = after-tax CF + appreciation in value of RE investment (i.e. CG)
* Use of leverage
  + With 25% down on most RE, can borrow up to 75% of total assets
  + So return on RE can be proportionately larger than from non-leveraged investments
  + So, ROI is higher
    - ROI box at 463
    - ROI = earnings after taxes / amount of equity investment
* Can buy raw land (considered speculative)
* Investing in income properties
  + Net Op Income (NOI) = gross rental income – op exp
    - Op exp = maint, ins, property tax (not income taxes), etc
* Commercial properties
* Residential properties

REITS, etc

* REIT’s sell shares to the business and then invests in commercial (& other) RE
* Closed end funds
* Investor owns shares of a REIT that then owns a portfolio of RE or RE mortgages
* Popular for
  + diversification purposes, since RE is not highly correlated with equities or bonds
  + Also popular for current income + CG potential (high div yield)
  + Passive compared to direct RE buys
* Equity REITS, Mortgage REITS, Hybrids
* RE LP’s and RE LLC
  + Popular for pooling of RE investments
* What to look for in a REIT, box at 465