CSX Trading Guide

You will understand :

- Why invest in stock?
- What to consider in stock investment?
- How to trade stock on the CSX?
- How to analyze before stock investment?

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CSX

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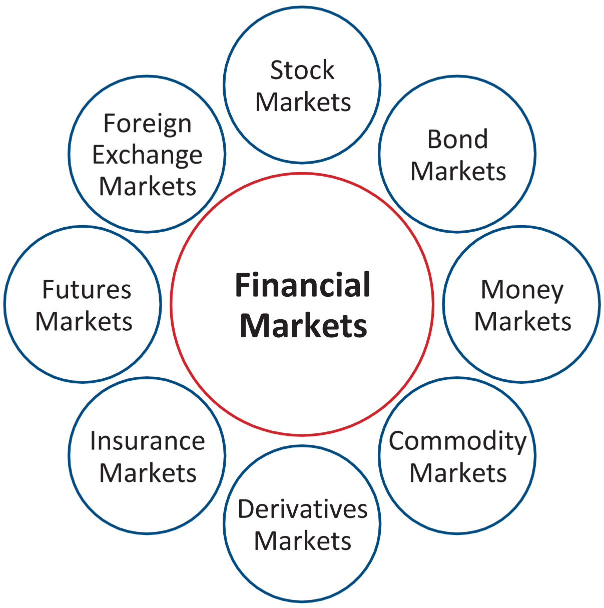
1 Financial Market

1.1 What is Financial Market?

- **A financial market** is where people trade financial securities, commodities, and other fungible items of value at prices that reflect supply and demand. Securities include stocks and bonds, and commodities.
- **Financial markets perform the essential function of channeling funds from economic players that have saved surplus funds to those that have a shortage of funds**. Additionally, the markets determine the prices of financial assets, provide liquidity of financial instruments, and enhance efficiency of transactions/productivity of funds borrowed.
- At any point in time, there are individuals or organizations with excess amounts of funds, and others with a lack of funds they need to consume or to invest.



1.2 Functions of Financial Market

- **Transfer of Resources**
  - Financial markets facilitate the transfer from who have saved surplus of funds to borrowers who encounter a shortage of funds.
- **Price Determination**

•Financial markets determine the prices of financial assets through the interaction of buyers and sellers. They provide a sign for the allocation of funds in the economy through the mechanism called price discovery process.

- **Liquidity**

•The existence of financial markets enables the owners of assets to buy and resell these assets.

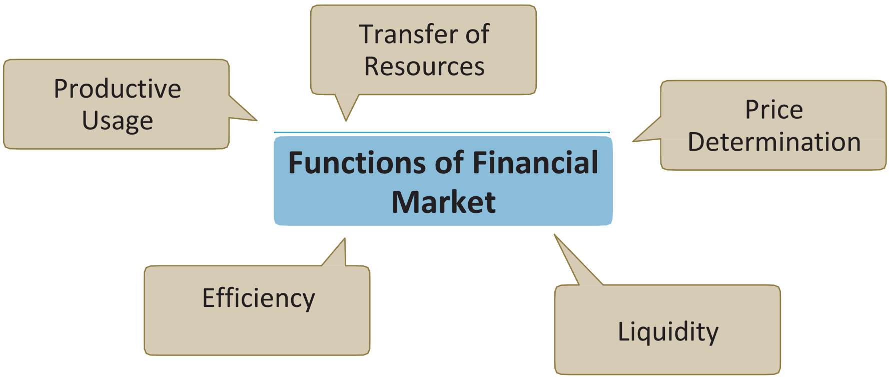
Generally this leads to an increase in the liquidity of these financial instruments.

- **Efficiency**

•The facilitation of financial transactions through financial markets lead to a decrease in information and transaction costs, which from an economic point of view leads to an increase in efficiency.

- **Productive Usage**

•Financial markets allow for the productive use of the funds borrowed, which enhances the gross national production.



1.3 Types of Financial Market: Direct Finance vs. Indirect Finance

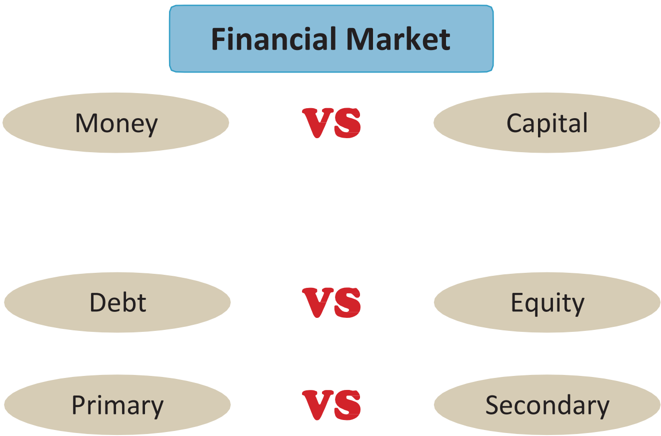
- There exist two different forms of exchange in financial markets.
- The first one is **direct finance**, in which lenders and borrowers meet directly to exchange securities. Securities are claims on the borrower's future income or assets including stock, bond, and foreign exchange.
- The second type of financial trade occurs with the help of financial intermediaries and is known as **indirect finance.**

•In this scenario, borrowers and lenders never meet directly, but lenders provide funds to a financial intermediary such as a bank and those intermediaries independently pass these funds on to borrowers.

Source: Mishkin, Frederic S. and ApostolosSerletis, The Economics of Money, Banking and Financial Markets, 2nd Canadian Edition, Pearson Addison Wesley, 2004

1.4 Structure of Financial Market

- Financial markets can be categorized as follows :



- **Money vs Capital Markets**

• **Money markets** are where only short term debt titles are traded. It doesn't actually deal in cash but deals with substitute of cash like trade bills, promissory notes and government papers which can be converted into cash without any loss at low transaction cost.

• **Capital markets** are where longer term debt and equity instruments are traded.

- **Debt vs Equity markets**

• Financial markets are split into debt and equity markets.

• Debt titles are the most commonly traded securities. In these arrangements, the issuer of the title (borrower) receive initial amount of money (such as the price of a bond) and the holder (lender) subsequently receives a fixed amount of payments over a specified period of time, known as the maturity of a debt title.

• Debt titles can be issued on short term (maturity < 1 yr.), medium terms (1 yr. < maturity < 10 yrs.), and long term (maturity >10 yrs.).

• The holder of a debt title does not achieve ownership of the borrower's enterprise. Common debt titles are bonds or mortgages.

• Equity titles are somewhat different from bonds. The most common equity title is (common) stock.

• First and foremost, an equity instrument makes its buyer (lender) an owner of the borrower's enterprise.

• Formally this entitles the shareholders to earn a share of the enterprise's income.

• But some firms actually pay periodic payments to their shareholders known as dividends.

• Equity titles do not expire and their maturity is, thus, infinite. Hence they are considered long term securities.

- **Primary vs Secondary markets**

• **Primary markets** are where financial instruments are newly issued by borrowers.

• **Secondary markets** are where financial instruments (such as stocks and bonds) already in existence are traded among lenders. Stock Exchanges such as NYSE (New York Stock Exchange) are representative secondary markets.

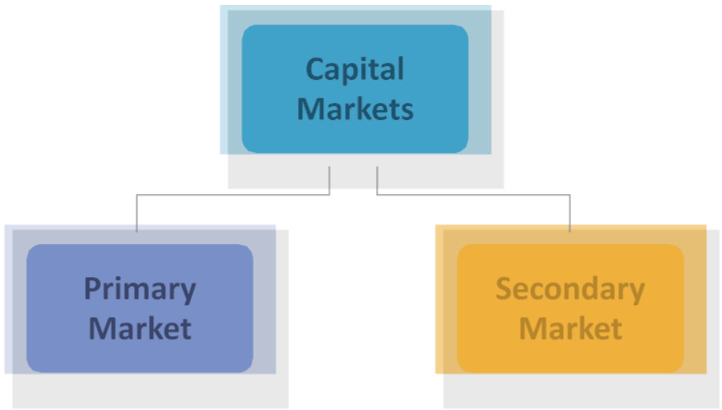
2 Capital Market

2.1 What is Capital Market?

- Capital markets are where investment instruments like bonds and equities are traded.
- The primary role of the market is to channel the wealth of investors who have surplus funds to the ones who are running a deficit.
- The different types of financial instruments that are traded in the capital markets are equity instruments, insurance instruments, foreign exchange instruments, hybrid instruments (such as interest rate options).
- The nature of capital market is brought out by the following facts:
  - It has two segments.
  - It deals in long-term securities.
  - It performs trade-off function.
  - it creates dispersion in business ownership.
  - It helps in capital formation.
  - It helps in creating liquidity.

2.2 Types of Capital Market

- **There are two types of capital markets :**



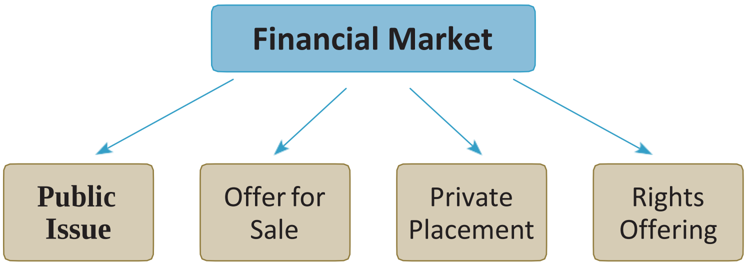
2.3 Primary (Issuing) Market

- **Overview of Primary Market**
  - Primary markets are where financial instruments are newly issued by borrowers.
  - This market is concerned with new issues, and the primary market is also called **new issue market.**
  - It is the market in which stocks, bonds and other securities are sold for the first time for collecting long-term capital.
  - In this market, the flow of funds is from savers to borrowers (industries); hence it helps the capital formation of the country.

- The capital collected from the primary market is used by companies for the purpose of setting up new business, and expanding or modernizing the existing business.

- Features of Primary Market

- In a primary issue, the securities are issued by the company directly to investors.
- The primary market performs the crucial function of facilitating capital formation in the economy.
- The new issue market does not include certain other sources of new long term external finance, such as loans from financial institutions. Borrowers in the new issue market may be raising capital for converting private capital into public capital; this is known as **"going public."**
- It has various methods of issuing: Followings are the methods of raising capital in the primary market:



Public Issue

- Public issue is an issue of stock on a public market rather than private funding, which may not collect enough capital for the companies' financial demand.
- The public issue allows the public to hold a part of the company's ownership.

Offer for Sale

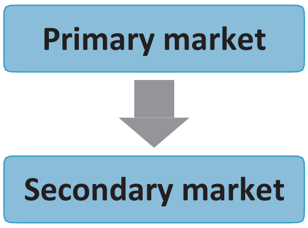
- Through a public invitation by a sponsoring intermediary such as bank or broker, public is allowed to buy new or existing securities.
- It contrasts with an offer for subscription which is an invitation to subscribe direct from the issuer.

Private Placement

- Private placement implies the sale of securities directly to an institutional investor, such as a bank, mutual fund, insurance company, pension fund, or foundation.

Rights Offering

- Right offering is an issuance of subscription rights to buy additional securities in a company made to the company's existing security holders.



2.4 Secondary (Circulation) Market

- **Overview of Secondary Market**
  - •Secondary markets are markets in which financial instruments already in existence are traded among lenders.
  - •Secondary markets can be organized as exchanges, in which titles are traded in a central location, such as a stock exchange, or alternatively as over-the-counter (OTC) markets.
  - •The transactions of the secondary market are generally done through the medium of stock exchange.
  - •The chief purpose of the secondary market is to create liquidity in securities.
  - •If an individual has bought some securities and he now wants to sell it, he can do so through the medium of stock. The trade requires the services of the broker.
- **Features of Secondary Market**
  - •It creates liquidity.
  - •It comes after **primary (issuing) market.**
  - •It has a particular place to **exchange (Stock Market).**
  - •It encourages new investments.
- **Functions of Secondary Market**
  - •It provides regular information about the value of security.
  - •It helps to observe prices of bonds and their interest rates.
  - •It offers to investor liquidity for their assets.
  - •It brings together many interested parties including investors, companies, credit rating firms, government as so on.
  - •It keeps the transaction cost low.

3 What is Stock?

3.1 Definition

- The stock of a corporation constitutes the equity stake of its owners.
- **Investing in stock means the investor has an ownership of a company and shares the company's profits and losses.**
- Investors can keep the stock for any length of time or decide to sell it to another investor.
- Stockholders' equity cannot be withdrawn from the company in a way that is intended to be detrimental to the company's creditors.

3.2 Types of Stock

- Stock typically takes the form of shares of either common stock or preferred stock.
- **Common stock** usually entitles the owner to vote at shareholders' meetings and to receive dividends.
  - The securities represent the ultimate ownership (and risk) position in a corporation.
  - In event of liquidation, the stockholders have a residual claim over the assets.
  - The claim is limited to amount recovered from the asset of the company.
  - Common stocks have no maturity date.
- **Preferred stock** differs from common stock in that it typically does not carry voting rights but is legally entitled to receive a certain level of dividend payments.
  - Preferred stock is a hybrid form of debt and common stock.
  - Like bonds, preferred stock has a par value and a dividend that must be paid before dividends can be paid on the common stock.
- Convertible preferred stock is preferred stock that includes an option for the holder to convert the preferred shares into a fixed number of common shares, usually any time after a predetermined date.

3.3 Rights/Benefits of Shareholders

- A shareholder is an individual or company that legally owns one or more shares of stock.
- Shareholders are granted special privileges depending on the class of stock, including the right to vote on matters such as elections to the board of directors, the right to share in distributions of the company's income, the right to purchase new shares issued by the company, and the right to a company's assets during a liquidation of the company.
- However, shareholders' rights to a company's assets are subordinate to the rights of the company's creditors.
- Even though the board of directors runs the company, the shareholders have some impact on the company's policy, as the shareholders elect the board of directors.
- Each shareholder typically has a percentage of votes equal to the percentage of shares he or she owns.
- Owning shares does not mean responsibilities. If a company goes broke and has to default on loans, the shareholders are not liable in any way.

- However, all the money obtained by converting assets into cash will be used to repay loans and other debts first, so that shareholders cannot receive any money unless and until creditors have been paid.
- Preferred stock differs from common stock in the followings.

- **Dividend**
  - The minimum dividend on preferred stocks is fixed.
  - Holders of the preferred stocks must receive a dividend before holders of common shares.
  - However, if the preferred dividend is not earned, the directors can omit it instead of going bankruptcy.
- **Voting Rights**
  - Preferred stockholders are not normally given a participation in management unless the company is unable to pay preferred stock dividends during a specified period.
  - If such a situation presents itself, the preferred stockholders would be entitled to elect a specified number of directors.

4 Stock Market

4.1 Definition

- A stock market is the aggregation of buyers and sellers of stocks; these may include securities listed on a stock exchange as well as those only traded privately.
- A stock market is also called equity market or share market.

4.2 Functions of Stock Market

- **Barometer of the Economy:**
  - A stock exchange is a reliable barometer to measure the economic condition of a country.
  - Every major change in country and economy is reflected in the prices of shares. The movement of share prices can be an indicator of the general trend in the economy.
- **Pricing of Securities:**
  - The stock market helps to value the securities on the basis of supply and demand.
  - The share price which is determined in the stock market offers a basis of investors' asset valuation, debtors' credibility, and government's taxation.
- **Safety of Transactions:**
  - In stock market only the listed securities are traded and stock exchange authorities include the company names in the trade list only after verifying the soundness of company.
  - The listed companies are supposed to comply with the strict rules and regulations, which ensures safety of trade through stock exchange.

- **Raising capital for business:**
  - A stock market provides companies with the facility to raise capital for expansion through selling shares to the public
- **Mobilizing savings for investment:**
  - When people draw their savings and invest in shares, it usually leads to rational allocation of resources because funds, which could have been consumed or kept in idle deposits with banks, are mobilized and redirected to help companies finance their organizations.
  - This may promote business activity, resulting in stronger economic growth and higher productivity levels of firms.
- **Facilitating company growth:**
  - A takeover bid or a merger agreement through the stock market is one of the simplest and most common ways for a company to grow.
- **Creating investment opportunities for small investors:**
  - Investing in shares is open to both the large and small stock investors because a person buys the number of shares they can afford.

4.3 Primary market

- An IPO, "Initial Public Offering" is conducted when a company wishes to raise capital by offering shares to the general public on a stock exchange for the first time.

- To be listed, a company must not only meet the basic legal and financial requirements but must also publish its business plan along with all its financial information.
- The purpose of IPO is to ensure that a business enterprise can efficiently raise necessary capital and make advance its management structure through separation of ownership and management.
- **Advantages of IPO**
  - **Capital:** an IPO provides funds to company for business expansion, working capital, acquisitions or other corporate purposes.
  - **Liquidity:** Through the creation of a public market, an IPO provides liquidity to investors, managements, and employees.
  - **Higher valuation:** an IPO increases the valuation of company, because 1) the creation of a trading market eliminates illiquidity discounts and 2) more extensive and reliable information about the company is available to investors.

•**Improved Capital Access:** a public company has access to cheaper fund raising than private company.

•**Improved prestige:** an IPO can provide additional stature and credibility of the companies to customers, suppliers, and employees.

- **Disadvantages of IPO**

•**Pressure to Maintain Growth Pattern**: If your sales or earnings deviate from an upward trend, investors may become apprehensive and sell their stocks.

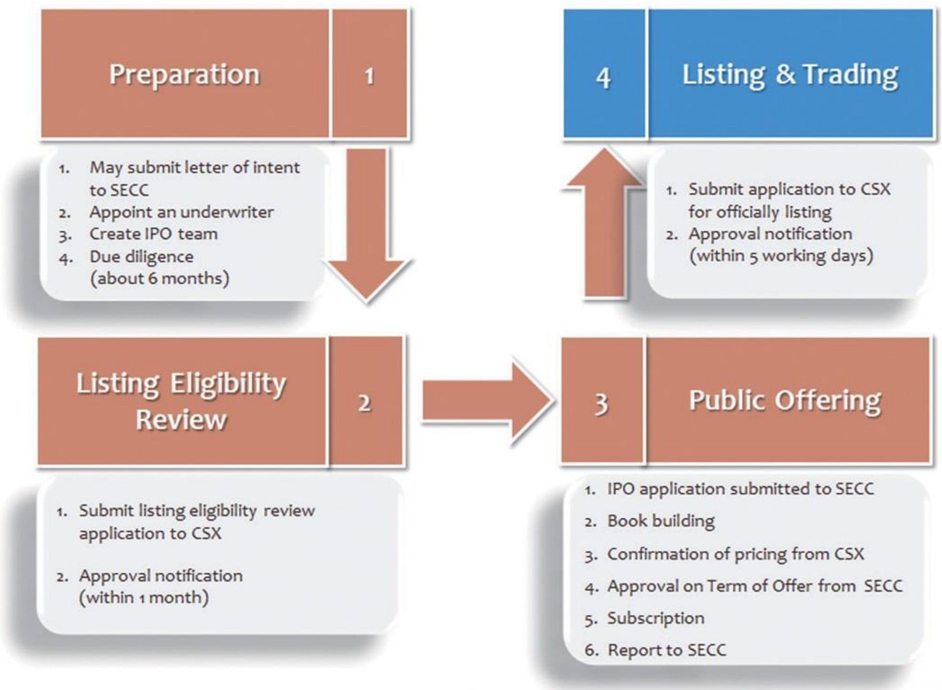
•**Diverged Management Focus:** Management may spend lots of times for preparing for IPO and industrial relationship.

•**Loss of Privacy:** Company's operations and financial situations are open to public scrutiny.

•**Loss of Control:** If a large portion of your shares is sold to public, you may lose your control of the company.

•**Potential Liability:** Public companies and their directors, officers and control persons can be sued by their shareholders, if they are suspected to commit wrongdoing.

- **Listing Procedure**



4.4 Secondary Market

- Secondary stock market usually has its stock composite index, which is combination of equities intended to the overall market performance over time.

•Investors use indices to track the performance of the stock market. Ideally, a change in the price of an index represents an exactly proportional change in the stocks included in the index.

•The indices are useful tools for measuring and tracking price level changes to an entire stock market or sector. Therefore, they provide a useful benchmark against which to measure an investor's portfolio.

- The globally biggest secondary markets are
  - New York Stock Exchange (market cap of USD 19,223bn as of Jan, 2015)
  - NASDAQ (USD 6,831bn)
  - London Stock Exchange (USD 6,187bn)
  - Tokyo Stock Exchange (USD 4,485bn)
  - Shanghai Stock Exchange (USD 3,986bn)
  - Hong Kong Stock Exchange (USD 3,325bn)
- Cambodia also has a secondary market, which is the Cambodia Securities Exchange (CSX).
  - CSX was incorporated on February 23rd, 2010. The Cambodian Ministry of Economy and Finance (MEF) owns 55% of the registered capital and Korea Exchange (KRX) the remaining 45%.
  - CSX has five listed companies, which are Phnom Penh Water Supply Authority, Grand Twins International (Cambodia), Phnom Penh Autonomous Port, Phnom Penh SEZ, and Sihanoukville Autonomous Port. (08/June/2017 updated)
  - Ten brokerage firms hold membership to the CSX. They are:

1) PHNOM PENH SECURITIES PLC.
2) RHB INDOCHINA SECURITIES PLC.
3) CANA SECURITIES LTD.
4) CAMPU SECURITIES PLC.
5) Yuanta Securities (Cambodia) Plc.
6) SBI Royal Securities Plc.
7) GOLDEN FORTUNE (CAMBODIA) SECURITIES PLC.
8) ACLEDA SECURITIES PLC.
9) CAB SECURITIES LIMITED.
10) and CAMBODIA - VIETNAM SECURITIES PLC..

Trading Days are from Monday to Friday (Except for public holidays)
Market opens to receive buy/sell orders from 08:00 am and closes at 11:30. Trading is executed through a continuous multiple-price auction process from 9:00 AM to 11:00 AM and single- price auction at 9:00 AM and 11:30 AM.

Settlement between members and CSX are carried out through 3 Cash Settlement Agents, which are ACLEDA Bank, Canadia Bank, and Bank for Investment and Development of Cambodia.

4.5 Bull/Bear Market

- The terms “bull market” and “bear market” describe upward and downward market trends, respectively. They can be used to describe either the market as a whole or specific sectors and securities.
- The names perhaps correspond to the fact that a bull attacks from the ground lifting its horns upward, while a bear strikes from above moving its claws in downward motion.
- These terms describe long-term trends for a year or more, not short-term changes.
- A bull market is a period of generally rising prices. The start of a bull market is marked by widespread pessimism. The feeling of despondency changes to hope, and eventually euphoria, as the bull runs its course.
- In a bull market, the economy tends to be strong, the unemployment rate is low, and consumers are spending more money, which increases business profits.
  - Notable bull markets marked the 1925~1929, 1953~1957, and the 1993~1997 periods when US and many other stock markets rose.
- A bear market is a general decline in the stock market over a period of time. It is a transition from high investor optimism to widespread investor fear and pessimism.
- A bear market tends to begin with a sharp drop in stock prices across the board. There is usually an eye in the storm, during which stock prices increase. But the storm returns, of course, and market falls and falls.
- In a bear market, the economy tends to be weak, the unemployment rate increases, and consumers spend less, which results in lower business profits.
  - A bear market followed the Wall Street Crash of 1929 and erased 89% of the Dow Jones Industrial Average’s market capital by July 1932, marking the start of the Great Depression.

II

Financial Investment

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Financial Investment

1.1 Definition of Financial Asset

- A **financial asset** is an intangible asset whose value is derived from a contractual claim.
- While a real asset (such as land, building, machinery, and so on) has physical value, a financial asset is a document that has no fixed fundamental value of itself until it is converted to cash.
- Common types of financial assets include bank deposits, bonds, stocks, and certificates.
  - **Bank deposits:** Money placed into a banking institution for safekeeping. Bank deposits are made to deposit accounts at a banking institution, such as savings accounts, checking accounts and money market accounts.
  - Bonds are often sold by corporation or governments to investors in order to help fund projects. A bond represents how much interest is guaranteed to be returned to the investor along with the original loan amount
    - **A government bond** is a bond issued by a national government, generally with a promise to pay periodic interest payments and to repay the face value on the maturity date.
    - **A corporate bond** is a bond issued by a company. The corporate issuer promises to pay a specified percentage of par value (known as the coupon payment) on designated dates, and to repay par value (principal) of the bond at maturity.
  - Stocks are one of the only financial assets that do not have an agreed upon ending date. Investing in stock means the investor has a part ownership of a company and shares in the company’s profits and losses.
  - A **Certificate of Deposit (CD)** is an agreement between an investor and a bank in which the investor agrees to keep a set amount of money deposited in the bank in exchange for a guaranteed interest rate.

1.2 What is Financial Investment?

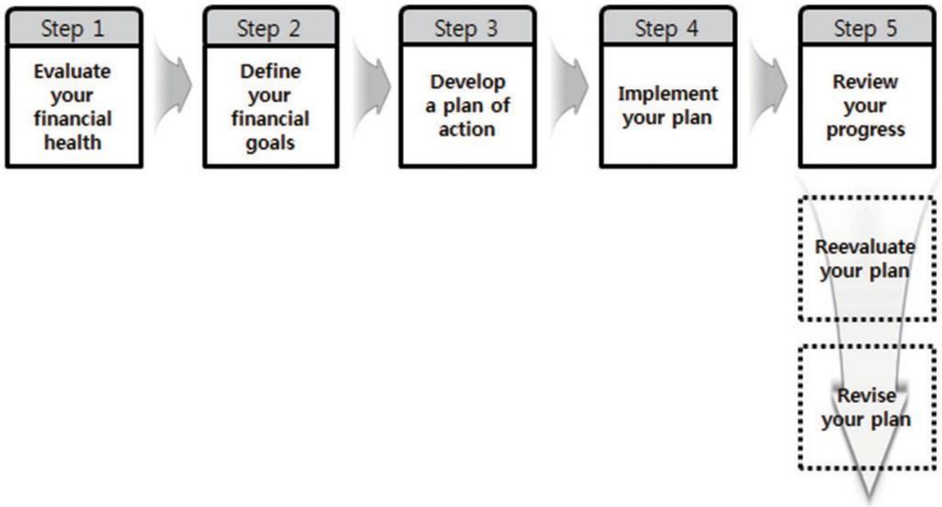
- A **financial investment** is that you put money into a financial asset with the hope that it will grow or appreciate into a larger sum of money. The idea is that you can later sell it at a higher price or earn money on it.
- You may be looking to grow something over the next year, such as saving up for a car, or over the next 30 years, such as saving for retirement.
- Investment time horizon is often a key thing to consider when making a financial investment. The more time you have, the more risk you can usually take. The more risk you take, the more potential for making more money.

2 Financial Planning

2.1 Why is Financial Planning Important?

- Financial planning may not help you earn more, but it will help you guide how to use the money you earn to achieve your financial goals.
  - Do you want to pay off your student loans?
  - Do you hope to buy a car?
  - Do you want to save enough to spend your holiday in Singapore?
- Financial problem is a major issue for most people, but finance courses in school do not cover it in most cases.
- When people encounter financial difficulties, a lack of financial education makes matters worse.
- Financial planning is the first step to forecast your future financial status, which leads you to avoid serious financial difficulties.
- Financial planning covers the followings.
  - **Saving:** Save for the future special expenses such as travel, wedding, college expenses for your children, house purchase, etc.
  - **Investment planning:** You need to have good understanding of a financial product that you plan to invest, including maturity, estimated earnings, risk factors, and so on.
  - **Insurance planning:** A complete financial plan should include adequate insurance products, which will protect your wealth from unexpected accidents/events.
  - **Tax planning:** This will help you legally reduce the amount of tax that you have to pay on your income.
  - **Retirement planning:** Government pension fails in covering all the living cost after our retirement in most cases, and we need to prepare a personal retirement plan.

2.2 Basic Steps of Financial Planning



Step #1 Evaluate Your Financial Health

- A financial plan begins with an examination of your current financial situation.
  - How much money do you make?
  - How much are you spending, and what are you spending it on?
- You have to see your whole financial picture, which requires careful record keeping, especially when it comes to spending. You need to record all of the daily expenses.

Step #2 Define Your Financial Goals

- You can't get what you want if you don't know what you want.
- Defining your goals includes writing down or formalizing your financial goals, attaching costs to them, and determining when you will spend the cost.
- Very few people actually have their financial goals. Although it is not difficult to make financial goals, it is easy to put off.

Step #3 Develop an action plan

- **Flexibility**
  - Your financial plan must be flexible enough to respond to changes in your life and unexpected events, such as losing your job.
- **Liquidity**
  - "Liquidity" means the accessibility to your money whenever you need it.
  - Unexpected events (illness, losing a job, etc.) require more than just flexibility.
- **Protection**
  - What if the unexpected event turns out to be catastrophe, such as a serious accident and badly injured?
  - What if the cost of an unexpected event is a lot more than you've got?
  - Insurance offers protection against the costliest unforeseen events, such as flood, fire, major illness, and death.

- However, insurance isn't free. A good financial plan includes a proper insurance coverage to avoid financial ruin at reasonable rates.

• **Minimization of Taxes**

- Keep in mind that a chunk of your earnings goes to the government. So, if you need to earn $1,000 from an investment, make sure it yields $1,000 after taxes.

Step #4 **Implement Your Plan**

• Although it's important to make a careful and thoughtful financial plan, it is also important to actually stick to that plan.

• You will need to track income and spending, as well as keep an eye on your long-term goals.

• Keep in mind that your financial plan is not the goal; it is a tool to achieve your goals.

• In effect, think of your financial plan not as punishment but as a road map

- Your destination may change, and you may get lost, but if your map is good enough, you'll always find your way again.

Review, Reevaluate & Revise

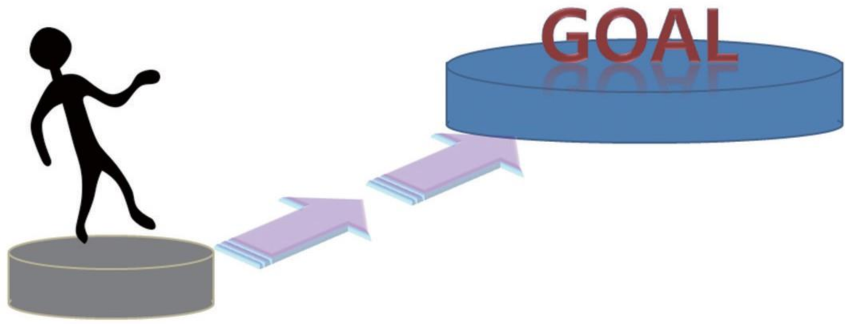
• As time passes and things change - maybe you get married or have children - you must review your progress and reexamine your plan.

• If necessary, you must be prepared to get a new plan.

3 Financial Investment Process

3.1 Set Your Goals

- **Setting your financial goal** is the first step for the financial investment. Start by understanding your current financial situation. We have four check points.



- **What you own:** List all your assets. This includes big items like your home, car or boat. It also includes your savings and investments. You'll find this information in bank/investment statements, and retirement savings/other pension papers.
- **What you owe:** Total up your debts. This includes any student loans, mortgages, car loans, credit cards and other debts. Look for your mortgage records, loan papers and credit card bills.
- **What you earn:** Figure out your total income, including your salary, investment income and any other income. Look for this information on your tax returns, account statements and paystubs.
- **What you spend:** Track how much money you spend every month. This includes basics like food, clothing, utilities, and car costs, as well as extra expenses like eating out, going out, insurance, health or dental bills, and money you donate. Look at your bills, receipts and credit card statements. Don't just estimate – add up bills and receipts for at least a month to get an accurate picture.

- Once you've gathered the information, you need to get started, you can complete step 1 – setting your financial goals. Also, think about when you hope to achieve each goal.
- Examples of specific goals
  - Pay off your credit card debt within the next 6 months.
  - Save $300 for a vacation next year.
  - Pay off your mortgage faster by paying down an extra $500 each year.
  - Save $1,000 for an emergency fund within the next 2 years.
  - Save $2,000 for a down payment on a house over the next 3 years.
  - Save $3,000 for your child's education by the time she turns 18.
- **Be specific and realistic**
  - The strongest financial goals are specific and measurable. Instead of saying you want to have enough money to retire comfortably, think about how much money you'll need. Maybe your specific goal will be to save $50,000 by the time you're 65.
  - Your goals should also be realistic and based on your current financial situation. Think about how much you can afford to save toward your goals each month. Based on how much you can afford to save, you may have to decide which goals are the most important to you.
- **Questions to ask**
  - What are your top financial goals?
  - When do you want to reach each goal?
  - How much money will it take to reach each goal?
  - How much can you afford to save toward each goal?
  - What will you gain or lose by putting 1 of your goals first?
  - What choices will help you enjoy a better quality of life today, and in the future?

3.2 Know Your Investing Personality

- Knowing what kind of investor you are is the second step for the financial investment. This is called your investing personality or investor profile.
- questions to ask yourself

- **How much risk can you tolerate?**

  : With higher-risk investments, there's a greater chance you could lose some or all of your money. But higher-risk investments also have the potential to grow your money faster. Ask yourself if you're comfortable taking on more risk with greater returns. Or would you be more comfortable making less?

- **How much do you expect to make on your investments?**

  : Figure out how much of a return you'll need to make on your investments to reach your financial goals. Keep in mind that to get a higher return, you often have to take more risk. If meeting your expected return means taking on more risk than you're comfortable with, you may need to adjust your goals.

- **How long do you plan to invest for?**

  : Your investment time horizon is the amount of time it will take you to meet your goals. Your time horizon could be short term, like saving for a vacation in 6 months. Or it could be long term, like saving for retirement in 20 years. Your time horizon is a key factor in choosing investments. For example, if you're investing for the short term, you may want to choose investments that guarantee your return, so your money is there when you need it. If you're investing for the long term, you may choose to take more risk.

- **Do you need quick access to your money?**

  : Liquidity is a way to describe how easy it is to get your money back from an investment. Cash and bank accounts are very liquid. You can usually get your money right away and get it easily, but the returns are low. Investments that are less liquid may offer a higher potential return, but also may come with more risk.

3.3 Understand Your Risk Tolerance

- Understanding your risk tolerance is the third step. Risk is the potential to lose some or all of the money you have invested.

	Average Return	Worst Return	Best Return
a)	7%	-7%	15%
b)	9%	-15%	28%
c)	13%	-31%	50%

- Understanding risk and return

- Some investments are riskier than others – there's a greater chance you could lose some or all of your money. For example, Government bond has very low risk. Bank deposits also carry low risk because they are backed by large financial institutions. With these low-risk investments you are unlikely to lose money. However, they have a lower potential return than riskier investments and they may not keep pace with inflation.

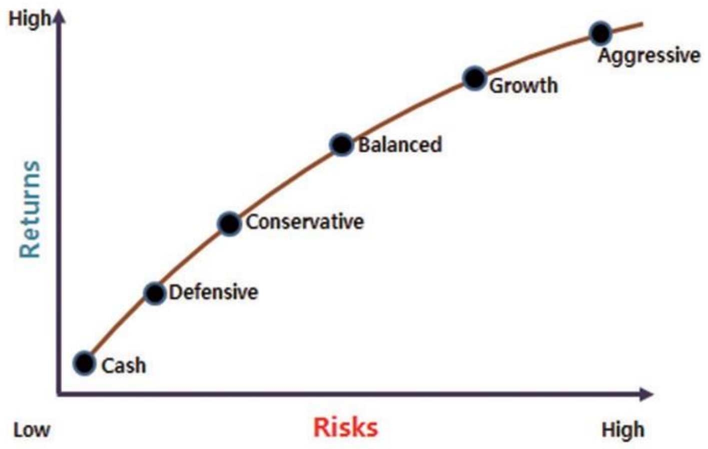
- Over the long-term, corporate bond has potentially higher return than Government bond and Bank deposit, but they also have more risk.
- Stocks have a potentially higher return than bonds over the long term, but they are also riskier. If the company is unsuccessful, shareholders could lose all of money. But if the company is successful, they could see higher dividends and a rising share price.

- Time horizon

- Your time horizon is the length of time you expect to hold an investment. The time horizon affects the risk of an investment performance.

- Risk tolerance

- How much risk you can tolerate is one of the important factors that you need to consider when you make an investment decision.
- To understand your risk tolerance, answer these questions.
  - How much risk are you able to handle?
  - How much risk are you willing to handle?
- Ability to tolerate risk
  - Your ability to tolerate risk – also called your financial risk tolerance – is your ability to handle an investment loss. If your investments carry enough risk that the loss would force you to reduce your standard of living, you may be taking on too much risk.
  - Your ability to tolerate risk depends on your wealth. Wealth refers to both your financial wealth (investments and savings) and your human capital. Wealthier investors can usually take on more financial risk.
- Willingness to tolerate risk
  - Your willingness to tolerate risk – also called your psychological risk tolerance – introduces the emotional side of investing. If the level of investment risk in your portfolio causes you stress, you may have been exposed to more risk than you are willing to tolerate. To lessen your stress, you might consider making your portfolio less risky.
  - It is easy to overestimate your willingness to tolerate risk. Research shows that an investor's stated belief in risk-taking is not the same as risk-taking behavior. Behavior is more influenced by past investment experience and beliefs about the future. Think about the last time you dealt with an investment loss – how did you react? If you had trouble in accepting the loss, consider reducing the risk of your portfolio.
- How your ability and willingness to tolerate risk connect
  - You should consider both elements of risk tolerance before you make an investment decision.
  - For example A wealthy investor can afford to risk $3,000 investing in a start-up company. Even if the investment loses all of its value, this won't affect her standard of living. However, if the idea of losing the money concerns her, she is better off not making the investment.



- **Risks of investment**

•You invest to earn a return on your money, but returns are not the only conside0ration. Risk and return are connected. Generally, the higher the risk of an investment, the higher the potential return. Here are some examples of how risk can affect investment return:

•Risk is usually perceived negatively as the potential to lose money. However, it can also have a positive side:

- Risk-free investments
  : While there are no risk-free investments, the risk of loss with some investments is so small that it can usually be ignored. For example, US treasury bills have very little risk of loss – the risk of the US government going bankrupt over the investment term is very low.
- Riskier investments
  : Some investments, such as common shares, carry much greater risk. When you buy common shares, your return is uncertain – it will depend on the future price of the shares. There is a possibility that you will not get the return you are expecting or that you will lose money.
  : An investment's volatility provides a good indication of the chance that it will lose money. When annual returns vary widely, there is more of a chance that the investment will lose money in any given period.
- The risk of not taking enough risk
  : If you don't take enough risk, you may not make enough money to meet your investment goals.
  : It's possible to take too little risk. If you don't take enough risk, there is a greater chance that the return on your portfolio won't be enough to meet your goals in the long term. Consider your risk tolerance.

- **Diversification** is a way to reduce the risk of your portfolio by choosing a mix of investments.

•Four reasons to diversify

- Not all types of investments perform well at the same time.
- Different types of investments are affected differently by events and changes in economic factors such as interest rates, exchange rates, and inflation rates.
- Diversification enables you to build a portfolio whose risk is smaller than the combined risks of the individual securities.

- If your portfolio is not diversified, it will be unnecessarily risky. You will not earn a higher average return for accepting the unnecessary risk.

3.4 Create Your Investment Plan

- The fourth step is creating a plan that will help you reach your financial goals.
- You need to do the followings for the investment plan.

• **Calculate how much you need to save each month**

- If you need to save $50,000 by the time you're 65, how much will you need to save each month? Check whether the amount is realistic for you to set aside each month. If not, you may need to adjust your goals.

• **Choose your investment strategy**

- If you're saving for long-term goals, you might choose more aggressive, higher-risk investments. If your goals are short term, you might choose lower-risk, conservative investments. Or you might want to take a more balanced approach.

• **Develop an investment policy statement**

- Create an investment policy statement to guide your investment decisions.
- Your investment policy statement should:

i. specify your investment goals and objectives,

ii. describe the strategies that will help you meet your objectives,

iii. describe your return expectations and time horizon,

iv. include detailed information about how much risk you're willing to take,

v. include guidelines on the types of investments that make up your portfolio, and how accessible your money needs to be,

vi. specify how your portfolio will be monitored, and when or why it should be rebalanced.

3.5 Choose Your Asset Mix

- Choosing your asset mix is the fifth step.
- The right asset mix should:

• help balance risk with your expected rate of return on your investments,

• fit your tolerance for risk,

• let you get your money when you need it,

• help provide the growth you need to reach your goals,

• revise as your needs and goals change over time.

- **You will need to revise asset mix over time, as your financial goals and needs change.** Here are a few examples:

• When you've just started your first job: You may not have a lot of savings and you may be paying off student debt. But you may also have relatively long time to reach some of your financial goals. At this stage of life, you may be willing to take more risks with your long-term investments.

- When you're more established in your job career: You'll likely be earning more. And your financial goals will likely have changed. You may be paying down a mortgage, and saving for a child's education or for your retirement. At this point, you may be interested in a mixture of higher- and lower-risk investments.
- When you approach retirement: You might want to start shifting into lower-risk investments. Protecting your savings may become more of a priority because you'll need to live on your investments after you retire. You may also want to look into investments that create a steady and stable income stream.

3.6 Choose Your Investment Vehicles

- Choosing your investment vehicle is the sixth step. Once you know your asset mix, you can choose specific investment vehicles. Before you choose an investment, understand how it works with involved risks.

- **Ask yourself:**
  - How does the investment work? Do you understand the investment well enough to explain it to someone else?
  - What are your goals? Are you looking for safety, a regular financial income or capital gain?
  - What are the risks of this investment? Are you comfortable taking these risks?
  - How much do you expect to earn on this investment? Is this realistic?
  - How long do you plan to invest? Is this a short-, medium- or long-term investment?
  - What are the costs to buy, hold and sell the investment? And will you pay taxes on the money you earn?
  - What other investments do you already have? How does this investment fit with the other investments? How will it change your asset mix?

- **Three types of income stream from investments**
  - Interest: Bonds pay regular interest like savings accounts. With these types of investments, you know exactly how much money you're going to earn on your investment.
  - Dividends: Some stocks pay dividends, which give investors a share of what the company makes. You get a regular income from these investments. The amount of the dividend depends on how well the company was run that year and what type of stocks you own.
  - Capital gains: If you sell an investment like a stock, bond, and mutual fund at a higher price than you paid for it, you'll have a capital gain. If you sell it for less than you paid for it, you'll have a capital loss.

- Investment for steady income
  - Some investment vehicles make payments of interests or dividends on a regular base. Before you choose an investment vehicle for a steady income, get the answers to the following questions.
  - How much risk is involved?
    - Some income investments are considered low risk. They guarantee you'll earn stable income. These include savings account and bonds.

- ‣ Preferred shares may be considered as one of income investment. However, the income stream is not guaranteed, and the investment loss may be incurred.
- •How much income will you get?
  - ‣ The income is determined by the interest or coupon rates at the maturity.
- •When can you take your money out?
  - ‣ If you may need quick access to your money, you won't choose an investment which reaches maturity long time later.
- •Are there any fees?
  - ‣ Some investments that pay interest don't charge fees when you buy. Others do. Find out if there are any account fees and other costs.

- **Investment for capital gain**

•Investments for capital gain have potentials for both gain and loss. This includes equity mutual funds, and stocks.

•When you decide to invest for capital gain, you might need to consider the following approaches.

- ‣ Value investment: Investors look for the companies which have abilities to generate stable and decent earnings, but the stock price is undervalued.
- ‣ Growth investment: Investors look for the companies which have huge growth potential, even though they do not generate decent earnings today.
- ‣ Top-down approach: Investors first look at the overall economy to find out which sectors or industries will likely outperform. Then, they choose stocks within the category.
- ‣ Bottom-up approach: Investors choose the companies purely based on companies' fundamentals including financial data, business outlook, etc. Bottom-up investors believe that companies' fundamentals already reflected the industry and economy situations.

3.7 Track Your Progress

- Investors need to track the investment return on a regular base, following the steps below.

- •First, find out your rate of return: Ask your adviser to calculate your rate of return for you. Keep in mind that any costs or fees you pay on your investments reduce your rate of return. So does any tax you pay on the earnings from the investments. Your adviser should take costs, fees, and taxes into account when they calculate your return.
- •Second, assess your progress toward your goals. Check the current value of the investment asset and the performance. This should give you an idea of whether you're on track. If you're not, you may choose to make changes to your investments.
- •Third, compare your results with other investment assets including benchmark index. This will give you an idea for better investment opportunity, if any.

4 Major Investment Style

4.1 Growth Investment

- Growth investment is one of the most popular investing styles. Growth investors look for companies that have exceptional growth potential of earnings.
- The investors are willing to pay whatever it takes to get on a high-growth train-and to stay on board as long as necessary to reap the rewards of long- term growth.
- The time commitment required for the growth investor is moderate, but most of his time will be spent in the stock selection phase. Once you've selected your stocks, you could check in on them as seldom as once a quarter or so to make sure the earnings are still on track.
- Growth investors need to have a high tolerance for risk. They are susceptible to dramatic reversals if a stock is affected by any of the events including market risk, because growth stocks are traded at much higher than normal P/E ratios.
- A case in point is Cisco Systems (CSCO), which has been a leader in what was considered in the 1990s the most dynamic industry in the world-the equipment required to run the Internet.
  - During the early 1990s, when its earnings growth rate was 50% to 100 % per year, Cisco's P/E approximated 30, which made it a favorably priced growth stock. The company performed like a champion during that time, generating nearly 5 years of consecutive, quarter-over-quarter returns in excess of 50%. In the late 1990s Cisco's growth rate slowed to about 30%, but this was during the dot-com craze, so instead of the P/E decreasing along with the growth rate, Cisco's P/E expanded, ranging anywhere from 60 to 100.
  - In essence, before its earnings slowdown, Cisco had a P/E of about one-half its growth rate, and after the slowdown the P/E expanded to more than double the growth rate, chiefly owing to investors' unwillingness to face the lowered growth respects.
  - The Internet bubble had to burst before investors would look at dot-com stocks with a clear eye, but all it took to send Cisco (and other Internet stocks) into a steady and serious decline was just a hint that the hyper growth of the Internet was slowing down.
- This example is not meant to scare you away from growth investment. Some of the biggest gains come from high-growth stocks. But because these stocks carry high P/E, growth investors have to be willing to accept moderate risk and learn how to avoid the long, painful price meltdowns by having and using an effective exit strategy.

4.2 Value Investment

- **Value investors** are essentially bargain hunters. They don't like risk, and they don't like the idea of paying full price for anything. Generally speaking, the value investor buys stocks that are currently out of favor with the market, generally owing to an erosion of confidence in a specific company or sector.

- Eroding confidence can be caused by any of the events such as 1) a series of earnings disappointments that signal a slowdown in growth, 2) trouble within a company or industry, or even a perception that the stock or the industry is just not as exciting or as dynamic as it formerly was.
- Investors often lose confidence in a company's ability to grow, and when they do, the stock price takes a beating, the P/E ratio drops, and what was previously a growth stock becomes a value stock.
- Value investors may believe the stock is unjustly undervalued and consider it a bargain.
- They are willing to accept the lower confidence in earnings growth for the relatively lower risk, and they're willing to bet that the earnings growth as well as investor confidence will be improved and the P/E ratio will expand dramatically.
- The value investor wants the same reward that the growth investor wants, but without as mush risk. The fly in the ointment is patience. Not everyone has the patience to wait for investor confidence to rally and for the undervalued stock to become fully valued.
- There is a way around this long wait. An astute value investor can use an entry strategy whereby he or she purchases the value stock at the point where the turnaround seems to be at hand and investor confidence has begun to grow.

4.3 Momentum Investment

- Momentum investors like a lot of actions. They try to own the fastest-rising stocks in the fastest-moving sectors in the market, and when the stock or sector slows down, they move on to the next "best" thing. In a sense, they're like surfers who jump on the biggest wave they can find, ride it for as long as they can, then jump off before it slams them onto the rocks.

- **Momentum stocks** are those in which the market is demonstrating great confidence. They are high and going higher on a daily basis. If you're right about a momentum stock, it will provide the fastest move in the shortest time. If you're wrong, the penalty can be swift and often painful.
- That risk is the downside of momentum investment, which carries probably the highest risk of the four major investment styles. With investor confidence driving the momentum, guess what happens if something shakes investor confidence or if the perception of future earnings turns even slightly negative? The stock price can drop like a rock.
- If a company comes out with an earnings warning or if an analyst announces a downward revision, it is not uncommon for a momentum stock to drop 30 or 40 percent on the next day's open. No technical indicator or system we know of can save you from this kind of gap. Such risks simply go with the territory. So if you can't stomach sudden and dramatic price drops, you might want to reconsider your decision to become a momentum investor.
- If you can stomach the risk, you should also consider the time involved in managing a momentum portfolio. Because of the need to stay alert to daily changes in your stocks/sectors and because of the need for quick and decisive action, momentum investment involves the most serious commitment of time. It would be extremely imprudent to take on a style so fraught with risk. If you learn to do it well and if the style fits your personality, momentum investing can be the most "fun" and perhaps the most profitable of the four major styles.

4.4 Technical Investment

- Any investment style may make use of technical analysis-in fact, most entry and exit strategies are built on a form of technical analysis-but the pure **technician uses technical analysis to decide which stocks to buy, as well as when to buy and sell stocks.**
- Technicians, or chartists as they are sometimes called, interpret stock charts as a way to find and buy the stocks with the best patterns. These investors aren't concerned about the stock's projected earnings or its P/E ratio or the level of investor confidence or, quite frankly, about any aspect of the company itself.
- The technical investment style is rooted in the assumption that all the information you need to know about a company is already reflected in the current stock price.
- When buying stocks, technicians put their money on the chart patterns that they believe are predictive of a new upswing in the stock price. When selling socks, they rely on the chart pattern to tell them when investor confidence begins to wane, at which point they get out quickly.
- There are dozens of ways to approach technical investment. Many people think momentum investment and technical investment are very similar, and, in fact, technicians frequently end up buying momentum stocks because those stocks often have the best-looking chart patterns.
- But there is major difference between technical investors and momentum investors. Momentum investors usually look for stocks with good underlying fundamentals, especially recent strong earnings growth with the greatest momentum.
- Pure technicians have little if any interest in a company's future earnings potential, because they believe that everything known about the stock is already factored into the stock price.

Nevertheless, technicians and momentum investors buy many of the same stocks, so one could argue that the risk for technicians is about the same as for momentum investors.

- Most pure technicians would disagree on that technical investment is similar to momentum investment. They would argue that they know which chart patterns denote risk and would obviously avoid risky stock patterns.
- Given their primary emphasis on chart patterns, technical investors have one major requirement and that is to learn how to read the chart patterns of the technical indicators of their choice.

5 Asset Allocation

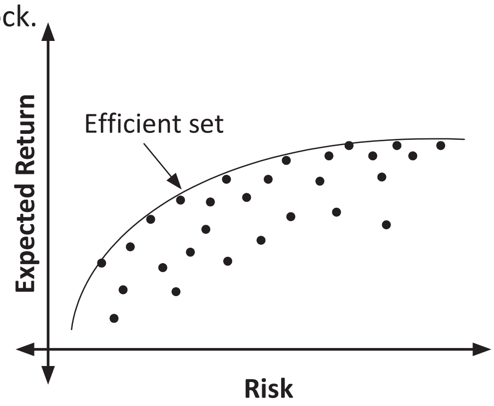
5.1 Definition of Portfolio

- Portfolio refers to any collection of financial assets. It is generally accepted principle that a portfolio is designed according to the investor's risk tolerance, time horizon, and investment objectives.
- When determining a proper asset allocation, an investor aims at maximizing the expected return and minimizing the risk.
- **Expected return in portfolio:**
  - Expected return is most possibly realizing profit from our investment.
  - Bank time deposit is so easy to get the expected return. But, a stock is not easy, because the performance is affected by so many factors such as the global/domestic economy, the relevant industry, company specific issues, and so on.
  - The best practice to get the expected return is to estimate by using the historical data.
- **Portfolio Risk:**
  - The risk is measured by the difference between the expected return and the actual return, which is caused by the future uncertainty.
  - If the actual return is higher than the expected return, it is called upside risk. If it is in the inverse case, it is called downside risk.

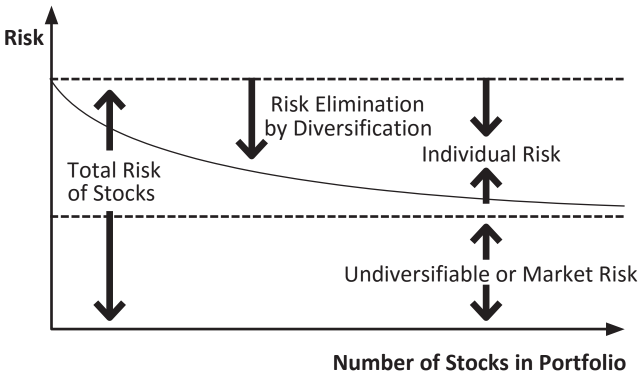
5.2 Diversification Effect

- Investors can maximize their expected return for a given level of risk through diversification rather than holding any single stock.
- In the picture below, each dot denotes the risk/return combination of each single stock. If you diversify your investment into several stocks, your risk/ return combination can be moved toward somewhere on the efficient set line.

- The efficient set shows that your return is higher than any single stock given a same level of risk. Where you will be located on the efficient set can be determined by the stock selection and the weight of each stock.



- On the other hand, another study shows that the more number of stocks you have, the less risk you are exposed to.
- Total risk of a stock is divided into market risk and individual risk. Market risk is the risk of collapse of an entire financial system or entire market, while individual risk is associated with a single stock.
- As seen in the picture below, individual risk can be eliminated by holding more number of stocks, while market risk cannot be avoided.



III

Why and How to Invest in Stock?

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1
Why Invest in Stock?

1.1 Why Invest in Stock?

- Stocks have consistently proven to be one of the most profitable investment vehicles.
- **The benefits include:**
  - Liquidity (Immediate Buy/Sell).
  - Very low transaction cost.
  - Freedom to work at your own place, at your pace, in your own time.
  - Easy monitoring.
  - Being able to maximize returns while spreading your risk.
  - A predictable form of investment if you know what you're doing.

1.2 Stock and Other Investment Vehicles

- Typical investment vehicles for individual investors are known as stock, bond, mutual fund, and real estate.
- Although we have other alternative investment vehicles such as derivatives, foreign exchange, and commodity, individual investors' access is difficult because of the requirement of very specialized knowledge and a large amount of deposit.
- **Stocks**
  - When you purchase stocks, you become a partial owner of the company. This entitles you to vote at the shareholders' meeting and allows you to receive any profit that the company allocates to its owners.
  - While bonds provide a steady income stream, stocks do not guarantee anything. The stock price is very volatile and many stocks do not even pay dividends.
- **Bonds**
  - When you purchase a bond, you are lending out your money to a company or government. In return, they agree to give you interest on your money and eventually pay you back the amount you lent out.
  - The main attraction of bonds is their relative safety. Unless bond issuers go bankrupt, the income stream from bond is stable and safe. However, the rate of return on bond is generally lower than other investment vehicles.
- **Mutual Funds**

- A mutual fund is a collection of stocks and bonds. When you buy a mutual fund, you are pooling your money with a number of other investors, which enables you to pay a professional fund manager to select specific securities for you.
- The advantage of a mutual fund is that you can invest your money without the time or the experiences that are often needed for investment decision makings. You should get a better return by giving your money to a professional than investing by yourself. However, you should check the track records of mutual funds and fund managers before you purchase.

- **Real estate**

- Real estate refers to land, buildings, and natural resource of the land.
- Unlike stocks and bonds, real estate does not have a centralized market, and every unit of real estate is unique. These factors cause difficult pricing and high transaction cost.

2 Buying and Selling Stock

2.1 Buying Shares in Primary Market

- A participation of companies' IPO (Initial Public Offering) is one way that investors buy stocks, while buying stocks in secondary market is another way.
- Details of the proposed offering are disclosed to the public in the form of a lengthy document known as a prospectus. Most companies undertake an IPO with the assistance of an investment banking firm acting in the capacity of an underwriter.
- When investors want to purchase stocks in IPO after checking the prospectus, they send indications of interest to one of underwriters. The prospectus includes the details on the financial statements, forecast on business, valuations, and so on.
- An auction allows shares of an IPO to be allocated based on price aggressiveness, with all successful bidders paying the same price per share.
- If investors want to sell the stocks which they bought in the primary market, they can do so in secondary market.

2.2 Trading Shares in Secondary Market

- Investors are allowed to trade stocks in secondary markets by placing buy/sell orders to their brokers.
- **Market Order**

- A market order implies that an investor buys or sells stocks immediately at the best available price.

- A market order is the default option and is likely to be executed because it does not contain restrictions on the buy/sell price or the timeframe in which the order can be executed.

- Limit Order

- A limit order is an order placed to buy or sell a set number of shares at a specified price or better.
- It may not be executed if the price set by the investor cannot be met during the period of time in which the order is left open.
- Limit orders also allow an investor to limit the length of time an order can be outstanding before being canceled.

- Fixed Stop Loss Order

- A fixed stop loss order triggers an order to sell an underlying security, if a price level is reached. This is set at a constant price and inherently good until cancelled.
- This is used to protect the downside of holding an investment, and is only triggered once the price reaches the specified stop level.

- Trailing Stop Order

- The trailing stop order is more flexible than a fixed stop loss, since it automatically tracks the stock price direction and does not have to be manually reset like the fixed stop loss.
- This is designed to protect gains by enabling a trade to remain open and continue to profit as long as the price is moving in the right direction, but closing the trade if the price changes direction by a specified percentage.
- A trailing stop order can also specify a dollar amount instead of a percentage.

- Good Till Canceled (GTC) order

- GTC is an order to buy or sell a security at a set price that is active until the investor decides to cancel it or the trade is executed.
- If an order does not have a GTC instruction then the order will expire at the end of the trading day the order was placed.
- In most cases, GTC orders are canceled by brokerage firms after 30-90 days.

- Day Order

- A day order is an order to buy or sell a security that automatically expires if not executed on the day the order was placed.

- All or None (AON)

- AON is an order to buy or sell a security only when the order can be filled completely or not at all.
- If there is insufficient trading volume to meet the order, then it is canceled at the close of the market.

3 Using a Stock Broker to Buy and Sell Shares

3.1 Importance of a Stock Broker

- You need guidance in the stock market so as to understand what actually goes on and to make the right choices of stocks to invest in. The right person to give you this kind of guidance is a stock broker.
- Even if you do the research by yourself, you still need practical aid in stock investing, and a stock broker can be a great help. You could opt for an individual or an organization of professional stock brokers.
- A professional stock broker is well trained and experienced in the stock market and stock investment. He is the right person to give you the necessary advice you need.
- Buying/selling stocks cannot be done entirely by you; you will always need a representative to carry out the sale and purchase with your best interest at heart. It is much easier for a licensed professional stock broker to complete the transactions for you.
- What stock brokers do is to open an account in their company or firm under your name, and then manage it for you.

3.2 Finding the Right Stock Broker

- Finding the right stock broker is one of the key financial decision makings.
  A lot of people who succeed in the stock market have the best stock brokers working for them.
- If you invest a large amount of money in stocks, you need a stock broker that has the best capabilities in going for stocks with the best returns in the market. If you invest a small amount of money, you will care so much about the cost of his services and the fee structure.
- Note that those stock brokers who charge a high commission are not always the best at what they do; there are affordable stock brokers who deliver great results all the time.
- You have two options in the stock market, either to trade or to invest for the future returns. Trading involves buying and selling stocks as soon as there is a good chance to do so. Traders aim to get small and recurrent profits, and they buy and sell stocks frequently.
- Investment, on the other hand, involves putting your money to a certain company or companies for a suitable period of time and then getting good returns out of it.
- If you want to invest, you need a full-service providing stock broker. He will analyze the stock markets for you and advise you on the right company to invest in.
- If you want to trade, you may consider a discount stock broker in order to save the commissions so as to maximize the returns that you get.
- If you are new in stock investment, you will need an advice and guidance and you have so much to learn from a stock broker. In this case, a full-service stock broker will be the right one to hire.

- If you do not need a broker service such as market guidance, open an account with a discount stock broker. It is always good to determine what you want first so as to hire the right stock broker.
- Different stock brokers deal with different kinds of stocks. Therefore, you will hire a stock broker depending on what kind of stocks you want to trade. Some brokers are familiar with only large market capital companies, and you will need another stock broker if you decide to invest in small market capital companies.
- Make up your mind about what kind of stocks you will invest in first, and then hire the best stock broker who fits your investment style.
- You have to ensure that your account is insured to minimize the risks of losing all of your investments. This is the first thing you have to make sure when you start talking to a stock broker.

3.3 Factors to Consider When Hiring a Stock Broker

- With the above considerations, you will definitely end up with more than one stock broker that you have to compare. Below are the factors for the comparison.
- **The cost**
  - Stock brokers differ in the way that they charge for their services. You need to find the stock broker who charges the least amount of money so as to maximize the returns that you get out of your investment. Some stock brokers charge commissions plus other fees, so you have to consider all these charges.
- **Stock broker capabilities**
  - It is best to go for the most capable stock broker because he has a higher chance to make the right decisions for your gain. Check out the past record of the stock broker.
- **Trust**
  - The stock broker will be managing all the money in your account. Licensed stock brokers should be trusted. You can also get a referral from someone that is currently using a trustworthy stock broker. It is always good to conduct a background check on the stockbroker you are interested in so that you will be sure whether he is trustworthy and quite reputable.
- **The company or firm he represents**
  - Many stock brokers work for certain brokerage companies and you have to check out more about the companies. Ensure whether the companies are reputable with a good track record of performance and very capable to manage your investments. Many people invest in stocks these days and it will be so easy to get the information you need about a certain brokerage company.
- **The services they offer**
  - Choose a stock broker who will give you quality support services whenever you need them. Some stock brokers are known to treat their clients unprofessionally, or to be unavailable in odd hours, which is not something you would go for. Ensure that they have the best customer support services so that you will always be treated as a valuable customer.

4 Stock Trading in Cambodia

4.1 Trading Process

1) Buyers and sellers send orders through their brokers.

2) Brokers place the orders to stock exchange (CSX).

3) CSX collect all the orders and match them.

4) CSX returns trading results to the brokers.

5) Brokers inform buyers and sellers of their trading result.

4.2 Market Arrangements

- **Trading Hours**
  - Market opens to receive buy/sell orders from 08:00 am and closes at 11:30 am but the trading starts from 09:00 to 11:00 am and at 11:30 am once again before closing market.

- **Order**

  There are three types of order available at the CSX:
  - **Limit order:** the order to buy or sell a security at a specific or a better price.
  - **Market Order:** the order to buy or sell an equity security at the best price available in the market.
  - **Negotiated Order:** the order to buy or sell a securities though Negotiated Trading Method, which executed a paire of bid and ask negotiated orders after a buyer and a seller have negotiated and agreed on the transaction conditions.
  - Effective until being executed during the trading hours of the day.

- **Trading Unit**
  - The order unit of equity securities on CSX shall be one (1) share.

- **Trading before Settlement:**

  A new method that enable investors to use securities/cash that shall be received to trade without waiting until the settlement date.

- Price Unit (Tick Size)

Price (P) Range	Tick Size	Example of WRONG Quotes	Example of RIGHT Quotes
P < 4,000	10	2,555; 3,012; 3,999	2,550; 2,560; 3,010; 3,020; 3,990
4,000 ≤ P < 20,000	20	4,210; 19,525	4,200; 4,220; 19,520; 19,540
20,000 ≤ P < 40,000	50	20,110; 35,530	20,100; 20,150; 35,500; 35,550
40,000 ≤ P < 100,000	100	50,720; 90,450	50,700; 50,800; 90,400; 90,500
100,000 ≤ P < 200,000	200	150,500; 125,300	150,400; 150,600; 125,200; 125,400
200,000 ≤ P < 400,000	500	300,100; 350,200	300,000; 300,500; 350,000; 350,500
P ≥ 400,000	1,000	620,500; 852,100	620,000; 621,000; 852,000; 853,000

- Correction or Cancellation of Orders Submitted

- An order can be corrected or cancelled only if not yet executed.
- Only Price and/or Quantity can be corrected.
- Whenever there's correction on price or increasing quantity of the order submitted, the new time stamp will be taken.

- Daily price change limit: ± 10% of the base price.

- Exceptions

- 90%-150%: for initially listed issues
- No daily price change limit for issues scheduled to be delisted.

4.3 Base Price

- In principle
  - Last closing price (or special quotation).
- Exceptions
  - Stock dividend (bonus issue)
  - Capital increase (ex-rights)
  - Stock split or Reverse stock split
  - Initial Listing Issue
- Stock dividend (bonus issue)
  - Base Price = $\dfrac{\text{Market capitalization before dividend}}{\text{No. of shares after dividend}}$

Day	Price	No. of issues
D-1 (before dividend)	30,000R	20,000
D (after dividend)	27,250R	22,000

- Base Price = 27,700R
  - ✓ Calculation: (30,000×20,000)/22,000 = 27,272.7272...
- Capital increase (ex-rights)

•Base Price = $\dfrac{\text{[Total market cap. before capital increase + Capital]}}{\text{No. of shares after capital increase}}$

Day	Price	No. of issues	No. fo new issued	Price of issues
D-1	60,000R	20,000	-	-
D	56,700R	30,000	10,000	50,000R

•Base Price = 56,700R

✓Calculation: [(60,000×20,000)+(10,000×50,000)]/30,000 = 56,666.666...

- **Stock split**

•Base Price = Last closing price x Ratio

Day	Price	No. of issues
D-1	30,000R	2,000
D	3,500R	20,000

•Base Price = 3,500R

✓Calculation: (35,000×0.1) = 3,500 ; Ratio = 2,000/20,000 = 0.1

- Base Price of Initially Listed Issues

•The Base Price of the initially listed issues shall be from 90% to 150% of the IPO price.

•IPO price: 10,000R

Sell Orders	Price	Buy Orders
Upper Limit (150%)	15,000	
	:	
	12,600	Upper Limit (+10%)
	:	
	12,000	Base Price
	:	
	10,800	Lower Limit (-10%)
IPO Price	10,000	
Lower Limit (90%)	9,000	

4.4 Trade Execution

- Priority of Bid/Ask Orders

•Lower asks (higher bids) have a priority over higher asks (lower bids).

•In case of same price orders, time priority adopted.

•Price priority (①) ▸ Time priority (②, ③)

<Example 1>

Ask		Price	Bid	
		10,100	① 20 (the highest bid)	
		10,080	② 200	③ 300
-		10,060	-	
-		10,040	-	
80 ③	100 ②	10,020		
(the lowest ask) 20 ①		10,000		

<Example 2>

Ask		Price	Bid	
		6,200	~~1,200~~	
2,000	700	6,160	~~700~~	~~100~~
300	500	6,140	~~200~~	~~300~~
2,000	~~400~~ 200	6,100	~~100~~	~~300~~
	~~200~~ ~~100~~	6,060		
~~500~~	~~400~~ ~~100~~	6,040		
~~400~~	~~200~~	6,020	100	200
	~~1,000~~	6,000		

Matched Price: 6,100R ; Matched Quantity : 2,900 shares

- Two or more matched prices
•The price that is equal to the latest market price.
•The price that is closest to the latest market price.

<Examples>

Ask	Price	Bid
	9,320	25
	9,300	20
	9,280	
Last Price	9,260	
15	9,220	
30	9,200	

Ask	Price	Bid
	38,750	100
	38,700	100
20	38,500	
	38,400	
150	38,250	
50	38,200	Last Price

- Special Quotation
•The best ask quotation (lower than base price) or best bid quotation (higher than base price), in cases of not executed until the market closing.

<Examples>

Ask	Price	Bid
5,000	10,120	
	10,100	
2,500	10,080	
1,000	10,060	
	10,040	3,000
	10,020	

Ask	Price	Bid
	7,400	
2,000	7,380	
	7,360	
	7,340	
	7,320	1,000
	7,300	

- Example

Ask	Price	Bid
	10,500	
② ~~300~~	10,400	③ ~~600~~ 100
① ~~200~~	10,300	
	10,200	
	10,100	
0	Total	100

•1st Trade: 200 x 10,300 R = 2,060,000 R

•2nd Trade: 300 x 10,400 R = 3,120,000 R

•Total: 5,120,000 R

- Single-price auction (for Comparison)

Ask	Price	Bid
	10,500	
② ~~300~~	10,400	③ ~~600~~ 100
① ~~200~~	10,300	
	10,200	
	10,100	
0	Total	100

•

Trade : 500 x 10,400 R = 5,200,000 R

4.5 Clearing & Settlement

- Securities Clearing and Settlement Operator

•Settlement Date: 2 days after trading day (T+2)

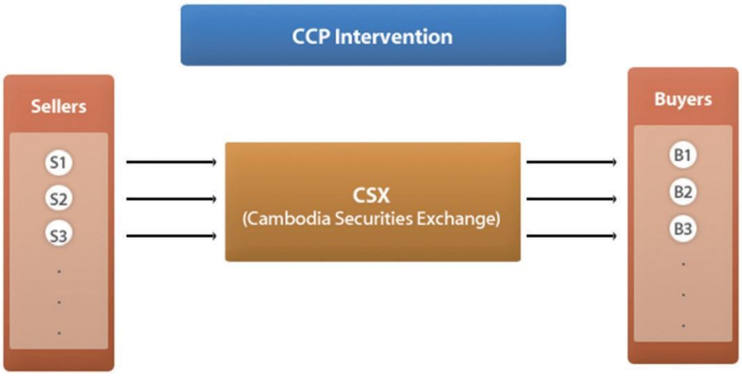
•Clearing & Settlement Methods:

✓ Clearing: Central Counter Party (Multilateral Netting)

✓ Settlement: Delivery Versus Payment

What is Clearing?

- Clearing is a series of processes that a Central Counter-party (CCP) performs to guarantee the settlement by netting the credits and liabilities between the sellers and the buyers.
- Central Counter- party (CCP) means an organization who assumes the accountability of buyers to all sellers and the accountability of seller to all buyers. In this way, buyers and sellers do not have financial obligations to each other but instead to the CCP.
  In this case, CSX performs as the CCP in the Cambodia Securities Market.



- Netting is the process of reducing multiple credit/debit obligations among multiple traders to several credit/debit obligations. Through netting, CSX calculates the final settlement size. After netting, original credit or debit obligation are replaced with a single credit or debit obligation.
- The final settlement size is obtained by the following method:
- In case of securities: obtained by netting the total sold quantity and total purchased quantity per issue for the concerned member.
- In case of cash: obtained by clearing the total purchased value and the total sold value of the concerned member.

What is settlement?

- **Settlement** is the completion of a transaction, wherein the seller transfers securities or financial instruments to the buyer and buyer transfers money to the seller.
- CSX Settlement characteristics :
- Settlement Method : DVP3 (Delivery Versus Payment Model 3)
  DVP 3 is the process of delivery of securities which is done simultaneously with payment on a net basic (Net stock, net payment). It is occurred at the end of the processing cycle.
- Settlement Time : 8:30 am T+2
  The member shall transfer the securities and cash to be settled to the accounts of CSX before 8:30 am on T+2 and CSX shall settle those securities and cash to the counterpart members after 8:30 am on the same settlement date.
- Cash Settlement Agent (Acleda Bank, Canadia Bank and BIDC) : are subjected to carry out the cash settlement obligation.

4.6 Depository

- **What is Securities depository?**
  - Securities depository refers to where securities are deposited.
  - Securities deposit is a process through which rights over securities are transferred, altered, and nullified by book-entry (recording debit/credit in the member and participant account book) without the actual movement of physical certificates.
- **Benefits**
  - When securities are traded between investors, Securities Depository Operator settles transaction by book-entry without physical securities transfer.
  - Transactions of securities deposit are kept in a safe and convenient way without the risk of loss and theft of physical securities.
  - The members and their customers who have deposited their securities at CSX don’t have to withdraw securities in order to exercise their rights against issuing companies.

IV

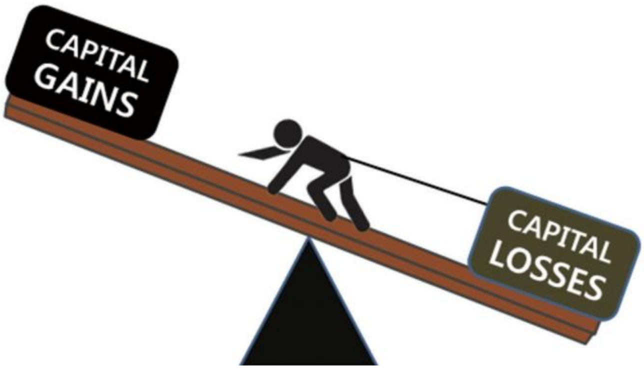
What to Consider in Stock Investment?

IV What to Consider in Stock Investment?

1 Return/ Benefits of Stock Investment

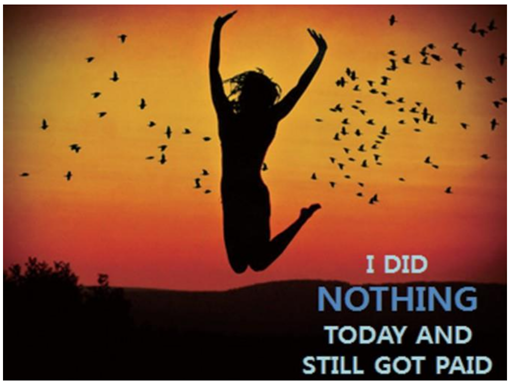
1.1 Capital Gain

- **Capital gain** is profit that results from a sale of a stock, where the selling price exceeds the purchased price. The gain is the difference between a selling price and a purchased price.
- **The main way for people to have hopes in creating good wealth is through capital gain in the stock market. It is proved by the increasing number of rich people across the world.**
- You will realize that the majority of people who are newly rich in your area have invested a good amount of money in the stock market. You have a high chance of making great returns if you invest wisely.
- If you take enough time to study the market before making an investment, you can be enjoying the best returns than you will ever get in any other kinds of investment.



1.2 Dividend Income

- A dividend is a payment made by a company to its shareholders, usually as a distribution of profits. When a company earns a profit, it can re-invest in the business, and pay a fraction of the earnings as a dividend.
- Some of the stocks you will invest in will pay dividends on a regular base (quarterly or yearly) and this means that you will receive some extra money every time the company makes profits.
- Some exceptional companies pay out the dividends on a monthly base, and if you have enough shares, you get enough money to support you or your family for a long time.

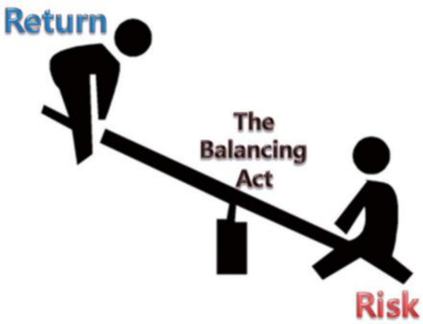


1.3 Investment Strategies for High Return

- As long as you have an effective strategy in the stock investment, you will
  find it easier to invest wisely, and reap high returns quickly.
- Stock market always goes up and down, which offers the chance for investors to make profit. If you have an appropriate strategy for the stock market situation, you can make higher return than any other investment vehicles.

2 Risk of Stock Investment

2.1 Relationship between Risk and Return



- Risk is an inherent part of investment. Generally, investors must take greater risks to generate greater returns; however, taking on additional risk does not always lead to greater returns.
- Investors who take on additional risk must be comfortable with experiencing significant periods of underperformance in the expectation of achieving higher returns over the longer term.
- Those who do not bear risk very well have a relatively smaller chance of receiving high earnings than those with a higher tolerance for risk; similarly they have a smaller chance of making significant losses.
- It's crucial to understand that there is an inevitable tradeoff between investment performance and risk. Higher returns are associated with higher risks of price fluctuations.
- It is important to establish your attitude to risk before you start an investment. Are you willing to tolerate the ups and downs of the market in the expectation of higher returns?
- Although not always the case, generally speaking, the level of return on your investments will reflect the underlying risk.

If you're only willing to accept low or zero levels of uncertainty, your investment returns are also likely to be low.

- However, an investment that seems very attractive in terms of its potential return may not be the right choice if it carries high risk. High risk investments generally require investors to have ability to hold it for the longer term (5-10 years). Importantly, investors should be aware that accepting high levels of risk does not always result in high returns.

2.2 Stock Investment Portfolio

- Not all investment decisions will turn out as expected, but diversification can be a key tool in managing risk.
- By acquiring a portfolio of varied investments across a range of asset classes (stocks, bonds, cash, etc.), geographies and sectors, investors can minimize the effects which poorly performing investments can have on their overall portfolio.
- There are specific risks which investors should be aware of when investing in certain asset classes. The following sections deal with some of the risks which apply when investing in stocks.

2.3 Volatility Risk

- Share prices can be very volatile and investors should be aware that their shares may fluctuate significantly in price in short periods. This can apply to individual stocks, sectors or market itself.

2.4 Market Risk

- There is the circumstance that the entire market will decline, thus affecting the prices and values of securities. Market risk, in turn, is influenced by outside factors such as interest rate changes, political risk, and so on.

2.5 Sector Specific Risk

- This is the risk that a particular sector experiences malaise, e.g. the airline industry on news of terrorist attacks. Such periods of weakness can however provide buying opportunities, but existing investors must decide whether they are prepared to weather the storm or they should sell their shares in anticipation of further declines.

2.6 Company Specific Risk

- Similar to sector specific risk, this is the risk that a particular investment will experience share price declines due to negative news flow or poor sentiment towards the company. This would be followed by perhaps a change in management which is not well accepted by the market.

2.7 Timing Risk

- This is the risk that you buy or sell a share at the wrong time. Not all sectors of the market follow the same price cycles. Understanding what the business cycles are and how different companies perform during different phases of the business cycle can help to manage the effects of timing risk.

2.8 Exchange Rate Risk

- This is the risk that investments in a foreign currency lose value when converted to your local currency, due to movements in the exchange rates between the two currencies.

2.9 Broker Risk

- Trading stocks through a broker adds another layer of investing risk. A solid broker will provide research and stock analysis that you may not have the time or resources to conduct by yourself. This research may allow you to make more precise investment decisions.
- Relying on the advice of others for investments is always a risk, as you may not know their motives. Some brokers may push specific stocks and investments based on their potential reward or company's directives without regard to your specific financial objectives.
- Deception and the theft are also possibilities, but reviewing the broker and firm's licensing and registration information as well as the firm's complaint record can help you minimize broker-related issues.

2.10 Liquidity Risk

- You may need a lot of money for a house or other investments. If you place your savings into stocks, you handle the risk of not being able to sell the securities easily when you need to convert them to cash. If you invest in stocks with a large market cap of which trading volume is heavy, your liquidity risk is lower.

3 Cost of Stock Investment

3.1 Transaction Cost

- Whenever you buy and sell the stocks, you need to pay commission to the broker, which is a transaction cost. The cost is generally negotiable depending on your trading amount.

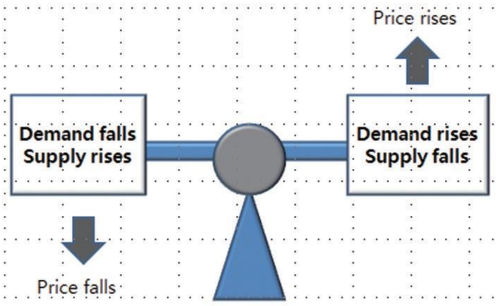
3.2 Research Cost

- Before you make an investment decision, you will search for a better stock by reading articles, meeting with experts, and so on. All of the activities incur the cost, which is research cost.

4 Why Stock Price Rise and/or Fall

4.1 Supply and Demand

- Stock prices rise and fall by a function of supply and demand.
- If a company reports surprisingly low earnings, demand for the stock may wither.



- Buyers will demand a discount on the existing price and many motivated sellers will accommodate. More sellers than buyers mean that there is more supply than demand, so the price falls.
- At some point, the price drops to a level that buyers find it attractive.
- As buyers move into the market, demand grows faster than supply and the price goes up.
- Sometimes supply and demand find a balance, which is an accepted price between buyers and sellers. When supply and demand are balanced, prices will bounce up and down in a narrow price range.
- It is possible for a stock to stay in this range for days or months, before something else disrupts the supply/demand balance.
- There is an inter-relationship with “supply and demand” and “a stock price”.
- If demand for a stock exceeds the supply, the price will rise to the level where buyers can accept.
- At that point, holders of the stock will start to sell.
- Some may have ridden the price up and believe a reversal (supply>demand) is coming soon, so they will start to sell and take their profits.

- As more owners sell (for whatever reason), the price begins to fall, since there is now more supply than demand.
- To attract buyers, the holders of the stock lower the price.
- As buyers acquire shares, the stock price rises again.
- The supply and demand balance determines the price in the market.

4.2 Company News

- Company news is one of the key factors which affects the supply and demand of stocks.
- Positive news flow such as favorable business environment and surprisingly good earnings report will attract more investors to buy the stocks aggressively, pushing up the share price.
- Negative news flow such as accidents in a company's factory and disappointing earnings report will push stock holders to sell the shares, pulling down the share price.

4.3 Merger and Acquisition (M&A)

- M&A is another key factor to affect the share price.
- If a company takes over a very profitable business unit from another company, the company's future cash flow will be improved, which is positive for the share price.
- On the other hand, if a local company is acquired by a globally competitive company, the company's cash generation power could be upgraded by using acquirer's global sales network and quality management skill. This will likely drive up the share price.
- However, M&A is sometimes interpreted as a negative news for the share price, if the M&A incurs a huge cost with little synergy.

4.4 Analyst's Upgrade and Downgrade

- Analysts in brokerage firms suggest "Buy" or "Sell" recommendations on major listed companies. When they upgrade or downgrade the recommendations, the share price is affected. In some circumstance, it is not.
- If the recommendation change is based on the accurate and reliable analysis which has been unknown to the market, the impact on the share price can be strong. Otherwise, the impact can be negligible.

4.5 Organization Restructure

- Companies sometime split/spin off some business units for independent decision makings and transparent performance evaluations. On the contrary, companies can take over their subsidiaries for synergy with mother companies.
- The investors check the impact from the organization restructuring into the future business performance, which is reflected in the share prices.

V
Fundamental Analysis

V Fundamental Analysis

1 Introduction

1.1 Definition

- **Fundamental analysis** is a technique to determine a security value by focusing on the factors that affect a company's actual business and its future prospects.
- Fundamental analysis is a method of evaluating a security to measure its intrinsic stock value by examining related economic, financial and other qualitative and quantitative factors.

1.2 Goal of Fundamental Analysis

- Fundamental analysis is to examine the factors that can affect the security's value, including macro-economy, industry, and company specific issues.
- The end goal of fundamental analysis is to produce an actual value that an investor can compare with the security's current price.
  - Buy, if the security is underpriced;
  - Sell, if the security is overpriced.

1.3 Comparison with Technical Analysis

- Even though fundamental analysis is a right way to make an investment decision, it requires too much complicated works for an individual investor to conduct with a limited time and information.
- Hence, technical analysis is widely used as another tool to estimate a proper stock value.
- Technical analysis forecasts the future price trend by focusing on the historical price and trading volume chart under the assumption that the historical trend will repeat in the future.
- Comparing with fundamental analysis, technical analysis is much easier and simpler to conduct, which is an attractive merit in a fast changing stock market.
- However, technical analysis does not always give a guarantee of 100% accurate result, as the stock price does not always repeat the historical pattern.
- We recommend that individual investors should check both fundamental and technical analysis, as the two methods are complementary.

	Fundamental	Technical
Main Focus Area	• Intrinsic value including Macro Economy, Industry and the company	• Historical Chart
Strength	• If analysis is well conducted, the success probability is high	• Analysis is relatively simple
Weakness	• There are so many factors and data that we cannot obtain everything	• Even though analysis is well conducted, there is always failure probability

1.4 Importance of Fundamental Analysis

- Stock price eventually reflects the future earnings of a company, while it could diverge temporarily.
  Fundamental analysis is the best tool to find the proper value of a stock by estimating the future earnings.
- A thoroughly conducted fundamental analysis will protect investors from fluctuating market conditions and help investors to maximize the return by finding undervalued stocks.
- **Fundamental analysis answers the following questions:**

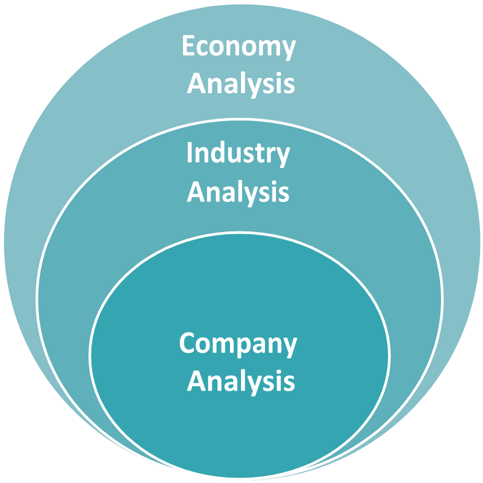
•Is the company's revenue (sales) growing?

•Is it actually making a profit?

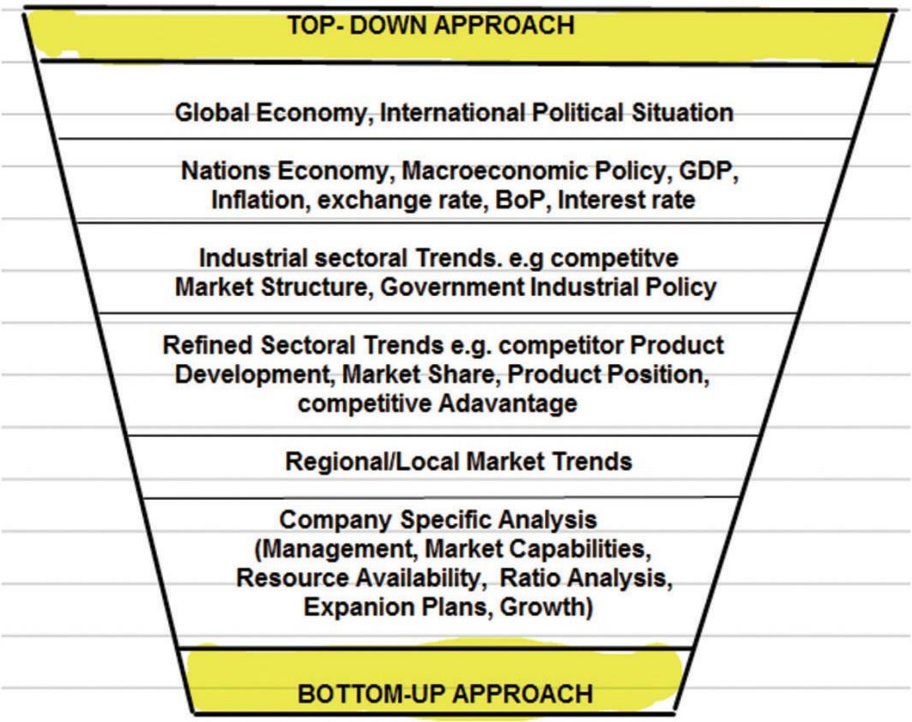
•Is it in a position strong enough to surpass its competitors in the future?

•Is it able to repay its debts?

- Fundamental analysis allows investors appraise the intrinsic value of shares through :



- Two Ways of Fundamental Analysis:



2 Macro Economy

2.1 Concept

- Macro economy is the dominant factor for fundamental analysis of a company.
- There are so many check points including global economy, domestic economy, politics, unexpected events such as war and natural disasters.
- Despite the importance of the macro economy analysis, we do not recommend to spend too much time on it. Because it is too much time consuming and difficult to get the right answer only by individual work. We recommend relying on selective reports published by some reputable brokerage houses or institutes.

2.2 Politics

- Politics has a widespread influence on a country's economy, especially in the countries where the politics is unstable.
- When international fund managers select stocks, the country's political stability is a key requirement for the investment.
- Unstable politics may cause an abrupt change of financial system, interest rate, FX rate, etc., which raise the investment risk.

2.3 Macro Economy Variables

- Macro economy variables include GDP, exchange rates, balance of payments, interest rate, inflation, unemployment rate, etc.
- Economic Indicators' Impacts on the stock market is seen below.

Variables	Impact on stock market
Higher GDP growth rate	Positive
Increasing FX rate	Usually positive (Improving trade balance)
Improving balance of payment	Positive
Higher Interest rate	Negative
Higher inflation	Moderate inflation preferable
Higher unemployment rate	Negative
Higher tax rate	Negative

2.4 Unexpected Events

- The stock market is affected by unexpected events such as war, terror, and natural disaster.
- The Sep 11th attacks in US had a significant impact on US stock market. The stock exchanges did not open on Sep 11th and remained closed until Sep 17th. Reopening on Sep 18th, the Dow Jones Industrial Average (DJIA) fell 7.1%. By the end of the week (Sep 21th), the DJIA had fallen 14.3%.
- The 2011 Tsunami (Mar 11th) also hit the Japanese stock market. Nikkei225 had dropped 17.5% for 3 trading days from Mar 11th to Mar 15th.
- Stock investors are always exposed to the unexpected events. When they encounter the events, they are required to make a quick decision whether they should stop loss or maintain the position with a hope of market recovery.

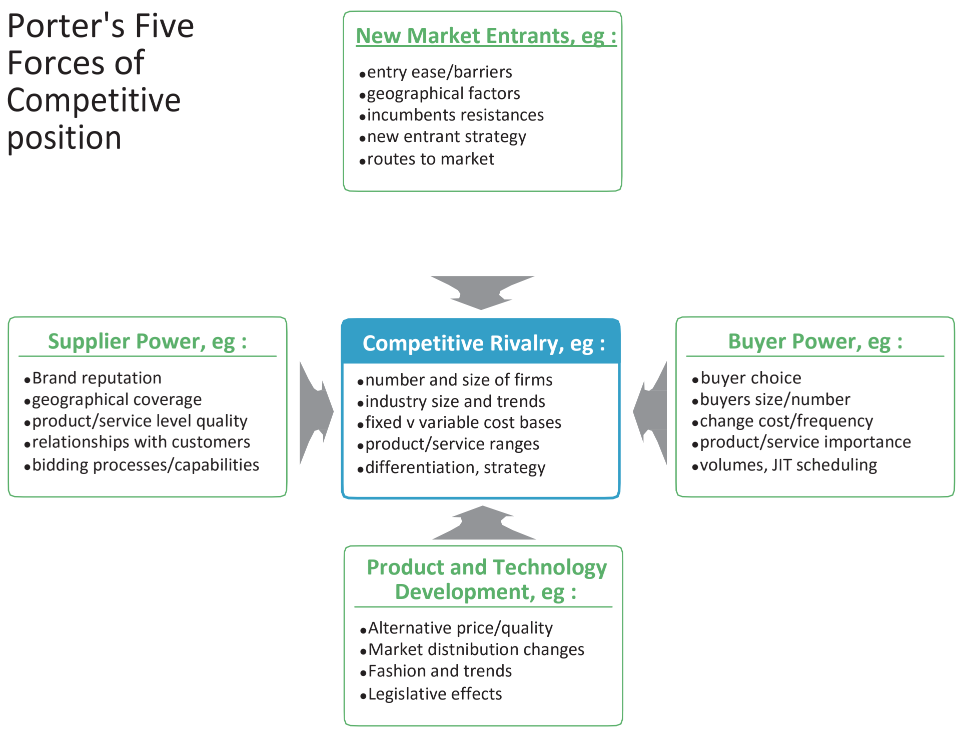
3 Industry

3.1 Concept

- Industry analysis is a type of investment research that begins by focusing on the status of an industry. The purpose is to predict the profitability and business growth of the industry in the future.
- Each industry has a different feature in terms of growth stage, earnings trend, etc., which implies that it is not justifiable to compare multi industries by only one valuation tool.
- Industry analysis covers sales and earnings trend, government policy on the industry, competitive conditions, stock price trend, and so on.

3.2 Porter's Five Forces of Competitive Position

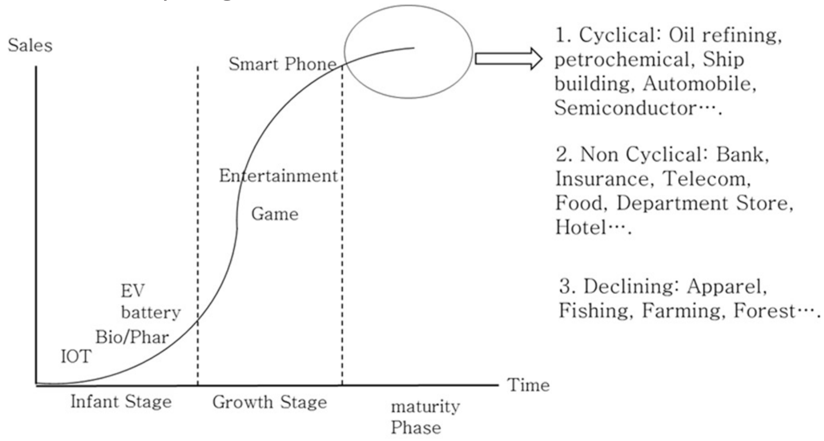
- Five Forces analysis is a framework that attempts to analyze the level of competition within an industry and business strategy development.
- It draws upon industrial organization economics to derive five forces that determine the competitive intensity and attractiveness of an industry.



- Competitive Rivalry describes the intensity of competition between existing firms in an industry. Highly competitive industries generally earn low returns because of high competition cost.
- Threat of New Market Entrants is known as an entry barrier. The easier it is for new companies to enter the industry, the more fierce competition is.
- Product and Technology Development can be expressed as availability of substitutes. A low switching cost to substitutes poses a serious threat to the existing products. Product and technology development will make it more costly to switch to substitutes.
- Supplier power means how strong bargaining power a supplier has. If a supplier has a strong impact on the industry's product volume and price, it implies that the industry has a low competition level.
- Buyer power means the bargaining power of customers, which is the ability of customers to put the suppliers under pressure. Strong buyer power can be caused by small number of buyers, high price sensitivity, low cost for substitute (competitive) products, and so on.

3.3 Industry Growth Curve

- All the industries have a similar growth curve, which has infant, growth, and maturity stages.



- In infant stage, rosy prospects dominate the market, despite a big hurdle in technology. All the relevant companies are highlighted, and the sales growth is relatively slow due to an immature business environment.
- In growth stage, the industry sales growth accelerates amid more friendly business environment. The suppliers are distinguished between winners and losers by their product quality and technology level.
- In maturity stage, the industries are classified into survivors and decliners by their competitiveness. The survivors, in turn, are into cyclical and non- cyclical industries by the sales trend.

•Cyclical industries have a feature that it takes time for the volume gap between production and consumption to be filled. This is due to a long period time for plant construction.

•Non-cyclical industries have flat sales volume and price trend. As a result, the earnings of the industries are stable.

4 Company

4.1 Qualitative Analysis

- Qualitative analysis covers a company's, management quality, technology level, competitiveness of the facilities, brand image, effectiveness of distribution channel, industrial relations, and man power.
- The following questions will help you to get the solutions for the qualitative analysis.

•Is the company run by family members or professional managers?

•What is the public image and reputation of the company?

•Does the company have the competitive technology and what kind of efforts does it make for R&D?

- Does the facility have competitiveness in terms of quality and economies of scale?
- Does the company have effective distribution channel and marketing activities?
- How are the company's industrial relations? Does it communicate well with the market and minority shareholders?
- How competitive is the overall man power of the company?

4.2 Financial Statements

- **Financial Statement** is a formal record of the financial activities and position of a company. Relevant financial information is presented in a structured manner.
- Key components of financial statement are income statement, balance sheet, and cash flow.
- **Income Statement (Profit and loss account)** shows the company's revenues and expenses over a period of time.
- It indicates how the revenues are transformed into the net income. The purpose of the income statement is to show managers and investors whether the company made gain or loss during the period of time.

ABC Corporation Income Statement	Year 1
Total Revenue	$1,000.00
Cost of Goods Sold	-$600.00
Gross Profit	$400.00
Operating Expenses	
Research & Development	-$50.00
Administrative Expenses	-$100.00
Other Operating Expenses	-$30.00
Operating Profit (EBIT)	$220.00
Interest Expenses	-$15.00
Profit Before Taxes (EBT)	$205.00
Income tax	-$51.25
Net Income	$153.75

- Balance sheet is a snapshot of a company's financial condition at the end of a specific date, showing the summary of assets, liabilities, and shareholders' equity.
- Three balance sheet segments give investors an idea as to what the company owns and owes, as well as the amount invested by shareholders. The amount of asset should be equal to sum of liabilities and shareholders' equity.
- Key balance sheet Items are;
  - Assets
    - ✓ Current assets:
      - ① Cash & securities

② Accounts Receivable (AR)
③ Inventories

✓Fixed assets:

① Tangible assets like PPE(Property, Plant And Equipment)
② Intangible assets

• Liabilities and Equity

✓Current liabilities:

① Accounts payable (AP)
② Short-term debt

✓Long-term liabilities

✓Shareholders 'equity

ASSETS		LIABILITIES AND SHAREHOLDERS' EQUITY	
Current assets		**Current liabilities**	
Cash and cash equivalents	$ 80,000	Accounts payable	$ 35,000
Accounts receivable	15,000	Notes payable	9,000
Inventory	10,000	Accrued expenses	6,500
Prepaid expense	5,000	Deferred revenue	3,500
Investments	15,000	Total current liabilities	54,000
Total current assets	125,000		
		Long-term debt	250,000
Property and equipment			
Land	25,000	**Total liabilities**	304,000
Buildings and improvements	300,000		
Equipment	50,000	**Shareholders' Equity**	
Less accumulated depreciation	(5,000)	Common stock	20,000
		Additional paid-in capital	25,000
Other assets		Retained earnings	151,750
Intangible assets	5,000	Treasury stock	(1,000)
Less accumulated amortization	(250)		
		Total liabilities and shareholders' equity	$ 499,750
Total assets	$ 499,750		

- **Cash flow** shows a firm's net amount of cash change by elaborating cash receipts and cash payments during a specified period.
- Net cash flow is distinguished from net income, which includes accounts receivable and other items for which payment has not actually been received. Cash flow is used to assess the quality of a company's income, that is, how liquid it is, which can indicate whether the company is positioned to remain solvent.
- Key cash flow items are;

• Operating activities
• Investing activities
• Financing activities

Cash flows from (used in) operating activities		
Cash receipts from customers	9,000	
Cash paid to suppliers and employees	(1,500)	
Cash generated from operation(sum)	7,500	
Interest paid	(1,000)	
Income taxes paid	(1,500)	
Net cash flows from operating activities		5,000
Cash flows from (used in) investing activities		
Proceeds from the sale of equipment	7,000	
Dividends received	2,000	
Net cash flows from investing activities		9,000
Cash flows from (used in) financing activities		
Dividends paid	(2,000)	
Net cash Flows used in financing activities		(2,000)
Net increase in cash and cash equivalents		12,000
Cash and cash equivalents, beginning of year		1,500
Cash and cash equivalents, end of year		$13,500

4.3 Earnings Model

- Earnings model implies a construction of financial statements (Income statement, balance sheet, and cash flow) estimates, which is a base of valuation.
- In a sense that stock selection should be based on the earnings estimates rather than the historical result, the earnings model is a key of the company fundamental analysis.
- Even though earnings model is known as a quantitative analysis, it should contain the factors of qualitative analysis.

Income Statement Key Items	Key Variables
Sales	**Price : Domestic / Global Competitiveness**
	Quantity : Domestic / Global GDP, new market
Cost of sales	Price : Raw material price, FX, Utiliy cost Quantity : Domestic / Global GDP, new market
Operating cost	Inflation rate, Number of employees
Non operating Items	Interest rate, FX rate, affillates earnings change
Tax	Corporate tax rate

Balance Sheet Key Items	Key Variables
Receivables	**Sales change, receivable collection period change**
inventory	Sales change, inventory holding period change
Tangible Asset	**Investment / disposal plans, depreciation schedule**
Payable	Cost of sales change, payment period change
Paid in capital	**Plan for capital increase / reduction**

Cash Flow Key Items	Key Variables
Severance provision	**Number of employees change, wage change**
Working capital change	Current asset change, current liability change
Capex	**Investment / divestment plans, depreciation schedule**

5 Ratio Analysis

5.1 Introduction

- Ratio analysis standardizes financial information for comparison.
- It makes it possible to compare one company's current status with its historical data as well as other companies.'
- Ratio analysis shows growth, profitability, and stability.

5.2 Growth Analysis

- Growth analysis usually includes sales, EBITDA (Earnings before interest expense, tax, depreciation, and amortization), operating profit, and net profit.
- High growth companies are preferred, as they could generate higher earnings in the future.
- EBITDA growth is considered importantly, as it shows the cash flow trend based on key operating activities.
- Operating profit growth and net profit growth provide a hint on the future shareholders' value change.

Growth (%)	**FY13**	**FY14**	**FY15E**
Sales	26.6	4.4	15.5
EBITDA	20.6	- 56.1	69.4
Operating Profit	18.0	- 67.2	122.3
Net Profit	24.5	- 62.9	109.2

5.3 Profitability Analysis

- Profitability is commonly measured by gross margin, EBITDA margin, operating margin, net margin, ROE, and ROA.
- The formula is as followings;
  - ✓ Gross margin = gross profit/sales
  - ✓ EBITDA margin = EBITDA/sales
  - ✓ Operating margin = operating profit/sales
  - ✓ Net margin = net profit/sales
  - ✓ ROE = net profit/total shareholders' equity
  - ✓ ROA = net profit before interest expense and tax/total asset

Profitability (%)	FY13	FY14	FY15E
Gross Margin	12.1	5.5	8.1
EBITDA Margin	11.9	5.0	7.3
Operating Margin	9.5	3.0	5.7
Net Margin	7.2	2.6	4.6
ROE	25.4	6.8	13.5
ROA	17.3	4.6	10.0

5.4 Stability Analysis

- Stability analysis is the minimum to check the investment risk. The most commonly used tool is liability to equity, as it is easy to calculate. However, we use other tools for more accuracy, which are total debt to equity, net debt to equity, current ratio, and interest coverage.
- The formula is as followings;
  - ✓ Liability to equity = total liability/total shareholders' equity
  - ✓ Total debt to equity = total interest bearing debt/ total shareholders' equity
  - ✓ Net debt to equity = (total interest bearing debt – total interest bearing asset)/total shareholders' equity
  - ✓ Current ratio = current asset/current liability Interest
  - ✓ coverage = operating profit/interest expense

Stability (%)	FY13	FY14	FY15E
Liab. to Equity	74.5	67.1	55.6
Total debt to Equity	30.2	23.5	13.7
Net debt to equity	0.8	-1.3	-11.1
Current ratio	179.2	171.4	184.8
Interest coverage(x)	18.9	7.3	19.5
Capex/Ebitda	50.2	48.8	28.8

6 Valuation

6.1 Introduction

- Valuation is the process of estimating what a stock is worth, which helps us to make Buy/Sell decision by suggesting a fair value or target price.
- Valuations are classified into absolute valuations and relative valuations.
- Absolute valuations suggest fair value (=intrinsic value), which include DCF and DDM. Intrinsic value is the actual of a company based on an underlying perception of its true value including all aspects of the business.
- Relative valuations suggest target price, which include PE, PB, EV/EBITDA, and Dividend yield.

6.2 Absolute Valuations

- **DCF (Discounted Cash Flow)** is a method of valuing a company's stock price using the concepts of the time value of money. All future cash flows are estimated and discounted by using cost of capital to get their present values. The sum of all future cash flows is the net present value, which is taken as the fair value of the stock.

(W bn)	2015	2016E	2017E	2018E	2019E	2020E
Operating Profit	1,089	1,165	1,223	1,284	1,374	1,470
+Depreciation	300	321	337	354	379	405
=EBITDA	1,389	1,486	1,560	1,638	1,753	1,875
-CAPEX	400	400	450	450	500	500
FCF	989	1,086	1,110	1,188	1,253	1,375
FCF after effect	741	814	832	891	939	1,031
Disconted FCF	741	754	714	707	691	702

A. Sum of Discounred FCF Explicit Period	4,309
Undisounted Terminal Value	20,630
B. Discounted Terminal Value	14,040
C. Present Value of FCF (A+B)	18,349
D. Net Debt	838
E. Equity Value (C-D)	19,187
F. Number of shares	31,860,000
G. Fair Value (E/F)	
WACC (r)	8%
Growth rate (g)	3%

- DDM (Dividend Discount Model) is a method of valuing a company's stock price based on the theory that its stock is worth the sum of all the future dividend payments, discounted back to the present value.
  - ✓ The simple formula: Fair Value = this year's dividend/ (cost of equity –long term growth rate)
  - ✓ Example : this year's dividend = 1,500, Cost of equity = 8%, growth rate = 3%, DDM = 1,500/(8%-3%)= 30,000
- The fair value calculated by absolute valuations are affected by assumptions such as long term growth rate and discount rate. Hence, we usually conduct sensitivity analysis by changing the assumptions

Sensitivity for DCF

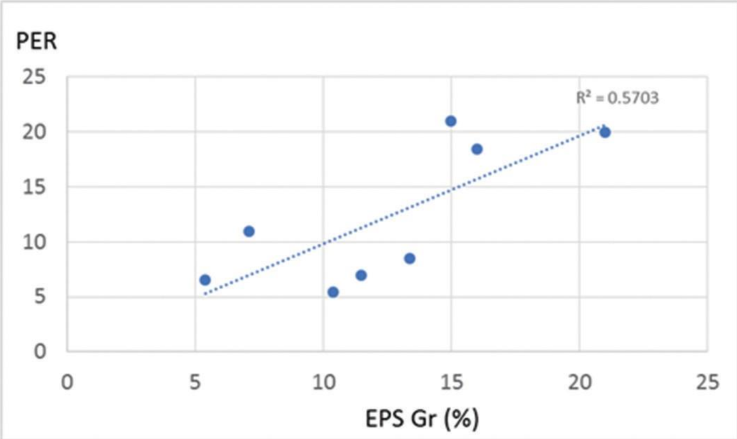
		WACC 4%	6%	8%	10%	12%
Growth	1%	1,062,000	651,830	476,325	379,020	317,246
	3%	2,836,034	974,404	602,235	442,838	354,359
	5%	-2,486,067	2,587,273	896,027	557,711	412,679

Sensitivity for DDM

		k 4%	6%	8%	10%	12%
g	1%	50,000	30,000	21,429	16,667	13,636
	3%	75,000	37,500	25,000	18,750	15,000
	5%	150,000	50,000	30,000	21,429	16,667

6.3 Relative Valuations

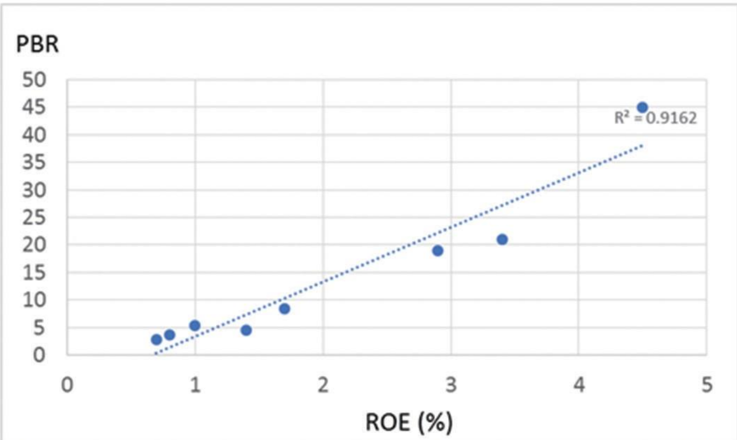
- **PER (Price to Earnings ratio)** is the most commonly used in the real world due to its simplicity of calculation. Lower PER stock is preferred as it is considered as undervalued. However, proper multiple is determined by its earnings growth rate.
  - ✓ PER = Market price per share/Earnings (net profit) per
  - ✓ share Example: market price = 100, EPS= 10, PER = 10x



- PEGR is introduced to check whether a company's PER can be justified by its growth rate.
  - ✓ PEGR = PER/(EPS growth*100)
  - ✓ Stock B has a lower PEGR, which is more attractive

	Stock A	Stock B
PER	10x	20x
3yr average EPS gr	5%	40%
PEGR	2	0.5

- PBR (Price to Book ratio) is also frequently used in the real world. The concept is to compare a company's current market price to its book value.Lower PBR stock is preferred as it is considered as undervalued. However, proper multiple is determined by its book value growth (measured by ROE).
  - ✓ PBR = Market price per share/shareholders' equity per share
  - ✓ Example : Market price/share = 100, shareholders' equity/share = 120, PBR = 0.83x



- EV (Enterprise Value)/EBITDA is also used to measure the value of a company. The advantage of EV/ EBITDA is to measure the company's earnings generation power based on operating cash flow. The proper multiple is determined by its EBITDA growth.
  - ✓ EV = Market capital + net debt
  - ✓ EBITDA = Earnings before interest expense, tax, depreciation, and amortization
- Dividend Yield is used to calculate the performance of stock investment considering only the returns in the form of dividend. It is usually lower than the market interest rate. If a stock price drops and the dividend yield approaches to the market interest rate, the share price tends to be a bottom.
  - ✓ Dividend Yield = Dividend per share/market price per share

6.4 Valuation Comparisons

- Absolute valuation suggests the fair value, which is independent from the market situation. However, the fair value is sensitive to an assumption change.
- Relative valuations are easy to calculate, but the proper multiples depend on the market situation change.

	Strength	Weakness
Absolute Valuations	• Regardless the market situation change, we can find the value.	• Sensitivity to an assumption change is too high.
Relative valuations	• Calculation is easy.	• The target price depends on the market situation change.
PER, EV/ EBITDA	• Good tools in earnings expansion cycle	
PBR, Dividend Yield		• Good tools in earnings reduction cycle.

VI

Technical Analysis

VI Technical Analysis

1 Introduction

1.1 What is Technical Analysis?

- Technical analysis is a tool to estimate a proper security value by focusing on the historical price and trading volume, while Fundamental analysis is a method of evaluating a security to measure its stock value by examining related economic, financial and other qualitative and quantitative factors.
- Technical analysis is often called "Chart analysis".

1.2 Underlying Assumptions

- The historical trend or pattern will repeat in the future.
- The share price and trading volume graphs show the information on the supply and demand for the stocks.

1.3 Strength and Weakness

- **Strength**
  - •Share price is affected by fundamental as well as psychological factors, and the technical analysis makes up the factors that fundamental analysis does not cover.
  - •Technical analysis provides the information on the entry/exit points.
- **Weakness:**
  - •When the stock price diverges from the historical trend, the technical analysis does not work.
  - •Technical analysis misses the cause of the stock price movement.
- Basic Essentials for stock selection
  - •Both fundamental and technical analysis should be used for stock selection.

<u>Basic Essentials for stock selection</u>

Macro Economy	• The most dominance factor, but no one knows. • Do not spend too much time.
Industry Prediction	• Check whether the industry is growing up, flat, declining. • What is the risk factor?
Company Competitiveness	• What makes the company differentiate from its competitors? • Price driven or quantity driven? Management quality?
Finacial Status	• Financially sound? Any risk for bankruptcy? • Chance for improvement or deterioration?
Valuation	• Cheap? Expecting news flow already reflected? • Looking for cheap company, not good company.
Technical Analysis	• Right time for entry/exit? • Any opposite signal to the fundamental analysis?

1.4 Main Theories of Technical Analysis

- Dow Theory was developed by Charles Dow, and it became famous by predicting the US stock market collapse in 1929. The technical analysis today has its origin in theories first proposed by Dow.
- The basic tenets of Dow theory are :
  - •The Averages discount everything: The sum and tendency of the stock transaction represent the sum of all Wall Street's knowledge.
  - •The market has three trends. They are primary (more than a year), secondary (more than three weeks), and minor (less than three weeks).
  - •Major trends have three phases. They are an accumulation, a public participation, and a distribution phase.
  - •The Averages Must Confirm Each Other: No important bull or bear market signal could take place unless each of them confirms each other.
  - •Volume Must Confirm the Trend: Trading volume is regarded as another important factor in confirming price signals.
  - •A trend is assumed to be in effect until it gives Definite Signals that it has reversed; A price trend tends to continue in motion until some external forces cause it to change to change the direction.
- •In the pictures below, A represents accumulation, P does public participation, and D does distribution.

Dow Jones Industrial Average

KOSPI

•Criticisms of Dow Theory: A) Dow theory misses 20 to 25% of a move before generating a signal. B) Dow theory is sometimes too late. A buy signal sometimes occurs in the second phase of an uptrend.

- Ralph Nelson Elliott developed the Elliott Wave Theory, and he insisted that Elliott Wave Theory was complement to the Dow Theory.
- The basic tenets of Elliott theory are;

•Market prices alternate between an impulsive (or motive) and a corrective phase on all time scales of trend.

•Impulses are always subdivided into a set of 5 lower-degree waves, alternating again between motive and corrective character.

•Waves 1, 3, and 5 are impulses and waves 2 and 4 are smaller retraces of waves 1 and 3 in the picture below.

•Wave 1 is a start of the up/down trend.

•Wave 2 has the opposite direction against Wave 1 and the length is 38% or 62% of Wave 1. The lowest point of Wave 2 should be higher than that of Wave 1.

•Wave 3 is the most powerful and the longest out of 5 waves. The length of wave 3 is 1.6x of wave 1.

Wave 3 has the largest trading volume.

•Wave 4 has the opposite direction against wave 3 and the length is 38% of wave 3. The lowest point of wave 4 should be higher than the highest point of wave 1.

•Wave 5 is the final stage of the phase and the length is similar to wave 1.

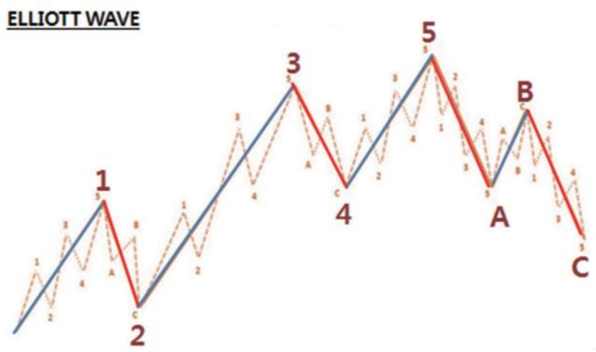
•Corrective waves are subdivided into 3 smaller-degree waves, which are A, B, and C in the picture.

•Wave A has the opposite direction against Wave 5.

•Wave B has the opposite direction against Wave A and the trading is not active.

•Wave C is similar to Wave 4 in terms of the direction and the length. The trading is very active.

•In a bear market, the dominant trend is downward, so the pattern is reversed- five waves down and three up.



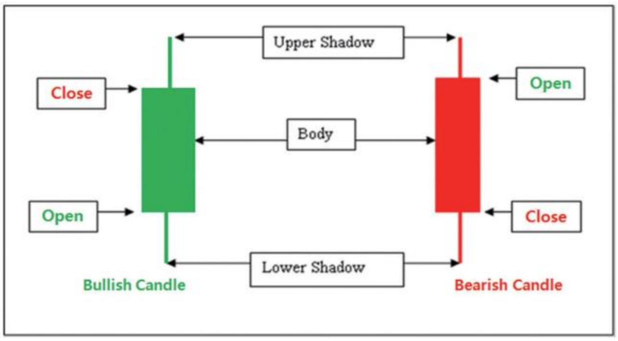
Elliot Wave Theory (KOSPI)

•Criticism of Elliot Wave Theory: A) There are times when Elliot waves are clear and other times when they are not. B) It is unclear to set the starting point.

2 Candle Chart

2.1 Introduction

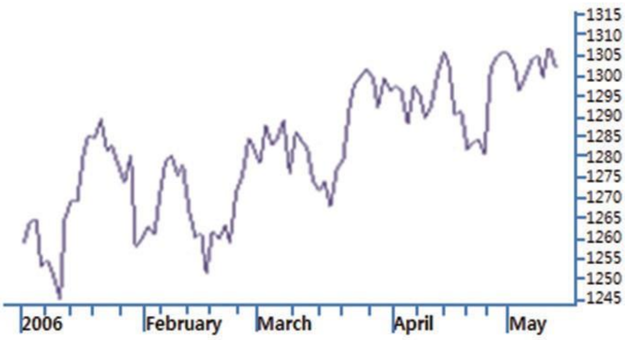
- A candle chart is a style of financial chart used to describe price movements of a security.
- A candle is usually composed of the body (green or red), and an upper and a lower shadow. The area between the open and close price is called body, and the price excursions above and below the body are called shadows.
- The body illustrates the opening and closing prices, and the shadow does the highest and lowest trading prices during the time interval represented.
- If the closing price is higher than the opening price, the body is green (or white). In the inverse case, it is red (or black). But, some countries use the colors on the other way.
- Whatever the color is, we call “bullish candle” when the close price is higher than the open price, and “bearish candle” in the opposite case.



- The below picture is candle chart for KOSPI where blue is bearish and red is bullish candle.

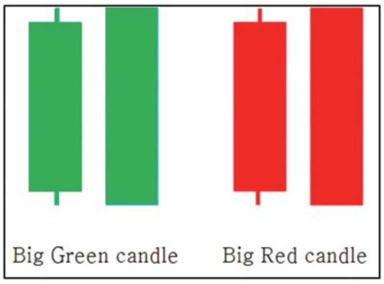
•Comparing with a candle chart, a bar chart does not have a body. Instead, the opening (closing) price is shown as a tic to the left (right) of the vertical bar.

•A line chart produces a solid line by connecting the successive closing prices. This does not show opening, high, and low prices.



2.2 Simple Patterns (Here green is bullish and red is bearish)

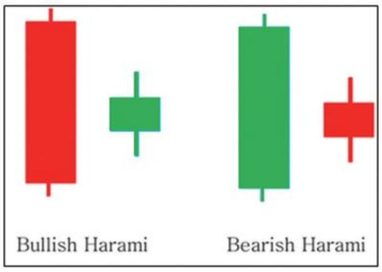
- Big Green candle has an unusually long green. This is a bullish signal. If the candle has only body without shadows, meaning that the close price is the highest price and open is the lowest, it is a stronger bullish signal.
- Big Red candle is the opposite case of big green candle. This is a strong bearish signal.



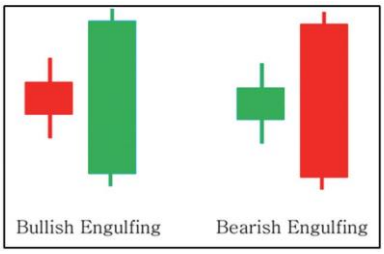
- Doji is formed when open and close prices are virtually same. This means that the buying and selling pressure is balanced, and the future trend is uncertain.
- Dragonfly is formed when the open and close prices are at the highest of the day. If it has a longer lower shadow, it signals a more bullish trend.
- Gravestone is formed when the open and close prices are at the lowest of the day. If it has a longer upper shadow, it signals a more bearish trend.

2.3 Complex Patterns (Here green is bullish and red is bearish)

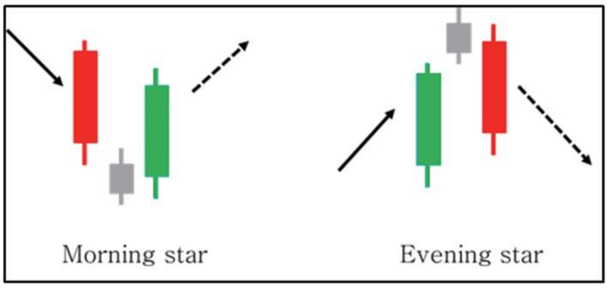
- Bullish Harami consists of an unusually large red body followed by a small green candle (contained within large red body). It is considered as a bullish pattern when preceded by a downturn.
- Bearish Harami consists of an unusually large green body followed by a small red candle (contained within large green body). It is considered as a bearish pattern when preceded by an uptrend.



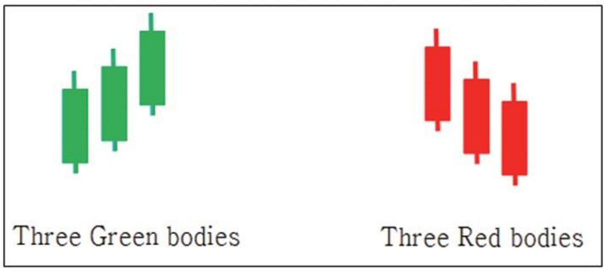
- Bullish Engulfing consists of a small red body that is contained within the followed large green candle. When it appears at bottom of the price trend, it is interpreted as a major reversal signal.
- Bearish Engulfing consists of a small green body that is contained within the followed large red candle. When it appears at top of the price trend, it is interpreted as a major reversal signal.



- Morning star consists of a large red body candle followed by a small body (either red or green) that occurred below the large red body candle. On the following day, a third green body candle is formed of which close price is higher than the middle of the first red body. It is considered as a major reversal signal when it appears at bottom of the price trend.
- Evening star consists of a large green body candle followed by a small body (either red or green) that occurred above the large green body candle. On the following day, a third red body candle is formed of which close price is lower than the middle of the first green body. It is considered as a major reversal signal when it appears at top of the price trend.



- Three green bodies consist of three long green candles with consecutively higher closes. The closing prices are near to or at their highs. When it appears at bottom of the price trend, it is interpreted as a bottom reversal signal.
- Three red bodies consist of three long red candles with consecutively lower closes. The closing prices are near to or at their lows. When it appears at top of the price trend, it is interpreted as a top reversal signal.



- We show some examples of the patterns above mentioned.

Engulfing Pattern

Morning (Evening) Star Pattern

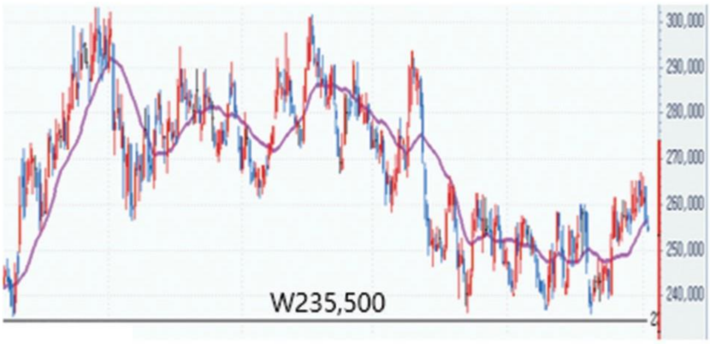
3 Trend Analysis

3.1 Introduction

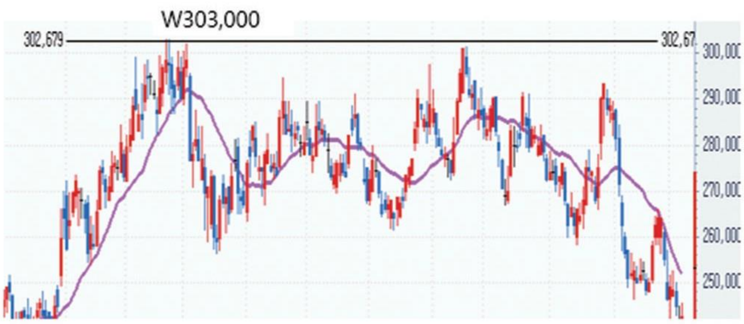
- The underlying assumption is that the historical trend will continue in the future.
- Like other technical analysis, the success in the past does not always guarantee the success in the future.

3.2 Support and Resistance

- Think of security prices as the result of a head-to-head battle between a bull (the buyer) and a bear (the seller). The bulls push prices higher and the bears push prices lower. The price actually reveals who is winning the battle.
- Using this analogy, note how each time prices fell to the W235,500 level in the graph below. The buyers took control and prevented prices from falling further. This means that at the price of W235,500, buyers felt that investing in this company was worthwhile (and sellers were not willing to sell for less than W235,500). This type of price action is referred to as support, because buyers are supporting the price of W235,500.



- Similar to support, a "resistance" level is the point at which sellers take control of prices and prevent them from rising higher. Note how each time prices neared the level of W303,000 in the graph below. Sellers outnumbered buyers and prevented the price from rising.



- Support levels indicate the price where the majority of investors believe that prices will move higher, and resistance levels indicate the price at which a majority of investors feel prices will move lower.
- But investor expectations change with time. For a long time investors did not expect the stock price to rise above W121,500 (as shown by the heavy resistance at W121,500 in the picture below). Yet only a few years later, investors were willing to trade with the stock price near W121,500.

- When investor expectations change, they often do so abruptly. The breakout above the resistance level was accompanied with a significant increase in volume.
- Once investors accepted that a company could trade above W3,500, more investors were willing to buy it at higher levels(causing both prices and volume to increase). Similarly, sellers who would previously have sold when prices approached W3,500 also began to expect prices to move higher and were no longer willing to sell.

- The development of support and resistance levels is probably the most noticeable and reoccurring event on price charts. The penetration of support/resistance levels can be triggered by fundamental changes that is above or below investor expectations (e.g., changes in earnings, management, competition, etc.) or by self-fulfilling prophecy (investors buy as they see prices rise). The cause is not as significant as the effect--new expectations lead to new price levels.
- Following the penetration of a support/resistance level, it is common for traders to question the new price levels. For example, after a breakout above a resistance level, both buyers and sellers may question the validity of the new price and may decide to sell. This creates phenomena I refer to as "traders' remorse" where prices return to a support/resistance level following a price breakout.
- Consider the breakout in the graph below. Note how the breakout was followed by a correction in the price where prices returned to the resistance level.

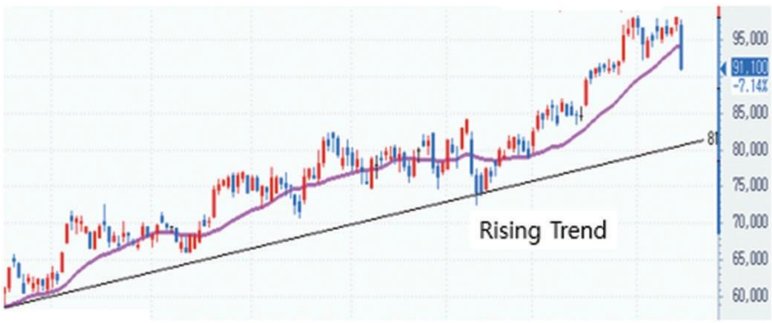
- The price action following this remorseful period is crucial. One of two things can happen. Either the consensus of expectations will be that the new price is not warranted, in which case prices will move back to their previous level; or investors will accept the new price, in which case prices will continue to move in the direction of the penetration.
- If following traders' remorse, the consensus of expectations is that a new higher price is not warranted, a classic "bull trap" (or "false breakout") is created. As shown in the picture below, prices penetrated the resistance level at W255,000, and then prices dropped back to below the resistance level leaving the bulls holding overpriced stock.

- Similar sentiment creates a bear trap. Prices drop below a support level long enough to get the bears to sell (or sell short) and then bounce back above the support level leaving the bears out of the market.

When a resistance level is successfully penetrated, that level becomes a support level. Similarly, when a support level is successfully penetrated, that level becomes a resistance level.

- An example of resistance changing to support is shown in the picture below. When prices broke above the resistance level of W240,000, the level of W240,000 became the new support level.
- This is because a new "generation" of bulls who did not buy when prices were less than W240,000 are now anxious to buy anytime prices return near the W240,000 level.

- Similarly, when prices drop below a support level, that level often becomes a resistance level that prices have a difficult time penetrating. When prices approach the previous support level, investors seek to limit their losses by selling.
- A trend represents a consistent change in prices (i.e., a change in investor expectations). Trends differ from support/resistance levels in that trends represent change, whereas support/resistance levels represent barriers to change.
- As shown in the picture below, a rising trend is defined by successively higher low-prices. A rising trend can be thought of as a rising support level--the bulls are in control and are pushing prices higher.



- The below picture shows a falling trend. A falling trend is defined by successively lower high-prices. A falling trend can be thought of as a falling resistance level--the bears are in control and are pushing prices lower.

- As with support and resistance levels, it is common to have traders' remorse following the penetration of a trendline. This is illustrated in the picture below.

3.3 Moving Average

- Moving Average is an average of certain number of data. For example, if a 10 day average of closing prices is desired, the prices for the last 10 days are added up and the total is divided by 10.
- Moving average has strength in a sense that we can easily find the price direction in a certain period, even though there is any exceptional price in a single day.
- We usually use 5 day moving average for a short term trend, 20 and 60 day for midterm, and 120 and 200 day for long term.

- In a stock price uptrend, the stock prices hover above the moving average, and in a downtrend, vice versa.
- When a moving average is falling and stock price penetrates up the moving average, the stock price will likely keep going up.
- When a moving average is rising and stock price penetrates down the moving average, the stock price will likely keep going down.
- In a stock price uptrend, the moving average works as a support level.
- In a stock price downtrend, the moving average works as a resistance level.
- Golden cross implies that a short term moving average penetrates up a mid/ long term moving average. Buy signal.
- Dead cross implies that a short term moving average penetrates down a mid/long term moving average. Sell signal.

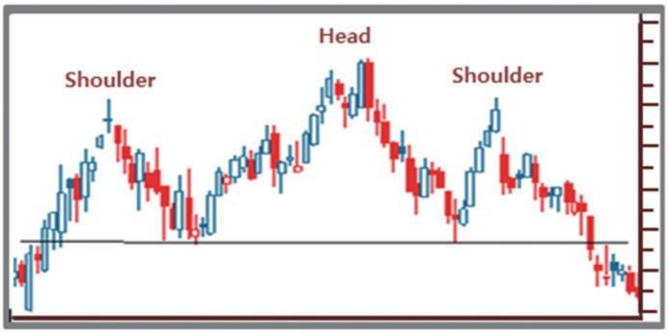
4 Pattern Analysis

4.1 Introduction

- When stock price is plotted, there is usually a pattern which naturally occurs and repeats over a period.
- By studying the frequently found patterns, we can maximize the investment return.
- However, the pattern analysis is not always guaranteed like other technical analysis.

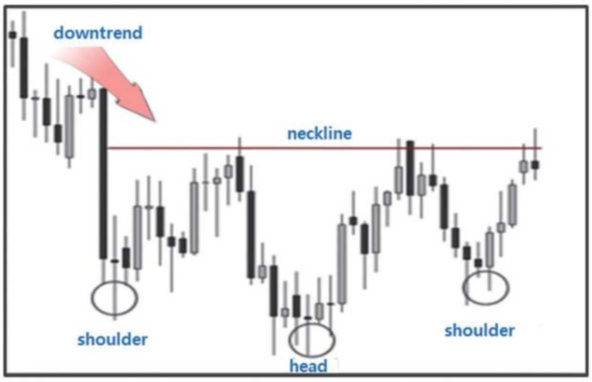
4.2 Head and Shoulder Formation

- Head and shoulder tops formation has three up & downs, and the second top is the highest. The trading volume is usually the most at the first shoulder and the least at the second shoulder.
- If head and shoulder tops formation is found after stock price uptrend, it is the reversal signal to downturn.



- Head and shoulder bottoms formation is the reverse of Head and shoulder tops formation. The trading volume is usually the most at the second shoulder and the least at the first shoulder.

- If head and shoulder bottoms formation is found after stock price downtrend, it is the reversal signal to upturn.



4.3 Rounding Formation

- Rounding Top Formation is that the share price goes up smoothly for a certain period and then turns into downward direction.
- If rounding top formation is found after stock price uptrend, it is the reversal signal to downturn.

- Rounding bottom formation is the reverse of the rounding top formation.
- If rounding bottom formation is found after stock price downtrend, it is the reversal signal to upturn.

4.4 Double Formation

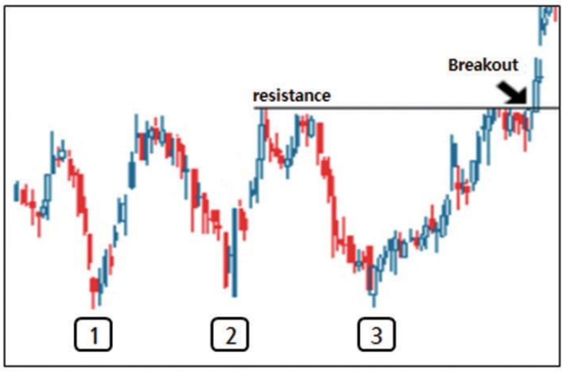
- Double top is frequently seen when the stock price uptrend changes into downtrend. Two peaks are at about the same price level. Volume tends to be heavier during the first peak and lighter on the second.

- Double bottom is a reversal of double top and it is seen when the stock price downtrend changes into uptrend. Volume tends to be heavier during the second peak and lighter on the first.

4.5 Triple Formation

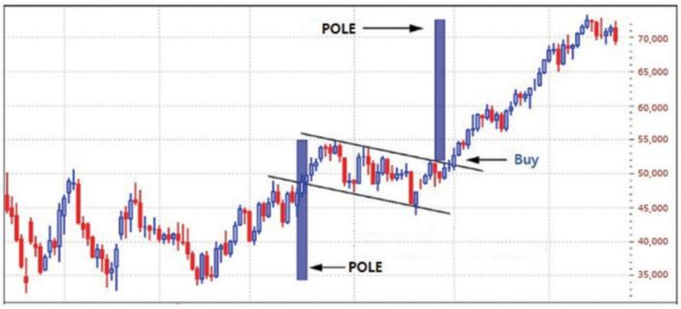
- Triple top is also seen along with double top when the stock price uptrend changes into downtrend.
- Triple top is identified when the stock price creates three peaks at nearly the same price level. The bounce off the resistance near the third peak is a clear indication that buying interest is becoming exhausted.

- Triple bottom is seen along with double bottom when the stock price downtrend changes into uptrend.
- Triple bottom is a reversal of triple top.



4.6 Flag Formation

- Bull flag formation is found after share price rally. The bull flag is a correction period when the investors confirm a fundamental improvement.
- After the bull flag formation, the share price tends to rise.



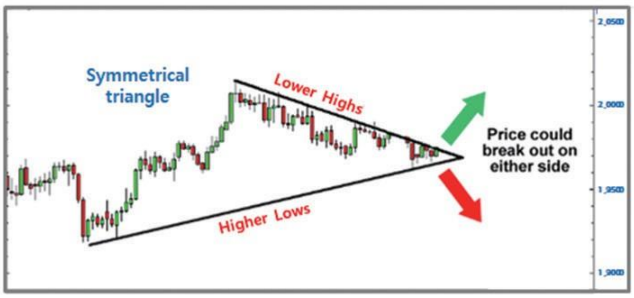
- Bear flag formation is a reversal of bull flag.
- Bear flag is a short term recovery period when the investors confirm a fundamental deterioration. After the bear flag formation, the share price tends to fall.

4.7 Rectangle Formation

- Rectangle formation is described by horizontal lines showing support and resistance, implying that the supply and demand are in approximately balance for an extended period of time.
- If it is found after the share price rally, the price will likely continue to rise after the rectangle formation, and vice versa.

4.8 Triangle Formation

- In symmetrical triangle formation, the resistance line is getting lower and the support line is getting higher. So, the price range gets narrower over time because of lower highs and higher lows.
- The symmetrical triangles have no directional bias. Investors should be ready to trade a breakout on either side.



- In ascending triangle formation, the resistance line is flat and the support line is getting higher. It is interpreted that the buyers are willing to pay a higher price.

- Ascending triangle formation is usually followed by stock price rally.

- In descending triangle formation, the support line is flat and the resistance line is getting lower. It is interpreted that the seller are willing to accept a lower price.
- Descending triangle formation is usually followed by stock price drop.

4.9 Wedge Formation

- Rising wedge formation looks similar to ascending triangle formation. The difference is that the resistance line is getting higher. It is interpreted that the optimism is overdone.
- Rising wedge is usually followed by stock price drop.

- Falling wedge formation looks similar to descending triangle formation. The difference is that the support line is getting lower. It is interpreted that the pessimism is overdone.
- Falling wedge is usually followed by stock price rally.

5
Index Analysis

5.1 Introduction

- Index analysis constructs indicators by using stock prices or trading volume in order to forecast the future stock price trend.
- The index analysis is difficult for individuals to construct due to the complexity of calculation. Instead, brokerage houses usually provide the analysis to their customers.
- What is required to the individuals is to understand and interpret the outcome of index analysis.
- Like the other technical analysis, index analysis does not always suggest the right direction. Instead, it only helps to raise the chance of success.
- Index analysis shows better performance when the stock price repeats up and down within a limited range rather than when the price continues to go up or down.

5.2 Moving Average Oscillator (MAO)

- MAO is an indicator that shows the momentum of price action.
- The calculation is; MAO = short term moving average (e.g. 5 day) – long term moving average (e.g. 20 day)
- Plus (+) signal implies share price rally and minus (-) signal does share price drop. When (-) signal turns into (+), MAO suggests Buy, and vice versa.

5.3 Sonar Momentum

- Sonar momentum is introduced by Nomura Securities, which suggests Buy/Sell signal based on slope of the stock price graphs.
- The calculation is; Sonar Momentum = slope of the share price line chart.
- Like MAO, plus (+) signal implies share price rally and minus (-) signal does share price drop. When (-) signal turns into (+), Sonar momentum suggests Buy, and vice versa.

5.4 Rate of Change (ROC)

- ROC was introduced to suggest whether the current price is overbought or oversold.
- The calculation is; the current share price divided by the price of a certain number days ago (e.g. today's share price / price of 10 days ago).
- When ROC breaks up 100, it suggests Buy, and vice versa.

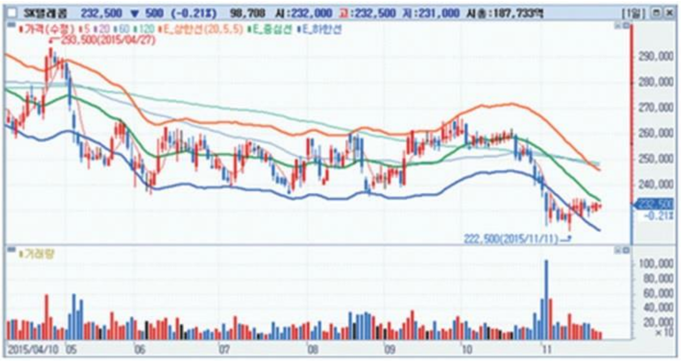
5.5 Disparity

- Disparity was also devised to suggest the timing of Buy or sell by comparing the current price with a moving average.
- The calculation is; the current share price divided by a certain number of moving averages (e.g. Today's share price / today's 10 day moving average value).
- When Disparity breaks up 100, it suggests Buy, and vice versa.

- The dotted lines in the picture below suggest sell, while the solid lines does buy, like the other index analysis.

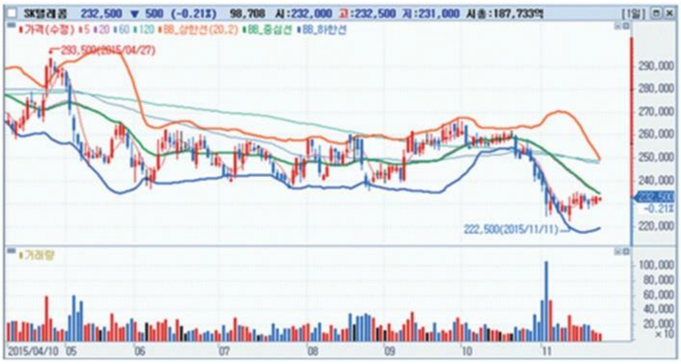
5.6 Moving Average Envelope (MAE)

- MAE is percentage-based envelopes set above and below a moving average. The moving average forms the base for this indicator. Each envelope is then set the same percentage above or below the moving average.
- When a share price touches a lower envelope, it suggests Buy, and vice versa.
- The picture below uses 20day moving average for the base line and plus/minus 5% percent for the envelope lines.



5.7 Bollinger Band

- Bollinger Band is similar to MAE in a sense that it uses a moving average line for the base line.
  However, it uses standard deviations for the envelope lines, instead of percentage based envelope lines in MAE.
- When a share price touches a lower envelope, it suggests Buy, and vice versa. This is same with MAE.
- The picture below uses 20 day moving average for the base line and standard deviation of 2 for the envelope lines.



5.8 Relative Strength Index (RSI)

- RSI compares the magnitude of recent gains to recent losses in an attempt to determine overbought and oversold conditions of stock.
- The calculation is;

$$\text{RSI} = \frac{\text{Sum of price change for updays}}{\text{Sum of price change for updays} + \text{Sum of price change for downdays}}$$

- When the index is below 30, it means that the stock is oversold, which is Buy signal. If it is above 70, it is Sell signal.
- They usually use 14 days of standard period, but it could be changed.

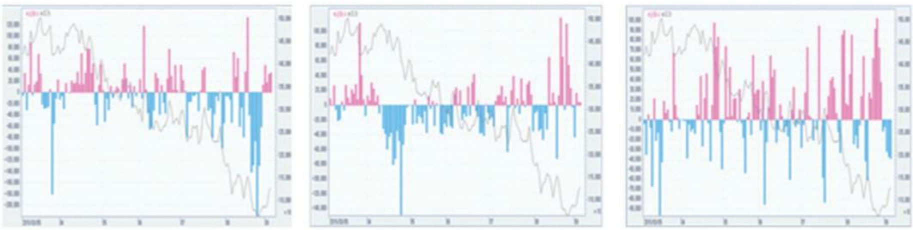
5.9 Price by Volume (PBV) chart

- PBV is a horizontal histogram that overlays a price chart. The histogram bars stretch from left to right. The length of each bar is determined by the cumulative total of trading volume.
- If you see any longer than other bars, they might be considered as resistance or support lines.

5.10 Trading activities by investors

- The stock market participants can be classified into domestic institutes, foreign institutes, and individuals.
- Domestic and foreign institutes usually have the grab on individuals in term of research supports, trading system, and cumulative investment know-how.
- Domestic institutes might have better knowledge on the domestic companies than foreign institutes, while foreign institutes could reflect the global investment trend better.
- From the stand point of individual investors, you would better check the investment trend of both domestic and foreign institutes.
- The charts below show the buy and sell activities by each investor group.

Foreigners Domestic Institutes Individuals



References

A. M. Chisholm(2009). An Introduction to International Capital Markets.Wiley.

A.Kuznetsov(2006). The Complete Guide to Capital Markets for Quantitative Professionals. McGraw-Hill Library of Investment and Finance.

F.J. Fabozzi and F. Modigliani(2009). Capital markets. 4th Ed. Prentice Hall.

www.ksd.or.kr

www.krx.co.kr

www.investopedia.com

www.about.com

www.wisegeek.com

www.investinganwers.com

www.investorwords.com

www.finance-glossary.com

www.wikipedia.org

www.samsungpop.com

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"Stock market will be a crucial investment platform in the near future. The sooner you are prepared, the bigger opportunity you will get."

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