



Lecture notes, lectures 6, 7, 9

Introduction to Accounting and Finance (The University of Western Ontario)

Lecture Notes

Lecture 6: Intro to Finance

Finance: the study of the management of funds (cash)

The goal of the firm:

- The goal of the firm is to **create value** for the firm's shareholders
- 2 ways for shareholders to get money back: dividends, and selling shares at a higher price
- How? Maximizing the price of the existing common stock- the perception of the future drives the stock price, if shareholders think things are going well they are going to buy stock and the stock price will thus go out
- Good financial decisions will help increase stock price and poor financial decisions will lead to a decline in stock price
- If managers make good decisions, it should have a positive effect on the stock price

Role of Management: to be the agent for the shareholder

- Management serves as an arbitrator and moderator between conflicting interest groups or stakeholders and objectives
- **Principle agent problem:** the principle is the shareholder (they own the business), but who runs the company on my behalf? That would be the managers, so the managers are the agents who act on the shareholders behalf
- We have both stakeholders and shareholders, a shareholder owns a stock in the company, but a stakeholder: is any constituent group that has an interest in that company (managers, employees, buyers, government etc.)... so shareholders and stakeholders, but not all stakeholders are shareholders... and all these constituents have a claim
- Creditors, managers, employees and customers hold **contractual claims** against the company
 - **Contractual claims:** so if im a supplier and I give you a 30 days s to pay, there is a contract to claim on your asset
- Shareholders have **residual claims** against the company
 - **Residual claims:** equity... the thing about shareholders is that they come last, so if a company goes bankrupt they have to pay the contractual claims first, so the shareholders are last in line

Role of Finance in Business:

- 3 basic issues addressed by the study of finance
 - **Capital budgeting decision:** What long-term investments should the firm undertake?
 - **Capital structure decision:** How should the firm raise money to fund these investments?- how do you raise money?, do you borrow it, issue more equity that's a finance decision
 - **Operating decisions:** How to manage cash flows arising from day-to-day operations?- how much money do you invest in inventory, should you have lots of inventory on hand?

Functions of financial manager

1. a) Raising funds- issuing debt, or issuing shares
b) Obligations (stocks, debt securities)
2. Investments

3. Cash from operating activities
 4. Reinvesting
 5. Dividends or interest payments
- In the center you have the corporate manager (someone in the middle making decisions), they have to determine how they are going to raise funds, so they are either going to raise funds by issuing debt, or issuing shares, then you get the financial markets, which is going outside of the organization and you ask people for money (investors). Now when you get that money, they have to decide how to invest that money (what plant, what equipment etc), all long term investments. Hopefully, our day to day decisions are strong, and we are generating enough cash from operating activities, now some of that money is going to get reinvested into the company.

Finance Function: managing the cash flow

Principles of Finance

→ Principle 1: Cash flow is what matters

- Accounting profits are not equal to cash flows
- It is possible for a firm to generate accounting profits but not have cash or to generate cash flows but not report accounting profits in the books
- Cash flow, and not profits, drive the value of a business
- We must determine additional cash flows when making financial decisions

→ Principle 2: Money has a time value

- A dollar received today is worth more than a dollar received in the future
- Since we can earn interest on money received today, it is better to receive money sooner rather than later
- A lot of our finance decisions are long term... if you buy a factory today you won't get your money back for years, the payback is in the future
- You cannot compare future dollars to today's dollars because they don't have the same value
- **Computation of present value:** an investment can be viewed in two ways- its future value or its present value... when we look at long term investments- an investment is viewed by either present or future value, they are opposite ways of looking at the same thing but we calculate differently (same variables just flip around)

The Theory of Interest- future value:

- Assume a bank pays 8% interest on a \$100 deposit made today
- How much will the \$100 be worth in one year?
- How much will the \$100 be worth in 2 years?
- How much will it be worth in 3 years?
- After 1 year you take 1.08 and multiply by 100
- Not only are you earning interest on the 100 dollars, but you are earning interest on the interest you earned the first year= **compounding**

Present Value:

- If a bond will pay \$100 in 2 years, what is the present value of the \$100 if an investor can earn a return of 12% on investments?
- $P = F_n / (1+r)^n$
- Ex: $P = \$100 / (1+.12)^2 \dots P = \79.72
- This process is called **discounting**. We have discounted the \$100 to its present value of \$79.72. the interest rate used to find the present value is called the discount rate

- Compounding is the opposite of discounting

The Net Present Value Method:

- To determine the net present value we..
 1. Calculate the present value of cash inflows
 2. Calculate the present value of cash outflows
 3. Subtract the present value of the outflows from the present value of the inflows
- **Net present value:** is the project doable, this is the main look used by finance people... what it does is it says we want some investments to earn some interest
- So first look how much cash is coming in over the life of it, and do the same for cash outflows, then you compare both, if inflows are greater than outflows then you have a positive net value
- If the **net present value is positive:** then the project is acceptable, since it promises a return greater than the required rate of return- your inflow is greater than your outflow
- If the **net present value is zero:** then the project is acceptable, since it promises a return equal to the required rate of return
- If the **net present value is negative:** then the project is not acceptable, since it promises a return less than the required rate of return- means that your cash outflow is greater than your inflow

Typical cash outflows:

- Repairs and maintenance- costs you
- Initial investment
- Incremental operating costs
- Working capital- if you decide to expand your product line, you have to invest in more receivables and inventory

Typical cash inflows:

- Salvage value- when you may be able to sell this piece of equipment in 5 years
- Reductions of costs- savings
- Incremental revenues
- Release of working capital

Choosing a Discount Rate:

- The firm's **cost of capital** is usually regarded as the minimum required rate of return
- The cost of capital is the average rate of return the company must pay to its long-term creditors and stockholders for the use of their funds
- Lowest return they will accept

→ Principle 3: risk requires a reward

- Risk is the uncertainty about the outcome or payoff of an investment in the future
- Rational investors would choose a riskier investment only if they feel the expected return is high enough to justify the greater risk
- Every time we invest there is a risk we won't get our money back, we can't predict the future, so we know that there are safer investments than others... rational investors won't choose
- **Risk adverse:** aversion to risk... we are willing to take more risk, however you better get a return ex: if you were going to invest in a Canada savings bond, there is no risk involved and not a huge return, but if you were to invest in a company it's a huge risk with a potential huge return

Diversifications of Investments- spreading your money around and not just in one company

- All investment risk is not the same

- A diversified portfolio (10 or 15 stocks) is taking the risk and spreading it around different industries
- Some risk can be removed or diversified by investing in several different securities
- **Firm specific (unsystematic)**- risk associated with the company, actions to the managers
- **Market (systematic)**- risk of the market, economy gets hit and it all drops
- Spread risk around so actions of one manager wont screw you over, if your portfolio is fully diversified then only relevant risk measure would be the market

→Principle 4: Market Prices are generally right

- A financial market is “information efficient” if at any point in time the prices of securities reflect all information available to the public
- **Efficient market theory**: says most people are rational, and most people are going to make good decisions, their going to buy stock that has good info to make them wealthier, so when stock prices have risen up it is because good rational people got the information and bought stocks... so stock prices reflect all the information
- When new information becomes available, prices quickly change to reflect that information
- Information efficient markets provide liquidity and fair prices
- Note there are inefficiencies in the market that may distort the market prices from value of assets. Such inefficiencies are often caused by behavioral biases

→Principle 5: conflicts of interest cause agency problems

- The separation of management and the ownership of the firm create an **agency problem**
- Owners or equity investors want to maximize the returns on their investments
- When owners and managers aren't the same people, there is a principle agent problem, since owners want their managers to act in best interest, but managers make decisions in their best interest instead= **principle agent problem**

Management vs. Owner Objectives

- Management objectives may differ from owner objectives
- Managers may make decisions that are not in the best interest of the shareholder (**principle agent problem**)
- Managers may seek to emphasize the size of the firm sales, assets, or other perks
- **Dispersed ownership**- means that it is spread out and there is no one shareholder that has control
- Agency conflict is reduced through monitoring (ex: annual reports) and compensation plans (ex: stock options)

Corporate Governance functions: a system that ensures companies are running in best interest of the shareholders

- **Oversight:** board of directors to oversee management- responsibility of the board, they are there to act in best interest of company, more pressure now on board
- **Managerial:** run company to the best interest of the shareholders
- **Compliance:** make sure the company is in compliance with all laws, regulations, standards etc.
- **Internal audit:** provide assurance and consulting activity
- **Legal and advisory:** advice
- **External audit:** they lend credibility
- **Monitoring:** elect or remove directors and management

Proxies: signing off on document that lets someone acts on your behalf ex: my mom when she goes on vacation signs off on someone to run her business when shes gone

→Principle 6: Ethics and Trust in Business

- Ethical behavior is doing the right things... but what is the right thing?
- Sound ethical standards are important for business and personal success
- Unethical decisions can destroy shareholder wealth

→Real VS. Financial Assets

- **Real assets** are tangible things owned by persons and businesses
 - Residential structures and property
 - Major appliances and automobiles
 - Office towers, factories, mines
 - Machinery and equipment
- **Financial assets** are what one individual has lent to another, things we have invested in
 - Consumer credit ex: visa
 - Loans- asset for people who lent the money
 - Mortgages- somebody lent money, their financial asset

→The Functions of Money

- **Medium of Exchange**
 - How transactions are conducted: something that is generally acceptable in exchange for goods and services. In this function money removes the need for double coincidence of wants by separating sellers from buyers
 - Back in the old days there was a concept of **Barter**: when your trading (I have something you want, you have something I want) problem is you need a happy coincidence, what if the other person doesn't want what you have
- **Standard of value**
 - How the value of goods and services are denominated: something that circulates and provides a standardized means of evaluation the relative price of goods and services
 - How goods are valued relative to others, what is worth it, something might be worth it for something but that same price not for something else ex: 50 dollars to a shirt is worth it, but its not worth it for food
- **Store of value**
 - How the value of goods and services are maintained in monetary terms: the ability of money to command purchasing power in the future
 - Allowing it to command purchasing power in the future

→The Financial System

- Shows that there is people who have the money, and there are people who needs the money... and the market works to facilitate the transaction...financial intermediaries: you can invest in the company and never have to deal with them again
- Financial intermediaries:

- Banks and other deposit-taking institutions, any organization that you can put a deposit on, a financial intermediaries is a group that takes money from someone and changes the nature of that financial security and expedites it to another institution
- Insurance companies
- Pension funds
- Mutual funds- they don't really fall in the same definition as a financial intermediary

→**Financial Markets**- every single transaction In the financial market, will fall in one of these

Primary markets: first time that security has been available to buy/sell/invest- first time a company goes public offering new stock that wasn't available before that is a primary market transaction

Secondary markets: when you buy the stock from a company and 5 years later you sell it to someone else

- The difference between the two is simply who gets the money: so with a primary market if you go and buy a brand new car from GM, GM gets the money... 2 or 3 years later you decide you don't want the car, and sell it as a used car, and then you get the money not GM which is a secondary market transaction
- A secondary market is critical, because if it wasn't available, you would not want to buy that car
- An active secondary market means that the stock is liquid, want to be able to sell stock when you need the money
- 3rd market- transactions that are large transactions that happen over the counter
- 4th market- transactions that happen between investors

Money Market: short term securities, things that will expire quickly (usually within a year), they are liquid short-term debt securities

Capital market: is long-term debt, and shares- shares are never on the money market because shares never expire

Organized exchanges:

Over the counter: network of dealers

Debt Instruments issued by Corporations

- **Commercial paper:** only solid companies have the ability to issue this because it unsecured, they are paid back within a year, Its short term debt
- **Bankers acceptance:** way companies can get short term debt that might not have the ability to issue short term paper, difference between the two is that the bank acts as the guarantor, bank is promising that they are good for the money, pays lower interest rate
- **Corporate bonds:** debt, long or short-term- we look at short term (anything less then 5 years), great way to raise money

Corporate Bonds

- **Debentures:** unsecured debt. Backed only by the general assets of issuing corporation- when company goes bankrupt it has to stand inline to get their money, when you have unsecured debt you need to wait inline like everyone else
- **Secured debt (mortgage debt):** secured by specific assets- specific which means they come first
- **Subordinal debt:** in default, holders get payments only after other debt holders get their full payment- debt that is issued after other debt

- **Senior debt:** in default, holders get payments before other debt holders get
- **Zero coupon:** pay face value at maturity only, sold at discount- no safe interest on the bond
- **Junk bonds:** bonds with below investment grade rating, company isn't stable but their promising ridiculous returns

Bond Features:

- **Retractable:** take it back, means that the holder can retract their loan, you can force the issuer to pay back early
- **Convertible:** can convert to something else- you can convert debt into something like equity, has to be written in contract and within the same company
- **Extendable:** can extend life of contract
- **Callable (redeemable):** opposite of retractable, gives issuer the right to call bonds/debt back
 - Key is to understand what these features mean and why we would do this
 - Issuer: issuer is the borrower, company issues debt, selling debt on the market
 - Holder: holder is the lender, you hold the bond, it allows you to sell it to someone else

Equity instruments issued by corporations: common stocks

- The common stockholders are the owners of the corporations equity
- Voting rights
- No specified maturity date and the firm is not obliged to pay dividends to shareholders
- Returns come from dividends and capital gains

Equity instruments issues by corporations: preferred stocks

- Have face value, predetermines periodical (dividend) payments with priority over common stockholders
- Rank ahead of common shares in terms of who gets paid first, but your probably not going to get a huge return
 - Cumulative- means that I get lets say a dollar a share every year, so I own 1000 preferred shares, and get a cheque from the company for 1000 dollars, but in 2012 the company didn't do very well, so if my dividend is cumulative that means that the following year I get 2012 dividend and 2013 and they accumulate
 - Non-cumulative- you loose, they don't declare dividends
 - Participating
 - Non-participating
- If dividend payment is not paid, preferred stockholders may get voting rights

Derivative securities- when you trade securities and their value, and you derive them from an underlying security

- Securities whose value is derived from the value of some underlying asset
- Most important derivatives are options and futures
- Stock options- not a tool of fundraising, it is a method of compensation
- Prices of financial instruments are determined in equilibrium by demand and supply forces
- They reflect market expectations regarding the future as inferred from currently available information

Lecture 7: Financing and Distribution

Bootstrapping:

- **Initial funding of the firm**
 - The process by which many entrepreneurs raise “seed” money and obtain other resources necessary to start their businesses
 - The initial “seed” money usually comes from the entrepreneur or other founders
 - Since most companies don’t start off huge, most follow a simple process- they start off with an idea- **bootstrapping period**: refers to someone pulling themselves up on their own, period early on that the money comes from the entrepreneur, also referred to as **seed money**: comes from you
 - Other cash may come from personal savings, the sale of personal assets, loans from family and friends, use of credit cards
 - The seed money, in most cases, is spent on developing a prototype of the product or service and a business plan- not about advertising or manufacturing, at this point it is still an idea
 - Usually lasts 1 to 2 years- if it lasts longer it probably not a great idea

Venture Capital:

- Venture capitalists are individuals or firms that help new businesses get started and provide much of their early-stage financing
- Individual venture capitalists or angel investors, are typically wealthy individuals who invest their own money in emerging businesses at the very early stages in small deals
- These people play a critical role they are the risk takers,
- These people ask people early on for an investment
- Three reasons exist as to why traditional sources of funding do not work for new or emerging businesses:
 1. The high degree of risk- bankers aren’t to willing to hand over money just for a “great” idea
 2. Types of productive assets- most traditional financiers are looking for collateral- they say what kind of assets do you have? So there’s not a real asset as a collateral
 3. Informational asymmetry problems- when you have investors on the outside and managers on the inside, managers know more then the investors... makes it harder for traditional sources of financing to be used at this stage, because the owner knows everything
- The venture capitalists investments give them an equity interest in the company- for the most part its an **equity purchase**- at this point its me asking the venture capitalist to invest
- Often in the form of preferred stock that is convertible into common stock at the discretion of the venture capitalist
- **They provide more then financing:**
 - The extent of the venture capitalists involvement depends on the experience of the management team
 - One of their most important roles is to provide advice
 - Because of their industry and general knowledge about what it takes for a business to succeed, they provide counsel for entrepreneurs when a business is being started and during early stages of operation
 - Usually venture capitalists have other roles then just providing the money- their very involved in the industry and their very knowledgeable

- **How venture capitalists reduce their risk:**
 - Venture capitalists know that only a handful of new companies will survive to become successful firms
 - Tactics to reduce risk:
 - Funding the ventures in stages- (stage financing): saying your not going to give all the money you have right away, your going to give them a commitment... so if things seem to not be going good, you can stop investing instead of loosing all your money
 - Requiring entrepreneurs to make personal investments-
 - Syndicating investments
 - In-depth knowledge about the industry- focus on areas they are excellent in
- **Syndication:** lend the money, but then they will take that and sell stock of that investment to other venture capitalists, and this diversifies the risk
 - It is a common practice to syndicate seed- and early-stage venture capital investments
 - Syndication occurs when the originating venture capitalist sells a percentage of a deal to other venture capitalists
 - Syndication reduces risk in 2 ways:
 - It increases the diversification of the originating venture capitalists investment portfolio
 - The willingness of other venture capitalists to share in the investment provides independent corroboration that the investment is a reasonable decision
- **The Exit Strategy**
 - Venture capitalists are not long-term investors in the companies, but usually exit over a period of 3-7 years
 - Every venture capital agreement includes provisions identifying who has the authority to make critical decisions concerning the exit process
 - Timing (when to exit)
 - The method of exit
 - What price is acceptable
 - There are 3 principle ways in which venture capital firms exit venture-backed companies:
 - Sell to a **strategic buyer** in the private market- somebody or a group that is going to benefits because the nature of the product, so its creating a synergy
 - Sell to **financial buyer** in the private market- doesn't care about the product itself, simply looking for an investment
 - The difference between a strategic buyer and a financial buyer is the reason they are buying
 - Initial public offering: selling common stock in an initial public offer (IPO)- sold to anybody that wants to participate on the market... when sales go public for the first time on the market the name is an IPO

Initial Public Offering:

- One way to raise larger sums of cash or to facilitate the exit of a venture capitalist is through an initial public offering, or IPO, of the company's common stock
- First time stock issues are given a special name because the marketing and pricing of these issues are distinctly different from those of seasoned offerings
- **Advantages Going Public:**

- The amount of equity capital that can be raised in the public equity markets is typically larger than the amount that can be raised through private sources- easier to raise money on a public market
- Once an IPO has been completed, additional equity capital can usually be raised through follow-on seasoned public offerings at a low cost- once you go public its easier to put more stock out there
- Going public can enable an entrepreneur to fund a growing business without giving up control- if you structure in such a way that you can go public but still maintain control
- After the IPO, there is an *active secondary market* in which stockholders can buy and sell its shares- where you buy shares in a company, and you can turn them around and sell them to someone else
- Publicly traded firms find it easier to attract top management talent and to better motivate current managers if a firms stock is publicly traded
- **Disadvantages to going public:**
 - High cost of the IPO itself
 - The costs of complying with ongoing SEC disclosure requirements- you need to release all your financial information
 - The transparency that results from this compliance can be costly for some firms- the transparency some people don't want to give up
- **Investment-Banking Services-** they determine what a good price is, and market your stock
 - To complete an IPO, a firm will need the services of investment bankers, who are experts in bringing new securities to the market
 - Investment bankers provide 3 basic services when bringing services to market-
 - **Origination:** determining when the company is ready to go public
 - Includes giving the firm financial advice and getting the issue ready to sell
 - The investment banker helps the firm determine whether it is ready for an IPO
 - Once the decision to sell stock is made, a firm's management must obtain a number of approvals
 - File a registration statements with the securities exchange commission
 - One we decide were ready, we refer to this as a **prospectus:** a document that includes all relative info for potentials investors- talk about the path, the trends, the costumers you have... nothing can be an exaggeration everything has to be verified
 - **Underwriting:**
 - The risk-bearing part of investment banking- coming up with a way, or a price to sell it
 - The securities can be underwritten in two ways:
 - **On a firm-commitment basis-** the investment banker bares the risk, says that "I am your investment banker and I am going to commit to raising 10m dollars" when you say "I am going to sell this many shares for this price" that is the commitment... lets say if you only got 8, and you were promised 10, then its to bad for the investment banker because he has to give the 10- he is baring the risk... but if I get 12, then the investment banker wins

- **On a best efforts basis**- the company bares the risk, says I'm not promising you anything, I know you want 10 dollars a share, ill do my best if I get you 8, then I get you 8, but the investment banker isn't on the risk
- **Underwriting Syndicates:**
 - **Syndicates:** they spread the risk, so you might not have an investment banker involved, you might share it- each investment banker shares it equally and it becomes a syndicate, basically putting your resources together to become stronger
 - To share the underwriting risk and to sell a new security issue more efficiently, underwrites may combine to form a group called an underwriting syndicate
 - Participating in the syndicate entitles each underwriter to receive a portion of the underwriting fee as well as an allocation of the securities to sell to its own customers
- **Determining the offer price**
 - One of the investment banker's most difficult tasks is to determine the highest price at which the bankers will be able to quickly sell all of the shares being offered and that will result in a stable secondary market for the shares
 - Process of setting a price- is it 10 dollars is it 8 dollars?, this is the hardest thing because if you over price and say that the stock is worth 10, but the market says 6, that is bad news, and a bad way to start... however, if you think the stock price is worth 10, and people buy it at 10, and it jumps up to 15-20- good
- **Due Diligence Meeting**
 - Due diligence is really about being thorough, they want to make sure you come up with the right price
 - Before the shares are sold, representatives from the underwriting syndicate hold a due-diligence meeting the representatives of the issuer
 - Investment bankers hold due-diligence meetings to protect their reputations and to reduce the risk of investors lawsuits in the event the investment goes sour later on
- o **Distribution**
 - Once the due-diligence process is complete, the underwriters and the issuer determine the final offer price in a pricing call
 - The pricing call typically takes place after the market has closed for the day
 - By either accepting or rejecting the investment bankers recommendation, management ultimately makes the pricing decision

IPO Pricing and Cost

- Three basic costs are associated with issuing stock in an IPO:
 - Underwriting spread- is the difference between the proceeds the issuer receives and the total amount raised in the offering
 - Out-of-pocket expenses- including other investment banking fees, legal fees, accounting expenses, printing costs, travel expenses, SEC filing fees, consultant fees, and taxes
 - Underpricing- typically defined as the difference between the offering price and the closing price at the end of the first day of the IPO

Private Markets

Private vs. Public Markets:

- Because many smaller firms and firms of lower credit standing have limited access, or no access, to the public markets, the cheapest source of external funding is often the private markets
- When market conditions are unstable, some smaller firms that were previously able to sell securities in the public markets no longer can
- Bootstrapping and venture capital financing are part of the private market as well

Private Markets:

- Many private companies that are owned by entrepreneurs, families, or family foundations, and are sizeable companies of high credit quality, prefer to sell their securities in the private markets even though they can access public markets

Private Placements:

- Private placements occurs when a firm sells unregistered securities directly to investors such as insurance companies, commercial banks, or wealthy individuals
- Private lenders are more willing to negotiate changes to a bond contract
- If a firm suffers financial distress, the problems are more likely to be resolved without going to a bankruptcy court
- Other advantages include the speed of private placement deals and flexibility in issue size
- The biggest drawback of private placements involves restrictions on the resale of the securities- you might have a contract that says you can only sell to certain people, because they want control over who purchases

Private Equity Firms:

- Like venture capitalists, private equity firms pool money from wealthy investors, pension funds, insurance companies, and other sources to make investments
- Private equity firms invest in more mature companies, and they often purchase 100% of a business
- Private equity firm managers look to increase the value of the firms they acquire by closely monitoring their performance and providing better management
- Once value is increased, they sell the firms for a profit. Private equity firms generally hold investments for 3 to 5 years

Dividends:

- How we get the money... when it comes to equity there is 2 ways investors get their money: issue dividends, or trading
- The term dividend policy is generally used to refer to a firm's overall policy regarding distributions of value to stockholders
- A dividend is something of value that is distributed to a firm's stockholders on a pro-rata
- A dividend can involve the distribution of cash, assets, or something else, such as discounts on the firm's products that are available only to stockholders
- Key is every shareholder receives a share on a pro-rata basis... if every shareholder gets the same thing its not a pro-rata
- Pro-rata: proportion- so if I own 20% of stock I get 20% of the total dividends paid
- 2 ways they can get their money is to either issue dividends, or trade
- **Dividend payout ratio:** dividend policies are structured in 2 ways, either flat rate (dividend policy is 20c per share), and the second way is dividend payout ratio (so 2% of income is our

payout ratio, so whatever our profit is this year (2%), is our payout)– both policies just verbalized a different way

- Dividend- When a firm distributes value through a dividend, it reduces the value of the stockholders claims against the firm
- A dividend reduces the stockholders investment in a firm by returning some of that investment to them
- **Regular cash dividend:**
 - The most common form, it is the cash dividend that is paid on a regular basis
 - Are generally paid on a quarterly basis and are a common means by which firms return some of their profits to stockholders
 - The size of a firms regular cash dividend is typically set at a level that management expects the company to be able to maintain in the long run, barring some major change in the fortunes of the company
 - Setting the policy is critical- whatever we decide its going to be, we want to make sure its something we can maintain in the long run, and achieve it every single time, because if we don't people are disappointed
- **Extra dividends**
 - Management can afford to err on the side of setting the regular cash dividend too low because it always has the option of paying an extra dividend if earnings are higher than expected
 - So say you promised 5c a share, and you have a great year, you can pay out a lot more, and you have extra dividends
 - Extra dividends are often paid at the same time as regular cash dividends
 - Extra- when its better then you anticipated and you can pay out more money
 - Special- similar but different, one time thing
- **Special Dividend**
 - A special dividend, like an extra dividend, is a one-time payment to stockholders
 - Larger than extra dividends and to occur less frequently
- **Liquidating dividend**
 - A dividend that is paid to stockholders when a firm is liquidated
 - Liquidating is when a company is going to close, so the company sells all their assets, gets all their liquidity, they take all the cash and pay off all their debt, and what's left gets paid on a pro rata basis to its shareholders
 - Going concern company will not issue a liquidating dividend because their still in business

→The Dividend Payment process:

Time line for a public company

- The dividend payment process begins when the board votes to pay a dividend. Shortly afterward, the firm publicly announces its intent to pay a dividend, along with, at a minimum, the amount of the dividend and the record date. The ex-dividend date, which is set by the stock exchange, normally precedes the record date by 2 days. The payable date is the date on which the firm actually pays the dividend
- Process in doing this: you must follow this process, even if you have a policy in place
- Every corner the board has to vote, they have to agree that the company can pay this. Then they make a declaration, which is a vote- once they declare it, it becomes something, there is going to be some dates published in this declaration ex: so lets say they do the vote on may 1st, and on

may 5th they declare it, now in that declaration there is going to be some key items, its going to say how much (ex. 20c per share), its going to say when (ex. June 15th) which will be the payable date, the day the cheques are done... then the record date is critical because if you own the shares as of the record date you get the dividend, if you sell the shares to someone after the dividend you still get the dividend

- The ex dividend date is usually 2 days earlier, and all that means is that the security commission needs to cut off.
- Board vote, public announcement (declaration date), Ex- Dividend Date, Record date, Payable date

The Dividend payment process at private companies:

- Private companies do not have to follow the process above
- It is not as well defined for private companies because
 - Shares are bought and sold less frequently
 - Fewer stockholders and,
 - No stock exchange is involved in the dividend payment process- don't have to follow rules of the stock exchange
- It is easy to inform all stockholders of the decision to pay
- It is easy to actually pay it
- There is no public announcement
- No need for an ex-dividend date
- The record date and payable date can be any day on or after the day that the board approves the dividend

Stock Repurchases:

- Selling stock- another way shareholders get money back... company sometimes helps this along, by offering to buy stock back from investors, to reduce the number of shares that are out there, allows investors to get money back. So what they will do is they offer a pro rata distribution of the value- a dividend value, stock repurchases do not... so these are not dividends because they might say they want to buy back stock, but not everyone participates... so pro rata means that they buy back stock and each gives up the same percentage
- They do not represent a pro-rata distribution of value to the stockholders, because not all stockholders participate
- When a company repurchases its own shares, it removes them from circulation- so if you had 10m stock out there trading and you buy back 1m, then you have 9m outstanding...
- Stock repurchases are taxed differently than dividends-
- How stock is purchased: 3 ways-
 - **Open-market repurchase**- they simply go on the market and buy back stock, anybody who wants to buy the stock can
 - **Tender offer**- means were offering to purchase something, if the shareholder tenders their stock, it means that they accept the offer and their going to sell their stock (agreeing to sell), so when someone tenders there offer there is 2 ways:
 - **Fixed price**: this is what were offering, if you agree then you'll sell it to me and then were done

- **Dutch auction:** it says hey shareholders we want to buy back some stock, what we want you to do is tell us how many shares would you sell at 3 dollars, at 4 dollars, at 5 dollars... and so when we get all this information, the company then gets to choose the best price
- **Targeted stock repurchase-** what we specifically call an investor and say we want to buy a big chunk back or buy it all back

→ Stock Dividends and Stock splits

• Stock Dividends

- Usually done when we want to give our investors something but we don't want to give them money... so what we do is we do a stock dividend ex: we have a company that has 10 thousand in shares trading at 11 dollars, so what a stock dividend does is it increases the number of shares that are outstanding... for every share you own you get another share of the stock, but... there was no change in value of the company
- One type of "dividend" that does not involve the distribution of value is known as a stock dividend
- When a company pays a stock dividend, it distributes new shares of stock on a pro rate basis to exiting stockholders
- Value of company does not change
- The stockholder is left with exactly the same value as before

• Stock Splits:

- A stock split is quite similar to a stock dividend, but it involves the distribution of a larger multiple of the outstanding shares
- We can often think of a stock split as an actual division of each share into more than one share
- One real benefit of stock splits is that they can send a positive signal to investors about the outlook that management has for the future and this, in turn, can lead to a higher stock price
- Management is unlikely to want to split the stock of a company two-for-one or three-for-one if it expects the stock price to decline
- Reverse stock splits- opposite of stock split

Practical considerations in setting a dividend policy

- A company's dividend policy is about how the excess value in a company is distributed to its stockholders
- It is extremely important that managers choose their firms dividend policies in a way that enables them to continue to make the investments necessary for the firm to compete in its product markets
- Managers should consider several practical questions when selecting a dividend policy:
 1. Over the long term, how much does the company's level of earnings (cash flows from operations) exceed its investment requirements? How certain is this level?
 2. Does the firm have enough financial reserves to maintain the dividend payout in periods when earnings are down or investment requirements are up?
 3. Does the firm have sufficient financial flexibility to maintain dividends if unforeseen circumstances wipe out its financial reserves when earnings are down?
 4. Can the firm quickly raise equity capital if necessary?
 5. If the company chooses to finance dividends by selling equity, will the increased number of stockholders have implications for the control of the company?

→Chapter 8: Mergers and Acquisitions- International Finance

General Terms:

- **Acquisition**
 - The purchase of one firm by another
 - Takeover- is an acquisition- its when one company takes over or acquires another company
 - **Merger**
 - The combination of two firms into a new legal entity
 - In Canada we call this an amalgamation
 - **Amalgamation**
 - The genuine merge in which both sets of shareholders must approve the transaction
 - Its when 2 companies equal in size come together and join to become a new company
-
- Related businesses (horizontal relationships)
 - Transferring competitively valuable expertise
 - Combining the related activities of separate businesses into a single operation to lower costs
 - Exploiting common use of a well-known brand name

Vertical Integration Strategies:

- Vertical integration extends a firm's competitive scope within **same industry**- vertical is going through the value chain
 - So the first one is suppliers, so if your looking at Maxwell house coffee the suppliers would be who supplies the coffee beans, the packaging etc. Next step is factory, where you add value to it and add costs, then we distributed it, to places like grocery stores, then finally the buyers... this is the value chain
 - **Backward** into sources of supply
 - **Forward** toward end-users of final project
 - So what vertically integrated strategies do is- lets say this is me im the company that manufactures I can go backwards and purchase the supplier, or I can go forward and purchase the ex: if you are a manufacturer and you don't trust retailers to give your company the sales and support is deserves, so you open your own store- this is what apple does
- Can aim at either **full** or **partial** integration
- Activities, costs, and margins of suppliers →internally performed activities, costs and margins →activities, cots and margins of forward channel allies and strategic partners →buyers/users

Unrelated Diversification:

- Favors capitalizing on a portfolio of businesses that are capable of delivering excellent financial performance
- Entails hunting to acquire companies:
 - Whose assets are undervalued
 - That are financially distressed- great time to buy, cause you can buy them very cheap, and hopefully you will have the expertise to turn it around

- With high growth potential but are short on investment capital- they have growth but don't have the money to go any further

Motivations for Mergers and Acquisitions

Creation of synergy motive for M&As

- The primary motive should be the creation of synergy
- Synergy value is created from economies of integrating a target and acquiring a company; the amount by which the value of the combined firm exceeds the sum of the two individuals
- $1 + 1 = 3$ - what this says is that the sum of our 2 organizations, is greater together than they were apart, because they can achieve greater things together, and save so much on marketing, or manufacturing- this is what synergy refers to
- **Synergy:** is about getting greater value for the sum of their parts

Value creation motivation for M&A's

- **Operating Synergies-** basic operations of business
 1. **Economies of scale-** are per unit basis
 2. **Economies of scope-** so were spreading costs over different products, same companies order the same products (variety stores, grocery stores), so were able to use the same support activities and spread them over different product lines
 - The difference between scale and scope is what were spreading the costs of, bigger we are the more we can spread our costs around
 3. **Complementary strengths-** a company recognizing that they aren't good at something, they want to merge with a company that's better at something else- so its looking for something hat will compliment you
- **Efficiency increases-** refers to economies of scale and scope, this is where the savings come from
 - New management team will be more efficient and add more value than what the target now has
 - The combined firm can make use of unused production/sales/marketing channel capacity
- **Financing synergy-** bigger companies tend to have less volatility in their cash- this refers to when some months the company makes a lot and some months they don't
 - Reduced cash flow variability
 - Increase in debt capacity
 - Reduction in average issuing costs
- **Tax benefits** – can be tax benefits with a merger acquisition
 - Make better use of tax deductions and credits
- **Strategic realignments-** its about strategy, lets say you want to be a international company, but you cant do this, so what your going to do is buy a company that already is in Europe or somewhere
 - Permits new strategies that were not feasible prior to the acquisition. The acquisition of new management skills, connections to markets or people, and new products/services

→Managerial motivations for M&A's

- Managers may have their own motivations to pursue M&As. The two most common, are not necessarily in the best interest of the firm or shareholders, but do address common needs of managers
 1. **Increase firm size**
 - More highly rewarded financially for building a bigger business

- Many associate power and prestige with the size of the firm

2. Reduced firm risk through diversification

- Managers have an undiversified stake in the business and so they tend to dislike risk
- M&As can be used to diversify the company and reduce risk that might concern managers

→How the Deal is Finance

- **Cash transaction**
 - The receipt of cash for shares by shareholders in the target company
 - If you have 2 companies (A and B) and A wants to buy B- a cash transaction is asking the shareholders of B if they will sell their shares, if company B shareholders say yeah then it just has to be approved. Company A writes a cheque, and does not have to contact their shareholders for permission... this is a asset purchase their buying a company
- **Share transaction**
 - The offer by an acquiring company of shares or a combination of cash and shares to the target company's shareholders
 - Company A wants to buy company B, but there not going to issue cash... where their going to do is say ok you have a million shares in company B outstanding, and we have 5m shares in company A... company A says I will give you 1 share of A for 2 shares of B
 - So basically their gong to issue more shares to control B
 - In this case they have to get permission
- **Going private transaction (issuer bid)**
 - A special form of acquisition where the purchaser already owns a majority stake in target company
 - It means that you have already had control, so say I am company B and I own 90% of the company, so I get to decide what is happening... but lets say I want to take it private, there is a special thing that needs to happen is a **issuer bid**: when you want to go off the stock market and go private, so you get a 3rd party to come in and evaluate the bid to make sure its fair

→General intent of the legislation

- **Transparency- information Disclosure**
 - To ensure complete and timely information to be available to all parties while at the same time not letting this requirement stall the process unduly
- **Fair treatment**
 - To avoid oppression or coercion of minority shareholders
 - To permit competing bids during the process and not have the first bidder have special rights (this this way, shareholders have the opportunity to get the greatest and fairest price for their shares)
 - To limit the ability of a minority to frustrate the will of a majority (minority squeeze out provisions)

→Exempt Takeovers

- Private companies are generally exempt from provincial securities legislation, private corporations don't have to follow the rules

- Public companies that have few shareholders in one province may be subject to takeover laws of another province where the majority of shareholders reside
- Purchase of shares from fewer than 5 shareholders

→ **Creeping Takeovers**- if you take over a company slowly like 5% a year or less, you don't have to follow the rules

The 5% rule:

- Normal course tender offer is not required as long as no more than 5% of the outstanding shares are purchased through the exchange over a one-year period of time
- This allows creeping takeovers where the company acquires the target over a long period of time
- You don't have to follow the rules, because its going to take at least 10 years to get there
- So 5% less per year means that your exempt from following the rules

→ **Securities Legislation**

Critical Shareholder Percentages

1. 10% early warning

- When a shareholder hits this point a report is sent to OSC
- The requirement alters other shareholders that a potential acquirer is accumulating a position (toehold) in the firm
- **Toehold:** is when you have enough, you don't have control of the company, but you have enough

2. 20% Takeover Bid

- Not allowed further open market purchases but must make a takeover bid
- This allows all shareholders an equal opportunity to tender shares and forces equal treatment of all at the same price
- This requirement also forces the acquirer into disclosing intentions publicly before moving to full voting control of the firm
- If you want to take over the company, as soon as you hit 20%, you are no longer allowed to buy stock on the stock market, you have to now give every single shareholder outstanding the same opportunity so you have to issue a **takeover bid**

3. 50.1% Control

- Shareholder controls voting decisions under normal voting (simple majority)
- Can replace board and control management
- Anything over 50% technically you have control of the company, because you have the most ownership

4. 66.7% Amalgamation

- Can approve amalgamation proposals requiring a 2/3 majority vote (supermajority)- so you would ask the shareholders of company A and the shareholders of company B, and 2/3 of both sides must be okay to merge, if one company says its okay, and the other doesn't there cant be a merger

5. 90% Minority Squeeze-out

- Once the shareholder owns 90% or more of the outstanding stock minority shareholders can be forced to tender their shares
- This provision prevents minority shareholders from frustrating the will of the majority
- They can force the sale to happen, for a fair price

→The Takeover Bid Process

Moving beyond the 20% threshold

- Takeover circular sent to all shareholders
- Target has 15 days to circulate letter to shareholders with the recommendation of the board of directors to accept/reject
- Bid must be open for 35 days following public announcement
- Shareholders tender to the offer by signing authorizations
- A competing bid automatically increases the takeover window by 10 days and shareholders during this time can withdraw authorization and accept the competing offer
- So at 20% either you stop buying stock altogether, or you do a **takeover bid**- buy 5% each year for the next 7-8 years to gain control, or you issue a circular to all shareholders asking them to tender their shares to you- a **tender offer**: a offer saying this is the price, please sell your stock to me... the target company has 15 days to circulate this recommendation to the board. And what's going to happen is the board is going to send out a note to the shareholders saying this is a great deal and to take it, or this is a terrible deal please don't take it... but the shareholders decide not the board

Prorated settlement and price

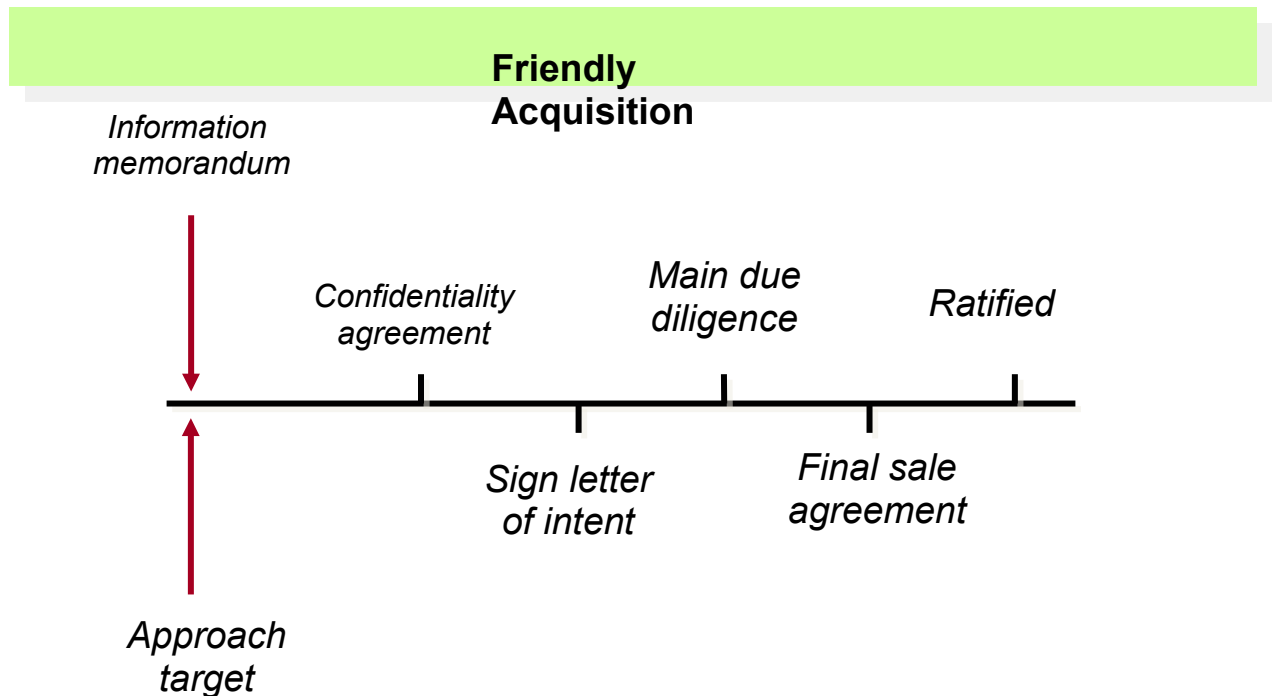
- Takeover bid does not have to be for 100% of the shares
- Tender offer price cannot be for less than an average price that the acquirer bought shares in the previous 90 days (prohibits coercive bids)
- If more shares are tendered than required under the tender, everyone who tendered shares will get a prorated number purchase

→Friendly Acquisition

- The acquisition of a target company that is willing to be taken over- the company recognizes that it is in our best interest to be purchased and we want to
- Usually, the target will accommodate overtures and provide access to confidential information to facilitate the scoping and due diligence processes

The friendly Takeover process:

1. Normally starts when the target voluntarily puts itself into play
 - Target uses an investment bank to prepare an **offering memorandum**- basically documents how awesome the company is
 - May set up a data room and use confidentiality agreements
 - A signed letter of intent (usually includes a no-shop clause and a termination or break fee)- due diligence, making sure everything they say is true
 - Legal team checks documents
2. Can be initiated by a friendly overture by an acquirer seeking information



- Partnerships fail for the same reasons as marriages- if you look at these steps the same way as dating: if you wanted to find a boyfriend, you put yourself out there and your offering your best traits (information memorandum), and you approach the target. So now we gonna do some due diligence, so you get to know his friends etc (confidentiality agreement). Then you decide to be exclusive (letter of intent). Then you do the main due diligence. The final sale is the engagement, and then ratified is the wedding

Structuring the Acquisition: in friendly takeovers, both parties have the opportunity to structure the deal to their mutual satisfaction including:

1. Taxation issues
2. Asset purchases rather share than share purchases
3. Earn outs where there is an agreement for an initial purchase price with conditional later payments depending on the performance of the target after acquisition

→**Hostile Takeovers:** a takeover in which the target has no desire to be acquired and actively rebuffs the acquirer and refuses to provide any confidential information

- The acquirer usually has already accumulated an interest in the target (20% of the outstanding shares) and this preemptive investment indicates the strength of resolve of the acquirer

The Typical Process:

1. Slowly acquire a toehold by open market purchase of shares at the market prices without attracting attention
2. File statement with OSC at the 10% early warning stage while not trying to attract to much attention
3. Accumulate 20% of the outstanding shares through open market purchase over a longer period of time
4. Make a tender offer to bring ownership percentage to the desired level (either the control (50.1%) or amalgamation level (67%)- this offer contains a provision that it will be made only if a certain minimum percentage is obtained

- During this process the acquirer will try to monitor management/board reaction and fight attempts by them to put into effect shareholder rights plans to launch other defensive tactics

Capital Market Reactions and other dynamics:

- Market clues to the potential outcome of a hostile takeover attempt:
 - 1. Market price jumps above the offer price**
 - A competing offer is likely or
 - The bid price is too low
 - 2. Market price stays close to the offer price**
 - The offer price is fair and the deal will likely go through
 - 3. Little trading in the shares**
 - A bad sign for the acquirer because shareholders are reluctant to sell
 - 4. Great deal of trading in the shares**
 - Large numbers of shares being sold from normal investors to arbitrageurs (arbs) who are, themselves building a position to negotiate an even bigger premium for themselves by coordinating a response to the tender offer

Defensive Tactics:

- **Shareholders Rights Plan-**
 - Known as a poison pill or deal killer
 - Can take a different forms but often
 - Gives non-acquiring shareholders get the right to buy 50% more shares at a discount price in the event of a takeover. Makes acquisition more expensive
 - Trying to dilute the control that the first company thought they had, and make it more expensive to get control
- **Selling the crown jewels**
 - The selling of a target company's key assets that are acquiring company is most interested in to make it less attractive for takeover
 - Saying I don't want you to buy me so I would rather destroy my company then you buy it, so they sell off assets, or saying you want to buy my company because its financially strong... well not anymore "I just borrowed 10m dollars"
 - Can involve a large dividend to remove excess cash from the target's balance sheet
- **White Knight**
 - The target seeks out another acquirer considered friendly to make a counter offer and thereby rescue the target from a hostile takeover
 - You don't want this company to take over, so you start looking for another company to purchase me

→Introduction to International Finance Management

Globalization of the World Economy:

- Globalization refers to the removal of barriers to free trade and the closer integration of national economies
- Consumers in many countries buy goods that are purchased from a number of countries other than just their own
- The production of goods and services has also become highly globalized
- The financial system has also become highly integrated

The Rise of Multinational Corporations

- A **multinational corporation** is a business firm that operates in more than one country but is headquartered or based in its home country- they are headquartered and managed in the head country ex: Wal-Mart- its everywhere but their home office is in the US
- Multinationals are owned by a mixture of domestic and foreign stockholders
- **Transnational corporations**, regardless of the location of their headquarters, are managed from a global perspective rather than the perspective of a firm residing in a particular country
 - Transnational is not necessarily headquartered in their home country, but they are managed on a global perspective

→Factors affecting International Financial Management

- 6 factors can cause international business transactions to differ from domestic deals
 1. The uncertainty of future exchange rate movements
 2. Differences in legal systems and tax codes
 3. While English is the official business language, it is not, however, the world's social language
 4. Cultural views also shape business practices and people's attitudes toward business
 5. An economic system determines how a country mobilizes its resources to produce goods and services needed by society, as well as how the production is distributed
 6. Country risk refers to political uncertainty associated with a particular country
 - At the extreme, a country's government may even expropriate business's assets within the country
 - Other actions include; change in tax laws, restrictive labour laws, local ownership, tariffs and quotas, disallow any cash from subsidiary to parent
 - These types of actions clearly can affect a firm's cash flows

→Goals of International Finance Management

- Stockholders value maximization is the accepted goal for firms in Canada, the United Kingdom and the United States
- The continental Europe, for example, countries such as France and Germany focus not just on the shareholder but also on maximizing corporate wealth
- The European manager's goal is to earn as much wealth as possible for the firm while considering the overall welfare of all stake holders

→Country Differences:

- In Japan, companies form tightly knit, interlocking business groups and the goal of the Japanese business manager is to increase the wealth and growth of the group
 - As a result, they might focus on **maximizing market share** rather than stockholder wealth- they create strong relationships with suppliers
- In China, which is moving from a command or central economy to a market-based economy, there are sharp differences between state-owned companies and emerging private-sector firms
 - The large state-owned companies have an overall goal that can best be describes as **maintaining full employment in the economy** while the new private-sector firms fully embrace the Western standard of stockholder value maximization

→Basic Principles:

- The basic principles of managerial finance remain the same whether a transaction is domestic or international- they still have risk

- The time value of money is not affected by whether a business transaction is domestic or international
- The same models are used for valuing capital assets, bonds, stocks, and entire firms

→ Foreign Exchange Markets

- The foreign exchange market is a group of international markets connected electronically where currencies are bought and sold in wholesale amounts

→ Factors that affect Currency Exchange Rates

- Supply and demand relationships
- Relative inflation rates
- Relative interest rates
- Other factors (political risk and economic risk)

→ Market Structure and Major Participants

- The major participants in the foreign exchange markets are
 - Multinational commercial banks
 - Large investment banking firms
 - And small currency boutiques

Foreign Currency Quotations

- The **spot rate** is the rate at which one agrees to buy or sell a currency today- the rate that is published right now
- The **forward rate** is the rate at which one agrees to buy or sell a currency on some future date rate we agree to in the future
- Note that the forward rate is established at the date on which the agreement is made and defines the exchange rate to be used when the transaction is complete in the future
- By contracting now to buy or sell foreign currencies at some future date, can lock in the cost of foreign exchange and do not have to worry about the risk of an unfavorable movement in the exchange rate in the future
 - Companies can use forward transactions to lock in (hedge) the cost of foreign exchange

Currency Rate Quotations

- **Currency Exchange Rate:**
 - Value of one currency relative to another currency
- **Direct Quotation Method:**
 - Indicates the amount of a home country's currency needed to purchase one unit of a foreign currency – if you want to know how much Canadian do I need to buy 1 euro that would be a direct quotation
- **Indirect Quotation Method**
 - Indicates the amount of a foreign currency needed to purchase one unit of the home country's currency

International Capital Budgeting

- When a multinational firm wants to consider overseas capital projects, the financial manager faces the decision of which capital projects should be accepted on a company-wide basis

- The decision to accept projects with a positive net present value increases the value of the firm and is consistent with the fundamental goal of financial management, which is to maximize stockholder wealth
- The problem with this is foreign currency and country risk- so now its more complicated, you need to estimate cash flows in the future, and estimate what the foreign currency will be and what the country risk will be- what managers do when they have these risks is try and guess- we can reduce our *cash flow* prediction so if you thought you were going to generate 1m in the next 10 years, maybe bring it down to 700 thousand, so you create a bluffer. Or what you might do is *shorten the life*, it should last 10 years but might as well make it last 6. Or *discount rate*: bump up the discount rate

Determining Cash Flow

- A number of issues complicate the determination of cash flows from overseas capital projects
- Companies find it more difficult to estimate the incremental cash flows for foreign projects
- Problems with cash flows can arise when foreign governments restrict the amount of cash that can be repatriated, or returned, to the parent company

Exchange Rate Risk

- Financial managers have to deal with foreign exchange rate risk on international capital investments
- The convert the projects future cash flows into another currency, we need to come up with projected or forecast exchange rates
- One of the problems with obtaining currency rate forecasts for use in analysis of capital projects is that many projects have lives of 20 years or more

→Lecture 9: Derivatives

Financial derivatives securities: derive all or part of their value from another (underlying) security

- Why trade these indirect claims?
 - Expand investment opportunities
 - Lower cost
 - Increase leverage

Options:

- Options are created by investors, sold to other investors
- **Call:** buyer has the right, but not the obligation, to purchase a fixed quantity from the seller at a fixed price up to a certain date
- **Put:** buyer has the right, but not the obligations, to sell a fixed quantity to the seller at a fixed price up to a certain date

→Optional Terminology:

Exercise (strike) price: the per-share price at which the common stock may be purchased or sold

Expiration date: last date at which an option can be exercised

- American
- European

- Bermudan

Option premium: the price paid by the option buyer to the writer of the option, whether put or call

→How options work:

- Call buyer expects the price of the underlying security to increase
- Call seller expects the price of the underlying security to decrease or stay the same
- Put buyer expects the price of the underlying security to decrease
- Put seller expects the price of the underlying security to increase or stay the same
- Possible courses of action
 - Options may expire worthless, be exercised, or be sold prior to expiry

Example- Call Options:

- Writer sells a call option for \$1.00 to you to purchase 1000 shares at \$10.00
- You must expect shares to increase, writer expects shares to decrease
- If shares increase to \$15.00 you will exercise option- buy shares at \$10.00 and sell for \$15.00 (you earned \$4.00 profit on option contract)
- If shares decrease to below \$10.00 you will not exercise- seller gets the \$1.00

Example- Put Option:

- Writer sells a put option for \$1.00 to you to sell 1000 shares at \$10.00
- You might expect shares to decrease, writer expects shares to increase
- If shares decrease to \$5.00 you will exercise option- buy shares at \$5.00 and sell for \$10.00 (you earned \$4.00 profit on option contract)
- If shares rise over \$10.00 you will not exercise- seller gets \$1.00

Options Trading

- **Options exchanges**
 - Montreal exchange (ME)
 - Chicago board options exchange (CBOE)
- **Standardized exercise dates, exercise prices, and quantities**
 - Facilitate offsetting positions through a clearing corporation
 - Clearing corporations is guarantor, handles deliveries

Options Characteristics

- **In-the-money options have a positive cash flow if exercised immediately**
 - Call options: stock price (S) > exercise price (E)
 - Put options: S < E
- **Out-of-the-money options should not be exercised immediately**
 - Call options: S < E
 - Put options: S > E
- **If S=E, an option is at the money**

→Factors Affecting Prices:

- Stock price
- Exercise price
- Time to maturity
- Stock volatility
- Interest rates

- Cash dividend

→Rights and Warrants

- **Right:** to purchase a stated number of common shares at a specified price with a specified time (often a few months)
 - Issued by the corporation
 - Are transferrable
 - Option to purchase shares a price often lower than the market price
 - Certificates mailed to current shareholders on pro rata basis
- **Warrant:** to purchase a stated number of common shares at a specified price with a specified time (often several years)
 - Often attached to debt or preferred shares as a sweetener
 - Are detachable

→Understanding Futures Markets

- **Spot or cash market**
 - Price refers to item available for immediate delivery
- **Forward market**
 - Price refers to item available for delayed delivery
- **Futures market**
 - Sets features (contract size, delivery date, and conditions) for delivery

An obligation to buy or sell a fixed amount of an asset on a specified future date at a price set today

- **Future market characteristics**
 - Centralized marketplace allows investors to trade with each other
 - Performance is guaranteed by a clearinghouse
- **Commodities:** agricultural, metals and energy related
- **Financials-** foreign currencies as well as debt and equity instruments

→Future exchanges:

- Where futures contracts are traded
- Voluntary, nonprofit associations, typically unincorporated
- Organized marketplaces where established rules govern conduct
 - Financed by membership dues and fees for services rendered
- Members trade for self or for others

→The Clearing Corporation

- A corporation separate from, but associated with, each exchange
- Exchange members must be members or pay a member for these services
 - Buyers and sellers settle with clearing corporation, not with each other
- Helps facilitate an orderly market
- Keeps track of obligations

→The Mechanics of Trading

- Through open-outcry, seller and buyer agree to take or make delivery on a future date at a price agreed on today
 - **Short position** (seller) commits a trader to deliver an item at contract maturity
 - **Long position** (buyer) commits a trader to purchase an item at contract maturity

- Like options, futures trading is a zero-sum game

→Futures Margin

- Good faith deposit made by both buyer and seller to ensure completion of the contract
 - Not an amount borrowed from broker
- Each clearing house sets its own requirements
 - Brokerage houses can require higher margin
- Initial margin usually less than 10% of the contract value
- Margin calls occur when price goes against investor
 - Must deposit more cash or close account
 - Position marked-to-market daily
 - Profit can be withdrawn
- Each contract has maintenance or variation margin level below which the investor's net equity cannot drop

→Using Futures Contracts

- **Hedgers**
 - At risk with a spot market asset and exposed to unexpected price changes
 - Buy or sell futures to offset the risk
 - Used as a form of insurance
 - Willing to forgo some profit in order to reduce risk
 - Hedged return has smaller chance of low return but also smaller change of high return
- **Speculators**
 - Buy or sell futures contracts in an attempt to earn a return
 - Absorb excess demand or supply generated by hedgers
 - Assuming the risk of price fluctuations that hedgers wish to avoid
 - Speculation encourages by leverage, each of transacting, low costs