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FYBSC A

Business Finance - 2
Assignment 1.

(1) (D) IRR is the most reliable means of choosing between mutually exclusive projects.

(2) (A) Market price of share / Earnings per share

(3) (D) All of the above.

(4) (D) 10,00,000

(5) Sales = 2500
Cost = 1500
t = 40%
i = 20%.
NPV = $1500(1.2)^{-1} - 2500(1.2)^{-1}$
= - 833.3
NPV' = $2500(1.2)^{-1} - ₹1500(1.2)^{-2}$
= 1041.67

(5) (i) Sales - cost - tax = 2500 - 1500 - 400
= ₹600
(ii) NPV = 1000 (1 - 20%.)
= ₹800
(iii) NPV = 2500 (1 - 20%.) - 1500 (1 - 20%.)
= 1040 ₹

The NPV has increased by ₹ 240.

(6) The ratios used to analyse a company's efficiency are:

i) Inventory turnover ratio
ii) Asset turnover ratio.
iii) Trade receivables turnover ratio.
iv) Trade payables turnover ratio.

(8) (i) The beta of a stock indicates how volatile its price in comparison to the overall stock market. This volatility relates to the existing activities of the company. It considers factors which are risk involved, the potential of growth of the company, cyclicality of the project. The factors are what determine the beta of the stock. different companies have different risk, growth potential and other factors. Thus, stocks of different companies trade at different betas in the stock market.

(ii) Geared Beta = Ungeared beta × [1 + debt : equity ratio × (1 − tax rate)]

current geared beta = 1:1
current debt : current equity = 1:2
tax rate = 30%.

$$1{\cdot}1 = \text{Ungeared data} \times [1 + 1{:}2\ (1 - 30\%)]$$

$$\text{Ungeared data} = \frac{1:1}{1 + 1/2\,(1 - 0.3)}$$

$$= \frac{1.1}{1.35}$$

$$= 0.815$$

New debt equity = 2:2

New geared beta = $(0.815)[1 + 2:2\ (1 - 30\%)]$

$= (0.815)(1 + 0.7)$

$= (0.815)(1.7)$

$= 1.3855$

New geared beta = 1:4.

(9) (D) In general the market value of investment trust is not correlated to the NPV.

(10) (B) The shareholder's wealth can be maximised by improving the stock price. The problem with this is that the stock price depends on the beta of the company. The higher the beta, the more returns it generates, so the companies would try to improve their beta by either increasing their debt. Equity ratio or by increasing their risk. To increase their debt equity ratio they would need to increase their debt. This could be a problem in case of insolvency.

(11) PV = £70

Div = 10

R_D = 8%

R_f = 6%.

ERP = $R_M - R_f$ = 5%.

β = 0.8.

$$\text{Share Price} = \frac{\text{Div}}{\text{Cost of Equity} - \text{growth rate}}$$

$$= \frac{10}{[6\% + 5\%.(0.8)] - 8\%}$$

$$= \frac{10}{0.02}$$

$$= 500$$

(7) Reasons why analysis is tenteous is as follows:

i) Company may not be comparable directly.

ii) History div and earning may be affected by some factors.

iii) Info assymetry

(11) (i) Beta can be regarded as a measure of the systematic risk associated with a particular stock.

(ii) We can compare individual stocks with the overall market by ameuing the Beta (β) of the stock. For company - i.

$$\beta_i = \sigma_{im} / \sigma^2_m.$$

where σ^2_m is the valience of the market index and σ_{im} is the covariance between the individuals stock's returns and that of the market. An alternative expression for Beta is:

$$\beta_i = \rho_{im} \sigma_i / \sigma_m.$$

(iii) In my opinion I would invest in a stock with

a Beta 1.
A beta close to zero would indicate a stock provided a more stable return than the market as whole. A negative beta would signify a stock whose performance was counter cyclical offsetting the overall marketing experience.

(10) Government Bonds is likely to have $\beta = 0$.

(12) $\frac{D}{E} = \frac{1}{1}$ $R_x = 7\%$. ERP $= 5\%$. $t = 25\%$.

$\beta = 1.5$ given cost of debt $= 9\%$.

(i) $WACC = Re\left(\frac{M_e}{M_e + M_d}\right) + R_D^{\sim}\left(\frac{M_D}{M_e + M_d}\right)$

$= (7\% + 5\%)(1.5)\left(\frac{1}{2}\right) + 9\%(1 - 25\%)\left(\frac{1}{2}\right)$

$= (0.145)\left(\frac{1}{2}\right) + (0.0675)\left(\frac{1}{2}\right)$

$= 0.10625$.

(ii) $1.5 = \beta_{ungear}\left(1 + \frac{1}{1}(75\%)\right)$

$= 1.75\beta$

$\beta_{ungear} = 0.857$

$ROE = 7\% + 5\%(0.857)$

$= 0.1129$

$= 11.29\%$.

(13) (i) NPV = $40000(1.15)^{-1} + 40000(1.064)(1.15)^{-2}$
$+ \ldots + 40000(1.064)^3(1.15)^{-4}$
$= 40000(1.15)^{-1}[1.064(1.15)^{-1} + \ldots + (1.064)^3(1.15)^{-3}]$
$= 34782.6087\ (2.573255885)$
$= 89504.55253$

(15) (i) $\frac{D}{E} = \frac{1}{1}$ $R_d^9 = 8\%$. div yield = 4%.
$COC = 4\%.\left(\frac{1}{2}\right) + 8\%.\left(\frac{1}{2}\right)$
$= 6\%$.

(ii) (a) $R_M = 6\%$. ERP = 5%. $\beta = 1.4$
$R_e = 6\% + 5\%.(1.4)$
$= 13\%$

(b) $\beta_{gear} = 1.4\left(1 + \frac{1}{1}(1 - 30\%.)\right)$
$= 2.38$

(c) $COE = 6\% + 5\%.(2.38)$
$= 17.9\%$