SUGGESTED SOLUTION

CS PROFESSIONAL JUNE '19

SUBJECT- F.M.

Test Code – CSP 3002

BRANCH - () (Date :)

Answer : 1

Particulars	Rs.
EBIT	6,23,000
(-) Interest	(83,200)
EBT	5,39,800
(-) Tax @ 40%	(2,15,920)
Profit available for equity shareholders	3,23,880

EPS = $\dfrac{3,23,880}{18,000}$ = 18 per share

Cost of equity – Price Earning Method :

$$K_e = \frac{EPS}{P_0}$$

$$= \frac{18}{150}$$

= 0.12 i.e. 12%

Cost of debt :

K_d = I (1 – t)

= 8 (1 – 0.4)

= 4.8%

[6 Marks]

Calculation of WACC (Market value basis) :

Types of capital	Rs.	%	Cost of Capital	Product
Equity	27,00,000	72.19%	12%	866.28
8% Debt	10,40,000	27.81%	4.8%	133.49
	37,40,000	100%		999.77

WACC = $\dfrac{999.77}{100}$ = 9.998% i.e. 10%

[4 Marks]

Answer: 2

(A) The payback period represents the amount of time that it takes for a capital budgeting project to recover its initial cost. The use of the payback period as a capital budgeting decision rule specifies that all independent projects with a payback period less than a specified number of years should be accepted. When choosing among mutually exclusive projects, the project with the quickest payback is preferred.

Merits :
(1) It is **simple to apply, easy to understand.**
(2) In case of capital rationing, a company is compelled to invest in projects having shortest payback period.
(3) This method is **most suitable when the future is very uncertain**. The shorter the payback period, the less risky is the project. Therefore, it can be considered as an indicator of risk.
(4) This method gives an **indication to the prospective investors** specifying when their funds are likely to be repaid.
(5) It does not **involve assumptions about future interest rates**.
(6) Ranking projects according to their ability to repay quickly may be useful to firms when experiencing liquidity constraints. They will need to exercise careful control over cash requirements.

Demerits :

(1) It does not indicate whether an investment should be accepted or rejected, unless the Payback period is compared with an arbitrary managerial target.
(2) The method ignores cash generation beyond the payback period and this can be seen more a measure of liquidity than of profitability.
(3) It fails to take into account the **timing of returns and the cost of capital**.
(4) **The traditional payback approach does not consider the salvage value of an investment.** It fails to determine the payback period required in order, to recover the initial outlay if things go wrong.
(5) This method makes no attempt to measure a percentage return on the capital invested and is often used in conjunction with other methods.

[5 Marks]

(B) Following are the main points of distinction between lease & hire purchase.

Points	Lease	Hire Purchase
Meaning	A lease is a contractual arrangement calling for the lessee (user) to pay the lessor (owner) for use of an asset.	Hire purchase is a contract in which goods are delivered and the price is allowed to be paid in instalments on the condition that property (ownership) in goods will be passed only on payment of all the instalments.
Transfer of ownership	In leasing it is only in financial lease, the ownership will get transferred. While in operating lease, the ownership is not transferred.	In Hire purchase, the agreement is entered for the transfer of ownership after a fixed period.
Type of agreement	Leasing is **bipartite agreement, involving lessor and lessee.**	Hire purchase is a **tripartite agreement involving the seller, finance company and the hire purchaser.**
Depreciation	In finance lease depreciation is claimed by the lessee whereas in operating lease depreciation claimed by lessor.	Depreciation is claimed by the hire purchaser.

[5 Marks]

Answer: 3

Calculation of expected cash flow for each Project :

Project A

Cash Flow	Probability	Expected Cash Flow
6	0.3	1.8
4	0.4	1.6
2	0.3	0.6
		$\overline{NPV}$ = 4.0

Project B

Cash Flow	Probability	Expected Cash Flow
5	0.3	1.5
4	0.4	1.6
3	0.3	0.9
		$\overline{NPV}$ = 4.0

Calculation of standard deviation of Project – A :

NPV	D	D²	P	PD²
6	2	4	0.3	1.2
4	0	0	0.4	0
2	- 2	4	0.3	1.2
			σ^2 =	2.4
			σ	1.55

Coefficient of variation = $\dfrac{\sigma}{NPV} = \dfrac{1.55}{4}$ = 0.3875

Calculation of standard deviation of Project B :

NPV	D	D²	P	PD²
5	1	1	0.3	0.3
4	0	0	0.4	0
3	-1	1	0.3	0.3
			σ^2 =	0.6
			σ	0.78

Coefficient of variation = $\dfrac{\sigma}{NPV} = \dfrac{0.78}{4}$ = 0.195

Analysis : Project A is more risk because of higher coefficient of variation.

[10 Marks]

Answer: 4

(A) Money markets play a key role in banks' liquidity management and the monetary policy of RBI which are discussed as below :

(a)   Banks' liquidity management

Banks have to maintain Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR). CRR is the reserve which the Banks have to keep with Reserve Bank of India (RBI). On the other hand, SLR is the amount which the banks have to keep with themselves. Banks are often evaluated on the basis of their liquidity.

SLR requirements help banks to do that. Whenever the RBI issues treasury bills on behalf of the Government, CRR and SLR requirements of banks are automatically met.

(b)   Monetary Policy

Monetary policy affects rates of interest, inflation and business cycle. Through the introduction of repos and reverse repos, the government adjusts the rate of interest, thus, reducing or increasing money supply by impacting inflation, thereby effecting changes in business cycles. Also, by introducing treasury bills and other money market instruments, it affects money supply and consequently inflation and business cycles.

In normal times, money markets are among the most liquid in the financial sector. By providing the appropriate instruments for liquidity trading, the money market allows the refinancing of short and medium – term positions and facilitates the mitigation of one's business liquidity risk with the help of commercial papers, commercial bills and certificate of deposits.

[5 Marks]

(B)   **Advantages of MUTUL FUND**

(a)   **Professional Management :** The funds are managed by skilled and professionally experienced managers with a back up of a Research team.

(b)   **Diversification :** Mutual Funds offer diversification in portfolio which **reduces the risk.**

(c)   **Convenient Administration :** There are no administrative risks of share transfer, as many of the Mutual Funds offer services in a demat form which save **investor's time and delay.**

(d)   **Higher Returns :** Over a medium to long – term investment, investors always get **higher returns in Mutual Funds a**s compared to other avenues of investment. This is already seen from excellent returns, Mutual Funds have provided in the last few years. However, investors are cautioned that such high returns riding on the IT boom should not be taken as regular returns and therefore one should look at the average returns provided by the Mutual Funds particularly in the equity schemes during the last couple of years.

(e)   **Low cost of Management :** No Mutual Fund can increase the cost beyond prescribed limits of 2.5% maximum and any extra cost of management is to be borne by the AMC.

(f)   **Liquidity :** In all the open ended funds, liquidity is provided by direct sales / repurchase by the Mutual Fund and in case of close ended funds, the liquidity is provided by listing the units on the Stock Exchange.

(g)   **Transparency :** The SEBI Regulations now compel all the Mutual Funds to disclose their portfolios on a half – yearly basis. However, many Mutual Funds disclose this on a quarterly or monthly basis to their investors. The NAVs are calculated on a daily basis in case of open ended funds and are now published through AMFI in the newspapers.

(h)   **Other Benefits :** Mutual funds provide **regular withdrawal and systematic investment plans** according to the need of the investors. The investors can also switch from one scheme to another without any load.

(i)   **Highly Regulated :** Mutual Funds all over the world are **highly regulated** and in India all Mutual Funds are registered with SEBI and are strictly regulated as per the Mutual Fund Regulations which provide excellent investor protection.

(j)   **Economies of scale :** The way mutual funds are structured gives it a natural advantage. The "pooled" money from a number of investors ensures that mutual funds enjoy economies of scale; it is cheaper compared to investing directly in the capital markets which involves higher charges.

This also allows retail investors access to high entry level markets like real estate, and also there is a greater control over costs.

(k)   **Flexibility :** There are a lot of features in a regular mutual fund scheme, which imparts, flexibility to the scheme. An investor can opt for Systematic Investment Plan (SIP), Systematic Withdrawal Plan etc. to plan his case flow requirements as per his convenience. The wide range of schemes being launched in India by different mutual

funds also provides and added flexibility to the investor to plan his portfolio accordingly.

[5 Marks]

Answer : 5

Computation of EBIT of the unlevered company :

Particulars	Rs.
EBIT	10,76,9,23
(-) Interest	-
EBT	10,76,923
(-) Tax @ 35%	(3,76,923)
PAT	7,00,000
Capitalization rate	20%
Market value of equity (PAT/ Capitalization rate) ×100 (given)	35,00,000

Perform reverse calculation to find out EBIT.

Particulars	All Equity	Equity + Debt
EBIT	10,76,923	10,76,923
(-) Interest	-	(80,000)
EBT	10,76,923	9,96,923
(-) Tax @ 35%	(3,76,923)	(3,48,923)
PAT	7,00,000	6,48,000

According to MM, the value of levered firm would exceed that of the unlevered firm by an amount equal to the levered firm debt multiplied by the tax rate.

Value of unlevered firm + (Value of debt × Tax rate) = Total Value

Value of the company with Rs. 8,00,000 in debt :

35,00,000 + (8,00,000 × 35%) = 37,80,000

Total value – Value of debt = Value of equity

37,80,000 – 8,00,000 = 29,80,000

$$K_e = \frac{D}{P_0} = \frac{6,48,000}{29,80,000} = 0.2175 \text{ i.e. } 21.75\%$$

Cost of debt :

$$K_d \quad = I\,(1-t)$$
$$= 10\,(1-0.35)$$
$$= 6.5\%$$

Calculation of overall cost of capital (Market value basis) :

Types of capital	Rs.	%	Cost of Capital	Product
Equity Share Capital	29,80,000	78.84%	21.75%	1,714.77
15% Debt	8,00,000	21.16%	6.5%	137.54
	37,80,000	100%		1,852.31

$$\text{WACC} = \frac{1,852.31}{100} = 18.52\%$$

[10 Marks]