



VALUATION OF **START-UPS**

Start-up valuation is the process of determining the value of a newly established business in the market, taking into account a range of different factors. It's an important task that entrepreneurs must undertake when seeking funding, looking for a business partner, or even for financial reporting purposes. Therefore, a financial analysis and valuation document is required for every start-up to evaluate its true worth accurately. This document is vital for the start-up's success can help making informed decisions.

What is a start-up?

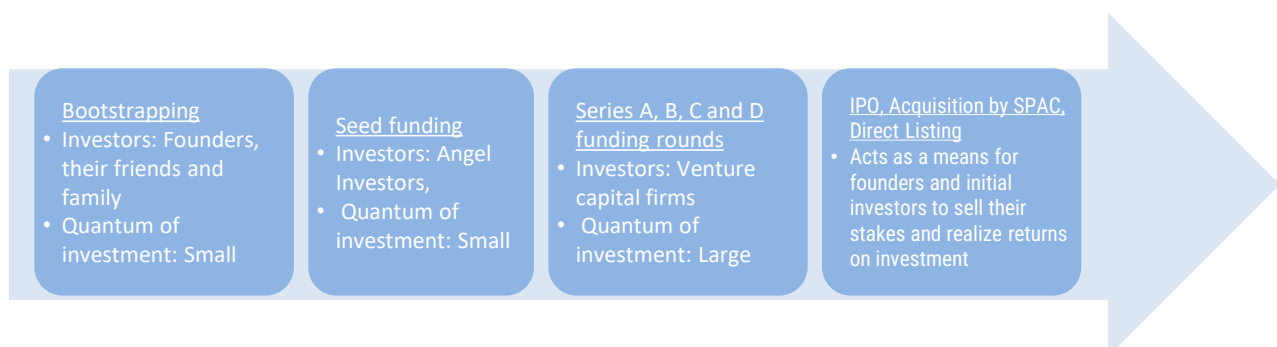
A start-up is generally defined as a company in the early stage of operations that is incorporated to solve a problem by developing a unique product or service. A start-up aims to upgrade existing products or create an entirely new and innovative range of goods and services. Initially, start-ups are funded by their founders and need a fully developed business model. These companies generally start with high costs and limited revenue and often require significant investments to grow their enterprise and invest in research and development.

Recent trends in start-up funding in the US

Due to major geopolitical and financial headwinds, start-up funding activity involving early-stage to series B funding in the US in 2022 has been negatively impacted. With 10,681 deals totaling a deal value of \$112.90 billion, start-up funding activity in 2022 has witnessed a marginal decline compared to 2021 which witnessed 11,828 deals with a total deal value of \$130.02 billion (i.e., down 13% by value and 10% by volume).

Further, in the first three months of 2023, the aggregate deal value and the number of deals were significantly lower compared to the same period in 2022, with a decrease of approximately 54% for both i.e., aggregate deal value and the number of deals. The decline can be attributed to a cautious approach taken by most funds, as they are sitting on a considerable amount of dry powder and want to be prepared to support their existing portfolio startups amid the continuous macroeconomic uncertainties. However, it's important to note that the data only covers the first three months, and it might be too early to draw any definitive conclusions for the coming year. *(Data compiled as of March 31, 2023; Source: S&P's Capital IQ Pro)*

Start-ups generally raise money via several rounds of funding as described below:



Each round of funding, as described in the above section, typically necessitates some form of a professional valuation. However, the valuation of start-ups is a tricky and extensive process. All start-ups share some common characteristics that can be problematic when valuing them. These characteristics include:

- **No history:** Start-ups have little or no history, with most possessing merely one or two years of financial data on business operations and financing.
- **Little to no revenue streams:** Revenue streams for start-ups are usually small or non-existent. The expenses are often associated with establishing the business and undertaking research and development activities rather than generating revenues and supporting the operations.
- **Survival:** Many start-ups don't survive as there needs to be clear visibility about whether the product or services being developed will commercialize or not. In such cases, the risk of failure makes using long-term terminal year variables inappropriate.
- **Illiquidity of investments:** Typically, equity investments in start-ups are privately held and exit via IPO or secondary sale. Therefore, investments are considered more illiquid.
- **Lots of uncertainty in the business model:** In some cases, how the business model will evolve is unclear. This uncertainty makes it challenging to build valuation models due to a lack of definitive projections and trends

In light of the above, valuation methods used to value a start-up are broadly categorized into quantitative and qualitative. Quantitative valuation methods emphasize the financial metrics and involve discounted cash flow analysis and evaluating multiples derived from publicly comparable companies and transactions. Qualitative valuation methods focus on measuring the value of a start-up's intrinsic attributes, such as the founding team's qualifications, the innovation of the start-up's product/service, and the legal status of the start-up, among other things. This type of valuation method measures the startup's value rather than focusing on the future value it may generate.

The methods are elaborated upon in the next section.

I. Quantitative methods

1. Venture capital ("VC") method

This method is based on the expected future returns of the investor. In this method, the investor assumes that after a span of 'n' years, the start-up could be sold for an 'x' amount. Then, based on the expected return on investment and the sale value, the investor determines the price he may be willing to pay today for investing in the start-up after adjusting for dilution and future rounds between now and the company sale.

Below is a computation of a hypothetical company illustrating the application of the VC method:

Particulars	Amount (\$)
Expected exit period	5 years
Expected Revenue in Year 5	2,500,000
Expected Profit in Year 5 (A)	375,000
Price-to-earnings Multiple (B)	20x
Company's Exit Value (A*B) (C)	7,500,000
Required rate of return for investors (%)	50%
Present value of the company	987,654

2. Price of recent investment ("PORI") method

The recent investment in the business is often taken as the base value if there have been no substantial changes since the last investment, and thus can provide a basis for valuation, but only for a limited period. The major inputs required include details of the recent investment made in the start-up and management's assessment of changes in the business environment since the last investment.

The implied equity value of a hypothetical start-up as per the PORI method for a 100% stake is as follows:

Particulars	Amount (\$)
Amount invested in series A round of funding (A)	10,000,000
Stake acquired (%) (B)	20%
Post-money implied equity value (A/B)	50,000,000

II. Qualitative methods

1. Scorecard method

This method is usually used to value pre-revenue start-ups. This method uses industry data and weighted percentages based on a detailed analysis of various factors. Then, the above factors are multiplied by the industry average pre-money valuation to arrive at the start-up's pre-money valuation.

Below is an assessment of a hypothetical start-up illustrating the rules of the scorecard method, and the factors and their weights typically used are illustrated below:

Comparison Factor	Weight Range	Weight Assigned (%)	Comparison (%)	Factor (Weight x Comparison)
Management Team	0-30%	30%	100%	0.30
Size of opportunity	0-25%	25%	125%	0.31
Product/Technology or Service	0-15%	15%	150%	0.23
Competitive Environment	0-10%	10%	80%	0.08
Marketing/Sales channels/Partnerships	0-10%	10%	100%	0.10
Need for Additional Investment	0-5%	5%	100%	0.05
Other factors	0-5%	5%	125%	0.06
Weighted average sum of the factors				1.13

- Average industry pre-money valuation = \$1,500,000
- Weighted average sum of the factors = 1.13
- Pre-money valuation of the start-up = \$1,500,000 x 1.13 = **\$1,695,000**

2. Berkus method

This method is mainly used to value pre-revenue start-ups in the technology sector. It is based on the assumption that the company has the potential to reach \$20 million or more in revenues by the 5th year of operation. The Berkus method applies a scale of five components in a start-up, rating each from zero to \$0.5 million (\$0.4 million in case of a pre-revenue start-up), i.e., the maximum value earned in each category.

Under this method, the highest pre-money valuation could be a maximum of up to \$2.5 million, and in the case of a pre-revenue start-up, it could only score up to \$2 million. The assessment of a hypothetical startup is provided below to show the general principles and five components of the Berkus method.

Sr. No.	Value Driver	Add to pre-money valuation (Max limit)	Assigned value
1.	Sound idea (Appeal of core business to buyer)	\$500,000	\$250,000
2.	Quality of management	\$500,000	\$300,000
3.	Strategic alliance	\$500,000	\$350,000
4.	Product prototype	\$500,000	\$150,000
5.	Product rollout and sales plan	\$500,000	\$70,000
	Pre-Money Valuation	\$2,500,000	\$1,120,000

3. Risk Factor Summation method

This method is frequently used to value early-stage startups. It bases the company's valuation on the pre-money value of a comparable start-up. To determine the company's final valuation, 12 common risk factors are added to this basic value. A positive, neutral, or negative score within the range of -2 to 2 indicates the seriousness of the risk, with -2 being a highly negative and thus risky outlook and 2 being an extremely positive and healthy outlook. The sum of the values is then multiplied by a flat number (typically \$250,000). The final worth of the company is then calculated by adding this premium (or discount) to the comparable company's initial base value.

The following example illustrates the risk factors used in the risk summation method and hypothetical values of risk assigned:

Let the value of the comparable start-up be **\$5,000,000**.

Sr. No.	Risk factors	Risk Assigned	Increase/Decrease (in \$)
1.	Management	2	500,000
2.	Stage of the business	-1	(250,000)
3.	Legislation/Political Risk	1	250,000
4.	Manufacturing Risk	0	0
5.	Sales and Marketing Risk	-2	(500,000)
6.	Funding/Capital raising Risk	2	500,000
7.	Competition Risk	0	0
8.	Technology Risk	1	250,000
9.	Litigation Risk	1	250,000
10.	International Risk	-1	(250,000)
11.	Reputation of Risk	2	500,000
12.	Potential Lucrative Exit	2	500,000
	Total	7	1,750,000

The total value of the company = Base value + Premium
= \$5,000,000 + \$1,750,000
= **\$6,750,000**

Pre-money vs. Post-money valuation

Post-money refers to the value of the start-up after it receives the investments. This valuation gives investors an idea of the business's current value and the issued share's value. The post-money valuation includes considering outside financing, the latest capital investment, and associated cash flows.

The concept of pre-money and post-money valuation is elaborated via the below illustration:

Suppose a start-up raises \$10 million in growth capital in an upcoming funding round. After the financing is complete, the investors' ownership is expected to amount to 20% of the total equity.

Investment size = \$10 million
Investor Equity Ownership = 20%

The post-money value calculation is done by dividing the investment amount by the equity ownership of the new investors, which comes out to \$50 million.

Post-Money Valuation = \$10 million / 20% = \$50 million

Then subtract the investment amount from the post-money valuation to calculate the pre-money valuation, which comes to \$40 million.

Pre-Money Valuation = \$50 million – \$10 million = \$40 million

Conclusion

The valuation of start-ups is a profoundly subjective process, as they need a track record of generating cash flows and previous rounds of valuations. It is rightly said that the valuation of start-ups is as much an art as a science. Evaluating and determining which or a combination of methods must be employed to value a start-up company properly is imperative. Investors rely on the valuation of a company to make investment decisions - the quantum of the investment, expected rate of return, and the breakeven point. The recent trends point to nascent companies employing the services of a business valuer, which is a relatively cost-effective approach. The use of experts can help reliably assess a start-up's intrinsic and future value and provide potential investors with confidence in the management.



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