How Much is Your Startup Worth?

Venture capital ("VC") – financing and investing in early-stage or emerging companies deemed to have high growth potential – is big business.

Southeast Asia has ridden this wave of new opportunities. Startups in Singapore closed 353 financing deals worth USD$10.5 billion in 2018, an increase from the 160 deals worth USD$0.8 billion in 2012.[1]

Investors are drawn to the high-risk, high-potential-return of startups, a lottery that can reap exceptional rewards. The first question many investors ask when weighing-up an opportunity is: *what is the business worth?* Herein lies the challenge of startup valuation.

Where to begin?

Traditional valuation methods rely on estimates of current or future financial performance and its corresponding risk. However, startups can be some way off generating sales, let alone profits, when investment is required and generally face additional risk compared with more established businesses. Indeed, valuing startups is one of the hardest problems a valuer is likely to face, as evidenced by the fact that a number of recently listed startups have traded initially below their opening price on the public markets (for example, Lyft, which priced its initial public offering (IPO) at USD$72 per share but has since fallen to around USD$50 a little over a month after its listing), and hovering around USD$40 at the time of this article's publication. Furthermore, investors are questioning the business models of startups and growing more cautious of their high valuations, in situations where a firm has not reported a profit to date.[2] So how do investors and founders navigate through this complexity? This article proposes and briefly reviews a framework that can be used to value startups.

[1] https://www.straitstimes.com/business/start-ups-in-spore-snagged-14b-in-financing-deals-in-2018
[2] https://www.economist.com/leaders/2019/04/17/techs-new-stars-have-it-all-except-a-path-to-high-profits

Tailored approach

There is no standardised approach to valuing startups, largely because startups can be found in a very wide range of businesses, from an individual looking for initial investment to develop a business idea, to established businesses such as Uber which has achieved substantial size and has recently listed on the New York Stock Exchange.

In general, however, there are two key factors that provide an indication of which valuation approaches would be reliable:

- the maturity of the business
- the level of financial information required

As either of these increase, more data points about the company, whether financial or non-financial, become known.

Examples of relevant data points include:

- Is there "proof of business concept"?
- Is it able to provide the product or service required by the market at a price that will generate sufficient gross margin for a sustainable business?
- Does it have the resources, operational infrastructure and corporate culture required to scale up its business?
- How will it fare in an economic downturn?
- What revenues and profits have been generated to date?

Scoring systems

For new businesses with limited financial information, some practitioners use methods that do not rely upon such information. Of these methods, the most common approach is to use a scoring system whereby an initial value is adjusted upwards or downwards based on factors judged key in building a successful startup.

One example, and possibly the simplest, is the Berkus Method developed by Dave Berkus, an American venture capitalist.[3] Under this method, investors first ask themselves whether they believe the target business can reach USD$20 million in revenue by its fifth year of operation. If the answer is no, the investment is declined. If the answer is yes, the business is assessed against the following five key factors:

1) *Sound Idea*
2) *Prototype*
3) *Quality Management Team*
4) *Strategic Relationships*
5) *Product Rollout or Sales.*

Each of the key factors is worth up to USD$0.5 million, but is weighted according to the investor's assessment of its strength. The value of the business is determined by adding the individual value of each of the five factors up to a maximum of USD$2.5 million.

While scoring methods are simple to implement, which may appeal to many, they have their drawbacks. The principal shortcoming is that the methods are not derived from financial theory or fundamentals. This means that assessing progress in each of the key qualitative factors and translating that assessment into monetary value requires strong personal judgement. With respect to the Berkus Method, not only is further judgment required to assess whether the business will achieve sales of at least USD$20 million in five years but it also imposes an upper ceiling on value which may not be appropriate. For these reasons, scoring methods are perhaps most suited for pre-revenue companies at the seed funding stage. They become less useful as the target company matures and the track record of the business is more established.

Discounted cash flow

At the opposite end of the spectrum is the discounted cash flow ("DCF") approach. This approach assesses the value of a business based on the amount of cash that it is expected to generate in the future. This involves forecasting future cash flows (income and expenses) and converting the amounts into a cash sum today at an appropriate discount rate.

For more mature startups with an established track record, this can be a useful approach. Much like valuing traditional established businesses, the company's recent financial results are normally used as a starting point to estimate future cash flows.

However, the prospects for a startup can be far more removed from its current position than for a mature company. First, the growth of a startup is likely to be more striking: a company with a low revenue base achieves higher growth more easily. Second, a startup faces more risks. This risk of failure has a detrimental effect on the value of a company since it reduces the likelihood of future cash flows being realised. Failing to properly account for this risk would result in an inappropriate valuation.

Where possible, the failure risk should be accounted for in the cash flow projections by weighting the financial projections according to their prospect of being realised. So, if the company is expected to make one million dollars profit, but has only 35 percent possibility of surviving until that year, the company's profits should be projected at USD$350,000. The probability of failure can be assessed, among other ways, by analysing historical survival rates of new firms by industry or geographical location. For example, a recent study found that startups in Singapore have a five-year survival rate of 53 percent, compared with 49 percent in the US and 42 percent in the UK.[4]

However, if detailed financial information is not available, or past performance is not representative of the business' future prospects, then the DCF is unlikely to be reliable. An alternative for relatively mature startups is the market multiples approach.

Market multiples

In contrast with the DCF approach, where the focus is the expected future financial performance of the target

[3] https://berkonomics.com/?p=131
[4] https://www.techinasia.com/nus-enterprise-startup-study-singapore-2017

company, a valuation performed under the market multiples approach looks to value the target company by reference to the value of comparable assets in the market. Three types of transaction commonly used as valuation benchmarks are:

1) Recent prices paid to acquire stakes in the target company: the value of the target company is assessed by reference to transactions involving the company itself. This approach is not without its challenges.

First, the prospects for startups can change dramatically in a short space of time, meaning that previous benchmarks may be of little use. Second, there can be problems with extrapolating the value of a company from a VC investment due to complicated capital-raising structures. These structures may include, for example, options designed for protection (against dilution from future equity fund raising), or opportunity (such as allowing for future investment at favourable prices). As a result, the headline valuation of the transaction may not represent the underlying value of the share once these variations are taken into account.

2) Recent prices paid to acquire stakes in comparable private companies: the value of the target company is assessed by reference to transactions involving the companies operating within the same "space" as the target, and scaled according to its earnings, or lacking that, some other useful financial or operational metric. For example, Airbnb could be valued by reference to number of properties listed or rooms available.

It is important to take great care when identifying comparable companies to ensure that they share similar economically relevant characteristics to the company that is being valued. That means they need to share similar growth prospects and risks as the target company. Comparable companies can be hard to find, especially in new industries or in niche markets. For startups, the level of scrutiny required is perhaps even greater, since companies can be at markedly different stages of their business life cycle, which can materially affect the risk of the business.

3) Traded share price of comparable publicly listed companies: in situations where an emerging private firm has achieved enough operating substance in a market where there are public companies, the traded share price of public companies can be used as a basis for valuing the private firm. Again, it is necessary to scale the price according to some financial or operating metric of the target company and review companies carefully to ensure comparability with the target company.

A further consideration when using a publicly traded share price to value a private business is the issue of liquidity. Early stage shareholders in privately held companies cannot sell their shares with ease, unlike shareholders in public companies. This lack of liquidity has a cost: it takes time to sell the shares and investors cannot quickly adjust their portfolio's asset allocation to changes in the market environment. Consequently, a discount for lack of liquidity is normally applied to the publicly traded share price.

For promising startups with low initial sales and negative earnings, valuing the business using non-financial multiples can help. However, such multiples should be used only when they lead to better predictions than financial multiples do. If a company can't translate operating statistics such as subscribers or web hits into profits, the non-financial metric is of little or no use. Also, like all multiples, non-financial multiples are relative rather than absolute measures of value; they simply measure one company's valuation by reference to another's. Funding for startups can be highly volatile due to market sentiment and, as such, can become detached from economic fundamentals when investors rely too heavily on relative-valuation methods.

Venture Capital Method

The Venture Capital Method was first set out by Professor William Sahlman from Harvard Business School in his seminal 1987 paper. It is now widely used by venture capitalists in the evaluation of startup investments. In this approach, a valuation is performed based on the amount of investment, its required rate of return, and when the investor will exit from it.

It works as a hybrid method which incorporates features of both DCF and market multiple approaches and involves two stages:

1) Investors first seek to estimate the value of the company upon exit. The selling price is estimated by establishing a reasonable estimate for revenue or earnings in the year of sale (typically three to eight years), and then applying a market multiple based on comparable companies, to arrive at a terminal value;

2) The terminal value is then discounted back to the present date using a target rate of return on investment ("ROI") to arrive at today's value of the company after investment (post-money valuation). Deducting the investment required in order to achieve the exit value will give the pre-money valuation.

The Venture Capital Method is a popular alternative to the DCF method for venture capitalists as it does not require cash flows to be estimated in the intervening period between investment and exit; only the final year matters. However, there are a number of points to note when using this method.

First, the ROIs adopted are often based on 'rule of thumb' principles (for example, 10 times return on investment) or internal IRR "targets" that often do not reflect the specific risk characteristics of the company, sector or country. Moreover, the method can confuse the target price that the investor wants on exit with the intrinsic value of the firm's operations.

Second, the possibility of further financing rounds and dilution should be considered. If the startup is likely to need additional capital prior to the exit event, the initial investor

will be diluted by the follow-on issue of shares if they do not participate in future financing rounds.

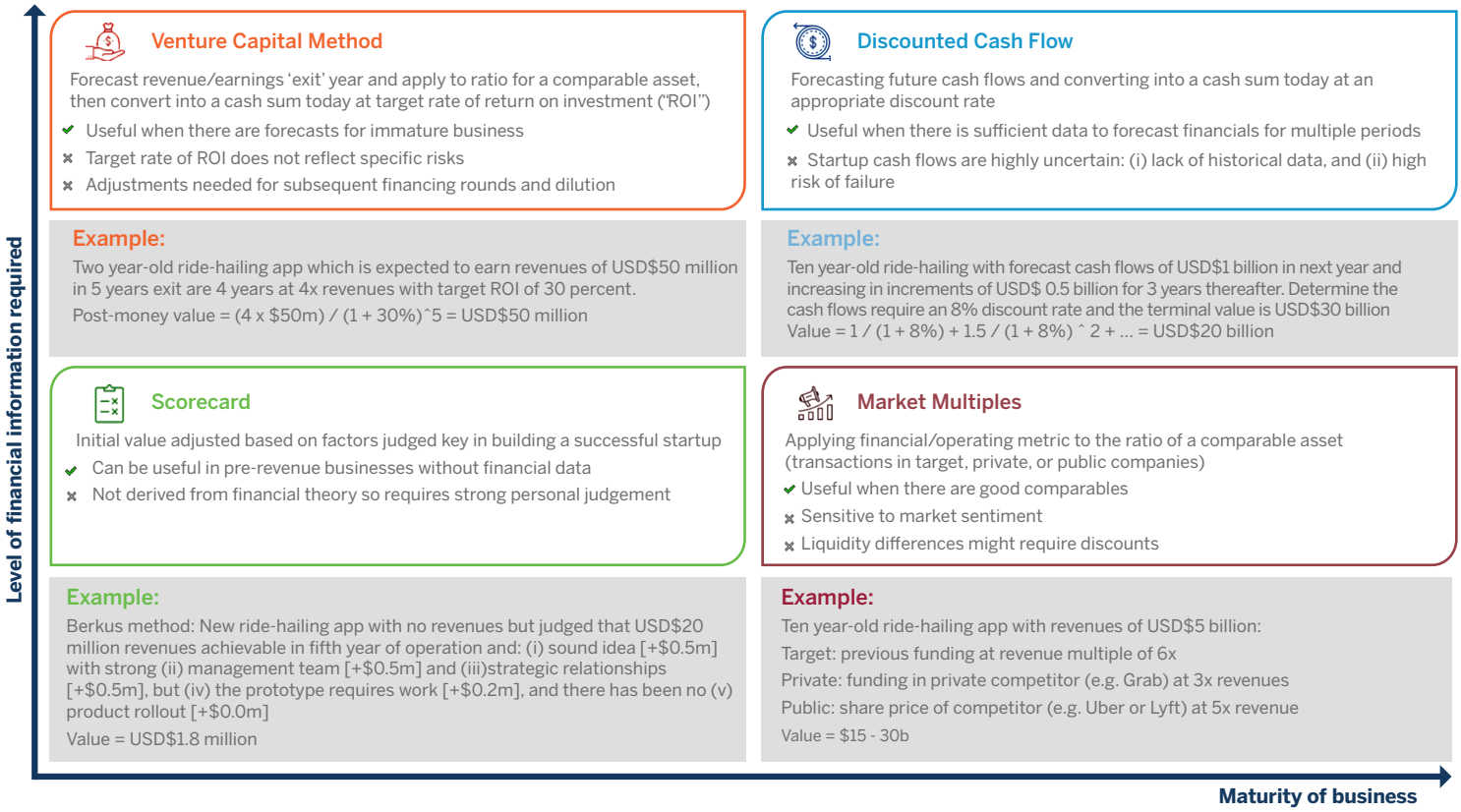
No 'one-size-fits-all'

In recent years, there has been a marked increase in VC activity within Southeast Asia. The trend is expected to continue and investors and founders alike require robust valuations of startups and new technology businesses.

Given the diverse nature of the industry, there is no standardised approach to valuing startups. Each of the valuation methods discussed above has its benefits and weaknesses.

As a guide, the best approach depends on the maturity of the business and level of financial information available. However, where appropriate and feasible, it is usually best to consider more than one methodology so that final conclusions can be cross-checked. Like valuing any business, the appropriate valuation approach should be tailored to reflect the circumstances of the company. There is no 'one-size-fits-all'.

Figure 1 below summarises the valuation approaches that are, in general, suitable at different maturities and levels of financial information required.[5] Each approach is briefly reviewed below.



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[5] The approaches discussed in this article are by no means exhaustive. This article focuses on valuation approaches based on the future potential and risk of the company rather than past activity such as asset based valuation methods. While asset based valuation methods can be useful in certain circumstances (e.g. asset intensive businesses or businesses under liquidation), these methods do not link the value of the business to its future performance or show how the investment can generate a return.

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