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Question.....

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- DEPRECIATION OF BOTH OLD AND NEW ASSETS IS ON STRAIGHT LINE METHOD
- THE OLD MACHINE HAS A BOOK VALUE OF KSH 600,000 AFTER 5 YEARS
- THE COMPANY'S FINANCE DIRECTOR HAS CONDUCTED MARKET RESEARCH AND FOUND THAT WITH KSH 1,410,000 A NEW REPLACEMENT MACHINE CAN BE ACQUIRED AND BE USED FOR THE REMAINING 10 YEARS.
- NEW MACHINE IS TO INCREASE SALES FROM THE CURRENT KSH 1,200,000 TO KSH 1,320,000 P.Q. FOR 10 YEARS.
- THE NEW MACHINE WILL REDUCE OPERATING COSTS FROM KSH 840,000 TO KSH 600,000 P.Q. FOR THE 10 YEARS ECONOMIC LIFE OF NEW MACHINE.
- THE NEW MACHINE HAS AN ESTIMATED SCRAP VALUE OF KSH 240,000
- THE COMPANY'S TAX RATE IS 40%
- THE COST OF FINANCE IS 10% P.Q.

REQUERED - Advise the Company whether the old machine should be replaced with the new machine or not.

THERE ARE TWO FORMS OF PRESENTATION AVAILABLE

(i) USING INCOME STATEMENT FORM

CASHFLOW NEW MACHINE	KSH 1,410,000
LESS: OLD MACHINE SCRAP VALUE (240,000)	✓
= TAX ALLOW ON CAPITAL LOSS (192,000)	(312,000)
NET CASHOUT/TAXES	KSH 1,128,000

- (i) The Co. requiring quotation must be ready during the continuance of this quotation to:
- Present half-yearly interim statements including its P&L A/c, Balance Sheet or any other useful statements indicating its performance
 - Present the Co. Chairman's report on the accounts to the Stock Exchange Council.
 - Inform the Stock Exchange Council of any sale or purchase of fixed assets which have materially affected the Company's existing Capital Structure.
 - Notify the NSE Council of any announcement of dividends, scrip issues and rights issues three weeks before the closure of the shareholders' register so that the brokers can inform their potential buyers or sellers accordingly so that buyers and sellers can know whether shares are to be bought ex or cum dividend.
- (ii) The Co. granted quotation must pay an annual quotation fee which will vary from time to time as per the Stock Exchange Council rates
- (iii) The Co. granted quotation must recognize and register only those shares sold to different parties thru brokers who are members of the NSE and for

Shares sold by companies which have had a very good history of dividend payment for a number of years usually such shares will be in high demand in the stock exchange and there will be little or no supply of such shares as the present shareholders cannot see such investments as much as they are viewed as very stable.

Examples of Blue Chip Companies in Kenya are:

- a) Kenya Breweries
- b) B.A.T
- c) KPLC
- d) Brooke Bond (K) Ltd
- e) Nation Newspapers Ltd.
- f) Std " "

② QUOTATION - the process by which a company's shares are allowed to be traded at the stock exchange.

③ UNDERWRITING - is the process by which a co. wishing to issue new shares to the public enters into an arrangement with an institution such as a bank, an insurance co. or any other financier under which this institution will agree, for a fee, to acquire a stated proportion of any shares left unsold after a public issue of shares. Such institutions that undertake underwriting are called UNDERWITERS.

~~REPLACEMENT OF ASSET DECISION~~

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Replacement of assets calls for capital budgeting techniques of NPV & IRR

- These principles are applied such that an investor can replace an asset based on its cashflows and cashoutflows associated with the new asset as compared to the cashflows and cashoutflows generated by the existing asset.

PRINCIPLES OF REPLACEMENT OF ASSETS

- ① Considers the INCREMENTAL CASHFLOWS i.e. the difference between cashflows of the new asset and those of the old asset.
- ② Considers the OPERATIONAL COSTS. If Operational costs of new Asset > operational costs of existing Asset, then replace.

FACTORS TO CONSIDER IN REPLACEMENT OF ASSET DECISIONS

- ① MAINTENANCE & OPERATIONAL COST
- ② RESIDUAL / SCRAP VALUE / SALVAGE VALUE OF BOTH OLD AND NEW ASSET.
- RESIDUAL VALUE OF OLD ASSET REDUCES THE INITIAL COST OF THE NEW ASSET.
- RESIDUAL VALUE OF NEW ASSET IS A CASHFLOW OF THE NEW ASSET
- ③ COMPARE INITIAL CASH OUTLAY OF NEW ASSET TO THE PRESENT VALUE OF ITS CASHFLOWS

(10)

STOCK EXCHANGE OPTIONS - the term option means the right but not an obligation to transfer (for a fee) or the right to buy or sell shares by either party for a period of 3 months after which the right expires automatically. These options include:

- (i) A PUT OPTION - right to sell shares to a given party at the prevailing market price from the day the option is arranged until 3 months after which it expires or another option is arranged.
- (ii) A CALL OPTION - gives the broker the right to buy a specific type of share at the prevailing market price on the day the option is arranged until the next 3 months when the option may be renewed or expires automatically.
- (iii) DOUBLE OPTION - gives the right to buy or sell specific type of shares at a given time using market price on the day the option is arranged until the next 3 months when it can be renewed or expires automatically.

(11)

PARLI PASSAU - signifies a situation whereby a co. issues new shares to new members either bonus or rights issues and these issues are issued at the



- (ii) **BONERS** - are speculators who believe that prices are high now and are likely to fall in future. So they sell now and **Buy in future** to make a profit.
- (iii) **SIGERS** - these are jobbers or speculators who buy securities in the primary market at lower prices and sell them in the secondary market at higher prices in order to make profit.
- (7) **SPECULATION** - a situation where a jobber buys securities when their prices are low and sell them in future in times are high in order to reap profits. Profit will depend on the accuracy of their expectation or judgement.

- (8) **MARKEt VALUE** of SHARES - the company's share prices as quoted in the stock exchange.

~~MARKEt PRICE OF A SHARE~~ depends on

- (i) The Co-goodwill or reputation
- (ii) Its level of dividend payment
- (iii) The Co profitability
- (iv) Market prices are determined by demand and supply forces in the stock exchange.

- (9) **PAR VALUE / NOMINAL VALUE / FACE VALUE** - of SHARES / STOCK - is the value of the Share or security as printed on the face of the Share certificate.



IMPORTANCE/BENEFITS OF STOCK EXCHANGE TO AN ECONOMY.

- ① FACILITATES INVESTMENT PROCESS
- ② PROVIDE PHYSICAL MARKET AND HENCE FACILITATES CONTINUOUS TRANSACTIONS THAT TEST VALUES OF SECURITIES
- ③ STABILIZE SECURITY PRICES - BRINGS ABOUT LIQUIDITY/MARKETABILITY OF SECURITIES
- ④ HELPS IN ISSUE OF NEW SECURITY UNITS AND FACILITATES THEIR SUCCESSFUL FLOTATION

ATTRIBUTES OF A GOOD MARKET - all types of markets.

- ① TIMELY AND ACCURATE INFORMATION ON PRICE AND VOLUME OF PAST TRANSACTIONS AND ON PREVAILING DEMAND AND SUPPLY FORCES
- ② LIQUIDITY/MARKETABILITY OF ASSETS TRADED ENSURING THAT PRICES ARE CLOSE TO REVENUE TRANSACTIONS.
- ③ LOW TRANSACTION COSTS SO THAT THERE WILL BE MANY BUYERS AND SELLERS
- ④ RAPID ADJUSTMENT OF PRICES TO NEW INFORMATION - EMH.

The total amount of these face values (i.e. Face value per share \times No. of shares) represents the company's Share Capital.

In the event of liquidation the maximum amount the shareholders can be refunded is these face values at most.

* This is the TRUE VALUE of the shares from the Company's point of view.

Because of the following reasons.

- i) This is the max value the Co. will be obliged to refund to its shareholders in the event of its liquidation.
- ii) It is the value on which the Co. is supposed to pay a dividend to the shareholders.
- iii) This is the value represented in the company's capital structure as total Share Capital.
- iv) This is the same value on which the Co. will base its payment of either bonus or rights issue and also stock splits or reverse stock split of shares.
- v) This is the value on which equity will grow in particular on ordinary Share Capital.

DIVIDEND - is the price of return a Co. will pay for using Share Capital i.e. return to the providers of Share Capital i.e. Ordinary & preference Share Holders.

TERMINOLOGIES USED IN STOCK EXCHANGE MARKET

Moi University Examination Answer Book



August 2015 Series

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- ① PRIMARY MARKET - a market for first-hand or new issue of securities such as ordinary shares, preference shares and bonds
- ② SECONDARY MARKET - market for subsequent issue of securities. This is the most active section of the stock exchange because trading is continuous.
- ③ CAPITAL MARKET - market for long-term sources of finance - shares, bonds, debentures, treasury stocks etc.
- ④ BROKERS - are members of the stock exchange who act as a link between the investing public and the stock exchange. They bring buyers and sellers together and earn a commission based on the par value of securities.
- ⑤ JOBBERS - are principals in their own right who buy or sell securities in their own names on wholesale basis. They make profit which is the spread-difference between offer and bid price.
- ⑥ TYPES OF JOBBERS:
- (i) BULLS (ii) BEARS (iii) STAGS
- BULLS - are speculators in the stock exchange who believe that prices of securities are now low and are bound to rise in future so they buy now and sell in future at higher prices to make profit.

(F) BROKERS - are the middlemen between the investing public and the stock exchange. There is no member of the public who can buy or sell shares unless a broker is party to this transaction. These brokers act on behalf of the members of the public who want to buy or sell shares.

- These stock exchange brokers are supposed to give technical information and advice to members of the public on matters relating to the shares available on stock exchange. They give information such as:

- (i) The dividend yield on the shares needed
- (ii) The Company's present owners - directors and number of existing shareholders
- (iii) How the Co. came into being
- (iv) The Company's present EPS
- (v) The Company's present growth in equity
- (vi) The Company's dividend policy.
- (vii) The Company's dividend cover
- (viii) The Company's future prospects in particular contemplated investments and expansion programmes.

- Brokers earn commission known as BROKERAGE commision which is fixed on the par value of shares sold

(5) JOBBERS - are principals in their own right who buy or sell securities in their own names on wholesale basis.

- They are not allowed to deal with the

(18) CONTINGENT OPERATIONS - operations that are under situations where buyers of shares might defer payment for purchase of shares until a later date when they have identified a seller ready to accept such an arrangement ie to be paid later after delivering the shares. However the price of these securities are predetermined as the day this arrangement is entered into and will not change regardless of the movement in the price of the share in question.

(19) STOCKBROKER DEALER - is a Securities broker who acquires his own inventory of securities and buys these from and sells them to his customers - the Mkt in general. He may also be a broker but should avoid conflicting interest in the two functions.

(20) MARKET MAKER - is a dealer who undertakes to buy and sell specified securities, adjusting his bid and offered prices to maintain an orderly and relatively stable market.

(21) MERCHANT BANK - this term often refers to an underwriting firm because the firm buys securities and merchandise to resell. A Merchant Bank typically engages in underwriting and in money market operations but often also in other securities activities including as a securities dealer providing investment advice, researching companies whose securities are traded in the market, advising on mergers and acquisitions, managing and investing in venture capital and sometimes sponsoring and managing a mutual fund.

(22) OTC MARKET - trading of securities outside the Organized Stock Exchange. The broker buys and sells securities to and from his own inventory. OTC market is off the exchanges ie it is a dealer market. The customer or other brokers representing customers sell securities (or buy from) a broker who acts as a principal ie

price which means that there will be a difference (discount) on the price at which the shares are issued. This speculation is the job of dealers who deal in such shares issued in the primary market.

(18)

- (15) RANDOM WALK - is the process by which security prices in the stock exchange behave in an unpredictable manner which means that the changes in security prices usually follow no consistent pattern i.e. are random in nature. Since these share prices are not consistent in their change it means that there will be no correlation i.e. the movement in share prices at different periods in time.

The STOCK EXCHANGE INDEX which depends mainly on changes in share prices will equally change in a random manner increasing/decreasing randomly over some time. For this reason financial analysts use their judgement to identify viable securities although their judgement sometimes may be reduced to mere luck as a result of the random walk nature of shares.

- (16) WATCHED CAPITAL - is a term used in the stock exchange to identify companies which are financially strong and happen to issue bonus shares from their accumulated reserves. The shares are issued in proportion to the existing shareholding e.g. 4 for 5 shares @ 10/- After this the price of shares fall due to artificial ones supply of shares. This will decrease the dividend yield (D/Y) on these shares but will not affect the original dividend return to the shareholders.

- (17) AUSTIN LEVEL - signifies circumstances where a large number of buyers meet together in the stock exchange and during such time shares fall or reach a given price level due to the presence of such large numbers of buyers and sellers. The level reached by share prices will tend to set the upper and lower limit at which shares will be dealt in. The financial analysts at the stock exchange by observing the offer and bids can determine the most appropriate

(2)

SECONDARY MARKET - is a market for second-hand shares, stocks, debentures and other securities which are changing hands among the members of the public. i.e. it is a market for those shares which the issuing co. has already sold to the public.

→ This is the busiest market in the NSE and stock brokers are the main selling/buying agents to the general public.

- This secondary market is dominated by 6 Broker firms also known as Brokerage Houses which are all members of the NSE. They are:

- (1) CHANDULAL SHAH LTD
- (2) FRANCIS THUO & PARTNERS LTD
- (3) NYAHA SECURITIES LTD
- (4) DYER & BLAIR LTD
- (5) NGENYE KARIUKI & CO. LTD
- (6) FRANCIS DRUMMOND & CO. LTD.

(3)

MEMBERSHIP AT NSE - Membership is made up of BROKERS, and for this reason members of the public buy and sell shares through these brokers. These brokers form a Council which is responsible for the running of day to day operations of the Stock exchange. Brokers and Jobbers form membership of the stock exchange.

⑤ SELLING PRICES OF SHARES - A company's shares can sell at any of the following prices:

- (i) Cum-div (cd) or Ex-div (xd) - with or without cash dividends declared.
- (ii) Cum-right (cr) or Ex-right (xr) - without rights issue.
- (iii) Cum-Cap (cc) or Ex-cap (xc) - with or without a bonus issue. Cap stands for Capital Side bonus issue results in Revenue earnings being capitalised.
- (iv) Cum-all (ca) or Ex-all (xa) - with or without all the above types of dividends attached to the issue of shares.

⑥ GILT-EDGED SECURITIES - refers to those types of securities available in the financial market which are considered very safe as regards the payment of interest and later the repayment of principal as and when they fall due. For this reason, securities known by this name are GOVERNMENT TREASURY BONDS.

They are regarded as very safe because the Govt. cannot default or delay in payment of interest or principal when these fall due.

⑦ BLUE CHIPS - refers to the highest grade of equity i.e. those ordinary

This reason any transfer of shares by such a Co. must be done thru a broker who must BE A MEMBER OF NSE.

- (4) The NSE council reserves the right to suspend or cancel in part or in whole the company's issue of shares without giving reasons for such an action. (ii)
- (5) The Co. quoted must abide by the rules of conduct and regulation governing the quotation of companies at the NSE.

DEFINITION AND TERMS -

- (1) PRIMARY ISSUE MARKET - is the market of new issue of new shares, debentures, loan stock etc either by a newly quoted Co. or by an already quoted Co. issuing extra new shares to the public.
- To float shares the Co. must issue a detailed prospectus and must also be a registered public limited Co. under the Companies Act Cap 148 of the laws of Kenya.
- To float shares in this market such a Co. must obtain permission from:
- (i) New Issue Capital Issue Committee made up of officers from CBK and Treasury which assess the Co's

terms which apply to the existing Ordinary Shares. This means that a Share issued Paid, Paid-up will rank in all aspects at par with existing ordinary shares e.g.

- (1) Get the same dividend rate
- (2) Same Voting rights
- (3) Similar growth in equity
- (4) Similar Statutory rights

(17)

(12) BARTHOON - that deal b/w jobbers and brokers whereby the jobber quotes a price i.e. buying or selling price and the broker obtain offers of such quotations from various jobbers from whom they choose the best buying price for their clients. However, there are no jobbers at the NSC and as such the bargains take place b/w various brokers in the stock exchange.

(12) CONTRACT NOTE - this is a note used in the purchase or sale of shares and it is written by the broker wherein he describes the results of the sale or purchase of a share. The note will contain

- (i) the sale/purchase price of the share
- (ii) the broker's commission
- (iii) the stamp duty
- (iv) the transfer fee to change the shareholders register in case of a buyer

- If sent by a selling broker it is known as a SALE CONTRACT NOTE and if sent by a buying broker it is known as a PURCHASE CONTRACT NOTE

(14) STAKING - is the speculation which occurs in the new stock issue in that market where the share prices may be lower than their subsequent contemplated

To obtain a quotation is a process by which a company's name will appear on the Stock Exchange list whereby its shares are said to be listed and thus dealt with in - (a process by which a co. will have permission to have its shares bought and sold in the stock exchange).

REQUIREMENTS FOR COMPANIES SEEKING QUOTATION ON THE NSE

- 1) A Co. seeking quotation must be a registered Co. with the Registrar of Companies as a Limited Co. under cap 486. Hence it must submit a certificate of Registration to the Stock Exchange Council.
- 2) The Co. applying for quotation must be ready to offer for sale to the public the lower of Ksh 1,000,000 or 20% of the Share Capital to be raised.
- 3) A Co. wishing quotation must provide to the Stock Exchange Council details of:
 - (i) Its current directors
 - (ii) Its legal advisors or solicitors or lawyers
 - (iii) The Company's Secretary
 - (iv) The Company's auditors.
- 4) The Co. must provide to the Stock Exchange Council particulars of:
 - (i) The Company's financial year end.



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$$\text{VALUE-WEIGHTED INDEX} = \frac{\text{YEAR MARKET CAPITALIZATION}}{\text{BASE YEAR MARKET CAPITALIZATION}}$$

$$= \frac{\sum \text{NO. SHARES} \times \text{YEAR PRICE}}{\sum \text{NO. OF SHARES} \times \text{BASE YEAR PRICE}}$$

MARKET CAPITALIZATION IN YEAR

$$= 10 \times 70 + 20 \times 50 + 5 \times 90 + 15 \times 80 + 50 \times 24$$

$$= 700 + 1000 + 450 + 1200 + 1200 = \underline{\underline{4550}}$$

BASE YEAR MARKET CAPITALIZATION

$$= 10 \times 50 + 20 \times 40 + 5 \times 100 + 15 \times 20 + 50 \times 15$$

$$= 500 + 800 + 500 + 300 + 750 = \underline{\underline{2850}}$$

$$\text{VALUE-WEIGHTED INDEX} = \frac{4550 \times 100}{2850}$$

$$= \underline{\underline{160}}$$

CAPITAL MARKET THEORY was taught
in your 3rd & 4th year of study.

- ① EFFICIENT MARKETS
- ② EFFICIENT MARKET HYPOTHESIS
- ③ FORUMS DEGREES OF EMH - WORKS/NOT WORKS STRONG FROM EMH
- ④ LESSONS ON EMH
- ⑤ APPROACHES TO VALUATION OF SECURITIES - TECHNICAL, FUNDAMENTAL, RANDOM-WALK THEORY AND THEIR IMPLICATIONS ON EMH
- ⑥ THEORY OF EXPECTATIONS FORMULATION



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for other clients. Bargain could also
be between brokers.

(19)

CONTRACT NOTE - a note used in
the stock exchange for recording
the purchase and sale of shares.
It is written by the broker and
it describes the results of a sale
or purchase of shares.

- The NOTE contains the following:
 - (i) The sale or purchase price per share
 - (ii) The broker's commission based on fair value
 - (iii) The stamp duty to the government
 - (iv) The transfer fee to change the shareholder register in case of a buyer.

- If sent to by a selling broker,
it is a SALE CONTRACT NOTE.
- If sent to a buying broker, it is a
PURCHASE CONTRACT NOTE.

(20)

STAKING - Speculation in the
primary market for new issue of
securities - buying new issues on
wholesale at lower prices which
are sold later in secondary
market at higher price

(21)

SHORT SALE - Sale of shares not
currently owned with the intention
of purchasing them before due date
for settlement. Same as SHORT
POSITION.

(22)

LONG POSITION - Selling shares
already owned.

STOCK MARKET INDICES.

Moi University Examination Answer Book



Aug/Sep 2016 Series

CONSTRUCTION OF STOCK MARKET INDICES

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INVESTORS often ask the question: How is THE

STOCK MARKET DOING?

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- This interest in the broad market movement stems from the general observation that stock price tend to move together.
- The general movement of the market is typically measured by indices representing the entire market or important segments thereof.
- Most of the stock market indices used in practice are of two types.

TYPES OF STOCK MARKET INDICES

- ① EQUAL-WEIGHTED INDEX - is an index reflecting the simple ARITHMETIC MEAN / AVERAGE of the PRICE RELATIVES of the sample shares in a certain period - could be a day, week, month, year etc with reference to a base year.
- ② VALUE-WEIGHTED INDEX - is an index reflecting the AGGREGATE MARKET CAPITALIZATION of the sample shares in a given period (day, month, week, year etc) in relation to a base year.

- N.B A STOCK MARKET INDEX - is simply a measure of economic performance (price movements) of a sample of shares where price in year t is compared with price in a base year. This is PRICE RELATIVE
- $$= \frac{\text{PRICE IN YEAR } t}{\text{PRICE IN BASE YEAR}} \times 100$$

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Question

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- (4) TAKE CARE OF DEPRECIATION ALLOWANCES OF OLD AND NEW ASSET.
- (5) GET PRESENT VALUE OF INCREMENTAL CASHFLOWS.
- (6) ADD PRESENT VALUE OF NEW MACHINE ASSET SALVAGE VALUE.
- (7) IF NPV OF INCREMENTAL CASHFLOWS IS POSITIVE REPLACE, IF NEGATIVE RETAIN THE OLD ASSET.

STEPS TAKEN IN REPLACEMENT DECISION

- (1) ESTIMATE THE ACTUAL CASHOUTLAY OF THE NEW ASSET.
 - (2) DETERMINE INCREMENTAL CASHFLOWS.
 - (3) FIND NPV OF INCREMENTAL CASHFLOWS.
 - (4) ADD PRESENT VALUE OF SALVAGE VALUE OF NEW ASSET.
 - (5) DETERMINE NPV → ~~IF Positive → Replace~~
→ IF NEGATIVE ~~RETAIN~~
- IF IRR IS USED → REPLACE THE OLD ASSET
IF THE IRR CALCULATED > COST OF CAPITAL USED TO DISCOUNT INCREMENTAL CASHFLOWS
IF IRR < COST OF CAPITAL → ~~DO NOT REPLACE~~

ELABORATE EXAMPLE

- A MACHINE WAS PURCHASED 5 YEARS AGO AT A COST OF KSH 900,000
- EXPECTED ECONOMIC LIFE OF 15 YEARS AT THE TIME OF PURCHASE
- THE MACHINE HAS A SCRAP VALUE OF 2000 BUT IT CAN FETCH KSH 120,000 IF SOLD TODAY

Question.



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CONTINUED OPERATIONS - This is the buying and selling of shares or credit. Cash is not exchanged immediately but after some time

(2)

DEALER - This is a professional who acquires his own inventory of securities for sale to others at a higher price in order to make a profit. He may also be a broker.

(3)

MARKET MAKER - Is a dealer who undertakes to buy and sell specified securities adjusting his bid and offer prices to maintain an orderly and relatively stable market.

(4)

(4)

MERCHANT BANK - also known as UNDERTAKERS. Also deal in money market operations and also in capital market operations giving investment advice, and research for companies whose securities are traded in the market, advising on mergers, acquisitions, raising customer funds, mobilizing venture capital and managing mutual funds.

(5)

(5)

OVER-THE-COUNTER (OTC) MARKET - Only kind of trading in securities outside one organized stock exchange. Very active these days of modern TCP. It can be a dealer market and also brokers market.

(6)

ability and financial position for reasons of safeguarding public finance. It also assesses whether the timing of the issue is right i.e. at a time when the liquidity position in the economy will allow the purchase of the planned issue of shares.

(ii) From the Stock Exchange Council thro' a broker who will also sponsor the issue i.e. sell the shares on behalf of the Co. At this point the Co. and the broker must set the price of the new issue. Such price must take into account the following:

(1) The Company's P/E ratio = $\frac{MPS}{EPS}$. This ratio will indicate the payback period of the shares.

(2) Expected Dividend Yield = $\frac{DPS}{MPS} \times 100$

which gives the approximate expected return on the share to the shareholders.

(3) Dividend Coverage Ratio

(i) Ordinary dividend = $\frac{EAT + \text{Pref Dividends}}{\text{Ordinary dividends paid}}$

which gives the number of times ordinary dividends are covered by available profits.

(ii) Preference dividend cover = $\frac{\text{Profits after tax}}{\text{Pref. dividends paid}}$

which indicates the number of times preference dividends are covered by available profits.



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- It is also the value on which the company will pay dividend.
- The total amount of these par values represents the company's share capital = Par value per share \times No. of shares outstanding.
- In the event of liquidation the maximum amount the shareholders can be refunded is these par values at most ie Par value \times No. of shares outstanding.
- It is the true value of the shares from the company's point of view because of the following:
- This is the maximum value the Co. will be obliged to refund to its shareholders in the event of liquidation.
 - If the value on which the Co. pays dividend to its shareholders.
 - It is the value on which the Co. will base payment of either bonus shares, Right issue and also stock splits or reverse splits of shares.
 - (It is the value on which equity will grow), $g = b + r$ where b = retention rate, r = internal rate of return, g = growth rate of dividend on ordinary shares

Dividend - is a return on Share Capital investment i.e on Ordinary and preference shares

SELLING PRICES OF SHARES - A shareholder can sell at any of the following Cum-Div (cd) or EX-DIV (xd) with or without dividend.

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① Use MM Proposition II to get cost of 100% equity financed firm (K_u).

$$MM\text{II} = K_s = k_d + (k_d - k_e)(1 - T) \times \frac{V_e}{V_e + k_d}$$

$V_e = \text{cost of equity capital} + \frac{k_d}{1 - \text{levered to}}$

$$0.206 = k_u + (k_u - 0.12)(1 - 0.35) \times \frac{1}{1 + k_u}$$

$$\begin{aligned} 0.206 &= k_u + 0.65k_u - 0.14 \times 0.65 \\ &= 1.65k_u - 0.0910 \end{aligned}$$

$$1.65k_u = 0.297$$

$$k_u = \frac{0.297}{1.65} = 0.1800 \quad 18\%$$

The cost of EQUITY capital of UNLEVERED Firm = 18%.

② NPV if THE Project is 100% EQUITY FINANCED

YEAR	CASH FLOW(KSh)	DISCOUNT RATE	PV KSh
1	400,000	0.847	338,800
2	-800,000	0.718	574,400
3	600,000	0.609	365,400
4	600,000	0.516	309,600

PRESENT VALUE OF FUTURE CASH FLOWS @ k_u 1,588,200

LESS INITIAL CASH OUTLAY 1,600,000

NET PROJECT CASH FLOW - KSh. (11,800)

③ DETERMINE PRESENT VALUE OF BENEFITS

$$\text{CASH SHRED} = 35\% \times 100,000 \times 11\%$$

$$= \text{KSh } 49,000 \text{ P.y for 4 years}$$

discounted at pre-tax cost of debt = 14%.



- The unquoted capital and the company's auditors must certify this position.
- 7) The Co. must be willing to offer to the public a minimum issue of shares which must be sponsored by a broker who must be a member of THE NSE. Since this is a public quotation the Co. must prepare a prospectus for the new issue which must contain detailed information about the Co. as is required by the NSE council.
- 8) The Co. needing quotation must be willing to pay a hearing fee payable immediately the application for quotation is submitted to the Stock Exchange council.
- 9) The Co. must also be ready to pay a fee for each class of shares or debentures for each quotation is needed. This fee must be paid within 30 days after quotation has been granted by the NSE council.
- 10) The Co. must pay to the NSE council for any alterations in its existing capital structure affecting shares except for such issues as rights issue, scrip issue or bonus issues.

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Question

shares to the public enters into an agreement with a financial institution who will agree for a fee to place the shares of the issuing co. and is ready to buy any share not bought by the general public.

Institutions that undertake this underwriting are called ~~underwriters~~ - who are merchant banks or investment companies

- (15) STOCK EXCHANGE OPTIONS - are call and puts options on shares and stock indices

- (16) DOUBLE OPTION - The right to buy or sell specific types of shares at a given market value price on the day the option is arranged until the next three months when it can be exercised or expire automatically.

- (17) DARK PASSEUR - a situation where a co. issues new shares to new shareholders say bonus or rights issues and the shares rank at par with the existing shares as to: Voting rights, receipt of dividends, similar growth in equity and similar statutory rights.

- (18) BARGAIN - the deal between jobbers and brokers whereby the jobber quotes a price - buying or selling price and the broker obtain offers of such quotations from various jobbers from which they choose the best price - buying and selling

price changes, upon which they expect to earn a profit or at worst a loss, to such ~~judges~~ depending on the accuracy of their expectations & judgement.

(2) MARKET VALUE OF SHARES - The Company's share prices as quoted in the Stock Exchange i.e. the price at which a Company's shares are dealt in the stock exchange. This price depends on:

- (i) The Company's goodwill or reputation
- (ii) Its level of dividend payment
- (iii) The Company's profitability.

— Market value (price) is not fixed and is determined by the forces of demand and supply, although it may also be influenced by political stability in a given economy.

(3) PAR VALUE, FACE VALUE OR NOMINAL VALUE OF SHARES/ STOCK

This is the value of a share as printed on the face of the share certificate.

— It is also the value on which the issuing Co. of such a share will pay a return to the holder in form of dividends i.e. dividend rates are based on par value.

members of the public directly, implying brokers. This is to avoid exploiting members of the public.

In most cases jobbers buy shares from Companies or institutional investors and sell these to brokers who are also buying on behalf of the public.

Jobbers can get "return" which is a profit made between the price at which they bought the securities and the price at which they sell the same securities to the brokers.

④ TYPES OF JOBBERS - indicate the role of a given jobber in a particular transaction, which means that one jobber can operate under any one or all the following types:

- (i) BULLS
- (ii) BEARS
- (iii) STAKES

BULLS - A bull is a speculator on the Stock exchange who buys stocks or shares in expectation of a rise in their prices i.e. these are jobbers who operate in the secondary market of the Stock exchange and buy shares when they speculate that their prices are low and expect them to rise in future so that they can profit on them.

The term is also known as a BULL.

ADJUSTED PRESENT VALUE METHOD OF CAPITAL BUDGETING

MoU University Examination Answer Book

DEC 2013 Series

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APV - is an alternative¹ to the traditional NPV method which takes into consideration the benefits and costs of the methods of financing a proposed investment project.

STEPS IN THE APV METHOD

- ① DETERMINE COST OF CAPITAL (i.e. discount rate) assuming that the project is 100% equity financed - use MM II if given $k_e = \text{cost of equity capital of firm}$
- ② DETERMINE NPV OF THE PROJECT USING THE COST OF CAPITAL OF 100% EQUITY FINANCED FIRM (k_e)
- ③ ADP PRESENT VALUE OF BENEFITS DISCOUNTED AT THE PRE-TAX COST OF DEBT (NOTE: Debt financing is the only financing that brings in benefits in form of interest tax relief) i.e ADD TAX SHELTER ON INTEREST EXPENSES discounted at $k_d = \text{cost of debt}$ ~~at unlevered rate}~~
- ④ DEDUCT ALL ISSUE COSTS OF FINANCING OF DEBT AND EQUITY FINANCING
- ⑤ $\text{APV} = ② + ③ - ④$

ELABORATE EXAMPLE

A Project is to cost Ksh 1,600,000 with 4 years life. It is to be financed by a loan of Ksh 1,000,000 at loan costs of Ksh 10,000. The balance is to be rights issue at a cost of Ksh 40,000. This method of financing is to leave the existing Debt: Equity ratio of 1:1 intact. The cost of equity capital of the firm is debt-financed is 120.6%. P-9. Cash flows are 40,000, 80,000, 600,000, 600,000 Ksh for the 4 years. Tgt Rate is 35%



Question.....

- (ii) Cum-Dividend (c) or ~~Right (x)~~ - without
without rights issue
- (iii) Cum-Cap (cc) or Ex-Cap (xc) - with no
without bonus/capital issue entitlement.
- (iv) Cum-all (ca) or Ex-all (xa) - with or without
all the above attached to the issue of
shares.

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- (11) **GILT-EDGED SECURITIES** - refers to risk-free government securities like T-Bills and Treasury Bonds which are free of default risk.

(15)

- (12) **BLUE CHIPS** - refers to the highest grade of equity for those reputable companies with a good history of paying high dividends consistently. Demand for such shares is very high and supply is low since owners of such shares believe that it is the best investment and hence not ready to part with them. These are ordinary shares of mature declining firms which have exhausted all probable investment opportunities and hence have a lot of surplus funds. They include Bajaj Finserv, PNB, KPLC, Provo Board Ltd, Nation Newspapers Ltd, STD Newspapers Ltd etc.

(16)

- (13) **QUOTATION/LISTING** - is the process by which a company is allowed to trade its securities in the Stock exchange through a broker.

- (14) **UNDERWRITING** - the process by which a company wishing to issue new



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$$\begin{aligned} \text{PV of Benefits} &= 49000 \times \text{PVIFA } 14\%, 4 \text{ yrs} \\ &= 49000 \times 2.914 \\ &= \underline{\underline{\text{Ksh } 142,786}} \end{aligned}$$

Summary

NPV if all equity financed (Ksh 11,800)
ADD PV of Benefits

$$\begin{array}{rcl} & & 142,786 \\ \text{Less Issue costs: Dost 10,000} & & \\ \text{equity } \underline{10,000} & & (50,000) \\ & & \underline{\underline{\text{Ksh } 80,986}}} \end{array}$$

Thus, because of method of financing, the project is viable since it has a positive NPV of Ksh 80,986 which means the value of the firm will increase by Ksh 80,986.

merits and demerits of APV over the traditional NPV.

merits

- ① APV considers method/source of financing whereas NPV does not.
- ② APV considers the benefits and costs of each source of financing whereas NPV does not. ③ APV looks at costs explicitly whereas NPV looks at costs implicitly.
- ④ Getting issue costs is not easy
- ⑤ Getting cost of capital of 100% equity financed firm (Ksh) is not easy. One has to use MM Proposition II.

- (ii) Its Subsidiaries if any
 (iii) Its associate companies
- The information to (b) above must be accompanied with previous 5 yrs P&L A/c's and should any of the above information change, this must be notified to the Stock Exchange Council immediately.
- 2) The Co. applying for quotation must at present have a fully paid up capital of not less than Ksh 2 million and this capital must be in the nominal value of 1-1 5/- and 10/- so as to enable as many Kenyans as possible to afford these shares as they are usually sold in bundles of 100 shares.
- 3) This Co. must submit to the NSE council the following documents:
- 7 copies of the Company's auditing B/S for the previous 5 yrs.
 - 7 copies of the Company's Articles and Memorandum of Association. This is necessary for the 6 member brokers of the NSE to have a copy each and one copy for the Secretary to the Stock Exchange.
- 4) Such a Co. will have to inform the NSE council the current distribution of its shares i.e whether they are owned by Kenyans or foreign investors. Also such a Co. must submit a certificate of approved enterprise in relation to

THE FUNCTIONING OF THE STOCK EXCHANGE

[Nairobi Stock Exchange (NSE)]

- A STOCK EXCHANGE - is an organized market for securities (financial instruments) which may be in form of
 - 1) Shares - ordinary & preference
 - 2) Debentures
 - 3) Bonds
 And other stocks all of which are bought and sold thru brokers who act as middlemen between sellers and buyers of the above securities.
- Trading floor of NSE is currently at the Nation Plaza in Nairobi. Otherwise it is not physical but artificial.
- The idea of NSE was facilitated by Companies Act Cap 48C which introduced the idea of public limited companies which sell shares to the public and may now buy them back (TREASURY STOCK) in particular ordinary shares.
- The Stock Exchange has two trading markets namely
 - 1) PRIMARY MARKET - market for selling out buying new shares to new shareholders
 - 2) SECONDARY MARKET - market for buying and selling already issued shares (ie second hand shares) ie a market for shares changing hands amongst individual companies which need to sell their shares in the stock exchange must arrange with the Stock Exchange Comi

CASH FLOW SCHEDULE

	OLD MACHINE	NEW MACHINE	INCREMENTAL \$
SALES	1,200,000	1,250,000	120,000
OPERATING COSTS	(840,000)	(600,000)	(240,000)
NET CASHFLOWS C/F	360,000	720,000	360,000
NET CASHFLOWS B/F	260,000	700,000	360,000
TAX @ 40%	(144,000)	(288,000)	(144,000)
NET CASHFLOWS B/F	216,000	432,000	216,000
ANN TAX SAVINGS ON DEPRECIATION	24,000	48,000	24,000
OLD - 40% x 60,000 x 9 NEW - 40% x 120,000			
TOTAL CASH INFLOW	<u>240,000</u>	<u>480,000</u>	<u>240,000</u>

PRESENT VALUE OF INCREMENTAL CASHFLOWS

$$PV = 240,000 \times PVIFA 10\%, 10 \text{ yrs}$$

$$= 240,000 \times 6.145 \quad \text{Ksh } 1,474,800$$

Ann PV of new machine scrap value approx. 32% 92,640

Total Present Value of Incremental Cashflows 1,567,440

Less New Machine Net Initial Capital Cost 1,128,000

NPV of Incremental Cashflows Ksh 439,440

Replace the old machine since the new machine has a positive NPV of incremental cashflows of Ksh 439,440.

Q2) USING WORKSHEET APPROACH

ATE	AMOUNT BEFORE TAX	AMOUNT AFTER TAX	DCF	PV
NEW ASSET COST	1,440,000	1,440,000	1.000	1,440,000
LESS OLD ASSET SCRAP VALUE	(120,000)	(120,000)	1.000	(120,000)
LESS: TAX EFFEC ON CAPITAL LOSS	(180,000)	(180,000)	1.000	(180,000)
				1,128,000
INCREMENTAL CASHFLOWS	260,000	216,000	6.145	1,327,360
DEPRECIATION - NEW ASSET	60,000	24,000	6.145	(147,480)
11. NEW ATE	120,000	48,000	6.145	294,960
ACETED SCRAP VALUE - NEW ASSET	240,000	240,000	0.386	92,640
LESS NEW ASSET INITIAL CASHFLOW			6.145	439,440
NPV				1,567,440
				1,128,000

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(23) **DOWNTON-WALK** - the theory that share prices are randomly determined and reflect all available information meaning that market prices of shares are fair. The and there is no room to make arbitrage profits.

(24) **TECHNICAL ANALYSIS OR CHARTISM** - used by analysts who believe that past or historical information on trading volumes and price of shares due to certain events that can be repeated and be able to predict the direction prices are likely to take.

(25) **FUNDAMENTAL ANALYSIS** where analysts determine the INTRINSIC VALUE = present value of all cash flows from a security which is compared with the current market price to determine undervaluation or overvaluation of a security in order to make a buy or sell decision.

(26) **WATTELLED CAPITAL** - capital of companies that are financially very strong and are able to pay high dividends for a long period of time. Such companies also have strong shares too.

(27) **RESISTANCE LEVEL** - the level between which share prices tend to oscillate ie minimum and max share price level in a day - upper and lower limit of share price

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ILLUSTRATION OF CONSTRUCTION OF STOCK MARKET INDICES

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- Consider the following data for a sample of 5 shares for two years, the base year and first.

	SHARE PRICE IN BASE YEAR (RSH)	PRICE IN YEAR 1 (RSH)	NO. SHARES OUTSTANDING (in millions)
A	50	70	10
B	40	50	20
C	100	90	5
D	20	80	15
E	15	24	50

~~EQUAL WEIGHTED INDEX = AVERAGE/MEAN of PRICE RELATIVES~~

~~PRICE RELATIVE = $\frac{\text{YEAR 1 PRICE}}{\text{BASE YEAR PRICE}} \times 100$~~

$$= \frac{70}{50} \times 100 = 140$$

~~$50 \times 100 = 125$~~

~~$90 \times 100 = 90$~~

~~$80 \times 100 = 400$~~

~~$24 \times 100 = 160$~~

~~PRICE RELATIVE = $\frac{140 + 125 + 90 + 400 + 160}{\text{NO. OF SHARES (5)}}$~~

~~Equal-weighted INDEX = $915 \div 5$~~

~~$= 183$~~

BULLS are usually given two means to supply such shares and chances are that after these two means the bull can sell such shares at a π .

BEARS - a bear is a speculator (jobber) on the stock exchange who sells stocks or shares because he believes the prices are high and will fall in future; hence he can buy them when prices fall and sell when prices rise to make a π .

STAKES - A stake is a jobber or spectator on the stock exchange who buys large blocks of new issue of shares and stocks in anticipation of a rise in their market price when they begin to be dealt with on the stock exchange Secondary market.

These are the type of jobbers who deal in the new issue so formerly market strictly and for this reason they will buy shares directly from the company floating them at lower prices in hope that they will increase in future and sell them at a π .

TERMINOLOGIES USED IN THE STOCK

ESTHABLE

SPECULATIONS - a situation where jobbers develop expectations regarding future