## About CA, CPA Vinod Kumar Agarwal

## Summary:

Founder Member of A.S. Foundation, India's Leading Academy for C.A. Course, CA Vinod Kumar Agarwal is a fellow member of ICAI and a past member of the Board of Studies, ICAI. With a teaching experience of twenty one years, he has guided more than $1,00,000$ students and is ranked as one of the best teachers for Accounts and Financial Management at Intermediate level and Financial Reporting and AFM at Final Level. He has authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management, and his books have sold more than 2,00,000 copies.

## Education:

- Passed the Certified Public Accountant (CPA) (USA) exam in 2007.
- Post-graduation from Pune University with First Class.
- Graduation from B.M.C.C, Pune with distinction.
- Passed the Diploma in Business Finance Conducted by ICFAI, Hyderabad.
- Passed the Derivative Module test conducted by National Stock Exchange.
- Also appeared for UPSC exam and cleared Mains twice.

Teaching Experience:

- Teaches Accounts, Advanced Accountancy, Financial management and Economics for Finance at CA Intermediate Level and Financial Reporting and Advanced Financial Management (AFM) at CA Final level.
- Pioneer of creating and distributing video tutorials in pen drives/google drive among students.
- Produced All India Toppers (1st Rank) in CPT examination and final examination apart from more than $\mathbf{2 5 0}$ all India meritholders.
- More than 30000 Facebook subscribers, more than $1,35,000$ YouTube subscribers.
- Sold more than 40000 video lectures in pen-drive and google-drive mode.
- In 2019, launched a brand VKNOW, to become a national brand for digital learning.

Publications and Achievements:

- A merit holder in all the three levels of exams conducted by ICAI (2nd rank, 4th rank, and 24th rank in CA Foundation, CA Intermediate and CA Final respectively).
- Scored 99 marks in Accountancy in CA Foundation.
- Authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management.
- Complied a book "No Truth, Only Interpretations", a book on motivation, inspiration and guidance.
- Compiled a book, "Mind Candy", a book on motivation.
- Compiled a book, "Sweet Voice", a book on inspirational quotes.
- Working experience with India's top firms Firms like M/s. S.B. Billimoria and A.F. Ferguson (both member firm of Deloitte).
- Published article in the Students Newsletter of ICAI on "Valuation of Equity Shares" and "Stock Market Index".
- Presented a paper on "Corporate Governance and Role of Auditor" in National Students Conference held in Goa.

Teaching Approach:

- Simple and effective way of teaching through concept building, class-room practice, home-exercise, and power-point presentation.
- A large variety of problems are solved in the class to meet the examination requirements.
- Notes are updated frequently covering amendments and exam problems.


## PROBLEM : 1 (a)

Theme Ltd provides you the following information :
12.5 \% Debt
₹ 45,00,000

Debt to Equity ratio
1.5 : 1

Return on Shareholder's fund
54\%
Operating Ratio 85\%
Ratio of operating expenses to Cost of Goods sold 2:6

Tax rate 25\%

Fixed Assets
Current Ratio
₹39,00,000

You are required to calculate :
(i) Interest Coverage Ratio
(ii) Gross Profit Ratio
(iii) Current Assets

## Solution:

## Step 1: Calculation of Equity

$$
\begin{aligned}
\text { Debt to Equity Ratio } & =1.5 \\
\text { Debt } / \text { Equity } & =1.5 \\
45,00,000 / \text { Equity } & =1.5 \\
\text { Equity } & =45,00,000 / 1.5=30,00,000
\end{aligned}
$$

## Step 2: Calculation of Net Profit After Tax

Return on shareholder's Fund $=54 \%$
Equity = Rs 30,00,000

Therefore, Net profit after tax $=54 \% \times 30,00,000$
= 16,20,000

## Step 3: Calculation of operating Profit (EBIT)

|  |  | Rs |
| :--- | :--- | :--- |
| A | PAT (Step 2) | $16,20,000$ |
| B | Tax Rate | $25 \%$ |
| C | PBT (PAT/75\%) | $21,60,000$ |
| D | Add back: Interest (12.5\% $\times 45,00,000)$ | $5,62,500$ |
| E | EBIT (C + D) (Operations Profit) | $27,22,500$ |

Step 4: Calculation of sales and operating cost

|  |  | Rs |
| :--- | :--- | :--- |
| A | Operating Profit (Step 3) | $27,22,500$ |
| B | Operating Ratio | $85 \%$ |
| C | Operating Profit Ratio (100 -85) | $15 \%$ |
| D | Sales (A/C) | $1,81,50,000$ |
| E | Operating Cost $(1,81,50,000 \times 85 \%)$ | $1,54,27,000$ |

Step 5: Calculation of cost of goods sold and operating expenses
Given,
Ratio of operating expenses to cost of goods sold $=2: 6$
Total operating cost $=1,54,27,500$
Therefore, Operating expenses $=2 / 8 \times 1,54,27,500$

$$
=38,56,875
$$

Therefore, Cost of goods sold $=6 / 8 \times 1,54,27,500$

$$
=1,15,70,625
$$

Step 7: Interest Coverage Ratio = EBIT / Interest

$$
=27,22,500 / 5,62,500=4.84
$$

## Step 8: Gross Profit Ratio

Gross Profit = Sales - COGS

$$
=1,81,50,000-1,15,70,625=65,79,375
$$

Gross Profit Ratio $=$ Gross Profit $/$ Sales

$$
\begin{aligned}
& =\frac{65,79,375}{1,81,50,000} \times 100 \\
& =36.25 \%
\end{aligned}
$$

## Step 9: Calculation of current Assets

Debt + Equity $\quad=$ Fixed Assets + Working Capital
$45,00,000+30,00,000=39,00,000+$ Working Capital
Therefore, Working Capital $=36,00,000$
Current Ratio $=1.8$
Let current assets be 1.8 x and current liabilities be x
Current Assets - Current Liabilities = Working Capital

$$
1.8 x-x=36,00,000
$$

$$
\begin{aligned}
0.8 x & =36,00,000 \\
x & =36,00,000 / 0.8=45,00,000
\end{aligned}
$$

$$
1.8 x=81,00,000
$$

Therefore, Current Assets = Rs 81,00,000

## PROBLEM : 1 (b)

Alpha Limited has provided following information :

| Equity Share Capital | 25,000 Shares @ ₹ 100 per Share |
| :--- | :--- |
| $15 \%$ Debentures | 10,000 Debentures @ ₹ 750/- per Debenture |
| Sales | 50 Lakhs units @ ₹ 20 per unit |
| Variable Cost | ₹ 12.50 per unit |
| Fixed Costs | ₹ 175.00 Lakhs |

Due to recent policy changes and entry of foreign competitors in the sector, Alpha Limited expects the sales may decline by $15-20 \%$, However, selling price and other costs will remain the same. Corporate Taxes will continue @ 20\%.
You are required to calculate the decrease in Earnings per share, Degree of Operating Leverage and Financial Leverage separately if sales are declined by (i) $15 \%$; and (ii) $20 \%$.
(5 Marks)

## Solution:

Calculation of Decrease in EPS, Operating Leverage and financial leverage

|  |  | Present <br> Situation | Sales Decreases <br> by 15\% | Sales Decreases <br> by 20\% |
| :--- | :--- | :---: | :---: | :---: |
| A | Sales (units)(lakhs) | 50 | 42.50 | 40 |
| B | Selling Price per unit (Rs) | 20 | 20 | 20 |
| C | Sales Value (Rs lakhs) | 1000 | 850 | 800 |
| D | Variable cost (A x 12.50) | 625 | 531.25 | 500 |
| E | Contribution (C - D) | 375 | 318.75 | 300 |
| F | Fixed Costs | 175 | 175 | 175 |
| G | EBIT (E - F) | 200 | 143.75 | 125 |
| H | Debenture Interest (10,000 x <br> $750 \times 15 \%)$ | 11.25 | 11.25 | 11.25 |
| I | EBT (G - H) | 188.75 | 132.50 | 113.75 |
| J | Tax @ 20 \% | 37.75 | 26.50 | 22.75 |
| K | PAT (I - J) | 151 | 106 | 91 |
| L | No. of shares (lakhs) | 0.25 | 0.25 | 0.25 |
| M | EPS (Rs) (K/L) | 604 | 424 | 364 |
| N | Decrease in EPS |  | $\mathbf{1 8 0}$ | $\mathbf{2 4 0}$ |
| $\mathbf{O}$ | \% Decrease in EPS | $\mathbf{6 0 4 - 4 2 4 )}$ | $\mathbf{( 6 0 4 - 3 6 4 )}$ |  |
| P | Operating Leverage $=$ <br> Contribution | $\mathbf{1 . 8 7 5}$ | $\mathbf{2 9 . 8 \%}$ | $\mathbf{3 9 . 7 4 \%}$ |
| $\mathbf{( 2 4 0 ~ / ~ 6 0 4 ) ~}$ |  |  |  |  |
| Q | Financial Leverage = EBIT | $\mathbf{1 . 0 6}$ | $\mathbf{2 . 2 1}$ | $\mathbf{2 . 4 0}$ |

## PROBLEM : 1 (c)

Following is the sales information in respect of Bright Ltd :

Annual Sales (90 \% on credit)
Credit period
Average Collection period
Bad debts
Credit administration cost (out of which 2/5th is avoidable)
₹ 7,50,00,000
45 days
70 days
0.75\%
₹ 18,60,000

A factor firm has offered to manage the company's debtors on a non-recourse basis at a service charge of $2 \%$. Factor agrees to grant advance against debtors at an interest rate of $14 \%$ after withholding $20 \%$ as reserve. Payment period guaranteed by factor is 45 days. The cost of capital of the company is $12.5 \%$. One time redundancy payment of $₹ 50,000$ is required to be made to factor.

Calculate the effective cost of factoring to the company. (Assume 360 days in a year)

## (5 Marks)

## Solution:

## Step 1: Net Amount Advanced by Factor

|  |  | Rs |
| :--- | :--- | :--- |
| A | Annual Credit Sales $(90 \% \times 7,50,00,000)$ | $6,75,00,000$ |
| B | Average Receivables $(6,75,00,000 \times 45 / 360)$ | $84,37,500$ |
| C | Less : Factor Reserve $(20 \% \times 84,37,500)$ | $16,87,500$ |
| D | Balance | $\mathbf{6 7 , 5 0 , 0 0 0}$ |
| E | Less : Service charges $(2 \% \times 84,37,500)$ | $1,68,750$ |
| F | Balance | $\mathbf{6 5 , 8 1 , 2 5 0}$ |
| G | Interest charged by factor $(65,81,250 \times 14 \% \times 45 / 360)$ | $1,15,172$ |
| H | Amount available for advance | $\mathbf{6 4 , 6 6 , 0 7 8}$ |

Note - It is assumed that interest and service charges are collected upfront.
Step 2: Annual Saving (Benefits) in taking factoring

|  |  | Rs |
| :--- | :--- | :--- |
| A | Interest saved due to reduction in average collection period <br> $(6,75,00,000 \times(70-45) / 360 \times 12.5 \%)$ | $5,85,938$ |
| B | Bad Debts avoided $(0.75 \% \times 6,75,00,000)$ | $5,06.250$ |
| C | Credit administration cost avoided $(18,60,000 \times 2 / 5)$ | $7,44,000$ |
|  | Total | $\mathbf{1 8 , 3 6 , 1 8 8}$ |

Step 3: Net Annual Cost of Factoring

|  |  | Rs |
| :--- | :--- | ---: |
| A | Service Charge (2\% x 6,75,00,000) | $13,50,000$ |
| B | Interest Charged (1,15,172 x 360/45) | $9,21,376$ |
| C | Redundancy Payment | 50,000 |
| D | Opportunity cost on Redundancy Payment $(50,000 \times 12.5 \%)$ | $\underline{6,250}$ |
| E | Total Cost (A + B + C + D) | $\underline{\mathbf{2 3 , 2 7 , 6 2 6}}$ |


| F | Less: Annual Benefits (Step 2) | $(18,36,188)$ |
| :--- | :--- | ---: |
| G | Net Annual Cost (E F F) | $\mathbf{4 , 9 1 , 4 3 8}$ |

Note - It is assumed that Redundancy Payment will be made by the company separately and we will consider opportunity cost for 1 year at cost of capital of $12.5 \%$. We also assume that factoring arrangement is for one year.

Step 4: Effective Cost of factoring
$=$ Net Annual Cost of Factoring $\times 100$
Amount Available for Advance
$=\underline{4,91,438} \times 100$
64,66,078
= $7.6 \%$

## Question 2(a)

Step 1: = Cost of Equity Share Capital (Ke)

$$
\begin{aligned}
\text { Ke using CAPM } & =R f+\beta(R m-R f) \\
& =6+(1.54 \times 8) \\
& =\mathbf{1 8 . 3 2 \%}
\end{aligned}
$$

Step 2: Cost of Retained Earnings ( Kr )

$$
\begin{aligned}
\mathrm{Kr} & =\mathrm{Ke}(1-\mathrm{Tp}) \quad \text { (Where, } \mathrm{Tp}=\text { Personal Income) } \\
& =18.32(1-0.20) \\
& =14.656 \%
\end{aligned}
$$

## Step 3: Cost of convertible debentures

(a) Determination of redemption value

Higher of -
(i) Cash value of debenture $=$ Rs 100
(ii) Value of equity share $=4 \times 25 \times(1.06)^{5}=133.84$

Hence, Rs 133.84 will be taken as redemption value.
Note - We have taken 5 years because the remaining maturity is 5 years from 31.03.2024.
(b) Cost of $13 \%$ convertible debenture using approximation method (Kd)

$$
\begin{aligned}
& K d=I(1-T)+\frac{(R V-N P)}{n} \\
& \frac{R V+N P}{2} \\
& \\
& =13(1-0.25)+\frac{(133.84-100)}{5} \\
& \frac{133.84+100}{2} \\
& =
\end{aligned}
$$

Step 4: Cost of Redeemable pref. Shares (Kp)

```
Kp= PD + (RV-NP)
        RV +NP
            2
    = 15 + (100-150)
            100+150
                        2
= 15-6.25
    125
    = 7%
```

Step 5: Cost of Term Loan

$$
\begin{aligned}
\mathrm{KT} & =\mathrm{I}(1-\mathrm{T}) \\
& =11(1-0.25) \\
& =8.25 \%
\end{aligned}
$$

## PROBLEM : 2 (b)

Following data is available in respect of Levered and Unlevered companies having same business risk :
Capital employed $=₹ 2,00,000$, EBIT $=25,000$ and $\mathrm{K}_{\mathrm{e}}=12.5 \%$

| Sources | Levered Company (₹) | Unlevered Company (₹) |
| :--- | :---: | :---: |
| Debt (@ 8 \%) | 75,000 | Nil |
| Equity | $1,25,000$ | $2,00,000$ |

An investor is holding $12 \%$ shares in levered company. Calculate the increase in annual earnings of investor if he switches over his holding from Levered to Unlevered company.(4 Marks)

## Solution :

Step 1 : Calculation of Value of two firms

|  |  | Levered Firm | Unlevered Firm |
| :--- | :--- | :---: | :---: |
| A | EBIT | 25,000 | 25,000 |
| B | Less: Interest (8\% $\times \mathbf{7 5 , 0 0 0})$ | 6,000 | - |
| C | Earnings available to equity shareholders (A-B) | 19,000 | 25,000 |
| D | Cost of Equity (Ke) | $12.5 \%$ | $12.5 \%$ |
| E | Value of Equity (C/D) | $1,52,000$ | $2,00,000$ |
| F | Add: Value of Debt | 75,000 | 0 |
| G | Value of firm (E + F) | $\mathbf{2 , 2 7 , 0 0 0}$ | $\mathbf{2 , 0 0 , 0 0 0}$ |

Note:- Value of levered firm is more than that of unlevered firm. Therefore, investor will sell shares in levered company and buy shares of unlevered company. To maintain the level of risk he will borrow proportionate amount and invest that amount also into the shares of unlevered firm.

Step 2: Investment and Borrowings

|  |  | Rs |
| :--- | :--- | :---: |
| A | Sell shares in levered firm (12\% x 1,52,000) | 18,240 |
| B | Borrow money @ 8\% (12\% x 75,000) | 9,000 |
| C | Buy shares in Unlevered Company | 27,240 |

Step 3: Increase in Annual Earnings of Investor

|  |  | Rs |
| :--- | :--- | :---: |
| A | Income from shares in Unlevered firm <br> $\frac{27,240 \times 25,000 \quad \text { Or } \quad(27,240 \times 12.5 \%)}{2,00,000}$ | 3,405 |
| B | Less: Interest on Loan (8\% x 9,000) | $(720)$ |
| C | Net Income from Unlevered Firm (A - B) | 2,685 |
| D | Less: Income from levered firm (12\% x 19,000) | $(2280)$ |
| E | Increase in Income of investor due to arbitrage (C - D) | $\mathbf{4 0 5}$ |

## PROBLEM : 3 (a)

HCP Ltd. is a leading manufacturer of railway parts for passenger coaches and freight wagons. Due to high wastage of material and quality issues in production, the General Manager of the company is considering the replacement of machine A with a new CNC machine B. Machine A has a book value of ₹ $4,80,000$ and remaining economic life is 6 years. It could be sold now at ₹ $1,80,000$ and zero salvage value at the end of sixth year. The purchase price of Machine B is ₹ $24,00,000$ with economic life of 6 years. It will require ₹ $1,40,000$ for installation and ₹ 60,000 for testing. Subsidy of $15 \%$ on the purchase price of the machine B will be received from Government at the end of 1st year. Salvage value at the end of sixth year will be ₹ $3,20,000$.

The General manager estimates that the annual savings due to installation of machine B include a reduction of three skilled workers with annual salaries of ₹ $1,68,000$ each, ₹ $4,80,000$ from reduced wastage of materials and defectives and ₹ $3,50,000$ from loss in sales due to delay in execution of purchase orders. Operation of Machine B will require the services of a trained technician with annual salary of ₹ $3,90,000$ and annual operation and maintenance cost will increase by ₹ $1,54,000$. The company's tax rate is $30 \%$ and it's required rate of return is $14 \%$. The company follows straight line method of depreciation. Ignore tax savings on loss due to sale of existing machine.
The present value factors at $14 \%$ are :

| Years | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PV Factor | 1 | 0.877 | 0.769 | 0.675 | 0.592 | 0.519 | 0.456 |

Required:
(i) Calculate the Net Present Value and Profitability Index and advise the company for replacement decision.
(ii) Also calculate the discounted pay-back period.

## Solution:

Step 1: Calculation of Initial Cash Outflow

|  |  | Rs | Rs |
| :--- | :--- | :---: | :--- |
| A | Cost of New Machine |  |  |
|  | $\bullet$ Purchase Price | $24,00,000$ |  |
|  | $\bullet$ Installation | $1,40,000$ |  |
|  | $\bullet$ Testing | $\underline{60,000}$ | $26,00,000$ |
| B | Less: Sale Processes of old machine |  | $(1,80,000)$ |
| C | Less : PV of Govt Subsidy at the end of year 1 (24 lacs $\times 15 \% \times 0.877)$ |  | $(3,15,720)$ |
| D | Initial Cash Outflow |  | $\mathbf{2 1 . 0 4 , 2 8 0}$ |

Step 2: Govt Subsidy at the end of $1^{\text {st }}$ year
$=15 \% \times 24,00,000=3,60,000$

Step 3: Incremental Income before depreciation and tax from New Machine

|  |  | Rs |
| :--- | :--- | :---: |
| A | Annual Savings: |  |
|  | (i) Reduction in Salaries (1,68,000 x 3) | $5,04,000$ |
|  | (ii)Reduction in Material Wastage \& Defectives | $4,80,000$ |
|  | (iii)Reduction in lost sales | $\underline{\mathbf{3 , 5 0 , 0 0 0}}$ |
|  |  | $\underline{3,34,000}$ |
| B | Additional Costs: | $\mathbf{3 , 9 0 , 0 0 0}$ |
|  | (i)Salary of one trained technician | $\underline{1,54,000}$ |
|  | (ii)Increase in operation \& maintenance cost | $\underline{\mathbf{5 , 4 4 , 0 0 0}}$ |
|  |  | $\mathbf{7 , 9 0 , 0 0 0}$ |
| C | Incremental Income before depreciation and tax |  |

Step 4: Incremental Depreciation

|  |  | Rs |
| :--- | :--- | :--- |
| A | Depreciation on New Machine (SLM) <br> $=\frac{(\text { Total cost - Subsidy) - Salvage Value }}{\text { No. Of years }}$ <br> $=\frac{(26,00,000-3,60,000-3,20,000}{6}$ |  |
| B | Depreciation on old Machine <br> $=\frac{4,80,000-0}{6}$ | $8,20,000$ |
| C | Incremental Depreciation (A - B) | $\mathbf{8 0 , 0 0 0}$ |

Step 5: Calculation of Incremental CFAT

|  |  | Rs |
| :--- | :--- | :--- |
| A | Incremental Profit Before Depreciation and Tax (Step 3) | $7,90,000$ |
| B | Less: Incremental Depreciation (Step 4) | $(2,40,000)$ |
| C | Incremental PBT (A-B) | $5,50,000$ |
| D | Incremental PAT $[5,50,000 \times(1-0.30)]$ | $3,85,000$ |
| E | Incremental CFAT $(3,85,000+2,40,000)$ | $6,25,000$ |

Step 6: Calculation of NPV

| Year | Particulars | Cash Flow | PV @ 14\% | Present Value |
| :---: | :--- | :---: | :---: | :---: |
| 0 | Initial cash flow (Step 1) | $(21,04,280)$ | 1 | $(21,04,280)$ |
| $1-6$ | Incremental CFAT (Step 5) | $6,25,000$ | 3.888 | $24,30,000$ |
| 6 | Salvage Value of New Machine | $3,20,000$ | 0.456 | $1,45,920$ |
|  | NPV |  |  | $\mathbf{4 , 7 1 , 6 4 0}$ |

Step 7: Profitability Index (PI)

$$
\mathrm{PI}=\frac{\mathrm{PV} \text { of Cash Inflows }}{\mathrm{PV} \text { of Cash Outflows }}
$$

$$
\mathrm{PI}=\frac{25,75,920}{21,04,280}
$$

$$
=1.224
$$

Advice - The company should replace the old machine by the new one because NPV is positive. Positive NPV maximizes the wealth of shareholders.

Step 8: Calculation of Discounted Payback Period

| Year | Cash flow | PV @ 14\% | Present <br> Value | Cumulative <br> Present Value |
| :--- | :---: | :---: | :---: | :---: |
| 1 | $6,25,000$ | 0.877 | $5,48,125$ | $5,48,125$ |
| 2 | $6,25,000$ | 0.769 | $4,80,625$ | $10,28,750$ |
| 3 | $6,25,000$ | 0.675 | $4,21,875$ | $14,50,625$ |
| 4 | $6,25,000$ | 0.592 | $3,70,000$ | $18,20,625$ |
| 5 | $6,25,000$ | 0.519 | $3,24,375$ | $21,45,000$ |
| 6 | $6,25,000+3,20,000=9,45,000$ | 0.456 | $6,25,000$ | $25,75,920$ |

Discounted Payback Period

$$
=4 \text { Years }+\frac{21,04,280-18,20,625}{3,24,375}
$$

[^0]
## PROBLEM : 3 (b)

Vista Limited's retained earnings per share for the year ending 31.03 .2023 being $40 \%$ is ₹ 3.60 per share. Company is foreseeing a growth rate of $10 \%$ per annum in the next two years. After that the growth rate is expected to stabilize at $8 \%$ per annum. Company will maintain its existing pay-out ratio. If the investor's required rate of return is $15 \%$, Calculate the intrinsic value per share as of date using Dividend Discount model.
(3 Marks)

## Solution:

Step 1: Calculation of EPS and Dividend Payout Ratio

|  |  | Rs |
| :--- | :--- | :---: |
| A | Retained Earnings Per Share | 3.60 |
| B | Retention Ratio | $40 \%$ |
| C | EPS (A/B) | 9 |
| D | Dividend Payout Ratio $(100-40)$ | $60 \%$ |

Step 2: Calculation of Intrinsic Value per share
First calculate PV of Dividend for first two years (Growth rate of first two years = 10\%)

| Year | EPS | DPS @ 60\% | PVF @ 15\% | Present Value |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $9(1.10)=9.90$ | 5.94 | 0.8696 | 5.17 |
| 2 | $9.90(1.10)=10.89$ | $\mathbf{6 . 5 3 4}$ | 0.7561 | 4.94 |
|  |  |  |  | $\mathbf{1 0 . 1 1}$ |

## Calculation of Terminal Value (Price at the end of year 2 i.e. $\mathbf{P}_{\mathbf{2}}$ )

$P_{2}=\frac{D_{2}(1+g)}{K e-g}$

$$
=\underline{6.534(1+0.08)}
$$

15\% - 8\%

$$
=100.81
$$

Present Value of $\mathrm{P}_{2}=\underline{100.81}$
$(1.15)^{2}$

$$
=76.23
$$

Intrinsic Value $=10.11+76.23$

$$
=86.34
$$

## PROBLEM :4 (a)

State with brief reasons whether the following statements are true or false : (4 Marks)
(i) Maximising Market Price Per Share (MPS) as the financial objective which maximises the wealth of
shareholders.
ANSWER - TRUE - Market price represents the wealth of the shareholders. Wealth maximization is the main objective of financial management.
(ii) A combination of lower risk and higher return is known as risk-return trade off and at this level of risk-return, profit is maximum.

FALSE: A combination of higher risk and higher return is known as risk-return trade off
(iii) Financial distress is a position when accounting profits of a firm are sufficient to meet its long-term obligations.
FALSE: Financial distress is when company is unable to pay its liabilities.
(iv) Angel investor is one who provides funds for start-up in exchange for an ownership/equity.

TRUE - Angel investor are individual who provides funds for start-up in exchange for an ownership/equity. They take a stake in the company. Angel investors are focused on helping startups take their first steps. Angel investors who seed startups that fail during their early stages lose their investments completely.

## PROBLEM : 4 (b)

ABC Ltd. is approaching the banks for financing its business activity. You are required to describe any four forms of bank credit for the consideration of the company. (4 Marks)

## PROBLEM : 4 (c)

Discuss the relevance of Payback reciprocal in capital budgeting decisions.
(2 Marks)
OR

## PROBLEM : 4 (c)

Explain the features of crowd funding.



[^0]:    $=4.87$ years

