

# Recommendation on Valuation and Budgeting in Start-Up Company PT X

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**Abstract:** This research aims to get and give a recommendation on valuation calculation at PT X, a start-up company that mainly does management consultation with technology-based, also to suggest on financial planning and control to achieve the projected financial result with the desired valuation. With valuation on hand, PT X can explore the possibility get fund from the investor or even to go public. Financial planning is very crucial for PT X that is currently only having sales target without having profit and loss budgeting or cash flow projection. Financial control is also urgently required by PT X that is presently facing an extremely high burn rate. After assessed use multiple valuation methods, it resulted mostly on positive valuation, which means PT X has the potential to take funding option, either from a loan or additional capital from the investor. However, PT X need to do proper financial planning and control to achieve that valuation result. Financial planning through participative budgeting is the alternatives that PT X can use to build their financial budget. Meanwhile, monthly financial control through variance analysis both on cash flow and profit and loss statement is required to do.

## 1 INTRODUCTION

In these past decades, the number of start-up companies has been raising. Indonesia has been one of the countries with a high contribution of start-up companies. According to Startup Ranking, as of June 2018, Indonesia has been one of the big ten countries that has the most start-up companies.

Start-up companies generally can be classified into four stages, which are the seed, early stage, later stage, and initial public offering (IPO).

Table 1: Start-up Companies Classification.

Stage	Product	Funding Source	Risk	Investment Budget
Seed	Shaping concept	Angels	Very high	Low
Early Stage	Concept ready	Venture Capital	High	Medium
Later Stage	Product ready	Venture Capital	Medium	High
IPO	Product verified	Stock Exchange	Low	Very high

Source: "Corporate Venture Capital Variable for Investing on Startup in Indonesia". *International Journal of Innovation and Research in Educational Sciences* (2017)

Start-up companies that face financial loss and negative cash flow in their first few years operations have been a common phenomenon. However, three out of four start-ups were failed (Gosh, 2012). Smallbiztrends launched less than 50% of start-up companies failed in their first 4 years. Smallbiztrend has also indicated more than half of those failed companies are due to the cashflow problem.

Although most of the start-up companies have a negative cash flow, some of them still manage to generate a positive valuation. Example of those is companies like Go-Jek, Tokopedia, Traveloka, and Bukalapak that currently become Unicorn with a market capitalization worth more than 1 million USD.

PT X as start-up companies in Indonesia has been facing financial loss for the past two years of operation. Their extremely high burn rate has been a problem. Furthermore, currently, they have no financial budgeting and only yearly sales target. High burn rate is high risk for new start-up companies that need to be managed accordingly to avoid continuous lost and even worse, bankruptcy.

## 2 LITERATURE REVIEW

### 2.1 Financial Distress

Continuous negative cash flow occurrence can lead to financial distress. Financial distress described as a condition where operating cash flows of a company are not sufficient to pay their liability, especially the short-term. Financial distress can further lead to bankruptcy probability. (Ross, 2015)

### 2.2 Financial Decision

To maximize a firm's value, Damodaran (2015) describes there are three decisions that need to be considered, which are the investment, financial, and dividend decision. The financial decision itself mean to choose either additional equity, debt, or mix of both – to fund the operation cost.

### 2.3 Funding Alternatives

According to Ross (2015), one of the alternatives that a newly born company might seek is venture capital (VC) market. VCs basically is intermediaries between investor and investee. They are looking, monitoring, and trying to get the best deal for an investor. Damodaran (2010) also said that valuation player for a young growth company is either venture capital or Initial Public Offering (IPO).

Ross (2015) mentioned that stages of financing in venture capital could be broken down into:

1. seed money stage
2. start-up
3. first-round financing
4. second-round financing
5. third-round financing
6. fourth-round financing

### 2.4 Signalling Theory

Ross (1977) as quoted by Markopoulou (2009) describes signaling theory as the usage of information made by the company for an external party outside the company to take an investment decision. Information, -or signal-, that given to outsider can be the announcement of the company is going to take a debt, spin off, merger or acquisition, and others.

### 2.5 Multiple Valuation Methods in Early-Stage Company

Valuation is one of the essential tools where investor as an outsider can get a sense of a company's worth.

However, it's not that easy to value young companies due to less or no historical data available, few or no existing assets, no clue of potential margin and returns to be generated in the future, and hard to measure the risk (Damodaran, 2010).

Behrmann (2016) made a comparison of some valuation techniques to value young internet-based companies. The research comes from the background that no single valuation technique is perfectly suitable for different kind of companies, business model, or development stage (Bartov, Mohanram & Seethamraju, 2001 ; Hand, 2000). Conventional valuation method like Discounted Cash Flow (DCF) quoted that are heavily relying on assumptions (Steiger, 2008) as well as subject to error (Desmet, D., Francis, T., Hu,A., Koller, T.M., & Riedel, 2000; Festel, Wuermseher, & Cattaneo, 2013).

#### 2.5.1 Discounted Cash Flows

Valuation using Discounted Cash Flows (DCF) method is mainly to get the sense of how much the company's future worth to present. This is done by calculating expected future cash flows in a certain period and discount it with specific rate to convert it to present value (Ross, 2015).

#### 2.5.2 Venture Capital Method

Sahlman (2012) describes a way of valuing an early-stage company using the venture capital method as follow:

1. Determine the terminal value or exit value, which is the estimate worth if the company is going bankrupt and being sold. Terminal value can be a benchmark to a similar company. Other way is to multiple sales with sales multiplier, computed by dividing market capitalization to net sales.
2. Discount terminal to present value using investor target IRR to get post financing valuation (V post). Next is to deduct V post with the amount of Capital (C) to get pre-financing valuation (V pre)

Terminal value can be determined to use the price-earning ratio to future projected earnings. Meanwhile, target return rates are ranged that generally accepted for each stage of the company's development.

#### 2.5.3 Relative/Market Comparison Valuation

Damodaran (2010) mentioned that usage of a relative method in valuing company's equity is easy yet can

be misuse because each company has different risk, growth potential, and cash flows.

Further, Damodaran (2010) explained how to do a relative valuation in two steps. First is to find a similar company. The specific ratio will be used as a multiplier to calculate the valuation (the example of these ratios are price to earnings ratio, EBITDA, price to sales ratio).

### 2.5.4 Step Up Model

Poland (2014) explained Step Up model as further exploration of Berkus Method. Step Up model has ten valuation factors. Pre-money valuation is calculated by giving \$250,000 for each valuation method that is applicable for the company.

## 2.6 Budgeting

Hansen (2015) highlights the importance of budgeting in financial planning and control. As a planning tool, the budget is used to translate the organization's goal and strategies into operational terms. As a control tool, the budget will help to see the actual performance and the deviation towards the plan.

### 2.6.1 Income Statement Budgeting

Hansen (2015) explained to first build sales and operations budget to make a budgeted income statement. Operations budget includes marketing expense, administrative expense, and other operational expenses.

### 2.6.2 Cash Flow Budgeting

Ross (2015) describe cash budget as a primary tool to do short-term financial planning. There are a few things that need to be considered during the cash budgeting process:

1. Cash collection
2. Cash outflow
3. Cash balance

Hansen (2015) defined cash budget as a detailed plan of cash source and expenditure. Further Hansen explains how to calculate ending cash balance as follow:

Beginning cash balance  
 + Cash receipts  
 = Cash Available  
 - Cash disbursement  
 - minimum cash balance  
 Excess or deficiency of cash  
 - repayment

+ loans  
 + minimum cash balance  
 Ending cash balance

Account receivable aging schedule can help to build cash receipts budget. While account payable aging schedule help to build cash disbursement budget (Hansen, 2015)

### 2.6.3 Good Budgetary

According to Hansen (2015), good budgetary should be able to drive the manager to achieve the organization's goal. Characteristics of good budgetary are:

1. Have frequent feedback on performance;
2. Have monetary and nonmonetary incentives;
3. Participative budgeting;
4. Realistic standards;
5. Have multiple performance's measures.

## 3 METHOD

This study is a case study. Case study being chosen given the phenomena that were researched, and the proposed solution might be only well suitable for specific unit analysis, PT X.

The mixed method is being used given the data collection is combining between qualitative and quantitative, as well as data processing. An interview has occurred to get the information about the current situation and practice in PT X. Further, the financial statement is being analysed using document review.

The data mainly used in this study were primary data obtained from the Chief of Staff in PT X that supervises finance, accounting, human resource, and general and affair department. Secondary data is also used as complementary, which are the financial statements for compared public listed companies.

The unit analysis in this study is PT X, start-up companies that have established in Indonesia for only two years and currently face a high burn rate. PT X does not have any budgeting process in place, and they just have a sales target for the whole year. At the moment they are using external parties accounting vendor to manage their financial and accounting statement.

## 4 RESULT

### 4.1 Valuation use Multiple Methods

Using multiple methods, PT X can either resulted in positive or negative valuation, regardless of the negative cash flow that they had for the financial year of 2017 and 2018.

#### 4.1.1 Discounted Cash Flow (DCF) Method

Using the DCF method can result in PT X to have either positive or negative cashflow, depend on the variables that were used as assumptions.

#### Sales Growth Target

PT X has significant growth of 417% from 2017 to 2018.

Table 2: Sales Growth PT X.

	2017	2018
Sales (in IDR)	353,425,249	1,828,815,129
Sales growth	N/A	417%

Source: PT X financial report

Based on the assumption given the information from Chief of Staff PT X and some other factors taken into consideration, the growth for each year for five years period as follow:

Table 3: Sales Growth PT X Use Three Scenarios.

	2019	2020	2021	2022	2023
Pessi-mistic	300%	200%	150%	100%	100%
Most Likely	350%	250%	200%	150%	150%
Opti-mistic	400%	300%	250%	200%	200%

Source: Interview with Chief of Officer PT X (data further processed)

#### Expenses and Tax Assumptions

Expenses assumption is according to current expenses as a baseline, yearly growth, and further reasonability analysis. Corporate income tax applied is 25% as used in Indonesia if any profit occurs during the respective financial year. Loss carryover of five years is taken into consideration.

#### Required Rate of Return/Discount Factor

The discount factor being used in this study 70%. This rate is used as some studies show that the required rate of return for start-up companies varies between 50% and 70%, some even requires 100% (Carver, 2012). Damodaran (2010) mentioned that venture capital requires 50% to 70% rate of return for the company under the start-up stage.

#### Discounted Cash Flow Use Three Scenarios

Table 4: Valuation PT X Use DCF Three Scenarios.

	Probability to Happened (assumption)	Valuation (IDR) use 70% discount rate
Pessimistic	25%	-3,674,950,917
Most Likely	50%	-1,242,513,746
Optimistic	25%	2,654,615

Source: PT X financial statement FY 2018 (Data further processed)

Based on the above calculation, PT X will get positive valuation only if the optimistic scenario happens. Further, if three scenarios combined together with the probability, it will generate a negative valuation of (IDR 876,340,752).

Given the high required rate of return by an investor for a start-up company, it is tough to get a positive valuation for PT X in five years timeline. Provided that a lot of assumption is being used in the calculation, they can be easily modified to get positive valuation result. However, it does not serve the purpose of reasonable valuation.

#### 4.1.2 Venture Capital (VC) Method

Use the VC method, calculation for PT X's valuation as follow:

1. Terminal value or exit value = sales x sales multiplier
  - a. Use KIOS sales multiplier 0.55  
 $TV = 0.55 \times 12,723,308,962 = 3,475,888,687$
  - b. Use MCAS sales multiplier 1.73  
 $TV = 1.73 \times 12,723,308,962 = 22,023,771,219$
  - c. Use 50% x (a) and 50% x (b)  
 $TV = (50\% \times 3,475,888,687) + (50\% \times 22,023,771,219) = 14,487,774,296$
2. V post = TV discounted by 75%  
 $V \text{ post} = 14,487,774,296 / (1+75\%)^5 = 882,696,548$

### 4.1.3 Relative/Market Comparison Valuation

#### Comparison Companies

Companies that were used as a comparison to PT X are PT Kioson Indonesia (KIOS) and PT M Cash Integrasi (MCAS). Both companies were chosen for having the closest characteristic with PT X, which are : start-up companies, technology-based and located in Indonesia. Further, Kioson and M-Cash have been going public for less than 5 years, hence all financial data is publicly available.

Comparison between PT X and PT Kioson and PT M Cash as follow:

Table 5: Start-Up Attributes PT X, KIOS, MCAS.

Start-Up Attributes	PT X	KIOS	MCAS
Industry	Management consultation with technology based	Online trading with technology based	Digital and e-commerce trading with technology based
Founder leading experience	First time	Experienced before	Experienced before
Company location	Jakarta, Indonesia	Jakarta, Indonesia	Jakarta, Indonesia
B2B/B2C	B2B	B2B	B2B
Stage of development	Early-stage	IPO	IPO
Funding	From headquarter	Public	Public
Team	Full team	Full team	Full team
Valuation* (Billion IDR)	To be calculate	1,072	3,185

\*Source: Financial statement KIOS 30 September 2018 unaudited, financial statement MCAS 30 June 2018 unaudited.

#### Sales Multiplier

Given the fact that PT X has not gone public yet, some multipliers that contain stock price or dividend can not be used. The most possible multiplier that can be used is sales multiplier. It calculated by dividing market capitalization with net sales.

Table 6: Valuation PT X Use Relative Method.

In Billion IDR	KIOS	MCAS
Market Capitalization *	1,072	3,185
Net Sales **	1,962	1,840
Sales Multiplier	0.55	1,73

\*) Source: Yahoo January 18,2019 (market capital KIOS & MCAS)

\*\*\*) Source: Financial statement KIOS 30 September 2018 unaudited, financial statement MCAS 30 June 2018 unaudited.

Valuation for PT X can be computed as below:

- Benchmark to KIOS

Market capitalization PT X = sales multiplier KIOS x net sales PT X YTD Sep'18

= 0.55 x IDR 1.37 billion = IDR 0.75 billion

- Benchmark to MCAS

Market capitalization PT X = sales multiplier MCAS x net sales PT X YTD Jun'18

= 1.73 x IDR 0.91 billion = IDR 1.58 billion

Using the percentage of 50% for both companies, valuation for PT X will be:

(50% x IDR 0.75 billion) +(50% x IDR 1.583 billion)

= IDR 1.17 billion

#### 4.1.4 Step Up Model

Poland (2014) proposes to give \$250.000 for each yes of step-up factors.

Table 7: Start-Up Attributes PT X Use Step Up Model.

Step-Up factors	Yes
1.Total market size over \$500 million	√
2.Business model scales well	
3FOUNDERS have previous exits or significant experience	
4.More than one founder committed full time	
5.MVP developed, customer development underway	
6.Business model validated by paying customers	
7.Significant industry partnerships signed	
8.Execution roadmap developed and being achieved	
9.IP issued or technology protected	√
10.Competitive environment favourable	



Given the checklist above, valuation for PT X is computed as:

$$2 \text{ factors} \times \$250.000 = \$500.000 = \text{IDR } 7 \text{ billion.}$$

## 4.2 Budgeting

### 4.2.1 Profit and Loss Budget

The proposed process of profit and loss budgeting in PT X is as follows:

1. Breakdown the sales target into a monthly target.  
Currently they have one yearly sales target.
2. Review all the expenses that have happened in 2017 and 2018
3. Adjusted accordingly to build expenses in 2019.
4. Combine the sales target and expenses budget to be profit and loss budget.
5. All these budgeting steps should involve managers from multiple departments, not only finance (participative budgeting).
6. Compare actual sales and expenses every month end and analyse the gap (variance analysis).

### 4.2.2 Cash Flow Budget

The proposed process of cash flow budgeting in PT X is as follows:

1. Make cash income schedule by mapping customer's sales generated and customer terms of payment. For example, with 60 days terms of payment, sales generated in January should be paid by March. Make adjustment accordingly by looking at historical data from bank account statement.
2. Make cash outcome schedule by mapping expenses forecasted and supplier terms of payment. For example, expenses booked in January book will due in February. Make adjustment accordingly by looking at historical disbursement data from bank account statement.
3. Combine both schedules to get cash balance for each month.
4. All these budgeting steps should involve managers from multiple departments, not only finance (participative budgeting).
5. Compare actual cash income and disbursement with the budget every month end and analyze the gap in monthly basis (variance analysis).

## 5 CONCLUSIONS

Using multiple valuation methods can result in PT X either to have positive or negative valuation. It varies due to different assumptions and estimations used.

Table 8: Valuation PT X Use Multiple Methods.

Valuation Method	Valuation (IDR)
DCF	-876 Million
VC method	882 Million
Relative/market comparison	1.17 Billion
Step up method	7 Billion

However, the fact that PT X can generate positive valuation with some of the methods are opening their view that they have potential to explore for external funding option from the investor, either from Venture Capital or Initial Public Offering.

Apart from the chance of having a positive valuation, more fundamental things that PT X need to be a concern is that positive valuation can be achieved if they have financial budgeting. The budget for Profit and Loss statement as well as cash flow projection need to be established and tightly monitored.

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## REFERENCES

- Behrmann, Glenn. 2016. Internet Company Valuation – A Study of Valuation Method and Their Accuracy. Thesis : EBS Universitat fur Wirtschaft und Recht.
- Damodaran, Aswath. 2010. Dark Side of Valuation : Valuing Young, Distressed, and Complex Businesses. New Jearsey : Pearson Education, Inc.
- Damodaran, Aswath. 2015. Applied Corporate Finance Forth Edition. USA : Wiley.
- Ghosh, Shikhar. 2012. The Venture Capital Secret : 3 Out of 4 Start-Ups Fail. Harvard Business School Newsroom.
- Hansen, Don R. Moewn, Maryanne M. (2015). *Cornerstones of Cost Management* (3<sup>rd</sup> ed.). USA : Southwestern-Cencage Learning.
- Mansfield, Matt. "Startup Statistics : The Numbers You Need to Know". 15 Mei 2018. <<https://smallbiztrends.com/2016/11/startup-statistics-small-business.html>>.

- Markopolou, Maria K. 2009. Capital Structure Signaling Theory : Evidence From The Greek Stock Exchange.
- Poland, Stephen R. 2014. Founder's Pocket Guide : Startup Valuation
- Markopolou, Maria K. 2009. Capital Structure Signaling Theory : Evidence From The Greek Stock Exchange.
- Ross, Stephen A. Westerfield, Ramdolph W. Jaffie, Jeffrey. Lim, Joseph. Tan, Ruth. Wong, Helen. (2005). *Corporate Finance Tenth Edition* (10<sup>th</sup> ed.). New York : McGraw-Hill Education.
- Harvard Business Review. 2012. Early-Stage Companies and Financing Valuation : The Venture Capital Method. IESE Business School-University of Navarra.

