

# Challenges in Valuation of Start-up Companies

## Introduction :

Valuation is the first step to intelligent investing. Valuing “work of art” is merely based on perception of person willing to buy or we can say that value of such artwork lies in eyes of beholder. However, same rule cannot be applied for valuing business / Company. Valuation of Company is based on various assumptions backed by historic and current scenarios in which Company operates and the accuracy of valuation directly depends on closeness of such assumption to the real outcome at future date.

Valuation of any company depends on number of factors affecting the operation of the Company or the environment in which the company operates. To name a few, it includes :

- historic trend of the Company,
- growth prospects,
- Management experience,
- Market share of the Company,
- Business cycle,
- Macro level changes, Government regulation/policies, etc.

Thus while valuing more mature or established company that has data for analysis, draw comfort from historical trend however such trend/track record is not available while valuing “Start-ups”. In addition to the above factors, the valuer faces additional challenges in valuing start-ups, brief description of each such additional challenge faced by the valuer is described in this article.

## Challenges in valuation of start-ups :



### I. No History

Most start-up's companies have only one or two years of data available on operations & financial activity. Valuing such companies early in the life cycle is difficult. Thus, the valuer should understand each aspect of business plan & after applying his expertise & knowledge of market, the valuer should agree with such business plan.

For e.g. If business plan is depicting unreasonable assumption, then valuer should discuss with the Management and try to align the assumption to more realistic levels. On other hand, valuing established company is much easier considering available data & proven track record, also management of such established companies forecast based on historic trend of the Company & market in which it operates.



### II. No Revenue or small revenue / loss making

Majority of start-ups, are more focused on establishing business model, developing client base, product/service market fit, etc. Hence, they have very little or no Revenue as against expenses associated with business establishment, which results in having negative EBITDA. Business plan becomes very subjective & can be vulnerable to overconfidence bias or over optimistic views of the founder. In such cases, the valuer should address the risk of not achieving such aggressive forecast by adjusting discounting factor for risk premium & also adjusting perpetual growth rate (in case of in Gordon growth model) used for deriving terminal value.

For e.g. If Managements expects to achieve exponential growth, that seems to be too unreasonable, then valuer should address the concern as above. On other hand, if established Company forecast growth that can be justified based on historic trend of such company than it might not seem to be unreasonable.



### III. Hidden costs in forecasting

There are sometimes hidden cost for e.g. founders agree between them that they shall start taking salary or withdraw salary at increasing rate once specific milestone is achieved. In such cases, such hidden expenses should be captured in business model. However, if such milestone is not achieved in explicit forecasted period then same needs to be adjusted in terminal value calculation, or in case of relative multiple method impact of same needs to be considered. For e.g. say royalty shall increase once the Company achieves XYZ amount of topline. However, if in explicit period of projections such milestone is not achieved then impact of such increase in royalty shall have to be considered in calculation of terminal value (in case of DCF method) or in case of relative method (e.g. EV/EBITDA) impact of decrease in EBITDA (due to increase of royalty) shall have to be factored in. On other hand, there are no such hidden cost based on milestone in case of established companies.



#### IV. Unique product / Business model :

Having an unique idea in the form of product or service is one of the positive sides for any business. However, there are equal chances that the business may or may not be able to survive the test of commercial success or failure.

Sustainability of projections of such business model cannot be benchmarked against proven business. Further, valuer cannot use relative method in absence of comparable company/transaction multiples and also it becomes difficult to find the sensitivity factor (BETA) required in case of DCF method.

Examples for such business model are OYO Rooms, Uber, OLA, etc. which are unique & no such business existed before.



#### V. More than 1 type Shares :

Start-ups depends on private investors in form of seed funding, angel funding, etc., claims or rights of shares issued at each round of investment may vary, it may also include quasi equity like CCDs or CCPs or equity shares with differential rights. With various types of equity claims in place it becomes difficult to calculate % holding of investor.

For e.g. The Valuer shall have to understand terms of each such type of instruments and try to convert it to nos. of equivalent equity shares to calculate diluted equity. On other hand, established companies have comparatively less complicated securities. Therefore, conversion of such securities is comparatively easy.



#### VI. No effective tax rate

Start-up companies usually do not pay tax in initial years due to losses incurred by them. Thus, unlike using effective tax rate for valuing established companies, in case of start-up companies' valuer need to compute tax expense based on marginal tax rate after considering rules for carried forward losses & considering any special tax rate applicable to business of start-ups.



#### VII. Illiquid Investments

Investment in a start-up usually lacks liquidity as it is difficult to exit from investment made in start-up unless and until it has very promising business model and proven track record, which is usually not the case for start-ups as discussed above. In such case valuer shall have to adjust discounting factor by adding for liquidity premium, being additional return to investor for making investment in such illiquid Companies. On other hand, established companies are relatively more liquid, i.e. investor can exit from the investment quickly without compromising on value front, thus in such case liquidity premium is not required to be added to discounting factor.



#### VIII. Dependency on Key personnel

In majority of start-ups business is dependent on 1 or 2 key personnel. Key Personnel have special talent or ability which is one of the keys to the sustainability of business. In this type of start-up companies, the Valuer has to adjust discounting factor by adding risk premium, i.e. additional return for taking risk on account of losing such key personnel and thus questioning the sustainability of business.

For e.g. in case of technology startup key person includes person who has designed software on which business is dependent. In case, such person quits the company for any reason, then the Company shall face 2-dimensional risk. First, sustainability of business is challenged and 2nd there is every chance of Key person who has left the Company may emerge as competitor. On other hand, existing business do not depend on 1 or 2 persons they engage team of persons with multiple reporting layers, due to which exit of 1 of the person won't impact the Company much.



Based on above, in addition to the factors mentioned in the introduction of the article, other major factors that play important role in valuation of a start-up are understanding Idea of business model, demand of product, marketing risk, management experience, Nos of outlets/centres, understanding of pros and cons of new business model, etc.

Also, apart from using conventional method for valuing Companies, start-ups valuation is also benchmarked in light of additional valuation matrix which are very specific for each type of business model like Nos. of patents in name of Company, Nos. of subscribers (both free and paid) / Customer, Customer traction on website, etc.

Thus, the Valuer will be required to be more vigilant and careful in undertaking valuation of start-up companies. The Valuer should be aware of challenges and opportunities in unique business of start-ups and should capture all such risk and opportunities in its valuation procedure. If valuer is not in agreement with any of the aspect of forecast/assumption with the management, then valuer should discuss the same with management and try to reach at a consensus. Valuer should specifically draw attention to major risk, assumptions, reliance on work of other professional, etc. to the user of valuation report.

### Valuation of Start-ups by Investors

Owner/Founder of the start-up shall strive to get maximum valuation. On the other hand, investor (seed investor, angel investor, Venture capitalist, Private equity, etc) shall be willing to invest at low valuation as they would seek more return for investing in such risky avenues, based on simple rule of more risk more returns. Thus, the Valuer shall also have to strike the balance between the expectation of founder and investor keeping in mind actual business scenarios around which the Company is operating.

Now let us see as to what factors do investors consider when valuing a start-up. Investors typically ask the following questions when evaluating a start-up :

- Can the start-up achieve exponential growth in revenues based on its market size, impact, the team & product?
- Can the start-up generate a 8-10x return in 3-5 years?
- Do the founders have the perseverance and determination to scale the business?

Investors use various method to derive pre money valuation. To name the few it includes Berkus Method, Score Card Valuation Method, Venture capital (VC) Method, Risk Factor Summation method, etc. However, out of all VC method is most prominently used. Let see how this valuation method is actually used to derive value of the Company. There are 2 simple steps to it.

**Step 1:** VC first calculate expected value of Company in Harvest year (expected exit year for VC).

**Step 2 :** Based on there expected ROI (return on investment), they track backwards the value of the Company, after giving effect to dilution (if any).

**Illustration :** Suppose investor anticipates value of start-up say after 10 years at INR 50 Mn and expected return on investment of 10X. At this post money valuation today comes to INR 5 Mn (INR 50 Mn/10X). Now, Investor want to invest say INR 1 Mn therefore pre- money valuation comes at INR 4 Mn (INR 5 Mn – INR 1 Mn)

From above we can see that, investors calculate an exit value to see if their IRR expectations and return multiples can be met. Investors value start-ups based on expected rates of return at exit. If their return expectations are in line with the valuation of the start-up in question, they would be inclined to invest in the start-up.

Investors get a lot of confidence from positive factors regarding the start-up such as Management, traction, existence of prototypes, funding demand/supply, distribution channels, reputation of founders, industry timing, competition scenario, margin profile, etc.

Thus, it can be concluded that determining the value of a startup company is challenging as its success or failure remains uncertain and also due to availability of limited data as discussed above. Valuation is both an art as well as a science.

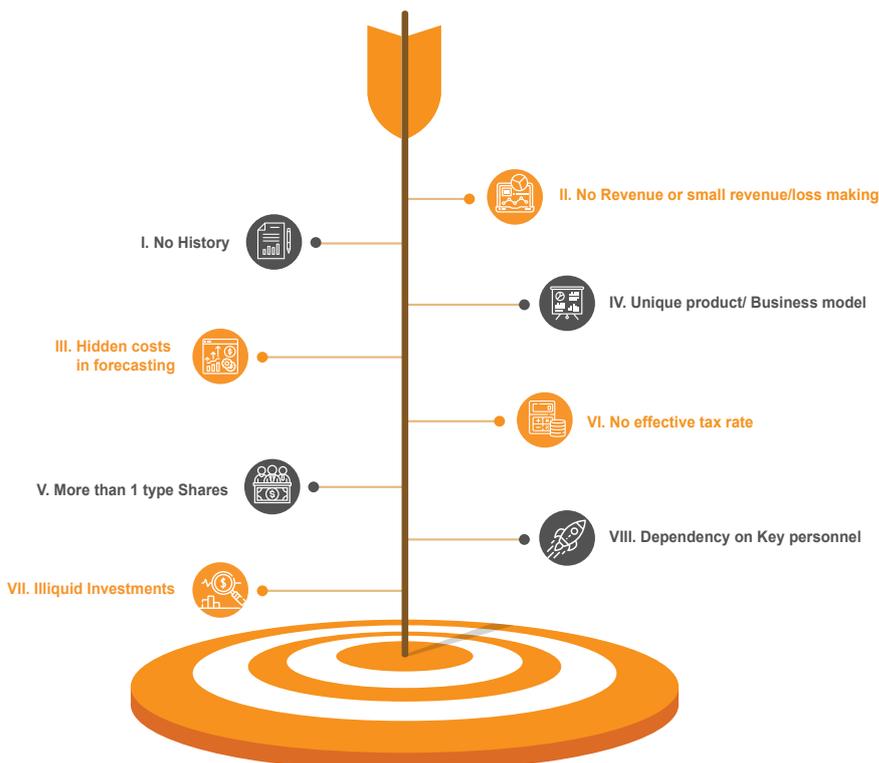
Valuations are a good starting point when considering fund raising. The Valuer helps build the reasoning behind the figures & objectify the methodology. The scenarios and challenges outlined above would help in making the valuation process more scientific than turning it more into an art.

## Case study

| Particulars             |             | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|-------------------------|-------------|--------|--------|--------|--------|--------|
| FCFF                    |             | (2.0)  | (5.0)  | 1      | 3      | 8      |
| Discounting factor      |             | 0.85   | 0.73   | 0.62   | 0.53   | 0.45   |
| Discounted FCFF         | 0.5         | (1.7)  | (3.6)  | 0.6    | 1.6    | 3.6    |
| Terminal Value          | 30.4        |        |        |        |        |        |
| <b>Value of Company</b> | <b>30.9</b> |        |        |        |        |        |
| Less: O/s debt          | (20.4)      |        |        |        |        |        |
| <b>Value of equity</b>  | <b>10.4</b> |        |        |        |        |        |
| Nos of diluted shares   | 100,000     |        |        |        |        |        |
| <b>Value per Share</b>  | <b>104</b>  |        |        |        |        |        |

| Parameter                               | Units | Description  |
|---|-------|--|
| Risk free rate                          | 6.5%  | Generally, interest rate of 10 years zero coupon bond issued by Government                     |
| Market return                           | 13%   | CAGR of Nifty over period of 15 years  |
| Beta ( $\beta$ )                        | 1.2   | It is average $\beta$ of listed peers. If no peers are available than $\beta$ of 1 is taken    |
| Risk premium                            | 5%    | Additional risk premium for taking additional risk as discussed above                          |
| Cost of equity (COE)                    | 19.3% | Risk free rate + $\beta$ (market return – risk free rate) + risk premium                       |
| Tax rate                                | 30%   |  |
| Debt rate (post tax)                    | 9.8%  | Say Company borrows fund at 14%, then post tax debt rate is $14\% * (1 - \text{tax rate})$     |
| Debt equity ratio                       | 20:80 | This is target debt equity ratio of the management of the Co.                                  |
| Weighted average cost of capital (WACC) | 17.4% | (% of Equity * COE) + (% of post-tax debt rate)  |
| Free cash flow to firm (FCFF)           |       | EBIT*(1- Tax rate) + Depreciation/Amortisation - working capital changes – Capital Expenditure |
| Discounting factor                      |       | $1/(1+WACC)^n$ (n denotes number of years)   |
| Perpetual Growth (G)                    | 5%    | It is expected perpetual growth to be achieved by the Co.                                      |
| Terminal growth                         |       | $((FCFF \text{ of year } 5) * (1+G)) / (WACC-G)$   |

Please note FCFE can also be used instead of FCFF. In that case, COE shall be used in place of WACC for deriving discounting factor and terminal growth.



If you have questions or need some clarifications, please be free to write to  
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