

ACCOUNTING, PROPERTY FINANCE AND TAXATIO

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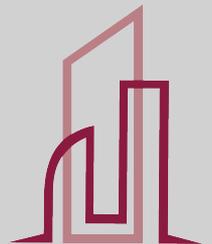


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1.0 THE CASH FLOW STATEMENT

Complementing the balance sheet and income statement, the cash flow statement (CFS), a mandatory part of a company's financial reports, records the amounts of cash and cash equivalents entering and leaving a company. The CFS allows investors to understand how a company's operations are running, where its money is coming from, and how it is being spent. Here you will learn how the CFS is structured and how to use it as part of your analysis of a company.

1.1 The Structure of the Cash Flow Statement

The cash flow statement is distinct from the income statement and balance sheet because it does not include the amount of future incoming and outgoing cash that has been recorded on credit. Therefore, cash is not the same as net income, which, on the income statement and balance sheet, includes cash sales *and* sales made on credit. Cash flow is determined by looking at three components by which cash enters and leaves a company: core operations, investing and financing.

1.2 Operations

Measuring the cash inflows and outflows caused by core business operations, the operations component of cash flow reflects how much cash is generated from a company's products or services. Generally, changes made in cash, accounts receivable, depreciation, inventory and accounts payable are reflected in cash from operations.

Cash flow is calculated by making certain adjustments to net income by adding or subtracting differences in revenue, expenses and credit transactions (appearing on the balance sheet and income statement) resulting from transactions that occur from one period to the next. These adjustments are made because non-cash items are calculated into net income (income statement) and total assets and liabilities (balance sheet). So, because not all transactions involve actual cash items, many items have to be re-evaluated when calculating cash flow from operations.

For example, depreciation is not really a cash expense; it is an amount accounted for. That is why it is added back into net sales for calculating cash flow. The only time income from an asset is accounted for in CFS calculations is when the asset is sold.

Changes in accounts receivable on the balance sheet from one accounting period to the next must also be reflected in cash flow. If accounts receivable

decreases, this implies that more cash has entered the company from customers paying off their credit accounts - the amount by which AR has decreased is then added to net sales. If accounts receivable increase from one accounting period to the next, the amount of the increase must be deducted from net sales because, although the amounts represented in AR are revenue, they are not cash.

An increase in inventory, on the other hand, signals that a company has spent more money to purchase more raw materials. If the inventory was paid with cash, the increase in the value of inventory is deducted from net sales. A decrease in inventory would be added to net sales. If inventory was purchased on credit, an increase in accounts payable would occur on the balance sheet, and the amount of the increase from one year to the other would be added to net sales.

The same logic holds true for taxes payable, salaries payable and prepaid insurance. If something has been paid off, then the difference in the value owed from one year to the next has to be subtracted from net income. If there is an amount that is still owed, then any differences will have to be added to net earnings.

1.3 Investing

Changes in equipment, assets or investments relate to cash from investing. Usually cash changes from investing are a "cash out" item, because cash is used to buy new equipment, buildings or short-term assets such as marketable securities. However, when a company divests of an asset, the transaction is considered "cash in" for calculating cash from investing.

1.4 Financing

Changes in debt, loans or dividends are accounted for in cash from financing. Changes in cash from financing are "cash in" when capital is raised, and they're "cash out" when dividends are paid. Thus, if a company issues a bond to the public, the company receives cash financing; however, when interest is paid to bondholders, the company is reducing its cash.

1.5 Analyzing the Cash Flows Statement

Illustration CFS sample:

**Cash Flow Statement
Company ABC
For the year ended 31 Dec 2015**

Cash Flow From Operation	
Net Earning	2,000,000
Additional to cash	
Depreciation	10,000
Decrease in Account Receivable	15,000
Increase in Account Payable	15,000
Increase in Tax Payable	2,000
Subtractions From Cash	
Increase in Inventory	(30,000)
Net Cash Flow from Operation	2,012,000
Cash Flow From Investing	
Equipment	(500,000)
Cash Flow From Financing	
Note Payable	10,000
Cash Flow for the year ended 31 Dec 2015	1,522,000

From this CFS, we can see that the cash flow for FY 2015 was \$1,522,000. The bulk of the positive cash flow stems from cash earned from operations, which is a good sign for investors. It means that core operations are generating business and that there is enough money to buy new inventory. The purchasing of new equipment shows that the company has cash to invest in inventory for growth. Finally, the amount of cash available to the company should ease investors' minds regarding the notes payable, as cash is plentiful to cover that future loan expense.

Of course, not all cash flow statements look this healthy, or exhibit a positive cash flow. But a negative cash flow should not automatically raise a red flag without some further analysis. Sometimes, a negative cash flow is a result of a company's decision to expand its business at a certain point in time, which would be a good thing for the future. This is why analyzing changes in cash flow from one period to the next gives the investor a better idea of how the company is performing, and whether or not a company may be on the brink of bankruptcy or success.

1.6 Tying the CFS with the Balance Sheet and Income Statement

As we have already discussed, the cash flow statement is derived from the income statement and the balance sheet. Net earnings from the income statement is the figure from which the information on the CFS is deduced.

As for the balance sheet, the net cash flow in the CFS from one year to the next should equal the increase or decrease of cash between the two consecutive balance sheets that apply to the period that the cash flow statement covers. (For example, if you are calculating a cash flow for the year 2016, the balance sheets from the years 2015 and 2016 should be used.)

1.7 Comprehensive Free Cash Flow Coverage

We can calculate a comprehensive free cash flow ratio by dividing the comprehensive free cash flow by net operating cash flow to get a percentage ratio - the higher the percentage the better.

Free cash flow is an important evaluative indicator for investors. It captures all the positive qualities of internally produced cash from a company's operations and subjects it to a critical use of cash - capital expenditures. If a company's cash generation passes this test in a positive way, it is in a strong position to avoid excessive borrowing, expand its business, pay dividends and to weather hard times. The term "cash cow," which is applied to companies with ample free cash flow, is not a very elegant term, but it is certainly one of the more appealing investment qualities you can apply to a company with this characteristic.

1.8 The Important Views

Once we understand the importance of how cash flow is generated and reported, we can use these simple indicators to conduct an analysis on your own portfolio. The point is to stay away from "looking only at a firm's income statement and not the cash flow statement." This approach will allow you to discover how a company is managing to pay its obligations and make money for its investors.

Therefore, we can conclude here, a company can use a cash flow statement to predict future cash flow, which helps with matters in budgeting. For investors, the cash flow reflects a company's financial health: basically, the more cash available for business operations, the better. However, this is not a hard and fast rule. Sometimes a negative cash flow results from a company's growth strategy in the form of expanding its operations.

By adjusting earnings, revenues, assets and liabilities, the investor can get a very clear picture of what some people consider the most important aspect of a company: how much cash it generates and, particularly, how much of that cash stems from core operations.

Exercise 1

1. What is Cash Flow Statement?
2. Name three (3) components of cash flow statement.

3. Explain the main differences between cash flow statement and income statement & balance sheet.
4. Please identify the usage of cash flow statement.

2.0 CONSOLIDATED FINANCIAL STATEMENTS

Consolidated financial statements combine the financial statements of separate legal entities controlled by a parent company into one set of financial statements for the entire group of companies.

For example, let's assume that Northern Electric Power (NEP) is an electric utility with its stock traded on a stock exchange. NEP acquires all of the stock of Midwest Gas Corporation (MGC). Both NEP and MGC continue as separate legal entities. NEP is the parent company and MGC is the subsidiary company. Each of these corporations will continue to operate its respective business and each will issue its own financial statements. However, the investors and potential investors in NEP will find it helpful to see the financial results and the financial position of the economic entity (the combination of NEP and MGC) that they control.

The consolidated income statement of NEP will report all of the revenues that the *economic entity* earned from outside customers. (Since the sales of electricity from NEP to MGC and the sales of gas from MGC to NEP are not earned outside of the economic entity they are eliminated.) The consolidated income statement will also report all of the expenses that were incurred outside of the economic entity. (Since the purchases of electricity by MGC from NEP and the purchases of gas by NEP from MGC did not occur outside of the economic entity they are also eliminated.)

The consolidated balance sheet of NEP will report all of the cash, receivables, plant, etc. of the *economic entity*. It will also report all of the liabilities of the economic entity. (Amounts owed and receivable between NEP and MGC are eliminated in the consolidated balance sheets)

This is a very brief overview of consolidated financial statements. It is a major topic within the university course and textbook entitled advanced accounting.

2.1 Why establish consolidated financial statements

A primary motive for establishing consolidated financial statements is that the group's result and position should be judged by how much dividend the parent company can pay to its shareholders. A single company can pay dividends to the shareholders only if the company has distributable earnings. If the same rules were not applied to the group, it would be possible to pay dividends even if the group lacked distributable earnings.

Another motive is that the consolidated balance sheet should show the group's profit/loss for the year minus dividends within the group and minus internal profits/losses during the financial year. The group's unrealized internal profits may not be included in distributable earnings.

For public companies, the consolidated financial statements are the primary reporting to the shareholders, creditors, employees and other stakeholders. The reporting of the parent company is of secondary importance.

2.2 Methods for consolidated financial statements

There are four methods for establishing consolidated financial statements

- The purchase method
- The pooling method
- The equity method
- The proportional method

The choice of method depends on how the acquisition of the subsidiary has been made. The methods may occur together in the same consolidated financial statements. Because the three later methods are rather seldom (and not permissible in new acquisitions) the following section of this presentation will deal with the purchase method only.

2.3 The Purchase Method

When applying the purchase method, the acquisition by the parent company of a subsidiary is regarded as an acquisition of the assets and liabilities of the subsidiary in the consolidated financial statements. The shares in the subsidiary are substituted for the assets and liabilities of the subsidiary. The assets and liabilities are then revaluated to the acquisition cost of the parent company. The valuation of the subsidiary is based on an acquisition analysis.

In reality it is not the assets and liabilities that form the basis of the valuation of the subsidiary. Instead it is the equity of the subsidiary that is the point of departure of the analysis. The equity may consist of both taxed and untaxed equity. The latter is transformed to taxed equity when the consolidated financial statements are made. The amount of deferred tax is then subtracted from it.

$$\text{Equity} = \text{Assets} - \text{Liabilities} = \text{Net assets}$$

Debit	Credit
Assets	Equity Liabilities

Balance sheet**Financial statements of the possession**

When an acquisition of a subsidiary is made the purchase price of the share is often based on a financial statement on the takeover date. In this statement the assets and liabilities of the purchased company are market valued.

In the example below the properties of a company are valued at 10 000. Other assets and liabilities are market valued at their booked value. In the agreement, the buyer and seller has agreed that a deduction for deferred tax should be done with 10% on the surplus value of the properties.

Balance Sheet	Booked value	Adjustment Assets	Adjustment Liabilities	Market value
Properties	2 500	7 500		10 000
Receivables	500			500
Cash and Bank	100			100
	3 100	7 500	0	10 600
Equity	1 500	7 500	-750	8 250
Deferred tax	500		750	1 250
Liabilities	1 100			1 100
	3 100	7 500	0	10 600

Example of a financial statement for a takeover

Based on the values above the company is valued at 8 250. If the deferred tax had been calculated at a higher percentage, the valuation would have declined. Conversely it would have increased at a lower percentage.

Alternative method for calculating the purchase price

Market value of the assets	+	10 600
Booked value of the assets	-	3 100
Market value of the liabilities	-	2 350
Booked value of the liabilities	+	1 600
Book value of the equity	+	1 500
Purchase price for the shares	=	8 250

Acquisition analysis

At the date of acquisition an analysis must be performed in order to determine:

- the acquisition value of the shares
- the market value of the assets and liabilities of the purchased company

If the acquisition value of the shares is higher than the market value of the net assets, this constitutes goodwill. The acquired equity equals the equity of the purchased company at the date of acquisition. This amount equals the booked value of the assets and liabilities in the purchased company at the date of acquisition.

A surplus value of an asset exists if the market value of the asset is higher than the booked value. If the market value of a liability is lower than the booked value, a surplus value also exists. An undervaluation exists if the situation is reversed. This is where the market value of an asset is lower than the booked value of the asset or if the market value of a liability is higher than the booked value of the liability.

The significance of the acquisition analysis is to establish the group-relevant acquisition value for the assets and the liabilities of the purchased company. This is based on the acquisition value of the shares. The analysis is based on the income statement and the balance sheet of the subsidiary upon the date of acquisition. The acquired assets and liabilities are market value and the accounting principles regarding classification are adjusted to the principles of the parent company.

The acquisition analysis below is based on the financial statement for the takeover above. The analysis affects both the income statement and the balance sheet. The analysis is meant to establish how the purchased assets and liabilities of the subsidiary would affect the consolidated balance sheet. As a result of this the amount of equity acquired before purchase is established along with any surplus values or under valuations.

In the example below, the market values of the assets and liabilities and the deferred tax correspond to the financial statement of the takeover. This is quite rare. Normally there is a difference of some kind regarding the valuation or the percentage for the deferred tax. This affects the surplus value of the shares.

Acquired Equity

Purchase price for the shares

8 250

Share capital	1 000	
Restricted reserves	200	
Non-restricted reserves	250	
Profit for the period	50	
Properties	7 500	
Deferred tax		750
	9 000	9 000
Market value of the		
Properties	10 000	
Booked value	-2 500	
Surplus value for group	7 500	
Deferred tax	1 250	
Booked value	-500	
Undervaluation for group	- 750	
Acquired Income		
Income	1 000	
Operating expense		500
Depreciation		50
Interest		379
Tax		21
Profit		50
	1 000	1 000

Example of an acquisition analysis

The acquired equity affects both the immediate and future consolidated balance sheet. The acquired income affects only the immediate consolidated income statement. The net profit (income reduced with expenses etc.) earned by the subsidiary before the date of acquisition is not included in the net profit for the group. The elimination/reduction is made row by row in the income statement.

When the acquisition analysis is done there is a foundation for how the assets and liabilities of the subsidiary should be handled in the consolidated balance sheet. The fundamental is that the equity which the subsidiary owns at the acquisition date is never considered a part of the consolidated equity.

Deferred tax

We encountered the term deferred tax above. This term refers to a tax consequence which is not accounted for in the income statement. Instead, this consequence is deferred to the future. A deferred tax may both refer to assets and liabilities. The most common deferred tax asset is losses that the company has not been able to use during the accounting period. These losses do not result in reduced tax until they are used in the income tax statement of the company.

On the other side of the balance sheet, the most common deferred tax liability is the consequence of different treatment of assets and liabilities in the accounting records compared with the income tax statement. This is allowed in some countries but not in others. A company might also have untaxed reserves, which will not result in any tax until they are reversed in the income statement. Finally, consolidated surplus values result in a deferred tax liability. This liability is reversed in proportion to the reversal of the surplus value. The opposite situation occurs with consolidated under valuations.

Minority

When the parent company owns less than 100% of the subsidiary this constitutes a minority. The minority has a right to a share both in the net profit/loss of the year and in the net assets.

Elimination of shares

The acquisition analysis forms the basis for eliminating the shares in the subsidiary. The analysis refers to the situation at the date of acquisition. It must be adjusted in future consolidated financial statements with regard to development within the group. Since depreciations reduce the surplus value there is a corresponding change reduction of the deferred tax related to the surplus value. The net effect of these transactions is accounted for in the income statement.

Balance item	Opening Elimination	Reallocation	Elimination of the year	Closing elimination
Properties	7 500		-56	7 444
Shares in subsidiary	-8 250			-8 250
Share capital	1 000			1 000
Restricted Reserves	200			200
Non-restricted Reserves	250	50		300
Net profit/loss	50	-50	51	51
Deferred tax	-750		5	-745
	0	0	0	0

Example of share elimination

In the income statement the reduction of the surplus value of the properties is accounted for as depreciation. The reduction of the deferred tax is accounted for as a reduction of tax expense. The closing elimination of this year forms the opening elimination for the next year.

Adjustments

Aside from elimination of acquired equity and changes in share elimination, the consolidated financial statements must be adjusted in some way to provide a fair view of the group as if it were one company. The most common adjustments are:

- Internal income, expenses and profits/losses
- Internal receivables and liabilities
- Untaxed reserves converted to equity and deferred tax
- Group contributions are converted to tax expense and equity
- Other adjustments which are needed to adjust the accounts of the subsidiaries to the accounting principles of the parent company

Exercise 2

1. What is Consolidated Financial Statements?
2. Why establish Consolidated Financial Statements?
3. Name four (4) methods for establishing consolidated financial statements.
4. Explain Purchase Method.
5. Define the followings:
 - a. Acquisition analysis
 - b. Deferred tax
 - c. Minority
 - d. Elimination of shares

3.0 KSA MONEY MARKETS

A segment of the financial market in which financial instruments with high liquidity and very short maturities are traded. The money market is used by participants as a means for borrowing and lending in the short term, from several days to just under a year. Money market securities consist of negotiable certificates of deposit (CDs), bankers acceptances, U.S. Treasury bills, commercial paper, municipal notes, federal funds and repurchase agreements.

The money market is used by a wide array of participants, from a company raising money by selling commercial paper into the market to an investor purchasing CDs as a safe place to park money in the short term. The money market is typically seen as a safe place to put money due the highly liquid nature of the securities and short maturities, but there are risks in the market that any investor needs to be aware of including the risk of default on securities such as commercial paper.

The money market is different from the capital market. Capital markets are perhaps the most widely followed markets. Both the stock and bond markets are closely followed and their daily movements are analyzed as proxies for the general economic condition of the world markets. As a result, the institutions operating in capital markets - stock exchanges, commercial banks and all types of corporations, include nonbank institutions such as insurance companies and mortgage banks. Money market is often accessed alongside the capital markets. While investors are willing to take on more risk and have patience to invest in capital markets, money markets are a good place to "park" funds that are needed in a shorter time period - usually one year or less. The financial instruments used in capital markets include stocks and bonds, but the instruments used in the money markets include deposits, collateral loans, acceptances and bills of exchange.

3.1 Purposes

The major attributes that will draw an investor to short-term money market instruments are superior safety and liquidity. Money market instruments have maturities that range from one day to one year, but they are most often three months or less.

The secondary money market has no centralized location. The closest thing the money market has to a physical presence is an arbitrary association with the city of New York; although, the money market is accessible from anywhere by telephone. Most individual investors participate in the money market with the assistance (and experience) of their financial advisor, accountant or banking institution.

3.2 Types of Money Market Instruments

A large number of financial instruments have been created for the purposes of short-term lending and borrowing. Many of these money market instruments are quite specialized, and they are typically traded only by those with intimate knowledge of the money market, such as banks and large financial institutions. Some examples of these specialized instruments are federal funds, discount window, negotiable certificates of deposit (NCDs), eurodollar time deposits, repurchase agreements, government-sponsored enterprise securities, shares in money market instruments, futures contracts, futures options, and swaps.

Aside from these specialized instruments on the money market are the investment vehicles with which individual investors will be more familiar, such as short-term investment pools (STIPs) and money market mutual funds, Treasury bills, short-term municipal securities, commercial paper, and bankers' acceptances. Here we take a closer look at STIPs, money market mutual funds, and Treasury bills.

3.3 Fixed Income Securities

An investment that provides a return in the form of fixed periodic payments and the eventual return of principal at maturity. Unlike a variable-income security, where payments change based on some underlying measure such as short-term interest rates, the payments of a fixed-income security are known in advance.

An example of a fixed-income security would be a 5% fixed-rate government bond where a \$1,000 investment would result in an annual \$50 payment until maturity when the investor would receive the \$1,000 back. Generally, these types of assets offer a lower return on investment because they guarantee income.

To illustrate, suppose an investor owns a Treasury bond with a par value of \$1,000 and an annual yield of 6%. This investor is guaranteed a payment of \$60 each year for the life of the bond. Similarly, an investor who holds preferred stock in Company XYZ might be promised a quarterly dividend payment of \$5 per share, which he can dependably receive for as long as he holds the shares.

3.3.1 Why it Matters:

Fixed income securities are an excellent choice for risk-averse investors seeking a stable source of income payments at predictable intervals. Fixed income investors and prospective investors should understand that the relatively low risk of fixed income securities generally translates into relatively lower returns.

Bond, certificate of deposit, preferred stock (preference share), etc., which yields fixed and regular income (interest). Common stock (ordinary shares) do not qualify because their income (dividend) yield can vary from period to period. Market price of fixed income securities tends to move in a direction opposite to that of interest rates.

3.3.2 Investment Risks of Fixed Income Securities

In the most general sense, **risk** is the possibility of something undesirable. Since the goal of investing is to get the greatest return possible for the investment, investment risk is the possibility that the investor will get back

less than his investment or his expected return, or that he will get less than he could have had if he had invested his money elsewhere. Generally, the most important risk for fixed income securities is market risk or **interest rate risk**, because interest rates change continually, and this risk affects virtually every security.

Market Risk - The price of fixed income securities usually changes oppositely of interest rates, with some exceptions, such as securities with put options and interest-only mortgage-backed securities.

Liquidity risk, which is the spread between the bid and ask prices for a security being offered in the secondary market. If there is not much interest in the security, then the bid-ask spread may be wide, which means that the price that the security can be sold may be significantly less than another similar recent transaction even when there is no change in any other significant factor. For individual investors, this risk exists only if the investor wants to sell the security before maturity.

Reinvestment risk is based on the assumption that cash flows from a fixed-income security are reinvested, so that interest can be earned on interest, and, thus, the risk is that the reinvested money will not earn the same rate of return as the original investment.

Call Risk (Timing Risk)

Some bonds are callable—the issuer may redeem the bond before maturity. How, when, and at what price it may do so is specified in the indenture of the bond.

A callable bond has both a market risk and a reinvestment risk. The market risk arises, because even though a bond normally increases in value as interest rates drop, a callable bond will not rise above its call price because the issuer will probably redeem the bond at its call price before maturity. The reinvestment risk exists because a bond is more likely to be called when interest rates are declining, and, thus, the investor will have to settle for a lower rate of return for money that is reinvested.

Prepayment risk, the risk that homeowners will prepay their mortgage, when interest rates decline, or when they sell their home. Prepayment risk is also called **contraction risk**. Note that if interest rates are rising, then it benefits investors of mortgage-backed securities to receive prepayments so that the money can be reinvested for a higher rate of return.

Credit Risk

The price of a bond depends on the issuer's credit rating, or perceived ability to pay its debt obligations. The greater the credit rating of the issuer, the

less yield the issuer has to pay on the bond to sell it. In the secondary market, the bond's price is proportional to the issuer's credit rating for a given yield. highest interest rates. Financial institutions, trustees, and other fiduciaries are generally restricted to purchasing investment grade bonds to limit credit risk.

Event risks are major events that can downgrade the credit rating of the issuer significantly—a nuclear accident at a nuclear power plant, for instance, or the leveraged buyout of a company, where the company's debt is increased significantly to finance the buyout, thereby lowering the credit rating of the company, usually below investment grade status.

Inflation risk is the risk that money obtained in the future will be worth less when it is obtained, which is almost always the case. The real risk is how much this risk will be. On the other hand, it is possible, in some cases, to take advantage of deflation that occurs when interest rates rise. A good example is when interest rates are rising, newly issued fixed-income securities start to pay more, while prices of things that generally require borrowing, such as real estate, start declining. Thus, for instance, one could buy 4 week T-bills as a way to save for a house or for a down payment. As the T-bills expire, they can be re-invested at progressively higher rates (while rates are rising). In the meantime, real estate prices are falling because it is becoming more expensive to borrow the money to pay for it. So the money earned on the T-bills becomes even more valuable than the interest rate itself suggests when used to purchase real estate.

Legal risk is the risk that changes in the law may adversely affect the price of the bond. Most legal risk is associated with the tax exemption of particular bonds, especially municipal bonds. Because municipal bonds are exempt from federal taxation, and, may also be exempt from state and local taxes, municipalities can pay a lower interest rate. The higher tax rate of the exempt taxes, the lower the interest rate that the municipality has to pay to sell its bonds. However, if tax rates decline, then the advantage of the tax exemption also declines, and with it, the price of the bond in the secondary market. This is known as **tax risk**.

Foreign exchange risk is the possibility that the foreign currency will depreciate against the domestic currency. Currency exchange rates are changing all of the time, so if the bond currency depreciates against the investor's domestic currency during the term of the bond, then the investor will either lose money or not make as much profit. Of course, if the foreign currency appreciates, then this will result in greater profits.

Volatility Risk

Bonds issued from emerging countries are more volatile than most other bonds, since these countries are viewed as being less stable and less predictable. Thus, there is a greater price reaction to news about the issuer or about economic conditions in the issuer's country.

Sovereign risk (aka country risk, political risk)

The risk associated with the laws of the country, or to events that may occur there. Particular events that can hurt a bond are the restriction of the flow of capital, taxation, and the nationalization of the issuer. Also, as recently evinced by the Dubai crisis, there may be uncertainty in the law in cases of default by the issuer or the law may provide weak remedies.

Convertibility Risk

A particular form of sovereign risk is **convertibility risk**, which is the prohibition of the exchange of the foreign currency for domestic currency. The only hope for an investor in this situation is to accept local currency or wait until the rules change.

Disclosure Risk

Because many countries, especially emerging countries, have very lax or inadequate laws regarding financial disclosures or accounting rules, it can be difficult to assess the true creditworthiness of the bond issuer. **Disclosure risk** results from this lack of disclosure about an issuer or accounting rules that don't adequately reflect the true financial status of the issuer.

Maturities, and the interest rates of these bonds is assumed to change by a certain amount for a given change in prevailing rates. Yield-curve risk results when bonds prices of different maturities deviate from this assumption when prevailing rates change.

Sector risk results when an entire sector of securities declines in prices or yields, because of common causes affecting the sector. Any risk that affects the yield of fixed income securities is also referred to as **basis risk**.

3.3.3 Pricing Fixed Income Securities

Factors that Affect the Price of Fixed-Income Securities Fixed-rate capital securities have certain risks in common with other fixed-income securities. These risks affect the market price of the securities, which in turn affects their yield. In general, investors demand higher yields to compensate for higher risks. The risks of fixed-income securities include: Interest Rate Risk, the market value of the securities will be inversely affected by movements in interest rates. When rates are rising, market prices of existing debt securities will fall, as demand increases for new-issue securities with the higher rates. As prices decline, yields are brought into line with the prevailing rates. When rates are falling, market prices will rise, because the higher rates on outstanding debt securities will be more valuable.

Here, the market works to align the yields with prevailing rates. Downward trends in interest rates also create reinvestment risk, or the risk that income or principal repayments will have to be invested at lower rates.

Reinvestment risk is an important consideration for investors in “callable” securities. Credit Risk The safety of a fixed-income investor’s principal depends on the issuer’s credit quality and ability to meet its financial obligations. Issuers with lower credit ratings usually have to offer investors higher yields to compensate for the additional credit risk. A change in either the issuer’s credit rating or the market’s perception of the issuer’s business prospects will affect the value of its outstanding securities. Purchasing Power Risk Fixed-income investors often focus on the real rate of return, or the actual return minus the rate of inflation. Rising inflation has a negative impact on real rates of return, because inflation reduces the purchasing power of the investment income and principal. Price Risk Investors who need access to their principal prior to maturity have to rely on the available market for the securities. Although investors in fixed-rate capital securities may take advantage of the exchange listing for retail offerings to sell their shares prior to maturity, the price received may be more or less than the purchase price as a result of the dynamic risk factors.

A fair price for a fixed-income security

One important step in the process discussed above bears looking at more closely. While the current market price for a stock is easily attained, finding what the “fair” value for a particular bond is at a given moment can be more difficult. Therefore, we will now look more closely at some of the methods individuals can use to determine what a fair price for a fixed income security might be.

There are two main ways to determine a fair price for a bond. The first is to see where it has been trading in the market, and the second is to calculate a fair value based upon its characteristics.

The easiest way to determine what a fair price would be is to see where the bond has traded recently. Prior to the early-2000s, this was extremely difficult if not impossible to do, particularly for individual investors. However, the Financial Industry Regulatory Authority (FINRA) now requires broker-dealers to report trade prices shortly after execution for many types of bonds.

Looking at the prices where a bond has traded recently will give you not only an idea of what level the bond should trade at, but also what the recent trend in price activity has been. It is important to keep in mind that if you’re only interested in trading a small position of a bond, your pricing may be somewhat worse than that which you see in the TRACE data. This is because the best pricing in the bond market generally goes for executions of greater than \$1 million, while smaller pieces are often penalized.

Looking at recent trade prices is a great start, but just as in the stock market, bond market trading may not accurately reflect what the “true” intrinsic value should be. Depending on market conditions, recent trades could be much higher or lower than where a bond’s value actually is. Furthermore, some

bonds do not trade very frequently, and if that is the case for the bond that you are seeking to buy or sell, there may not be any recent trades that have been reported to FINRA.

Under these circumstances, you might wish to calculate what you believe the fair value for a bond to be. There are a couple of ways to do this. Most bonds trade on a spread basis, because investors wish to receive additional compensation for taking risk beyond that which is inherent in Treasury securities (spread refers to the additional yield of a bond above that of a comparable Treasury security). Therefore, one way of valuing a bond would be to determine how much additional compensation you believe would be fair for the additional risk you are taking relative to a Treasury.

In general, the greater the risk you are taking, the greater the additional compensation you should get. This means that you should receive more spread for purchasing a high-yield bond than a very high-quality investment grade bond. Similarly, you should receive more spread for buying a less liquid issue than for a very large and liquid issue and you should receive more spread for purchasing longer maturity securities than shorter maturity securities.

The final method for calculating what your target price for a trade should be is to look for levels at which comparable bonds have traded. For instance, you might decide that company A and company B have reasonably similar credit profiles and should therefore trade at reasonably comparable prices. If you cannot find recent trade data on the company A bond that you're trying to purchase, you could instead see where a comparable company B bond has traded and use that as a rough approximation for what the value of the company A bond should be.

Exercise 3

1. What is money market?
2. What are the differences between money market and capital market?
3. Why people choose money market?
4. Please provide examples of money markets instruments.
5. What is fixed income securities?
6. Define the followings:
 - a) Investment risk
 - b) Market risk
 - c) Liquidity risk
 - d) Reinvestment risk
 - e) Timing risk
 - f) Prepayment risk
 - g) Credit risk
 - h) Event risk
 - i) Inflation risk

- j) Legal Risk
- k) Foreign exchange risk
- l) Volatility risk
- m) Sovereign risk
- n) Convertibility risk
- o) Disclosure risk
- p) Sector risk

4.0 KSA EQUITY MARKETS

Equity markets are the meeting point for buyers and sellers of stocks. The securities traded in the equity market can be either public stocks, which are those listed on the stock exchange, or privately traded stocks. Often, private stocks are traded through dealers, which is the definition of an over-the-counter market.

4.1 Stock Exchanges

The place where stocks in the equity market are traded is the stock exchange. There are many stock exchanges around the world, and they can be either physical places or virtual gathering spots. NASDAQ is an example of a virtual trading post, in which stocks are traded electronically through a network of computers. Electronic stock exchanges often include a market maker, which is a broker-dealer company that both buys and sells stocks in order to facilitate trading for a particular stock. This comes at a risk to the company, but it makes the exchange process for a given stock operate more smoothly. Electronic trading posts are becoming more common and a preferred method of trading over physical exchanges.

The Saudi Stock Market is a famous example of a physical stock exchange; however, there is also the option to trade in online exchanges from that location, so it is technically a hybrid market. In a physical exchange, orders are made in open outcry format, which is reminiscent of depictions of Wall Street in the movies: traders shout and display hand signals across the floor in order to place trades. Physical exchanges are made on the trading floor

filter through a floor broker, who finds the trading post specialist for that stock to put through the order. Physical exchanges are still very much human environments, although there are a lot of functions performed by computers. Brokers are paid commissions on the stocks they work.

Most large companies have stocks that are listed at multiple stock exchanges throughout the world. However, companies with stocks in the equity market range from large-scale to small, and traders range from big companies to individual investors. Most buyers and sellers tend to prefer trading at larger exchanges, where there are more options and opportunities than at smaller exchanges. However, in recent years, there has been an uptick in the number of exchanges through third-party markets, which bypass the commission of a stock exchange, but pose a greater risk of adverse selection and don't guarantee the payment or delivery of the stock.

4.2 Trading in the Equity Market

In the equity market, investors bid for stocks by offering a certain price, and sellers ask for a specific price. When these two prices match, a sale occurs. Often, there are many investors bidding on the same stock. When this occurs, the first investor to place the bid is the first to get the stock. When a buyer will pay any price for the stock, he or she is buying at market value; similarly, when a seller will take any price for the stock, he or she is selling at market value.

Companies sell stocks in order to get capital to grow their businesses. When a company offers stocks on the market, it means the company is publicly traded, and each stock represents a piece of ownership. This appeals to investors, and when a company does well, its investors are rewarded as the value of their stocks rise. The risk comes when a company is not doing well, and its stock value may fall. Stocks can be bought and sold easily and quickly, and the activity surrounding a certain stock impacts its value. For example, when there is high demand to invest in the company, the price of the stock tends to rise, and when many investors want to sell their stocks, the value goes down.

This market can be split into two main sectors: the primary and secondary market. The primary market is where new issues are first offered, and stocks and bonds are issued directly from the company. Any subsequent

trading takes place in the secondary market, in which proceeds from the stock go to the investors, not the company directly. Stock exchanges, such as Saudi Stock Exchange or NASDAQ, are examples of secondary markets.

4.3 What Stock Prices Mean for the Economy

In general, rising stock prices for companies from a particular country indicate a healthy, growing market; on the other hand, a downward trend in stocks may reflect weakening fundamentals in a country's economy. This is because rising prices tend to indicate that many buyers are investing their money in the future health and growth of the economy as a whole.

4.4 Pricing Equities

How prices are set in the stock market can seem like another reality at times. Investing in stocks requires some knowledge of the factors that drive stock prices up or down.

There are some of the factors that may push stock prices up or cause them to drop. Once you understand the basics, stock prices begin to make more sense. Although you may think the market moves in a rational manner that is not always true. Fear and greed are important factors in which way stock prices move. This is reflected in supply and demand for stocks.

4.4.1 How Stock Prices Are Set

The balance between supply and demand sets stock prices. When demand is high and supply is low, prices rise. When supply is high and demand is low, prices fall. How prices are set in the stock market can seem like another reality at times. Investing in stocks requires some knowledge of the factors that drive stock prices up or down.

There are some of the factors that may push stock prices up or cause them to drop. Once you understand the basics, stock prices begin to make more sense. Although you may think the market moves in a rational manner that is not always true. Fear and greed are important factors in which way stock prices move. This is reflected in supply and demand for stocks.

The methods of calculating the daily price of a stock and the long-term price target are two different processes.

It is important for stock investors to know how the market (and other investors) arrive at these numbers. Investors calculate long-term stock price targets based on fundamental analysis of the company's strengths and weaknesses. This process considers the financial and market strength of the company and examines its competitive advantages (if any).

Daily stock prices, however, are a different matter.

4.4.2 Supply and Demand

In the stock market, prices are driven by supply and demand. Supply equals the willing sellers and demand equals the willing buyers. Where their mutual interests intersect, is the current price.

That intersection is a moving target so at one moment there is more supply than demand and at some other moment the balance has shifted to more demand than supply.

Simple Illustration

Here's a simple illustration of how it works.

ABC stock opens trading at \$25 per share. At that price, there are holders who are willing to sell and buyers who are willing to buy. Under these circumstances, the price will stay close to \$25 per share until the balance between supply and demand changes.

But what happens if more buyers (demand) want ABC stock than sellers are willing to sell at \$25 per share? The buyers must bid up the price to a level where sellers are willing to part with their shares.

Price Will Rise

In other words, the price of ABC will rise. If there is a sustained demand (more buyers joining the action), the price will continue to rise. At the price rises, it will reach a point when owners become nervous and/or want to take a profit. When the supply of shares for sale approaches and then exceeds the demand, prices begin to fall. Sellers must now make the shares more attractive to buyers by lowering the price. As the price falls, more holders sell to lock in a profit or cut a loss.

4.4.3 Buying & selling

Buy low and sell high is the ultimate guide to successful stock investing. It is also the reverse of what many investors do. Its not that investors start out to do that, but too often, they use price, and in particular price movement, as their only signal to buy or sell.

Stocks that have gone up recently, especially those with a lot of press, often attract even more buyers. This obviously drives the price up even higher. People get excited about what they read and see and want a part of the action. They jump into a stock that is already trading at a premium they buy high.

Traders

Experienced traders can make money jumping in and out of a stock that is caught the publics attention, but it's not a game for the inexperienced and it's not investing.

There is risk involved and tax consequences along with other issues that mean most investors should leave this activity to short-term traders.

For most investors, trying to grab a piece of the latest flashy stock, usually means paying too much (buying high).

Bad Decision

The other side of the market is when a stock has fallen; most investors may want to sell along with the rest of the market. If you go by price alone, this can be a bad decision (sell low).

There are many reasons a stock's price drops and some of them have nothing to do with the soundness of the investment. That's why if you only follow price you may miss an opportunity.

After a stock's price has fallen can be a great time to buy (buy low) if you have done your research on the company.

Therefore, if we know about a stock is the price, you may (and likely will) make investing mistakes. Remember, if a stock has had a good run up it may be time to sell, not buy (sell high). Similarly, if a stock has dropped like a rock, it may be a good time to buy rather than sell (buy low). We won't know what to do unless you understand a lot more about the company than its stock price.

Exercise 4

1. What are equity markets?
2. Please define stock exchanges.
3. What is the relationship between stock prices with one country's economy?
4. Please elaborate on how to determine the stock prices.

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1.0 INTRODUCTION TO ACCOUNTING

1.1 Introduction

Accounting is a process of identification, recording and communicating the business economic events for the specific period of time to the interested parties to make a decision. It is concern with provision of information, which is useful to those who are directly or indirectly affiliated to an organization. The information provided would be useful both in assessing the performance of those who manage the organization, and the performance and financial position of the organization itself.

The 5 important functions of accounting are;

Recording: This is the basic function of accounting. It is essentially concerned with not only ensuring that all business transactions of financial character are in fact recorded but also that they are recorded in an orderly manner. Recording is done in the book “Journal”.

Classifying: Classification is concerned with the systematic analysis of the recorded data, with a view to group transactions or entries of one nature at one place. The work of classification is done in the book termed as “Ledger”.

Summarizing: This involves presenting the classified data in a manner which is understandable and useful to the internal as well as external end-users of accounting statements. This process leads to the preparation of the following statements: (1) Trial Balance, (2) Income statement (3) Balance sheet.

Analysis and Interprets: This is the final function of accounting. The recorded financial data is analyzed and interpreted in a manner that the end-users can make a meaningful judgment about the financial condition and profitability of the business operations. The data is also used for preparing the future plan and framing of policies for executing such plans.

Communicate: The accounting information after being meaningfully analyzed and interpreted has to be communicated in a proper form and manner to the proper person. This is done through preparation and distribution of accounting reports, which include besides the usual income statement and the balance sheet, additional information in the form of accounting ratios, graphs, diagrams, funds flow statements etc.

The objective is to provide information that is useful for making business and economic decisions. Specifically, the information should be useful to investors and lenders, be helpful in determining a company's cash flows, and report the company's assets, liabilities, and owner's equity and the changes in them. With these objectives in mind, financial accountants

produce financial statements based on the accounting standards in a given jurisdiction.

Uses - Financial Statements are used for a Multitude of Different Purposes Readers of a financial statement are seeking to understand key facts about the performance and disposition of a business. They make decisions about the business based on their reading of the statements. Because financial statements are widely relied upon, they must be straightforward to read and understand.

For large corporations, these statements are often complex and may include an extensive set of notes to the financial statements and explanation of financial policies and management discussion and analysis. The notes typically describe each item on the balance sheet, income statement, and cash flow statement in further detail. Notes to financial statements are considered an integral part of the financial statements.

Owners and managers frequently use financial statements to make important business decisions, for example:

Whether or not to continue or discontinue part of the business.

Whether to make or to purchase certain materials.

Whether to acquire or to rent/lease certain equipment in the production of goods.

The documents are also helpful in making long-term decisions and as a source of historical records.

1.2 Main user groups of financial statements

Users of Accounting Information - Internal & External

Accounting information helps users to make better financial decisions. Users of financial information may be both internal and external to the organization.

Internal users (Primary Users) of accounting information include the following:

- Management: for analyzing the organization's performance and position and taking appropriate measures to improve the company results.
- Employees: for assessing company's profitability and its consequence on their future remuneration and job security.
- Owners: for analyzing the viability and profitability of their investment and determining any future course of action.

Accounting information is presented to internal users usually in the form of management accounts, budgets, forecasts and financial statements.

External users (Secondary Users) of accounting information include the following:

- **Creditors:** for determining the credit worthiness of the organization. Terms of credit are set by creditors according to the assessment of their customers' financial health. Creditors include suppliers as well as lenders of finance such as banks.
- **Tax Authorities:** for determining the credibility of the tax returns filed on behalf of the company.
- **Investors:** for analyzing the feasibility of investing in the company. Investors want to make sure they can earn a reasonable return on their investment before they commit any financial resources to the company.
- **Customers:** for assessing the financial position of its suppliers which is necessary for them to maintain a stable source of supply in the long term.
- **Regulatory Authorities:** for ensuring that the company's disclosure of accounting information is in accordance with the rules and regulations set in order to protect the interests of the stakeholders who rely on such information in forming their decisions.

1.3 Types and various form of business

The four main business structures commonly used around the world are:

Sole trader: an individual operating as the sole person legally responsible for all aspects of the business. Like other structures, as a sole trader you can employ people to help you run your business.

Partnership: an association of people or entities running a business together, but not as a company.

Company: a legal entity separates from its shareholders.

Trust: an entity that holds property or income for the benefit of others.

When deciding on a structure for your business, choose the one that best suits your business needs, keeping in mind that there are advantages and disadvantages for each structure.

It's important to investigate each option carefully, as choosing your business structure is an important decision.

Your business structure can determine:

- the licenses you require
- how much tax you pay
- whether you're considered an employee, or the owner of the business
- your potential personal liability
- how much control you have over the business
- ongoing costs and volume of paper work for your business.

It is important to note that you can change your business structure throughout the life of your business. As your business grows and expands,

you may decide to change your business structure, or to restructure your business. It is important to determine your business structure and business type before you register a business or company as the steps may differ.

As well as deciding on the structure of your business, you'll also need to consider your business type. There are many different types of businesses. The business type you choose to may depend on your personal circumstances, interests, finances and business objectives.

The common business types that you may choose, below:

- Small business
- Franchise
- Online business
- Family business
- Home-based business
- Independent contractor
- Importer
- Exporter.

1.4 Difference between bookkeeping and accounting

Begin with bookkeeping, since it is essentially a subset of the larger topic of accounting. Bookkeeping is the recordation of basic accounting transactions, such as:

- Issuing invoices to customers
- Recording invoices from suppliers
- Recording cash receipts from customers
- Paying suppliers
- Recording changes in inventory
- Processing payroll
- Processing petty cash transactions

These transactions are mechanical in nature; that is, the bookkeeper follows a prescribed set of procedures on a repetitive basis to record a common activity. These common bookkeeping tasks are entirely adequate for the accounting needs of a small business.

A bookkeeper could compile financial statements from the transactions just described. However, those financial statements would be incorrect to some extent, because they would not include the following additional actions that are usually handled by an accountant:

- Accruing or deferring expenses
- Accruing or deferring revenue

The broader field of accounting includes the use of these accruals. In addition, accounting encompasses the following activities:

- Creating the chart of accounts
- Setting up the general ledger
- Designing the financial statements
- Issuing customized management reports to address specific issues
- Altering the classification or recordation of transactions to meet certain accounting standards
- Creating a budget and comparing it to actual results
- Compiling tax returns from the financial information
- Creating a set of controls within which the financial system operates
- Designing a record keeping, archiving, and document destruction system

Usually, there is at least one trained accountant responsible for the accounting operations of a medium to large-sized business, and who sets up the procedures that are then followed by a larger number of bookkeepers.

In short, the difference between accounting and bookkeeping is that bookkeeping focuses on repetitive business transactions, and so is a subset of the much larger set of tasks that can be encompassed by accounting.

There are also significant differences between the bookkeeper and accountant positions. The bookkeeper role is broad-based, with one person typically handling all of the accounting transactions for a small business. The bookkeeper tends to be very experienced, but is more likely to be lacking in formal accounting training. A bookkeeper with a great deal of responsibility may be referred to as a full-charge bookkeeper. Conversely, the accountant is more likely to work exclusively on a specific area, such as fixed assets or the general ledger, and is more likely to have formal training in the accounting function. There is also a career path for accountants, which leads to the assistant controller and controller positions.

1.5 Accounting and the role of computer

Accounting is the language of the business. Different parties such as shareholders, stakeholders, tax authorities, stock exchanges, etc. are interested in the accounting information for their varied needs.

A full disclosure is insisted by Securities Exchange Board and therefore, full information and its neat, simple, and quick presentation has become very essential. Manually maintained accounting system may not be able to provide all these facilities.

In recent times, computers are being used to maintain the accounting records and for the preparation, analysis, and interpretation of accounting statements. Hence, the system operated through computers is called as computerized accounting or simply, accounting in computerized environment.

The manual system of recording accounting transactions requires maintaining books of accounts such as journal, cash book, special purpose books, and ledger and so on. From these books summary of transactions and financial statements are prepared manually.

The advanced technology involves various machines, which can perform different accounting functions, for example a billing machine. This machine is capable of computing discount, adding net total and posting the requisite data to the relevant accounts.

With substantial increase in the number of transactions, a new machine was developed to store and process accounting data with greater speed and accuracy. A computer, to which it was connected, operated this machine. As a result, the maintenance of accounting data on a real-time basis became almost essential. Now maintaining accounting records become more convenient with the computerized accounting.

Objects of Introduction of Computers in Accounting:

Labor Saving: Labor saving is the main aim of introduction of computers in accounting. It refers to annual savings in labor cost or increase in the volume of work handled by the existing staff.

Time Saving: Savings in time is another object of computerization. Computers should be used whenever it is important to save time. It is important that jobs should be completed in a specified time such as the preparation of pay rolls and statement of accounts. Time so saved by using computers may be used for other jobs.

Accuracy: Accuracy in accounting statements and books of accounts is the most important in business. This can be done without any errors or mistakes with the help of computers. It also helps to locate the errors and frauds very easily.

Minimization of Frauds: Computer is mainly installed to minimize the chances of frauds committed by the employees, especially in maintaining the books of accounts and handling cash.

Effect on Personnel: Computer relieves the manual drudgery, reduces the hardness of work and fatigue, and to that extent improves the morale of the employees.

Exercise 1:

1. Define accounting
2. Name five (5) important functions of accounting
3. What is the objective of the accounting?
4. Who are the users of accounting reports?
5. Please name four (4) types of businesses.
6. Explain Bookkeeping.
7. Explain accounting activities.
8. Differentiate between Bookkeeping and Accounting.
9. List the purpose of introducing computer technology in accounting process.

2.0 INTRODUCTION TO CONCEPTS AND CONVENTIONS OF ACCOUNTING

Accounting concepts and conventions evolved as a result of information needed by the users of accounting information which became conflicting over time because of different methodology or procedure used in its preparation .it was thereby adopted to ensure that accounting information is presented accurately and consistently. Accounting concepts and conventions could be defined as ground or laid down rules of accounting that should be followed in preparation of all accounts and financial statements.

- 2.1 **Generally accepted accounting principles** - The common set of accounting principles, standards and procedures that companies use to compile their financial statements. GAAP are a combination of authoritative standards (set by policy boards) and simply the commonly accepted ways of recording and reporting accounting information. GAAP are imposed on companies so that investors have a minimum level of consistency in the financial statements they use when analyzing companies for investment purposes. GAAP cover such things as revenue recognition, balance sheet item classification and outstanding share measurements. Companies are expected to follow GAAP rules when reporting their financial data via financial statements. If a financial statement is not prepared using GAAP principles, be very wary!
- 2.2 **Business entity concept** - This concept states that every business unit not withstanding its legal existence is treated a separate entity from the body or bodies that owe it, this implies that its existence is distinct from its owner(s). It records and reflects the financial activity of the specific business organization and not of its owner(s) or employees. It is also important

because it ensures that a company and its owner(s) can contract and sue each other in case of any misunderstanding arising in the future.

- 2.3 **Going concern concept** - Giving the fact that a business entity is solvent and viable this concept assumes the notion that the business unit will have a perpetual existence and will not be sold or liquidated. It supports the use of historical cost concept in measuring assets such as; supplies equipment's etc. that will be used in operation of a business. Without the Going concern concept accounts will be drawn up on a winding up basis.
- 2.4 **Monetary measurement concept** - This concept states that an item should not be recorded unless it can be quantified in monetary terms in other words it specifies that accountants should not record facts that are not expressed in money terms. This concept could be said to be efficient because money enables various things of diverse nature to be added together and dealt with.
- 2.5 **Accrual-based Accounting concept/Matching concept** - This concept states that in an accounting period the earned income and the incurred cost which earned the income should be properly matched and reported for the period. This concept is also universally accepted in Manufacturing, Trading organization.

Points to considered when matching

1. Outstanding expenses though not paid for in cash are shown in the profit and loss accounts.
2. Prepaid expenses are not shown in profit and loss accounts
3. Income receivable should be added in the revenue
4. Income receivable in advance should be deducted from revenues.

Accrual concept attempt to correctly match all the accounting expenses (cost) to income (revenue) to the time it occurs at that accounting period. It also enables all revenue and expenditure of an accounting period to be recognized. It helps specify the profit of the organization in the accounting period.

- 2.6 **Neutrality Concept** - Information contained in the financial statements must be free from bias. It should reflect a balanced view of the affairs of the company without attempting to present them in a favored light. Information may be deliberately biased or systematically biased.
- 2.7 **Accounting period concept - fiscal year and accounting year**
 The Accounting period (Reporting period) is the time period for which a company or organization reports financial performance and financial position. Normally the accounting period is defined with respect to the organization's fiscal year, Typically, four quarterly accounting periods

correspond to the organization's fiscal quarters, and an annual accounting period covers the entire fiscal year.

- 2.8 **Matching concept** - The matching concept is an accounting practice whereby expenses are recognized in the same accounting period as the related revenues are recognized. The period's revenues, that is, are reported along with the expenses that brought them. The matching concept thus helps avoid misstating earnings for a period. Reporting revenues for a period without reporting all the expenses that brought them could result in overstated or understated profits.
- 2.9 **Adequate disclosure concept** - It states that information relating to the economic affairs of the enterprise which are of material interest should be clearly disclosed to the readers. It discloses sufficient information which is of material in trust to owners, present and potential creditors and investors. It also helps the reader not to be misled in anyway by hearsay.
- 2.10 **Consistency concept** - It states that accounting method used in one accounting period should be the same as the method used for events or transactions which are materially similar in other period (i.e. accounting practices should remain unchanged from period to period). This also involves treatment of transaction and valuation method. Consistency is also advisable so that the comparison of accounting figures over time is meaningful. Consistency also states that if a change becomes necessary, the change and its effect should be clearly stated. Consistency in accounting is an important assumption that facilitates comparability for information users. It also encourages reliability and fair presentation.
- 2.11 **Materiality concept** - According to AMERICAN ACCOUNTING ASSOCIATION, an item should be regarded as material if there is reason to believe that knowledge of it would influence decision of informed investors. An item is also considered material if its omission or misstatement could distort the financial statement such that it influences the economic decision of users taken on the basis of financial statement. It helps prevent records to be unnecessarily being over burden with minute details.
- 2.12 **Dual Aspect concept** - This concept ensures that transactions are recorded in books at least in two accounts, if one account is debited it's also credited with the same amount in a different account. The recording system is also known as double entry system. $Assets = Liabilities + Capital$.
- 2.13 **Conservatism/prudent concept** - This is an accounting practice that emphasizes great care in the anticipation of possible gains while possible losses are efficiently provided for. Prudence requires an accountant to attempt to ensure that the degree of success is not overstated. It also makes provision for possible bad and doubtful debts out of current year's profit. A strict application of prudence convention would ensure that profits and assets of the firm are not overstated.

2.14 **Realisation concept** - Realisation concept encourages the periodic recognition of revenue as soon as it can be measured and the value of the assets is reasonably certain. In realization the revenue are realized in three basis:

1. Basis of cash
2. Basis of sale
3. Basis of production.

It encourages the recognition of transaction and profit arising from them at the point of sale or transfer of ownership

2.15 **Historical cost concept** - This concept implies that all assets acquired, service rendered or received, expenses incurred etc. should be recorded in the books at the price at which it was acquired (It's cost price). The cost is distinct from its value and the record does not signify the value. It also holds that cost is the most reliable and verifiable value at which a good is or services should be initially recognized. It allows the record of all transaction no matter how minute it may be before it might or might not be subjected to depreciation.

2.16 **Role of auditors of financial statement** - Independent auditor is engaged to render an opinion on whether a company's financial statements are presented fairly, in all material respects, in accordance with financial reporting framework. The audit provides users such as lenders and investors with an enhanced degree of confidence in the financial statements. An audit conducted in accordance with GAAS and relevant ethical requirements enables the auditor to form that opinion. To form the opinion, the auditor gathers appropriate and sufficient evidence and observes, tests, compares and confirms until gaining reasonable assurance. The auditor then forms an opinion of whether the financial statements are free of material misstatement, whether due to fraud or error.

Exercise 2

1. Define the followings in your own words:
 - a. General Accepted Accounting Principles (GAAP)
 - b. Business entity concept
 - c. Going concern concept
 - d. Monetary measurement concept
 - e. Accrual-based accounting concept/ Matching concept
 - f. Neutrality concept
 - g. Accounting period concept
 - h. Matching concept
 - i. Adequate disclosure concept
 - j. Consistency concept

- k. Materiality concept
- l. Dual aspect concept
- m. Conservatism/prudent concept
- n. Realisation concept
- o. Historical cost concept

3.0 ACCOUNTING CLASSIFICATION AND ACCOUNTING EQUATION

3.1 Introduction

Business transactions can be classified into five categories; assets, owner’s equity, liabilities, revenues and expenses. Assets, owner’s equities and liabilities are recorded in the statement of financial position / balance sheet, whereas revenues and expenses are recorded in the statement of profit or lost. For non-accounting students, the easier way to learn accounting is to start with the statement of financial position.

3.1.1 The Statement of Financial Position

This statement may present either using the horizontal format; that is side by side form of presentation, or the vertical format. At present, vertical format is preferred as most business presents their statement of financial position using this format. The statement of financial position presentation of a sole proprietorship, partnership and limited company using the horizontal format are shown below. Vertical format presentation will be shown in later chapter.

Example 3.1

Sole Proprietorship: Statement of Financial Position as at 31 December 2016

<p>\$</p> <p>Non-Current Assets</p> <p>Building 30,000</p> <p>Current Assets</p> <p>Cash & bank 3,400</p> <p>Account receivable/debtors 2,000</p> <p style="text-align: right;"><u>35,400</u></p>	<p>\$</p> <p>Owner’s Equity</p> <p>Opening Capital 20,000</p> <p>Add: Net Profit <u>4,000</u></p> <p>24,000</p> <p>Less: Drawing <u>(1,000)</u></p> <p>23,000</p> <p>Non-Current Liabilities</p> <p>8% Bank Loan 10,000</p> <p>Current Liabilities</p> <p>Account payable / creditors <u>2,400</u></p> <p style="text-align: right;"><u>35,400</u></p>
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Example 3.2

Partnership: Statement of Financial Position as at 31 December 2016

<p>\$</p> <p>Non-Current Assets</p> <p>Building 100,000</p> <p>Machinery 26,000</p> <p>Current Assets</p> <p>Cash & bank 3,500</p> <p>Account receivable/debtors 2,000</p> <p style="text-align: right;">_____</p> <p style="text-align: right;"><u>131,500</u></p>	<p>\$</p> <p>Capital Account</p> <p>Partner A 20,000</p> <p>Partner B 50,000</p> <p>Partner C <u>24,000</u></p> <p style="text-align: right;">94,000</p> <p>Current Account</p> <p>Partner A 10,000</p> <p>Partner C <u>5,000</u></p> <p style="text-align: right;">15,000</p> <p>Non-Current Liabilities</p> <p>Bank Loan 20,000</p> <p>Current Liabilities</p> <p>Account payable / creditors <u>2,500</u></p> <p style="text-align: right;"><u>131,500</u></p>
--	--

Example 3.3

Limited Companies: Statement of Financial Position as at 31 December 2016

<p>\$</p> <p>Non-Current Assets 100,000</p> <p>Current Assets 120,000</p>	<p>\$</p> <p>Authorised Capital</p> <p>200,000 ordinary shares of \$1each 200,000</p> <p>100,000 ordinary shares of \$1each <u>100,000</u></p> <p style="text-align: right;"><u>300,000</u></p> <p>Issued and Paid-up Capital</p> <p>150,000 ordinary shares of \$1each 150,000</p> <p>80,000 ordinary shares of \$1each <u>80,000</u></p> <p style="text-align: right;">230,000</p> <p>Capital Reserved 50,000</p> <p>Revenue Reserved 30,000</p> <p>Shareholders Fund 310,000</p>
--	--

	Non-Current Liabilities	50,000
	Current Liabilities	<u>10,000</u>
		<u>370,000</u>
<u>370,000</u>		

3.1.2 **Assets** - are properties owned by a business. There are two types of assets;

- Non-current assets / Fixed assets
- Current assets

Non-current assets are assets acquired/bought not for resale but to be used in the business with useful life's of more than one year. Non-current assets are divided into three categories:

Tangible – has a physical substance – eg. Land & building, machinery, motor etc.

Intangible – no physical substance – eg. Franchise, Goodwill, Trademark, etc.

Investment – money place in other organisation in the hope of getting returns.

Current assets are assets either cash or those that can be converted into cash within one year. These assets constantly change their form during an accounting period. Example: inventory or stock, account receivables or debtors, cash in hand or in bank.

3.1.3 **Owner's Equity** - represents owner-supplied fund to the business for the acquisition of assets for the business. It is the financial obligations of the business to the owner. Profit will increase the capital of the business, whereas losses and drawing will reduce the capital of the business. Drawing occurs when the owner uses whatever assets of the business for personal means. Therefore, owner's equity is represented by capital that has been adjusted, after taking into account profit or loss of the business and any withdrawals made by the owner.

$$\text{Owner's Equity} = \text{Capital} +/(-) \text{ Profit/(losses) - Drawing}$$

3.1.4 **Liabilities** – are fund supplied by external parties to the business for the acquisition of assets. It is therefore the financial obligation of the business to external parties. There are two types of liabilities;

- Non-current liabilities / long term liabilities
- Current liabilities

Non-current liabilities are amounts owed by the business that are not repaid within one year – eg. Long-term loan, mortgage and debenture.

Current liabilities – are amounts owing by the business that are to be paid within one year – eg. Short-term loan, bank overdraft, creditors or account payable.

3.2 Purpose & Importance of statement of financial position/Balance sheet

Statement of financial position helps users of financial statements to assess the financial health of an entity. When analyzed over several accounting periods, balance sheets may assist in identifying underlying trends in the financial position of the entity. It is particularly helpful in determining the state of the entity's liquidity risk, financial risk, credit risk and business risk. When used in conjunction with other financial statements of the entity and the financial statements of its competitors, balance sheet may help to identify relationships and trends which are indicative of potential problems or areas for further improvement. Analysis of the statement of financial position could therefore assist the users of financial statements to predict the amount, timing and volatility of entity's future earnings.

3.3 The accounting equation

The accounting equation, also called the basic accounting equation, forms the foundation for all accounting systems. In fact, the entire double entry accounting concept is based on the basic accounting equation. This simple equation illustrates two facts about a company: what it owns and what it owes.

The accounting equation equates a company's assets to its liabilities and equity. This shows all company assets are acquired by either debt or equity financing. For example, when a company is started, its assets are first purchased with either cash the company received from loans or cash the company received from investors. Thus, all of the company's assets stem from either creditors or investors i.e. liabilities and equity. The basic accounting equation;

$$\text{ASSET} = \text{LIABILITIES} + \text{OWNER'S EQUITY}$$

As you can see, assets equal the sum of liabilities and owner's equity. This makes sense when you think about it because liabilities and equity are essentially just sources of funding for companies to purchase assets.

The equation is generally written with liabilities appearing before owner's equity because creditors usually have to be repaid before investors in a bankruptcy. In this sense, the liabilities are considered more current than the equity. This is consistent with financial reporting where current assets and liabilities are always reported before long-term assets and liabilities.

If a company keeps accurate records, the accounting equation will always be "in balance," meaning the left side should always equal the right side. The balance is maintained because every business transaction affects at least two of a company's accounts. For example, when a company borrows money from a bank, the company's assets will increase and its liabilities will increase by the same amount. When a company purchases inventory for cash, one asset will increase and one asset will decrease. Because there are two or more accounts affected by every transaction, the accounting system is referred to as double-entry accounting.

A company keeps track of all of its transactions by recording them in accounts in the company's general ledger. Each account in the general ledger is designated as to its type: asset, liability, owner's equity, revenue, expense, gain, or loss account.

3.4 Effects of transactions on the accounting equation

Initially, owner equity is affected by capital contributions. Once business operations commence, there will be income (revenues minus expenses, and gains minus losses) and perhaps additional capital contributions and withdrawals. At the end of a reporting period, these items will impact the owner's equity as follows.

Assets	=	Liabilities	+	Owner's Equity
			+	Revenues
			-	Expenses
			+	Gains
			-	Losses
			+	Contributions
			-	Withdrawals

Example 3.4

Abdul Jabbar decides to open a bicycle repair shop. To get started he rents some shop space, purchase an initial inventory of bike parts, and opens the shop for business. Here is a listing of the transactions that occurred during the first month; (business adopting periodic inventory method)

Date	Transaction
March 1	Owner contributes \$7,500 in cash to start the business.
March 5	Purchase \$2,500 in bike parts on credit, payable in 45 days.
March 12	Paid first month's shop rent of \$1,000 cash.
March 13	Repaired bike for \$1,100; collected \$400 cash, and the balance on credit.

- March 16 \$275 in bike parts were used in repairing his bike.
- March 20 Collected \$425 from customer accounts.
- March 29 Paid \$500 to suppliers for parts purchased earlier in the month.

These transactions affect the accounting equation as shown below.

<u>ASSETS</u>		=	<u>LIABILITIES + OWNER'S EQUITY</u>			
Cash + Acc Receivable		=	Acc Payable + Capital	+ Revenue	– Expenses (Drawing)	
March 1	7,500	=		7,500		
5		=	2,500			(2,500)
12	(1,000)	=				(1,000)
13	400 700	=			1,100	
16		=		(275)		275
20	425 (425)	=				
29	(500)	=	(500)			
TOTAL	6,825 + 275	=	2,000 + 7,225	+ 1,100	- 3,225	

At the end of the month of March, the balance sheet for the business would appear as follow:

Jabbar's Bikes
Statement of Financial Position as at 31 March 20xx

ASSETS		LIABILITIES & OWNER'S EQUITY	
Cash	6,825	Account payable	2,000
Account receivable	275	Capital	5,100
	7,100		7,100

3.5 Double entry rules (Debits and credits)

Every transaction has two effects. Accounting attempts to record both effects of a transaction or event on the entity's financial statements. This is the application of double entry concept. Without applying double entry concept, accounting records would only reflect a partial view of the company's affairs. Traditionally, the two effects of an accounting entry are known as Debit (Dr) and Credit (Cr). Accounting system is based on the

principal that for every Debit entry, there will always be an equal Credit entry. This is known as the Duality Principal.

Debit entries are ones that account for the following effects:

- Increase in assets
- Increase in expense
- Decrease in liability
- Decrease in equity
- Decrease in income

Credit entries are ones that account for the following effects:

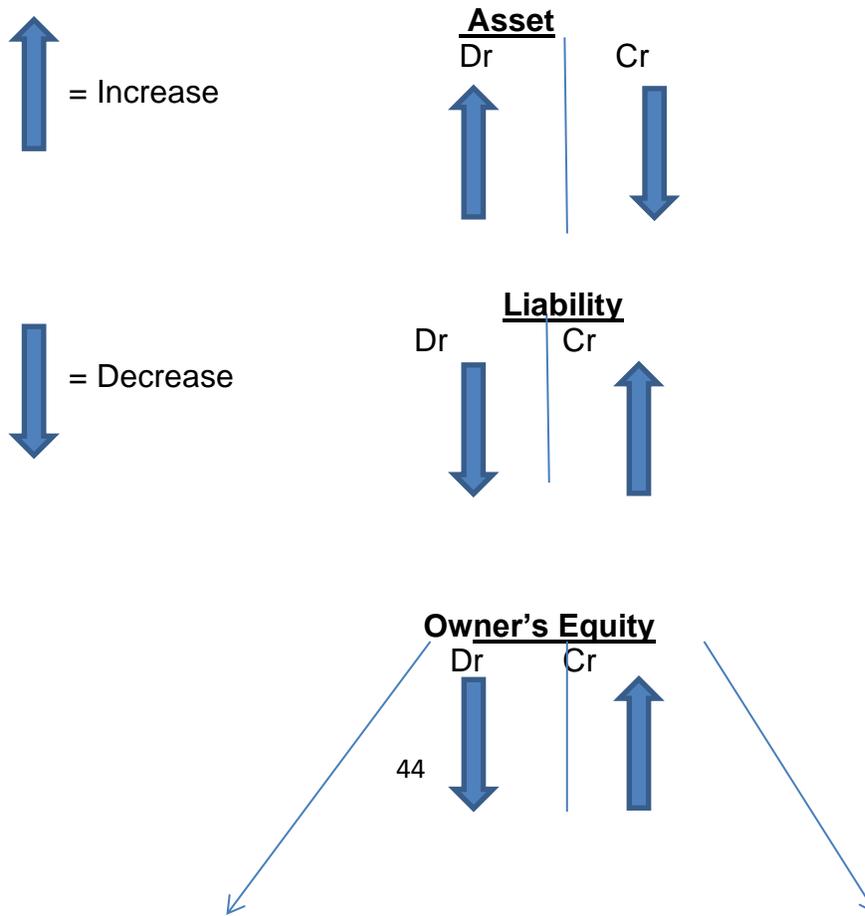
- Decrease in assets
- Decrease in expense
- Increase in liability
- Increase in equity
- Increase in income

Double Entry is recorded in a manner that the Accounting Equation is always in balance.

$$\text{Assets} - \text{Liabilities} = \text{Capital}$$

Any increase in expense (Dr) will be offset by a decrease in assets (Cr) or increase in liability or equity (Cr) and vice-versa. Hence, the accounting equation will still be in equilibrium.

Double Entry Rules





Exercise 3

1. What is asset?
2. Identifies and elaborate different type of asset.
3. What is Owner's Equity
4. Define Liabilities?
5. What is the main purpose of financial statement/ balance sheet?
6. What is the formula for accounting equation?
7. What is the formula for the effect of transactions on accounting equation?
8. What is double entry rules?

4.0 ACCOUNTING FOR SERVICE OPERATION – (SOLE PROPRIETOR)

A service company uses its employees to provide a service for the customer. These services can include lawn care, carpet cleaning or childcare. Some service companies purchase expensive equipment to provide the service, such as a vehicle. Other service companies rely on human labor more than equipment and only purchase a minimal amount of assets. The typical financial transactions recorded for a service company include collecting a deposit from the customer, providing the service and receiving payment. These activities may occur in the same accounting cycle or in several cycles.

Similarities on Accounting for Service Companies vs. Merchandising Companies.

The accounting cycle for service companies and merchandising companies includes similar processes. For example, the accounting cycle for both companies follows the same basic structure of recording transactions and reporting financial results. The accountants in both types of companies review the account balances

and identify any necessary adjustments. Adjustments refer to transactions that occurred during the month but did not create an entry in the financial records. The adjusting entry records the entry.

Differences on Accounting for Service Companies vs. Merchandising Companies.

Several differences exist in the accounting cycle between service companies and merchandising companies. These include recognition of revenue and the format of the financial statements. Service companies recognize revenue when the company performs the service for the customer. In most cases, the company bills the customer on a future date to request payment. Merchandising companies generally collect payment from customers when the customer takes the merchandise from the store. The merchandising company recognizes revenue on the date of sale. The income statement formats vary between service companies and merchandising companies. The income statement for the service company subtracts the operating expenses from the revenues to arrive at net income. The merchandising company subtracts the cost of merchandising from the revenue to arrive at gross profit. It then subtracts all other operating expenses to arrive at net income.

4.1 Journals

In accounting and bookkeeping, a journal is a record of financial transactions in order by date. A journal is often defined as the book of original entry. The definition was more appropriate when transactions were written in a journal prior to manually posting them to the accounts in the general ledger or subsidiary ledger. Manual systems usually had a variety of journals such as a sales journal, purchases journal, cash receipts journal, cash disbursements journal, and a general journal.

With today's computerized bookkeeping and accounting, it is likely to find only a general journal in which adjusting entries and unique financial transactions are entered. The recording and posting of most transactions will occur automatically when sales and vendor invoice information is entered, checks are written, etc. In other words, accounting software has eliminated the need to first record routine transactions into a journal.

Example: General Journal

1/3	Dr	Building	350,000	
		Cr Capital		350,000
		(Bring in building as an investment to the biz)		
5/3	Dr	Machinery	40,000	
		Cr Azman Trading		40,000
		(Brought a machinery on credit)		
31/3	Dr	Drawing	600	
		Cr Cash		600

(Owner's took a cash for personal used)

Example on business transactions:

Jan 1, 2016 Saiful started a consultation business with \$ 100,000 cash and building at value RM350,000.

3 Transferred cash to bank account amounting \$ 90,000

5 Bought office furniture RM50,000 where \$10,000 paid by cheque and the balance on credit from Azman trading.

8 Rendered a services to Zulzalis Enterprise and received a payment \$5,000 by cheque

12 Received a cash \$150 as a payment for service rendered.

Answers: General Journal

1/1	Dr	Cash	100,000	
	Dr	Building	350,000	
		Cr Capital		450,000

(started a biz with cash and building)

3/1	Dr	Bank	90,000	
		Cr Cash		90,000

(Transfer cash into the bank)

5/1	Dr	Office furniture	50,000	
		Cr Bank		10,000
		Cr Azman Trading		40,000

(Bought a machinery from Azman Trading with 10,000 as down payment)

8/1	Dr	Bank	5,000	
		Cr Service revenue		90,000

(Received payment for service rendered)

12/1	Dr	Cash	150	
		Cr Service revenue		150

(Received payment for service rendered)

4.2 Ledgers

Once journal entries are made in the general journal or subsidiary journals, they must be posted and transferred to the T-accounts or ledger accounts. This is the second step in the accounting cycle.

The purpose of journalizing is to record the change in the accounting equation caused by a business event. Ledger accounts categorize these changes or debits and credits into specific accounts, so management can have useful information for budgeting and performance purposes.

Since management uses these ledger accounts, journal entries are posted to the ledger accounts regularly. Most companies have computerized accounting systems that update ledger accounts as soon as the journal entries are input into the accounting software. Manual accounting systems are usually posted weekly or monthly. Just like journalizing, posting entries is done throughout each accounting period.

T- Account

Ledger accounts use the T-account format to display the balances in each account. Each journal entry is transferred from the general journal to the corresponding T-account. The debits are always transferred to the left side and the credits are always transferred to the right side of T-accounts.

Since most accounts will be affected by multiple transactions, there are usually several numbers in both the debit and credit columns. Account balances are always calculated at the bottom of each T-account. Notice that these are account balances—not column balances. The total difference between the debit and credit columns will be displayed on the bottom of the corresponding side. In other words, an account with a credit balance will have a total on the bottom of the right side of the account.

As a refresher of the accounting equation, all asset accounts have debit balances and liability and equity accounts have credit balances. All contra accounts have opposite balances.

Since so many transactions are posted at once, it can be difficult post them all. In order to keep track of transactions, I like to number each journal entry as its debit and credit is added to the T-accounts. This way you can trace each balance back to the journal entry in the general journal if you have any questions later in the accounting cycle.

Example

Let's post the journal entries that Shaiful's Consultancy made during the first month in business to the ledger accounts.

Cash a/c				Building a/c				
	1/1 Capital	100,000	3/1 Bank	90,000	1/1 Capital	350,000	31/1 c/d	<u>350,000</u>
12/1 Revenue	150	100,150	Bal cd	<u>10,150</u>	350,000	350,000		
		100,150		100,150				

<u>Capital a/c</u>				<u>Bank a/c</u>	
		1/1 Cash 100,000	3/1 Cash 90,000	5/1 O/F 10,000	
31/1 Bal c/d <u>450,000</u>		Building <u>350,000</u>	8/1 Rev <u>5,000</u>	31 Bal c/d <u>85,000</u>	
450,000		450,000	95,000	95,000	
				<u>Azman Trading a/c</u>	
5/1 Bank 10,000			31/1 Bal c/d <u>40,000</u>	5/1 O/ F 40,000	
Azman <u>40,000</u>	31/1 Bal c/d <u>50,000</u>		<u>40,000</u>	<u>40,000</u>	
50,000	50,000				
		<u>Service Revenue a/c</u>			
		8/1 Bank 5,000			
31/1 Bal c/d <u>5,150</u>		12/1 Cash <u>150</u>			
5,150		5,150			

As you can see, all of the journal entries are posted to their respective T-accounts and the account balances are calculated on the bottom of each ledger account.

Now these ledgers can be used to create an unadjusted trial balance in the next step of the accounting cycle.

4.3 Trial balance

A bookkeeping worksheet in which the balances of all ledgers are compiled into debit and credit columns. A company prepares a trial balance periodically, usually at the end of every reporting period. The general purpose of producing a trial balance is to ensure the entries in a company's bookkeeping system are mathematically correct. Preparing a trial balance for a company serves to detect any mathematical errors that have occurred in the double-entry accounting system. Provided the total debts equal the total credits, the trial balance is considered to be balanced, and there should be no mathematical errors in the ledgers.

However, this does not mean there are no errors in a company's accounting system. For example, transactions classified improperly or those simply missing from the system could still be material accounting errors that would not be detected by the trial balance procedure.

Example

Let's prepare the trial balance on the accounts of Shaiful's Consultancy made during the first month in business.

Saiful's Consultancy
Trial Balance on 31 January 20xx

	Dr	Cr
Cash	10,150	
Building	350,00	
Capital		450,000
Bank	85,000	
Office Furniture	50,000	
Azman Trading		40,000
Service Revenues		<u>5,150</u>
	<u>495,150</u>	<u>495,150</u>

4.4 Closing entries

Closing journal entries are made at year-end to prepare *temporary accounts* for the next accounting period.

Temporary or nominal accounts, (also called income statement accounts), are measured *periodically*.

The amounts in one accounting period should be closed or brought to zero so that they won't be mixed with those of the next period.

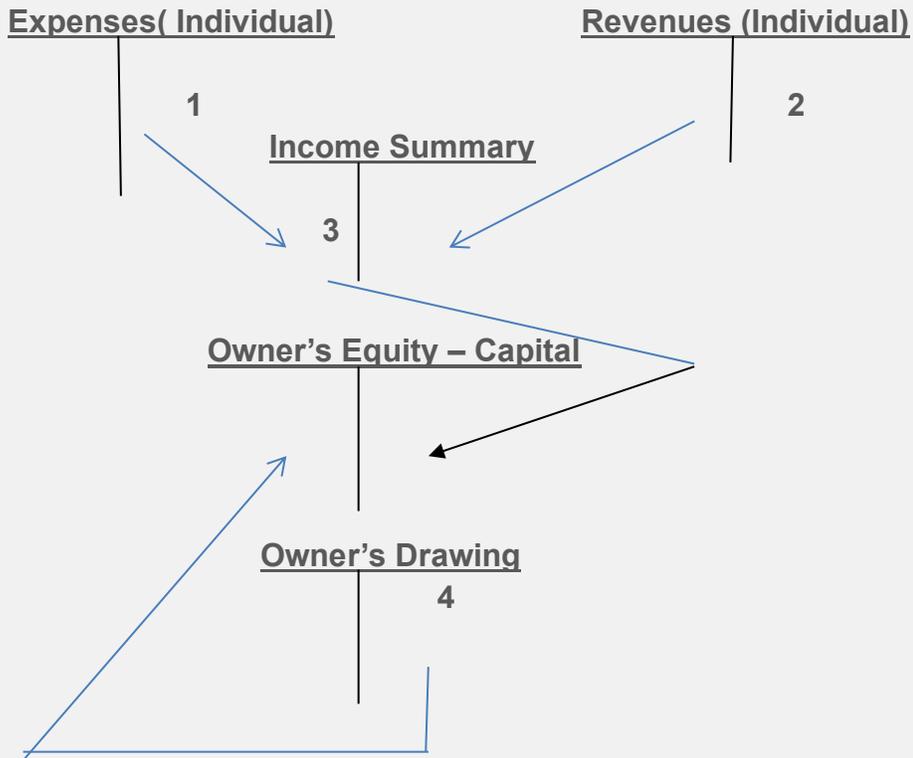
Temporary accounts consist of all *revenue* and *expense* accounts, and also withdrawal accounts of owner/s in the case of sole proprietorships and partnerships.

Take note that closing entries are prepared only for temporary accounts. Permanent accounts are never closed.

Four Steps in Preparing Closing Entries

1. Close all income accounts to Income Summary
2. Close all expense accounts to Income Summary
3. Close Income Summary to the appropriate capital account
4. Close withdrawals to the capital account/s (*this step is for sole proprietorship and partnership only*)

Its' can be explained as follows:



Closing Entries: Example

Prepare the closing entries using the following information:

**Gray Electronic Repair Services
Adjusted Trial Balance
December 31, 2014**

Account Title	Debit	Credit
Cash	\$ 7,480.00	
Accounts Receivable	3,700.00	
Service Supplies	600.00	
Furniture and Fixtures	3,000.00	
Service Equipment	16,000.00	
Accumulated Depreciation		\$ 720.00
Accounts Payable		9,000.00
Utilities Payable		1,800.00
Loans Payable		12,000.00
Mr. Gray, Capital		13,200.00

Mr. Gray, Drawing	7,000.00	
Service Revenue		9,850.00
Rent Expense	1,500.00	
Salaries Expense	3,500.00	
Taxes and Licenses	370.00	
Utilities Expense	1,800.00	
Service Supplies Expense	900.00	
Depreciation Expense	720.00	
Totals	<u>\$ 46,570.00</u>	<u>\$ 46,570.00</u>

Step 1: Close all income accounts to Income Summary

Date 2014		Particulars	Debit	Credit
Dec	31	Service Revenue	9,850.00	
		Income Summary		9,850.00

In the given data, there is only 1 income account, i.e. Service Revenue. It has a credit balance of \$9,850. To close that, we debit Service Revenue for the full amount and credit Income Summary for the same.

The Income Summary account is temporary. It is used to close income and expenses. As you will see later, Income Summary is eventually closed to capital.

Step 2: Close all expense accounts to Income Summary

	31	Income Summary	8,790.00	
		Rent Expense		1,500.00
		Salaries Expense		3,500.00
		Taxes and Licenses		370.00

		Utilities Expense		1,800.00
		Service Supplies Expense		900.00
		Depreciation Expense		720.00

To close expenses, we credit the expense accounts and debit Income Summary.

Now for the next step, we need to get the balance of the Income Summary account. In step 1, we credited it for \$9,850 and debited it in step 2 for \$8,790. It would then have a credit balance of \$1,060.

Notice that the balance of the Income Summary account is actually the *net income* for the period. Remember that net income is equal to all income minus all expenses.

Step 3: Close Income Summary to the appropriate capital account

The Income Summary balance is ultimately closed to the capital account.

	31	Income Summary	1,060.00	
		Mr. Gray, Capital		1,060.00

Step 4: Close withdrawals to the capital account

Note: This step is applicable only to sole proprietorships and partnerships.

In a sole proprietorship, a drawing account is maintained to record all withdrawals made by the owner. In a partnership, a drawing account is maintained for each partner. Drawing accounts are closed to capital at the end of the accounting period.

Our example is a sole proprietorship business. Mr. Gray's withdrawals are recorded in *Mr. Gray, Drawing*. To close the drawing account to the capital

account, we credit the drawing account and debit the capital account. Notice that drawings decrease capital.

	31	Mr. Gray, Capital	7,000.00	
		Mr. Gray, Drawing		7,000.00

Conclusion

The purpose of closing entries is to prepare the temporary accounts for the next accounting period. In other words, the income and expense accounts are "restarted".

After preparing the closing entries above, Service Revenue will now be zero. The expense accounts and withdrawal accounts will now also be zero. The balances of these accounts have been absorbed by the capital account – Mr. Gray, Capital, which now has a balance of \$7,260 (\$13,200 beginning balance + \$1,060 in step #3 - \$7,000 in step #4).

4.5 Financial Statement Pre-adjustment – Vertical Format

Financial statements are a collection of reports about an organization's financial results, financial condition, and cash flows. They are useful for the following reasons:

- To determine the ability of a business to generate cash, and the sources and uses of that cash.
- To determine whether a business has the capability to pay back its debts.
- To track financial results on a trend line to spot any looming profitability issues.
- To derive financial ratios from the statements that can indicate the condition of the business.
- To investigate the details of certain business transactions, as outlined in the disclosures that accompany the statements.

Illustration:

SUMMIT ADVERTISING AGENCY
Income Statement
For the Year Ended 31December 20xx

Revenues		
Service revenue		xxxxxx
Expenses		
Salaries and wages	xxxxxx	
Supplies	xxxxxx	
Rent	xxxxxx	
Insurance	xxxxxx	
Interest	xxxxxx	
Depreciation	<u>xxxxxx</u>	
		<u>(xxxxxx)</u>
Net Profit/(net loss)		<u>xxxxxx</u>

SUMMIT ADVERTISING AGENCY
Balance Sheet
For the Year Ended 31December 20xx

Assets

Cash		XXXXXX
Account receivable		XXXXXX
Supplies/stock/inventory		XXXXXX
Prepaid expenses		XXXXXX
Equipment	XXXXXX	
Less: Accumulated depreciation	<u>(XXXXX)</u>	XXXXXX
Total Assets – i.e		<u>30,000</u>

Liabilities and Owner's Equity

Liabilities

Notes payable		XXXXXX
Account payable		XXXXXX
Prepaid revenue		XXXXXX
Accrued salaries n wages		XXXXXX
Interest payable		<u>XXXXXX</u>
Total liabilities		XXXXXX

Owner's Equity

Capital		XXXXXX
Net Profit/net loss		<u>XXXXXX</u>
Less: Drawing		<u>(XXXXX)</u>
Total liabilities & owner's equity		<u>30,000</u>

in balance

Tentative – Owner's equity Statement

**SUMMIT ADVERTISING AGENCY
Balance Sheet
For the Year Ended 31 December 20xx**

Owner's capital on 1 Jan 20xx	XXXXXX
Net income/(net loss)	<u>XXXXXX</u>
	XXXXXX
Less Drawing	<u>(XXXXX)</u>
Owner's capital on 31 December 20xx	<u>XXXXXX</u>

Exercise 4

1. What is journal in accounting?
2. Define and explain ledger accounts or T account.
3. What is Trial Balance?
4. What is financial statement? How is it useful?

5.0 ACCOUNTING FOR MERCHANDISING OPERATION – (SOLE PROPRIETOR)

A merchandising company purchases inventory items to resell to customers. The company buys from several vendors and provides a central purchasing point where customers can purchase everything in one stop. The customer benefits by making one convenient stop for all her needs. Inventory represents the primary asset of a merchandising company. The typical financial transactions of a merchandising company include purchasing inventory, storing the inventory and selling the inventory to customers. These activities may occur in one or more accounting cycles.

5.1 Journals

The journal is similar to service oriented business as discussed in 4.1. Only some differences instead of selling services, merchandising are selling products. In order to sell a product, business therefore has to acquire supplies/material to process then later to sells. Buying for the materials or goods for resales, the term used is purchase. It is may also involve of returns on sales or purchase, discount allowed and received and also trade discount as well. There is no difference in journalizing the business transactions.

Example on business transactions:

- Jan 1, 2016 Saiful started a business with \$ 100,000 cash and building at value \$350,000.
- 3 Transferred cash to bank account amounting \$ 90,000
- 5 Bought machinery \$50,000 where \$10,000 paid by cheque and the balance on credit from Azman trading.
- 7 Bought a goods from Loyang enterprise on credit \$5,000
- 8 Bought a goods from Zulzalis Entp. \$45,000 by cheque
- 12 Returns some goods valued \$2,500 to Loyang due to goods defects.
- 21 Sold goods on credit to Allan & Son amount \$90,000
- 23 Sold goods to Arumugam Pillai and received cheque amount \$50,000
- 24 Allan & Sons returned a good value \$1,500.

Answers : General Journal

1/1	Dr	Cash	100,000	
	Dr	Building	350,000	
		Cr Capital		450,000
		(started a biz with cash and building)		
3/1	Dr	Bank	90,000	
		Cr Cash		90,000
		(Transfer cash into the bank)		
5/1	Dr	Machinery	50,000	
		Cr Bank		10,000
		Cr Azman Trading		40,000
		(Bought a machinery from Azman Trading with 10,000 as down payment)		
7/1	Dr	Purchase	35,000	
		Cr Loyang Enterprise		35,000
		(Bought a goods on credit)		
8/1	Dr	Purchase	45,000	
		Cr Zulzalis Enterprise		45,000
		(Bought a goods on credit)		
12/1	Dr	Loyang Enterprise	2,500	
		Cr Return outward		2,500
		(Returns some goods to Loyang Entp)		
21/1	Dr	Allan & Son	90,000	
		Cr Sales		90,000
		(Sold a goods on credit)		
23/1	Dr	Bank	50,000	
		Cr Sales		90,000
		(Sold a goods on credit)		
24/1	Dr	Return outward	90,000	
		Cr Allan & Son		90,000
		(Goods returns by Allan & Son)		

5.2 Ledgers

Recording to ledger – posting to ledger (individual a/c), as shown on the item 4.2

5.3 Trial balance

Preparing trial balance – list of account with it balances as shown on the item 4.3

5.4 Closing entries

Recording the closing entries, as shown in the item 4.4

5.5 Financial Statement Pre-adjustment – Vertical Format

There are some differences from illustration on 4.5, such as cost of goods and returns.

Mahad Enterprise
Statement of Financial Position as at 31 Dec 2016

Non Current Assets	Cost	Acm Dpr	Net Value
Land	xxx	-	xxx
Building	xxx	(xxx)	xxx
Machinery	xxx	(xxx)	xxx
			xxx
Current Assets			
Inventory		xxx	
Account receivables		xxx	
Bank		xxx	
Prepaid Expenses/Accrued revenues		xxx	
			<u>xxxx</u>
			<u>100,000</u>
			in
balance			
Financed by;			
Capital		xxx	
Plus: Net Profit/(Loss)		xxx	
Less: Drawing		(xxx)	xxxx
Non Current Liabilities			
6% Loan from BIMB			xxxx
Current Liabilities			
Account payables	xxx		
Accrued expenses/prepaid rev	xxx		
			<u>xxxx</u>
			<u>100,000</u>

Mahad Enterprise
Statement of Profit or Loss
For the year ended 31 Dec 2016

Sales		XXXX
Less: Returns Inwards (sales returns)		<u>(XXX)</u>
Net sales		XXXX
Less: Cost of goods sold (COGS)		
Opening stocks	XXX	
Purchases	xxx	
Less: Returns outward	<u>(XXX)</u>	XXX
Tax and duties		XXX
Carriage inwards		<u>XXX</u>
COGAFS		xxx
Less: Closing stocks		<u>(XXX)</u>
COGS		<u>(XXX)</u>
Gross Profit		XXXX
Other revenues/incomes		
Rental	xxx	
Discount received	xxx	
Interest received	xxx	
Dividend received	<u>xxx</u>	<u>xxx</u>
		XXXX
Less: Expenses		
Selling & distribution		
Advertising	xxx	
Carriage	xxx	
Sales commission	xxx	
Salesmen's salaries	xxx	(xxx)
Administrative expenses		
Rental	xxx	
Utilities	xxx	
Insurance	<u>xxx</u>	(xxx)
Financial expenses		
Interest on loan	xxx	
Discount allowed	xxx	
Depreciation	xxx	
Bad debts	xxx	
Bank charges	<u>xxx</u>	<u>(xxx)</u>
Net Profit/(Loss)		<u>XXXX</u>

Illustrative Example.

Trial Balance		
	Dr	Cr
Sales		140,000
Purchase	79,400	
Return inwards	1,500	
Return outwards		3,500
Cash	7,000	
Bank	130,287	
Machinery	50,000	
Electricity	2,500	
Water	1,000	
Salary	9,500	
Capital		450,000
Building	350,000	
Discount allowed	2,213	
Discount received		1,000
Azman Trading		40,000
Drawing	<u>1,100</u>	
	<u>634,500</u>	<u>634,500</u>

Saiful Enterprise
Statement of Profit and Loss for the year ended 31 March 2016

Sales		140,000
Return inward		<u>(1,500)</u>
Net sales		138,500
Less: COGS		
O/Stock	-	
Purchases	79,400	
Return outward	<u>(3,500)</u>	
COGAFS	75,900	
Less: C/stock (given)	<u>(3,200)</u>	
COGS		<u>(72,700)</u>

Gross Profit		65,800
Plus: Other incomes		
Disc. Received		1,000
Minus Other expenses:		
Electricity	2,500	
Disc. Allowed	2,213	
Water	1,000	
Salary	<u>9,500</u>	
		<u>15,213</u>
Net Profit		<u>51,587</u>

Saiful Enterprise
Statement of Financial Position as at 31 March 2016

Non-current asset		
Machinery		50,000
Building		<u>350,000</u>
		400,000
Current asset		
Cash	7,000	
Bank	130,287	
Closing stock	3,200	
		<u>140,487</u>
		<u>540,487</u>
Financed by:		
Capital		450,000
Net profit		51,587
Less: Drawing		<u>(1,100)</u>
		500,487
Non-Current Liabilities		–
Current liabilities		
Azman Trading		<u>40,000</u>
		<u>540,487</u>

6.0 BALANCE DAY ADJUSTMENT AND PREPARATION OF FINAL ACCOUNT

Balance day adjustments are adjustments that need to be made on some accounts at the end of the financial year, so that they accurately reflect the position of the business. These are only required when a company is using an accrual accounting system, as income or expenses may be recognised and paid/received at different times.

Generally income is considered to be earned when the right to receive the income arises. When goods are sold for cash, the sale is recorded in the accounting period in which the sale is made. Credit sales are not so straight forward. If goods are sold on credit on 20 June 2008 but the account is not paid until 15 July 2008 the sale is still recognised on 20 June 2008. This means it is included as income for the period ended 30 June 2008 and not when the money is received.

The most common balance day adjustments used in small business are:

- Writing off bad debts
- Correction of errors
- Calculating depreciation
- Accrued expense and revenue
- Prepaid expense and revenue

6.1 Adjustments of accrual and prepayment

To ensure all income and expenses that relate to the current financial reporting period are identified and properly reported in the current period, it is necessary to make certain adjustments in the accounting records.

Adjustments of accrual expenses and revenues/incomes

Accrued expense is expense which has been incurred but not yet paid. Expense must be recorded in the accounting period in which it is incurred. Therefore, accrued expense must be recognized in the accounting period in which it occurs rather than in the following period in which it will be paid. As expense will be debited to record the accrued expense, a corresponding payable must be created to account for the credit side of the transaction. The accounting entry to record accrued expense will therefore be as follows:

	Debit		
		Credit	
			Expense (Income Statement)
			Expense Payable (Balance Sheet)

Example:

ABC pays loan interest for the month of December 2015 of \$20,000 on 3rd January 2016. ABC has an accounting year end of 31st December 2015. ABC will recognize interest expense of \$20,000 in the financial statements of year 2015 even though it was paid in the next accounting period as it relates to the current period. Following accounting entry will need to be recorded to account for the interest expense accrued:

Debit	Interest Expense	20,000
Credit	Interest Payable	20,000

On the date of payment of interest (i.e. 3rd January of the next year) following accounting entry will need to be recorded in the subsequent year:

Debit	Interest Payable	20,000
Credit	Cash	20,000

Accrued income is income which has been earned but not yet received. Income must be recorded in the accounting period in which it is earned. Therefore, accrued income must be recognized in the accounting period in which it arises rather than in the subsequent period in which it will be received. As income will be credited to record the accrued income, a corresponding receivable must be created to account for the debit side of the transaction. The accounting entry to record accrued income will therefore be as follows:

Debit	Income Receivable (Balance Sheet)
Credit	Income (Income Statement)

Example:

ABC receives interest of \$20,000 on bank deposit for the month of December 2015 on 3rd January 2016. ABC has an accounting year end of 31st December 2015. ABC will recognize interest income of \$20,000 in the financial statements of year 2015 even though it was received in the next accounting period as it relates to the current period. Following accounting entry will need to be recorded to account for the interest income accrued:

Debit	Interest Income Receivable	20,000
Credit	Interest on Bank Deposit (Income)	20,000

On the date of receipt of interest (i.e. 3rd January of the next year) following accounting entry will need to be recorded in the subsequent year:

Debit	Bank	20,000
Credit	Interest Income Receivable	20,000

Adjustments of prepaid expenses and revenues/incomes

Prepaid expense is expense paid in advance but which has not yet been incurred. Expense must be recorded in the accounting period in which it is incurred.

Therefore, prepaid expense must be not be shown as expense in the accounting period in which it is paid but instead it must be presented as such in the subsequent accounting periods in which the services in respect of the prepaid expense have been performed. Entity should therefore recognize an asset in respect of expense it has paid in advance until such time as the services that are due in relation to the prepaid expense have been performed by the suppliers/contractors. Following accounting entry is required to account for the prepaid expense:

Debit		
Credit	Prepaid Expense (Asset)	Cash

Example:

ABC pays advance rent to its landowner of \$20,000 on 30 th December 2015 in respect of office rent for the following year. ABC has an accounting year end of 31st December 2015. ABC will recognize an asset of \$20,000 in the financial statements of year 2015 in respect of the prepaid expense to recognize its right to use office space in the following year. Following accounting entry will be recorded in the books of ABC LTD in the year 2015

Debit		
Credit	Prepaid Rent	20,000
	Cash	20,000

The prepaid expense will be recognized as expense in the next accounting period to which the rental expense relates. Following accounting entry will be recorded in the year 2016:

Debit		
Credit	Rent Expense (Income Statement)	20,000
	Prepaid Rent	20,000

Prepaid income is revenue received in advance but which is not yet earned. Income must be recorded in the accounting period in which it is earned. Therefore, prepaid income must be not be shown as income in the accounting period in which it is received but instead it must be presented as such in the subsequent accounting periods in which the services or obligations in respect of the prepaid income have been performed. Entity should therefore recognize a liability in respect of income it has received in advance until such time as the obligations or services that are due on its part in relation to the prepaid income have been performed. Following accounting entry is required to account for the prepaid income:

Debit		
Credit	Cash/Bank	Prepaid Income (Liability)

Example

ABC receives advance rent from its tenant of \$20,000 on 30 th December 2015 in respect of office rent for the following year. ABC has an accounting year end of 31st December 2015. ABC will recognize a liability of \$20,000 in the financial statements of year 2015 in respect of the prepaid income to acknowledge its

obligation to make the office space available to the tenant in the following year. Following accounting entry will be recorded in the books of ABC in the year 2010

	Debit		
		Cash	20,000
	Credit	Prepaid Rent Income (Liability)	20,000

The prepaid income will be recognized as income in the next accounting period to which the rental income relates. Following accounting entry will be recorded in the year 2016:

	Debit		
		Prepaid Rent Income (Liability)	20,000
	Credit	Rent Income (Income Statement)	20,000

Depreciation

The loss, over time, in the value of an asset such as plant, equipment, and vehicles. Depreciation accounts for the decline in the value of the asset as it ages. Several methods are used for calculating depreciation, including straight-line depreciation, accelerated depreciation, and the accelerated cost recovery system.

For accounting purposes, depreciation indicates how much of an asset's value has been used up. For tax purposes, businesses can deduct the cost of the tangible assets they purchase as business expenses; however, businesses must depreciate these assets in accordance with IRS rules about how and when the deduction may be taken based on what the asset is and how long it will last.

Depreciation is used in accounting to try to match the expense of an asset to the income that the asset helps the company earn. For example, if a company buys a piece of equipment for \$1 million and expects it to have a useful life of 10 years, it will be depreciated over 10 years. Every accounting year, the company will expense \$100,000 (assuming straight-line depreciation), which will be matched with the money that the equipment helps to make each year.

There are four methods of calculating the depreciation.

1. Straight line method
2. Reducing balance method
3. Sum of the year digit or accelerated method
4. Unit of production/activity method

For the purpose of this study, only two popular method of depreciation will be discussed. Those are Straight line method and Reducing balance method

Straight Line Depreciation Method

Straight-line is the simplest depreciation method, allocating an even rate of depreciation every year for the life of the asset. You calculate annual straight-line depreciation as follows:

Annual Depreciation Expense = (Asset Cost - Residual Value) / Useful Life of the Asset

Example: ABC Company purchases a truck for \$20,000. It has a useful life of 5 years and a residual value of \$3,000.

Annual Depreciation Expense = (\$20,000 - \$3,000) / 5 = \$3,400

Thus, ABC Company can take \$3,400 in depreciation expense every year for the next five years. It can further explain as shown in the following table:

Year(A)	Original Cost (B)	Depreciation (C) [B-Residual] 10%	Accumulated Depreciation (D) [C + D]	Book value (E) [B - D]
1	20,000	3,400	3,400	16,600
2	20,000	3,400	6,800	13,200
3	20,000	3,400	10,200	9,800
4	20,000	3,400	13,600	6,400
5	20,000	3,400	17,000	3,000

Following accounting entry will be recorded in the year 1 and 2.

Yr 1. Debit: Depreciation (income statement) 3,400
 Credit: Accumulated depreciation (balance sheet) 3,400

Yr 2. Debit: Depreciation (income statement) 3,400
 Credit: Accumulated depreciation (balance sheet) 3,400

Presentation of Income statement and Balance sheet.

Income statement (Extract) – Yr 1

Less Expenses:

Depreciation	3,400
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Income statement (Extract) – Yr 2

Less Expenses:

Depreciation	3,400
--------------	-------

Balance sheet (Extract) – Yr 1

Non-current assets	Cost	Accum Depr.	Net Book value
Truck	20,000	3,400	16,600

	<u>Balance sheet (Extract) – Yr 2</u>		
Non-current assets	Cost	Accum Depr.	Net Book value
Truck	20,000	3,400	13,200

Reducing Balance Depreciation Method

Reducing Balance Method charges depreciation at a higher rate in the earlier years of an asset. The amount of depreciation reduces as the life of the asset progresses. Depreciation under reducing balance method may be calculated as follows:

$$\text{Depreciation per annum} = (\text{Net Book Value} - \text{Residual Value}) \times \text{Rate}\%$$

Where:

Net Book Value is the asset's net value at the start of an accounting period. It is calculated by deducting the accumulated (total) depreciation from the cost of the fixed asset.

Rate of depreciation is defined according to the estimated pattern of an asset's use over its life term.

Example:

An asset has a useful life of 5 years.

Cost of the asset is \$2,000.

Residual Value is \$500.

Rate of depreciation is 20%.

Depreciation expense for the three years will be as follows:

	NBV	R.V	Rate	Depreciation	Accum Depr
Year1:	2,000	500	20%	400	400
Year2:	1,600	500	20%	320	720
Year3:	1,280	500	20%	256	976

Presentation of Income statement and Balance sheet.

<u>Income statement (Extract) – Yr 1</u>	
Less Expenses:	
Depreciation	400

<u>Income statement (Extract) – Yr 2</u>	
Less Expenses:	
Depreciation	320

<u>Income statement (Extract) – Yr 3</u>	
Less Expenses:	
Depreciation	256

<u>Balance sheet (Extract) – Yr 1</u>			
Non-current assets	Cost	Accum Depr.	Net Book value
Truck	2,000	400	1,600

<u>Balance sheet (Extract) – Yr 2</u>			
Non-current assets	Cost	Accum Depr.	Net Book value
Truck	2,000	720	1,280

<u>Balance sheet (Extract) – Yr 2</u>			
Non-current assets	Cost	Accum Depr.	Net Book value
Truck	2,000	976	1,024

Note: To get the actual percentage of depreciation using reducing balance the formula is as follows.

Then only you can get the residual value at the end of useful life as shown on example above. The depreciation in the example just an assumption for the purpose to show how to calculate the depreciation.

Bad debts

A debt that is not collectible and therefore worthless to the creditor. This occurs after all attempts are made to collect on the debt. Bad debts could arise for a number of reasons such as customer going bankrupt, trade dispute or fraud. In accountancy we refer to such receivables as Irrecoverable Debts or Bad Debts. This debt, once considered to be bad, will be written off by the company as an expense. There are two methods available in adapting bad debts; such as a direct write-off method and allowance method.

Direct Write-off and Allowance Methods for Dealing with Bad Debt

Loaning money contains risk. Every time a business extends payment terms to a customer, that business is taking on risk. Not every customer will pay on time, some may not pay at all. When a customer defaults on an amount due, this is called **bad debt**. When an account is deemed to be uncollectible, the business must remove the receivable from the books and record an expense. This is considered an expense because bad debt is a cost of doing business. Part of the cost of allowing customers to borrow money, which is essentially what a customer is doing when the business allows the customer time to pay, is the expense related to uncollectible receivables. This expense is called Bad Debt Expense.

There are two ways a company can account for bad debt expense: the direct write-off method and the allowance method.

The Direct Write-off Method for Bad Debt

The **direct write-off method** allows a business to record Bad Debt Expense only when a specific account has been deemed uncollectible. The account is removed from the Accounts Receivable balance and Bad Debt Expense is increased.

Example 1: On March 2, Excellent Car Repair Enterprise has deemed that a \$1,400 in Accounts Receivable, due from Joe Smith, is uncollectible and should be recorded as a bad debt.

Dependable must reduce Accounts Receivable by \$1,400 and record the Bad Debt Expense.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
3/2	Bad Debt Expense	\$1,400	
	Accounts Receivable		\$1,400

What happens if the customer later sends payment? This happens fairly regularly in business. If the customer’s balance is written off as uncollectible, there is nothing to apply the payment against. If the company applies the balance against the customer’s account, the entry would cause a negative balance or an amount due to the customer. In order to accept the payment, the company must first restore the balance to the customer’s account. The company would debit Accounts Receivable. What would the credit be? It’s not revenue because the company has not done any work or sold anything. By receiving the payment, the company is acknowledging that the debt is actually not a bad debt after all. Therefore, the company should reduce Bad Debt Expense.

Example 2: On June 23, Excellent Car Repair received a check for \$1,400 from Joe Smith, whose balance was written off as uncollectible on March 2.

This transaction requires two entries. The first entry will restore the balance in accounts receivable. The second entry will show the receipt of the payment. It seems counterintuitive to restore the balance to pay it off, but for recordkeeping purposes, it is necessary to restore the account balance and show the customer properly paid his debt. We must make sure to show that Joe Smith paid the amount he owed, not just the fact that the company received some cash.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
6/23	Accounts Receivable	\$1,400	
	Bad Debt		\$1,400
6/23	Cash	\$1,400	
	Accounts Receivable		\$1,400

The direct write-off method is an easy way to manage bad debt when nonpayment is rare. However, this method violates the matching principle which states that expenses must be matched with revenue. When companies extend credit to customers, it is fairly common that some percentage of those customers will not pay. It may take a long time before the company has exhausted all efforts to collect the debt. Typically, the write off occurs in a different fiscal year than the revenue was recorded. This is why direct write-off violates the matching principle. How can we match the bad debt expense to the revenue associated with it?

The Allowance Method for Bad Debt

The allowance method creates bad debt expense before the company knows specifically which customers will not pay. Based on prior history, the company knows the approximate percentage of sales or outstanding receivables that will not be collected. Using those percentages, the company can estimate the amount of bad debt that will occur. That allows us to record the bad debt but since accounts receivable is simply the total of many small balances, each belonging to a customer, we cannot credit Accounts Receivable when this entry is recorded.

We must create a holding account to hold the allowance so that when a customer is deemed uncollectible, we can use up part of that allowance to reduce accounts receivable. This holding account is called Allowance for Doubtful Accounts. Allowance for Doubtful Accounts is a contra-asset linked to Accounts Receivable. The allowance is used to reduce the net amount of receivables that are due while leaving all the customer balances intact.

To record the bad debt, which is an adjusting entry, debit Bad Debt Expense and credit Allowance for Doubtful Accounts. When a customer is identified as uncollectible, we would credit Accounts Receivable. We cannot debit bad debt because we have already recorded bad debt to cover the percentage of sales that would go bad, including this sale. Remember that allowance for doubtful accounts is the holding account in which we placed the amount we estimated would go bad. This amount is just sitting there waiting until a specific accounts receivable balance

is identified. Once we have a specific account, we debit Allowance for Doubtful Accounts to remove the amount from that account. The net amount of accounts receivable outstanding does not change when this entry is completed.

Let's say that the balance in Accounts Receivable is \$10,000 (debit) and the balance in Allowance for Doubtful Accounts is \$500 (credit). Net accounts receivable is \$9,500. This is how it would be presented on the balance sheet:

Account receivable	\$10,000
Less: Allowance for Doubtful accounts	<u>500</u>
Account Receivable, net	9,500

If a customer who owed \$100 was deemed uncollectible on April 7, we would credit Accounts Receivable to remove the customer's balance and debit Allowance for doubtful Accounts to cover the loss.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
4/7	Allowance for Doubtful Accounts	\$100	
	Accounts Receivable		\$100

What effect does this have on the balances in each account and the net amount of accounts receivable? The balance in Accounts Receivable drops to \$9,900 and the balance in Allowance for Doubtful Accounts falls to \$400. The net amount is still the same.

Account receivable	\$9,900
Less: Allowance for Doubtful accounts	<u>400</u>
Account Receivable, net	9,500

How is that possible? Allowance for Doubtful Accounts is where we store the nameless, faceless uncollectible amount. We know some accounts will go bad, but we do not have a name or face to attach to them. Once an uncollectible account has a name, we can reduce the nameless amount and decrease Accounts Receivable for the specific customer who is not going to pay.

What if the customer later pays the bill? We would need to restore the balance in accounts receivable. Because we identified the wrong account as uncollectible, we would also need to restore the balance in the allowance account. If the customer paid the bill on September 17, we would reverse the entry from April 7 and then record the payment of the receivable.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
9/17	Account Receivable	100	
	Allowance for doubtful account		100

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
9/17	Cash	100	
	Account Receivable		100

Calculating Bad Debt Under the Allowance Method

As stated previously, the amount of bad debt under the allowance method is based on either a percentage of sales or a percentage of accounts receivable. When doing the calculations, it is important to understand what the resulting number actually represents. Because one method relates to the income statement (sales) and the other relates to the balance sheet (accounts receivable), the calculated amount is related to the same statement. When using the percentage of sales method, the resulting amount is the amount of bad debt that should be recorded. When using the percentage of accounts receivable method, the amount calculated is the new balance in allowance for doubtful accounts.

Percentage of Sales Method

The percentage of sales method is based on the premise that the amount of bad debt is based on some measure of sales, either total sales or credit sales. Based on prior years, a company can reasonably estimate what percentage of the sales measure will not be collected. If a company takes a percentage of sales (revenue), the calculated amount is the amount of the related bad debt expense.

Example: The company estimates bad debt based on the percentage of sales method. Sales for the fiscal year ended December 31, 2015 were \$3,400,000, while credit sales were \$2,900,000. The company estimates that 1.5% of credit sales are uncollectible. Allowance for Doubtful Accounts has a credit balance of \$17,000. Record the adjusting journal entry necessary to record bad debt.

First identify the accounts that will be used in the entry. We already know this is a bad debt entry because we are asked to record bad debt. The percentage of sales method is an allowance method. We are also told that the company is estimating bad debt, so this is clearly not a company that uses direct write-off. Therefore, we will be using Allowance for Doubtful Accounts and Bad Debt Expense.

Time to calculate the amount of the transaction. The company estimates that 1.5% of **credit sales** are uncollectible. Therefore, we will use credit sales.

$$\mathbf{\$2,900,000 \times 1.5\% = \$43,500}$$

What is this number? When using the percentage of sales method, we multiply a revenue account by a percentage to calculate the amount that goes on the income

statement. That means we are calculating bad debt expense. The amount of expense is proportional to the amount of revenue.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
12/31	Bad debt expense	43,500	
	Allowance for doubtful account		43,500

What is the balance in Allowance for Doubtful Accounts? The account had a credit balance of \$17,000 before the adjustment. The entry from December 31 would be added to that balance, making the adjusted balance \$60,500. The percentage of sales method does not factor in the existing balance in Allowance for Doubtful Accounts. Without careful monitoring, the balance in the account could grow indefinitely. It is important for management to monitor the balance to ensure the balance is reasonable.

Percentage of Receivables Method

The percentage of receivables method automatically monitors the balance in Allowance for Doubtful Accounts because each year the calculation gives us the amount that should be in the account based on the amount of receivables outstanding. The contra-asset, Allowance for Doubtful Accounts, is proportional to the balance in the corresponding asset, Accounts Receivable.

When using the percentage of receivables method, it is usually helpful to use T-accounts to calculate the amount of bad debt that must be recorded in order to update the balance in Allowance for Doubtful Accounts. This is very similar to the adjusting entries involving shop supplies or prepaid expenses. If the transaction tells you what the new balance in the account should be, we must calculate the amount of the change. The amount of the change is the amount of the expense in the journal entry.

Example: The company estimates bad debt based on the percentage of receivables method. The balance in Accounts Receivable on December 31, 2015 was \$530,000. The company estimates that 6% of receivables are uncollectible. Allowance for Doubtful Accounts has a credit balance of \$17,000. Record the adjusting journal entry necessary to record bad debt.

As in all journal entries, the first step is to figure out which accounts will be used. Because this is just another version of an allowance method, the accounts are Bad Debt Expense and Allowance for Doubtful Accounts.

On to the calculation, since the company uses the percentage of receivables we will take 6% of the \$530,000 balance.

$$\mathbf{\$530,000 \times 6\% = \$31,800}$$

Now to consider what this amount is. We used Accounts Receivable in the calculation, which means that the answer would appear on the same statement as Accounts Receivable. Therefore, we have to consider which of our accounts would appear on the balance sheet with Accounts Receivable. Allowance for Doubtful Accounts is a contra-asset account so that is what we calculated. The adjusted balance in Allowance for Doubtful Accounts should be \$31,800. Since the current balance is \$17,000, we need to increase the balance to \$31,800. We do this by crediting the account \$14,800. The \$14,800 is the amount of Bad Debt Expense that must be recorded.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
12/31	Bad Debt Expense	\$14,800	
	Allowance for Doubtful Accounts		\$14,800

When using an allowance method, it is critical to know what you are calculating. If using sales in the calculation, you are calculating the amount of bad debt expense. If using accounts receivable, the result would be the adjusted balance in the allowance account.

Aging of Accounts Receivable Method

The aging method is a modified percentage of receivables method that looks at the age of the receivables. The longer a debt has been outstanding, the less likely it is that the balance will be collected. The aging method breaks down receivables based on the length of time each has been outstanding and applies a higher percentage to older debts.

<u>Age</u>	<u>Balance</u>	<u>Estimated Percentage Uncollectible</u>
Not yet due	\$396,000	1%
1-30 days	\$ 90,000	3%
31-60 days	\$ 30,000	9%
61-90 days	\$ 10,000	26%
90+ days	\$ 4,000	60%

Notice how the estimated percentage uncollectible increases quickly the longer the debt is outstanding. Judging the amount that is uncollectible based off an aging schedule is the most accurate way to calculate bad debt because history tells us that the longer a debt is outstanding, the less likely the company is to collect it.

Example: The company uses the Aging Method to calculate bad debts. The company produced the following aging schedule on December 31, 2015:

<u>Age</u>	<u>Balance</u>	<u>Estimated Percentage Uncollectible</u>
Not yet due	\$396,000	1%
1-30 days	\$ 90,000	3%
31-60 days	\$ 30,000	9%
61-90 days	\$ 10,000	26%
90+ days	\$ 4,000	60%

Allowance for Doubtful Accounts had a credit balance of \$9,000 on December 31. Record the adjusting journal entry for bad debt.

As with every other entry we have completed, the first step is to identify the accounts. This is another variation of an allowance method so we will use Bad Debt Expense and Allowance for Doubtful Accounts.

The calculation here is a few more steps but uses the same methodology used in all the other methods. Multiply the percentage by the balance outstanding. In this case, we have a percentage for each outstanding period. Once you know how much from each time period, add them to get the total allowance balance.

<u>Age</u>	<u>Balance</u>	<u>Estimated Percentage Uncollectible</u>	<u>Allowance</u>
Not yet due	\$396,000	1%	\$ 3,960
1-30 days	\$ 90,000	3%	\$ 2,700
31-60 days	\$ 30,000	9%	\$ 2,700
61-90 days	\$ 10,000	26%	\$ 2,600
90+ days	<u>\$ 4,000</u>	60%	<u>\$ 2,400</u>
	\$530,000		\$14,360

The adjusted balance in Allowance for Doubtful Accounts is \$14,360. Since the unadjusted balance is \$9,000, we need to record bad debt of \$5,360.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
12/31	Bad Debt Expense	\$5,360	
	Allowance for Doubtful Accounts		\$5,360

Can Allowance for Doubtful Accounts have a debit balance? How would that happen? Allowance for Doubtful Accounts is a holding account for potential bad debt. When an account is written off, the allowance is debited. If the company underestimates the amount of bad debt, the allowance can have a debit balance. If the company uses a percentage of sales method, it must ensure that there will be enough in Allowance for Doubtful Accounts to handle the amount of receivables that go bad during the year. One of the benefits of using a receivables method is that we are calculating the new balance in the allowance account or bring the

allowance account up to the level needed for the percentage of receivables that are outstanding. This is not the case with the sales method.

Example: Record the adjusting entry assuming the same facts as above, except the Allowance for Doubtful Accounts has a debit balance of \$2,000.

Since Allowance for Doubtful Accounts has a normal credit balance, a debit balance in the account is like overdrawing the account. We need to bring the account even, then add enough to get the balance to \$14,360. Therefore, we want to add the amounts. You could also look at it like this:

New balance – old balance = amount of adjustment

$$\$14,360 - \$(-2,000) = \$16,360$$

When you subtract a negative, you add the number. The amount of the entry will be \$16,360.

<u>Date</u>	<u>Account</u>	<u>Debit</u>	<u>Credit</u>
12/31	Bad Debt Expense	\$16,360	
	Allowance for Doubtful Accounts		\$16,360

The most important thing to remember when working with the allowance methods for bad debt is to know what you have calculated! Once you figure a dollar amount, ask yourself if that amount is the bad debt expense or the allowance. If it is the allowance, you must then figure out how much bad debt to record in order to get to that balance.

Bad Debt Recovered

Occasionally, a bad debt previously written off may subsequently settle its debt in full or in part. In such case, it will be necessary to cancel the effect of bad debt expense previously recognized up to the amount settlement.

Example

ABC sells goods to DEF for \$1,000 on credit. ABC subsequently finds out that DEF is being liquidated and therefore the prospects of recovering its dues are very low. ABC therefore writes off the receivable from its books. However, the administrator appointed to oversee the liquidation of DEF instructs the company to pay \$500 to ABC in full settlement of its dues.

As \$500 of the bad debt has been recovered, it is necessary to cancel the effect of previously recognized bad debt expense up to this amount. The accounting entry will therefore be as follows:

Debit	Cash	\$500
	Credit	Bad Debt Recovered (Income) \$500

6.2 Adjusted trial balance

An adjusted trial balance is a listing of all the account titles and balances contained in the general ledger after the adjusting entries for an accounting period have been posted to the accounts.

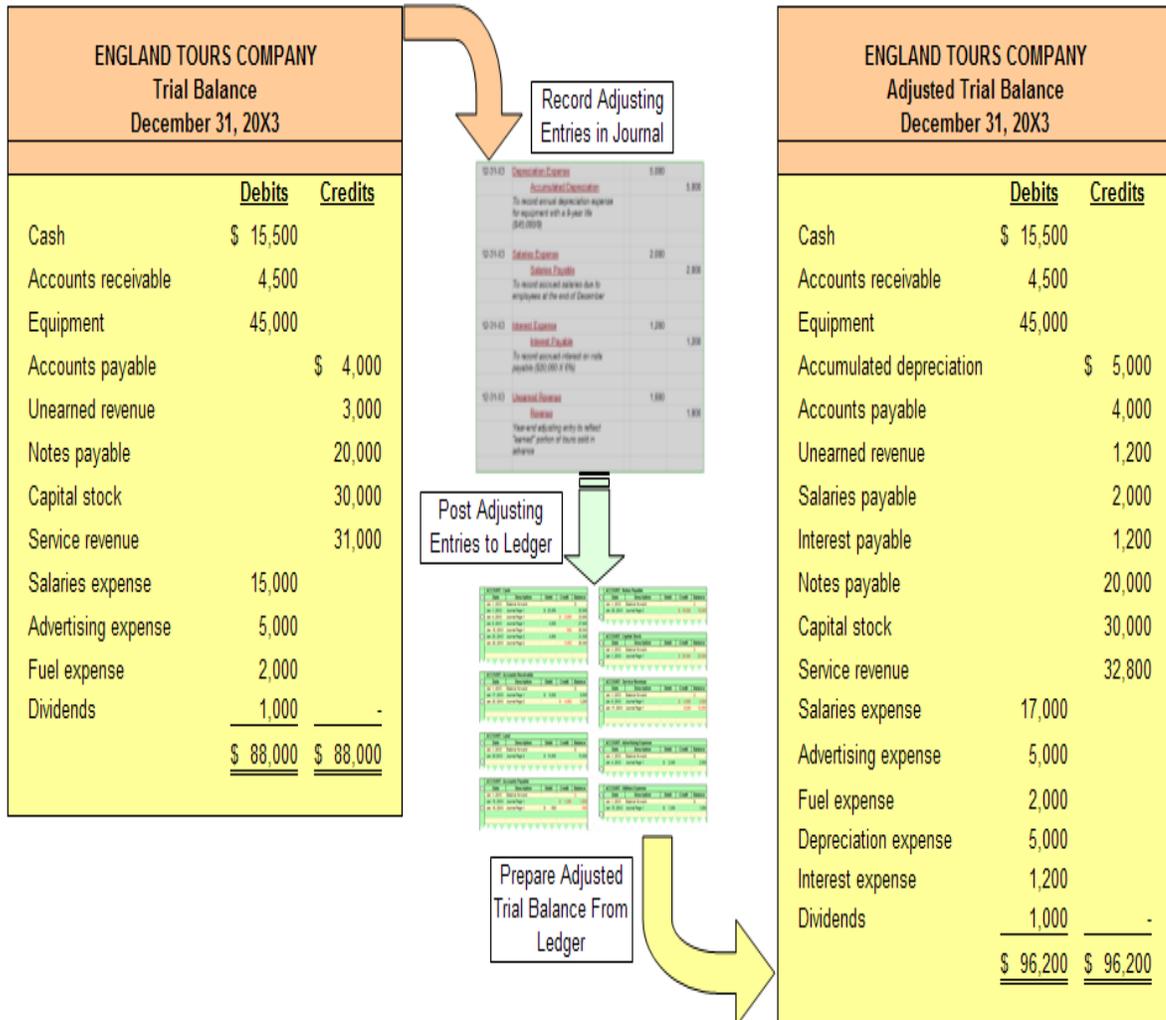
The adjusted trial balance is an internal document and is not a financial statement. The purpose of the adjusted trial balance is to be certain that the total amount of debit balances in the general ledger equals the total amount of credit balances.

For this paper, adjusted trial balance is shown by using worksheet. Using worksheet is much safer than manual, because error can easily detect since we are working on the same piece of worksheet and all adding and subtract is computerize.

Using Worksheet

ENGLAND TOURS COMPANY												
Worksheet to Prepare Financial Statements												
December 31, 20X3												
	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Statement of Ret. Earnings		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	\$15,500				\$15,500							
Accounts receivable	4,500				4,500							
Equipment	45,000				45,000							
Accounts payable		\$ 4,000				\$ 4,000						
Unearned revenue		3,000	\$ 1,800			1,200						
Notes payable		20,000				20,000						
Capital stock		30,000				30,000						
Revenue		31,000		\$ 1,800		32,800						
Salaries expense	15,000		2,000		17,000							
Advertising expense	5,000				5,000							
Fuel expense	2,000				2,000							
Dividends	1,000				1,000							
Depreciation expense			5,000		5,000							
Accum. depreciation				5,000		5,000						
Salaries payable				2,000		2,000						
Interest expense			1,200		1,200							
Interest payable				1,200		1,200						
	<u>\$88,000</u>	<u>\$88,000</u>	<u>\$10,000</u>	<u>\$10,000</u>	<u>\$96,200</u>	<u>\$96,200</u>						
Net income												
Retained earnings												

Journalising the adjustment, posting the journal to the ledger, balance the ledger and prepare adjusted trial balance



6.3 Financial Statement with year-end adjustments

Before the final account can be prepared, there are some adjustment to be made at the end of the accounting period. The adjustments are necessary to determine the actual revenue earned and expenses incurred during the accounting period.

Illustrative Example.

The following is a list of balances was extracted from the books on Kruing Inc. as at 30th June 20x3

	\$	
Purchase	84,750	
Sales	149,750	
Returns inwards	3,250	
Return outwards	2,250	
Drawing	4,750	
Inventory on 1 st July 20x2	12,950	
Land & building	79,750	
Motor vehicles (cost \$34,750)	22,150	
Fixtures and fitting (cost \$24,250)	19,350	
Cash at bank	15,600	
Salaries	18,020	
Carriage inwards	3,150	
Carriage outwards	4,300	
Account receivable	29,750	
Account payable	14,750	
Water & electricity	3,640	
Insurance	2,160	
Allowance for doubtful debts		500
Discount allowed	150	
Discount received	100	
Rent revenue		4,250
Rates	3,000	
Loan from Merchant bank	24,750	
Interest on loan	750	
Commission revenue		250
Capital		110,400

The following additional information is available as at 30th June 20x3

1. Rent revenue received in advance amounting to \$750.
2. The loan from merchant bank was taken on 1st Oct 20x2 and interest charged is 8% pa
3. Depreciation:
 - Motor vehicle – 20% per annum on reducing balance method.
 - Fixtures and fitting – 10% per annum on straight line basis.
4. Rates accrued on 30th June 20x3 was \$50
5. Insurance expenses amounting \$360 is for July 20x3
6. Commission revenue of \$500 was still not received as at 30th June 20x3
7. Allowance for doubtful debts should be increased by \$750

8. The owner took \$1,000 to pay his son's hospital bill.
9. Inventory as at 30th June is \$19,050

Prepare the following:

- (a) Statement of profit or lost for the year ended 30th June 20x3
- (b) Statement of financial position as at 30th June 20x3

Kruing Inc.
Statement of Profit or Loss for the ended 30th June 20x3

	\$	\$	\$
Sales			149,750
Less: Return inwards			<u>3,250</u>
			146,500
Less: Cost of goods sold			
Opening inventory		12,950	
Add: Purchases	84,750		
Less: Return outwards		<u>2,250</u>	
			82,500
Add: Carriage inwards		3,154	
Cost of goods available for sale		98,600	
Less: Closing inventory		<u>19,050</u>	
Cost of goods sold			<u>79,550</u>
GROSS PROFIT			66,950
Add: Revenues			
Rent revenue	(1 adj)	3,500	
Commission received	(2 adj)	750	
Discount received		<u>100</u>	
			<u>4,350</u>
Total revenues			71,300
Less: Operating Expenses			
Carriage outwards		4,300	
Salaries		18,020	
Water & electricity		3,640	
Insurance	(3 adj)	1,800	
Rates	(4 adj)	3,050	
Depreciation – motor vehicle	(5 adj)	4,430	
Fixtures & fitting	(5 adj)	2,425	
Bad debts	(6 adj)	750	
Discount allowed		150	
Interest on loan		1,485	
Total expenses			<u>40,050</u>

Net Profit 31,250

Kruing Inc.
Statement of Financial Position as at 30th June 20x3

	Cost Value		Accumulated Depreciation		Net Book
	\$		\$		\$
Non-current Assets					
Land & building	79,750				79,750
Motor vehicle	34,750	(5adj)	17,030		17,720
Fixtures & fitting	24,250	(5adj)	7,325		<u>16,925</u>
					114,395
Current Assets					
Inventory			19,050		
Account receivable	29,750				
Less: Allowance D/D	<u>(1,250)</u>				
			28,500		
Cash at bank			15,600		
Prepaid insurance	(3 adj)		360		
Accrued commission	(2 adj)		<u>500</u>		
					<u>62,540</u>
					<u>176,935</u>
Finance by:					
Owner's Equity					
Capital beginning of the year					110,400
Add: Net profit					31,250
					141,650
Less: Drawing					<u>(5,750)</u>
Ending capital					135,900
Non-current Liabilities					
Loan from Merchant bank					24,750
Current Liabilities					
Account payable			14,750		
Accrued interest on loan	(7 adj)		735		
Rent received in advance	(1 adj)		750		
Accrued rates	(4 adj)		50		
					<u>16,285</u>

176,935

Explanation:

1. Rent revenue

Rent Revenue a/c

Date	Particular	\$	Date	Particular	\$
	Statement of profit or loss	3,500			
	Rent received in advance	<u>750</u>		Balance c/d	<u>4,250</u>
		4,250			4,250

Rent Received in Advance a/c

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>750</u>		Rent revenue	<u>750</u>
		750			750

During the year, the business received \$4,250 as rent revenue. At the end of the year, the amount of the rent revenue to be credited to the statement profit or loss is only \$3,500 and the amount received in advance is treated as current liability in the statement of financial position.

2. Commission received

Commission Received a/c

Date	Particular	\$	Date	Particular	\$
	Statement of profit or loss	<u>750</u>		Balance c/d	250
		750		Accrued commission	<u>500</u>
					750

Accrued Commission a/c

Date	Particular	\$	Date	Particular	\$
	Commission received	<u>500</u>		Balance c/d	<u>500</u>
		500			500

During the year, only \$250 is received as commission, and the business is yet to received \$500. The revenue from commission is therefore \$750; the amount not yet received is treated as current asset in the statement of financial position.

3. Insurance

Insurance a/c

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>2,160</u>		Statement profit or loss	1,800
		2,160		Prepaid insurance	<u>360</u>
					2,160

Prepaid Insurance a/c

Date	Particular	\$	Date	Particular	\$
	Insurance	<u>360</u>		Balance c/d	<u>360</u>
		360			360

\$2,160 was paid for insurance but part of it, \$360 is for the next accounting year. Thus, the insurance expense for the year is \$1,800 whilst \$360 prepaid insurance is treated as current asset in the statement of financial position.

4. Rates

Rate a/c

Date	Particular	\$	Date	Particular	\$
	Balance b/d	3,000		Statement of profit or loss	<u>3,050</u>
	Accrued rates	<u>50</u>			3,050
		3,050			

Accrued Rates a/c

Date	Particular	\$	Date	Particular	\$
	Balance b/d	<u>50</u>		Rates	<u>50</u>
		50			50

\$3,000 was paid for rates but rates accrued on year end was \$50. Thus, the rates expense for the year is \$3,050 and the unpaid amount to be treated as current liability in the statement of financial position.

5. Depreciation

Motor vehicle : 20% x carrying amount

$$20\% \times 22,150 = 4,430$$

Fixtures & fitting: 10% x cost

$$10\% \times 24,250 = 2,425$$

Depreciation a/c – Motor Vehicle

Date	Particular	\$	Date	Particular	\$
	Accumulated depreciation	<u>4,430</u>		Statement of profit or loss	<u>4,430</u>
		4,430			4,430

Depreciation a/c – Fixtures & Fitting

Date	Particular	\$	Date	Particular	\$
	Accumulated depreciation	<u>2,425</u>		Statement of profit or loss	<u>2,425</u>
		2,425			2,425

Accumulated Depreciation a/c – Motor Vehicle

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>17,030</u>		Balance b/d	12,600
		17,030		Depreciation	<u>4,430</u>
					17,030

Accumulated Depreciation a/c – Fixtures & Fittings

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>7,325</u>		Balance b/d	4,900
		7,325		Depreciation	<u>2,425</u>
					7,325

For both the motor vehicle and fixtures & fittings, the current year’s depreciation is charged to the statement profit or lost. The depreciation charged is then added to the existing balance of the accumulated depreciation. The total accumulated depreciation is then carried to the statement of financial position. To get the net

value/book value or current book value of non-current assets, cost of current asset – total accumulated depreciation.

6. Doubtful debt

Bad Debts a/c

Date	Particular	\$	Date	Particular	\$
	Allowance for D/debt	<u>750</u>		Statement of profit or loss	<u>750</u>
		750			750

Allowance for Doubtful Debts a/c

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>1,250</u>		Balance b/d	500
		1,250		Bad debts	<u>750</u>
					1,250

The business increase its doubtful debts from \$500 o \$1,250. The increase in the doubtful debt is charged to the statement of profit or lost, whereas the total allowance for doubtful debts is shown as deduction from the accounts receivable in the statement of financial position.

7. Interest on loan

$$\begin{aligned} \text{Interest} &= 8\% \times 24,750 \times 9/12 \\ &= 1,485 \end{aligned}$$

Interest on Loan a/c

Date	Particular	\$	Date	Particular	\$
	Balance b/d	750		Statement profit or loss	<u>1,485</u>
	Accrued interest	<u>735</u>			1,485
		1,485			

Accrued Interest on Loan a/c

Date	Particular	\$	Date	Particular	\$
	Balance c/d	<u>735</u>		Interest on loan	<u>735</u>
		735			735

Interest calculated for the nine months' period since the loan was taken on 1st October 20x2. The business paid only \$750 and owed the bank \$735. The total interest to be charged to the statement of profit or loss is actually \$1,485, and the unpaid amount \$735 must be shown as a current liability in the statement of financial position.

Exercise 5

1. What is balance day adjustments?
2. Please provide five (5) ways of doing balance day adjustments in accounting.
3. What is accrued income?
4. What is prepaid expense?
5. What do you know about Prepaid income?
6. Define depreciation.
7. Name four (4) types of depreciation in accounting.
8. What is straight line method in accounting?
9. How is reducing balance method works in calculating depreciation?
10. What is bad debt?
11. Provide the definition for the direct write-off method for bad debt
12. Explain the allowance method for bad debt in accounting?
13. Define the percentage sales method in identifying bad debts using allowance method
14. What is percentage of receivable method in calculating bad debts?
15. Define adjusted trial balance in accounting.

7.0 FINANCIAL STATEMENT ANALYSIS

The process of reviewing and evaluating a company's financial statements (such as the balance sheet or profit and loss statement), thereby gaining an understanding of the financial health of the company and enabling more effective decision making. Financial statements record financial data; however, this information must be evaluated through financial statement analysis to become more useful to investors, shareholders, managers and other interested parties.

7.1 Horizontal analysis

Horizontal analysis (also known as trend analysis) is a financial statement analysis technique that shows changes in the amounts of corresponding financial statement items over a period of time. It is a useful tool to evaluate the trend situations.

The statements for two or more periods are used in horizontal analysis. The earliest period is usually used as the base period and the items on the statements for all later periods are compared with items on the statements of the base period. The changes are generally shown both in dollars and percentage.

Dollar and percentage changes are computed by using the following *formulas*:

1. Dollar change = Amount of the item in comparison year - Amount of the item in base year

2. Percentage change = $\frac{\text{Dollar change}}{\text{Amount of the item in base year}} \times 100$

Horizontal analysis may be conducted for balance sheet, income statement, schedules of current and fixed assets and statement of retained earnings.

Example:

An example of the horizontal analysis of balance sheet, schedule of current assets, income statement and statement of retained earnings is given below:

Comparative balance sheet with horizontal analysis:

Comparative Balance Sheet
December 31, 2008 and 2007

	2008 (\$)	2007 (\$)	Increase or (Decrease)	
			Amount	Percent
<u>Assets</u>				
Current assets	550,000	533,000	17,000*	3.2%
Long-term investments	95,000	177,500	(82,500)	(46.5)%
Plant assets (net)	444,500	470,000	(25,500)	(5.4)%
Intangible assets	50,000	50,000	--	
	<hr/>	<hr/>	<hr/>	
Total assets	1,139,500	1,230,500	(91,000)	(7.4)%
	<hr/>	<hr/>	<hr/>	
<u>Liabilities</u>				
Current liabilities	210,000	243,000	(33,000)	(13.6)%
Long-term liabilities	100,000	200,000	(100,000)	(50.0)%
	<hr/>	<hr/>	<hr/>	
Total liabilities	310,000	443,000	(133,000)	(30.0)%
	<hr/>	<hr/>	<hr/>	
Stockholders' Equity:				
Preferred 6% stock, \$100 par	150,000	150,000	--	--
Common stock, \$10 par	500,000	500,000	--	--
Retained earnings	179,500	137,500	42,000	30.5%
	<hr/>	<hr/>	<hr/>	
Total stockholders' equity	829,500	787,500	42,000	5.3%
	<hr/>	<hr/>	<hr/>	
Total liabilities and stockholders' equity	1,139,500	1,230,500	(91,000)	(7.4)%
	<hr/>	<hr/>	<hr/>	

* $550,000 - 533,000 = 17,000$
 $(17,000 / 533,000) \times 100 = 3.2\%$

Comparative schedule of current assets:

Comparative Schedule of Current Assets
December 31, 2008 and 2007

	2008 (\$)	2007 (\$)	Increase or (Decrease)	
			Amount	Percent
Cash	90,500	64,700	25,800	39.9%
Marketable securities	75,000	60,000	15,000	25.0%
Accounts receivables (net)	115,400	120,000	(5,000)	(4.2)%
Merchandise inventory	264,000	283,000	(19,000)	(6.7)%
Prepaid expenses	5,500	5,300	200	3.8%
	<hr/>	<hr/>	<hr/>	
	550,000	533,000	17,000	3.2%
	<hr/>	<hr/>	<hr/>	

Comparative income statement with horizontal analysis:

**Comparative Income Statement
For Years Ended 31, 2008 and 2007**

	2008 (\$)	2007 (\$)	Increase or Decrease	
			Amount	Percent
Sales	1,498,000	1,200,000	298,000	24.8%
Cost of goods sold	1,043,000	820,000	223,000	27.2%
Gross profit	455,000	380,000	75,000	19.7%
Selling expenses	191,000	147,000	44,000	29.9%
General expenses	104,000	97,400	6,600	6.8%
Total operating expenses	295,000	244,400	50,600	20.7%
Operating income	160,000	135,600	24,400	18.0%
Other income	8,500	11,000	(2,500)	(22.7)%
	168,500	146,600	21,900	14.9%
Other expenses	6,000	12,000	(6,000)	(50.0)%
Income before income tax	162,500	134,600	27,900	20.7%
Income tax	71,500	58,100	13,400	23.1%
Net income	91,000	76,500	14,500	19.0%

Comparative retained earnings statement with horizontal analysis:

**Comparative Retained Earnings Statement
December 31, 2008 and 2007**

	2008 (\$)	2007 (\$)	Increase or (Decrease)	
			Amount	Percent
Retained earnings, January 1	137,500	100,000	37,500	37.5%
Net income for year	91,000	76,500	14,500	19.0%
Total	228,500	176,500	52,000	29.5%
Dividends:				
On preferred stock	9,000	9,000	--	33.3%
On common stock	40,000	30,000	10,000	25.6%
Retained earnings, December 31	179,500	137,500	42,000	30.5%

In above analysis, 2007 is the base year and 2008 is the comparison year. All items on the balance sheet and income statement for the year 2008 have been

compared with the items of balance sheet and income statement for the year 2007.

The actual changes in items are compared with the expected changes. For example, if management expects a 30% increase in sales revenue but actual increase is only 10%, it needs to be investigated.

7.2 Vertical analysis

Vertical analysis (also known as *common-size analysis*) is a popular method of financial statement analysis that shows each item on a statement as a percentage of a base figure within the statement.

To conduct a vertical analysis of balance sheet, the total of assets and the total of liabilities and stockholders' equity are generally used as base figures. All individual assets (or groups of assets if condensed form balance sheet is used) are shown as a percentage of total assets. The current liabilities, long term debts and equities are shown as a percentage of the total liabilities and stockholders' equity.

To conduct a vertical analysis of income statement, sales figure is generally used as the base and all other components of income statement like cost of sales, gross profit, operating expenses, income tax, and net income etc. are shown as a percentage of sales.

In a vertical analysis the percentage is computed by using the following formula:

$$\text{Percentage of base} = \frac{\text{Amount of individual item}}{\text{Amount of base}} \times 100$$

A basic vertical analysis needs an individual statement for a reporting period but comparative statements may be prepared to increase the usefulness of the analysis.

Example:

An example of the vertical analysis of balance sheet and income statement is given below:

Comparative balance sheet with vertical analysis:

Comparative Balance Sheet
December 31, 2008 & 2007

	2008		2007	
	Amount (\$)	Percent	Amount (\$)	Percent
<u>Assets:</u>				
Current assets	550,000	48.3%	533,000	43.3%
Long-term investments	95,000	8.3%	177,500	14.4%
Plant assets (net)	444,500	39.0%	470,000	38.2%
Intangible assets	50,000	4.4%	50,000	4.1%
Total assets	1,139,500	100.0%	1,230,500	100.0%
<u>Liabilities:</u>				
Current liabilities	210,000	18.4%	243,000	19.7%
Long-term liabilities	100,000	8.8%	200,000	16.3%
Total liabilities	310,000	27.2%	443,000	36.0%
<u>Stockholders' equity:</u>				
Preferred 6% stock	150,000	13.2%	150,000	12.2%
Common stock	500,000	43.9%	500,000	40.6%
Retained earnings	179,500	15.7%	173,500	11.2%
Total stock holders' equity	829,500	72.8%	787,500	64.0%
Total liabilities and stockholders' equity	1,139,500	100.0%	1,230,500	100.0%

Current assets:

2008: $(550,000 / 1,139,500) \times 100 = 48.3\%$

2007: $(530,000 / 1,230,500) \times 100 = 43.3\%$

Comparative income statement with vertical analysis:

Comparative Income Statement
For the year ended December 31, 2008 and 2007

	2008		2007	
	Amount (\$)	Percent	Amount (\$)	Percent
Sales	1,498,000	100.0%	1,200,000	100.0%
Cost of goods sold	1,043,000	69.6%	820,000	68.3%
Gross profit on sales	455,000	30.4%	380,000	31.7%
Selling expenses	191,000	12.8%	147,000	12.3%
General expenses	104,000	6.9%	97,400	8.1%
Total operating expenses	295,000	19.7%	244,400	20.4%
Operating income	160,000	10.7%	135,600	11.3%
Other income	8,500	0.6%	11,000	0.9%
	168,500	11.3%	146,600	12.2%
Other expenses	6,000	0.4%	12,000	1.0%
Income before income tax	162,500	10.9%	134,600	11.2%
Income tax	71,500	4.8%	58,100	4.8%
Net income	91,500	6.1%	76,500	6.4%

Cost of goods sold:

2008: $(1,043,000/1,498,000) \times 100 = 69.6\%$

2007: $(820,000/1,200,000) \times 100 = 68.3\%$

Vertical analysis states financial statements in a comparable common-size format (percentage form). One of the advantages of common-size analysis is that it can

be used for inter-company comparison of enterprises with different sizes because all items are expressed as a percentage of some common number. For example, suppose company A and company B belong to same industry. A is a small company and B is a large company. Company A's sales and gross profit are \$100,000 and \$30,000 respectively whereas company B's sales and gross profit are \$1,000,000 and \$300,000 respectively. If vertical analysis is conducted and sales figure is used as base, it would show a gross profit percentage of 30% for both the companies as shown below:

**Company A and B
Comparative Income Statement
For the year ended.....**

	<u>Company A</u>		<u>Company B</u>	
Sales	100,000	100%	1,000,000	100%
Cost of goods sold	70,000	70%	700,000	70%
	30,000	30%	300,000	30%

7.3 Ratio analysis

Ratios use simple calculations based upon the interactions in sets of data. For example; changes in costs of sale are directly linked to changes in sales activity. Changes in sales activity also have an effect upon wages and salaries, receivables, inventory levels etc. Ratios allow us to see those interactions in a simple, concise format.

Ratios are of limited use on their own, thus, the following points should serve as a useful checklist if you need to analyse data and comment on it:

- What does the ratio literally mean?
- What does a change in the ratio mean?
- What is the norm?
- What are the limitations of the ratio?

7.3.1 Profitability - Profitability analysis is aimed at understanding the performance of a business over time with regard to specific performance measurement criteria.

Gross profit margin

On a unit basis the gross profit represents the difference between the unit sales price and the direct cost per unit. The margin works this out on an average basis across all sales for the year.

Gross profit margin is calculated as follows:

Gross profit / sales revenue x 100

Net profit margin

The operating margin is an expansion of the gross margin and includes all of the items that come after gross profit but before finance charges and taxation, such as selling and distribution costs and administration costs. If the gross margin is a measure of how profitably a company can produce and sell its products and services, the operating margin also measures how effectively the business manages/administers that process.

The operating profit margin or net profit margin is calculated as:

Profit before interest and tax / sales revenue x 100

Returns on investment (ROI)/ Returns on Capital Employ (ROCE)

It is an important analysis tool as it allows users to assess how much profit the business generates from the capital invested in it. Profit margins of different companies are not necessarily comparable due to different sizes and business structures. You could have one company that makes large profits but based on huge levels of investment. Shareholders may decide they can make similar returns in different companies without such a high initial investment required.

In simple terms ROI/ROCE measures how much operating profit is generated for every \$1 capital invested in the business. It is calculated as follows:

Profit before interest and tax / capital employed x 100

Capital employed is measured as equity, plus interest-bearing finance, i.e. non-current loans plus share capital and reserves.

- 7.3.2 Liquidity ratio** - These ratios assess the liquidity/solvency of a business (i.e. the ability to meet debt obligations) and how efficiently the company manages its working capital resources.

Current ratio

The current ratio measures the adequacy of current assets to meet liabilities as they fall due. A high or increasing figure may appear safe but should be regarded with suspicion as it may be due to:

- high levels of inventory and receivables (this could mean inventory is unsaleable or that credit control is weak)
- high cash levels which could be put to better use (e.g. by investing in non-current assets).

This is calculated as:

Current assets / current liabilities

Traditionally, a current ratio of 2:1 or higher was regarded as appropriate for most businesses to maintain creditworthiness. However, more recently a figure of 1.5:1 is regarded as the norm.

Acid test ratio

The quick ratio is also known as the acid test ratio because by eliminating inventory from current assets it provides the acid test of whether the company has sufficient liquid resources (receivables and cash) to settle its liabilities. Normal levels for the quick ratio range from 1:1 to 0.7:1.

This is calculated as:

Current assets – inventory-prepaid / current liabilities

- 7.3.3 Efficiency** - This is similar to liquidity analysis in that it assesses current assets and liabilities. The purpose of efficiency analysis, however, is to identify how effectively/efficiently management uses its resources (or working capital) to run the business.

Accounts receivable collection period

This represents the credit period taken by the company from its suppliers.

This is calculated as:

Trade payables / credit purchases x 365

This represents the credit period taken by the company from its suppliers.

The ratio is always compared to previous years:

- A long credit period may be good as it represents a source of free finance.
- A long credit period may indicate that the company is unable to pay more quickly because of liquidity problems.

If the credit period is long:

- the company may develop a poor reputation as a slow payer and may not be able to find new suppliers
- existing suppliers may decide to discontinue supplies*
- the company may be losing out on worthwhile cash discounts.

Inventory turnover ratio

This simply measures how efficiently management uses its inventory to produce and sell goods. An increasing number of days implies that management are holding onto inventory for longer. This could indicate lack of demand or poor inventory control.

This is calculated as:

Cost of sales/ Average inventory

Average inventory = $\frac{1}{2}$ (opening inventory + Closing inventory)

Either way, the consequence is that the costs of storing, handling and insuring inventory levels will also increase. There is also an increased risk of inventory damage and obsolescence.

Exercise 6

1. What is financial statement analysis?
2. Explain horizontal analysis.
3. Elaborate vertical analysis.
4. What do you understand with ratio analysis?
5. How profitability analysis work?
6. Explain and provide formula for gross profit margin.
7. Discuss on the net profit margin in your own word.
8. How does returns on investment were calculated?
9. What is liquidity ratio?
10. Define current ratio?
11. What do you know about acid test ratio?

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1.0 INTRODUCTION TO REAL ESTATE FINANCE

- Real estate is a key driver of urban change and a potential constraint on city performance.
- Real estate plays an important social justice role by redistributing resources, jobs and opportunities across space.
- The long-lived nature of real estate impacts property development specifically on the long-term evolution of the urban built environment.
- At the same time, the economy and governance will both influence property returns, property development strategies, market behaviour and the use of space.
- Therefore, finance market will have indirect effect through prices and returns on the way urban systems evolve.

1.1 Real Estate System

In order to understand the importance of finance in real estate sector, we need to understand how the real estate system works. The real estate system consists of three main markets namely space (user), asset (investment) and development (redevelopment) markets. The successful operation of each of the submarkets within the real estate system will be enclaved by the availability of finance in the system. The interaction between the submarkets within the system will determine the successful operation of the system.

The Space (User) Market

- The space market is market for the usage of (or right to use) real property (land and built space).
- It is also known as the user or rental market. On the demand side of the market are individuals, households and firms use space for consumption and production purpose.
- On the supply side of the space market are real estate owners who rent space to tenants.

- The price of the right to use space for a specified temporary period of time is called the rent.
- Rent is usually quoted in annual terms, per square foot (SF), though other methods are also used (such as monthly per apartment).
- Rental price (determined by supply and demand in the space market) establishes the current value of built space and the current balance of supply and demand for that space. If demand grows and supply remains constant, rents tend to rise, and vice versa.

The Asset (Investment) Market

- The real estate asset market is the market for the ownership of real estate assets.
- Real estate assets refer to real property (land parcels and buildings on them)
- This market is often referred to as the property market.
- In terms of economic perspective, such assets consist essentially of claims to future cash flows (e.g., the rents the buildings can generate for their owners).
- These real estate assets can be compared to, and indeed compete in the capital market with, other forms of capital assets, such as stocks and bonds.
- The real estate asset market – viewed as part of the larger capital market.
- Capital markets can be divided into four categories: whether public or private markets, and whether the assets traded are equity or debt.

The Development (Redevelopment) Market

- The development market employ physical and financial resources to construct new built space
- The market also needs financial resources for refurbishment, rehabilitation or conversion of existing buildings.
- The role of development comes in different ways:
- An economy in recession needs existing built space so as to continue to function. Conversely, structural changes in form of modifying existing dwellings (through refurbishment and conversion) and new construction of dwellings (resulting from outward expansion on undeveloped land) is necessary due to economic growth or structural shifts in the economy.

Fig.1 provides shows how the interaction between the submarkets exists and directly linked to other exogenous systems (local and national economies and the capital markets). The figure shows clear independency exists between space (user), asset (investment) and development (redevelopment) markets with respect to right to use space (user rights), hold a purely financial investment interest in property (investor rights) and supply new space (development and redevelopment) to the user market. Connectivity is evident as the use and investment rights subsisting in a property ownership (for instance in an unencumbered freehold interest) is mediated through the development market to meet changing market requirements of users and investors. It is these market changes in users and investors requirements which stimulate development activity and development in turns supplies new user and investors rights into the market.

This complex interaction between the three submarkets requires a good real estate finance system in order to operate effectively.

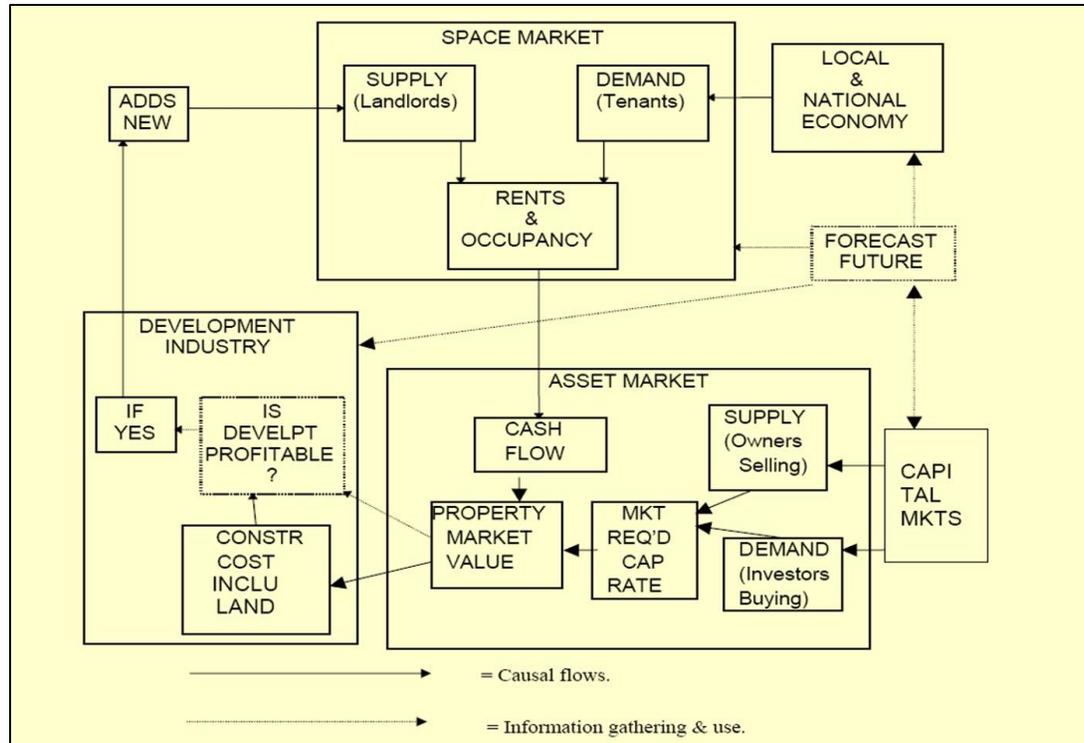


Fig.1: A Model of Residential Property Market: Interaction of the Space, Asset and the Development Markets with other Exogenous Systems.

Source: Geltner et al.,(2007)

1.2 Real Estate Finance

- Real Estate Finance is a body of facts, principles, and theories dealing with the raising and using of money by individuals, businesses, and governments” to invest in real estate (Schall and Haley, 1998).
- It is an exploration into the world of micro- and macroeconomic conditions that impact the value of a business’s assets, liabilities, and real estate investments.
- Real estate finance deals with how individuals divide their income between consumption and investment, how they choose from among available investment opportunities, and how they raise money to provide for increased consumption or RE investment.

- Real estate finance also deal with the study of financial markets and institutions, and the activities of governments, with stress on those aspects relating to the financial decisions of investors.
- In part, property finance deals with the raising of funds to be used for investment purposes to help these various types of entities generate a return on their capital.

1.3 Financial System

Basically, two of the main components in the financial system are Financial Institutions and Financial Markets.

Financial Institutions

Financial institutions refer to business organisations that act as mobilisers and depositors of savings, and as purveyors of credit or finance.

One of the main functions is to mobilise and transfer the savings or funds from surplus unit to deficit unit

Financial institutions are also classified as intermediaries and non-intermediaries (All banking institutions are intermediaries).

The function of banking institutions is to facilitate the flow of funds from savers to borrowers. Examples are Commercial banks, credit unions, life insurance companies and finance companies.

Financial Markets

A financial market refers to a mechanism that allows people to easily buy and sell (trade) financial securities (such as stocks and bonds), commodities (such as precious metals or agricultural goods), and other fungible items of value at low transaction costs and at prices that reflect the efficient-market hypothesis.

Financial Markets and Financial intermediaries have the basic functions of getting people with surplus funds to those who have a shortage of funds.

Well-functioning of the financial markets and financial intermediaries are crucial to economic health.

Financial markets are controlled by two sides of demand and supply functions. i.e. buying and selling financial instruments also called financial claims or securities (stocks, bonds, future contracts, mortgage – backed securities).

There are two economic units in the financial system. They are:

- Surplus Economic/Spending Units (SEU): spend less than earn
- Deficit Economic/Spending Units (DEU): spend more than earn

What would we do if we are SEU or DEU?

- SEUs (the net savers) lend out to earn interest
- DEUs (the net dissavers) borrow by paying interest
- Suppliers of loanable funds (SEUs)
- Demanders of loanable funds (DEUs)
- Equity is the claim on future profitability share
- Debt is the claim on a limited (fixed) future return

SEUs have income for the period that exceeds spending, resulting in savings. Other words for “SEU” are saver, lender, or investor. Most SEUs are households.

DEUs have spending for the period that exceeds income. Another word for “DEU” is “borrower”. Most DEUs are businesses or governments.

The financial system transfers the SEUs excess purchasing power to the DEUs when the SEU lending money to and accepting IOU from a DEU.

IOU (financial Claims) is referred to a written promise to pay a specific amount of money (the principal) plus a fee (an interest rate) for the privilege of borrowing the money over a period of time (maturity of the loan).

IOU for DEU is a liability and the interest payments are the penalty for consuming before income is earned.

IOU for SEU is an asset and the interest earned is a reward for postponing consumption.

SEU’s claim against DEU is liability to DEU and asset to SEU.

One's liability is another's asset: What is payable by one is receivable by another.

Assets arising this way are "financial assets". The financial system "balances" when the total financial assets equal to total liabilities.

Total financial liabilities MUST EQUAL to total financial assets.

Figure 2.0 shows the relationship between SEU and DEU. Thus, the role of the financial system is to facilitate the flow and efficient allocation of funds throughout the economy. The greater the flow of funds, the greater the accommodation of individuals' preferences for spending and saving. An efficient and sound financial system is a necessary condition to having a highly advanced economy.

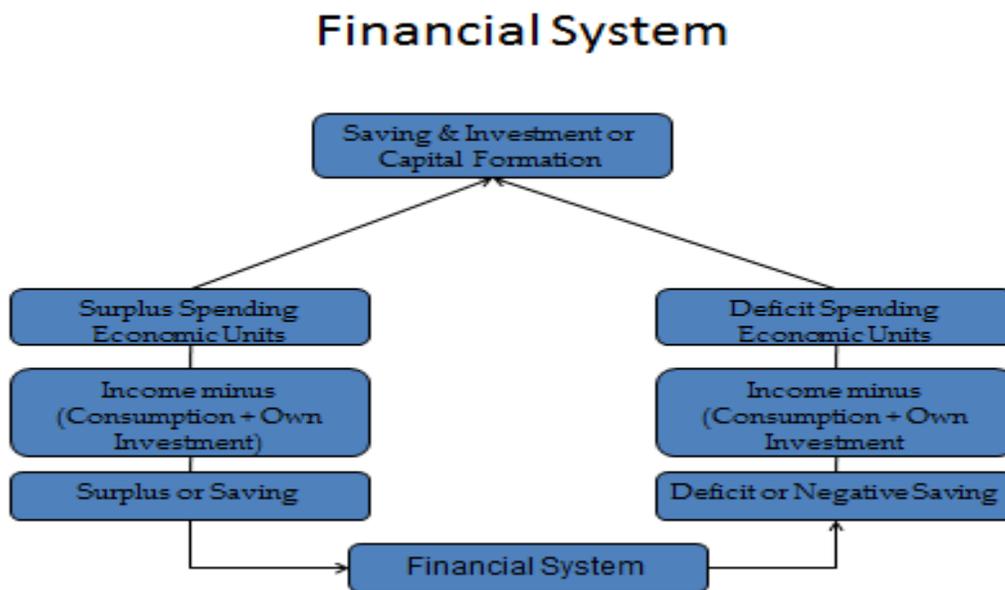


Figure 2.0: The relationship between SEU and DEU

Exercise 1

1. Name three (3) markets in real estate system.

2. What is the definition of real estate finance?
3. Define financial institution.
4. Explain the meaning of financial market.
5. What is SEU. Explain in your own word.
6. Please elaborate the definition of DEU.

2.0 REAL ESTATE FINANCE SYSTEM

As discussed above (Section 1.3), a highly advanced economy needs to have a robust and efficient financial system. The system may accommodate the demand from submarkets within the real estate system (Section 1.1). In doing so, not all real estate need to have a special treatment because the financial system itself will accommodate their need. However, most countries concentrate on the residential sector because this sector is crucial in terms of fulfilling the government social responsibilities. In addition, the residential is mainly offered to the domestic market where most countries face affordability issues among the first time homebuyers. Therefore, the real estate finance system is focussed on the residential sector. There are four types of real estate finance sector available worldwide. They are:

2.1 Bank Oriented System

The bank-oriented system is characterised by a strong participation of depository institutions in mortgage provision. These institutions include ordinary deposit banks and specialised housing banks that raise the majority of capital by means of deposits or the issuance of bonds and securitisation of their holding loans. These institutions act as intermediaries by taking on mismatches between the housing loans and deposit sources in terms of amount, credit risk and duration. Example of countries which operate the bank-oriented system are the US and Canada in North America, the UK and Germany in the EU and other countries such as Australia. The schemes of the bank-oriented system includes saving deposit, contractual savings, deferred credit and building societies.

The use of saving deposits (conventional deposit-based) is the most widespread method of financing housing loans outside the US. In the EU, such system operates in the historically developed regional and national saving banks. For contractual saving schemes, the lender obtains deposits from the customers at a below-market interest rate, and once the deposits taken have accumulated to a certain level, the housing loans are extended at favourable terms. The scheme is based on prior savings by the potential borrowers who are entitled to obtain a predetermined loan conditions which are more attractive than market conditions.

2.2 Mortgage Back Securities System

In some countries, asset-backed securities are issued in the secondary mortgage market and known as mortgage-backed securities. The main characteristic of mortgage-backed securities system is securitisation; the process of changing cash-generating assets into securities that can be purchased by investors. The originator creates an official entity known as a 'special purpose vehicles' (SPV) which then issues the securities to be traded in the capital market.

Mortgage-backed securities have become major instruments of capital markets in the US. Mortgage-backed securities in the US are issued almost exclusively with government guarantees and backed by government-insured mortgage loans. Mortgage-backed securities which are issued by government sponsored enterprises have generated acceptance among investors since they include the provision of payment guarantees. The Government National Mortgage Association (Ginnie Mae) guarantees the timely receipt of principle and interest where the investors do not need to back their purchase by allocating capital. Furthermore, mortgage-backed securities issued by Freddie Mac and Fannie Mae are weighted with only 20 percent solvency risk ratio for investors compared to 50 percent weighting at international level. The majority of residential mortgage loans in the US are funded through mortgage-backed securities.

2.3 Mortgage Bonds System

Mortgage bonds refer to secured debt securities issued by mortgage credit institutions and backed by certain assets normally residential and retail mortgage loans. In the EU, the mortgage bonds system is the second most important type of funding instrument after retail deposit. A typical product is a long term fixed interest rate instrument issued by the mortgage bank on behalf of the borrower to investors. The purpose of the product is to raise funds to the public rather than taking deposit from the public.

The mortgage bond system is characterised by a significant role of mortgage institutions with special supervision by public authorities. These institutions sell mortgage loans into large pools and the investors receive pro-rata shares of pool cash flows which come from borrower principal, interest and prepayment. The mortgage bonds remain on the issuer's balance sheet and therefore influences the creditworthiness of the lending institutions. In addition, bonds must have sufficient cover in terms of liabilities and provide privilege for bonds investors in the event of bankruptcy of the issuers. Thus, the issuance of mortgage bonds allows lenders to access funding in the capital market at reduced borrowing costs which is often a cost-efficient method of housing funding.

2.4 State System

The state system is characterised by the existence of state housing funds through public banks or the state itself. The main concept is to acquire the interest and repayments of previous debts and return them to the housing fund. This amount is then used to award new loans to homebuyers. In addition, additional financing under government budgets is received and generally channel to social housing projects. The fund for this purpose is raised in two ways through direct government lending and loan financing on the open market. Among the countries that practice the state system are Norway and Finland.

In Norway, the fund is raised through direct government lending. The main implementing agency is Norwegian State Housing Bank with its primary purpose to ensure all people acquire satisfactory homes. The bank works closely with local authorities and private builders to enhance the distribution of housing among citizens. However, the fund is restricted to social housing where individuals can obtain it from municipalities. Credit risk is shared by the municipalities and government with 25 and 75 percent respectively of the residual loan. The term of repayment and interest rates on funds usually correspond to the basic loans.

In Finland, the Housing Fund of Finland (ARA) is a government agency which raises funds in four ways namely returns from outstanding housing loans, external borrowing and securitisation, charges from State guarantees and requisition from the State budget. This organisation has an obligation on social housing by approving interest subsidies, paying interest for interest subsidy loans, providing grants for housing renovations and supervising the granting of State guarantee. As such, the fund is only provided to particular categories of beneficiaries.

2.5 Concept of Real Estate Finance System

By referring to the housing market, real estate finance system is defined as a financial service delivery system where three main functions are performed by various intermediaries: funding, lending and servicing. Funding of a housing project is normally derived from the amount of saving in the housing finance system.

Since housing is considered as the most expensive item household wealth, access to mortgage credit provides more incentives for households to save and invest. Saving in housing finance institutions normally becomes a large part of a country's saving, available for funding housing and non-housing projects. Lending and servicing activities in the housing finance systems helps

to ensure the strong demand for housing where repaid loans by homebuyers help to provide money for new mortgages. In fact, a housing finance lending service was used by housing finance institutions in the 1980s to encourage progressive housing developments in the US. The housing finance lending service is driven by long-term factors such as regulatory policy, securitisation and technology changes which help to shape of housing finance industry.

As discussed above, the Mortgage-backed securities system has become major instruments of capital markets in the world. The most successful mortgage back securities system started in the USA and followed by other countries including Malaysia. This housing finance system consists of three submarkets, namely Primary Mortgage Market, Secondary Mortgage Market and the Capital Market. A balanced relationship between the submarkets will determine the robustness of the system.

2.5.1 Primary Mortgage Market

A primary mortgage market refers to a place where buyer and seller of a housing unit deal directly with each other. Example of such situation is where a mortgage company (in most countries) make a loan to a homebuyer then this transaction becomes part of the activity of primary mortgage market. Main players in this market are the potential homebuyers who apply for the mortgage loan and the institutions which originate the mortgage loans for the houses being purchased.

The primary mortgage market is highly segmented with a variety of mortgage programmes to suit housing provision in each individual country. Most people live in owner-occupied housing especially in advanced economies which in turn influences the nature of housing systems. In doing so, most people need a housing loan from the mortgage market to finance the purchase of a housing unit. In granting a loan, banks usually demand households to pledge

collateral in the form of the house that is to be financed. The existence of collateral provides security to the banks since, in the event of default, banks are entitled to sell the house and use the proceeds to reclaim their funds.

The concept of the primary mortgage market exists from the traditional portfolio lending model known as the Bundled Home Mortgage System. The system consists of an institution which performs the functions of originating, servicing, funding and portfolio risk management. A detail illustration of this model is shown in Figure 3.0. The portfolio lenders consist of depository institutions such as commercial banks, saving banks, building societies or mortgage banks which normally originate and service a mortgage to be sold to a purchaser. The portfolio lenders also perform the management of pipeline risk which normally happen between the time of loan approval and the time the loan is either sold or placed in portfolio. If the value of the loan declines and the pipeline risk occurs, the lender takes an immediate loss.

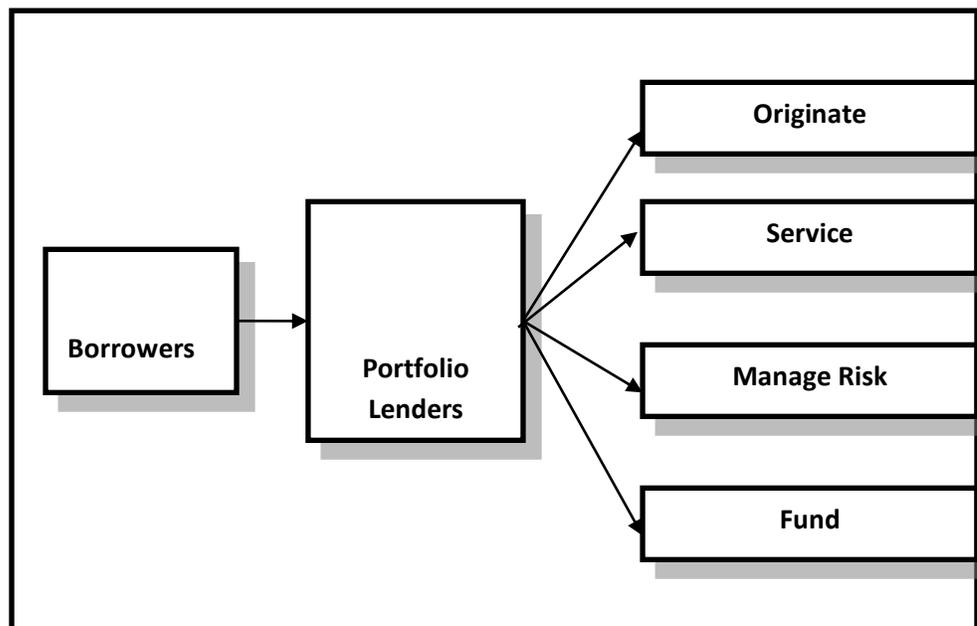


Figure 3.0: The Bundled Home Mortgage System

Source: Lea (2000)

2.5.2 Secondary Mortgage market

A secondary mortgage market is a market place in which mortgage loans are traded after origination by a portfolio lender in the primary mortgage market. An example of such a situation is where the depository institutions or mortgage companies provide a loan to a house purchaser and then sells that loan to an institutional investor such as a pension fund. In this situation, the borrower continues to make payment to these lending institutions and the contractual relationship between both parties is maintained. Therefore, portfolio lenders generate funds in the primary mortgage market consist of typical lending institutions such as a commercial bank, depository institution, thrift or mortgage bank. Funds originated by the portfolio lenders are then purchased by investors in the secondary mortgage market either whole loans or pools of loans.

Secondary mortgage market exists from the *unbundled mortgage delivery system*. Figure 4.0 provides illustration of the relationship between the function of each market player in this system. Unlike the primary mortgage market, the functions of origination, servicing, risk management and funding in this system are unbundled and managed by different specialised entities. In a bundled system implemented in the primary mortgage market, all the functions exist in a single mortgage intermediary. The originators of the mortgage loans may not be the one that service it, where depositories or mortgage companies are involving in servicing. Investors vary from depositories to mutual funds. In other words, investors depend on the pool of loans and enhancement of external credit but not the assets of the originator. In addition, credit risk management is often specialised and provided by third parties such as mortgage and bond insurance companies. Unlike the primary mortgage market which typically uses deposits, the secondary mortgage market uses

mortgage securities as the financing vehicle which is traded in the capital market.

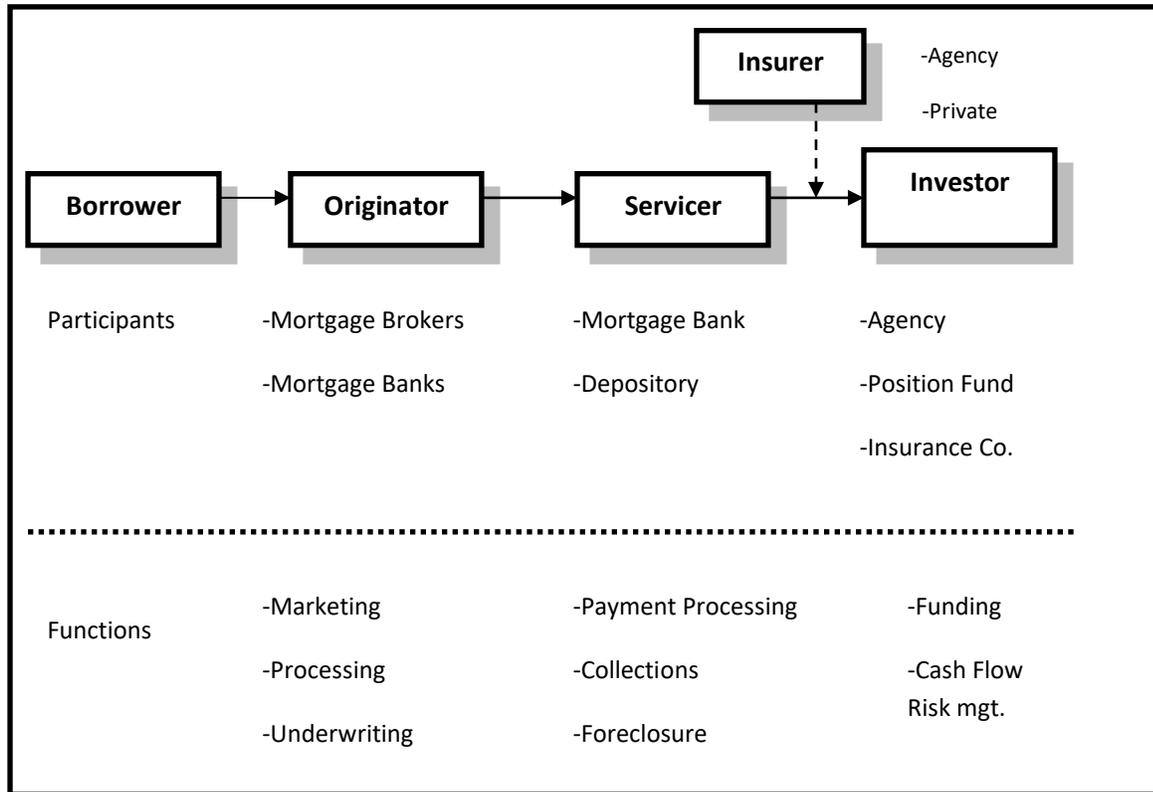


Figure 4.0: The Unbundled Mortgage Delivery System
Source: Lea (2000)

2.5.3 Capital Market

Since most of the funds for housing come from a domestic market, the condition of capital markets is important in the development of the secondary mortgage market. As such, one of the increasing roles of the capital market is to increase new capital through capital market investors. Unlike the funding of mortgage credit in the primary mortgage market, which is through the retail markets, the funding in the capital market is from the wholesale markets. Figure 5.0 shows the relationship between players of the capital markets. These wholesale institutions issue general obligation bonds and use the proceeds to refinance the portfolios of the primary

mortgage market. In the area of housing finance, the funds are raised in the capital market by issuing securities instrument either asset-backed or institution-backed securities. Issuing these instruments into the capital market is a specific method to fund mortgage loans. Therefore, major instruments in the capital market are asset-backed or institution-backed securities.

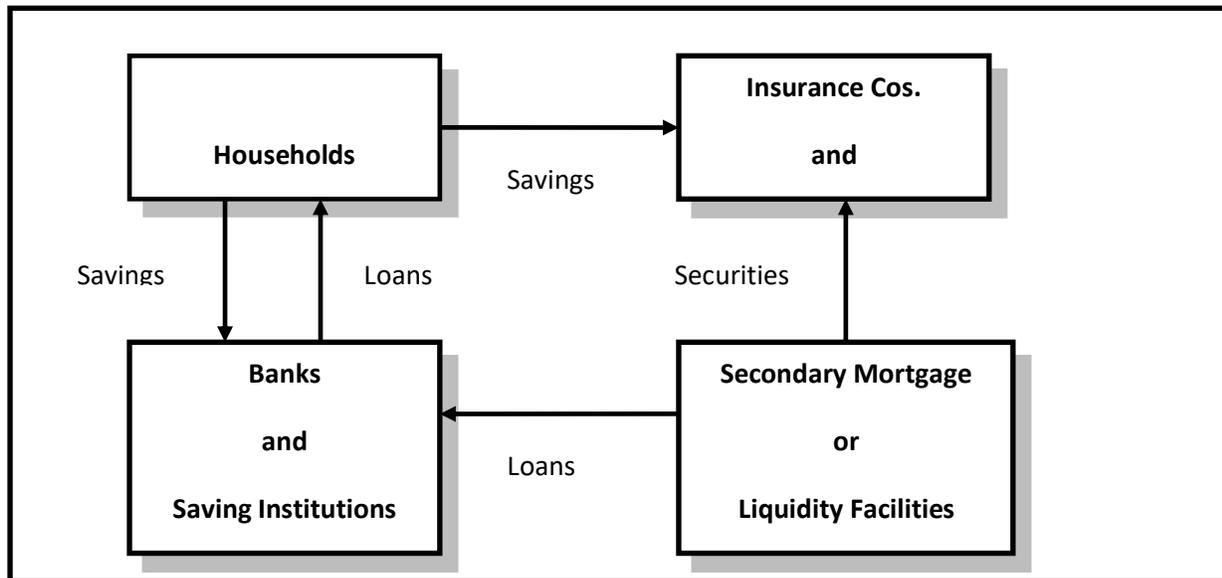


Figure 5.0: Capital Market Facility

Source: Lea (1994b)

Exercise 2

1. Name four (4) types of real estate finance sector available worldwide.
2. What do you understand by real estate finance system?
3. Please provide the name of the housing finance system. Explain each one.

3.0 MORTGAGE INNOVATIVE INSTRUMENTS

A mortgage can be defined as a loan or lien on a house that has to be paid over a specified time period (Freddie Mac, 2007). The unique feature of mortgages is that the most mobile factor of production (capital) meets the least mobile factor (housing). It is the factor affecting a loan’s security that leads to distinct mortgage instruments. Availability of several mortgage instruments in the market provides choices to borrowers which affects the housing demand in any country.

Mortgage can be categorised into two categories; Repayment and Endowment Mortgage. Repayment mortgage is further categorised to Fixed Rate Mortgage (FRM) and Adjustable Rate Mortgage (ARM) whereas the Endowment Mortgage is further categorised to End With Profit, End Without Profit and Low Payment Endowment Mortgage. There are four types of mortgage fall under the Fix Rate Mortgage knows as the Constant Amortisation Mortgage (CAM), Constant Payment Mortgage (CPM) and Graduated Payment Mortgage (GPM). Adjustable Rate Mortgage (ARM) is also known as a Variable Rate Mortgage (VRM) or Price Level Adjustable Mortgage (PLAM). Figure 6.0 shows the types of mortgage instruments available in most countries.

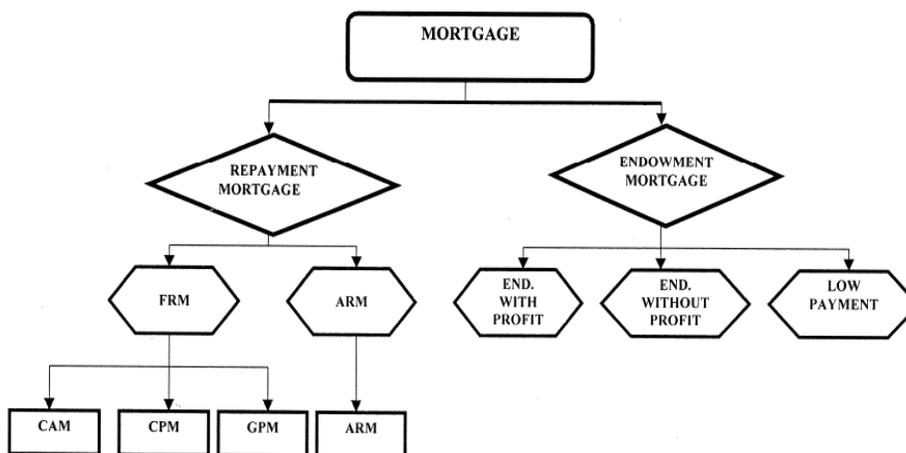


Figure 6.0: Types of Mortgage Instrument

3.1 Repayment Mortgage

- It is the most popular mortgage instrument in the world.
- Each product has different characteristics in terms of payment of principal and interest.
- RM allows the mortgagor to pay the loan back in series with a fixed amount
- Total payments - half the return on capital and half the interest of capital.
- Initial stage - cover more interest on the outstanding loan and only a small part of capital paid back.
- As mentioned above, Repayment Mortgage is divided into Fixed Rate Mortgage (FRM) and Adjustable Rate Mortgage (ARM).

3.1.1 Constant Payment Mortgage

- The level of payments at a fixed rate calculated on the original loan amount by an agreed period
- In the last period, the principal has been paid in total (fully amortized) and the mortgagee earns fixed interest rate based on the outstanding balance.
- The total principal balance will be reduced each month / year
- **This payment pattern simply means that**
- **a level, or constant, monthly payment is calculated on an original loan amount**
- **at a fixed rate of interest**
- **for a given term.**
- **Amount of amortization varies each month**
- **Loan is completely repaid over the term of the loan**

3.1.2 CAM

- CAM involves the process of amortization. i.e. the process of loan payment overtime.
- **The calculation of fixed principal payment (amortisation) and fixed annual interest charged on the principal.**
- **This amount is then added on the total loan balance until the balance is paid out (fully amortized).**
- **Monthly payments decline by a fixed amount.**

Steps in CAM

- Computing a Constant amount of payment say monthly; (Constant amortization amount)
- Computing interest on the monthly loan balance
- Adding interest to the Constant amortization amount
- Finding the total payment:
- Total payment= constant amortization amount plus monthly interest
- Find the Ending Balance

3.1.3 GPM

- GPM involves series of lower mortgage payments in the early years compared with the CPM and CAM.
- Payments increased from time to time in accordance with a specified interest (pre-determined rate)
- Assuming the borrower is expected to increase earnings in the future.
- Pattern of payments indicates the burden of payment on borrowers is lower at initial level.
- GPMs have a fixed note rate and payment schedule.
- With a GPM the payments are usually fixed for one year at a time.

- Each year for five years the payments graduate at 7.5% - 12.5% of the previous years payment.

3.1.4 ARM

- Interest rate can go up or down for the duration of the loan
- Interest rates are determined according to the BLR.
- If the interest rates increases, the amount of payment increases
- The interest rate on the principal include:

$i = r + p + f$; where

r = expected interest rate

p = the risk premium

f = expected inflation rate

f is the most difficult variable to be determined

- To reduce the risk of interest rates, mortgage lenders will determine the interest rate that reflects the expected interest rate plus a risk premium
- After $r + p$ is determined, the remaining loan will be adjusted according up or down in accordance with the basic index
- Payments will be determined by the balance of new loans with inflation adjustments.
- Calculation based on the **base index + margin**, where the base index will remain a fixed rate and fluctuations over time
 - The advantage of ARM / PLAM - Initial interest rate (Teaser rate) is lower than current market rates and these rates are usually guaranteed for one year
 - With low interest rates, the mortgagor can think of to raise revenue to make payments when the repayment amount increases
 - This is important especially for properties with high vacancy rates or a unit that requires additional work to increase the revenue of the unit
 - Disadvantages ARM / PLAM - mortgagor cannot predict the amount of future expenses. Each mortgagor must find out whether they are able to make repayments if rates rose to the highest level (loan ceiling)

3.1.5 Comparison between Fixed Rate Mortgage and Variable Rate Mortgage

The trend of payment between FRM and VRM is shown in Figure 7.0 and 8.0.

Figure 7.0 shows that GPM starts at the lowest level at the beginning of the mortgage period as compared to other FRM instruments. However, PLAM starts at the lowest level at the beginning of the mortgage period if compared with FRM. Figure 8.0 also shows the amount of outstanding balance where the PLAM shows the highest balance towards the end of the mortgage period. This is because; PLAM starts at the lowest level at the beginning of the mortgage period.

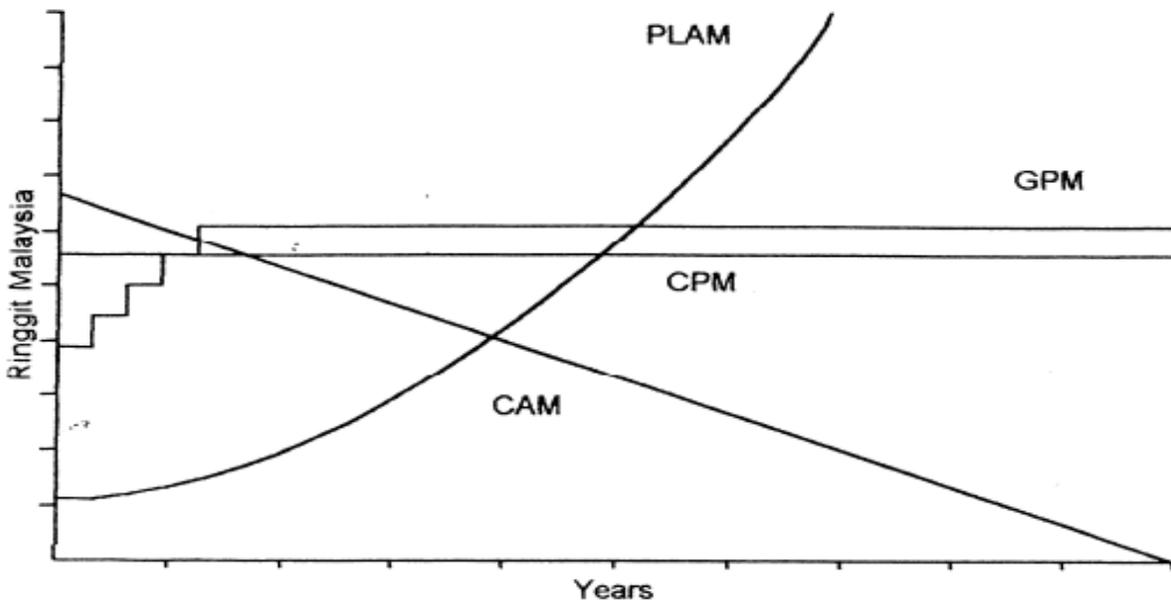


Figure 7.0: Repayment trends between FRM and VRM

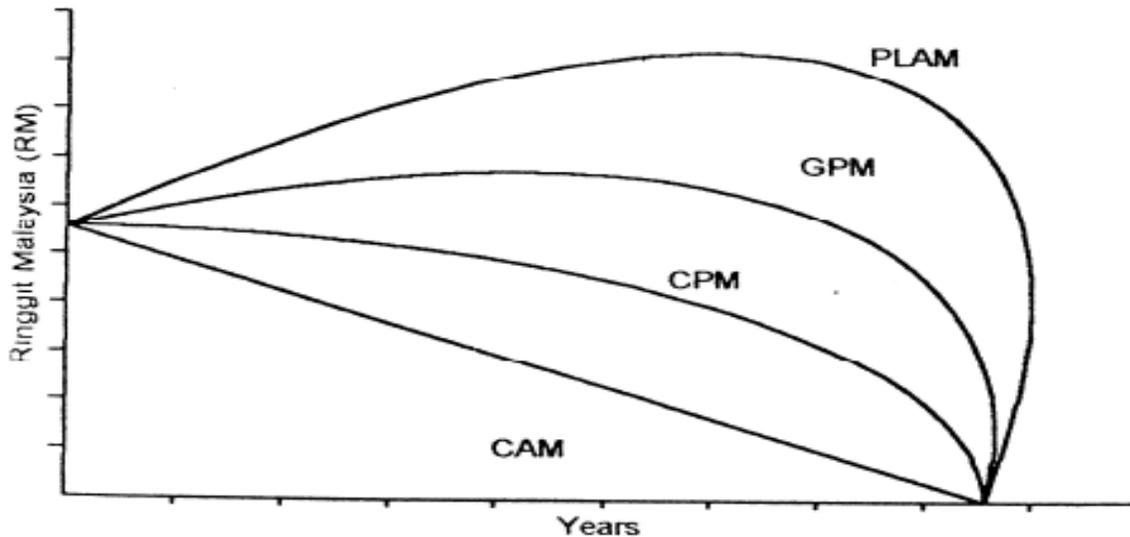


Figure 8.0: Comparison of outstanding balance between FRM and ARM

3.2 Endowment Mortgage

An endowment mortgage is a mortgage loan arranged on an interest-only basis where the capital is intended to be repaid by one of the endowment policies. A payment for endowment mortgage is made through premiums based on the principal amount. The interest is paid to the mortgagee, but the principal / capital is replaced with an insurance policy that will mature at the end of the period.

With an endowment mortgage, the interest is paid on the borrowed amount and also pays into an investment policy, called an endowment policy. At the end of the mortgage term, borrower then cash in the endowment policy to repay the original amount borrowed. The value of the endowment policy will depend on the performance of the investments it is linked to, such as unit trust.

There are three types of endowment mortgage:

3.2.1 Endowment with Profit

- The paid premium will provide sufficient guarantee for the repayment of the loans for the entire period of the loan or if the mortgagor dies early, plus the bonuses given by the insurance company.
- Mortgagor will have a higher amount than the amount due for repayment.

3.2.2 Endowment without Profit

- The paid premium will only guarantee an adequate amount of repayment on the loan balance at the end of the loan or if the mortgagor dies before the payments end.

3.2.3 Low-Payment Endowment Mortgage

- Most of the premium will be reflected in the 'Endowment with profit' to ensure that certain percentage of total loans, for example 40% of the loan for a period of 25 years.
- Repayment of the amount will be guaranteed when the bonus is given
- The amount paid in the end of the loan period is normally sufficient for the payment of the loan debt and left the total lump-sum in the range of one third of total loans (however, no guarantee on this amount)
- Other premiums that are included in the insurance period will determine that the amount is sufficient for the repayment of the loan if the borrower dies before the mortgage ends.

3.3 Working Calculation of Mortgage Instruments

3.3.1 Basis of Constant Payment Mortgage (CPM)

A total sum of RM100, 000 was approved under the CPM for the purchase of a house with a fixed interest rate of 12% for a period of 25 years.

- i) Calculate the total annual repayment on interest rates and capital
- ii) Calculate the total interest rate for the first year and ten years
- iii) Calculate the amount of capital that must be paid for the first and tenth year

There are two elements in the construction of the formula:

- i) benefit rate received on the remaining capital i.e. ruminative rates expected
- ii) repayment of capital over the period of charge ie annual sinking fund (a.s.f.) to replace the capital invested during the period of charge

Thus, the formula for a total annual payment (annual equivalent) on the amount of principal / capital for the duration of the loan is: $i + s$

Where $s = i/A - 1$

And $A = (1 + i)^n$

Thus the calculation can be done as follows:

Formula for Purchasing Annuity RM1 is: $i + SF$

Now the formula for the value of RM1 is: $1 / (i + SF)$ or $1 - NK$ RM1 / i

- i) What is the annual payment?

Total Loan	RM 100,000
Annuity RM1 will Purchase for 25 years @ 12%	0.1275
Annual payment	RM 12.750

- ii) When the interest rate in the first year is added directly on the capital borrowed, then:

$$\text{RM}100,000 \times 12\% = \text{RM}12,000 \text{ (first year interest rate)}$$

As the amount payable is RM12,750, the amount of capital paid is $\text{RM}12,750 - \text{RM}12,000 = \text{RM}750$ for the first year.

- iii) The total interest rate at ten years depends on the balance of capital at the beginning of the tenth ie after ninth annual payment:

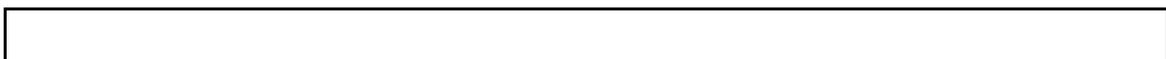
	RM 750
Amount of RM1 p.a. for 9 years @ 12%	<u>14.7757</u>
Total capital payments	<u>RM 11,080</u>

$$\text{Total Balance Capital is } \text{RM}100,000 - \text{RM}11,080 = \underline{\text{RM}88,920}$$

$$\text{Interest rates is } \text{RM}88,920 \times 0.12 = \underline{\text{RM}10,670}$$

$$\text{Capital paid in the 10th year is } \text{RM}12,750 - \text{RM}10,670 = \underline{\text{RM}2,080}$$

3.3.2 Working Calculation of CPM



LOAN REPAYMENT (CPM)

Loan Amount 100,000.00
Mortgage
Term 25 Years
Interest Rate 12% p.a.

Year	Outstanding Principle	Loan Amortization	Interest	Annual Payment
1	100000.00	750.00	12000.00	12750.00
2	99250.00	840.00	11910.00	12750.00
3	98410.01	940.80	11809.20	12750.00
4	97469.21	1053.69	11696.31	12750.00
5	96415.52	1180.13	11569.86	12750.00
6	95235.38	1321.75	11428.25	12750.00
7	93913.63	1480.36	11269.64	12750.00
8	92433.27	1658.00	11091.99	12750.00
9	90775.27	1856.96	10893.03	12750.00
10	88918.30	2079.80	10670.20	12750.00
11	86838.50	2329.38	10420.62	12750.00
12	84509.12	2608.90	10141.09	12750.00
13	81900.22	2921.97	9828.03	12750.00
14	78978.25	3272.61	9477.39	12750.00
15	75705.65	3665.32	9084.68	12750.00
16	72040.33	4105.16	8644.84	12750.00
17	67935.17	4597.78	8152.22	12750.00
18	63337.39	5149.51	7600.49	12750.00
19	58187.88	5767.45	6982.55	12750.00
20	52420.43	6459.55	6290.45	12750.00
21	45960.89	7234.69	5515.31	12750.00
22	38726.19	8102.85	4647.14	12750.00

23	30623.34	9075.20	3674.80	12750.00
24	21548.15	10164.22	2585.78	12750.00
25	11383.93	11383.93	1366.07	12750.00
Total Principle + Interest		100000.00	218749.92	318749.92

3.3.3 Working Calculation of CAM

LOAN REPAYMENT (CAM)				
Loan Amount	100,000.00			
Mortgage				
Term	25	Years		
Interest Rate	12%	p.a.		
Amortization	4,000			
Year	Outstanding Principle	Loan Amortization	Interest	Annual Payment
1	100000.00	4000.00	12000.00	16000.00
2	96000.00	4000.00	11520.00	15520.00
3	92000.00	4000.00	11040.00	15040.00
4	88000.00	4000.00	10560.00	14560.00
5	84000.00	4000.00	10080.00	14080.00
6	80000.00	4000.00	9600.00	13600.00
7	76000.00	4000.00	9120.00	13120.00
8	72000.00	4000.00	8640.00	12640.00
9	68000.00	4000.00	8160.00	12160.00
10	64000.00	4000.00	7680.00	11680.00
11	60000.00	4000.00	7200.00	11200.00
12	56000.00	4000.00	6720.00	10720.00

13	52000.00	4000.00	6240.00	10240.00
14	48000.00	4000.00	5760.00	9760.00
15	44000.00	4000.00	5280.00	9280.00
16	40000.00	4000.00	4800.00	8800.00
17	36000.00	4000.00	4320.00	8320.00
18	32000.00	4000.00	3840.00	7840.00
19	28000.00	4000.00	3360.00	7360.00
20	24000.00	4000.00	2880.00	6880.00
21	20000.00	4000.00	2400.00	6400.00
22	16000.00	4000.00	1920.00	5920.00
23	12000.00	4000.00	1440.00	5440.00
24	8000.00	4000.00	960.00	4960.00
25	4000.00	4000.00	480.00	4480.00
Total Principle + Interest		100000.00	156000.00	256000.00

3.3.4 Working Calculation of GPM

LOAN REPAYMENT (GPM)				
Loan Amount	100,000.00		141,384.85	
Mortgage Term	25	Years	20.0	Years

Interest Rate 12% p.a.
 First Payment 400
 Graduation Rate 7.50%
 Graduation Period 5 years

Year	Outstanding Principle	Loan Amortization	Interest	Annual Payment
------	--------------------------	----------------------	----------	-------------------

1	100000.00	-7200.00	12000.00	4800.00
2	107200.00	-7704.00	12864.00	5160.00
3	114904.00	-8241.48	13788.48	5547.00
4	123145.48	-8814.43	14777.46	5963.03
5	131959.91	-9424.94	15835.19	6410.25
6	141384.85	1962.25	16966.18	18928.43
7	139422.60	2197.72	16730.71	18928.43
8	137224.88	2461.45	16466.99	18928.43
9	134763.44	2756.82	16171.61	18928.43
10	132006.62	3087.64	15840.79	18928.43
11	128918.98	3458.15	15470.28	18928.43
12	125460.83	3873.13	15055.30	18928.43
13	121587.69	4337.91	14590.52	18928.43
14	117249.79	4858.46	14069.97	18928.43
15	112391.33	5441.47	13486.96	18928.43
16	106949.86	6094.45	12833.98	18928.43
17	100855.41	6825.78	12102.65	18928.43
18	94029.63	7644.88	11283.56	18928.43
19	86384.75	8562.26	10366.17	18928.43
20	77822.49	9589.73	9338.70	18928.43
21	68232.76	10740.50	8187.93	18928.43
22	57492.26	12029.36	6899.07	18928.43
23	45462.90	13472.88	5455.55	18928.43
24	31990.01	15089.63	3838.80	18928.43

25	16900.39	16900.39	2028.05	18928.43
<hr/>				
Total Principle +				
Interest		100000.00	306448.90	406448.90
<hr/>				

3.4 Property Insurance

Mortgage Reducing Term Assurance (MRTA)

Mortgage Level Term Assurance (MLTA)

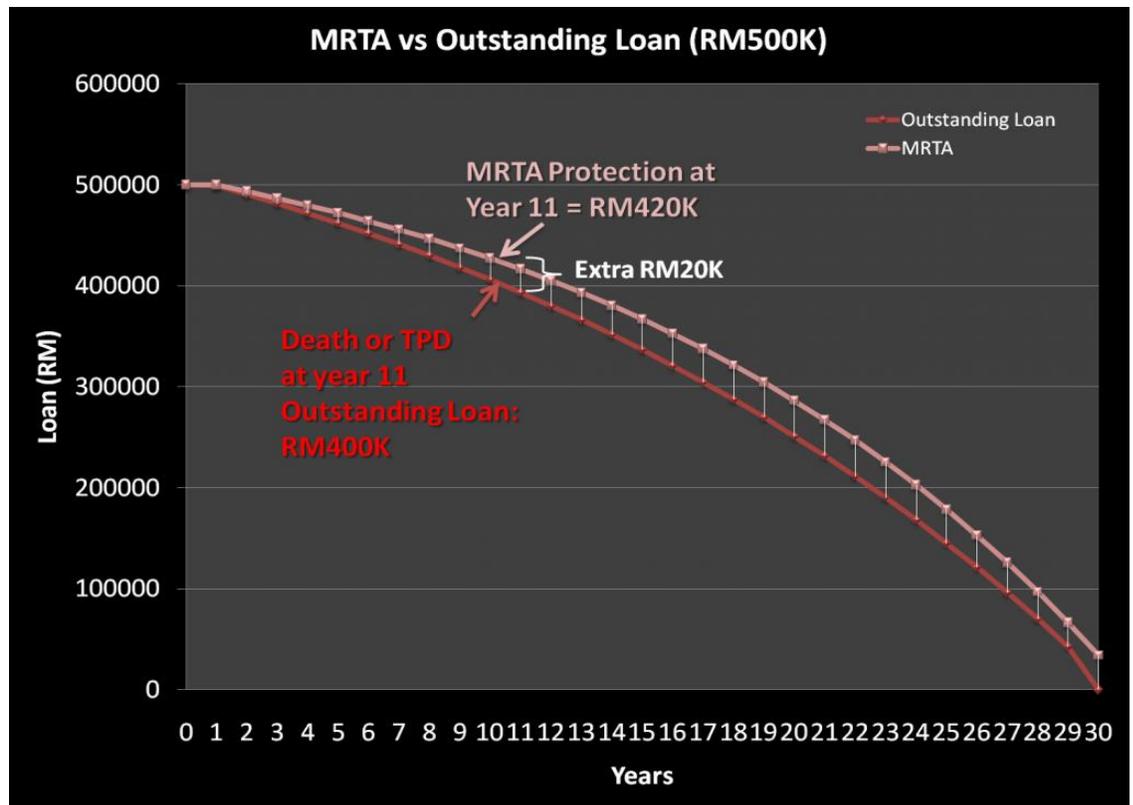
MRTAs and MLTAs are variants of life insurance products.

They are known as Mortgage Life Insurances.

The products are designed to pay off the outstanding loan balance in the event that the borrower dies or suffers from total and permanent disability (TPD) before the loan is fully paid off.

3.4.1 MRTA

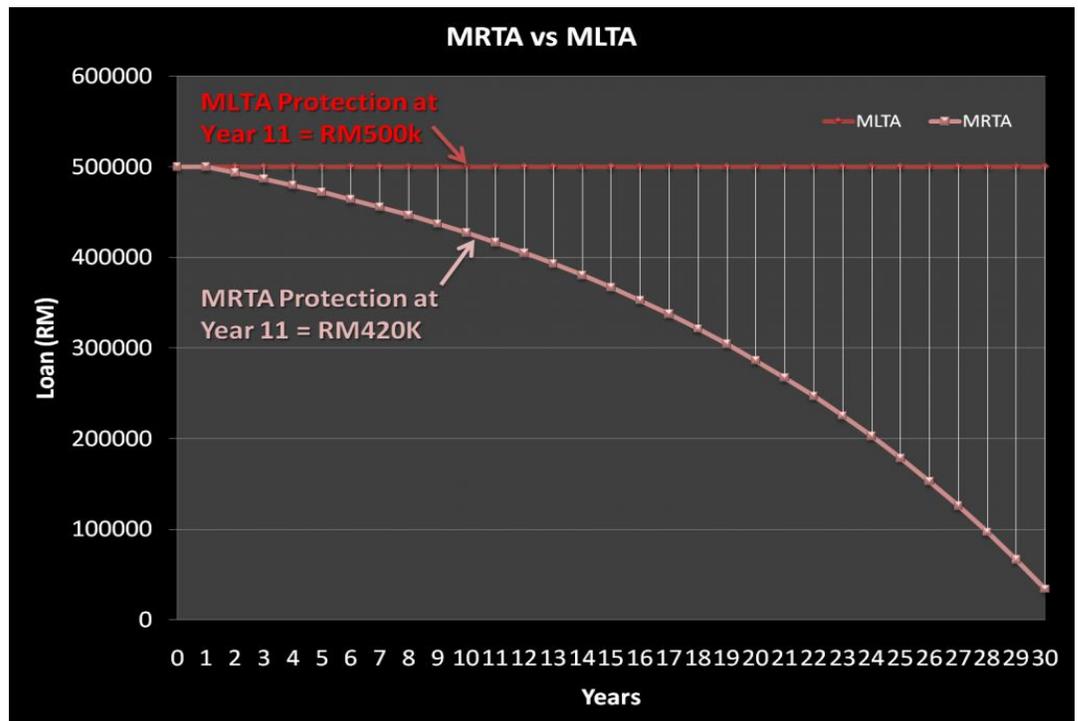
- It protects the borrower against death or TPD
- The sum assured reduces with time – Gradually decreases to nothing by the end of the tenure
- Most convenient - typically packaged as an option together with the loan
- Lenders allow the cost of insurance to be added to your loan amount
- Better interest rates if a borrower signs up for a MRTA.
 - Loan balance decreases over time, thus saving on premiums.
 - The premium for this type of insurance is cheaper than MLTAs



3.4.2 MLTA

- It protects the borrower against death or TPD **AND (Key difference) Option** for 36 Critical Illnesses.
- The sum assured does not decrease with time.
- Borrowers can choose to expand their coverage to include more than death or TPD (E.g. 36 critical illnesses).
- Borrowers can choose to have a savings feature, where a portion of the premiums paid accumulate as a cash surrender value.
- Not typically packaged as an option together with the loan - taken up separately
- Premiums are higher than MRTAs, and are paid on a monthly, quarterly, half-yearly, or yearly basis.
- Policies are **transferable** to other properties - the policies can be used to insure new property loans, or when refinance the property.

- Can **adjust the sum assured** as required without having to prove health/age again.
- More commonly used by more sophisticated borrowers for **short term** property purchases.



3.4.3 Mortgage Takaful

Mortgage Takaful is a Shariah-compliant reducing term Takaful plan that provides home financing borrowers with financial protection in the event of premature death or total permanent disability.

Among the features of Mortgage Takaful are:

- **Surplus sharing:** sharing of net surplus from the takaful operation (if any) as long as the insured has not made a claim during the period of takaful. The surplus is allocated in proportion to the contribution paid.

- **Pay in advance** - option to pay in advance all annual contributions payable for the duration of your house financing.
- **Single Contribution** - pay single contribution by amortising it over the period of house financing via single contribution financing.
- **Guaranteed benefit** - to settle mortgage balance based on the table of reducing sum covered plus a consolation benefit payable upon death or permanent disablement (within accepted terms).
- **Wider coverage with Liberal Permanent Disablement Definition** - that pays out the permanent disablement benefit if the insured is unable to perform his occupation for a certain period as agreed between the two parties.
- **Flexible coverage** - for completed properties and properties under construction (i.e. full level term coverage during the period of construction).

Exercise 3

1. What is mortgage?
2. Name the categories of mortgage. Give segmentation for each one.
3. What is endowment mortgage?
4. What are the criterias for endowment mortgage with profit?
5. Please explain the criteria of Mortgage Reducing Term Assurance (MRTA).
6. Elaborate your understanding on Mortgage Level Term Assurance (MLTA).
7. What is Mortgage Takaful?

4.0 ISLAMIC REAL ESTATE FINANCE

There are two types of banking operation available throughout the globe. In some countries such as Malaysia, a dual banking system is a major characteristic where the interest-rate based conventional banking system operates in conjunction with the Islamic non-interest based system. Unlike the conventional system, the

operation of Islamic system requires sharing risk and profit at pre-determined ratios. A common concept of the Islamic banking is that the payment or receipt of interest is forbidden. Literally, *riba*, is an increase to premium that must be paid to the lender along with the principal amount as a condition for the approved loan. Thus, Islam prohibits the use of *riba* in any transaction in the market economy. With reference to Malaysia, as for conventional system, the Islamic banking products are also offered in the Malaysian housing finance system. It can be found in the Malaysian Primary Mortgage Market either in the form of bridging finance or end financing; and the Malaysian Capital Market in the form of Islamic PDSs. In Malaysia, Islamic finance is more acceptable to developers and house purchasers alike especially during a higher interest rate environment. However, conventional housing finance provides flexibility in terms of repayment amount especially those who expect increases in future income.

4.1 Basis of Real Estate Islamic Finance

In dealing with Islamic real estate finance, one must understand certain terminologies used in the Islamic Finance in general. Among the terminologies used in Islamic real estate instruments are as follow:

Product	Nature	Characteristics
Murabaha	<ul style="list-style-type: none"> ▪ Asset based ▪ Cost Plus Financing 	<ul style="list-style-type: none"> ▪ Bank purchases the commodity and resells it at a predetermined higher price ▪ The client pays for the goods in deferred payments or over a stated instalment period ▪ In case of default the client is liable only for the contracted sale price
Mudaraba	<ul style="list-style-type: none"> ▪ Asset based ▪ Liability based ▪ Profit Sharing 	<ul style="list-style-type: none"> ▪ Under Mudaraba, one party provides 100% capital and the other party manages the investment project

		<ul style="list-style-type: none"> ▪ Profits are shared in a pre-agreed ratio whereas losses accrued are borne by the provider of capital only ▪ Mudaraba is often used for investment funds, where investor provides money to the Islamic bank, which the bank invests charging a management fee
Tawarruq	<ul style="list-style-type: none"> ▪ Asset based ▪ Monetization of commodity 	<ul style="list-style-type: none"> ▪ Tawarruq is the mode adopted by banks to lend cash ▪ The customer buys a commodity from the bank under Murabaha which is then sold to a third person on cash at a price less than the purchase price ▪ The customer hence obtains cash without taking an interest-based loan ▪ If the customer resells that commodity to the bank, it is called Al-'inah
Musharakah	<ul style="list-style-type: none"> ▪ Joint Venture 	<ul style="list-style-type: none"> ▪ Under Musharakah, all the partners contribute funds and have right to participate in the management of the business ▪ Profits are shared in an agreed ratio but losses are shared in the ratio of capital invested ▪ Contributions can be made either in cash or in kind

Sukuk	<ul style="list-style-type: none"> ▪ Islamic Bond 	<ul style="list-style-type: none"> ▪ Sukuks are similar to conventional bonds with the difference that these are asset backed and represent proportionate beneficial ownership in the underlying asset ▪ Sukuk holders are entitled to a share in the revenues generated and in the proceeds of the realization of the Sukuk assets
Takaful	<ul style="list-style-type: none"> ▪ Islamic insurance 	<ul style="list-style-type: none"> ▪ Takaful is insurance based on mutual co-operation, responsibility, protection and assistance between groups of participants ▪ It is akin to a cooperative insurance wherein members contribute a specific sum of money to a common pool ▪ Every policyholder pays his subscription to help those that need assistance ▪ Losses are divided and liabilities spread according to the community pooling system

4.2 Murabahah

Murabahah refers to a mark-up sale where the object of sale is sold at a price equivalent to the cost price and profit margin.

4.3 Al-Bai-Bithaman Ajil (BBA)

Al-Bai-Bithaman Ajil (BBA) is the most common product available in Islamic real estate finance. It is a contract of buy and sell where the seller delivers the merchandise and the buyer pays to the seller by instalment on differed payment basis.

- In simple terms – BBA means deferred instalment sale.
- To evidence the purchase, the bank and the customer will enter into an agreement called Property Purchase Agreement where the bank is purchasing the asset on a cash basis.
- To evidence the sale, the bank and the customer will enter into an agreement called Property Sale Agreement where the bank is selling the property, the sale is on deferred payment terms.
- The customer is then allowed to settle the bank's selling price on monthly basis over an agreed repayment period.

4.4 Tawarruq

Tawarruq refers to a transaction of where the customer buys a commodity from the bank under Murabaha which is then sold to a third person on cash at a price less than the purchase price.

4.5 Musharakah Mutanaqisah (MM)

Musharakah Mutanaqisah (MM) refers to a contract of partnership between two parties, where one partner gradually buys the whole parts of the property.

Exercise 4

1. Define the followings:
 - a. Murabaha
 - b. Mudarabah

- c. Tawarruq
- d. Musharakah
- e. Sukuk
- f. Takaful
- g. Al-Bait Bitahmin Ajil

5.0 CONVENTIONAL VS ISLAMIC MORTGAGE CALCULATION

In order to understand the difference between conventional loan and real estate finance, a calculation can be done based on previous discussion as in Section 3.3.

There are two main differences between Conventional Loan and Islamic Finance, namely Nature of Contract and Profit and Interest.

5.1 Nature of the Contract

The nature of the contract is a co-ownership and not a loan because the transaction is not based on the lending and borrowing of money but on the joint ownership of an asset. Bank's shares in the cost of asset being purchased, i.e. the house or in case of a replacement contract bank purchases a portion of the house from consumer and become a co-owner.

5.2 Profit and Interest

In conventional mortgages the interest charged is a mark-up on the money lent. The profit charged by Bank is the utilization payment for the consumer's use of bank's share throughout the life of the contract. The profit is predetermined based on market trends.

The difference between the two systems can be differentiated through mortgage calculation on the same property. For example, a loan is approved for a purchase of property with a market value of RM175,000 for a period of 15 years and interest rate/profit rate at 6%. The annual payment

is calculated based on the formula given in Section 3.3. As being practiced in Malaysia, the final result will be different due to the difference between base rate and profit rate used by the financial institutions.

LOAN REPAYMENT (CONVENTIONAL)				
Property Value		175,000.00		
Loan Amount (90%)		157,500.00	(10% down payment)	
Mortgage Term		15	Years	
Interest Rate		6%	p.a.	
	Outstanding	Loan		Annual
Year	Principal	Redemption	Interest	Payment
	(RM)	(RM)	(RM)	(RM)
1	157500.00	6766.64	9450.00	16216.64
2	150733.36	7172.63	9044.00	16216.64
3	143560.73	7602.99	8613.64	16216.64
4	135957.74	8059.17	8157.46	16216.64
5	127898.57	8542.72	7673.91	16216.64
6	119355.85	9055.28	7161.35	16216.64
7	110300.56	9598.60	6618.03	16216.64
8	100701.96	10174.52	6042.12	16216.64
9	90527.44	10784.99	5431.65	16216.64
10	79742.46	11432.09	4784.55	16216.64
11	68310.37	12118.01	4098.62	16216.64
12	56192.35	12845.09	3371.54	16216.64
13	43347.26	13615.80	2600.84	16216.64
14	29731.46	14432.75	1783.89	16216.64
15	15298.71	15298.71	917.92	16216.64
Total		157500.00	85749.53	243249.53

LOAN REPAYMENT (ISLAMIC)									
					Rental Division				
Year	Yearly	Yearly	Total	Customer's			Customer's	Bank's	Bank's
	rent	redemption	Payment	Ownership	Customer	Bank	Equity	Equity	cashflow
	(RM)	(RM)	(RM)	(%)	(RM)	(RM)	(RM)	(RM)	(RM)
	(A)	(B)	C = (A)+(B)						
0				10%			17,500.00	157,500.00	(157,500.00)
1	5716.64	10500.00	16216.64	16%	914.66	4801.97	42,700.00	132,300.00	10,500.00
2	5716.64	10500.00	16216.64	22%	1257.66	4458.98	52,150.00	122,850.00	21,000.00
3	5716.64	10500.00	16216.64	28%	1600.66	4115.98	61,600.00	113,400.00	31,500.00
4	5716.64	10500.00	16216.64	34%	1943.66	3772.98	71,050.00	103,950.00	42,000.00
5	5716.64	10500.00	16216.64	40%	2286.65	3429.98	80,500.00	94,500.00	52,500.00
6	5716.64	10500.00	16216.64	46%	2629.65	3086.98	89,950.00	85,050.00	63,000.00
7	5716.64	10500.00	16216.64	52%	2972.65	2743.98	99,400.00	75,600.00	73,500.00
8	5716.64	10500.00	16216.64	58%	3315.65	2400.99	108,850.00	66,150.00	84,000.00
9	5716.64	10500.00	16216.64	64%	3658.65	2057.99	118,300.00	56,700.00	94,500.00
10	5716.64	10500.00	16216.64	70%	4001.64	1714.99	127,750.00	47,250.00	105,000.00
11	5716.64	10500.00	16216.64	76%	4344.64	1371.99	137,200.00	37,800.00	115,500.00
12	5716.64	10500.00	16216.64	82%	4687.64	1028.99	146,650.00	28,350.00	126,000.00
13	5716.64	10500.00	16216.64	88%	5030.64	686.00	156,100.00	18,900.00	136,500.00
14	5716.64	10500.00	16216.64	94%	5373.64	343.00	165,550.00	9,450.00	147,000.00
15	5716.64	10500.00	16216.64	100%	5716.64	0.00	175,000.00	0.00	157,500.00
Total	85749.53	157500.00	243249.53						

Exercise 5

1. Give two (2) differences between Islamic finance with conventional financing.

6.0 SOURCES OF FINANCE

Sources of finance can be classified as long term or short term. The classification usually relates to duration, or how long it takes before the money is received or must be repaid. Businesses and individuals use long- and short-term sources of financing to raise capital for improvements and meet financial obligations.

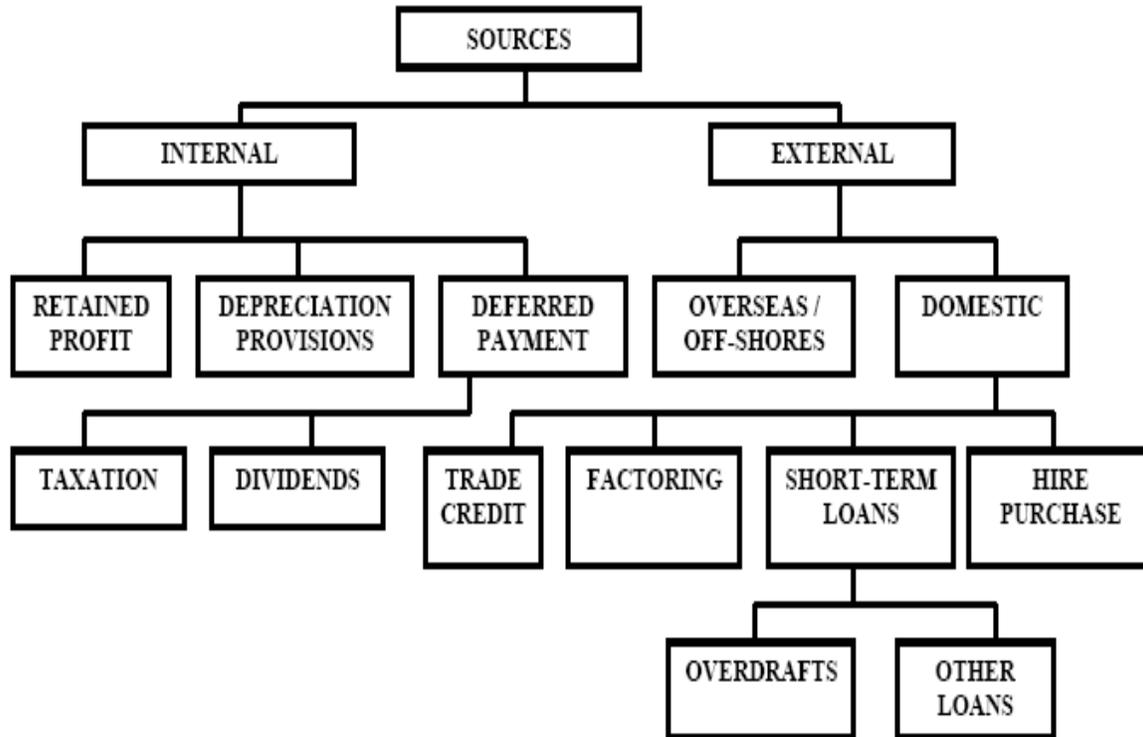
6.1 Short Term

Most short-term sources of financing occur over a period of one year, although some sources can last up to three years or longer.

The firm needs short term finance because:

- Cash flow from operations may not be sufficient to keep up with growth-related financing needs.
- Firms may prefer to borrow now for their inventory or other short term asset needs rather than wait until they have saved enough.
- Firms prefer short-term financing instead of long-term sources of financing due to:
 - easier availability
 - usually has lower cost

The following shows the finance sources available for a short term.



Trade credits

- Allows firms to purchase goods and services now, without pay until a certain date.
- Careful management of trade credit can help ease cash flow – usually between 28 and 90 days to pay
- Typically, credit terms are determined by the 'trade association', or involve custom or practice.
- Because of the time difference between the purchase of raw materials and selling the final product, the supplier would be willing to provide long-term credit.
- In the provision of trade credit, the discount usually given to encourage early payment.

Differed Payment

- Funds are kept separate until the date of payment of taxes and dividends.

- Payment of corporate tax liability is one year after the year in which the profits earned.
- The firm will use the funds for at least a year before taxes were paid.

Factoring

- The sale of debt to a specialist firm who secures payment and charges a commission for the service.
- Setting up funds based on firms' debt securities, funds received in advance of the debtor to pay.
- Liquidity problem normally occurs on small newly established firms because of the inability to collect the due debts.
- Financial institutions typically provide factoring services to these firms.
- The services include the administration of invoices and insurance against bad debts.
- Advance is given to the firm up to 80% of the value of the debt to be collected.
- Factoring incurs specific tax for professional services.
- It does not help the firm to maintain adequate sources of working capital, especially during critical period of sales.

Short Term Loans

Most of the firms using broad term loans from banks and other sources.

Overdraft facilities

- The right to be able to withdraw funds the firms do not currently have
- Provides flexibility for a firm
- Interest only paid on the amount overdrawn
- Overdraft limit – the maximum amount allowed to be drawn - the firm does not have to use all of this limit
- This method is the easiest and cheapest way, especially when the need is only temporary.

- This service is provided under the current account where the customer is qualified to withdraw funds up to the approved limit.
- Interest will only be charged on the amount withdrawn.
- The paid amount can be utilized again for working capital purposes.

Bank loans

- necessity of paying interest on the payment, repayment periods from 1 year upwards but generally no longer than 5 or 10 years at most

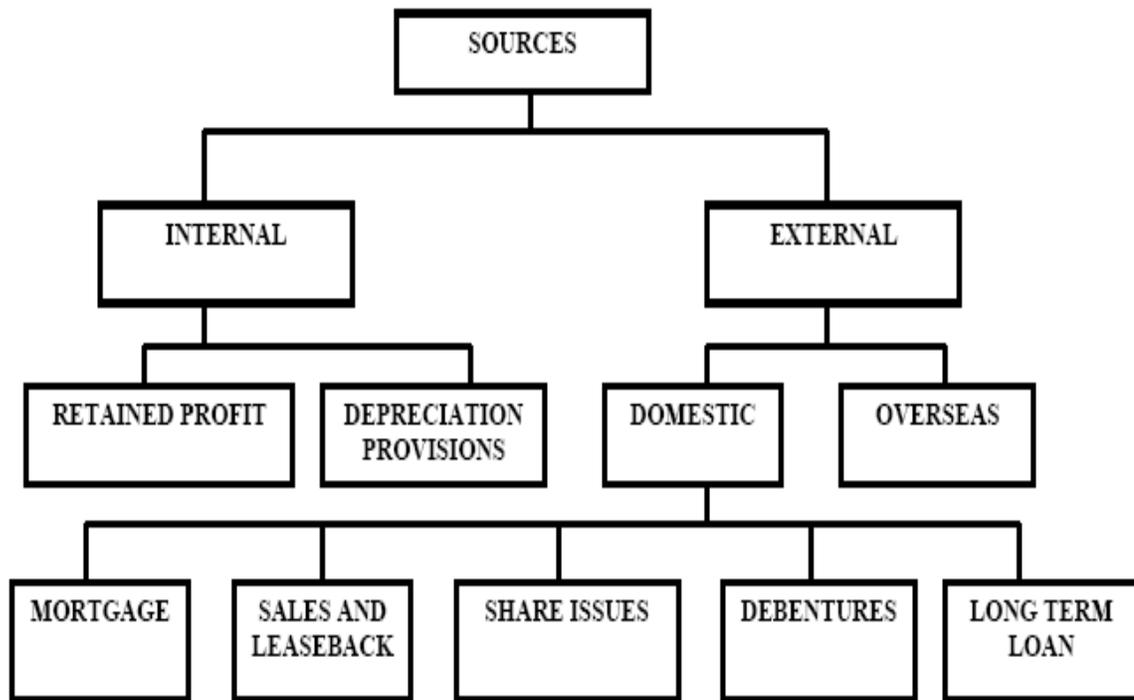
Hire Purchase (Leasing)

- provides the opportunity to secure the use of capital without ownership – effectively a hire agreement

6.2 Long Term

Long-term financing like home mortgages are typically available in 15- and 30-year durations.

- The firm needs long term finance because:
 - For modernization, expansion, diversification, huge quantities required, irreversible decision
 - Asset-liabilities mismatch, interest rate risk, liquidity risk etc
- The ability of firms to repay short term borrowings depend on long-term finance, the ability to sell the property unit.
- The willingness of banks to provide short term loans depends on a firm commitment to gain long-term finance; investors to purchase the completed building (forward sale).
- At the initial stage, the firm depends on the share capital, supplemented by external sources such as bank loans, to provide investment capital.



Retained Profit

- After the dividend is paid, the firm will retain the remaining profits which is a valuable source of funds for investment.
- Retained profits will reflect the share price to rise more than nominal value
- The firm must make a decision on the fraction of profits that should be kept for internal use and the fraction that will be distributed as dividends.

Depreciation Provisions

- Reserve is prepared for the obsolescence of fixed assets of its economic life.
- The funds available for expenditure on new investments in the same way as savings benefits.
- The firm will be allowed to 'write-off charges for obsolescence out of taxable profit.

Share issues

- If the ordinary shares are offered for sale, the firm will receive the par value or face value per share.
- The firm will use this capital to purchase investment assets, in the hope of making a profit for shareholders

Mortgage

- The oldest method of financial rescue for long-term finance - straight mortgage.
- Mortgage is repaid by annual/monthly installments over a period of borrowing, but rates vary in line with market rates.
- Mortgage loans are first disbursed and secured by a property where the lender has an interest on the property.
- Most mortgages have a fixed interest rate where full repayment of capital occurs at the end of the mortgage period.

Sales and Leaseback

- Sales and leaseback has proven to be the most important "equity sharing"
- It involves the sale of a firm's interest to the institutions and the firm will be granted a long lease and continue to lease back the property to small tenants.
- The firm continues to use the property as well as getting the funds to finance other development projects.
- SL provides capital requirements through the profit rent as a result of the different in rent paid to the institution and received from the small tenant.
- The terms of the agreement are usually influenced by cost, ease of financing, the investment market, property market conditions and bargaining power between the two parties.

Debentures

- A type of debt instrument that is not secured by physical asset or collateral.
- Debentures are backed only by the general credit worthiness and reputation of the issuer.
- Both corporations and governments frequently issue this type of bond in order to secure capital.
- Bond buyers generally purchase debentures based on the belief that the bond issuer is unlikely to default on the repayment.
- Eg. Government debenture: Treasury bond (T-bond) or Treasury bill (T-bill). T-bonds and T-bills are generally considered risk free because governments, at worst, can print off more money or raise taxes to pay these type of debts

Exercise 6

1. What are the mode for source of financing?
2. List the sources of financing in:
 - a. Short term
 - b. Long term

7.0 DEVELOPMENT FINANCE

7.1 Bridging Finance

- General definition - additional loans on an individual or organization involved in the development industry.

- Given as a construction loan - after the project planning has been approved and loans almost ended after completion of construction work.
- Usually given for a short period - to help the site works, infrastructure works and initial operation of the main building.
- Interest rates higher than long-term loan - subject to security provided to banks and financial institutions.
- Interest rate charged by banks is directly determining margin on lending rate.

BF is given either by means of:

- 'term loan' with a fixed repayment period, or
- Overdraft Facility, or
- A combination of both.
- Loans can be arranged either in the form of direct loans or a 'Syndication' loan (indirect).

7.2 Direct Loans

- Loan by a bank to its own customer without the use of third parties, such as dealers.
- Direct lending gives the lender more opportunities to screen credit applicants than indirect lending
- The total amount of loan from a bank / financial institution is smaller and has lower risk.

7.3 Indirect Loan - Syndication Loans

- a group of commercial and investment bankers agrees to advance a portion of the funding.

- reaction on the demand for 'large-scale financing' - to finance new projects, extensions or modernization of plant and equipment and provides a greater working capital to support higher production levels.
- a group of commercial bankers and investment bankers each agrees to advance a portion of the funding
- Typically, the financing is arranged by a single bank at narrow interest rate spreads above the lender's cost of funds

7.4 End Finance

- EF is designed as a loan for the purpose of buying the final product.
 - EF will be given after the Bridging Finance.
 - EF will be provided after the units have been advertised for sale
- EF will allow homebuyers to make payments properly to the developer when the units are still under construction.
- Repayment of EF will be on monthly/yearly basis (including interest and principal payments, based on the annual interest rate)
- Monthly Repayment does not exceed one third of the income of the buyer.
- The developer will try to get the best offer from the bank for prospective purchasers.
- EF is a form of mortgage loans granted for long term and usually between 10 to 35 years.

Exercise 7

1. Define the followings:
 - a) Bridging finance; b) Direct loan; c) Indirect loan; and d) End finance

8.0 PROPERTY TAX

Property tax is payable on all property sectors including commercial, industrial, residential and agricultural land. Local authorities or other government bodies such

as Inland Revenue are responsible for collecting property tax, which varies depending on the jurisdiction. Below are some examples of property taxes.

8.1 Assessment Tax

Assessment tax will be determined by local authorities based on either the annual value or improved value of the property concerned. The purpose of assessment tax is to cover the services day to day services provided by each local authority in their respective area. Thus, the amount of tax will be assessed and determined by respective local authorities. Generally, the authorities charge assessment tax at a rate of six percent of the annual or improved value for residential properties and is payable in two instalments annually.

8.2 Quit Rent

Quit rent is a form of levy or **land tax** imposed on freehold or leasehold land by a higher landowning authority, usually government or its assigns. Some governments have now abolished the quit rent system and relieved those with a nominal **quit rent obligation** from the requirement to pay it, replacing quit rents with a uniform system of land tax. In Malaysia, quit rent remains as an important means of **raising revenue from landowners**. It is defined as a form of land tax collected by State Governments imposed on owners of all alienated land. However, owners of certain pieces of land (such as those used for religious purpose) are exempted from payment. The amount of quit rent varies from state to state and within each state it also varies according to locality and category of land use.

8.3 Real Property Gains Tax

Real Property Gains Tax (RPGT) is a *tax* levied by the Inland Revenue Board (IRB) on chargeable *gains* derived from the disposal of *real property*. RPGT applies to properties sold less than five years after purchase. Those sold less than two years after purchase are subject to ten percent RPGT

and those sold between two and five years after purchase are subject to five percent RGPT.

There are a few exemptions allowed for RPGT:

- An individual will be given an exemption equal to RM10,000 or 10% of the chargeable gain, whichever is greater.
- An individual who is a Malaysian citizen or a permanent resident will be given an once-in-a-lifetime exemption on any chargeable gain arising from the disposal of his/her private residence if he/she elects in writing for the exemption to apply to that private residence.
- Exemption given to transactions in which the disposal price is deemed equal to acquisition price (i.e. “No gain no loss” transactions) ; this includes transfer between spouses / family members, disposal due to compulsory acquisition, and gifts to the government, local authority, or charity exempt from income tax.

8.4 Stamp Duty

When purchasing a property, stamp duty must be paid on the Memorandum of Transfer. Stamp duty is based on the purchase price:

- For the first RM 100,000, stamp duty is one percent
- For the next RM 400,000, stamp duty is two percent
- Anything over RM 500,000, stamp duty is three percent

There are penalties for the late payment of stamp duty.

8.5 Development Tax – Development Charge and Premium

Development charge is a tax that is levied when planning permission is granted to carry out development projects that **increase the value of the land**. For instance:

- rezoning to a higher value use
- increasing the plot ratio

9.0 TAX CALCULATION

9.1 Quit Rent

Quit Rent is a form of land tax collected by the Malaysian State Governments. It is imposed on owners of all land. The amount of the quit rent varies from state to state and even within each state. It is payable annually at a rate of 1 sen to 2 sen per square foot. The quit rent liability is generally estimated to be less than RM100 per year.

Example of the charged imposed on a dwelling house is as follows:

Dwelling House	RM per square metre
Country land	7.00 per 100 sm
Village land	9.00 per 100 sm
Town land third layer	11.00 per 100 sm
Town land Second layer	13.00 per 100 sm
Central Business District	15.00 per 100 sm

9.2 Assessment Tax

Assessment Tax, also known as assessment rates is a form of taxation imposed by local authorities on all properties in the respective authorities which is based on the 'Annual Value' or 'improved value and the Annual 'Percentage Rate'. Assessment rates must be paid twice in a year i.e. in January and July. An example of how an assessment rate is calculated:

Annual Value of Property	RM 3,000
Annual Percentage Rate	10%

Assessment rates of property is - $RM3,000 \times 10\% = RM300$ per annum or RM150 every 6 months

9.3 Real Property Gains Tax

RPGT is calculated based on **net chargeable gains**. To arrive at the net chargeable gains, a few expenses need to be subtracted such as legal fees, real estate fees (sales commission), administrative fees, and expenditure incurred to maintain / upgrade the property (including interior design works).

Gross Chargeable gains = Acquisition price – Disposal price

Net chargeable gains = Gross chargeable gains (ie. profit) – Individual exemption waiver (RM10,000 or 10% of the chargeable gains)

Tax payable = RPGT Rate (based on X years of property ownership) x Net chargeable gains

Example

Ali (Malaysian citizen), purchased a house in 2013 for RM415,000. He sold it in 2015 for RM560,000. Let's assume that Ali spent RM30,000 in legal fees, agent fees, administrative fees, and maintenance works;

Chargeable gains = RM560,000 – RM415,000 = **RM 145,000**

Net chargeable gain to be taxed

= (RM145,000 – RM30,000) - 10% individual exemption

= RM115,000 - RM11,500

= **RM103,500**

Ali sold the property within two years of purchasing it, so the tax imposed on RPGT is 30%.

Tax payable = 30% x RM103,500 = **RM31,050.00**

9.4 Stamp Duties Tax

The following example shows how to calculate the stamp duty for a property transferred at a market value of RM500,000.

First RM 100,000	: RM 100,000	1%	RM : 1,000
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RM 100,001 to 500,000	: RM 400,000	2%	RM : 8,000
RM 500,001 and above	: RM 0	3%	RM : 0
	-----		-----
Total	: RM 500,000		RM: 9,000

Total Stamp Duty Payable is **RM9,000.00**

9.5 Development Tax – Development Charge and Premium

On planning permission to the change of land use, the differences in the capital value which is current **OMV** of the proposed change of land use of the land and the exiting value of the land is taxable at 30%.

Assuming the land value held under agriculture before conversion is RM100,000. Upon planning approval, the approved land (building) is revalue at RM200,000. Therefore, the taxable amount for planning permission is RM30,000 which is 30% of RM100,000 (the difference in value). In cases where the land is located in local authorities, the amount chargeable is at 20% or RM20,000.

Permission to increase the density and floor space too are subject to the above tax.

9.6 Corporate Tax – Gains Tax and Income Tax

In Malaysia, the Corporate Income tax rate is a tax collected from companies. Its amount is based on the net income companies obtain while exercising their business activity, normally during one business year. Revenues from the Corporate Tax Rate are an important source of income for the government of Malaysia.

The common corporate tax rate in Malaysia is 25%. In general, corporations are taxed on income derived from Malaysia with the exception for banking, insurance, air transport or shipping sectors. Taxable income comprises all

earnings derived from Malaysia, including gains or profits from dividend, interest, royalty and land trading business or other earnings.

Withholding tax

Types of taxable income	Tax rate
Interest	15%
Royalty	10%
Technical fee	10%
Rental of movable property, fee for service rendered in Malaysia and other earnings	10%

Exercise 8

1. List all the property tax that you know.