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1. Is Company Valuation Important?

Taiwan Institute of Economic Research (TIER) has held many events related to startup fundraising. In addition to the annual Startup Funds Matching Event and Global Angel and Venture Capital Summit, there are also many other forums and sharing events. While many startups in Taiwan are in the process of looking for external capital, one of the most commonly asked questions is how the company valuation is calculated?

First, we need to clarify whether valuation is important. To a company that is in the process or in the need for external funding, valuation is definitely a key topic. To startups, valuation affects value per share, return on investment, equity release ratio, fundraising target, next round fundraising status, etc. and even to the public listed companies, share valuation is also something the company itself and the investors care about. Of course, public listed companies will not be included in this discussion, as this article will be focusing on startups. In other words, what kind of startups don't need to consider its valuation during fundraising? The first one would be the unicorns whose valuation already exceeds US$ 1 billion and the other one would be startups who have suspended or shut down their business.

Valuation is the evaluation of the company value, which reflects the current company asset level, including tangible assets, intangible assets, its talent resources and also the expectation of its future profitability. Valuation includes objective basis

and subjective views, and that is why people often say: "Valuation is a branch of science, but even more a kind of art". The same company during the same time frame, different valuator may provide different valuation and different investment conditions would also influence the valuation. Therefore, a complex reasoning and thinking are behind a simple mathematical calculation. The correct approach for startups should be understanding the valuation from investors' perspectives, instead of focusing on "the myth of high valuation".

The common valuation methods for companies are asset valuation, discounted cash flow valuation, market comparison approach, open market value, etc. However, these methods generally are not suitable for startups. Open market value provides a straightforward valuation data, but to non-listed startups, this is not applicable. Asset valuation is a method that evaluates the book value or replacement cost of the company assets, however, to evaluate light-assets startups, this would not provide the true value of intangible assets, such as software technologies and talents.

Discounted cash flow valuation uses the potential future cash flow calculated in conjunction with "reasonable" discounted rate to reflect the net present value (NPV). To a company with "stable" cash flow, this method would accurately reflect the present value. However, to startups, the fluctuation for future cash flow would be high and unpredictable. Successful startups would have exponential growth on both their business scale and revenue, but failed startups, which use up their venture capital could terminate their projects at any minute and exit the market. With unstable cash flow, discounted cash flow valuation is not suitable.

Comparing against the abovementioned methods, market comparison approach might be able to provide an appropriate valuation for startups. However, it might be difficult to compare with the best companies and finding the right criteria to compare. Traditional methods adopt different bases, for example, comparing with companies in a similar industry or companies with similar financial reporting structure. The possible comparable items are: market value, PE ratio or PB ratio, which are all helpful in calculating the market value. This approach could benefit the upcoming IPO companies during their process of stock underwriting and subscription. Nevertheless, to startups, it might be massively misleading. To start with, startups should not be comparing with listed companies; secondly, the level of rigorousness in financial reporting between startups and mature enterprises are very different, and therefore it can not be used on the same comparative basis; furthermore, since it's called "startups", naturally there should be no comparable industry to be referenced to. In short, "traditional" market comparison approach is not suitable for startups. The reason is not on the methodology itself, but on its basis. It should be finding "a comparable property for startups".

2. How to Evaluate the Value of Startups?

All of the aforementioned methods are not suitable for startups, yet valuation is extremely important during fundraising stage. So how should we prepare for valuation? It's a complex question with one simple answer: the price the founder is willing to pay, fundraising amount and equity release ratio. What needs to be considered first is the fundraising target. In a simpler term, how much external capital the founder wish to raise during the round. There are many imputation methods, e.g.

operating cost. It can use raw material costs, utility fee, rent, manpower expense, etc. to estimate the capital required in the next two to three years as the targeted fundraising amount. The second consideration is the percentage of share the founder is willing to sell. If the targeted fund raising amount is $10 million with 20% shares. Then the post-money valuation is $50 million ($10 million divided by 20%) and the pre-money valuation is $40 million ($50 million deduct $10 million).

This should be simple enough! However, this simple calculation is not easy to apply. The most common issue is "how much would the operating costs change in the future?" or "what is the reasonable number of shares to release?" Most importantly, the valuation would be meaningless, if the investors are not interested. In other words, the key of valuation is not purely about how much the startup wants, but also to how the investors look at the company. After all, the valuation on early stage investment is determined by the supply and the demand.

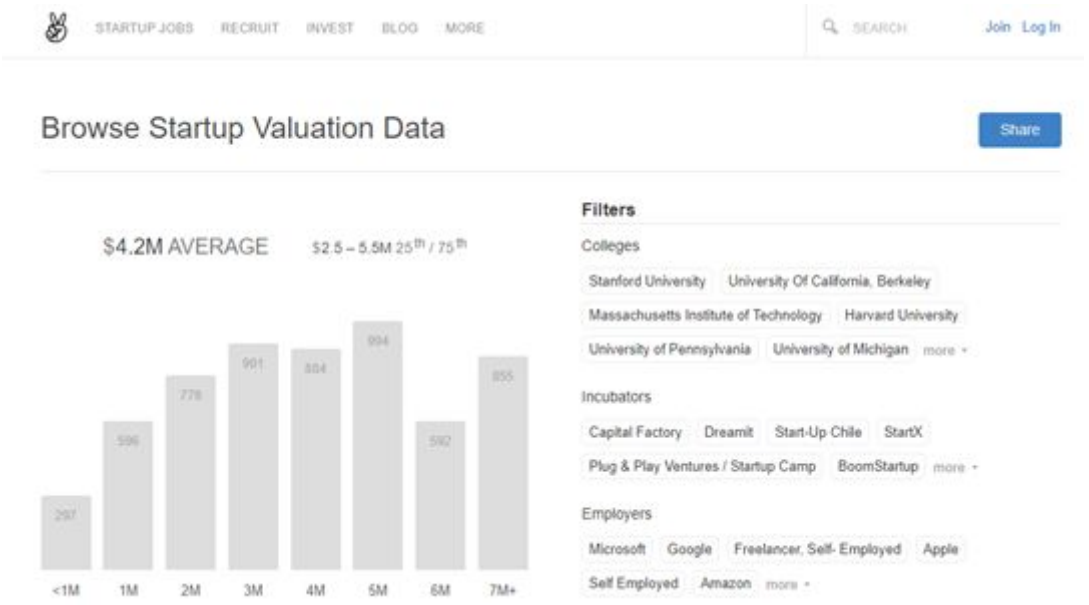
How to resolve this issue? For startups that have been through one or two rounds of external fundraising, it should not be a major issue. Just that during the next round fundraising, discuss with previous round investors (shareholders) and don't down-round the valuation. However, to the startups who are raising fund for the first time, there are two things they need to know about valuation. First of all, the "reference standards" (system/market factors) and secondly, the "factors investors consider" (individual/company factors). Understanding these two factors will not only provide the insight of the current market, but will also be able to evaluate the company value itself from investors’ perspectives.

More specifically, there are a few methods that can be adopted by startups during valuation, but first, it should be assisted by accountants. Either PwC or KPMG, both have passionate and professional accountants and related departments providing financial consultation services. In addition to valuations, they also provide service including taxation service, business opening and other information. There are even opportunities to receive free consultations through the domestic incubation institutions or accelerators. Secondly, there are online tools can be considered, which are not only useful in accumulating the mathematical concept of the market valuation on early stage investment, but also beneficial to a productive discussion before consulting with professional institutions. Below is a list of online valuation tools/websites that could be used as references for startups:

(1) AngelList Startup Valuation Data (https://angel.co/valuations)

AngelList is a renowned equity-based crowdfunding platform in the U.S, which holds quite a number of startups data. It launches Startup Valuation Data, which discloses startup valuation information and it provides a certain reference value. From 2010 until now, this platform has accumulated over 5,898 valuation data, with an average amount of US$ 4.2 million and a frequency distribution diagram. Users are not only able to see the total sum of the data, but are also able to check valuation by category e.g. different periods, locations, industries, etc. via the filtering function provided. What is special about the tool is that it allows filter on startups and background of the founders, e.g. accelerator participated/incubation institutions, the education background of the founders and so on.

Although AngelList Startup Valuation Data provides a good reference value, it is worth noting that the data held on the platform are mainly "U.S." numbers, which may not be applicable as a direct comparison for startups in Taiwan. Also, the data provided is an average number after filtering, a 25th / 75th percentile and distribution diagram. It does not provide frequency data or the option for round selection and therefore it can not be easily updated to suit our local numbers.



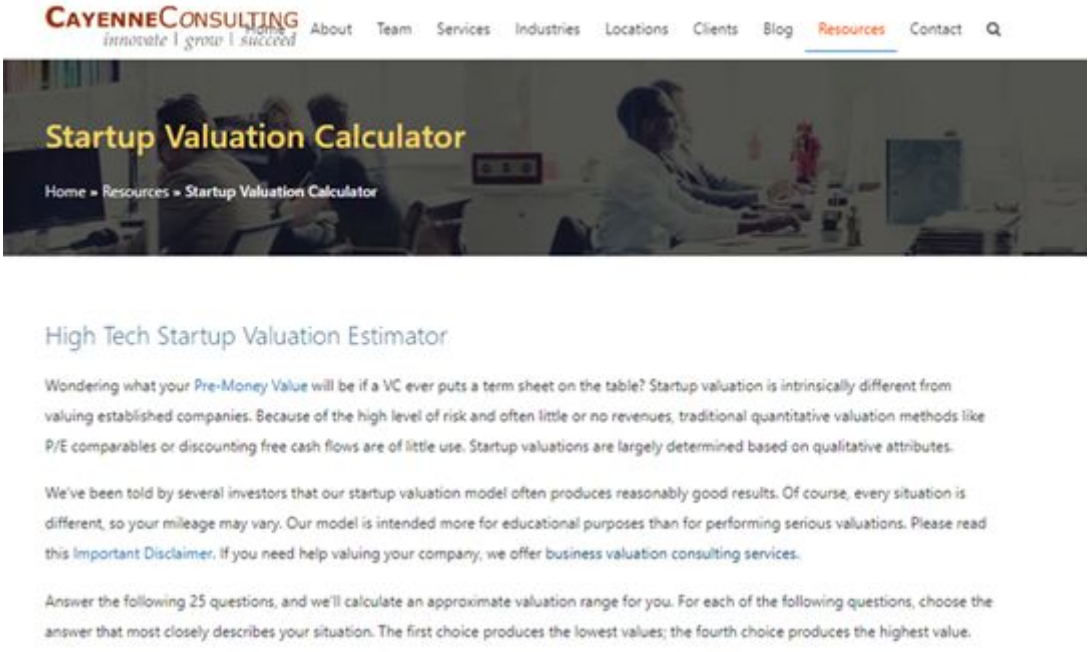
Source: AngelList Startup Valuation Data, https://angel.co/valuations

(2) Cayenne High Tech Startup Valuation Estimator (https://www.caycon.com/valuation)

Different from directly publishing the valuation numbers, it sets a systematic analysis model based on valuation factors and calculates its potential value through historic data. It might be a solution to valuation which provides both market factors and company factors. Questionnaires are designed from investors' perspectives, with questions covering topics concerning investors the most, it does not only impact the

valuation results, but most importantly, it can "educate" users to consider the development potential of startups from investors' perspectives. For example, based on the data of startups they hold, Cayenne Consulting developed "The High Tech Startup Valuation Estimator" using 25 single choice questions to estimate the valuation range of a startup. These 25 questions are specifically designed and each topic and question has different weighting and sensitivity towards the final valuation result.

Valuation model of Cayenne is indicated in a range, not absolute value. Also, the valuation process of this model is fairly strict. If the answers failed to score high points on certain key questions, the likelihood of receiving "zero valuation" would be high. Vice versa, if the answers score high points on those questions, Caynne's model would provide a higher valuation. This indirectly reflects that this model is specifically designed for "high tech startups".

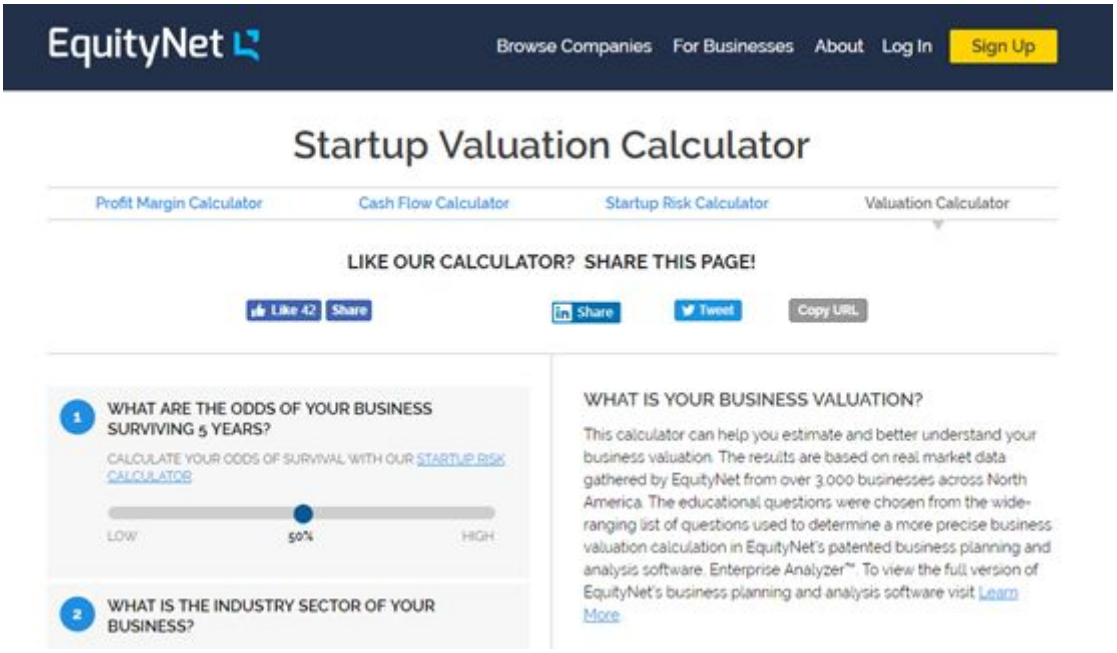


Source: Cayenne High Tech Startup Valuation Estimator, https://www.caycon.com/valuation

(3) EquityNet Startup Valuation Calculator (https://www.equitynet.com/crowdfunding-tools/startup-valuation-calculator.aspx)

Another consulting company, EquityNet, builds a valuation system based on data from over 3000 startups. It also has taken into key topics that investors care the most as part of its startup valuation. Different from Cayenne, the questionnaire only consists of 8 questions with more open-ended questions, such as company survival rate in the next 5 years, category of the industry, operational related data, etc. Among all, company survival rate could be calculated by online calculation tool provided by EquityNet to simulate the startup survival rate. Further details can be found on the article of "Introduction of New Digital Fundraising Tools " Financial Risk Compass (FRC) under research section of FINDIT platform, https://findit.org.tw/researchPageV2.aspx? pageId=913&test=1.

The calculation of EquityNET's valuation system requires users to fill in actual numbers on many of its questions and it's not presented as single choice questions, e.g. company asset value, revenue and profit in the next 5 years, etc. Valuation result is presented as a single number, with industry average data provided as references. However, the calculation basis from Cayenne and EquityNet are based on U.S. data, if it was going to be applied onto startups in Taiwan, further adjustment or amendments are required.



https://www.equitynet.com/crowdfunding-tools/startup-valuation-calculator.aspx

(4) Excellent Water Appraisal & Co. (http://ewac-valuation.com/)

In addition to the online valuation tools from other countries, there are also free online valuation platforms in Taiwan, EWAC startup valuation system from Excellent Water Appraisal & Co. is one of them. Excellent Water Appraisal & Co. was founded by a group of professionals with extensive experience in financial accounting, startup investment, M&A transactions and valuation analysis. They also provide business valuation and startup consultation service. It launched a free online startup valuation system in Oct., 2018. The system is formed from three parts: financial reports of the company, stage of development and fundraising plan. Financial reports of the company and stage of development determine the valuation results. Questions under company financial reports consist of industry type, revenue, number of shares and questions under stage of development cover level of technology developments, products/service development, channel status, company/number of employees,

organization structure, capital, etc. Valuation varies depending on the answers provided, where revenue is the key, yet slight changes can have massive impact on the valuation. The questions under fundraising plan, comprise fundraising amount and expected percentage of equity release ratio, are employed to calculate future value of the startup project as previously described. It can be compared against the valuation results calculated from financial reports and stage of development.

Source: EWAC startup valuation system, Excellent Water Appraisal & Co. (http://ewac-valuation.com/)

(5) FINDIT Valuation Estimator (https://ve.tier.org.tw/)

The research team of TIER,FINDIT, started with valuation model, builds an operable systematic valuation method, integrated important startup valuation general knowledge and designed the online "Valuation Estimator"(VE). This online valuation tool provides early stage companies with a real-time, objective and simple valuation

method. The Beta version of the Valuation Estimator has currently launched and is open for users to start a trial. (https://ve.tier.org.tw/)

FINDIT Valuation Estimator is probably the most complete online valuation system in Taiwan. Its valuation is based on the data from Crunchbase, the world's largest early stage investment database, with over 6,600 startup valuation data. The data is adjusted and amended based on the actual transaction situations in Taiwan to ensure it accord with the market demands. It covers four of the most commonly used startup valuation methods, including Venture Capital Method, Scorecard Method, Dave Berkus Method and Cayenne Method. Detailed calculation methods and user manual can be found under "Startup Column" Introduction to Startup Valuation 101: Let's Try the "Valuation Estimator"! (https://findit.org.tw/researchPageV2.aspx? pageId=693)

Venture Capital Method was designed in 1987 by Bill Sahlman, a professor at the Harvard Business School. First of all, ROI is needed, which is the percentage of profit the startup is willing and be able to earn for the investors. Post-money valuation equals terminal value divides ROI. Also, pre-money valuation can be calculated through post-money valuation minus investment value.

Scorecard method is widely used on the valuation of unprofitable startups. The reason it is being widely used is because it provides systematic valuation standard and flexibility for users based on different circumstances. A well-known angel investor, Bill Payne, who has involved in angel investment for over 40 years, designed a detailed scorecard method worksheet for the investors as a reference and this worksheet is used by FINDIT's Valuation Estimator.

Dave Berkus Method is designed specifically for those startups who are not yet profitable nor have financial planning. It was first published during mid 90s and updated by ACA (Angel Capital Association Leaders Workshop) in 2009. It includes five areas, which are the quality of the team, a well-round business ideas, product prototype, quality of the Board and the launch of the products and sales and each subject provides between US$0 - $500,000 increases to the average pre-money valuation.

Cayenne Model is redesigned based on the previously mentioned Caynne High Tech Startup Valuation Estimator. Each question is added with question tips, explaining how it would impact the valuation. For example, question 8 "my sales and marketing plan...", i.e. "entrepreneurship is business and business is all about generating revenue and profit". Therefore, entrepreneurs must understand the need for marketing, and that means how to simply but clearly communicate the benefits of the products to the target customers and convince them to pay for your product and services. The more detailed and logical the marketing plan is, the more convincing it will be.

In terms of valuation results, FINDIT's Valuation Estimator does not only provide company valuation, but also comparison on region (Asia, Europe, America, etc.), within the same industry and fundraising stage.

Valuation Estimator provides early investment stage companies with a real-time, objective and simple valuation. Most importantly, hopefully this tool will support startups to gain an insight on the current company value, understand the key factors

for the investors when they consider a potential investment and, at the same time, provides a right direction of the thought process.

Startups also need to understand that none of the methods could provide a "perfect" answer. The valuation varies even when it comes to experienced investors, and its negotiation details will further impact the terminal value as well.

In other words, the design of Valuation Estimator is to assist startups to review themselves during the process of valuation, to reconsider their startup value and to think about the market trend and company future developments from investors' perspectives. Regardless of startup boom or capital winter, only a reasonable valuation can help company to grow. To early stage investors, higher the valuation often means higher the risk. Lack of revenue is commonly seen among startups when first started, and valuation is thus discounted cash value of future profitability. A complete team, plenty of resources, a right product meeting market needs will not only reduce startup risks, but also embodies the value of a company.. What startups should work towards is to find a resourceful early- stage investors, who are able to work side by side through a reasonable valuation and a strategic fundraising plan.

Source: TIER, FIND Valuation Estimator (https://ve.tier.org.tw/)