Unit 01. Introduction, and Security Markets

(Reading Chapters 1 and 2)

Chapter 1. An Introduction to Investments: Summary Notes

- This chapter introduces important financial concepts that apply to investments and investment decision making. These concepts are:
  - The importance of setting financial goals.
  - Asset valuation as the present value of all future cash flows.
  - The trade-off between risk and return.
  - The management of risk through diversification.
  - The efficiency of financial markets.
  - The need to assess performance on a risk-adjusted basis.

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1. Portfolio Construction

- A portfolio is a combination of assets designed to transfer purchasing power to the future.
- Income is either spent or saved. Savings are invested. These investments constitute a portfolio.
- The composition of a portfolio depends on several factors, including
  - Financial goals
  - Willingness to bear risk
  - Tax implications
- A large portion of this course is devoted to descriptions and analysis of individual assets.
- With the understanding of the characteristics of individual assets, one can construct a portfolio that meets one's financial goals.

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2. Preliminary Definitions

- Investments: lay usage vs. economics
  - Lay: Acquisition of an asset such as a stock or a bond. We use this definition in this class.
  - Economics: The purchase of plant, equipment, or inventory.
- Primary and secondary markets
  - Primary market: The initial sale of securities.
  - Second market: The market for buying and selling previously issued securities.
- Value and valuation
  - Value: What something is worth
  - Valuation: The process of determining the current worth of an asset

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Preliminary Definitions

- Return: income and capital gains
  - Income gains: The flow of money or its equivalent produced by an asset. E.g. Dividends from a stock.
  - Capital gains: An increase in the value of a capital asset. E.g. stock price increase.
- Return: monetary units and percentages
  - Monetary units of return are often just $. E.g. $5 return for a particular year on one share of Yahoo stock.
  - Percentage of return is also called rate of return, which is the annualized return that is earned by the investment relative to its cost. E.g. If the initial price of a share of Yahoo stock was $100, then the rate of return for that year is 5%.

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Preliminary Definitions

- Risk: differentiated from speculation
  - Risk is the uncertainty if anticipated return will be achieved. E.g. housing price.
  - Speculation implies a high level of risk where the odds are against players. E.g. Gambling in Vegas.
- Marketability and liquidity of an asset
  - Marketability is the ease with which an asset may be bought and sold.
  - Liquidity is the ease with which assets can be converted into cash without sustaining a loss.

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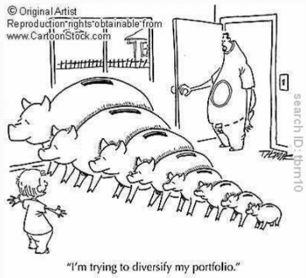
3. Diversification and Asset Allocation

- Diversification means investing in a wide spectrum of assets whose returns are not highly correlated.
  - E.g. Holding both an oil company stock and an airline stock.
- One should allocate one's assets to achieve diversification in order to reduce risk.



4. Efficient Markets

- Financial markets are efficient because:
  - Fierce competition exists among investors;
  - Participants may readily enter and exit financial markets, and
  - Information is readily available.
- Efficient markets imply that
  - The investor should not expect to consistently outperform the market.
  - In order to get higher return, one must be willing to bear more risk.

5. Portfolio Assessment

- Popular press places emphasis on return.
- Higher return requires accepting more risk.
- Assessment should consider both the return and the risk it takes to achieve that return.

6. The Internet

- Major source of information concerning investments, often for free.
- Problem of inaccurate or biased information
- Some good sites:
  - http://money.cnn.com/
  - http://www.forbes.com/
  - http://www.marketwatch.com/
  - http://moneycentral.msn.com/home.asp
  - http://finance.yahoo.com/

Chapter 2. Securities Markets

- This chapter covers securities market and the mechanics of buying and selling securities.
  1. Secondary market and security dealers
  2. The mechanics of investing in securities
  3. The short sale
  4. Foreign securities
  5. Regulations
  6. The sale of new securities to the general public

1. Secondary Markets

- While securities are issued in the primary market (IPOs), all subsequent transactions are in the secondary markets where people buy or sell securities.
- These transactions may occur on an organized exchange that has a physical location, or over-the-counter (OTC).
  - Important organized exchanges
    - NYSE: http://www.nyse.com
    - AMEX: http://www.amex.com
  - Important OTC
    - Nasdaq: http://nasdaq.com

The Role of Security Dealers

- Security dealers make the security markets by buying and selling securities for their own accounts.
  - NYSE: specialists.
  - Nasdaq: market makers.
- Sources of profit for dealers:
  - The difference between the price at which they buy and the price at which they sell (i.e., the spread)
  - Interest and dividend income received on the inventory of securities they own.
  - Price appreciation in the value of their inventory of securities.

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Terms in Security Trading

- Round lot vs. odd lot
  - A round lot is the normal unit of trading and for stocks that is usually 100 shares.
  - An odd lot is smaller than the round lot.
- Bid vs. ask prices
  - The price at which a security dealer offers to buy is called the bid price.
  - The price at which a security dealer offers to sell is called the ask price.
  - E.g. 24.11-24.60 means the bid is $24.11 and the ask is $24.60.
- Spread
  - Spread is the difference between the bid and the ask prices. E.g. In the case of 24.11-24.60, spread=24.60-24.11=0.49.
  - Spread is a major source of compensation for security dealers.

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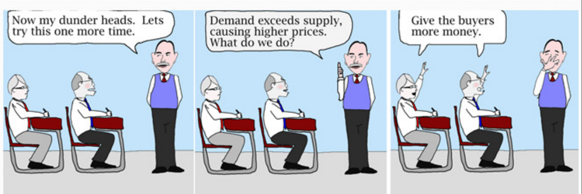
Determination of Prices

- Equilibrium price is set when
  - Demand=Supply



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Composite Transactions

- "Third" market:
  - A OTC market where the bulk of the trades are large transactions in blocks (1 block = 10,000 shares).
  - Dealers in "Third market" are called "block positioners".
  - Participants are often institutional investors.
- "Fourth" market:
  - In the "Fourth" market financial institutions do not use brokerage firms but trade through a computerized system such as Instinet (http://www.instinet.com)
  - Large transactions.
  - Lower commissions and quicker executions.

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2. The Mechanics of Investing in Securities

- Individual investors usually do not deal with security dealers. Instead they purchase securities through brokers.
- A broker is an agent who handles buy and sell orders for investors.
  - Full service vs. discount brokerage firms
  - Brokers: potential conflict of interest.
- Difference between brokers and securities dealers
  - Dealers hold securities and bear risks.
  - Brokers do not hold securities and do not bear risks.

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The Long and Short Positions

- The long (bullish) position
  - First buy then sell, hoping price will go up while receiving dividend income.
- The short (bearish) position
  - First sell (borrowed security) then buy, hoping price will go down.
  - In the meantime the short seller has to cover costs associated with borrowing, such as broker fee and dividend distributions.

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Types of Orders

- Market orders
  - An order to buy or sell at the current market price.
- Limit orders
  - An order to buy or sell a security at a specified price (limit price) or better.
  - Limit orders can be a day order or a good-till-cancel order
- Stop orders
  - An order that triggers a market order for a stock once a specific price (stop price) has been reached.
- Difference between limit and stop orders
  - Limit order: The actual execution price has to be better than the limit price for the order to be executed.
  - Stop order: The actual execution price can be better or worse than the stop price.

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Settlement

- T + 3: Settlement date – Three days after the purchase is made.
- Once purchased, the investor can choose to have the securities delivered to them, or to leave securities registered in street name (i.e. with the brokerage).
- Most people leave securities registered in street name.

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Cash versus Margin Accounts

- To pay for the purchase of securities, there are two methods: cash or margin.
  - Cash is just cash: you pay with your own funds.
  - Margin is paying with a combination of own funds and borrowed funds from the brokerage.
- The consequence of using margin accounts is increased risk, gain or loss.

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Margin Accounts – Initial Margin Requirement

- Initial Margin requirement: The minimum percentage of the total price that the investor must put up in cash to buy securities.
  - It is set by the Federal Reserve Board (the Fed). Since 1974 it has been set at 50% margin with a $2,000 minimum. Example:
  - John buys 100 shares of ABC stocks at $80 per share.
  - Initial margin requirement: 50%
  - Minimum cash: 50%*($80*100)=$4,000.
  - Borrow from the brokerage: $4,000.
- For an interesting article on margin requirement see http://www.frbsf.org/econrsrch/wklyltr/2000/el2000-09.html#subhead3

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Margin Accounts – Maintenance Margin

- Maintenance margin: This sets the minimum equity the investor must have in the position.
  - Maintenance margin is typically set by exchanges and brokerages. It is often 25% or more. In the example below we use 30%.
  - If the stock price falls and this percentage is no longer met, the investor must put in more money.
- Example:
  - Maintenance margin=30%
  - Suppose ABC stock is now only $50 a share.
  - The total value of John's investment: $50*100=$5,000.
  - John still owes the brokerage: $4,000.
  - John's equity=$1,000 ($5,000-$4,000) -> 20%($1,000/$5,000=20%).
  - Falling below the maintenance margin of 30% and will receive a margin call.

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Margin Accounts – Margin Call

- Margin call
  - If the investor's equity falls below the maintenance margin, the investor will receive a call requesting additional funds to be put in.
- Example
  - John needs to bring his margin back to at least 30%.
  - This means his equity needs to be: $1,500 ($5000*30%)
  - Additional cash he needs to put in: $500 ($1,500-$1,000)

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The Short Sale

- Short sale is the sale of borrowed securities in anticipation of a price decline.
  - The short seller must deposit with the broker an amount of money equal to the margin requirement for the purchase of the stock.
  - If the company distributes a dividend, the short seller is also "short in the dividend".
- Short-Interest Ratio (Short Ratio)
  - Short ratio is the number of shares outstanding of a company that is sold short, divided by all total stocks outstanding.
  - Some investors track short ratio as a means to forecast price changes.

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4. Foreign Securities

- Typically, foreign stocks are traded on their own stock markets.
- There are many ways one can invest in foreign stocks.
  - Mutual funds investing in foreign securities.
  - American Depository Receipts (ADR)
    - An ADR represents the ownership in the shares of a foreign company trading on U.S. financial markets.
    - It is expressed in dollars and not the local currency
- For a list of world markets, see http://www.tdd.lt/slnews/Stock_Exchanges/Stock.Exchanges.html

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5. Regulations

- The federal laws governing the securities industry are enforced by the Securities and Exchange Commission (SEC).
- The purpose of these laws is to ensure that individual investors have access to information upon which to base investment decisions.
- These laws require that publicly held firms to disclose financial and other information that may affect the value of their securities.
  - 10-K report: Required annual report filed with the SEC.
  - 10-Q report: Required quarterly report filed with the SEC.
  - 8-K report: Filed with SEC describing a change in a firm that may affect the value of its securities.
  - 13-D report: Filed with SEC by an individual who acquires 5% of a publicly held firm's stock.
  - Reports accessible at SEC's Website: http://sec.gov
  - Processed data at EDGAR online: http://www.edgar-online.com

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Major Federal Security Laws

- Securities Act of 1933
- Securities Exchange Act of 1934
- Securities Investor Protection Act of 1970
- Sarbanes-Oxley Act of 2002

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The Securities Act of 1933

- Congress enacted the **Securities Act of 1933** in the aftermath of the stock market crash of 1929 and during the ensuing Great Depression.
- It requires that new securities be registered with the SEC.
- It was the first major federal legislation to regulate the offer and sale of securities.

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The Securities Exchange Act of 1934

- This Act extends the 1933 regulation to existing securities
- The Act and related statutes form the basis of regulation of the financial markets and their participants in the United States.
- Reporting requirements such as the 10-K reports were established by this Act.

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The Securities Investor Protection Act of 1970

- Designed to protect investors from brokerage firm failures and bankruptcies.
- Created the Securities Investor Protection Corporation (SIPC).
  - SIPC is not a government agency;
  - It is a federally mandated membership corporation funded by its members.
  - It protects securities investors from harm if a broker/dealer defaults. Investors' accounts are insured by SIPC for up to $500,000 in the case of brokerage failure.

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The Sarbanes-Oxley Act of 2002

- The Sarbanes-Oxley Act of 2002 is a federal law enacted in 2002 in response to a number of major corporate and accounting scandals.
- The legislation establishes new or enhanced standards for all U.S. public company boards, management, and public accounting firms.
- The Act establishes a new quasi-public agency, the Public Company Accounting Oversight Board (PCAOB), which is charged with overseeing, regulating, inspecting, and disciplining accounting firms in their roles as auditors of public companies.
- The Act also covers issues such as auditor independence, corporate governance, internal control assessment, and enhanced financial disclosure.

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State Laws – Blue Sky Laws

- A **blue sky law** is a state law that regulates the offering and sale of securities to protect the public from fraud.
- Though the specific provisions of these laws vary among states, they all require the registration of all securities offerings and sales, as well as of stock brokers and brokerage firms.

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6. The Sale of New Securities to the General Public

- Initial public offerings (IPOs)
  - The first sale of common stocks to the general public.
- Investment bankers are usually employed by the company to sell new issues of securities to the general public.
- There are two types of agreements between investment bankers and the company:
  - Best efforts agreement: Investment bankers do not guarantee the sale of a security but agree to make the best effort to sell them. The risk of selling the securities rests with the company.
  - Firm commitment: Investment bankers guarantee the sale of securities by agreeing to purchase the entire issue at a specified price. The investment bankers bear the risk of not being able to sell these securities at the desired price.

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The Mechanics of Underwriting

- The process by which securities are sold to the public and in which the investment banker buys the security from the issuing company is called "underwriting".
- The originating house is the investment banker that makes an agreement with a firm to sell a new issue of securities. When there are more than one investment bankers they are referred to as lead underwriters.
- The originating house often assembles a selling group of investment bankers to market an issue of securities. This group is called a syndicate.

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Pricing and Price Volatility of IPOs

- Underpricing of IPOs leads to windfall gains to initial buyers.
- Overpricing inflicts losses on initial buyers.
- Reality – all possibilities
  - Underpricing: Prices can rise dramatically after initial issuing.
    - E.g. Yahoo: http://news.cnet.com/2100-1033-209413.html
  - Overpricing: Prices can drop dramatically after initial issuing.
    - E.g. Facebook: http://money.cnn.com/2012/05/23/technology/facebook-ipo-what-went-wrong/
  - Many firms eventually fail.
    - E.g. The Boston Chicken story http://www.fool.com/EveningNews/FOTH/1998/foth981007.htm
- Few investors get to participate in IPOs.

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Registration of IPOs

- Originating house issues a preliminary prospectus (often referred to as "Red Herring").
  - A prospectus is a document detailing the financial condition of a firm that must be filed with the SEC for registration.
- Application completed for registration with the SEC.
- SEC accepts registration statement.
- Originating house issues final prospectus incorporating any changes the SEC requests.

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Shelf Registrations

- If it is a publicly-held firm wanting to sell more securities, there is less need for a very detailed prospectus.
- Often such a firm constructs a prospectus describing a proposed issue of new securities and files it with SEC.
- This document is called shelf registration.
- Once approved, the firm may sell the securities whenever the need of fund raising arises.

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Lock-Ups

- Before the IPO, company employees are often allowed to purchase the stock in a "nonpublic" transaction at a lower price.
- SEC guidelines only require that these insiders keep such securities for at least one year before they sell them.
- Sometimes the actually public offering happens after one years of these private purchases. As such, these insiders can sell their stocks on the day of IPO – potential big impact on the market.
- Lock-ups are agreements between insiders and the underwriter that for a period of time (ranging from 90 days to 365 days) these insiders cannot sell their shares.

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