



**VIRTUAL UNIVERSITY OF PAKISTAN**

**03126968553**

**Semester Fall 2023**

**LECTURE WISE NOTES:**

**Short Questions File & MCQ's File**

**03126968553**

**COURSE: ACC501**

**Short Questions File For Final Exams**

## **LECTURE # 19**

**What is always true about the relationship between bond prices and market interest rates?**

Answer: Bond prices and market interest rates move in opposite directions.

**How does the market value of a bond compare to its par value when the bond's coupon rate is equal to the market's required return?**

Answer: The bond's market value will be equal to its par value.

**How does the price of a longer-term bond change compared to a shorter-term bond for a given change in market interest rates?**

Answer: The price of the longer-term bond will change more than that of the shorter-term bond.

**What happens to the price of a lower-coupon bond compared to a higher-coupon bond for a given change in market interest rates?**

Answer: The price of the lower-coupon bond will change more than that of the higher-coupon bond.

**How is the yield to maturity (YTM) of a bond calculated?**

Answer: The yield to maturity is the unknown discount rate ( $r$ ) that solves the bond pricing equation.

**What can be said about the yield to maturity (YTM) if a bond is selling at a discount?**

Answer: The yield to maturity is greater than the market's required return (greater than 8%).

**How can the yield to maturity (YTM) be found for a given bond value, coupon, time to maturity, and face value?**

Answer: The yield to maturity can be found through trial and error by trying different discount rates until the calculated bond value equals the given bond value.

**What are the main differences between debt and equity securities?**

Answer: Debt is not an ownership interest in the firm and creditors generally do not have voting power. Interest on debt is tax-deductible, while dividends paid to stockholders are not. Unpaid debt is a liability of the firm, which can lead to bankruptcy or financial failure if not paid, whereas equity does not have this risk.

**What distinguishes long-term debt securities from short-term debt securities?**

Answer: Maturity is the key distinction, where long-term debt remains outstanding for a longer period, while short-term debt matures in one year or less.

**What is the denomination of the bonds issued by Super Stores in the example provided?**

Answer: The denomination of the bonds is \$1,000.

**What is the annual coupon rate for Super Stores' bonds in the example?**

Answer: The annual coupon rate is 9.25%.

**When will Super Stores pay the coupon on its bonds?**

Answer: Coupons of \$46.25 will be paid on the 1st of March and 1st of September.

**Does the Super Stores bond have a call provision?**

Answer: Yes, the bonds have a deferred call feature before 28th Feb. 1993.

**What is the rating of Super Stores' bonds?**

Answer: The rating is A2, indicating a higher rating and a low probability of default.

## **LECTURE # 20**

### **What is a bond indenture, and what is the role of the trustee in it?**

Answer: The bond indenture is a contract between the bond issuer and bondholders. The trustee, usually a bank, is hired to protect the bondholders' interests, ensuring that the terms of the indenture are obeyed, managing the sinking fund, and representing bondholders in default.

### **What are the key components included in a bond indenture?**

Answer: The bond indenture includes the basic terms of the bond issue, the total amount of bonds issued, a description of the security, the repayment arrangements, the call provisions, and details of the protective covenants.

### **What is the par value of a bond, and how does it relate to the face value?**

Answer: The par value of a bond is almost always the same as the face value, and the terms are used interchangeably. Corporate bonds usually have a face value of \$1000, which is also known as the principal value stated on the bond certificate.

### **How do registered and bearer bonds differ in terms of ownership and coupon payment?**

Answer: Registered bonds have ownership recorded by the company, and interest and principal payments are made by cheque directly to the bondholder. In contrast, bearer bonds do not have recorded ownership, and interest is obtained by detaching coupons from the bond certificate and sending them to the company for payment.

### **What is the purpose of collateral and mortgage securities in debt securities?**

Answer: Collateral and mortgage securities are used to protect bondholders. Collateral involves assets pledged as security for payment of debt, while mortgage securities are secured by a mortgage on the borrower's real property.

### **How does seniority affect bondholders in the event of default?**

Answer: Seniority indicates preference in position over lenders, with some debts labeled as senior or junior. In case of default, holders of subordinated debt must give preference to other specified creditors.

### **What is a sinking fund, and how is it used for bond repayment?**

Answer: A sinking fund is an account managed by the bond trustee to repay bonds. The company makes annual payments to the trustee, who retires a portion of the debt either by buying up some bonds or calling in a fraction of outstanding bonds.

### **What is a call provision, and how does it affect bondholders?**

Answer: A call provision allows the company to repurchase part or all of the bond issue at specified prices over a specific period. The call price is typically above the bond's stated value (par value), and the amount of premium declines as the call date approaches.

### **What are protective covenants, and what are the two types mentioned?**

Answer: Protective covenants are limitations on certain actions a company might take during the loan term. The two types are negative covenants, which prohibit actions, and positive covenants, which specify actions the company must take.

### **How are bond ratings determined, and what do they assess?**

Answer: Bond ratings are based on the creditworthiness of the corporate issuer, assessing the likelihood of default and the protection creditors have in the event of a default.

**What does a PACRA rating of "AAA" indicate?**

Answer: A PACRA rating of "AAA" indicates the highest credit quality and the lowest expectation of credit risk.

**How are short-term bond ratings different from long-term ratings in PACRA's rating system?**

Answer: Short-term ratings assess the capacity for timely repayment in the short term, while long-term ratings evaluate credit risk over an extended period.

## **LECTURE # 21**

What are government bonds, and what is their default risk?

Answer: Government bonds are treasury notes and bonds issued by the government for borrowing money for more than one year. They have no default risk.

What are zero coupon bonds, and how do they differ from ordinary coupon bonds?

Answer: Zero coupon bonds pay no coupon and are offered at a much lower price than their stated value. In contrast, ordinary coupon bonds pay regular interest (coupon) and are issued at or near their face value.

**How is the interest on zero coupon bonds deducted for tax purposes?**

Answer: For tax purposes, the issuer of a zero coupon bond deducts interest every year, even though no interest is actually paid. This deduction reduces the taxable income, resulting in lower yields compared to taxable bonds.

**What are floating rate bonds, and how are their coupon payments adjusted?**

Answer: Floating rate bonds have coupon payments adjustable based on an interest rate index, such as treasury bills interest rate. The coupon adjusts with a lag to some base rate.

**What is the characteristic feature of inflation-linked bonds, and how are their coupons adjusted?**

Answer: Inflation-linked bonds have coupons adjusted according to the rate of inflation. The principal amount may also be adjusted based on inflation.

**What are income bonds, and how are their coupon payments determined?**

Answer: Income bonds have coupon payments that depend on the company's income being sufficient to support such payments.

**What is unique about convertible bonds, and when can they be exchanged for shares?**

Answer: Convertible bonds can be exchanged for a fixed number of shares at any time before maturity at the holder's option.

**What is the Fisher Effect, and how does it relate to real and nominal returns?**

Answer: The Fisher Effect describes the relationship between real and nominal returns. It states that the nominal return is equal to the real return plus the inflation rate, or  $R = r + h$ .

**What is the real rate of return, and how is it affected by inflation?**

Answer: The real rate of return is the percentage change in the amount of stuff you can actually buy. It is affected by inflation, and the formula to calculate it is  $r = (1 + R) / (1 + h) - 1$ .

**How do real and nominal returns differ, and what does the Fisher Effect equation show?**

Answer: Real returns consider the effects of inflation, representing the percentage change in buying power. Nominal returns only show the percentage change in the amount of money. The Fisher Effect equation,  $R = r + h$ , shows the relationship between nominal and real returns, where  $R$  is the nominal return,  $r$  is the real return, and  $h$  is the inflation rate.

## **LECTURE # 22**

**What does the term structure of interest rates tell us?**

Answer: The term structure of interest rates reveals the nominal interest rates on default-free, pure discount bonds of various maturities.

**How do long-term and short-term interest rates affect the term structure?**

Answer: When long-term rates are higher than short-term rates, the term structure is upward-sloping, and vice versa.

**What factors determine the term structure of interest rates?**

Answer: The real rate of interest, expected inflation, and interest rate risk influence the term structure of interest rates.

**What is the relationship between the real rate of interest and overall interest rates?**

Answer: When the real rate of interest is high, all interest rates tend to be higher, and vice versa, but it doesn't determine the shape of the term structure.

**How does the prospect for future inflation influence the term structure?**

Answer: Expectations of higher inflation lead to higher long-term interest rates than short-term rates, resulting in an upward term structure.

**What is interest rate risk, and how does it affect bond yields?**

Answer: Interest rate risk refers to the risk of loss resulting from changes in interest rates. Longer-term bonds have more risk, leading to higher yields (interest rate risk premium).

**What is the difference between the term structure of interest rates and the yield curve?**

Answer: The term structure is based on pure discount bonds, while the yield curve is based on coupon bond yields.

**What are the three important features of treasury notes and bonds?**

Answer: Treasury notes and bonds are default-free, taxable, and highly liquid.

**Why do investors demand a higher yield for taxable bonds compared to government bonds?**

Answer: Investors require extra yield as compensation for unfavorable tax treatment, known as the taxability premium.

**What is the difference between default risk and interest rate risk premium?**

Answer: Default risk premium compensates for the risk of possible default, while interest rate risk premium compensates for the risk of loss due to changes in interest rates.

**What are the difficulties in valuing common stock?**

Answer: Valuing common stock is challenging due to unknown cash flows, infinite life, and the difficulty in observing market rate of return.

**How is the price of a stock determined based on expected future cash flows?**

Answer: The price of a stock today ( $P_0$ ) is the present value of all future dividends, discounted at the market rate of return ( $R$ ).

## **LECTURE # 23**

**What are zero growth stocks?**

Answer: Zero growth stocks are common stocks in companies with a constant dividend, where  $D_1 = D_2 = D_3 = D = \text{constant}$ .

**How is the value of a zero growth stock calculated?**

Answer: The value of a zero growth stock is calculated using the formula  $P_0 = D / R$ , where  $D$  is the constant dividend and  $R$  is the required rate of return.

**What is the value of a share of stock with a constant \$10 per share dividend and a required rate of return of 20%?**

Answer: The value of the share is  $\$10 / 0.20 = \$50$  per share.

**What are constant growth stocks?**

Answer: Constant growth stocks are stocks with dividends that grow at a steady rate known as the growth rate ( $g$ ).

**How do you calculate the next dividend ( $D_1$ ) for constant growth stocks?**

Answer: The next dividend ( $D_1$ ) is calculated as  $D_1 = D_0 \times (1 + g)$ , where  $D_0$  is the current dividend and  $g$  is the constant growth rate.

**How can we generalize the formula for any number of periods for constant growth stocks?**

Answer: The formula for any number of periods ( $D_t$ ) is  $D_t = D_0 \times (1 + g)^t$ , where  $D_0$  is the current dividend,  $g$  is the growth rate, and  $t$  is the number of periods.

**How is the value of a share of stock with constant growth in dividends calculated?**

Answer: The value of the stock ( $P_0$ ) is calculated using the dividend growth model formula,  $P_0 = D / (R - g)$ , where  $D$  is the current dividend,  $R$  is the required rate of return, and  $g$  is the constant growth rate.

**What will be the dividend in 5 years for a company with a steady growth rate of 8% per year?**

Answer: The dividend in 5 years will be  $\$3 \times 1.085 = \$4.41$ .

**How is the future dividend in constant growth stocks calculated?**

Answer: The future dividend ( $D_t$ ) is calculated as  $D_t = D_0 \times (1 + g)^t$ , where  $D_0$  is the current dividend,  $g$  is the growth rate, and  $t$  is the number of years.

**What is the stock price for a company with \$2.30 dividend, 13% required rate of return, and 5% steady growth rate?**

Answer: The stock price is  $P_0 = \$2.30 / (0.13 - 0.05) = \$32.86$ .

**What is the price of the stock in 5 years based on the dividend growth model?**

Answer: The price of the stock in 5 years is  $P_5 = \$2.30 \times 1.055 = \$2.935$ .

**How do we calculate the value of GG stock today based on the dividend growth model?**

Answer: The value of GG stock today is  $P_0 = \$4 / (0.16 - 0.06) = \$4 / 0.10 = \$40$ .

**What will be the value of GG stock in four years based on the dividend growth model?**

Answer: The value of GG stock in four years is  $P_4 = \$4 \times 1.063 = \$4.764$ .

**How does the dividend growth model assume the stock price growth?**

Answer: The dividend growth model assumes that the stock price will grow at the same constant rate as the dividend.

**What is the present value formula for any growing perpetuity, not just dividends on common stock?**

Answer: The present value formula for any growing perpetuity is  $PV = C_1 / (R - g)$ , where  $C_1$  is the next cash flow,  $R$  is the required rate of return, and  $g$  is the growth rate.

**What is the price of a non-constant growth stock?**

Answer: The price of a non-constant growth stock can be calculated by discounting future cash flows and adding the present value of dividends up to a specific point in time.

**How can you calculate the current value of a non-constant growth stock?**

Answer: The current value of a non-constant growth stock can be calculated by discounting the future price back to the present at the required rate of return.

**What is the price of a stock with a future dividend of \$0.50, growing at 10% per year indefinitely, and a required rate of return of 20%?**

Answer: The price of the stock today is  $\$0.50 / (1.20)^5 = \$0.50 / 2.4883 = \$0.20$ .

**What is the value of a stock with non-constant dividends forecasted as \$1.00 in the first year, \$2.00 in the second year, and \$2.50 in the third year, with a constant growth rate of 5% and a required return of 10%?**

Answer: The value of the stock today is the present value of dividends in the first three years plus the present value of the price at time 3, which is  $P_0 = \$1 / (1.10) + \$2 / (1.10)^2 + \$2.50 / (1.10)^3 + \$37.87 = \$37.87$ .

**How can a time line help in dealing with problems of non-constant growth?**

Answer: A time line can help in visualizing and organizing the cash flows and prices over time, making it easier to calculate the present value of future cash flows and determine the stock's current value.

## **Lecture # 24**

**What is the growth rate of CR Inc., and how long is it expected to last?**

Answer: CR Inc. has been growing at a phenomenal rate of 30% per year, which is expected to last for 3 more years.

**What is the required return for CR Inc.?**

Answer: The required return for CR Inc. is 20%.

**What is the total value of CR Inc.'s stock if the growth rate drops to 10% after 3 years?**

Answer: The total value of the stock is \$120.835 million.

**Why is it unlikely for a 30% supernormal growth rate to be sustained for an extended period?**

Answer: Such high growth rates are usually difficult to sustain over a long period due to various business and market factors.

**What is the dividend growth model used for?**

Answer: The dividend growth model is used to value the equity in a company by calculating the present value of its future dividends.

**What are the components of the required return in the dividend growth model?**

Answer: The required return (R) consists of the dividend yield ( $D1/P0$ ) and the capital gains yield (g).

**How is the total return (R) calculated in the dividend growth model?**

Answer: The total return (R) is calculated as  $R = D1/P0 + g$ , where D1 is the next dividend, P0 is the current stock price, and g is the growth rate.

**What return does a stock offer if it is selling for \$20, has a \$1 dividend, and is expected to grow at 10% indefinitely?**

Answer: The stock offers a return of 15% (5% dividend yield + 10% capital gains yield).

**How can we verify the total return using the dividend growth model?**

Answer: We can calculate the price of the stock in one year (P1) using the total return (R) and see if it matches the expected growth.

**What are the shareholder rights associated with common stock?**

Answer: Shareholder rights include proxy voting, control over the organization through electing directors, and sharing proportionately in dividends and assets.

**What are the two procedures for shareholder voting?**

Answer: The two procedures for shareholder voting are cumulative voting and straight voting.

**How does cumulative voting work?**

Answer: In cumulative voting, shareholders can distribute their votes as they wish among the candidates to be elected, allowing minority shareholders to participate in the election.

**How does straight voting work?**

Answer: In straight voting, shareholders can cast their votes only for one candidate per seat to be filled, making it more likely for the majority shareholder to control the outcome.

**What is the primary reason for having multiple classes of common stock with unequal voting rights?**

Answer: Having multiple classes of common stock allows companies to raise equity by issuing non-voting or limited-voting stocks while maintaining control.

**What is a proxy, and why is it used?**

Answer: A proxy is a grant of authority by a shareholder to someone else to vote the shareholder's shares. It is used to facilitate voting in large corporations with numerous shareholders.

**What are the characteristics of preferred stock?**

Answer: Preferred stock has dividend priority over common stock, a fixed dividend rate, and sometimes lacks voting rights.

**What are cumulative and non-cumulative preferred stocks?**

Answer: Cumulative preferred stocks accumulate unpaid dividends as arrearage, while non-cumulative preferred stocks do not.

**Are preferred stockholders considered debt holders?**

Answer: No, preferred stockholders are not considered debt holders; they are entitled only to receive a stated dividend and the stated value of their shares.

**What is the primary purpose of the primary market?**

Answer: The primary market is where new securities are originally sold to investors, allowing companies to raise money.

**What is the secondary market?**

Answer: The secondary market is where previously issued securities are traded among investors.

**What is the role of a dealer in the stock market?**

Answer: A dealer buys and sells securities from a maintained inventory and stands ready to facilitate trades between investors.

**What is the bid price and ask price in stock trading?**

Answer: The bid price is the price at which the dealer wishes to buy securities from investors, and the ask price is the price at which the dealer sells securities to investors.

**What is the role of a broker in the stock market?**

Answer: A broker arranges security transactions among investors, matching buyers with sellers, and does not buy or sell securities for their own accounts.

**Why is it unlikely for a 30% supernormal growth rate to be sustained for an extended period?**

Answer: Such high growth rates are usually difficult to sustain over a long period due to various business and market factors.

**What is the dividend growth model used for?**

Answer: The dividend growth model is used to value the equity in a company by calculating the present value of its future dividends.

## **Lecture # 25**

**What is preferred stock, and what priority does it have over common stock?**

Answer: Preferred stock is a type of stock with dividend priority over common stock. Holders of preferred shares must receive dividends before common shareholders.

**What is stated value in preferred shares?**

Answer: Preferred shares have a stated liquidating value, and the cash dividend is described in dollars per share.

**Are preferred dividends like interest on a bond, and can they be deferred?**

Answer: Preferred dividends are not like bond interest and can be deferred by the directors, even if the company has sufficient net income.

**What are cumulative preferred stocks, and how are unpaid dividends treated?**

Answer: Cumulative preferred stocks accumulate unpaid dividends as arrearage if not paid in a particular year.

**Is preferred stock considered debt for the company?**

Answer: Preferred stock is not considered debt; it entitles shareholders to a stated dividend and the stated value of their shares.

**What are the primary and secondary markets in the stock market?**

Answer: The primary market is where new securities are initially sold, while the secondary market involves trading of previously issued securities among investors.

**What is the role of a dealer in the stock market?**

Answer: A dealer buys and sells securities from an inventory, standing ready to facilitate trades with investors.

**What is the difference between the bid price and ask price in stock trading?**

Answer: The bid price is what the dealer is willing to pay for securities, while the ask price is what the dealer is willing to sell them for.

**What is the role of a broker in the stock market?**

Answer: A broker arranges security transactions among investors, matching buyers with sellers, but does not buy or sell securities for their own accounts.

**What is the purpose of capital budgeting?**

Answer: Capital budgeting involves determining the long-term investment projects that a firm should undertake.

**How is the net present value (NPV) calculated?**

Answer: NPV is the difference between an investment's market value and its cost, estimated through discounted cash flow valuation.

**How is the NPV used to evaluate investment opportunities?**

Answer: Investments with positive NPV should be accepted, while those with negative NPV should be rejected.

**Why is the estimation of cash flows and discount rates critical in capital budgeting?**

Answer: Accurate estimation of cash flows and discount rates is essential to determine the true NPV of an investment.

**What does a negative NPV indicate for a potential investment?**

Answer: A negative NPV suggests that the investment would decrease the total value of the company.

**What is the net present value rule in capital budgeting?**

Answer: The net present value rule states that an investment should be accepted if the NPV is positive and rejected if it is negative.

**What happens if NPV is zero in capital budgeting?**

Answer: If NPV is zero, the company would be indifferent between accepting or rejecting the investment.

**Why is the task of estimating cash flows and discount rates more critical than the process of discounting itself?**

Answer: The accuracy of cash flow and discount rate estimates significantly impacts the reliability of the NPV calculation.

**How can the true NPV be determined?**

Answer: The true NPV can be found by putting the investment for sale and observing the actual market value it fetches.

**What priority does preferred stock have over common stock?**

Answer: Preferred stock has dividend priority over common stock, meaning preferred shareholders must be paid dividends before common shareholders.

**How are unpaid dividends handled in cumulative preferred stocks?**

Answer: Unpaid dividends in cumulative preferred stocks are carried forward as arrearage, which means they accumulate and must be paid eventually.

**Is preferred stock considered debt for the company?**

Answer: Preferred stock is not considered debt for the company; it represents equity ownership but usually comes with a fixed dividend rate and may lack voting rights.

**What is the primary purpose of the primary market?**

Answer: The primary market is where new securities are initially sold by companies to raise capital.

**What is the primary goal of capital budgeting?**

Answer: The primary goal of capital budgeting is to identify long-term investment projects that will create value for the shareholders.

**How is the net present value (NPV) calculated?**

Answer: NPV is calculated by subtracting the initial investment cost from the present value of expected cash flows generated by the investment.

**What is the net present value rule in capital budgeting?**

Answer: The net present value rule states that a project or investment should be accepted if its NPV is positive and rejected if its NPV is negative.

## **Lecture # 26**

**What is the net present value (NPV) rule, and how is it used in financial management?**

Answer: The NPV rule states that an investment should be accepted if its NPV is positive and rejected if it is negative. It is used to assess investment opportunities based on their potential impact on shareholder value.

**How is the true NPV determined in capital budgeting?**

Answer: The true NPV can be found by putting the investment for sale and observing the actual market value it fetches.

**In capital budgeting, which factors are more critical: cash flow estimation and discount rate determination or the process of discounting itself?**

Answer: Cash flow estimation and discount rate determination are more critical than the process of discounting itself in capital budgeting.

**How is the NPV calculated for a new product launch?**

Answer: The NPV is calculated by discounting the expected cash flows of the new product to the present value and subtracting the initial investment cost.

**What is the payback period, and how is it calculated?**

Answer: The payback period is the time required for an investment to recover its initial cost. It is calculated by determining when the total cash flows equal or exceed the initial investment.

**How is the payback period used to make investment decisions?**

Answer: If the calculated payback period is less than the specified cutoff time, the investment is considered acceptable; otherwise, it is rejected.

**What are the shortcomings of using the payback period rule in investment decisions?**

Answer: The payback period rule ignores the time value of money, does not consider cash flows beyond the cutoff date, and can bias decisions towards shorter-term investments.

**How does the payback period rule adjust for uncertainty in cash flows?**

Answer: The payback period rule adjusts for uncertainty by focusing on shorter-term cash flows and quickly freeing up cash for other uses.

**How does the payback period differ from the NPV in evaluating investment opportunities?**

Answer: The payback period does not consider the time value of money, while the NPV accounts for it in the discounted cash flow calculation.

**What are the advantages of using the payback period rule in investment decisions?**

Answer: The payback period rule is easy to understand, adjusts for uncertainty of later cash flows, and emphasizes liquidity.

**What are the disadvantages of the payback period rule?**

Answer: The payback period rule ignores the time value of money, requires an arbitrary cutoff point, and may bias decisions against long-term projects.

**How is the payback period calculated for different investment projects?**

Answer: The payback period is calculated by dividing the initial investment by the cash flows in subsequent years until the investment is fully recovered.

**What does a positive NPV indicate for an investment?**

Answer: A positive NPV suggests that the investment will increase the value of the company and is financially favorable.

**How does the payback period address the issue of impact on stock value?**

Answer: The payback period is a break-even measure in an accounting sense, but it does not focus on the impact of investment on stock value.

**What type of investments is the payback period rule most helpful for?**

Answer: The payback period rule is useful for making decisions on minor investments or when dealing with uncertain cash flows in later years.

**Why does the payback period rule have bias towards liquidity?**

Answer: The payback period rule emphasizes shorter-term investments, which can quickly free up cash for other uses, making it biased towards liquidity.

**How does the payback period rule compare to the NPV in making investment decisions?**

Answer: The payback period rule may lead to different investment decisions compared to the NPV, as it does not consider the time value of money.

**How is the payback period calculated for different investment projects?**

Answer: The payback period is calculated by dividing the initial investment by the cash flows in subsequent years until the investment is fully recovered.

**What are the disadvantages of using the payback period rule in investment decisions?**

Answer: The payback period rule ignores the time value of money, requires an arbitrary cutoff point, and may bias decisions against long-term projects.

**How does the payback period adjust for uncertainty in cash flows?**

Answer: The payback period rule focuses on shorter-term cash flows to account for the uncertainty in later cash flows.

**How does the payback period rule adjust for uncertainty in cash flows?**

Answer: The payback period rule focuses on shorter-term cash flows to account for the uncertainty in later cash flows.

**What is the primary goal of financial management?**

Answer: The primary goal of financial management is to increase the value of the company's shares.

**How is the NPV used to evaluate investment opportunities?**

Answer: The NPV is used to assess investment opportunities based on their potential impact on shareholder value.

**What is the purpose of the payback period in investment decisions?**

Answer: The payback period is used to determine the time required for an investment to recover its initial cost.

**How does the payback period differ from the NPV in evaluating investment opportunities?**

Answer: The payback period does not consider the time value of money, while the NPV accounts for it in the discounted cash flow calculation.

## **Lecture # 27**

**What is the Average Accounting Return (AAR) formula, and how is it used to evaluate investments?**

Answer: The AAR is calculated by dividing the average net income by the average book value of an investment. It is used to assess the profitability of an investment.

**How is the AAR calculated for a potential store opening in a new shopping center?**

Answer: The AAR is calculated by dividing the average net income over five years by the average book value of the investment.

**What are the drawbacks of using the AAR in investment decisions?**

Answer: The AAR ignores the time value of money, lacks an objective target to compare with, and focuses on net income and book value rather than cash flow and market value.

**What is the Internal Rate of Return (IRR), and how is it different from other return metrics?**

Answer: The IRR is a single rate of return that summarizes the merits of an investment. It is an "internal" rate that depends only on the investment's cash flows, not on rates offered elsewhere.

**How do you calculate the IRR for an investment?**

Answer: The IRR is the discount rate that makes the Net Present Value (NPV) of an investment equal to zero.

**How is the IRR used to make investment decisions?**

Answer: An investment is considered acceptable if its IRR exceeds the required return, and it should be rejected otherwise.

**What challenges arise with the IRR when cash flows are not conventional?**

Answer: When cash flows are not conventional, such as having both negative and positive cash flows, the IRR may yield multiple rates of return, making it difficult to determine the correct rate.

**How can mutually exclusive investments affect the choice of the best investment?**

Answer: Mutually exclusive investments compete with each other, and the best investment is determined based on its NPV at the required return, not solely on its IRR.

**How can the IRR be misleading in determining the best investment among mutually exclusive projects?**

Answer: The IRR may not always indicate the best investment among mutually exclusive projects, as NPV should be considered to make an informed decision.

**What are the qualities of IRR that make it a widely used investment evaluation metric?**

Answer: IRR is widely used, easily communicated, and understood. It can be estimated even if the discount rate is unknown.

**How does the AAR differ from other return metrics, such as the IRR and NPV?**

Answer: The AAR focuses on average net income and average book value, while the IRR and NPV consider the time value of money and market value of investments.

**What information is needed to calculate the AAR for an investment?**

Answer: To calculate the AAR, you need data on the net income generated by the investment and the book value over a specific period.

**Why does the AAR lack an objective or target value for comparison?**

Answer: The AAR does not provide a specific target value, making it difficult to determine if an investment is acceptable or not based on this metric alone.

**What does the break-even discount rate represent in IRR calculations?**

Answer: The break-even discount rate is the rate at which the NPV of an investment is zero, making it economically a break-even proposition.

**How can the IRR be determined for an investment with non-conventional cash flows?**

Answer: In cases of non-conventional cash flows, the IRR is determined through trial and error, as it may yield multiple rates of return.

**How can you determine the best investment among mutually exclusive projects using the IRR and NPV?**

Answer: To determine the best investment, compare the NPVs of the mutually exclusive projects at the required return rate.

**Why is the IRR easily communicated and understood?**

Answer: The IRR provides a single rate of return that is easy to interpret and communicate to stakeholders and decision-makers.

**How does the IRR help summarize the merits of an investment?**

Answer: The IRR represents a single rate of return that reflects the overall profitability and attractiveness of an investment.

**What is the purpose of the Average Accounting Return (AAR) in investment decisions?**

Answer: The AAR is used to assess the profitability of an investment by analyzing the average net income in relation to the average book value.

**How can the IRR be calculated for investments with different cash flows over time?**

Answer: The IRR can be calculated using trial and error by setting the NPV of the investment equal to zero and solving for the rate of return.

**What challenges arise with the IRR when cash flows are not conventional?**

Answer: When cash flows are not conventional, such as having both negative and positive cash flows, the IRR may yield multiple rates of return, making it difficult to determine the correct rate.

**How can mutually exclusive investments affect the choice of the best investment?**

Answer: Mutually exclusive investments compete with each other, and the best investment is determined based on its NPV at the required return, not solely on its IRR.

## **Lecture # 28**

### **What is the profitability index, and how is it calculated?**

Answer: The profitability index, also known as the benefit-cost ratio, is calculated by dividing the present value of future cash flows by the initial investment. It helps determine the value created per dollar invested and is given by:  $PI = \text{Present Value of Future Cash Flows} / \text{Initial Investment}$ .

### **What does a profitability index greater than 1.00 indicate?**

Answer: A profitability index greater than 1.00 indicates a positive net present value (NPV) investment, meaning that the project is expected to generate value and is desirable.

### **How is the NPV calculated for an investment?**

Answer: The NPV (Net Present Value) of an investment is calculated by subtracting the initial investment cost from the present value of the future cash flows.  $NPV = \text{Present Value of Future Cash Flows} - \text{Initial Investment}$ .

### **When is a project considered a desirable investment based on its NPV?**

Answer: A project is considered a desirable investment if its NPV is positive, indicating that it is expected to generate value and provide a return higher than the initial investment.

### **Why is the profitability index proposed as a measure of performance for government or non-profit investments?**

Answer: The profitability index measures the value created per dollar invested, making it a useful performance measure for projects where maximizing value creation is essential, such as government or non-profit investments.

### **Under what condition would a project be preferred despite having a lower profitability index?**

Answer: A project may be preferred despite having a lower profitability index when it has a higher NPV and thus generates more value in absolute terms.

### **What alternative capital budgeting techniques are used alongside NPV and why?**

Answer: Alternative capital budgeting techniques are used alongside NPV because, in uncertain situations, the estimated NPV may not accurately represent the true NPV. Multiple criteria help financial managers assess the reliability of the estimated NPV.

### **How can conflicting signals from different evaluation indicators impact investment decisions?**

Answer: Conflicting signals from different evaluation indicators may introduce uncertainty and require further analysis before making investment decisions.

### **What is the primary advantage of using the profitability index in capital budgeting?**

Answer: The primary advantage of using the profitability index is that it is closely related to NPV and often leads to identical investment decisions. It is also easy to understand and communicate.

### **Why might the payback period be favored as a capital budgeting technique in certain situations?**

Answer: The payback period may be favored as a capital budgeting technique when available investment funds are limited or when a firm seeks to recover its initial investment quickly.

### **How does the Internal Rate of Return (IRR) rule differ from the Net Present Value (NPV) rule?**

Answer: The IRR rule is to take a project if its IRR exceeds the required return, while the NPV rule is to take a project if its NPV is positive.

### **When can the Internal Rate of Return (IRR) be misleading in project evaluation?**

Answer: The IRR can be misleading when evaluating mutually exclusive or non-conventional projects, as it may not always lead to the same decision as the NPV.

**What does the Average Accounting Return (AAR) measure?**

Answer: The Average Accounting Return (AAR) measures accounting profit relative to book value.

**How is the payback period of an investment calculated?**

Answer: The payback period of an investment is the length of time until the sum of its cash flows equals its costs.

**What are some limitations of using the payback period as a capital budgeting criterion?**

Answer: The payback period ignores risk, time value of money, and cash flows beyond the cutoff point, making it a less comprehensive measure.

**How do CFOs' preferences for capital budgeting techniques vary based on company size?**

Answer: CFOs of larger firms tend to use the Internal Rate of Return (IRR) and Net Present Value (NPV) more frequently than CFOs of smaller firms, who may prefer the Payback Period and the Average Accounting Return (AAR).

**What percentage of CFOs in 2000 always or almost always used the Profitability Index for investment decisions?**

Answer: Only 12% of CFOs always or almost always used the Profitability Index for investment decisions in 2000.

**How does the Profitability Index help rank projects when a firm has limited funds?**

Answer: The Profitability Index is used to rank projects when a firm has more positive NPV investments than it can currently finance. Projects with higher PI values are prioritized.

**What are the two primary categories of investment criteria mentioned in the summary?**

Answer: The two primary categories of investment criteria are discounted cash flow criteria (e.g., NPV, IRR, PI) and accounting criteria (e.g., AAR).

**Which investment criterion is considered the most comprehensive, taking into account time value of money and risk?**

Answer: The Net Present Value (NPV) criterion is considered the most comprehensive, as it takes into account the time value of money and considers the risk associated with future cash flows.

## **Lecture # 29**

**What is the purpose of making an initial assessment of a proposed investment project?**

Answer: The purpose of making an initial assessment is to determine whether the project should be undertaken or not based on the spread of numbers and discounted cash flow analysis.

**Why is it crucial to identify relevant cash flows when evaluating a proposed investment?**

Answer: Identifying relevant cash flows helps to assess the changes in the firm's overall future cash flows that directly result from the decision to take the investment and determine whether the project adds value to the firm.

**What are incremental cash flows, and why are they important in project evaluation?**

Answer: Incremental cash flows are the changes in the firm's future cash flows that result directly from the project. They are essential because they reflect the real impact of the investment decision.

**What does the stand-alone principle assume in project evaluation?**

Answer: The stand-alone principle assumes that project evaluation is based on the project's incremental cash flows, treating the project as a separate "minifirm" with its own revenues, costs, assets, and cash flows.

**What are some examples of costs that should not be considered in investment decisions?**

Answer: Costs that should not be considered in investment decisions include sunk costs, financing costs (e.g., interest or dividend payments), and other non-incremental expenses.

**How does the concept of opportunity costs relate to investment decisions?**

Answer: Opportunity costs refer to the most valuable alternative foregone when choosing a particular investment. They should be considered when evaluating projects to assess the true cost of the decision.

**What are side effects, and how do they impact project evaluation?**

Answer: Side effects refer to spillover effects that a project may have on other aspects of the firm's operations. Positive or negative side effects should be taken into account to accurately assess the project's value.

**Why is net working capital considered in project evaluation?**

Answer: Net working capital is considered because projects often require investments in working capital in addition to long-term assets. It represents the capital required for daily operations and affects cash flows.

**Why are financing costs excluded from project analysis?**

Answer: Financing costs, such as interest payments or dividend payments, are excluded from project analysis to focus solely on the cash flow generated by the project's assets.

**What is the primary concern when measuring cash flows in project evaluation?**

Answer: The primary concern is to measure after-tax cash flows, as incremental cash flows refer to after-tax incremental cash flows.

**What are pro forma financial statements, and how are they used in project evaluation?**

Answer: Pro forma financial statements project future years' operations in a summarized format, helping to estimate the cash flows and profitability of a project.

**How are operating cash flows calculated for a project?**

Answer: Operating cash flows are calculated by adding earnings before interest and taxes (EBIT) to depreciation and then subtracting taxes.

**What is the purpose of a capital budgeting analysis?**

Answer: The purpose of a capital budgeting analysis is to assess the financial viability of a proposed investment project and make informed decisions about whether to undertake it.

**What is the Net Present Value (NPV) of the project in the example provided?**

Answer: The Net Present Value (NPV) of the project in the example is \$655.

**What is the Internal Rate of Return (IRR) of the project in the example?**

Answer: The Internal Rate of Return (IRR) of the project in the example is 21%.

**What is the payback period for this project?**

Answer: The payback period for this project is 2.3 years.

**How is the Average Accounting Return (AAR) calculated in the example?**

Answer: The Average Accounting Return (AAR) is calculated as \$5280 divided by the average investment  $[(31,000 + 24,000 + 17,000 + 10,000) / 4]$ , resulting in 25.76%.

**Based on the capital budgeting analysis, should the firm invest in this project?**

Answer: Yes, the firm should invest in this project because it has a positive Net Present Value (NPV), a reasonable Internal Rate of Return (IRR), and a favorable Average Accounting Return (AAR).

**Why is it important to use discounted cash flow analysis in project evaluation?**

Answer: Discounted cash flow analysis helps to account for the time value of money and provides a more accurate representation of the project's profitability.

**How does the consideration of opportunity costs affect the assessment of a project?**

Answer: Considering opportunity costs allows for a more comprehensive evaluation of the true cost of the project, as it accounts for the value of the next best alternative foregone.

**What does the term "incremental cash flows" mean in the context of project evaluation?**

Answer: Incremental cash flows refer to the changes in the firm's future cash flows that directly result from taking the investment project.

**What are the primary factors that need to be estimated to prepare pro forma financial statements?**

Answer: To prepare pro forma financial statements, estimates for unit sales, selling price per unit, variable cost per unit, and total fixed cost are required.

**How is the payback period calculated in project evaluation?**

Answer: The payback period is calculated by dividing the initial investment by the net annual cash inflow from the project.

**What does the stand-alone principle assume when analyzing a project?**

Answer: The stand-alone principle assumes that a project is evaluated based on its incremental cash flows, treating it as a separate entity with its revenues, costs, assets, and cash flows.

**Why are sunk costs not considered in investment decisions?**

Answer: Sunk costs are costs that have already been incurred and cannot be recovered. Since they are irretrievable and not relevant to future cash flows, they should not be considered in investment decisions.

## **Lecture # 30**

**What is the purpose of preparing pro forma financial statements for a project?**

Answer: The purpose of preparing pro forma financial statements is to project future years' operations in a summarized format, allowing for a more comprehensive evaluation of the project's financial performance.

**What are the sales projections for the project in the given example?**

Answer: The sales projections for the project are 10,000 units per year, with each unit priced at \$5.

**What are the fixed costs associated with the project in the example?**

Answer: The fixed costs associated with the project are \$5,000 per year.

**How many years is the project expected to last?**

Answer: The project is expected to last for 3 years.

**What is the total project cost?**

Answer: The total project cost is \$21,000.

**What is the depreciation amount for each year of the project?**

Answer: The depreciation amount for each year of the project is \$7,000.

**What is the investment in net working capital for the project?**

Answer: The investment in net working capital for the project is \$10,000.

**What is the firm's required return for the project evaluation?**

Answer: The firm's required return for the project evaluation is 20%.

**What is the tax rate used in the capital budgeting analysis?**

Answer: The tax rate used in the capital budgeting analysis is 34%.

**What is the projected Gross Profit for the first year of the project?**

Answer: The projected Gross Profit for the first year of the project is \$20,000.

**How much is the projected Net Income for the first year of the project?**

Answer: The projected Net Income for the first year of the project is \$5,280.

**What is the Net Working Capital at the end of year 3?**

Answer: The Net Working Capital at the end of year 3 is \$10,000.

**How is the Net Income calculated in the example for year 1?**

Answer: The Net Income for year 1 is calculated as EBIT minus Taxes:  $\$8,000 - \$2,720 = \$5,280$ .

**What is the total cash flow for year 1?**

Answer: The total cash flow for year 1 is \$12,280.

**How much is the total cash flow at the end of year 3?**

Answer: The total cash flow at the end of year 3 is \$22,280.

**How is the Net Present Value (NPV) calculated for this project?**

Answer: The NPV is calculated by subtracting the initial investment cost from the sum of the present values of all cash flows using the required rate of return.

**What is the Internal Rate of Return (IRR) of this project?**

Answer: The Internal Rate of Return (IRR) of this project is 21%.

**How long is the payback period for this investment?**

Answer: The payback period for this investment is 2.3 years.

**What is the After-tax Cash Flow in the tax shield approach for year 1?**

Answer: The After-tax Cash Flow in the tax shield approach for year 1 is \$12,280.

**How is the Operating Cash Flow calculated using the tax shield approach?**

Answer: Operating Cash Flow is calculated as  $(\text{Sales} - \text{Costs}) \times (1 - \text{Tax Rate}) + \text{Depreciation} \times \text{Tax Rate}$ .

**How is the change in Net Working Capital calculated for year 2?**

Answer: The change in Net Working Capital for year 2 is zero (0).

**What is the net cash flow for the project at the end of year 2?**

Answer: The net cash flow for the project at the end of year 2 is \$12,280.

**What is the net cash flow for The Pencil Company project?**

Answer: The net cash flow for The Pencil Company project is \$244.

**How does the tax shield approach account for depreciation?**

Answer: The tax shield approach accounts for depreciation by considering the tax benefits of depreciation, which influences the tax bill.

**What is the book value of an automobile after year 6, using Modified ACRS Depreciation?**

Answer: The book value of the automobile after year 6, using Modified ACRS Depreciation, is \$0.

## **Lecture # 31**

**What is the depreciation amount for the automobile in year 3 using MACRS depreciation?**

Answer: The depreciation amount for the automobile in year 3 using MACRS depreciation is \$2,304.00.

**What is the ending book value of the automobile after year 6?**

Answer: The ending book value of the automobile after year 6 is \$0.00.

**How is the tax liability calculated for the sale of the car after 5 years?**

Answer: The tax liability for the sale of the car after 5 years is calculated as 34% of the excess depreciation, which is \$784.99.

**What is the total after-tax cash flow from the sale of the car?**

Answer: The total after-tax cash flow from the sale of the car is \$16,000.

**What are the yearly depreciation allowances for the IT system purchased by The SS Company?**

Answer: The yearly depreciation allowances for the IT system are given in the table provided for each year.

**What is the estimated worth of the IT system if sold in 4 years?**

Answer: The estimated worth of the IT system if sold in 4 years is \$10,000.

**What is the tax consequence of selling the IT system in 4 years?**

Answer: The tax consequence of selling the IT system in 4 years is a tax savings of \$6,000.

**What is the total after-tax cash flow from the sale of the IT system?**

Answer: The total after-tax cash flow from the sale of the IT system is \$16,000.

**What are the projected unit sales for The M Inc.'s new product for year 3?**

Answer: The projected unit sales for The M Inc.'s new product for year 3 are 6,000 units.

**What is the projected unit price for The M Inc.'s new product for year 4?**

Answer: The projected unit price for The M Inc.'s new product for year 4 is \$110.

**How is the net working capital calculated at the end of year 1?**

Answer: The net working capital at the end of year 1 is calculated as 15% of the sales revenue for that year, which is \$54,000.

**How much is the operating cash flow in year 2 for The M Inc.'s new product?**

Answer: The operating cash flow in year 2 for The M Inc.'s new product is \$79,080.

**What is the total project cash flow at the end of year 4 for The M Inc.'s new product?**

Answer: The total project cash flow at the end of year 4 for The M Inc.'s new product is \$232,723.

**What is the Net Present Value (NPV) of The M Inc.'s new product at a required return of 15%?**

Answer: The Net Present Value (NPV) of The M Inc.'s new product at a required return of 15% is \$65,488.

**Is the project acceptable based on the Internal Rate of Return (IRR)?**

Answer: Yes, the project is acceptable based on the Internal Rate of Return (IRR) of 17.24%.

## **Lecture # 32**

**What is one of the responsibilities of the financial manager?**

Answer: Assessing the value of the proposed investment.

**What must the return from a proposed non-financial investment be at least as large as?**

Answer: The return from buying financial assets of similar risk.

**What are the two components of dollar returns for an investment?**

Answer: Income earned (Dividend) and Capital gain.

**How do you calculate the total percentage return for an investment?**

Answer: By adding the Dividend Yield and Capital Gains Yield.

**If you buy a stock for \$25 per share and sell it for \$35 per share with a \$2 dividend, what is the Total Percentage Return?**

Answer: 48% (8% Dividend Yield + 40% Capital Gains Yield).

**What are the most commonly used measures to examine the topic of risk?**

Answer: Variance and Standard Deviation.

**How do you calculate the variance of returns?**

Answer: By taking the average squared differences between the actual returns and the average return.

**What is the standard deviation used for?**

Answer: To measure the spread or volatility of returns.

**What is the formula for variance of historical returns (T returns)?**

Answer:  $\text{Var}(R) = \sum(R_i - \bar{R})^2 / T$

**What is the standard deviation always equal to?**

Answer: The square root of the variance.

## **Lecture # 33**

**What is the formula for variance of T historical returns?**

Answer:  $\text{Var}(R) = \sum(R_i - \bar{R})^2 / T$

**What is the standard deviation always equal to?**

Answer: The square root of the variance.

**What are the average returns for Company X and Company Y?**

Answer: Company X: 17.5%, Company Y: 5.5%

**Which investment was more volatile, Company X or Company Y?**

Answer: Company X was more volatile with a standard deviation of 29.87%, while Company Y had a standard deviation of 13.27%.

**What are the expected returns for stocks L and U in the first scenario?**

Answer: Stock L: 25%, Stock U: 20%

**Why should someone invest and hold stock U?**

Answer: Stock U provides a consistent return of 20% even during a recession, unlike stock L which can be more volatile.

**How do you calculate the risk premium for a stock?**

Answer: Risk Premium = Expected return - Risk-free rate.

**What is the risk premium for stock U and stock L in the first scenario?**

Answer: Stock U: 12%, Stock L: 17%

**What is the variance of returns for stock L and stock U in the first scenario?**

Answer: Stock L: 0.2025, Stock U: 0.0100

**What is the standard deviation for stock L and stock U in the first scenario?**

Answer: Stock L: 45%, Stock U: 10%

**How do you calculate the expected return of a portfolio?**

Answer:  $E(RP) = \sum(x_i * E(R_i))$ , where  $x_i$  is the percentage of money in asset  $i$  and  $E(R_i)$  is the expected return of asset  $i$ .

**What is the expected return of the portfolio with equal investments in stock L and stock U?**

Answer: 22.5%

**How do you calculate the variance of returns for a portfolio?**

Answer: Sum of  $(x_i * (Return_i - E(RP))^2 * P)$ , where  $x_i$  is the portfolio weight of asset  $i$ ,  $Return_i$  is the return of asset  $i$ ,  $E(RP)$  is the expected return of the portfolio, and  $P$  is the probability of the state of the economy.

**What is the variance of returns for the portfolio with equal investments in stock L and stock U?**

Answer: 0.030625

**How do the returns of a portfolio change if you invest half in stock A and split the remainder between stock B and stock C?**

Answer: The returns would be the same, both scenarios have a return of 20.91%.

**What is the expected return on stock A, stock B, and stock C during a boom?**

Answer: Stock A: 10%, Stock B: 15%, Stock C: 20%

**What is the expected return on stock A, stock B, and stock C during a bust?**

Answer: Stock A: 8%, Stock B: 4%, Stock C: 0

**What is the expected return on a portfolio with equal investments in stock A, stock B, and stock C?**

Answer: 9.67%

**What is the expected return on a portfolio with half investment in stock A and the remainder divided between stock B and stock C?**

Answer: 9.33%

**What happens to the expected return when the portfolio weights are changed?**

Answer: The expected return on the portfolio can change depending on the portfolio weights assigned to each asset.

## **Lecture # 34**

**What are the projected returns for stocks A, B, and C during a boom and a bust economy?**

Answer: During a boom: Stock A: 10%, Stock B: 15%, Stock C: 20%

During a bust: Stock A: 8%, Stock B: 4%, Stock C: 0%

**What is the expected return on a portfolio with equal amounts invested in each asset?**

Answer: 8.4%

**What is the expected return on a portfolio with half investment in stock A and the remainder divided between B and C?**

Answer: 8.5%

**How is the portfolio expected return calculated when all assets have equal investment?**

Answer:  $E(RP) = 1/3 \times 8.8\% + 1/3 \times 8.4\% + 1/3 \times 8.0\% = 8.4\%$

**How is the portfolio expected return calculated when half investment is in stock A and the remainder is divided between B and C?**

Answer:  $E(RP) = 1/2 \times 8.8\% + 1/4 \times 8.4\% + 1/4 \times 8.0\% = 8.5\%$

**What is the standard deviation of a portfolio with equal amounts invested in each asset?**

Answer: 5.4%

**What is the standard deviation of a portfolio with half investment in stock A and the remainder divided between B and C?**

Answer: 4.3%

**What is the difference between systematic risk and unsystematic risk?**

Answer: Systematic risk affects a large number of assets and is also known as market risk.

Unsystematic risk affects a single or small number of assets and is also known as unique or asset-specific risk.

**How is diversification related to risk reduction?**

Answer: Diversification is the process of spreading an investment across assets to reduce risk. It helps eliminate some of the riskiness associated with individual assets.

**What is the principle of diversification?**

Answer: The principle of diversification states that spreading an investment across many assets will eliminate some of the risk.

**How does the standard deviation of a portfolio change with the number of securities in the portfolio?**

Answer: The standard deviation declines as the number of securities in the portfolio increases.

**What is the minimum level of risk that cannot be eliminated by diversification?**

Answer: The minimum level of risk that cannot be eliminated by diversification is called non-diversifiable risk.

**What is systematic risk also known as?**

Answer: Systematic risk is also known as non-diversifiable risk or market risk.

**What is unsystematic risk also known as?**

Answer: Unsystematic risk is also known as diversifiable risk, unique risk, or asset-specific risk.

**How is unsystematic risk affected by diversification?**

Answer: Unsystematic risk is essentially eliminated by diversification, so a relatively large portfolio has almost no unsystematic risk.

**What type of risk cannot be eliminated by diversification?**

Answer: Systematic risk cannot be eliminated by diversification, as it affects almost all assets to some degree.

**What is the net effect of holding a large portfolio during company-specific events?**

Answer: The net effect on the overall value of the portfolio will be relatively small.

**What is the non-diversifiable risk also called?**

Answer: Non-diversifiable risk is also called systematic risk.

**What is the diversifiable risk also called?**

Answer: Diversifiable risk is also called unsystematic risk.

**What is the formula for total risk?**

Answer: Total risk = Systematic risk + Unsystematic risk.

## **Lecture # 35**

**What does it mean when we say the required return on an investment is 10%?**

Answer: The required return of 10% means that the investment will have a positive Net Present Value (NPV) only if its return exceeds 10%.

**How is the cost of capital associated with an investment calculated?**

Answer: The cost of capital associated with an investment is the return the firm must earn on the investment to compensate its investors for the use of the capital needed to finance the project.

**How do we determine the cost of capital for a risk-free project?**

Answer: The cost of capital for a risk-free project is determined by looking at the current rate offered by risk-free investments in the capital markets.

**Is the cost of capital for a risky project higher than the risk-free rate?**

Answer: Yes, the cost of capital for a risky project is greater than the risk-free rate, and the appropriate discount rate would exceed the risk-free rate.

**Can we use the terms required return, appropriate discount rate, and cost of capital interchangeably?**

Answer: Yes, these terms can be used interchangeably as they refer to the same concept - the return required to compensate investors for the use of their capital.

**What factors determine the cost of capital associated with an investment?**

Answer: The cost of capital associated with an investment depends on the risk of that investment.

**How does a firm's overall cost of capital reflect the required return on its assets?**

Answer: A firm's overall cost of capital is a mixture of the returns needed to compensate its creditors and stockholders, reflecting the required return on the firm's assets as a whole.

**How is the cost of equity capital calculated under the dividend growth model?**

Answer: The cost of equity capital (RE) is calculated as the dividend just paid (D0) plus the dividend growth rate (g).

**What are the three things needed to estimate the cost of equity using the dividend growth model?**

Answer: To estimate the cost of equity using the dividend growth model, we need D0 (dividend just paid), P0 (current stock price), and the growth rate (g) of dividends.

**Suppose GSS company paid a dividend of \$4 per share last year, and the stock's current price is \$60 per share. Assuming dividends are estimated to grow at 6% per year, what is the cost of capital for GSS?**

Answer: The cost of equity for GSS is 13.07%.

**How can we estimate the dividend growth rate (g)?**

Answer: The dividend growth rate can be estimated by using the dividend observations for previous years or by using analysts' forecasts of future growth rates.

**What is the cost of debt?**

Answer: The cost of debt is the return that a firm's creditors demand on new borrowings.

**How can we estimate the cost of debt using the firm's bond ratings?**

Answer: The cost of debt can be estimated by using the firm's bond ratings to estimate the interest rates on newly issued bonds of the same rating.

**Does the coupon rate on a firm's outstanding debt affect the cost of debt today?**

Answer: No, the coupon rate on a firm's outstanding debt is irrelevant to the cost of debt today, as it relates to the cost of debt when the bonds were issued.

**How can we calculate the cost of preferred stock?**

Answer: The cost of preferred stock (RP) is calculated by dividing the fixed dividend (D) by the current price per share of preferred stock (P0).

**Is the cost of preferred stock fixed or variable?**

Answer: The cost of preferred stock is fixed since preferred stock has a fixed dividend paid every period forever.

**How can we calculate the capital structure weights of a company?**

Answer: The percentages of total capital represented by debt and equity can be calculated by dividing the market value of the firm's debt and equity by the combined market value of debt and equity.

**What is the tax effect on the cost of debt?**

Answer: Interest paid by a corporation is tax-deductible, meaning the government subsidizes some of the interest, resulting in a lower after-tax cost of debt.

**Suppose a firm borrows \$1 million at 9%, and the corporate tax rate is 34%. What is the after-tax interest rate?**

Answer: The after-tax interest rate is 5.94%.

**How can we express the after-tax rate used for the cost of debt?**

Answer: The after-tax rate used for the cost of debt can be expressed as  $RD \times (1 - TC)$ , where  $RD$  is the before-tax cost of debt and  $TC$  is the corporate tax rate.

## **Lecture # 36**

**What is the Weighted Average Cost of Capital (WACC)?**

Answer: The Weighted Average Cost of Capital (WACC) is the overall return the firm must earn on its existing assets to maintain the value of the stock. It is also the required return on any investments by the firm that have the same risks as existing operations.

**How is the WACC calculated?**

Answer: The WACC is calculated by multiplying the capital structure weights with the associated costs (cost of equity and cost of debt) and adding up the pieces. The formula is:  $WACC = E/V * RE + D/V * RD * (1 - TC)$ , where  $E/V$  is the percentage of financing that is equity,  $D/V$  is the percentage that is debt,  $RE$  is the cost of equity,  $RD$  is the cost of debt, and  $TC$  is the corporate tax rate.

**What is the significance of WACC in evaluating investment projects?**

Answer: WACC is used as the discount rate to evaluate investment projects with similar risks to the overall firm. It helps in determining whether a project's expected cash flows will generate a return greater than the overall cost of capital.

**How is the cost of equity calculated using the dividend growth model?**

Answer: The cost of equity ( $RE$ ) is calculated using the dividend growth model as follows:  $RE = (D1 / P0) + g$ , where  $D1$  is the expected dividend in one period,  $P0$  is the current stock price, and  $g$  is the dividend growth rate.

**Why is the coupon rate irrelevant when calculating the cost of debt?**

Answer: The coupon rate on a firm's outstanding debt is irrelevant because it relates to the cost of debt when the bonds were issued, not the cost of debt today. The cost of debt is measured by the yield to maturity on the outstanding debt.

**How can we calculate the weighted average cost of debt?**

Answer: The weighted average cost of debt is calculated by taking the percentage of the total debt represented by each bond issue and multiplying it by the yield to maturity on that issue. The results are then added up to get the overall weighted average cost of debt.

**How does the use of book values or market values impact the WACC calculation?**

Answer: Using book values or market values can lead to different WACC results. Market values are generally considered more accurate since they reflect the actual market prices of securities and the true proportions of financing sources.

**What factors are considered in the WACC calculation?**

Answer: The WACC calculation considers the firm's cost of equity, cost of debt, corporate tax rate, and the capital structure weights (percentage of financing that is equity and debt).

**How can WACC be used to evaluate investment projects?**

Answer: WACC is used as the discount rate to evaluate investment projects. If a project's expected return exceeds the WACC, it is considered a favorable investment. If the project's expected return is

below the WACC, it may be rejected as it would not generate enough return to cover the cost of capital.

**How does WACC help in making financial decisions?**

Answer: WACC provides a benchmark rate of return that helps in making financial decisions related to investments, capital budgeting, and financing. It helps in determining the feasibility and profitability of various projects and investments for a firm.

## **Lecture # 37**

**What is the guiding principle in choosing the debt-equity ratio?**

Answer: The guiding principle in choosing the debt-equity ratio is to maximize the value of a share of stock, which is equivalent to maximizing the value of the whole firm.

**What is the optimal capital structure, and how is it related to WACC?**

Answer: The optimal capital structure is the one that results in the lowest possible Weighted Average Cost of Capital (WACC). It is the target capital structure for the firm, where the overall cost of capital is minimized.

**What is financial leverage, and how does it impact shareholders?**

Answer: Financial leverage refers to the extent to which a firm relies on debt financing. It can dramatically alter the payoffs to shareholders by magnifying gains and losses. However, it may not affect the overall cost of capital.

**How can financial leverage affect earnings per share (EPS) and return on equity (ROE)?**

Answer: Financial leverage can cause significant variability in both EPS and ROE. As the firm uses more debt financing, the impact of financial leverage can magnify gains and losses to shareholders.

**How can the break-even point be calculated with and without debt?**

Answer: The break-even point with no debt is calculated as  $EPS = EBIT / \text{Number of shares outstanding}$ . With debt, it is calculated as  $EPS = (EBIT - \text{Interest Expense}) / \text{Number of shares outstanding}$ .

**What is homemade leverage?**

Answer: Homemade leverage refers to the ability of shareholders to adjust the amount of financial leverage by borrowing or lending on their own. They can replicate the firm's capital structure by borrowing or lending to achieve the same debt-equity ratio.

**How can investors unlever the stock?**

Answer: Investors can unlever the stock by loaning out the money in the same proportion as the firm's debt-equity ratio. They sell a portion of their shares, loan out the proceeds at the interest rate equal to the cost of debt, and retain the rest of the shares.

**Why is capital structure an important consideration for a firm?**

Answer: Capital structure is an important consideration because it affects the expected return to stockholders and the riskiness of the stock. The choice of capital structure can impact the firm's overall cost of capital and, consequently, the value of the firm.

**What is the significance of the optimal capital structure for a firm?**

Answer: The optimal capital structure is essential for maximizing the firm's value and ensuring that the Weighted Average Cost of Capital (WACC) is minimized. It represents the most efficient mix of debt and equity financing that results in the lowest cost of capital.

**How can financial leverage affect shareholders' risk exposure?**

Answer: Financial leverage can increase shareholders' risk exposure by making the EPS and ROE more sensitive to changes in EBIT. This higher sensitivity results in more significant gains or losses for shareholders depending on the firm's performance.

## **Lecture # 38**

**Who are Franco Modigliani and Merton Miller, and what is their contribution to finance?**

Answer: Franco Modigliani and Merton Miller are Nobel laureates known for their contributions to finance. They presented two famous propositions, known as M&M propositions, which have had a significant impact on the field of corporate finance.

**What is the first proposition by M&M, and what does it imply about capital structure decisions?**

Answer: The first proposition by M&M states that it is completely irrelevant how a firm chooses to arrange its finances or its capital structure. This means that the value of the firm is independent of its capital structure, and changing it does not affect the firm's total value.

**How can the cost of equity be calculated according to M&M's second proposition?**

Answer: According to M&M's second proposition, the cost of equity (RE) depends on three factors: the required return on the firm's assets (RA), the firm's cost of debt (RD), and the debt-equity ratio (D/E). It can be calculated as  $RE = RA + (RA - RD) \times (D/E)$ .

**How does financial leverage impact the risk of equity?**

Answer: Financial leverage, which is the use of debt financing, raises the risk of equity. As the firm increases its debt-equity ratio, the risk borne by equity investors increases, leading to a higher required return or cost of equity.

**What is the interest tax shield, and how does it impact a firm's value?**

Answer: The interest tax shield refers to the tax-saving benefit a firm receives due to the tax deductibility of interest payments on debt. It enhances the value of a leveraged firm by the present value of the tax shield, which is calculated as the tax rate (TC) multiplied by the amount of debt (D).

**According to M&M proposition 1 with taxes, how is the value of a levered firm related to the value of an unlevered firm?**

Answer: M&M proposition 1 with taxes states that the value of a levered firm (VL) is equal to the value of an unlevered firm (VU) plus the present value of the interest tax shield ( $TC \times D$ ). Mathematically,  $VL = VU + TC \times D$ .

**What are the implications of M&M proposition 2 with taxes regarding a firm's capital structure?**

Answer: M&M proposition 2 with taxes suggests that debt financing is advantageous, and a firm's optimal capital structure could be 100% debt in extreme cases. The firm's weighted average cost of capital (WACC) decreases as it relies more heavily on debt financing.

**How does M&M proposition 1 impact a firm's capital structure decision in the absence of taxes?**

Answer: In the absence of taxes, M&M proposition 1 implies that a firm's capital structure decision is irrelevant, and the value of the firm is independent of how it arranges its finances. The firm's WACC remains the same, regardless of the mix of debt and equity used.

**What factors influence the cost of equity according to M&M proposition 2?**

Answer: M&M proposition 2 states that the cost of equity depends on the riskiness of the firm's operations (business risk), which determines the required return on firm assets (RA), and the degree of financial leverage (financial risk), represented by the debt-equity ratio (D/E).

**How can the interest tax shield be calculated for a firm with corporate taxes?**

Answer: The interest tax shield can be calculated by multiplying the tax rate (TC) by the amount of debt (D). The formula for the present value of the interest tax shield is  $PV = TC \times D$ .

**What does the first proposition by M&M imply about the value of a firm under different capital structures?**

Answer: The first proposition by M&M implies that the value of a firm remains the same regardless of its capital structure. The value of the firm is independent of how it arranges its finances or debt-equity ratio.

**How is the cost of equity affected when a firm increases its debt-equity ratio, according to M&M proposition 2?**

Answer: According to M&M proposition 2, when a firm increases its debt-equity ratio, the cost of equity rises. This is because the increase in leverage raises the risk borne by equity investors, leading to a higher required return on equity.

**What is the significance of the interest tax shield for a leveraged firm?**

Answer: The interest tax shield provides a tax-saving benefit for a leveraged firm. It enhances the value of the firm by the present value of the tax shield, which is calculated as the tax rate (TC) multiplied by the amount of debt (D).

**How does financial leverage impact a firm's business risk and financial risk?**

Answer: Financial leverage impacts a firm's business risk and financial risk. Business risk is determined by the riskiness of the firm's operating activities, while financial risk is determined by the debt-equity ratio (D/E). Increasing financial leverage raises the financial risk, resulting in higher cost of equity.

**How can the value of a levered firm be calculated using M&M proposition 1 with taxes?**

Answer: According to M&M proposition 1 with taxes, the value of a levered firm (VL) is equal to the value of an unlevered firm (VU) plus the present value of the interest tax shield ( $TC \times D$ ). Mathematically,  $VL = VU + TC \times D$ .

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Answer: M&M proposition 2 with taxes implies that debt financing is advantageous, and a firm's optimal capital structure could be 100% debt in extreme cases. As a firm increases its debt-equity ratio, the cost of equity rises due to increased financial risk.

**How does the interest tax shield impact the value of a levered firm?**

Answer: The interest tax shield enhances the value of a levered firm. The tax-saving benefit of interest payments increases the firm's value by the present value of the tax shield, which is calculated as the tax rate (TC) multiplied by the amount of debt (D).

**How does M&M proposition 1 impact a firm's capital structure decision when there are no taxes?**

Answer: In the absence of taxes, M&M proposition 1 states that a firm's capital structure decision is irrelevant. The value of the firm is not affected by how it arranges its finances, and the firm's weighted average cost of capital (WACC) remains the same.

**What factors influence the cost of equity, according to M&M proposition 2?**

Answer: According to M&M proposition 2, the cost of equity depends on three factors: the required return on the firm's assets (RA), the cost of debt (RD), and the debt-equity ratio (D/E). It can be calculated as  $RE = RA + (RA - RD) \times (D/E)$ .

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## **Lecture # 39**

**What are direct bankruptcy costs?**

Answer: Direct bankruptcy costs are costs directly associated with bankruptcy, such as legal and administrative expenses.

**What are indirect bankruptcy costs?**

Answer: Indirect bankruptcy costs are the costs incurred by a financially distressed firm in avoiding a bankruptcy filing.

**What are financial distress costs?**

Answer: Financial distress costs are the direct and indirect costs associated with going bankrupt or experiencing financial distress.

**What is the Static Theory of Capital Structure?**

Answer: The Static Theory of Capital Structure suggests that a firm borrows up to the point where the tax benefit from an extra dollar in debt equals the cost from the increased probability of financial distress.

**What is the Optimal Capital Structure?**

Answer: The optimal capital structure is the point where the firm's value ( $V_L^*$ ) is maximized at a debt level of  $D^*$ , which represents the optimal amount of borrowing.

**How is the value of a firm affected by taxes and bankruptcy costs in Case 1?**

Answer: In Case 1, with no taxes and bankruptcy costs, the value of the firm and its weighted average cost of capital (WACC) are not affected by capital structure.

**How does the value of a firm change with corporate taxes and no bankruptcy costs in Case 2?**

Answer: In Case 2, with corporate taxes and no bankruptcy costs, the value of the firm increases and the WACC decreases as the amount of debt increases.

**What happens to the value of a firm in Case 3 with corporate taxes and bankruptcy costs?**

Answer: In Case 3, with corporate taxes and bankruptcy costs, the value of the firm ( $V_L$ ) reaches a maximum at  $D^*$ , the optimal amount of borrowing, and the WACC is minimized at  $D^*/E^*$ .

**What are some managerial recommendations regarding tax benefits from leverage?**

Answer: Tax benefits from leveraging are important to firms in a tax-paying position, while firms with substantial losses or other tax shields may get less benefit from leverage. Firms with higher risk of financial distress will borrow less compared to firms with lower risk.

**How is net working capital defined?**

Answer: Net working capital (NWC) is the difference between current assets and current liabilities, representing the short-term financing of a firm.

**What are the current assets on a balance sheet?**

Answer: Current assets include cash and other assets expected to convert to cash within one year, such as marketable securities, accounts receivables, and inventories.

**What are the current liabilities on a balance sheet?**

Answer: Current liabilities are obligations that are expected to require cash payment within one year, including accounts payable, expenses payable, and notes payable.

**How can the basic balance sheet identity be written?**

Answer:  $NWC + \text{Fixed assets} = \text{Long-term debt} + \text{Equity}$

**What activities increase cash (sources of cash)?**

Answer: Increasing long-term debt, increasing equity, increasing current liabilities, decreasing current assets other than cash, and decreasing fixed assets are activities that increase cash.

**What activities decrease cash (uses of cash)?**

Answer: Decreasing long-term debt, decreasing equity, decreasing current liabilities, increasing current assets other than cash, and increasing fixed assets are activities that decrease cash.

**Is an increase in accounts payable a source or use of cash?**

Answer: An increase in accounts payable is a source of cash.

**What is the operating cycle for a typical manufacturing firm?**

Answer: The operating cycle is the time period between the acquisition of inventory and the collection of cash from receivables.

**What is the inventory period?**

Answer: The inventory period is the time it takes to acquire and sell inventory.

**What is the accounts receivable period?**

Answer: The accounts receivable period is the time between the sale of inventory and the collection of receivables.

**How is the operating cycle calculated?**

Answer: Operating Cycle = Inventory period + Accounts receivable period

**What is the cash cycle?**

Answer: The cash cycle is the time between cash disbursement and cash collection.

**How is the cash cycle calculated?**

Answer: Cash Cycle = Operating cycle - Accounts payable period

**What can fill the gap between short-term inflows and outflows?**

Answer: The gap can be filled by borrowing or holding a liquidity reserve in the form of cash or marketable securities.

**How can the gap be shortened in the operating cycle?**

Answer: The gap can be shortened by changing the inventory, receivable, and payable periods.

**Who manages the collection, disbursement, short-term investment, and short-term borrowing of cash?**

Answer: The Cash Manager.

**What does the receivable turnover ratio indicate?**

Answer: The receivable turnover ratio indicates how many times receivables are collected and replaced in a year.

**How is the operating cycle related to profitability?**

Answer: The shorter the operating cycle, the lower the firm's investment in inventories and receivables, leading to higher total assets turnover and profitability.

**What is the total assets turnover ratio used to calculate?**

Answer: The total assets turnover ratio is used to calculate the firm's accounting return on assets (ROA) and return on equity (ROE).

## **Lecture # 41**

**What are the two types of short-term financial policies based on the size of investments in current assets?**

Answer: The two types are the flexible policy and the restrictive policy.

**In a flexible short-term financial policy, what is the focus on financing of current assets?**

Answer: In a flexible policy, there is less short-term debt and more long-term debt for financing current assets.

**What are the consequences of a flexible short-term financial policy regarding current assets?**

Answer: A flexible policy leads to larger cash/marketable securities balances, larger investments in inventory, and more liberal credit terms.

**What is the trade-off involved in managing short-term assets?**

Answer: The trade-off is between carrying costs (associated with current assets) and shortage costs (related to lack of safety reserves).

**What is the optimal level of current assets that minimizes total costs?**

Answer: The optimal level of current assets is represented by CA\*.

**When is a flexible policy most appropriate?**

Answer: A flexible policy is most appropriate when carrying costs are low relative to shortage costs.

**What are temporary current assets in terms of the business cycle?**

Answer: Temporary current assets are those that are required for seasonal variations in sales or inventory build-ups.

**What are permanent current assets in terms of the business cycle?**

Answer: Permanent current assets are those that a firm needs to carry at all times.

**What are Policy F and Policy R in terms of financing policies?**

Answer: Policy F involves a short-term cash surplus and a large investment in cash and marketable securities, while Policy R uses long-term financing for permanent asset requirements and short-term borrowing for seasonal variations.

**What are the pros of having cash reserves?**

Answer: Cash reserves make a firm less likely to experience financial distress and better equipped to handle emergencies or seize unexpected opportunities.

**What is maturity hedging in short-term financial policy?**

Answer: Maturity hedging involves matching financing maturities with asset maturities.

**What are the potential risks associated with short-term financing using interest rates?**

Answer: Short-term rates may be lower, but firms can get into trouble if rates increase quickly or if they have difficulty making payments and cannot refinance short-term loans.

**What is a cash budget used for?**

Answer: A cash budget is a forecast of cash inflows and outflows over the next short-term planning period, helping determine cash surpluses and borrowing needs.

**What is the purpose of a cash reserve in a compromise policy?**

Answer: A cash reserve is used to initially finance seasonal variations in current asset needs before resorting to short-term borrowing.

**What is the average collection period in the cash budget?**

Answer: The average collection period is 30 days, implying that 2/3 of sales are collected in the quarter made and the remaining 1/3 are collected the following quarter.

**What is the payables period in the cash budget?**

Answer: The payables period is 45 days, so half of the purchases will be paid each quarter, and the remaining will be paid the following quarter.

**What is the net cash inflow for the first quarter in the cash budget?**

Answer: The net cash inflow for the first quarter is \$133.

**What is the cumulative surplus at the end of the fourth quarter in the cash budget?**

Answer: The cumulative surplus at the end of the fourth quarter is \$132.

**What is the difference between temporary and permanent current assets in the cash budget?**

Answer: Temporary current assets are seasonal, while permanent current assets are required at all times.

**Which policy is most appropriate when carrying costs are high relative to shortage costs?**

Answer: A restrictive policy is most appropriate in such a scenario.

## **Lecture # 42**

**What are the two types of unsecured loans?**

Answer: The two types are line of credit and letter of credit.

**What is the difference between committed and non-committed unsecured loans?**

Answer: Committed loans involve formal arrangements with a commitment fee, while non-committed loans are informal and involve lesser paperwork.

**What is revolving credit arrangement in unsecured loans?**

Answer: Revolving credit arrangements are open for two or more years.

**What are the three types of secured loans mentioned in the text?**

Answer: The three types are accounts receivable financing, inventory loans, and commercial paper.

**What is the difference between assigning and factoring in accounts receivable financing?**

Answer: In assigning, the borrower is responsible even if receivables are not collected, while in factoring, the receivable is discounted and sold to the lender (factor) who bears the risk of default.

**What is the interest rate for the short-term borrowing mentioned in the plan?**

Answer: The interest rate is 20% APR, calculated on a quarterly basis (5% per quarter).

**What is the objective in cash management?**

Answer: The objective in cash management is to keep the investment in cash as low as possible while efficiently operating the firm's activities.

**What are the reasons for holding cash?**

Answer: The reasons for holding cash include speculative motive, transaction motive, and precautionary motive.

**What is the speculative motive for holding cash?**

Answer: The speculative motive involves holding cash to take advantage of additional investment opportunities, such as bargain purchases, attractive interest rates, and favorable exchange rate fluctuations.

**What is the transaction motive for holding cash?**

Answer: The transaction motive involves holding cash to satisfy normal disbursement and collection activities associated with a firm's ongoing operations.

**What is the precautionary motive for holding cash?**

Answer: The precautionary motive involves holding cash as a safety margin to act as a financial reserve.

**What is the opportunity cost of holding excessive cash?**

Answer: The opportunity cost of excessive cash is the interest income that could be earned in the next best use.

**Why does a firm hold excessive cash?**

Answer: The firm holds excessive cash to provide liquidity necessary for transaction needs.

**What is the benefit of holding cash in a cash-out situation?**

Answer: In a cash-out situation, the firm may have to raise cash on a short-term basis by borrowing or selling current assets.

**What are the three motives for holding cash mentioned in the text?**

Answer: The three motives are speculative motive, transaction motive, and precautionary motive.

**What is the speculative motive for holding cash?**

Answer: The speculative motive involves holding cash to take advantage of additional investment opportunities.

**How is the precautionary motive for holding cash described?**

Answer: The precautionary motive involves holding cash as a safety margin to act as a financial reserve.

**What is the main objective in cash management?**

Answer: The main objective in cash management is to keep the investment in cash as low as possible while efficiently operating the firm's activities.

**What is the purpose of holding cash reserves in cash management?**

Answer: Cash reserves provide liquidity necessary for transaction needs and act as a financial reserve.

**What does the speculative motive in holding cash refer to?**

Answer: The speculative motive involves holding cash to take advantage of additional investment opportunities, such as bargain purchases and favorable exchange rate fluctuations.

## **Lecture # 43**

**What is the difference between bank cash and book cash?**

Answer: The difference between bank cash and book cash, representing the net effect of cheques in the process of clearing, is called float.

**What is disbursement float?**

Answer: Disbursement float occurs when cheques written by a firm cause a decrease in the firm's book balance but no change in its available balance.

**What is GM Inc.'s float before June 8?**

Answer: GM Inc.'s float before June 8 is zero.

**How is collection float generated?**

Answer: Collection float is generated when cheques collected by the firm increase book balances but do not immediately change available balance.

**What is net float?**

Answer: Net float is the sum of both disbursement float and collection float and represents the overall difference between the firm's available balance and its book balance.

**What does a positive net float indicate?**

Answer: A positive net float indicates that the firm's disbursement float exceeds its collection float, and its available balance exceeds its book balance.

**What is the net float in the given scenario?**

Answer: The net float is -\$1,000.

**How can firms speed up cash collection?**

Answer: Firms can speed up cash collection by reducing the lag between the time customers pay their bills and the time cash becomes available.

**What are the three parts into which total collection or disbursement time can be broken?**

Answer: The three parts are mailing time, processing delay, and availability delay.

**What does Electronic Data Interchange (EDI) do?**

Answer: EDI electronically transfers financial information and funds between parties, eliminating paper invoices, paper cheques, mailing, and handling.

**What is the purpose of cash concentration?**

Answer: Cash concentration is the process of moving cash collections from multiple accounts to a main account, reducing the number of accounts that must be tracked.

**What are the strategies to increase mail float, processing float, and availability float?**

Answer: The strategies may include writing checks on a distant bank, holding payment for several days, verifying statement accuracy for large amounts, mailing from distant post offices, etc.

**Why must financial managers work with collected company cash balances?**

Answer: Financial managers must work with collected company cash balances and not with the company's book balance to avoid ethical and legal questions.

**What is a zero-balance account?**

Answer: A zero-balance account is a disbursement account where the firm maintains a zero balance, transferring funds in from a master account only as needed to cover cheques presented for payment.

**Why do firms invest idle cash in the money market?**

Answer: Firms invest idle cash in the money market to earn a return on surplus cash.

**What is the primary reason for granting credit to customers?**

Answer: The primary reason for granting credit to customers is to stimulate sales.

**What does credit analysis involve?**

Answer: Credit analysis involves determining the probability that customers will or will not pay.

**What are the components of credit policy?**

Answer: The components are terms of sale, credit analysis, and collection policy.

**How are credit terms interpreted?**

Answer: Credit terms are interpreted as (take this discount off the invoice price) / (if you pay in this many days), (else pay the full amount in this many days).

## **Lecture # 44**

**What is the credit period?**

Answer: The credit period is the basic length of time for which credit is granted.

**What are the two components of the credit period if a cash discount is offered?**

Answer: The two components are the net credit period (length of time customer has to pay) and the cash discount period (time during which discount is available).

**What factors influence the credit period?**

Answer: Factors influencing the credit period include buyer's inventory period, operating cycle, perishability, collateral value, consumer demand, cost, profitability, standardization, credit risk, size of the account, product market competition, and customer type.

**How does a cash discount affect the credit offered?**

Answer: A cash discount reduces the amount of credit offered, and the firm must trade this off against the cash discount.

**What does "3/10 net 30" mean in credit terms?**

Answer: "3/10 net 30" means that the customer can take a 3% discount if they pay within 10 days. Otherwise, they must pay the full amount within 30 days.

**What is the net float in the given scenario?**

Answer: The net float is -\$1,000.

**What is a credit instrument?**

Answer: A credit instrument is a basic evidence of indebtedness used for credit transactions.

**What are some examples of credit instruments?**

Answer: Examples of credit instruments include promissory notes, commercial drafts, and banker's acceptances.

**What is the optimal credit policy based on?**

Answer: The optimal credit policy is determined by the point at which the incremental cash flows from increased sales equal the incremental costs of carrying the increased investment in accounts receivable.

**What are the carrying costs associated with granting credit?**

Answer: The carrying costs associated with granting credit include the required return on receivables, losses from bad debts, and the cost of managing credit and credit collection.

**What are the traditional 5 C's of credit?**

Answer: The traditional 5 C's of credit are Character, Capacity, Capital, Collateral, and Conditions.

**What is credit scoring?**

Answer: Credit scoring is the process of calculating a numerical rating for a customer based on information collected to determine whether credit should be granted.

**What does collection policy refer to?**

Answer: Collection policy refers to obtaining payment on past-due accounts.

**What does the firm focus on to keep track of customer payments?**

Answer: The firm focuses on its Average Collection Period (ACP) to keep track of customer payments.

**What is the aging schedule used for?**

Answer: The aging schedule is used to monitor receivables and classifies credit accounts by age.

**How is collection effort managed for customers who are past due?**

Answer: Most firms follow a protocol for past-due customers, including sending delinquency letters, making telephone calls, employing collection agencies, and taking legal action against the customer.

## **Lecture # 45**

**What does the operating cycle of a firm consist of?**

Answer: The operating cycle of a firm consists of its inventory period and its receivables period.

**Why must credit policy and inventory policy be coordinated?**

Answer: Credit policy and inventory policy must be coordinated to ensure the process of acquiring inventory, selling inventory, and collecting on sale proceeds smoothly.

**What are the three types of inventory?**

Answer: The three types of inventory are raw material, work-in-progress, and finished goods.

**What is derived or dependent demand?**

Answer: Derived or dependent demand refers to the demand of an inventory item that becomes a part of another item.

**What is the goal of inventory management?**

Answer: The goal of inventory management is to minimize the sum of carrying costs and shortage costs.

**What is the ABC approach in inventory management?**

Answer: The ABC approach involves dividing the inventory into three or more groups based on quantity and inventory value.

**What is the Economic Order Quantity (EOQ) model?**

Answer: The EOQ model is an approach to explicitly establish an optimal inventory level by determining the order size the firm should use when restocking its inventory.

**What are the carrying costs associated with inventory?**

Answer: Carrying costs include all direct and opportunity costs of keeping inventory on hand, such as storage costs, insurance, taxes, losses due to obsolescence, and the opportunity cost of capital.

**What are shortage costs associated with inventory?**

Answer: Shortage costs include restocking costs (the cost of placing an order) and safety reserve costs (opportunity losses from having inadequate inventory).

**What is the trade-off in inventory management?**

Answer: The trade-off is that carrying costs increase with inventory levels, while shortage or restocking costs decline with inventory levels.

**What is the ABC approach used for?**

Answer: The ABC approach is used to categorize inventory items based on their value and importance to the company.

**How is the Economic Order Quantity (EOQ) calculated?**

Answer: The EOQ is calculated as the square root of  $(2T \times F / CC)$ , where T is the total unit sales per year, F is the fixed cost per order, and CC is the carrying cost per unit per year.

**What is the reorder point?**

Answer: The reorder point is the level of inventory at which the firm places its inventory orders even before reaching a critical level to minimize the risk of stock-out.

**What is the safety stock in inventory management?**

Answer: The safety stock is the minimum level of inventory that a firm keeps on hand to cover the lead time between order and delivery.

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