# Learning Objectives

**Understand the pre and post money valuation**

**Recognize the quick valuation process**

**Implement the Venture Capital method**

# Valuation

**Valuation involves estimating the worth or price of a company.**

Different industries use different methods

The valuation of a business incorporates

1. Financial analysis of the company,
2. Subjective assessment of other factors :
   - Stage of the company
   - Management team assessment
   - Industry
   - Reason the company is being sold
   - Other general macroeconomic factors

**Valuation of start-ups is a challenge**

Young companies share some common characteristics:

- 1. No history
- 2. Small or no revenues, operating losses
- 3. Dependent on private equity
- 4. Many do not survive
- 5. Multiple claims on equity
- 6. Investments are illiquid

# Basic ideas of start-up valuation: From Early Stage to Equity Funding and Ownership Exchange

- **Early Stage Value:** At the initial phases of your startup, its value is minimal.
- **Value Growth with Milestones:** As you achieve startup milestones like product development and acquiring customers, your company's value increases.
- **Equity Funding and Ownership:** When seeking investment from investors (equity funding), founders exchange a portion of their ownership for cash investment.
- **Determining Ownership Exchange:** The investment amount raised from investors and the valuation of your company determines how much equity ownership you give up to the investors.
- **Negotiating Valuation:** The valuation is a mutual decision between you and investors. Investors want a low valuation (before they put their money in), whereas founders want a high valuation.

**Your start up is worth what you and the investor agrees its worth!**

# Why Value Your Company?

There are numerous reasons why an entrepreneur should know the value of his business:

- To determine a sale price for the company
- To determine how much equity to give up for partnership agreements
- To determine how much equity to give up for investor capital

*The valuation of a company, particularly that of a start-up, is not an exact science. As Nick Smith, a venture capitalist in Minnesota, stated, "Valuation in a start-up is an illusion." Therefore, the true value of a company, be it a start-up or a mature business, is established in the marketplace.*

https://learning.oreilly.com/library/view/entrepreneurial-finance-fourth/9781260461459/ch06.xhtml#:-:text=The%20valuation%20of,in%20the%20marketplace.

**Different methods used to determine the value of the company: Complicated quantitative models Vs Simple Approaches**

**Valuation is a complex process that always requires contextual consideration and cannot be carried out in isolation.**

# Specific valuation methods +

**Various valuation methods used by investors**

0. Pre and Post-money Valuation

1. VC Quick Valuation Method

2. VC Valuation Method

3. Income-based Valuation (DCF) Discounted Cash Flow Methods

… + Other Methods

4. Market-based Valuation (Relative)

5. Asset-based Valuation

# Valuation and Funding Terminology

- **Pre-money Valuation.** The value placed on a start-up before an investment round. The pre-money valuation is a key point of negotiation between founders and equity investors.
- **Post-money Valuation.** The value of the startup after the investment round. The investment amount + the pre-money valuation = the post-money valuation.
- **Founder Dilution.** The amount of ownership given up by startup founders, expressed as a percentage "the founders are willing to accept a 20% dilution in exchange for a $200,000 angel fund investment."
- **Investor Dilution.** Founders are not the only stakeholders that give up equity as new investors come into the funding picture. Existing investors can also be required to withstand a reduction in their ownership percentage in the startup. If the startup raises multiple rounds of equity investment, early investors will give up some ownership to new investors.

# Valuation and Funding Terminology

- **Raise or Round** (Investment Round). The process and result of raising money for your startup is called a round or a raise. Whether you are at the beginning stages of the money raising process, or have just put an investors money in the bank, each round is given a name or designation, such as Seed round or Series A round.
- **Priced Round**. Agreeing with investors on the valuation of the startup, and therefore the price per share of stock can be calculated. Also called pricing the company.
- **Seed Round.** In common usage, a seed round can be any investment in a startup used to start the company and create its first products or services. Money coming from the founders themselves, friends and family can all qualify as a seed round.
- **Series A, Series B,** etc. Series A is a term used to mean many things, but typically, a Series A is the first Venture Capital level investment round. Additional investments from institutional investors follow the same pattern, Series B, Series C, and so on.

# Valuation and Funding Terminology

- **Burn Rate:** The burn rate refers to the rate at which a company is using up its available capital or funds to cover its operational expenses and costs. It is often expressed as a monthly or annual figure and reflects the speed at which a company is "burning" through its financial resources.
- **Hurdle Rate:** The minimum rate of return that an investment must achieve to be considered feasible or acceptable. It's the benchmark return required by an investor
- **Equity.** The ownership of the startup—who owns how much. In the most common sequence, the founders own 100% equity of the startup at formation, then give up chunks of ownership to outside investors in exchange for cash investments. Portions of equity are also given to key employees in the form **of stock options** as additional compensation for their contributions to the startup’s efforts. If the startup gets acquired by a larger company (called an exit), the percentage equity ownership determines how the proceeds from the exit get divided.

# Pre-Money and Post-Money Valuation

- **Pre-money valuation** is the implied value of the venture prior to new investment: It is defined as the company's value, using whatever valuation models the entrepreneur chooses, before the investment.

**Post-money** is the total value of the venture after the new investment:

- It equals the premoney valuation plus the amount of the equity investment.
- Postmoney valuations determine how much equity the investor gets. This ownership amount is calculated by dividing the investment by the postmoney valuation.

**Example:** If the premoney value is $12 million, then the person who invests $3 million will get 20% ($3 million invested divided by the sum of the $12 million premoney valuation plus the $3 million investment).

**FIGURE 1 Premoney and Postmoney Valuation, Series A**

| Series | Investment | Premoney Valuation | Postmoney Valuation | Equity Stake |
|---|---|---|---|---|
| A | $3 | $12 | $15 | 20% |

# Example_ Premoney and Postmoney Valuations

**FIGURE 2** Premoney and Postmoney Valuation, Series A & B

| Series | Investment | Premoney Valuation | Postmoney Valuation | Equity Stake |
|---|---|---|---|---|
| A | $3 | $12 | $15 | 20% |
| B | $3 | $15 | $18 | 17% |

Postmoney valuation of the last financing round is usually where the premoney valuation of the next round begins

- The first round, the "Series A," was financed at a $15 million postmoney valuation. The premoney valuation for the next round of financing, the "Series B," will be $15 million, and if a new investor puts in $3 million, the new postmoney valuation will be $18 million. The Series B investor will receive 17% of the equity for his second round of financing.

***How much equity will receive the series A investor?***

- The Series A investor, who invested $3 million for 20%, will now own 20% of 83% (the balance of the equity after Series B), or 16.6% (=20%X83%) of the company.

# VC Quick Valuation Method

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# VC Quick Valuation Method

VC Quick Valuation Method:

- Rapidly assesses startup value
- Effectively assesses the investor's estimated valuation
- Requires few inputs for valuation calculation
- Offers swift valuation insight for investor decisions

## Example

1. At our current burn rate, the start-up needs $3 million for the next 18 months. This level of funding gets them to significant milestones, creating the validations they need to raise the next round of funding.
2. The VC knows that to get involved, they want to own at least 20% of the company.

- Post-money valuation: 20% → 3 M, so 100% = → 15M


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+3

# Activity 1_How Much Equity to Give Up

- *It is quite common for entrepreneurs to establish the value of their companies when they are raising capital. Many of them will **determine the amount of capital they need** and at the same time **arbitrarily state the level of ownership** they wish to retain. Such an act automatically places an implied value on the company.*
- *For example, if an entrepreneur is looking to raise $100,000 and says that she wants to retain 90% of the company, the postmoney valuation is $1 million*

*(postmoney valuation: =100,000/10%=1,000,000)*

## Arbitrarily Setting Ownership Targets While Determining Capital Needs

**Setting Equity Stake arbitrarily**

For example, if the company has a postmoney value of $2 million and the entrepreneur is raising $200,000, then the investor will get 10% of the company.

**Individual Activity:** Suppose a founder offers 15% of his business in return for 200K. What is the post money valuation?

# Activity 1_How Much Equity to Give Up

## Arbitrarily Setting Ownership Targets While Determining Capital Needs

- *It is quite common for entrepreneurs to establish the value of their companies when they are raising capital. Many of them will* ***determine the amount of capital they need*** *and at the same time* ***arbitrarily state the level of ownership*** *they wish to retain. Such an act automatically places an implied value on the company.*
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*(postmoney valuation: =100,000/10%=1,000,000)*

**Individual Activity:** Suppose a founder offers 15% of his business in return for 200K. What is the post money valuation? (200/0.15=1,333)

15% | 200K

100% | X

100%*200=X*15%

X = 1 333

# Activity 3 _ Pre-Money and Post-Money Valuation

**Individual Activity:** Prior to raising capital, a venture has 100,000 exiting shares. A new investor will invest $150,000 and get 20,000 shares. What are the pre- and post-money valuations?

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Implied share price = $150,000 ÷ 20,000 shares = $7.50
Pre-money valuation = 100,000 shares x $7.50 = $750,000
Post-money valuation = $750,000 + $150,000 = $900,000

# Activity 4 _ Pre-Money and Post-Money Valuation

**Group Activity:** In group, view the video and respond to the questions provided below.
https://www.youtube.com/watch?v=SKyI042AbQI

1. How unique was the business idea?
2. What was the original pre and post-money valuation?
3. What was the final post-money valuation
4. What obstacles affected the valuation?

# Activity 5_How Much Equity to Give Up

## Equity Calculation: Different Approaches for Savvy Investors: A method considering the company's value

- Investors may determine the equity stake that they want using calculations and considering the company's value
- Four, not two, variables are needed:
  - The future expected value of the company,
  - The amount of capital invested,
  - The investors' desired annual return,
  - The number of years that the capital will be invested.

**Equity Stake**

$$\text{Amount of Investment} \times \frac{(1 + \text{Year 1 expected return}) \times (1 + \text{Year 2 expected return}) \times \cdots}{\text{future expected value of company}}$$

**Equity Stake calculation**

**Individual Activity:** An entrepreneur is seeking an equity investment of $400,000 for a company valued at $5 million. Calculate the amount of equity she should expect to give up to an investor who wants to cash out in four years with an annual return of 30%.

# Activity 5_How Much Equity to Give Up

**Equity Stake calculation**

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## Equity Calculation: Different Approaches for Savvy Investors: A method considering the company's value

Equity Stake

$$\text{Amount of Investment} \times \frac{(1 + \text{Year 1 expected return}) \times (1 + \text{Year 2 expected return}) \times \cdots}{\text{future expected value of company}}$$

$$\frac{\$400{,}000 \times (1 + 0.30) \times (1 + 0.30) \times (1 + 0.30) \times (1 + 0.30)}{\$5{,}000{,}000}$$

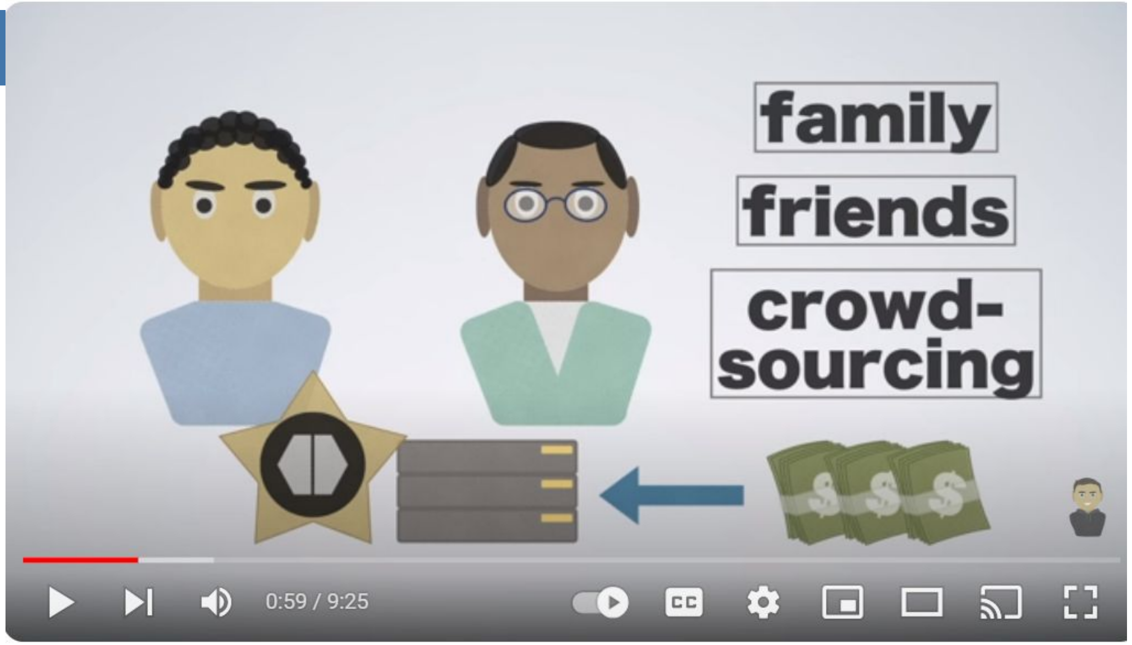
or

$$\frac{\$400{,}000 \times 2.86}{\$5{,}000{,}000} = 0.23$$

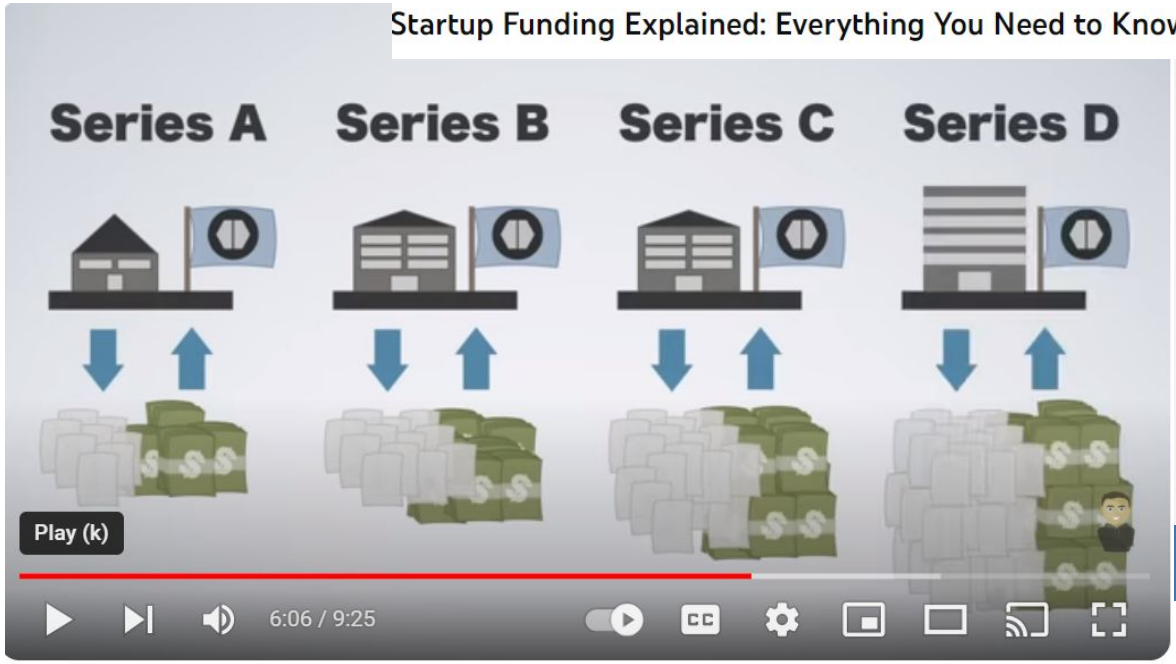
The entrepreneur should expect to give up 23% of the company.

# Video : Startup Funding Explained: Everything You Need to Know

- https://www.youtube.com/watch?v=677ZtSMr4-4




Startup Funding Explained: Everything You Need to Know




Startup Funding Explained: Everything You Need to Know

# Venture Capital Valuation Method

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# Venture Capital Valuation Method

**1- Start with the End Goal:**

- VC method begins by thinking about the startup's future acquisition or exit.
- Assume a value for the exit, which is the amount the startup gets acquired for.

**2- Work Backward:**

- Calculate the startup's current value by going backward from the exit value.
- Use this to figure out what the startup must be worth now, considering the expected return on investment (ROI).

## 3- Use one of the below methods

**A_ Using Financial Projections:**

Estimate the startup's future financial performance, specifically annual revenues in the year of the startup’s exit.
This helps understand how much the startup might grow over time.

**B_ Public Company Data:**

Look at data from similar public companies to get Price/Earnings (P/E) ratios.
These ratios help compare and validate the startup's value with others in the market.

**4- ROI Hurdles by Investors:**

Professional investors (VCs) set targets for the minimum return they want from their investment.
If the startup can't meet these targets, VCs might not invest.

**5- Pre-money valuation**

The VC valuation method uses this ROI expectation to derive a pre-money valuation for the startup

# Example: Venture Capital Valuation Method

## Case Study: CoinIn - A Fintech Venture Seeking Financing from Investors

There are two common ways to estimate the exit value:

1. **Exit Multiple :** Using industry trends. Say you know startups in your space typically get acquired for XX times (XX) their annual revenues.
2. **Price /Earnings Multiple**

**1- Exit Multiple :** CoinIn, a dynamic Fintech startup, is in search of strategic financing from a VC. The VC, is seeking a ROI multiple of 20 within a 5-year investment horizon.
A parallel Fintech enterprise recorded **revenues $20 million in its 5th year**, and industry peers have been valued at a **multiple of 2X** their annual revenues.
Based on this benchmark, Calculate the exit value.

**CoinIn's projected Exit Value= 2 x $20 million = $40 million**

**Exit Value= Exit Multiple × Exit Year Revenue**

# Example: Venture Capital Valuation Method

## Case Study: CoinIn - A Fintech Venture Seeking Financing from Shorooq VC

### 2- Price /Earnings Multiple

CoinIn founders believe that the revenue multiple method of estimating exit value is too simplistic and unreliable. Instead, they want to use the comparable price-earnings (P/E), model. Based on the below information, estimate the exit value :

- Estimate Year five annual revenues will be $25 million
- The industry P/E ratio – 10
- The company estimates its earnings (also referred to as Return on Sales, or ROS) to be 16 % of estimated revenues

- Earnings = $25 million x 16% = $4 million
- Exit value = 10 x $4 million = $40 million

*Estimate your Year five annual revenues. Then calculate your earnings in your exit year (year five in this example), and then multiply by the P/E multiplier to get an exit value.*

**Earnings = ROS% × Exit Year Revenue**

**Exit Value= P/E Multiplier × Earnings**

# Example: Venture Capital Valuation Method

## Case Study: CoinIn - A Fintech Venture Seeking Financing from Shorooq VC

Calculate the post-money valuation using the VC method

**Post money = $40 million /20 = $2 million**

*Now with your startup's exit value estimated, you can calculate what your post-money valuation would have to be to meet the investors' desired return on investment. (from the previous Step) • You know that investors are hoping for a 30 times (30X) return on their investment.*

**Post-money valuation = Exit Value/ROI Multiple**

Assume that CoinIn is trying to raise $500,000 from the VC. Calculate the pre-money valuation

**Pre money = $2 million - $500,000 = AED $1.5 million**

*Using the amount of the current investment round (**Amount of funds to be raised** ) you can easily calculate what your current pre-money valuation is: You know: • You are trying to raise $500,000 from the investors • Your target post-money valuation needs to be $2 million • Therefore, your pre-money valuation is $1.5 million*

# Example: Venture Capital Valuation Method

## Case Study: CoinIn - A Fintech Venture Seeking Financing from Investors/ VC

Calculate the equity percentage owned by the investor/VC.
Finally, divide the $500,000 investment amount by the post-money valuation to get the amount of equity that would be owned by the investor.

**Investor Ownership= $500,000/$2 million 25%**

*Divide the investment amount by the post-money valuation to get the amount of equity that would be owned by the investors.*

**Investor Ownership = investment amount / post-money valuation**

*In summary, if you are raising $500,000 now, your pre-money valuation needs to be $1.5 million, and your startup needs to get acquired for $40 million (or more) in order for investors to get their desired 20X multiple on their money.*

*(Note that this is a simplified example. Many other Term Sheet deal factors influence how much an investor gets from the sale proceeds of an exit event.)*

# Option Pool Impact on valuation

**What is Option Pool** An option pool is a set of shares that are reserved for future employees, such as new hires or existing staff members.

**Why Does it Matter**

- Option pools incentivize employees for company success.
- Startups attract talent and boost motivation.

- Option pool affects a startup's valuation in two ways:
  1. Dilution: Increased shares reduce existing shareholders' ownership.
  2. Potential future value: Option holders contribute to growth.

- The larger the option pool, the lower the company's valuation

**Example:** *A startup has a total of 1 million shares outstanding. If they set aside 10% of those shares for their option pool, that would be 100,000 shares. These shares could then be offered to new hires as part of their compensation package. As the company grows and becomes more valuable, the value of these shares also increases, providing a financial incentive for employees to stay with the company and work towards its success.*

# Option Pool Impact on valuation: True Pre-Money Valuation

**Case Scenario:** *The founders have agreed on a pre-money valuation of $2 million, a raise amount of $500,000, and investors are asking for a 20% option pool to be created pre-money.*

**1_Current Parameters**

**Post Money Valuation= Negociated Pre-Money + Raise Amount**

**$2,500,000= $2,000,000 + $500,000**

**Investor Ownership%= Raise Amount/Post-Money Valuation**

**20% = $500,000 / $2,500,000**

**2_Calculate the dollar value of the option pool**

**Option Pool Dollar Value= Required Option Pool % ×Negotiated Pre-Money**

**$400,000 = 20%× $2,000,000**

**3_ Calculate the true pre-money valuation**

**True Pre-Money = Negotiated Pre-Money – Option Pool Value**

**$1,600,000= $2,000,000 - $400,000**

**4_ Recalculate the ownership percentage of the investor**

**True Post-Money= True Pre-Money+ Raise Amount**

**$2,100,000= $$1,600,000 + $500,000**

**Investor Ownership%= Raise Amount / True Post-Money**

**24% = $500,000/$2,100,000**

# VC Method: Advantages & Disadvantages

**Qualitative advantages**

- The valuation can be driven by the financial projections for a "success" scenario that may be reported in the business plan.
- The negotiation process may be facilitated by centering the negotiations on the entrepreneur's projections.
- The investor's experience may be easiest to apply without formal analysis when comparisons of ventures are made on the basis of "success" scenarios.
- The method is easy to use and may be adequate for simple investment decisions.

**Disadvantages**

- Lack of precision
- Biases resulting from discounting optimistic cash flow projections at a hurdle rate that is above cost of capital.
- Lack of information about uncertainty, which would be useful for valuing complex financial claims.

# References

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# Thank You!