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BUSINESS FINANCE



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1. NATURE OF BUSINESS FINANCE

1. Scope of business finance

1.1 Definition of finance

1.1.1 Noun

1. The science of the management of money and other assets.
2. The management of money, banking, investments, and credit.
3. Finances, monetary resources or funds, especially those of a government or corporate body.
4. The supplying of funds or capital.

1.1.2 Verb (financed/financing/finances)

1. To provide or raise the funds or capital for. *financed a new car.*
2. To supply funds to. *financing a daughter through law school.*
3. To furnish credit to

1.2 Definition of business finance

Raising and managing of funds by business organizations. Such activities are usually the concern of senior managers, who must use financial forecasting to develop a long-term plan for the firm. Shorter-term budgets are then devised to meet the plan's goals. When a company plans to expand, it may rely on cash reserves, expected increases in sales, or bank loans and trade credits extended by suppliers. Managers may also decide to raise long-term capital in the form of either debt (bonds) or equity (stock). The value of the company's stock is a constant concern, and managers must decide whether to reinvest profits or to pay dividends. Other duties of financial managers include managing accounts receivable and fixing the optimum level of inventories. When deciding how to deploy corporate assets to increase growth, financial managers must also

(ii) Constant-growth model

This model is also known as the Gordon growth model. It assumes that the dividend will grow at a constant rate, but the rate is less than the required rate of return. The value of the share is calculated as follows:

$$P_0 = D_1 / (K_s - g)$$

Where: P_0 = the value of the ordinary share at time zero

D_1 = the next period's dividend

K_s = the required rate of return on ordinary shares

g = the growth rate in future dividends

Question 4

Delta Limited estimates that its ordinary share dividend next year (i.e. D_1) will be \$1.50. The dividend is expected to grow at a constant rate of 7%. The required return on similar ordinary shares is 15%.

Required:

Calculate the value of the ordinary dividend.

Suggested solution

Delta Limited

$$\begin{aligned} P_0 &= D_1 / (K_s - g) \\ &= 1.50 / (0.15 - 0.07) \\ &= \underline{\$18.75} \end{aligned}$$

3.4.2 Capital asset pricing model (CAPM)

Because an investor can create a portfolio of assets that will eliminate virtually all diversifiable risk, the only relevant risk is non-diversifiable risk. The investor or firm must, therefore, be concerned solely with non-diversifiable risk. The measurement of non-diversifiable risk is of primary importance in selecting assets with the most desired risk-return characteristics. The CAPM is a tool

Classification is relevant for evaluating project risk and determining the ranking of projects. Projects may be classified in the following ways.

4.2.1 Replacement or expansion

Replacement refers to the acquisition of an asset to maintain existing production. The asset may result in cost savings due to increased efficiencies. Expansion refers to expansion in existing product lines or to the introduction of new product lines.

4.2.2 Independent and mutually exclusive projects

Independent projects are projects whose cash flows are unrelated and the acceptance of one project does not eliminate the others from further consideration. Mutually exclusive projects are projects that compete with one another (i.e. they are alternatives) and the acceptance of one project eliminates the others from further consideration.

4.2.3 Divisible and indivisible projects

A divisible project is a project that may be split into a number of separated parts, each capable of being undertaken on its own. An indivisible project is a project that cannot be divided into separate parts and the entire project must be undertaken.

4.3 Cash flow determination

Capital budgeting evaluates expected future cash flows in relation to initial cash outflows today. The relevant cash flows are the incremental after-tax cash flows associated with the proposed project. Incremental cash flows are the additional cash flows (i.e. outflows and inflows) expected to result from the proposed investment. The estimation of cash flows on an incremental basis ensures that the firm analyses only the difference between the cash flows of the firm with and without the project.

Where: CF_t = the cash flow at time t

K = the cost of capital

I = the initial investment

Note: Cash flows are assumed to occur at the end of each time period

Decision criterion:

For independent projects, the decision criterion is:

If $NPV \geq \$0$, accept the project

If $NPV < \$0$, reject the project

For mutually exclusive projects, the decision criterion is:

Accept the project with the highest NPV, which is also greater than or equal to zero dollars, and reject the rest.

Note: The value of a firm's equity increases or decreases by the amount of the NPV.

4.5.2 Equivalent annual annuities (EAA)

Equivalent annual annuities (or equivalent annual income (EAI)) are used to evaluate mutually exclusive projects with unequal lives. Since mutually exclusive projects are ranked, it is important that these projects should be comparable. A project's NPV can be restated in terms of an annual annuity such that the company is indifferent between the project's NPV and the annuity. The calculation of annual annuities means that projects with unequal lives become comparable. To compute a project's EAA, the following steps are performed:

1. Compute the project's NPV based on the initial useful life of each project.
2. Divide the project's NPV by the PVIFA for the period of the project. $EAA = NPV / PVIFA_{k,n}$.

Note: This approach assumes that the projects are expected to be continuously replaced in the future.

Required:

Use the net present value technique to evaluate the proposed investment project.

Question 3 (EAA)

Sigma Limited is considering two mutually exclusive projects, A and B. The projects are expected to generate the following after-tax cash flows:

Year	Project A	Project B
	\$	\$
0	(52 000)	(80 000)
1	28 000	25 000
2	28 000	25 000
3	28 000	25 000
4	-----	25 000
5	-----	25 000
6	-----	25 000

Additional information:

1. The useful lives of projects A and B are 3 years and 6 years, respectively.
2. The cost of capital is 14%.

Required:

Use the EAA to evaluate the two mutually exclusive projects.

issue for the same assets, and so the value of existing shares will be diluted by the amount of the dividend. The shareholder is therefore in the same position. What has been gained in cash on receipt of a dividend has been lost through the dilution of the value of the shares. Thus, given the investment decision of the firm, the dividend payout ratio is a mere detail and does not affect the wealth of shareholders. The M& M argument makes the following assumptions:

- No taxes
- No transaction costs
- No market imperfections

Relaxing these assumptions could change the position. However, relaxing the assumptions often mitigates against, rather than for, the dividend. The supporters of the dividend should be paid only if a company has no other use for the funds. In fact they suggest that the payment of a dividend may be an indication of failure by management to find suitable investments. This view manifests itself in the residual approach to dividends.

6.1.3 Residual approach to dividends

The residual approach to dividend suggests that dividends are a passive residual. They are “what is left over after decisions regarding investment and financing have been made” This means that dividends should be paid only if there are no investment opportunities available in which the firm can place those funds and earn the required return for the given level of risk. To adopt the residual approach, a company should identify:

- It's set of investment opportunities;
- Its required rate of return;
- It target debt ratio.

The company should accept all projects which exceed the required rate of return. If funds remain, then they will be paid as a dividend.

6.2 Factors influencing dividend policy

- To maximize the wealth of the owners;
- To provide for sufficient financing.

A company may follow one of the following dividend payment policies:

6.3.1 Stable dividend amount

Also known as regular dividend. The firm pays a fixed dividend amount regardless of the level of earnings

6.3.2 Stable payout ratio

Also known as constant payout ratio. A fixed proportion of earnings is paid out by way of dividends.

6.3.3 Stable dividend plus bonus

Also known as lower regular plus extra. The company pays a low fixed dividend amount plus a bonus if earnings allow

6.4 Questions

Question 1

Delta Limited has identified the following investment opportunities:

Project	Cost	IRR
	\$	%
U	240 000	33
V	105 000	30
W	300 000	30
X	360 000	27
Y	450 000	24
Z	225 000	20

Additional information:

(d) Trade checking

Credit information can be exchanged among companies selling to the same customer.

(e) The firm's own experiences

A study of the promptness of past payments can be useful.

7.3.3 Collection policy

The firm's collection policy is its procedures for collecting trade receivables when they are due. The common collection techniques are:

- Letters;
- Telephone calls;
- Personal visits;
- Collection agencies (i.e. debt collectors);
- Legal action.

7.4 Management of inventory

Inventory is a current asset that permits the production-sale process to operate with a minimum of disturbance. The objective of inventory management is to balance the set of costs that increase with larger inventory holdings against the set of costs that decrease with larger order sizes. Some of the techniques that are commonly used in managing inventory are the economic order quantity, the reorder point and just-in-time.

7.4.1 Economic order quantity (EOQ) model

The EOQ model is an inventory management technique for determining an item's optimal order quantity. This is the order quantity that minimizes the total ordering and carrying costs (i.e. the total relevant cost). The ordering costs are the fixed clerical costs of placing an order and receiving an inventory order. The carrying costs are the variable costs per unit of holding an item in inventory for a specified

Question 1

Sigma Limited has an annual demand of 200 000 units of a product which it purchases at \$30 each. At present the firm makes 5 orders of 40 000 units per order at a cost of \$120 per order, including freight handling and all paperwork. The firm has also estimated that it costs on average \$18 to keep an item of inventory for a year.

The company is reviewing its inventory policy.

Required:

Calculate the following:

- (a) the current total relevant cost (TRC);
- (b) the economic order quantity (EOQ);
- (c) the savings that the firm will achieve with an EOQ approach.

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