VENTURE CAPITAL METHOD

Case Study 8: GAZA Capital

TYPE 1: Pre Money & Post Money Valuation (Single Round of Funding)

GAZA Capital is planning to invest Rs. 15 Crores at the seed stage in a startup known as Team Lease [A firm providing HR Services].

Investment Horizon is 5 years.

Given the high risk involved, rate of return required is 25% p.a.

The founder of Team Lease presently hold 2,50,000 shares. It is estimated that Team Lease will come out with a public issue (IPO) at the end of 5 years. It is estimated that the IPO will be priced at 6 times sales of the 5^{th} year which in turn is forecasted to be 60 crores.

You are required to **calculate**:

a. Post money valuation

b. Pre money valuation

c. Ownership position required by GAZA Capital

d. Number of shares issued to GAZA Capital

e. Issue price

ANSWER:

a. Post money valuation

Present value of Terminal value

Where, Terminal value i.e. V_5 = 6 × 60
= 360 Crores

Post money value today = PV of V_5 = PV of 360 crores @ 25%
= 360 PVIF (25%, 5)
= 117.96 crores

b. Pre Money Valuation = 117.96 – 15
= 102.96 crores

c. Ownership position required = (15/117.96) × 100
=12.72%

d. Number of share to be issued = (2,50,000/87.28)× 12.72
= 36434 shares

e. Issue price = 15,00,00,000/36434
= 4117.03

TYPE 2: Pre Money & Post Money Valuation (Multiple Round of Funding)

Suppose in the above problem, GAZA Capital decides to invest Rs. 5 crores today (Seed Stage) and another 10 crores at the end of 3 years (later stage).

Answer all the above questions at t = 0 & t = 3

Step 1: Terminal value V_5 = 360 crores
Therefore, post money value at (t=3) = 360 PVIF (25%, 2)
= 230.4 crores

Step 2: Pre money value at (t=3) = 230.4 – 10
= 220.4 crores

Step 3: Ownership position additional required at t = 3
= (10/230.4) × 100
= 4.34%

Step 4: Post money valuation today = 220.4 (PVIF 25%,3)
= 112.84 Crores

Step 5: Pre Money Value today = 112.84 – 5
= 107.84 Crores

Step 6: Ownership position required today = (5/112.84)× 100
= 4.43%

Step 7: No. of shares issued today =(2,50,000/95.57) × 4.43
= 11588 shares

Step 8: Issue price today = 5,00,00,000/11588
= 4314.81

Step 9: Total no. of shares today = 2,50,000 + 11588
= 261588 shares

Therefore no. of shares issued at t = 3 = (261588/95.60)×4.34
= 11,868 shares

Step 10: Issue price at t = 3 = 10,00,00,000/11868
= 8426.02

VC METHOD

Case Study 9: Excalytics

Excalytics is an Edtech company. Firm's entrepreneur founders believe they can sell the company for $40 million in five years. They need $1 million in capital now, and the entrepreneurs currently hold 1 million shares. The venture capital firm, VC Investors, decides that given the high risk of this company, an ROI of 10x is appropriate.

Calculate the pre-money valuation, post-money valuation, ownership fraction, and price per share applying the venture capital method.

ANSWER:

Given: ROI = 10; exit value = $40 million; INV = $1 million;

$shares_{founders}$ = 1,000,000

Step 1: Post-money valuation

POST = exit value / ROI
= 40m / 10
= $4 million

Step 2: Pre-money valuation

PRE =POST - INV
= $4m - $1m
= $3 million

Step 3: VC fund fractional ownership

f =INV/ POST
= $1m / $4m
= 25%

Step 4: Number of shares allocated to the VC fund

$Shares_{vc}=shares_{founders} \times (f/1-f)$
= 1,000,000 × (0.25 / 0.75)
= 333,333

Step 5: Price per share

Price per share = INV/ $shares_{vc}$
= 1,000,000 / 333,333
= $3.00

Case Study 10: ScaleIt

ScaleIt is a startup specializing in mobile "apps" (applications). The company's founders need $2 million in capital now, and the founders currently hold 1 million shares. The venture capital investor firm decides that an ROI of 10x is appropriate and targets an exit in 5 years when the startup's revenues will be $20 million. Assume a valuation of 2x revenue at exit.

1. **What is the post-money valuation?**
   A. $4,000,000.
   B. $11,310,120.
   C. $40,000,000.

2. **What is the pre-money valuation?**
   A. $1,200,000.
   B. $2,000,000.
   C. $4,000,000.

3. **What is the ownership fraction for the venture capital firm?**
   A. 24.00%.
   B. 38.11%.
   C. 50.00%.

4. **What is the number of shares for the venture capital firm?**
   A. 615,000.
   B. 900,750.
   C. 1,000,000.

5. **What is the price per share for the VC fund?**
   A. $2.00.
   B. $4.00.
   C. $7.37.

6. **The VC fund's expected IRR on this investment is closest to:**
   A. 31%.
   B. 44%.
   C. 58%.

ANSWER:

Question 1:

A is correct.

POST = exit value / ROI = 40 / 10 = $4 million

Question 2:

B is correct.

PRE = POST-INV = $4 million - $2 million = $2 million

Question 3:

C is correct.

f= INV/ POST = $2 / $4 = 50%

Question 4:

C is correct.

$Shares_{vc} = shares_{founder}$ X (f/1-f) = 1 million x (0.50 / 0.50) = 1 million

Question 5:

A is correct.

Price/share = INV / $shares_{vc}$ = $2 million / 1 million = $2.00

Question 6:

C is correct.

IRR = $(10)^{(1/5)}$ - 1
= 58.49%

JOINT PROBABILITY PROBLEM ON VENTURE CAPITAL

Case Study 11: KKR

KKR is contemplating to invest Rs. 80 crores in an education start up which plans to come out with memory enhancing herbals. Given the high risk involved required rate of return is 25% p.a.

Investment horizon is 5 years.

Scenario 1: In case the venture turn's out to be a success, the fund plans to recover Rs. 600 crores at the end of 5 years.

Scenario 2: If the venture fails, recovery would be NIL.

The following table provides the conditional probability of failure:

Years	Probability of failure
1	30%
2	25%
3	20%
4	18%
5	15%

Calculate expected NPV and decide whether KKR should make this investment or not?

ANSWER:

Scenario 1: Success

Step 1: Probability of success	= (1 - 0.3) × 0.75 × 0.80 × 0.82 × 0.85 = 0.2927
Note: probability of failure	**= 1 – Probability of success** **= 1 – 0.2927** **= 0.7073**
Step 2: NPV	= 600 PVIF (25%, 5) – 80 = 116.61 Crores

Scenario 2: Failure

Step 1: Probability of failure	= 1 – 0.2927 = 0.7073
Step 2: NPV	= 0 – 80 = – 80 crores
Expected NPV	= 0.2927 × 116 + 0.7073 (-80) = - 22.45 crores

Therefore investment is not viable