Stock Investments

Khan Academy – Intro to Stocks

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I. Security in the equity world is called a **stock**
II. Security in the debt world is called a **bond**
III. **Assets** of a company is property owned by the company, regarded as having value
    a. Land, building, patents, computers, furniture, etc.
    b. In case of bankruptcy, they try to sell this stuff
    c. All of these things carry value
IV. Debts are a liability for the company
V. Assets – Liabilities = Equity
    a. Or Assets = Liabilities + Equity
VI. **Equity** – value of the shares owned by a company
    a. When buying stock, this is what you are a part owner of
    b. **Shares** are a split of the owner's equity
VII. Current liabilities are amounts due to be paid to creditors within twelve months
VIII. Current Assets are cash and other assets that are expected to be converted to cash within a year
IX. To find worth of every share if we believe their numbers in their financial statement (book value)
    a. Divide their *shareholder/stockholder equity* by the *number of shares* offered by the company
        i. Ex: $8.40 million / 2.78 m shares = $3.02 per share
            1. If the stock is less than this amount, then you are getting a discounted rate
                a. A person may buy it thinking it may go up later because he believes that the company share is worth more than this value
            2. A person selling it for less than this amount may think the company is not worth this much or because future sales may drop or any other reason
X. 52 wk range is the range of prices the stock has sold in that time
XI. **Average volume** is the number of shares sold/exchanged per day
XII. **Market cap** is market's sense of what the actual stockholder equity is in value based on current stock price
    a. Formula: Current Stock Price x Number of Shares in the company
XIII. **Shorting Stock**
    a. Making a bet that a stock will fall
    b. Def: Short selling occurs when stock market participants sell stocks or commodities they do not own (i.e. they borrow them) in order to profit later from an anticipated fall in price
    c. The person borrows/rents share(s) of a company and then sells it right away
        i. Through a broker
    d. Essentially your selling high and buying low
        i. Opposite of long sale
            1. Buy low and sell high
    e. Islamically, these are not permissible due to two reasons
        i. You can't sell something you do not own
        ii. Riba issue
            1. It is known that in the application of short selling the lender, i.e. the stock owner, stipulates a gain in return for lending the stocks. However, any gain stipulated by the lender is deemed riba, therefore, the issue of the lender stipulating a return for lending the stocks becomes the fundamental factor in determining the legality of the whole transaction
    f. A short sale investor usually researches before deciding on whether to do this or not
        i. Otherwise, he could lose money if the stock goes up rather than down

XIV. Understanding company statements and capital structure

a. **Gross profit** is a company's residual profit after selling a product or service and deducting the cost associated with its production and sale. To calculate gross profit: examine the income statement, take the revenue and subtract the cost of goods sold.
b. **Operating profit** - a profit from business operations (gross profit less operating expenses) before deduction of interest and taxes.
    i. Tells you how much you're making from the business itself
c. **Net Income** – an entity's income minus cost of goods sold, expenses and taxes for an accounting period
    i. Also known informally as the bottom line
    ii. This is what goes to the owners of the company
        1. Meaning this is what they get to take home after all expenses have been paid for running the business
d. **Return on Assets (ROA)**
    i. The return on assets (ROA) shows the percentage of how profitable a company's assets are in generating revenue. This number tells you what the company can do with what it has. How much return can they get with what they have in assets?
    ii. Formula: Operating Profit / Value of Assets = ROA
        1. There are other ways to do it as well. It all depends on what you're looking for.
e. **Return on Equity (ROE)**
    i. Measures the rate of return for ownership interest (shareholders' equity) of common stock owners. It measures the efficiency of a firm at generating profits from each unit of shareholder equity, also known as net assets or assets minus liabilities.
    ii. Formula: Net Income / Equity
f. **Return on Investment (ROI)**
    i. It is the most common profitability ratio. There are several ways to determine ROI, but the most frequently used method is to divide net profit by total assets. So if your net profit is $100,000 and your total assets are $300,000, your ROI would be .33 or 33%
    ii. Formula: Net Income / Value of Assets = ROI
    iii. Return per dollar invested
g. **Rate of Return**
    i. A profit on an investment over a period of time, expressed as a proportion of the original investment. The time period is typically a year, in which case the rate of return is referred to as annual return
    ii. The riskier the business, the higher the return demanded. Someone would want a shot at double digit or triple digit returns on a start-up, for example, because the risk of failure and wipe out are much higher.

XV. Corporate metrics and valuation

a. When looking at stocks, don't just focus on the stock price per share
    i. You must also look at the number of shares in that company
        1. A more expensive stock might be a better deal than a cheaper one
            a. Ex: Company A and B have an Asset value of $1 Million. Company A has 1 Million shares so its stock is $1 each. But Company B has 500,000 shares so its stock is $2 each. The latter is a better deal because due to their lower number of shares, you own MORE of the company per share.
b. The three financial statements of a company
    i. Income statement – how much a company earns in a given period
        1. Monthly, annually, weekly, six month, etc.
        2. Includes **Revenue** (income that a company receives from its normal business activities, usually from the sale of goods and services to customers before all of the other expenses are subtracted from it. Also known as the *Top Line*), cost of

goods sold, gross profit, marketing cost, sales cost, **G&A** (General and Administrative expenses-all the stuff that the corporate office does), **SG&A** (Selling General and Administrative expenses-commissions, taking clients out to eat, traveling cost for sales people, etc.), **Operating Profit** (Gross Profit – Operating Cost. It shows profit after subtracting operating costs before deduction of interest and taxes), Interest paid, **Pre-Tax Income** (A company's earnings after all operating expenses, including interest and depreciation, have been deducted from total sales or revenues, but before income taxes have been subtracted), Taxes, Net Income

   ii. Balance sheet
   iii. Cash Flow statement

c. **Earnings Per Share (EPS)** – The monetary value of earnings per outstanding share of common stock for a company.
   i. Formula: Net Income / Number of Shares

d. **Price to Earnings Ratio (P/E Ratio)**
   i. Formula: Price of the stock per share / EPS = P/E
   ii. Lower this number is, the lower your paying for it
   iii. In general, a high P/E suggests that investors are expecting higher earnings growth in the future compared to companies with a lower P/E
      1. However, the P/E ratio doesn't tell us the whole story by itself. It's usually more useful to compare the P/E ratios of one company to other companies in the same industry to the market in general or against the company's own historical P/E
   iv. The P/E is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollar of earnings. If a company were currently trading at a multiple (P/E) of 20, the interpretation is that an investor is willing to pay $20 for $1 of current earnings
   v. Generally a high P/E ratio means that investors are anticipating higher growth in the future
      1. You should not buy stock with a higher P/E than average if the company is not growing or is not expected to grow
   vi. Companies that are losing money do not have a P/E ratio
   vii. There's no "good" P/E, but 10-20 is usually considered fairly valued. <10 is usually considered undervalued and >20 is usually considered overvalued, though it really depends on the industry. Compare the company to its industry peers to determine if its P/E is fair.

e. **Debt/Equity Ratio (D/E Ratio)**
   i. Def: A debt ratio used to measure a company's financial leverage, calculated by dividing a company’s total liabilities by its stockholders' equity. The D/E ratio indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders’ equity
   ii. Formula
      1. $$\text{Debt - Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Shareholders' Equity}}$$
         a. The result may often be expressed as a number or as a percentage
   iii. Given that the debt/equity ratio measures a company’s debt relative to the total value of its stock, it is most often used to gauge the extent to which a company is taking on debts as a means of leveraging (attempting to increase its value by using borrowed money to fund various projects). A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. Aggressive leveraging practices are

often associated with high levels of risk. This may result in volatile earnings as a result of the additional interest expense

iv. Ex: A company has a total shareholder value of $180,000 and has $620,000 in liabilities. Its debt/equity ratio is then 3.4444 ($620,000 / $180,000), or 344.44%, indicating that the company has been heavily taking on debt and thus has high risk. Conversely, if it has a shareholder value of $620,000 and $180,000 in liabilities, the company's D/E ratio is 0.2903 ($180,000 / $620,000), or 29.03%, indicating that the company has taken on relatively little debt and thus has low risk.

1. If a lot of debt is used to finance increased operations (high debt to equity), the company could potentially generate more earnings than it would have without this outside financing. If this were to increase earnings by a greater amount than the debt cost (interest), then the shareholders benefit as more earnings are being spread among the same amount of shareholders. However, if the cost of this debt financing ends up outweighing the returns that the company generates on the debt through investment and business activities, stakeholders' share values may take a hit. If the cost of debt becomes too much for the company to handle, it can even lead to bankruptcy, which would leave shareholders with nothing

XVI. Depreciation (Decline)

a. COGS – Costs of Goods Sold
b. Spreading out the cost of a tangible (physical) asset
c. Def: a reduction in the value of an asset with the passage of time, due in particular to wear and tear.
    i. A method of allocating the cost of a *tangible asset* (something physical: machinery, building, etc.) over its useful life. Businesses depreciate long-term assets for both tax and accounting purposes.
d. For accounting purposes, depreciation indicates how much of an asset's value has been used up. For tax purposes, businesses can deduct the cost of the tangible assets they purchase as business expenses; however, businesses must depreciate these assets in accordance with IRS rules about how and when the deduction may be taken based on what the asset is and how long it will last
e. Depreciation is used in accounting to try to match the expense of an asset to the income that the asset helps the company earn. For example, if a company buys a piece of equipment for $1 million and expects it to have a useful life of 10 years, it will be depreciated over 10 years. Every accounting year, the company will expense $100,000 (assuming straight-line depreciation), which will be matched with the money that the equipment helps to make each year

XVII. Amortization (Repayment)

a. Spreading out the cost of a non-tangible asset
    i. Patents, fees licenses, debt, etc.
b. Def: The spreading out of capital expenses for intangible assets over a specific period of time (usually over the asset's useful life) for accounting and tax purposes
c. Amortization is similar to depreciation, which is used for tangible assets, and to depletion, which is used with natural resources
d. Term also used in lending world
    i. Def: The paying off of debt with a fixed repayment schedule in regular installments over a period of time. Consumers are most likely to encounter amortization with a mortgage or car loan

XVIII. **Enterprise Value (EV)**

a. Def: a measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization. The market capitalization of a company is simply its share price multiplied by the number of shares a company has outstanding. Enterprise value is calculated

as the market capitalization plus debt, minority interest and preferred shares, minus total cash and cash equivalents.

b. Formula: EV = market value of common stock + market value of preferred equity + market value of debt + minority interest - cash and investments
c. Shows essentially how much you would have to pay to buy out or own a particular enterprise

XIX. **EBITDA**

a. Earnings Before Interest, Taxes, Depreciation, Amortization

XX. **Stock dilution**

a. Def: A reduction in the ownership percentage of a share of stock caused by the issuance of new stock
    i. When the number of shares outstanding increases, each existing stockholder will own a smaller, or diluted, percentage of the company
    ii. The smaller ownership percentage also diminishes each investor's voting power
b. Investopedia: Dilution reduces the value of existing shares by reducing the stock's earnings per share
c. Share dilution may be imminent any time a company needs additional capital. The potential upside of share dilution is that the additional capital the company receives from issuing additional shares can improve the company's profitability and the value of its stock

XXI. **Dividend Yield**

a. Def: A financial ratio that shows how much a company pays out in dividends each year relative to its share price. In the absence of any capital gains, the dividend yield is the return on investment for a stock
b. Formula:

$$= \frac{\text{Annual Dividends Per Share}}{\text{Price Per Share}}$$

c. Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position - in other words, how much "bang for your buck" you are getting from dividend
d. Ex: If two companies both pay annual dividends of $1 per share, but ABC company's stock is trading at $20 while XYZ company's stock is trading at $40, then ABC has a dividend yield of 5% while XYZ is only yielding 2.5%. Thus, assuming all other factors are equivalent, an investor looking to supplement his or her income would likely prefer ABC's stock over that of XYZ.
e. To determine, how much a company pays per share, use following formula
    i. Price per share x Div Yield Percentage
        1. Ex:
            a. Intel: $29.01 x 3.31% (.0331) = $0.96 / share
            b. Apple: $117.27 x 1.78% (.0178) = $2.08 / share

XXII. **What to consider when choosing a stock**

a. Khan Academy
    i. Stock price
    ii. Current Yield
    iii. Dividend Yield
    iv. Market Value
    v. Earnings Yield
b. CNN Money
    i. Buy stocks in companies you know and understand
    ii. Look for companies that are beating the market. Meaning the stock is going up faster than the S&P 500 over the past month or year
    iii. Start with better than average companies
    iv. Do a little homework on the company’s revenue (sometimes called sales). It’s how much the company makes in the last 3 months or year

1. Companies can manipulate other numbers but revenue is a lot harder
2. Compare the company's revenue from first quarter of this year to first quarter of last year. Is it growing?

v. Once invested, don't look at the markets every day. Check occasionally.

c. CBS News
   i. Don't put too much weight on the current market environment when making decisions
      1. Basing investment decisions on small samples can lead to costly outcomes. Don't ignore the much larger data set available
   ii. Always be wary of anyone who is recommending investments or strategies based on anything less than all the evidence available

XXIII. Higher the reward, the higher the risk
   a. If someone offering you low risk with high reward, then this is something to be highly cautious about
      i. Might be a scam

XXIV. **Return on Capital (ROC)**
   a. Formula: Cash you get per year / Cash you put it
   b. Ex: A $1 Million investment with $100k return per year [after all expenses paid (taxes, costs, fees, etc.) = 10%
      i. 100,000 / 1000,000 = 0.10
      ii. Meaning you'll get back 10% of your investment every year
         1. It will take 10 years to reach a million if it remains at that percentage
   c. In general, after evaluating risk, you always want to go with an investment with the higher return on capital

XXV. **Cost of Capital**
   a. You only want to do an investment if your Return on Capital is greater than your Cost of Capital
      i. RoC > CoC
   b. Ex: You invest in something with a loan of $1 M with a 15% interest/year and your return on capital is 10%
      i. Your cost of capital here is 15%: $150k
         1. Meaning you're paying this amount every year
      ii. Your return on capital is 10%: $100k
         1. Meaning you're receiving $100k in your pocket every year
      iii. This would not be a good investment because it's costing you more
         1. Unfortunately, lots of homeowners fall into this

XXVI. **Mutual Funds**
   a. Groups of stocks and other investment instruments (Bonds, Certificate of deposits, ...etc.) managed by a "professional" and pooling money from thousands of investors and leveraging the aggregated amount of the pooled money in buying stocks and bonds
   b. Types
      i. Income Funds
         1. These aim to provide the investor with a regular income (monthly/quarterly) by investing in securities that provide income (e.g. dividend paying stocks, etc.). The appreciation of capital is of secondary importance (if at all).
      ii. Growth Funds
         1. The main aim of this type of fund is to grow the capital invested by appreciation of the underlying securities, and not to provide any annual/quarterly income.
   c. Advantages
      i. Spread the risk by diversifying the portfolio. If one instrument (e.g. Stocks) or sector (e.g. Transportation) falters, then the hit to the overall portfolio is minimal.
   d. Disadvantages

i. Can incur huge costs in fees and commissions, unless you are buying a No-Load Mutual Fund
ii. Historically, they have underperformed the stock market. The best strategy (for a non-Muslim) is to buy an **Index Fund** (one that tracks a major market index, such as the Dow Jones Industrial Average - DJIA or the Standard and Poor 500 -S&P 500)

e. You have no say in where your money is being invested. Some Islamicaly prohibited investments can be made without your knowledge. (Banks, Tobacco, etc.)
f. Even if a fund starts out with all Islamicaly Correct components (very rare), the managers of the fund reserve the right to (and often do) change the fund components over time, as a response to market changes