

What is the **Time Value of Money**?

1

**Simple Interest** (or **Simple Interest**) is interest calculated on the initial principal and also on the accumulated interest of previous periods of a deposit or loan.

2

What is an **Annuity**?

3

**Perpetuity** refers to an infinite amount of time. In finance, it is a constant stream of identical cash flows with no end.

4

How would you calculate EAR (Effective annual rates)?

5

NPV (**Net Present Value**) is the difference between the market value of a project and its cost.

6

What is the equation to calculate the NPV?

7

What is Average Accounting Return (AAR) and how do you calculate it?

8

*Compound interest (or compounding interest) is interest calculated on the initial principal and also on the accumulated interest of previous periods of a deposit or loan.*

2

*The time value of money (TVM) is the idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. This core principle of finance holds that, provided money can earn interest, any amount of money is worth more the sooner it is received.*

1

*Perpetuity refers to an infinite amount of time. In finance, it is a constant stream of identical cash flows with no end.*

4

*An annuity is a financial product that pays out a fixed stream of payments to an individual, primarily used as an income stream for retirees.*

3

*NPV (Net Present Value) is the difference between the market value of a project and its cost.*

6

$$EAR = (1 + \frac{r}{m})^m - 1$$

- $r$  is the quoted rate
- $m$  is the number of compounding per year

*are the equation's values.*

5

$$AAR = \frac{\text{AverageNetIncome}}{\text{AverageBookValue}}$$

*The average project earnings after taxes and depreciation, divided by the average book value of the investment during its life.*

8

$$NPV = -IO + \sum_{t=1}^N (\frac{CF_t}{(1+r)^t})$$

- $IO$  is the initial investment.
- $N$  &  $t$  are number of years and current year respectively.
- $r$  is estimated required return.
- $CF$  is cash flow.

*Formula variables*

7

<p>The <span style="background-color: #cccccc; display: inline-block; width: 100px; height: 1em; vertical-align: middle;"></span> is the amount of time required for an investment to generate cash flows sufficient to recover its initial cost.</p> <p>9</p>	<p><span style="background-color: #cccccc; display: inline-block; width: 100px; height: 1em; vertical-align: middle;"></span> describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.</p> <p>10</p>
<p>What are the advantages &amp; disadvantages of the payback period calculation?</p> <p>11</p>	<p>What is <b>Net present value</b>? How would you calculate it?</p> <p>12</p>
<p>What is the <b>Internal rate of return</b>?</p> <p>13</p>	<p>If two investments are <span style="background-color: #cccccc; display: inline-block; width: 100px; height: 1em; vertical-align: middle;"></span>, then taking one of them means that we cannot take the other.</p> <p>14</p>
<p>A <span style="background-color: #cccccc; display: inline-block; width: 50px; height: 1em; vertical-align: middle;"></span> is a fixed income investment in which an investor loans money to an entity (typically corporate or governmental) which borrows the funds for a defined period of time at a variable or fixed interest rate.</p> <p>15</p>	<p><span style="background-color: #cccccc; display: inline-block; width: 80px; height: 1em; vertical-align: middle;"></span> is the amount of return an investor realizes on a bond.</p> <p>16</p>

*Liquidity describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.*

10

*The Payback Period is the amount of time required for an investment to generate cash flows sufficient to recover its initial cost.*

9

*The difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting to analyse the profitability of a projected investment or project.*

*It is calculated by subtracting the initial investment from the present value of cash flows.*

12

- + Easy to understand
- + Biased towards liquidity
- + Adjusts for uncertainty of later cash flows
- Ignores the time value of money
- Requires an arbitrary cutoff point
- Ignores cash flows beyond the cutoff date
- Biased against long-term projects, such as research and development, and new projects

*Payback period +/-*

11

*If two investments are Mutually Exclusive, then taking one of them means that we cannot take the other.*

14

*IRR is the return that makes  $NPV = 0$ . It is the most important alternative to NPV. You'd accept a project if the IRR is greater than the required return.*

13

*Bond yield is the amount of return an investor realizes on a bond.*

16

*A bond is a fixed income investment in which an investor loans money to an entity (typically corporate or governmental) which borrows the funds for a defined period of time at a variable or fixed interest rate.*

15

*What is the difference between debt and equity?*

17

*What is a **bond indenture**?*

18

*What do you call bond price due to changes in discount rates?*

19

*\_\_\_\_\_ is the relationship between time to maturity and yield, all else equal.*

20

*What is a dividend?*

21

*If you invest in a stock, you can receive cash in two ways. What are those ways?*

22

*What is the **P/E ratio**?*

23

*The \_\_\_\_\_ is the return over and above the risk-free rate. The extra return earned for taking on risk. Treasuring bills are considered to be risk-free.*

24

*The contract between company and the bondholders and includes:*

- *The basic terms of the bonds.*
- *The total amount of bonds issued.*
- *A description of property used as security, if applicable.*
- *Call provisions.*
- *Details of protective covenants.*

*Bond Indenture*

18

*Debt is not an ownership interest. Creditors do not have voting rights. Interest is considered a cost of doing business and is tax-deductible. Excess debt can lead to financial and bankruptcy.*

*Equity: Common stockholders vote to elect the board of directors and on other issues. Dividends are not considered a cost of doing business and are not tax deductible. Stockholders have no legal recourse if no dividends are declared. An all-equity firm cannot go bankrupt.*

17

*Term structure is the relationship between time to maturity and yield, all else equal.*

20

*Interest rate risk*

19

- *The company may pay dividends.*
- *You may sell your shares to another investor.*

*The ways to receive cash from stock*

22

*A sum of money paid regularly (typically annually) by a company to its shareholders out of its profits (or reserves).*

21

*The risk premium is the return over and above the risk-free rate. The extra return earned for taking on risk. Treasuring bills are considered to be risk-free.*

24

*Price per share divided by earnings per share. This is most commonly used in real-world for stock valuation. Applied through comparative valuation. If the P/E is high, it is considered overpriced so sell!*

23

<p>What is <b>total cash return</b> and <b>percentage return</b>?</p> <p>25</p>	<p>_____ is the volatility of asset returns: greater volatility = greater uncertainty or risk. Measured by the variance and standard deviation.</p> <p>26</p>
<p>What is the effect of a higher and lower <b>volatility</b>?</p> <p>27</p>	<p>What is a Security?</p> <p>28</p>
<p>What are the effects of positive and negative news on a security?</p> <p>29</p>	<p>To earn higher return, one must _____.</p> <p>30</p>
<p>What are the differences between Weak, Semi-strong and Strong form?</p> <p>31</p>	<p>_____ are based on the probabilities of possible outcomes. In this context, expected means average if the process is repeated many times.</p> <p>32</p>

*Return variability is the volatility of asset returns:  
greater volatility = greater uncertainty or risk.  
Measured by the variance and standard deviation.*

26

*A security is a fungible, negotiable financial instrument that holds some type of monetary value. It represents an ownership position in a publicly-traded corporation (via stock), a creditor relationship with a governmental body or a corporation (represented by owning that entity's bond), or rights to ownership as represented by an option.*

28

*To earn higher return, one must invest in security of firms with higher risk.*

30

*Expected returns are based on the probabilities of possible outcomes. In this context, expected means average if the process is repeated many times.*

32

*Total cash return: Income from investment + Capital gain (loss) due to change in price.*

*Percentage return:  
$$\text{dividend yield} = \text{income} / \text{beginning price} + \text{capital gains} = (\text{ending} - \text{starting price}) / \text{starting price}.$$*

25

*A higher volatility means that a security's value can potentially be spread out over a larger range of values. This means that the price of the security can change dramatically over a short time period in either direction. A lower volatility means that a security's value does not fluctuate dramatically, and tends to be more steady.*

27

*Positive news about a firm increases demand for its security, which in turn pushes up the price of this security. This is reversed for negative news. Demand for security is decreased which pushes down the price. Prices quickly reflect all available public information.*

29

- Weak form: Prices reflect all past market information such as price and volume. If the market is weak form efficient, then investors cannot earn abnormal returns by trading on market information.*
- Semi-strong form: Prices reflect all publicly available information including trading information, annual reports, press releases, etc.*
- Strong form: Prices reflect all information: including public and private.*

*Difference between the three forms*

31



**Standard Deviation** still measure the volatility of returns. Using unequal probabilities for the entire range of possibilities. Weighted average of squared deviations.

33

What is an **Asset**?

34

What is a **Portfolio**?

35

**Portfolio** is the investment in several different asset classes or sectors.

36

What are the differences between **Systematic** & **Unsystematic risk**?

37

Our cost of capital

38

What is the **Beta**?

39

In the **Capital Asset Pricing Model**, what does the beta tell us?

40

*An asset is a resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide future benefit. Assets are reported on a company's balance sheet, and they are bought or created to increase the value of a firm or benefit the firm's operations.*

34

*Variance and standard deviation still measure the volatility of returns. Using unequal probabilities for the entire range of possibilities. Weighted average of squared deviations.*

33

*Portfolio diversification is the investment in several different asset classes or sectors.*

36

*A portfolio is a collection of assets. An assets risk and return are important to how the stock affects the risk and return of the portfolio.*

35

*Our cost of capital provides us with an indication of how the market views the risk of our assets.*

38

*Systematic risk is the risk factors that affect a large number of assets. Includes such things as changes in GDP, inflation, interest rates, etc.*

*Unsystematic risks are risk factors that affect a limited number of assets. Also known as unique risk and asset-specific risk. Includes such things as labour strikes, part shortages, etc.*

*Systematic VS. Unsystematic risk*

37

*beta < 1 implies the asset has less systematic risk than the overall market.*

*beta > 1 implies the asset has more systematic risk than the overall market.*

*beta = 1 implies that the asset has the same systematic risk as the overall market.*

40

*Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.*

*A beta of 1 indicates that the security's price moves with the market. A beta of less than 1 means that the security is theoretically less volatile than the market. A beta of greater than 1 indicates that the security's price is theoretically more volatile than the market.*

39

What is the **Security Market Line**?

41

The [REDACTED] is the return required by the equity investors given the risk of the cash flows from the firm.

42

What are the pros and cons of the **Dividend Growth Model**

43

What are the pros and cons of the **Capital Asset Pricing Model** approach?

44

The [REDACTED] refers to the effective rate a company pays on its current debt.

45

[REDACTED] is a calculation of a firm's cost of capital in which each category of capital is proportionately weighted. The average is the [REDACTED], based on the markets perception of the risk of those assets.

The weights are determined by

46

**Capital Structure** decision involves the choice between [REDACTED] & [REDACTED] to finance a firm.

47

How does leverage affect the **Earnings Per Share** and **Return On Equity** of a firm?

48

*The Cost of Equity is the return required by the equity investors given the risk of the cash flows from the firm.*

42

*The SML is a line drawn on a chart that serves as a graphical representation of the capital asset pricing model (CAPM), which shows different levels of systematic, or market, risk of various marketable securities plotted against the expected return of the entire market at a given point in time.*

41

*Explicitly adjusts for systematic risk applicable to all companies (as long as we can compute the beta).*

*You have to estimate the expected market risk premium and beta, both of which vary over time. We are always relying on past data to predict the future.*

44

*It is easy to understand and use.*

*Only applicable to companies currently paying dividends. Dividends must be growing at a reasonably constant rate. Extremely sensitive to the estimated growth rate. Does not explicitly consider risk.*

43

*Weighted average cost of capital (WACC) is a calculation of a firm's cost of capital in which each category of capital is proportionately weighted.*

*The average is the required return on the firms assets, based on the markets perception of the risk of those assets.*

*The weights are determined by how much of each type of financing is used.*

46

*The Cost of Debt refers to the effective rate a company pays on its current debt.*

45

*It amplifies the variation. When we increase the amount of debt financing, we increase the fixed interest expense. If we have a really good year, then we pay our fixed costs, and have more left over for our stockholders. If we have a really bad year, we still have to pay our fixed costs, and have less left over for our stockholders.*

48

**Capital Structure** *decision involves the choice between debt & equity to finance a firm.*

47

*Types of bankruptcy costs:*  
[redacted] - directly associated with bankruptcy, e.g. legal and administrative expense.  
[redacted] - the cost of avoiding bankruptcy filing by a financial distressed firm.

49

A [redacted] is a financial security with a value that is reliant upon or derived from an underlying asset or group of assets. The [redacted] itself is a contract between two or more parties based upon the asset or assets.

50

A [redacted] is an investment to reduce the risk of adverse price movements in an asset. Normally, it consists of taking an offsetting position in a related security, such as a futures contract.

51

What are **Futures/Forwards**?

52

You buy a call option on a company's stock for \$4 per share, which gives you the option to buy the stock at a strike price of \$60 per share on the expiration date. The time comes, and the stock price is \$65. Should you buy? At which price should you not buy.

53

What is **Corporate Governance**?

54

What are the three categories of business organization?

55

With a Sole proprietorship & Partnership, the business has a [redacted]. [redacted] is difficult and [redacted] can't be raised.

56

*A derivative is a financial security with a value that is reliant upon or derived from an underlying asset or group of assets. The derivative itself is a contract between two or more parties based upon the asset or assets.*

50

*Types of bankruptcy costs:  
Direct costs - directly associated with bankruptcy, e.g. legal and administrative expense.  
Indirect costs - the cost of avoiding bankruptcy filing by a financial distressed firm.*

49

*They are contracts in which one party agrees to deliver a specified asset to another party at a specific price and time.*

52

*A hedge is an investment to reduce the risk of adverse price movements in an asset. Normally, it consists of taking an offsetting position in a related security, such as a futures contract.*

51

*Corporate governance is the system of rules, practices and processes by which a firm is directed and controlled. Corporate governance essentially involves balancing the interests of a company's many stakeholders, such as shareholders, management, customers, suppliers, financiers, government and the community.*

54

*You should, it is a \$1 gain.  
Anything less than \$64 is a loss, due to the initial call option price.*

53

*With a Sole proprietorship & Partnership, the business has a limited life. Transferring ownership is difficult and cash for investment can't be raised.*

56

*¿ Sole proprietorship  
¿ Partnership  
¿ Corporation*

*Three categories*

55

<p>When it comes to taxes, whats the differences between Sole proprietorship/Partnership &amp; Corperation?</p> <p>57</p>	<p>With a Corperation, there is [REDACTED].</p> <p>[REDACTED] own firms and represented by board of directors or supervisory board.</p> <p>Managers run firms and selected by the boards.</p> <p>58</p>
<p>What do we mean my <b>Institutional environments</b>?</p> <p>59</p>	<p>Common Law:</p> <p>[REDACTED].</p> <p>[REDACTED].</p> <p>Civil Law:</p> <p>[REDACTED].</p> <p>[REDACTED].</p> <p>Civil Law vs. Common Law</p> <p>60</p>
<p>What are some of the investor protection mechanisms?</p> <p>61</p>	<p>What is <b>behavioral finance</b>?</p> <p>62</p>
<p>What is <b>Herd Mentality</b>? Give an example of it.</p> <p>63</p>	<p>What is an investment bubble?</p> <p>64</p>

*With a Corporation, there is separation of ownership and control.  
Shareholders own firms and represented by board of directors or supervisory board.  
Managers run firms and selected by the boards.*

58

*Taxes are taxed as personal income for Sole proprietorship/Partnership and at the corporate rate for a Corporation.*

57

*Common Law:*

*Law is developed through court rulings.*

*Flexible and can adjust quickly to events.*

*Civil Law:*

*Law is developed through regularion and code of law.*

*Based on code of principles, does not change.*

*Civil Law vs. Common Law*

60

*The elaboration of rules and requirements to which individual organizations must conform in order to receive legitimacy and support.*

59

*Behavioral finance is a field of finance that proposes psychology-based theories to explain stock market anomalies such as severe rises or falls in stock price.*

*Within behavioral finance, it is assumed the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes.*

62

- *Proxy vote by mail is allowed.*
- *Votes are not blocked before the annual general meeting.*
- *Cumulative voting or proportional representation exists.*
- *Pre-emptive rights.*
- *Opposed minorities mechanisms.*
- *Minimum percentage to call an extraordinary shareholder's meeting.*

*Investor protection mechanisms*

61

*An investment bubble results from a rapid escalation in price of an asset over its intrinsic value, which is caused by exuberant market behavior perpetuated through a positive feedback loop. The bubble inflates until the asset price reaches a level beyond economical rationality when further increases in price are contingent purely on investors continuing to buy in at the highest price.*

64

*Herd mentality relates to instances in which individuals gravitate to the same or similar investments based almost solely on the fact that many others are investing in those stocks. The fear of regret of missing out on a good investment is often a driving force behind herd instinct.*

*An example would be the .com bubble.*

63



<p><i>Effective market hypothesis (EMH) makes many predictions that does not hold up [REDACTED]. Stock return are supposed to be unpredictable due to competition to arbitrage. But [REDACTED] evidence shows many pricing anomalies where apparent mispricings are not exploited away.</i></p> <p>65</p>	<p><i>In the context of behavioral finance, describe <b>Overconfidence.</b></i></p> <p>66</p>
<p><i>In the context of behavioral finance, describe <b>Framing.</b></i></p> <p>67</p>	<p><i>In the context of behavioral finance, describe <b>Representativeness.</b></i></p> <p>68</p>

*People in general overestimate their abilities. Investors overestimate the precision of their beliefs and forecasts. This may explain differences in investment performance between gender. E.g, Men are more overconfident & trade more than woman.*

66

*Effective market hypothesis (EMH) makes many predictions that does not hold up empirically. Stock return are supposed to be unpredictable due to competition to arbitrage. But empirical evidence shows many pricing anomalies where apparent mispricings are not exploited away.*

65

*People commonly do not take into account the size of a sample and believe that small sample is just as representative of a population as large one. Infer pattern too quickly on small sample and extrapolate apparent trends too far into future.*

68

*An individual may: Reject a bet when it is posed in terms of risk surrounding possible gains or accept that same bet when described in terms of the risk surrounding possible losses. Individuals may act risk averse in terms of gains but risk seeking in terms of loss.*

67