Financial Feasibility Study for the Second Merchandise Store of PT Persib Bandung Bermartabat

Raden Aswin Rahadi¹, Muhammad Akbar Hasby Hasibuan¹, Dwi Rahmawati^{2,*}, Rozainun Haji Abd. Aziz³, Sylviana Maya Damayanti¹ and Gabriella Witdarmono⁴

¹Institut Teknologi Bandung, Indonesia

²STIE Ekuitas Bandung, Indonesia

³International University of Malaya-Wales Malaysia

^₄PT Persib Bandung Bermartabat, Indonesia

Abstract: PT Persib Bandung Bermartabat is the company that manages a regional football team in Indonesia, the Persib Bandung Football Team. The company already has a merchandise store for the football team, but PT Persib Bandung Bermartabat needs to open a store that is suitable for Persib supporters' desires. This study aims to discover whether or not building a new PT Persib Bandung Bermartabat merchandise store is financially feasible for PT Persib Bandung Bermartabat. As a result of this study, this project is shown to be financially feasible because this project will be profitable for the company and give a good return. The NPV of this project is positive and the Profitability Index of this project is greater than one. IRR is greater than the Cost of Capital, and Discounted Payback Period is faster than the COGS of this project in order to make certain the COGS do not change too much from the current assumptions that are used in this financial projection. A slight change of COGS will have a big impact on the profit of this project. The company also should ensure that the Target Market Growth of this project is not less than 3,20% because it will make this project unprofitable.

Keywords: Investment Analysis, Financial Plan, Financial Feasibility Study, Persib Bandung.

INTRODUCTION

Football is a sport that is very popular in every level of Indonesian society. Indonesia is known to be a country with a huge number of football enthusiast. The country of Indonesia has the fourth-highest population in the world with 265 million people, and according to Nielsen Sport, 77% of Indonesia's population has an interest in football. Those facts make Indonesia the country which has the second largest number of football enthusiasts. Every football team in Indonesia has a huge number of supporters, and supporters with their favourite team's merchandise are two things that cannot be separated (Berawi, Susantono, Miraj and Nurmadinah 2018; Zhang, Leng and Zhou 2020).

PT Persib Bandung Bermartabat is the company that manages Indonesian football team Persib Bandung Football Team. Besides it, they run a business that produces and sells official Persib merchandise. Persib is one of the football teams that has a huge supporter base in Indonesia (Johnson, Scholes and Whittington 2005). Those supporters use a lot of Persib merchandise. However, these supporters still may not buy Persib's official merchandise, because the culture of the Persib supporters is one that likes to oblige everyone. It is desireable for the supporters to buy Persib's merchandise when they come to the stadium, but it is hard to make people buy Persib merchandise. Persib supporters often buy the merchandise near the stadium before they go inside the stadium, even though the products are a counterfeit good, and it means they do not go to the official store (Lange 2019; Rahman, Nurul Haqimin, Ahmad Fayas, and Lun 2016).

The clothing making process has become easier. People can make a lot of clothes by themselves, and this means many people can sell Persib's merchandise at a lower price than Persib's official merchandise. The good quality of Persib's official merchandise, makes Persib vendors unable to sell at a low price and many people who do not care about the originality of the products will make them still buy counterfeit products because it is cheaper and they do not care about the originality. Buying counterfeit occurs because fans not aware of the product and the quality of the merchandise that are sold at the official merchandise store of PT Persib Bandung Bermartabat. They are not aware because they do not go to the store because it is far from the place where they live (Rahmawati and Rahadi 2020).

^{*}Address correspondence to this author at the STIE Ekuitas Bandung, Indonesia; E-mail: d.research_r@yahoo.com

The fact that a lot of people use Persib's merchandise means PT Persib Bandung Bermartabat has a huge market to sell Persib's merchandise, but PT Persib Bandung Bermartabat, which only has a small parking lot store means many people do not come to that store. Moreover, in that location, PT Persib Bandung Bermartabat do not have more space to add more parking lots. This condition causes Persib supporters to look for another store from which it is easier to buy Persib merchandise (Kotler and Armstrong 2012). If PT Persib Bandung Bermartabat builds a new store it needs to build in a place that has a potential market and PT Persib Bandung Bermartabat needs to build a store that is suitable for Persib supporters' desires. This will make people want to go to the store and gain product awareness of Persib's merchandise. According to the explanation given earlier, building a new store can be a solution to this problem. PT Persib Bandung Bermartabat will have better store discoverability if they have the second store as Persib has a huge number of supporters in every city of West Java that love to use Persib's merchandise. PT Persib Bandung Bermartabat needs to ensure that the place is feasible as a place for a new store, so that for this project they have to do a feasibility study. The place must give a lot of benefits to PT Persib Bandung Bermartabat to make this project become feasible (Idolor 2014; Zhang et al., 2020).

On the whole, the primary objective of the study is to investigate the financial feasibility of the second merchandise store of pt persib bandung bermartabat, and finally, try to draw some conclusion along with practical recommendations. To perform so, business situation analysis will be done by using STP (Segmenting, Targeting, and Positioning) in internal analysis, whereas external analysis uses PESTEL analysis and Porter's Five Forces Model.

EXTERNAL AND INTERNAL ANALYSIS

This research analyses internals and externals of the company. The study makes certain the solution of this research is applicable. Internal and external analysis is an input to analyzing SWOT analysis. The external environment of a company provides the information regarding the general analysis of the industry and its competitors, while the internal environment analysis serves the information about a company's resources and their ability to develop core skills and competitive advantages. According to the study, PESTEL analysis initially developed by Aguilar (1967) supports this project to analyze the external environment or the business environment and assess the impact on the company, whereas analyzing the company's strengths to deal with competitive situations will be done by using Porter's Five Forces Model. This shows the five strengths that provide advantages or disadvantages of the position of the company, especially in a competitive environment, since it covers the information required to determine the condition of the industry. STP assists this project to analyze the internal environment of the company. Market segmentation divides the market into distinct groups of buyers who have different needs, characteristics, or behaviors, and who might require separate products or marketing programs. A SWOT analysis summarises the key issues from the business environment and the strategic capability of an organization that is most likely to impact strategy development.

Financial Feasibility Study

Financial Feasibility Study is one of the tools used to assess whether a project may generate the highest value to avoid irrationality in decision-making by an entity (Berawi et al., 2018) (Melnic & Iliescu, 2017). This project considers the time value of money by using Discounted Cash Flow. This approach has its foundation in the present value rule, where the value of any asset is the present value of expected future cashflows that the asset generates. Moreover, the approach may reflect the approximate assets value within the determined risk rate (Rahmawati et.al, 2019). Discounted Cash Flow for this project uses Cost of Capital. One way to obtain the cost of equity is through the capital asset pricing model (CAPM) approach, in which the cost of equity is equal to the risk-free rate added to risk premium to cover investment risk (Idolor, 2014).

This project uses Net Present Value (NPV), which defines the project is feasible if NPV>0, the Internal Rate of Return (IRR), which reflects the higher number of the value compared to the required discount rate (Boardman *et al.*, in Berawi *et al.*, 2018), the Profitability Index (PI) where more than one means the present value of cash inflow is greater than the present value of cash outflow which eventually will become profit for the company (Zadeh *et al.*, 2014), and the Discounted Payback Period (PP) for the consideration of the company to decide. To mitigate the risk, this project uses sensitivity analysis and scenario analysis. Sensitivity analysis is used in financial modelling to determine how one variable (the target variable) may be affected by changes in another variable (the input

variable) (Linden, 2010). Scenario planning should help companies use their risk appetites as guideposts when setting strategy and spotlight the risks that might threaten implementation of that strategy (Jaclyn, 2010).

METHODOLOGY

Business situation analysis consists of internal and external analysis. Analyzing the internal environment of the company, this project will be supported by Segmenting, Targeting, and Positioning (STP), of the company, while analyzing the external environment will use the PESTEL (Political, Economic, Social, Technology, Environmental, and Legal) method and Porter's Five Force method. Internal and external analysis are the considerations to determine SWOT (Strengths, Weakness, Opportunities, and Threats) of the company.

This project uses a questionnaire as a basis to make a decision about the place for the new store of PT Persib Bandung Bermartabat, make a decision about products that should be produced, and to be a reference when identifying issues. This market survey is a proper measure to earn quantitative and/or qualitative data aimed to analyze the actual condition of the market. Moreover, this measure is the easiest, most convenient, fastest, and most inexpensive (Rahmawati *et al.*, 2019) way to measure. The result of the questionnaire gives a recommendation what the best alternative places for the second store and determines the best location. Analyzing the best location by looking at the place which has the best market condition will give the most benefit to the

Table	1:	Pestel Analysis
IUNIO		

company. The result of the questionnaire also gives advice to the company for planning every product that it needs to produce and sell.

The financial projection of this project was taken from the current condition of the previous store, from the books, and from industry historical data. Then, for the projection we used average historical inflation rate and average industry historical data. This project analyzes whether or not building a new store at Riau Street is feasible, analyzes it, and this project includes a financial feasibility study to analyze whether this project is viable or not.

The feasibility study, from the financial projection, then the cash flow converted to present value, afterwards produces an NPV, IRR, Profitability Index, and a Discounted Payback Period based on the present value of cash flow. Every project has risk and this project needs to mitigate any future. In order to mitigate the risk, this project uses sensitivity analysis to look at the variable that will give the biggest impact to the NPV of the company. The company also should use scenario analysis to look the change of the NPV when the company experiences worst case or better case in the future.

FINDINGS AND ARGUMENT

This project was created to solve the issues of PT Persib Bandung Bermartabat's business. Issues of the company will be solved by building the second store. This project shows which location gives the most benefit for the second PT Persib Bandung Bermartabat

Factor	Analysis
Political Factors	Regulations for how to build a store and regulating the product that can be sold in a store are given, but the regulations state that professional football clubs are no longer allowed to use the source of money from government. Persib Football Team needs to create a company and make stakeholders of Persib to create PT Persib Bandung Bermartabat.
Economic	In 2019 growth in economic was lower than in 2018, and it harmed the business of PT Persib Bandung Bermartabat, because people had low purchasing power and ended up looking for a cheaper product.
Social	People want merchandise with good quality, but 74% of Persib supporters still have not bought Persib merchandise in Persib official merchandise store because they do not want to come to the store due to a small parking lot.
Technology	The development of technology is affecting every industry, it also affects to textile industry. That fact makes the process to make clothes easier because everyone who runs a business in the textile industry adopts the new systems that make the process more effective and efficient.
Environmental	PT Persib Bandung Bermartabat still should cooperate with a vendor which uses low energy, chemical, and water consumptions, and also have a great waste disposal management. This leads to the sustainability of the company. Moreover, the company will be perceived well by the people.
Legal	The company still does not have intellectual property rights because of PT Persib Bandung Bermartabat, which still uses the Bandung City Logo as its Logo.

Source: Author's Analysis.

store according to market conditions and shows whether the location of the second PT Persib Bandung Bermartabat store is viable. Creating a good recommendation for this project to solve the issues which occur requires business situation analysis. Business situation analysis makes an applicable solution to this project, because the solution is suitable for the internal and external conditions of the company. Business situation analysis is done by using STP (Segmenting, Targeting, and Positioning) in internal analysis, whereas external analysis uses PESTEL analysis and Porter's Five Forces Model. Internal and external analysis are an input for analyzing SWOT analysis.

EXTERNAL ANALYSIS

Porter's Five Forces Analysis

1. Threat of New Entrants – Low

It is hard, and even almost impossible to create, an official merchandise of PT Persib Bandung Bermartabat because to become a company which sells official merchandise, they need to get a license from the club to sell the merchandise of their team.

2. Threats of Substitute – High

PT Persib Bandung Bermartabat does not have intellectual property rights. This means anyone can easily make the same products sold by PT Persib Bandung Bermartabat and can sell at lower prices.

3. Bargaining Power of Suppliers – Low

The development of technology is affecting the process of producing merchandise. Many vendors can now produce merchandise with the same quality and same price. This is a condition that makes the switching cost for PT Persib Bandung Bermartabat changing vendors low

4. Bargaining Power of Buyers – High

Merchandise in the PT Persib Bandung Bermartabat store is not too hard to imitate and many people who support the Persib Football Team make many stores to sell the imitation products, which have almost the same quality as the merchandise currently sold by PT Persib Bandung Bermartabat.

5. İndustry Rivalry – Moderate

The industry rivalry among players is quite moderate. Since there are so many substitute products coming from each seller and from many suppliers, such

Internal Analysis

1. Segmenting

Every product cannot be sold to everyone. Everyone has their own interests, and that means the company cannot force everyone to buy their products. Persib that has a huge supporters base, but still cannot make every supporter buy Persib merchandise. PT Persib Bandung Bermartabat needs to segment their products to focus on selling the product to their target market. Segmentation consists of geographic, demographic, psychographic, and behavioral.

a. Geographic: West Java

b. Demographic:

Age	12-22 Years Old
	• 23-29 Years Old
	• 30-39 Years Old
	40-45 Years Old
	 > 46 Years Old
Gender	• Male
	Female
Income	• <rp.3.000.000< td=""></rp.3.000.000<>
	 Rp.3.000.001-Rp.5.000.000
	• Rp.5.000.001-Rp.8.000.000
	• Rp.8.000.001-Rp.10.000.000
	• >Rp.10.000.001
Education	Elementary
	Junior High School
	Senior High School
	Diploma
	Bachelor's Degree
	Master's Degree
Occupation	Student
	• Worker

c. Psychographic:

Social Class	Lower Class
	Low to Middle Class
	Middle Class
	Middle to Upper Class
	Upper Class
Characteristic	Football Lover
	Persib Lover
	Merchandise Collector

d. Behavioral:

Occasions	•	Regular Occasion When There Are Persib Matches
Loyalty Status	•	None Medium Strong

The segmentation of PT Persib Bandung Bermartabat merchandise above, then will be narrowed down in Targeting to look on the main target market of the PT Persib Bandung Bermartabat product.

2. Targeting

This project gives the segmentation for the product of PT Persib Bandung Bermartabat, then that segmentation needs to narrow down to targeting the market. They need to analyze the group of people that should be PT Persib Bandung Bermartabat's target market.

- a. Geographic: West Java
- b. Demographic:

Age	 23-29 Years Old 30-39 Years Old
Gender	MaleFemale
Income	 Rp.5.000.000-Rp.8.000.000 Rp.8.000.001-Rp.10.000.000 >Rp.10.000.001
Education	 Senior High School Diploma Bachelor's Degree Master's Degree
Occupation	StudentWorker

c. Psychographic:

	1	
Social Class	•	Middle Class
	•	Middle to Upper Class
	•	Upper Class
Characteristic	•	Persib Lover
	•	Merchandise Collector

d. Behavioral:

Occasions	Regular OccasionWhen There Are Persib Matches
Loyalty Status	NoneMediumStrong

The main objective of people when they want buy Persib merchandise is to watch Persib in a stadium or watch Persib together with most of the Persib supporters. People who usually watch Persib in a stadium are people with age ranges between 23-29 years old. This means that people within that age range are the main target market of the PT Persib Bandung Bermartabat store. Besides that, PT Persib Bandung Bermartabat has high prices for their products making the main target market for them middle class to high class, with the incomes above Rp. 5.000.000 per month. However, people that buy Persib merchandise on regular occasions should still be part of the target market so as to gain higher revenue for the company, to make it trendy to use Persib merchandise on regular occasions, and to make other people aware of the product sold by PT Persib Bandung Bermartabat.

3. Positioning

PT Persib Bandung Bermartabat is positioning to provide the Official Merchandise of the Persib Football Team. Persib, which is considered by people to be a legacy of West Java, has many people in West Java supporting Persib Football Team. Moreover, the football team and its supporters are two things that cannot be separated. Supporters want to support their team and one of their ways to support their team is by buying the official merchandise of the team. Persib Football Team is under PT Persib Bandung Bermartabat management. This means PT Persib Bandung Bermartabat is the only company that provides Persib Official Merchandise.

Desire of Location of The Second Store

PT Persib Bandung Bermartabat should build the second store around Riau Street (R.E. Martadinata Street), which is the second most desired place for the new store according to Persib supporters. The location is suitable according to customer desires but most supporters prefer the store located at Dago Street, which is near Sulanjana Street, the location of the current PT Persib Bandung Bermartabat store. This project uses four parameters to analyze the financial feasibility of this project, which are: NPV, IRR, Profitability Index, and Discounted Payback Period. The results of the four parameters of this project as following.

Projected Sales Calculation

Revenue calculations of this project was gotten from the quantity sold of every product multiplied by the (Jika Official Store Di Wilayah Bandara Kertajati Tidak Membuat Lebih Tertarik) Saya Akan Lebih Tertarik Membeli Merchandise Persib di Official Store Jika Persib Memiliki Official Store Di 100 responses



Figure 1: Respondents Desire of Location of The Second Store. Source: Hasibuan, 2020.

Price	0	1	2	3	4	5
Jersey Player Issue	Rp 500.000,00	Rp 500.000,00	Rp 592.500,00	Rp 592.500,00	Rp 702.112,50	Rp 702.112,50
Jersey Non-Player Issue	Rp 250.000,00	Rp 250.000,00	Rp 296.250,00	Rp 296.250,00	Rp 351.056,25	Rp 351.056,25
T-Shirt	Rp 100.000,00	Rp 100.000,00	Rp 118.500,00	Rp 118.500,00	Rp 140.422,50	Rp 140.422,50
Bag	Rp 200.000,00	Rp 200.000,00	Rp 237.000,00	Rp 237.000,00	Rp 280.845,00	Rp 280.845,00
Accessories	Rp 70.000,00	Rp 70.000,00	Rp 82.950,00	Rp 82.950,00	Rp 98.295,75	Rp 98.295,75

Table 2: Price of Every Product

Source: Author's Analysis.

price of every product. The price of every product was gotten from the existing prices of every product that is sold by PT Persib Bandung Bermartabat.

According to PT Persib Bandung Bermartabat does not have enough historical data of target market growth, because the previous store has just been open for one year. Therefore, this project uses benchmark data from the average of growth of several other companies from several other countries that run businesses in the same industry.

Projection sales for the next five years for this project will be done by multiplying projection prices in every year with projection quantities sold in every year. Quantity sold, which is always increasing, makes projection sales of this project seem to always increasing, as well. This projection of sales will be used for the calculation of the feasibility study for the new store.

Financial Projection

The projection for this project is for five years. Based on the assumptions, this project can provide the projected cash-in and projected cash-out of this investment project, which eventually will equate to the Free Cash Flow. PT Persib Bandung Bermartabat uses only equity from this project for Free Cash Flow to the Equity that is obtained from Net Operating Profit After Tax (NOPAT).

Financial Feasibility Study

Analyzing the financial feasibility of the new store of PT Persib Bandung Bermartabat will used four parameters to determine if the project is feasible. The four parameters of the financial feasibility of this project are: Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index, and Discounted Payback Period.

Calculating the four parameters of financial feasibility of this project should consider the time value of money, so that the cash flow should be converted to the present value. The first step that this project takes to convert the cash flow to present value is to make an accumulated cash flow as shown in the following:

PT Persib Bandung Bermartabat uses equity to fund this project, which means the cost of capital for this project is just the cost of equity. The cost of equity for this project is 15,11%. The cost of equity was obtained from the calculation of the cost of equity calculated

No.	Football	Market Growth								Average		
	Team	1	2	3	4	5	6	7	8	9	10	Growth
1	Manchester United	376,68	435,89	421,27	477,65	569,72	519,75	677,76	764,36	775,96	796,40	
	Growth		15,72%	-3,35%	13,38%	19,28%	-8,77%	30,40%	12,78%	1,52%	2,63%	9,29%
2	Manchester City	46,30	44,90	47,90	50,80	46,90	52,50	54,20	54,60	52,70	85,20	
	Growth		-3,02%	6,68%	6,05%	-7,68%	11,94%	3,24%	0,74%	-3,48%	61,67%	8,46%
3	Liverpool	79,50	75,80	85,70	99,10	114,00	124,10	153,00	159,80	161,60	170,80	
	Growth		-4,65%	13,06%	15,64%	15,04%	8,86%	23,29%	4,44%	1,13%	5,69%	9,17%
4	Barcelona	366,00	398,00	451,00	483,00	483,00	484,60	560,80	620,20	648,30	690,40	
	Growth		8,74%	13,32%	7,10%	0,00%	0,33%	15,72%	10,59%	4,53%	6,49%	7,43%
5	Real Madrid	401,00	439,00	480,00	513,00	519,00	549,50	577,00	620,10	674,60	750,90	
	Growth		9,48%	9,34%	6,88%	1,17%	5,88%	5,00%	7,47%	8,79%	11,31%	7,26%
6	Inter Milan	28,20	38,60	32,90	23,20	19,40	18,80	22,20	25,70	28,40	35,30	
	Growth		36,88%	-14,77%	-29,48%	-16,38%	-3,09%	18,09%	15,77%	10,51%	24,30%	4,65%
7	Juventus	54,30	55,60	53,60	73,00	68,40	85,00	73,50	101,70	114,40	143,30	
	Growth		2,39%	-3,60%	36,19%	-6,30%	24,27%	-13,53%	38,37%	12,49%	25,26%	12,84%
	e Growth of 7 Teams											8,44%

Table 3: Average Market Growth

Source: Author's Analysis.

Table 4: Projection Sales

Projection Sales	0	1	2	3	4	5
Jersey Player Issue	Rp 744.000.000,00	Rp 807.000.000,00	Rp 1.037.467.500,00	Rp 1.125.157.500,00	Rp 1.446.351.750,00	Rp 1.568.519.325,00
Jersey Non- Player Issue	Rp 474.000.000,00	Rp 514.250.000,00	Rp 660.933.750,00	Rp 716.925.000,00	Rp 921.522.656,25	Rp 999.457.143,75
T-Shirt	Rp 153.600.000,00	Rp 166.600.000,00	Rp 214.129.500,00	Rp 232.260.000,00	Rp 298.538.235,00	Rp 323.814.285,00
Bag	Rp 86.400.000,00	Rp 93.800.000,00	Rp 120.633.000,00	Rp 130.824.000,00	Rp 168.226.155,00	Rp 182.549.250,00
Accessories	Rp 34.440.000,00	Rp 37.380.000,00	Rp 48.111.000,00	Rp 52.175.550,00	Rp 67.135.997,25	Rp 72.837.150,75
Total	Rp 1.492.440.000,00	Rp 1.619.030.000,00	Rp 2.081.274.750,00	Rp 2.257.342.050,00	Rp 2.901.774.793,50	Rp 3.147.177.154,50

Source: Author's Analysis.

earlier. This cost of equity will then be used as the discount rate for this project. This discount rate will be used to convert cash flow to the present value of cash flow, and that present value of cash flow will also be accumulated. The result of the cash flow, which has been converted to present value of cash flow, is as follows:

According to four parameters, it is feasible to build a new merchandise store that is run by PT Persib Bandung Bermartabat, because the NPV for this project is positive. The NPV of this project is Rp. 499.868.539, the profitability index of this project is greater than one, at 1,92. The IRR of this project, which is greater than the cost of equity, is used for the discount rate of this project. The IRR of this project is 28% and is greater than the discount rate of this project, which is as much as 15,11%. The discounted payback period of this project is four years and five months, which is faster than the projection.

Sensitivity Analysis

There is always a possibility that the projection is not in accordance with what will be actual in the future because the future is uncertain. This circumstance means this project should do risk assessment to identify hazards and risk factors that have potential to

	0	1	2	3	4	5
Sales		Rp 1.619.030.000,00	Rp 2.081.274.750,00	Rp 2.257.342.050,00	Rp 2.901.774.793,50	Rp 3.147.177.154,50
COGS		Rp 596.976.000	Rp 647.612.000	Rp 832.509.900	Rp 902.936.820	Rp 1.160.709.917
Gross Profit		Rp 1.022.054.000	Rp 1.433.662.750	Rp 1.424.832.150	Rp 1.998.837.974	Rp 1.986.467.237
Renovation	Rp 75.000.000,00					
Decoration	Rp 100.000.000,00					
Land Rental	Rp 200.000.000	Rp 210.354.000	Rp 221.244.027	Rp 232.697.830	Rp 244.744.596	Rp 257.415.024
G&A Expenses		Rp 129.878.500	Rp 134.250.535	Rp 138.769.744	Rp 143.441.080	Rp 148.269.665
Selling Expenses		Rp 904.514.500	Rp 1.036.898.758	Rp 1.098.304.959	Rp 1.277.387.891	Rp 1.357.318.303
D&A		Rp 33.110.200				
EBIT		-Rp 255.803.200	Rp 8.159.231	-Rp 78.050.583	Rp 300.154.205	Rp 190.354.044
Tax 25%		-Rp 63.950.800	Rp 2.039.808	-Rp 19.512.646	Rp 75.038.551	Rp 47.588.511
NOPAT		-Rp 191.852.400	Rp 6.119.423	-Rp 58.537.937	Rp 225.115.654	Rp 142.765.533
Add D&A		Rp 33.110.200				
FCFE	-Rp 375.000.000	-Rp 158.742.200	Rp 39.229.623	-Rp 25.427.737	Rp 258.225.854	Rp 175.875.733
Terminal Value						Rp 1.881.931.127,25
FCFE	-Rp 375.000.000	-Rp 158.742.200	Rp 39.229.623	-Rp 25.427.737	Rp 258.225.854	Rp 2.057.806.860

Table 5: Free Cash Flow to the Equity

Source: Author's Analysis.

Table 6: Accumulated Cash Flow

Free Cash Flow to the Equity	0	1	2	3	4	5
Cash Flow	-Rp 540.551.000	-Rp 158.742.200	Rp 39.229.623	-Rp 25.427.737	Rp 258.225.854	Rp 2.057.806.860
Accumulated Cash Flow	-Rp 540.551.000	-Rp 699.293.200	-Rp 660.063.577	-Rp 685.491.314	-Rp 427.265.460	Rp 1.630.541.401

Source: Author's Analysis.

Table 7: Accumulated Present Value of Cash Flow

Present Value of Cash Flow	0	1	2	3	4	5
PV of Cash Flow	-Rp 540.551.000	-Rp 137.907.183	Rp 29.607.594	-Rp 16.672.134	Rp 147.088.151	Rp 1.018.303.110
Accumulated PV of Cash Flow	-Rp 540.551.000	-Rp 678.458.183	-Rp 648.850.589	-Rp 665.522.722	-Rp 518.434.571	Rp 499.868.539

Source: Author's Analysis.

Table 8: Result of Financial Feasibility Parameter

Financial Feasiblility Parameters	Result	Conclusion
Discounted Payback Period	4,51	Feasible
Net Present Value	Rp 499.868.539	Feasible
Profitability Index	1,92	Feasible
IRR	28%	Feasible

Source: Hasibuan, 2020.

Sensitivity Analysis	Current Assumption	+20% Swing	-20% Swing
COGS	40,00%	48,00%	32,00%
Price Player Issue	Rp 500.000	Rp 600.000	Rp 400.000
Quantity Sold Player Issue	1488	1786	1191
Target Market Growth First Year	8,44%	10,13%	6,75^
Price Non-Player Issue	Rp 250.000	Rp 300.00	Rp 200.000
Quantity Sold Non-Player Issue	1896	2276	1517
Price T-Shirt	Rp 100.00	Rp 120.00	Rp 80.000
Quantity Sold T-Shirt	1536	1844	1229
Inflation Rate	3,37%	4,04%	2,69%
Price Bag	Rp 200.000	Rp 240.000	Rp 160.000
Quantity Sold Bag	432	519	346
Capex	Rp 165.551.000	Rp 198.661.200	Rp 132.440.800
Price Accessories	Rp 70.000	Rp 84.000	Rp 56.000
Quantity Sold Accessories	492	591	394

Table 9: Swing of Assumptions

Source: Hasibuan, 2020.

harm the project. Risk assessment for this project is done by using Sensitivity Analysis.

Conducting sensitivity analysis starts by deciding how big the swing is for sensitivity analysis. For this project the sensitivity analysis will use swing as much as 20%, so that we can see how big the change of NPV is if every variable is increased 20%. We can also see how big the change is if every variable is decreased 20%. The sensitivity analysis of this project as follows:

Table **9** shows the change of every assumption when the assumptions have swung. The swing of every assumption is 20%, so that means every assumption will increase 20% and also decrease 20%. Every change of the assumptions will change the NPV of this project. Before we look how big the change of NPV is,

Table 10: Results of Sensitivity Analysis of NPV

Sensitivity Analysis	Current NPV	+20% Swing NPV	-20% Swing NPV
COGS	499.868.539,12	(818.325.337)	1.818.062.415
Price Player Issue	499.868.539,12	1.207.136.336	(207.399.258)
Quantity Sold Player Issue	499.868.539,12	1.207.564.224	(202.586.008)
Target Market Growth First Year	499.868.539,12	1.100.617.774	(63.583.106)
Price Non-Player Issue	499.868.539,12	950.567.789	49.175.289
Quantity Sold Non-Player Issue	499.868.539,12	950.850.338	49.659.313
Price T-Shirt	499.868.539,12	645.893.021	353.844.058
Quantity Sold T-Shirt	499.868.539,12	646.139.535	354.188.440
Inflation Rate	499.868.539,12	405.185.617	592.858.806
Price Bag	499.868.539,12	582.205.798	417.531.280
Quantity Sold Bag	499.868.539,12	582.144.391	418.774.481
Сарех	499.868.539,12	466.758.339	532.978.739
Price Accessories	499.868.539,12	532.714.633	467.022.446
Quantity Sold Accessories	499.868.539,12	532.730.161	467.559.788

Source: Hasibuan, 2020

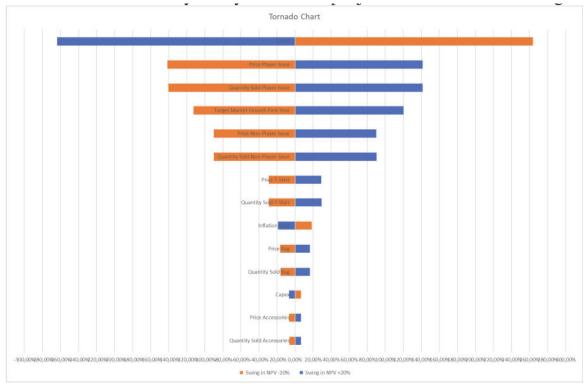


Figure 2: Tornado Chart. Source: Hasibuan, 2020.

we need to change every assumption, and when every variable of the assumption is changed so as to be increasing 20% or decreasing 20%, it affects the NPV so that it becomes bigger or smaller. The change in NPV when the assumptions are changed are as follows.

From the table above, we can see that if there is an increase of 20% of every variable, this will affect the result of the NPV. Therefore, if there is a decrease of 20%, this also will affect the result of the NPV. Sensitivity analysis shows the risk of the project, because from the sensitivity analysis we can see what variables most affect the NPV of the project. Table **10** shows the sequence of assumptions that provide the largest to smallest effect on NPV.

This project uses sensitivity analysis to look at the variable which has the largest impact on the NPV of the project. Looking at the sequence of variables which

have the largest effect to the smallest effect becomes easier. After that a tornado chart was made. The tornado chart from the sensitivity analysis of this project shows the following:

The tornado chart gives a clear picture showing that the Quantity of Accessories Sold has the smallest effect on the change of the NPV, and Cost of Goods Sold has the largest effect on the the change of the NPV. Another analysis to mitigate the risk of this project is scenario analysis. The scenario analysis of this project shows the following:

The results of the internal source for the PT Persib Bandung Bermartabat means the target market growth is 25% per year. The best-case scenario analysis is 25%, and the worst case is the minimum market growth of the average historical data. The best case was obtained from the highest market growth of the average industry historical data. If the target market growth

Scenario Analysis	Worst Case	Base Case	Better Case	Best Case
Target Market Growth Rate	4,65%	8,44%	12,84%	25,00%
NPV	-Rp 7 13.980.355	Rp 739.170.192	Rp 2.159.012.143	Rp 8.405.536.893

Source: Hasibuan, 2020.

experiences the worst case, then the NPV of this project will be negative and this project would not be feasible. If the target market growth is 25%, as PT Persib Bandung Bermartabat hopes, then the NPV will increase to Rp. 8.405.536.893.

CONCLUSIONS

PT Persib Bandung Bermartabat is a company which manages the Persib Football Team and produces the official merchandise for PT Persib Bandung Bermartabat. Persib supporters number around 20 million people, so that PT Persib Bandung Bermartabat still have a huge opportunity for merchandise business. Most Persib supporters will be find it easier to get information about PT Persib Bandung Bermarbat products if there is a second store. Moreover, most Persib supporters will be more attracted to buy official Persib merchandise from a second PT Persib Bandung Bermartabat store. The second PT Persib Bandung Bermartabat store should be located on a place in Riau Street, which is the second most desired place for the new store.

This project of PT Persib Bandung Bermartabat to build the second store at Riau Street is financially feasible according to four parameters that have been used to analyze the financial feasibility of this project. This project is financially feasible, but the company should monitor the Cost of Goods Sold of this project in order to make certain the Cost of Goods Sold does not change too much from the current assumptions. The Cost of Goods Sold has the biggest effect to this project, which makes this variable a big risk for this project.

PT Persib Bandung Bermartabat also should pay attention and do a strict control of every variable which has large effects on the profit of this project. Variables which give the largest effects on the profit of this project are: Cost of Goods Sold, Price and Quantity Sold of Jersey Player Issue, Jersey Non-Player Issue, T-Shirt, and Target Market Growth. PT Persib Bandung Bermartabat should make certain that all of these variables do not change too much from the current assumption of this project. A little change of each of these variables would have a big impact on the profit of this project. Additionally, the Target Market Growth of this project should be not experiencing the worst case as the minimum market growth of the average historical industry data because it will make this project unprofitable.

REFERENCES

- Berawi, M. A., Susantono, B., Miraj, P., & Nurmadinah, F. (2018). Prioritizing airport development plan to optimize financial feasibility. Aviation, 22(3), 115-128. <u>https://doi.org/10.3846/aviation.2018.6589</u>
- Damodaran, A. (2002). Investment Valuation Second Edition, New Jersey: John Wiley & Sons Inc.
- Idolor, E. J. (2014). Consumption oriented capital asset pricing model and capital asset pricing model in the Nigerian capital market: A comparative study. The Journal of Commerce, 6(3), 1-22. Retrieved from https://search.proquest.com/ docview/1609530812?accountid=31562
- Jaclyn, J.S. (2010), From Risk Assessment to Risk Scenario Analysis, London: Wilmington Group PLC
- Johnson, G., Scholes, K., Whittington, R. (2005), *Exploring* Corporate Strategy: Text and Cases, London: Prentice Hall.
- Kotler, P., & Armstrong, G. (2012), *Principles of Marketing*, New Jersey: Pearson Prentice Hall.
- Lange, D., (2019), Internazionale Milan Revenue by Stream from 2008/09 to 2017/18, *Statista*. Available from https://www.statista.com/statistics/251165/revenue-ofinternazionale-milan-by-stream/ [Accessed in 2019]
- Lange, D., (2019), Juventus Football Club revenue by stream from 2008/09 to 2017/18, *Statista*. Available from https://www.statista.com/statistics/251160/revenue-ofjuventus-turin-by-stream/ [Accessed in 2019]
- Lange, D., (2019), Liverpool FC Revenue by Stream from 2008/09 to 2017/18 (in million euros), *Statista*. Available from https://www.statista.com/statistics/251158/revenue-of-liverpool-fc-by-stream/ [Accessed in 2019]
- Lange, D., (2019), Total Revenue of FC Barcelona from 2005/06 to 2017/18, *Statista*. Available from https://www.statista.com/ statistics/282736/revenue-of-fc-barcelona/ [Accessed in 2019]
- Lange, D., (2019), Total Revenue of Real Madrid from 2005/06 to 2017/18, Statista. Available from https://www.statista.com/ statistics/282735/revenue-of-the-spanish-football-club-realmadrid/ [Accessed in 2019]
- Melnic, A., & Iliescu, C. (2017). Projects' financial feasibility. Economy Transdisciplinarity Cognition, 20(2), 5-11.
- Muh Guci, T. (2016), Pembuat Kaus Jersey dan Aksesoris Persib Mulai Kebanjiran Order, *Tribun Jabar*. Available from https://jabar.tribunnews.com/2016/03/26/pembuat-kausjersey-dan-aksesoris-persib-mulai-kebanjiran-order [Accessed in 2019]
- Newstex, A. (2015), Investopedia Stock Analysis: What's a Sensitivity Analysis, United States: Chatham.
- Olson, L. (2010), *Sensitivity Analysis Identifies Risk, Benefit*, United States, Minneapolis: Informa.
- Rahman, N. S. F. A., Nurul Haqimin, M. S., Ahmad Fayas, A. N., & Lun, V. Y. H. (2016). A descriptive method for analysing the kra canal decision on maritime business patterns in Malaysia. *Journal of Shipping and Trade, 1*(1), 1-16. <u>https://doi.org/10.1186/s41072-016-0016-0</u>
- Rahmawati, D. & Rahadi, R. A. (2020). An Appropriate Business Strategy for Small Medium Entreprises: A Case Study of Piksel Indonesia. *Malaysian Management Journal*, 23, 99-114. <u>https://doi.org/10.32890/mmj.23.2019.9687</u>
- Rahmawati, D., Rahadi, R. A., Damayanti, S. M. (2019). Business Valuation for Small Medium Enterprise (Case Study: Piksel Indonesia). *International Journal of Business, Economics and Law*, 17(2), 9-15.
- Zadeh, R. A., Nemati, F., Babaei, B., & Narimani, S. (2014). The Relationship Between Profitability and Sustainability of The Capital Structure of Listed Companies in Tehran Stock

ExchangE. *Kuwait Chapter of the Arabian Journal of Business and Management Review, 3*(12), 249-260. https://doi.org/10.12816/0018866

Zhang, C., Leng, M., & Zhou, L. (2020). Developing Strategies of Social Enterprises Explained Using Porter's Five Forces Analysis Model: Taking Mental Challenged Car Wash as An Example. *International Journal of Organizational Innovation (Online)*, 12(3), 50-64. Retrieved from https://search.proquest.com/docview/2334751287?accountid=31562

Received on 02-11-2020

Accepted on 06-12-2020

Published on 26-12-2020

DOI: https://doi.org/10.6000/1929-4409.2020.09.238

© 2020 Rahadi et al.; Licensee Lifescience Global.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<u>http://creativecommons.org/licenses/by-nc/3.0/</u>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.