Victoria University of Bangladesh

Final Assessment

Fall Semester - 2022

BBA Program

Course title : Introduction to Finance

Course code : FIN - 322

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## Answer to the question No: 1

Solution: Ballon payment method.

$$\text{principle payment} : \frac{\text{Amount of loan}}{\text{No of years}}$$

$$= \frac{15,00,000}{5}$$

$$= 300,000 \text{ ৳}$$

Loan Amortization Under Ballon payment method

| Year | Begining Loan | Invest | principle | Installment Repayment | Balance |
|---|---|---|---|---|---|
| Col-1 | Col-2 | COL 3=2X·12 | Col-4 | col 5=3+4 | col 6=2-4 |
| 1 | 15,00,000 | 1,80,000 | 3,00,000 | 480,000 | 12,00,000 |
| 2 | 12,00,000 | 1,44,000 | 3,00,000 | 4,44,000 | 9,00,000 |
| 3 | 9,00,000 | 108,000 | 3,00,000 | 408,000 | 6,00,000 |
| 4 | 6,00,000 | 72,000 | 3,00,000 | 372,000 | 300,000 |
| 5 | 3,00,000 | 36,000 | 3,00,000 | 336,000 | 00 |

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## Answer to the question No: 2

Solution :

Master Table

| particulars | Firm – A TK | Firm – B TK |
|---|---|---|
| Sales : | 20,00,000 | 30,00,000 |
| Less : Variable cost | | |
| Firm A = 40/100 x 20,00,000 | 8,00,000 | |
| firm B = 30/100 x 30,00,000 | | 9,00,000 |
| contribution : | 12,00,000 | 21,00,000 |
| Less : fixed cost : firm A | 5,00,000 | |
| firm B | | 7,00,000 |
| operating profit (EBIT) | 7,00,000 | 14,00,000 |
| Less: Interest : firm A | 1,00,000 | |
| Firm B | | 1,25,000 |
| EBT | 6,00,000 | 12,75,000 |

(a) Financial Leverage : $\frac{\text{EBIT (operating profit)}}{\text{EBT (Earning before tax)}}$

Firm A $= \frac{7,00,000}{6,00,000}$ ; firm B $= \frac{14,00,000}{12,75,000}$

Firm A = 1.16 times; firm B = 1.09 times

(b) Operating Leverage : $\frac{\text{EBIT (operating profit)}}{\text{EBT (Earning before tax)}}$

Firm A $= \frac{12,00,000}{7,00,000}$ ; firm B $= \frac{21,00,000}{14,00,000}$

Firm A = 1.71 times firm B = 1.5 times

firm A has greater Business and financial risk than firm B.

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## Answer to the question No 3 (i).

**Cost of capital:** The term cost of capital is often defined as the rate of return on investment projects necessary to leave unchanged the market price of a firm's stocks. It is the rate of return required by those who supply the capital.

**Different types of cost:** Different types of cost are:

i) Job process or product cost
ii) Direct cost
iii) Indirect cost
iv) Variable cost
v) out-of pocket cost
vi) Sunk cost
vii) Avoidable cost
viii) Unavoidable cost
ix) Common cost
x) Relevant cost
xi) Irrelevant cost
xii) Marginal cost
xiii) Programme cost
xiv) Specific cost

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# Answer to the Question No 3 (ii)

Solution :

~~Kp =~~

(i) $K_e = \frac{D_0}{P_0} + g$

$= \frac{9}{140} + .10$

$= 0.164$

$= 16.42\%$

Where
$K_e$ = cost of capital
$D_0$ = the begining Dividend
$P_0$ = price of stock
$g$ = growth rate of capital

(ii) $K_P = \frac{D}{P_0}$

$= \frac{9}{140}$

$= 6.42\%$

Where
$K_P$ = cost per share of preferred stock
$D$ = Begining dividend

(iii) $K_r = \frac{E_a\left(\frac{1-TR}{2}\right)}{P}$

$= \frac{1\left(\frac{1-.10}{2}\right)}{140}$

$= .03\%$

where
$K_r$ = cost of retained earning
$E_a$ = The anticipated earning
$P$ = price of stock
$TR$ = Amount of sharholder per rate

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## Answer to the question No 5:

**Risk and Return**: Risk and Return in finance is the risk associated with a certain investment and its return. Usually, high-risk investments yield better financial return and low-risk investments yield lower return. The term refers to income from a security after a defined period either in the form of interest, dividend, or market appreciation in security value. On the other hand, risk refers to uncertainty over the future to get this return. In simple words it is a probability of getting return of on Society.

**Types of Risk**: Return on investment may vary from the expectation of the investors. The variability of return from an investment is risk. Risk traditionally has been defined that the

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actual return from an investment will be less than the expected return. Risk may be broadly devided into two types as

A. Systematic Risk
B. Unsystematic Risk

A. Systematic Risk : Systematic risk is attributable to a common factor that affects all assets similarly and cannot be eliminated by diversification. Systematic risk are discussed below :

1. Market Risk : Market risk is the variability in returns resulting from fluctuations in the overall market price of the financial assets.

2. Default Risk : Default Risk arises when a firm unable to repay the principle loan amount to the lender. for default risk the firms may eventually bankrupt.

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3. Interest Rate Risk : Interest rate risk is defined as the fluctuation in market price of fixed income based securities owing to change in levels of interest rate.

4. Liquidity Risk : The chance of that an investment can not be easily at a reasonable price. Liquidity is significanty affected by the size and dept of the market in which an investment is customarily traded.

5. Exchange rate Risk : Exchange rate risk is defined as the variability in return on security caused by currency fluctuations. Sometimes it is called currency risk.

6. purchasing power Risk : purchasing power risk can be difined as the uncertainity of purchasing power of the amount to be received.

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7. Property Risk: persons owing property are exposed to property risk, the risk of having property damaged or lost from numerous causes

8. political Risk: the political risk is defined as the uncertainity due to possibility of major political change in the country where investment would be affected.

B. Unsystematic Risk: Unsystematic risk is unique to a particular asset and can be eliminated by diversification. unsystemic risk are discussed below;

1. Business Risk: Business risk refers to the relative variability in the firm's earning before interest and tax (EBIT). Business risk is caused primarily by the nature of the firm's operations.

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Some of the primary determinants of the risk are the following,

i) Sensitivity of sale of general economic fluctuation

ii) Degree of competition and size

iii) operating leverage

iv) Input price variability

v) Ability to adjust output prices.

2. Financial Risk : Financial risk depends on the amount of financing provided by creditors. The use of debt, bond, lease or preferred stock exposes the firm to more risk. The risk arises from imposing the fixed costs of financing, which have a prior claim on the firm's cash flows before the common stakeholders receives dividends. The risk is a result of firms long term financing decisions,

financial risk refers to

i) The increase variability of earning

ii) The increase probability of financial distress

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**3. Credit Risk:** Credit risk consists of business risk and financial risk. Business risk is caused primarily by the nature of the business operations. The financial Risk arises from imposing the fixed cost of financing.

**4. Industry Risk:** Industry risk defined as the risk of doing better or worse then expected return as a result of investment in a sector of the economy in a place of the other sector.

**5. Portfolio Risk:** The risk of an asset can be considered in two ways (i) on a stand alone business where the asset cash flow are analyzed by them, or (ii) in a portfollo context, where the cash flow from a number of assets are combined and then the consolidate cash flows are analyzed.