

VALUATION OF PT PEGADAIAN FOR PROPOSED IPO PRICE

FINAL PROJECT

By:

ANNISA RATNA PERTIWI

29118394



Master of Business Administration Program

School of Business and Management

Institut Teknologi Bandung

2020

VALUATION OF PT PEGADAIAN FOR PROPOSED IPO PRICE

ANNISA RATNA PERTIWI

NIM: 29118394

Date of Passing of Final Test: 4 December 2020

Date of Graduation Ceremony: April 2021

Master's Program, Bandung Institute of Technology, 2020

Thesis Counsellor: Yunieta Anny Nainggolan, PhD

ABSTRACT

PT Pegadaian aspires to be the most valuable financial company in Indonesia and as the public's first choice financial inclusion agent. To achieve that, PT Pegadaian planned becomes a public company. PT Pegadaian can distribute more financing with increasing capital facilities. PT Pegadaian has planned to do an initial public offering (IPO).

This study aimed to analyze and estimate the intrinsic value of Pegadaian This study will be analyzing PT Pegadaian using external analysis, internal analysis, financial ratio analysis, and SWOT analysis. Toward estimating the intrinsic value used absolute and relative valuation model. The absolute valuation model used is the free cash flow to equity (FCFE) model and the excess return model. The relative valuation used that are price to earnings ratio and price to book value ratio.

The intrinsic value using the free cash flow of the equity model estimated is IDR 2.383,73 /share. Using the scenario analysis with Monte Carlo simulation, the result is obtained the range of intrinsic value that is IDR 632,36 – 2.080,06/share. The intrinsic value using the excess return model estimated is IDR 2.571,41/share. Using the scenario analysis using Monte Carlo simulation, the result is obtained the range of intrinsic value that is IDR 658,22 – 2.240,00/share. The valuation using the price to earnings ratio has resulted is IDR 981,35/share. Then, the result of intrinsic value using the price to book value ratio is IDR 1.206,39/share.

Based on analyzed using the external analysis, internal analysis, financial ratio analysis, and SWOT analysis, then further the weighted average result of the absolute and relative valuation model, the intrinsic value of Pegadaian when IPO estimated around IDR 2.357,97/share. The researcher suggests recommendations to investors to buy PT Pegadaian stock during the IPO.

Keywords: initial public offering, intrinsic value, free cash flow to equity model, excess return model, price to earnings ratio, price to book value ratio.

VALUASI PT PEGADAIAN UNTUK MENGUSULKAN HARGA PENAWARAN UMUM PERDANA

ANNISA RATNA PERTIWI

NIM: 29118394

Tanggal Kelulusan Sidang: 4 Desember 2020

Tanggal Wisuda: April 2021

Program Pascasarjana, Institut Teknologi Bandung, 2020

Pembimbing Proyek Akhir: Yunieta Anny Nainggolan, PhD

ABSTRAK

PT Pegadaian bercita-cita untuk menjadi perusahaan keuangan paling bernilai di Indonesia dan sebagai agen inklusi keuangan pilihan utama masyarakat. Untuk mencapai itu, PT Pegadaian merencanakan menjadi perusahaan terbuka. PT Pegadaian dapat menyalurkan pembiayaan lebih banyak dengan peningkatan fasilitas permodalan. PT Pegadaian berencana melakukan penawaran umum perdana (IPO).

Penelitian ini bertujuan untuk menganalisis dan mengestimasi nilai intrinsik Pegadaian. Penelitian ini akan menganalisis PT Pegadaian menggunakan analisis eksternal, analisis internal, analisis rasio keuangan dan analisis SWOT. Untuk mengestimasi nilai intrinsik digunakan model penilaian absolut dan relatif. Model penilaian absolut yang digunakan yaitu model *free cash flow to equity* (FCFE) dan model *excess return*. Valuasi relatif yang digunakan yaitu rasio harga terhadap pendapatan dan rasio harga terhadap nilai buku.

Estimasi nilai intrinsik menggunakan model *free cash flow to equity* (FCFE) adalah Rp 2.383,73 per lembar saham. Dengan menggunakan analisis skenario dengan simulasi Monte Carlo didapatkan hasil kisaran nilai intrinsik yaitu Rp 632,36 – 2.080,06 per lembar saham. Estimasi nilai intrinsik dengan model *excess return* adalah Rp 2.571,41 per lembar saham. Dengan menggunakan analisis skenario dengan simulasi Monte Carlo didapatkan hasil kisaran nilai intrinsik yaitu Rp 658,22 – 2.240,00 per lembar saham. Penilaian menggunakan rasio harga terhadap pendapatan menghasilkan Rp 981,35 per lembar saham. Kemudian diperoleh hasil nilai intrinsik dengan rasio harga terhadap nilai buku sebesar Rp 1.206,39 per lembar saham.

Berdasarkan analisis dengan menggunakan analisis eksternal, analisis internal, analisis rasio keuangan, dan analisis SWOT, kemudian dilanjutkan dengan hasil rata-rata tertimbang model valuasi absolut dan relatif, nilai intrinsik Pegadaian saat IPO diperkirakan berkisar pada Rp 2.357,97 per lembar saham. Peneliti memberikan rekomendasi kepada investor untuk membeli saham PT Pegadaian pada saat IPO.

Kata kunci: penawaran umum perdana, nilai intrinsik, *free cash flow to equity model*, *excess return model*, *price to earnings ratio*, *price to book value ratio*.

VALIDATION PAGE

VALUATION OF PT PEGADAIAN FOR PROPOSED IPO PRICE

By:

ANNISA RATNA PERTIWI

NIM: 29118394

**Master of Business Administration Program
School of Business and Management
Institut Teknologi Bandung**

Approved

Bandung, 24 December 2020

Final Project Advisor



Yunieta Anny Nainggolan, PhD

DECLARATION OF NON-PLAGIARISM

Plagiarism is:

Taking, using, and submitting a work of another, including an idea, writing, or invention, as if it was her or his own.

Plagiarism includes (but not limited to):


1. **quoting verbatim** the work of another without acknowledgement of the source;
2. **paraphrasing** the work of another without acknowledgement of the source;
3. **using** the idea of another without acknowledgement of the source;
4. **submitting** the work of another without identifying clearly who did the work;
5. **colluding** by submitting the work of another as her or his own with consent from the other.

I understand that Plagiarism is wrong, a breach of academic integrity, and against Program, School, and University's Policy and Regulation.

I declare that all material in this Final Project is original, my own work, and does not involve plagiarism.

I have not allowed, and will not allow, another to copy my work with the intention of submitting it as her or his own work.

Name Annisa Raem Pertiwi Student ID 29118399

Signed  Date 18 November 2020

FOREWORD

First of all, I am feeling thankful, blessing, and grateful to Allah SWT for all graces and mercy to can complete this final project properly as the requirements to achieving a master's degree in business administration at the School of Business and Management, Institut Teknologi Bandung.

I am feeling blessed and thankful to my late beloved parents who always support, motivated, and believe in me. For never-ending support from my husband, thankful for all encouragement and patience during the completion of this thesis.

My sincere gratitude to Mrs. Yunieta Anny Nainggolan, PhD as my final project advisor for all guidance and advice during the writing of the thesis.

I am thankful to all lecturers of MBA ITB for knowledge and sharing experience, as well as thankful to MBA ITB staff for their support.

And for all of my friends in EMBA 60, thankful for support and good friendship.

Bandung, November 2020

Annisa Ratna Pertiwi

TABLE OF CONTENTS

ABSTRACT.....	i
ABSTRAK.....	ii
VALIDATION PAGE	iii
FOREWORD	v
TABLE OF CONTENTS.....	vi
LIST OF FIGURES	viii
LIST OF TABLES.....	ix
LIST OF APPENDICES.....	x
CHAPTER 1	1
INTRODUCTION	1
1.1 Background	1
1.2 Company Profile of PT Pegadaian.....	2
1.2.1 Company’s Vision	2
1.2.2 Company’s Mission	2
1.2.3 Company’s Roadmap.....	3
1.2.4 Company’s Strategy.....	3
1.2.5 Company’s Culture	3
1.3 The Structure of the Company’s Group	4
1.4 The Structure of Organizational.....	4
1.5 Main Services.....	5
1.5.1 Financing Services	5
1.5.2 Gold Services	7
1.5.3 Various Services	7
1.6 Composition of Shareholders.....	7
1.7 Business Issue	8
1.8 Research Objectives	9
1.9 Limitation of the Study	9
CHAPTER II.....	10
BUSINESS ISSUE EXPLORATION.....	10
2.1 Research Framework.....	10

2.2	Methods of Data Collection	11
2.3	Literature Review	11
2.3.1	Initial Public Offering	11
2.3.2	External Environment Analysis	11
2.3.3	Internal Environment Analysis	13
2.3.4	SWOT Analysis	16
2.3.5	Intrinsic Value.....	17
2.3.6	Valuing Financial Service Firms	17
2.3.7	Discounted Cash Flow Valuation	17
2.3.8	Relative Valuation	20
2.3.9	Risk Analysis	21
2.4	Business Analysis.....	21
2.4.1	External Analysis	21
2.4.2	Internal Analysis	26
2.4.3	SWOT Analysis	34
CHAPTER III		36
BUSINESS SOLUTION.....		36
3.1	Discounted Cash Flow Valuation.....	36
3.1.1	Cost of Equity	36
3.1.2	Free Cash Flow to Equity Models	37
3.1.3	Excess Return Models.....	41
3.2	Relative Valuation.....	43
3.2.1	Price to Earnings Ratio	44
3.2.2	Price to Book Value Ratio	45
3.3	Valuation Summary.....	47
CHAPTER IV		49
CONCLUSION AND RECOMMENDATION.....		49
4.1	Conclusion.....	49
4.2	Recommendation.....	50
REFERENCES		52
APPENDIX.....		60

LIST OF FIGURES

Figure 1.1. Company's Vision	2
Figure 1.2. Company's Roadmap	3
Figure 1.3. G-Star Generation (5G's)	3
Figure 1.4. The Structure of the Company's Group	4
Figure 1.5. The Structure of Organizational	4
Figure 1.6. Pegadaian's Main Services	5
Figure 1.7. Pawn Business Line	5
Figure 1.8. Fiduciary Micro Credit Business Line	6
Figure 1.9. Sharia Business Line	6
Figure 1.10. Gold Services	7
Figure 1.11. Various Services	7
Figure 1.12. Composition of Shareholders	8
Figure 2.1. Research Framework	10
Figure 2.2. PESTEL Analysis	12
Figure 2.3. The Porter's Five Forces Model	13
Figure 2.4. Financial Ratio Analysis	14
Figure 2.5. The Four Component of VRIN Analysis	15
Figure 2.6. The Combination of Four Criteria of Sustainable Competitive Advantage	16
Figure 2.7. SWOT Analysis	16
Figure 2.8. The Three Ways to Estimate of Earnings Growth	18
Figure 2.9. Stable Growth	19
Figure 2.10. Parameters for Estimating the Reinvestment in Regulatory Capital	20
Figure 2.11. The Growth of Inflation and B1 7-Day Repo Rate	22
Figure 2.12. The Four Categories of Financial Services	24
Figure 2.13. Subsidiaries, Associates, Regional Offices, and Area Offices Location	28
Figure 2.14. Awards and Certifications	29
Figure 2.15. Operating Profit Margin	29
Figure 2.16. Net Profit Margin	30
Figure 2.17. Return on Total Asset (ROA)	30
Figure 2.18. Return on Equity (ROE)	31
Figure 2.19. Current Ratio	31
Figure 2.20. Debt to Equity Ratio	32
Figure 2.21. Debt Ratio	32
Figure 2.22. The Non-Performing Loan Ratio	33
Figure 2.23. VRIN Analysis	34
Figure 3.1. The Range of Intrinsic Value – FCFE Model	40
Figure 3.2. The Range of Intrinsic Value – Excess Return Model	43

LIST OF TABLES

Table 3.1. Levered Beta of PT Pegadaian.....	36
Table 3.2. Risk Premium	37
Table 3.3. The Average Growth of Risk Adjusted Assets	37
Table 3.4. Reinvestment in Regulatory Capital (in million rupiahs)	39
Table 3.5. The Present Value of FCFE (in million rupiahs)	39
Table 3.6. The Intrinsic Value per Share – FCFE Model	39
Table 3.7. FCFE Models – Scenario Analysis.....	40
Table 3.8. The Equity Cost (in million rupiahs).....	41
Table 3.9. PV of Excess Equity Return (in million rupiahs).....	42
Table 3.10. The Intrinsic Value per Share – Excess Return Model	42
Table 3.11. Excess Return Models – Scenario Analysis	43
Table 3.12. The Compound Annual Growth Rate of Total Revenue From 2015-2019	44
Table 3.13. The Average of Forward P/E Ratio.....	45
Table 3.14. The Compound Annual Growth Rate of Total Equity From 2015-2019	46
Table 3.15. The Average of Expected PBV Ratio	47
Table 3.16. The Weighted Average Intrinsic Value.....	48

LIST OF APPENDICES

APPENDIX 1. Operational Profit Margin From 2015-2019	60
APPENDIX 2. Net Profit Margin From 2015-2019	61
APPENDIX 3. Debt to Equity Ratio From 2015 – 2019.....	62
APPENDIX 4. Debt Ratio From 2015 – 2019.....	63
APPENDIX 5. Current Ratio From 2015-2019.....	64
APPENDIX 6. ROA, ROE and NPL Ratio From 2015 – 2019.....	65
APPENDIX 7. FREE CASH FLOW TO EQUITY VALUATION MODEL.....	66
APPENDIX 8. EXCESS RETURN VALUATION MODEL.....	67
APPENDIX 9. RELATIVE VALUATION MODEL – PRICE TO EARNINGS RATIO... 	68
APPENDIX 10. RELATIVE VALUATION MODEL – PRICE TO BOOK VALUE RATIO	69

CHAPTER 1

INTRODUCTION

1.1 Background

The technological transformation causes the pawn industry to run into many changes. The presence of private pawn, substitute products from banks, and financial technology companies marked this change. Digital-based product and service innovations were undertaken for facing this transformation. PT Pegadaian's vision is to develop a digital financing business scale and get in access toward capital markets to achieve be Indonesia's most precious financial company and as the public's first preferred financial participation agent. Through the capital market, PT Pegadaian will be able to open the opportunity access to expand into the global market. When PT Pegadaian becomes a public company, PT Pegadaian will be more transparent and professional. Schemes expand into the global market, PT Pegadaian will be marketing products to Indonesian Workers abroad. The potential products to be marketed to migrant workers are gold savings and Arrum hajj. (Walfajri, 2020)

The Increasing of capital facilitates PT Pegadaian to distribute more financing. At present, the potential for credit penetration in Indonesia is still low. With the flow of funds from the capital market, it is expected that the amount of financing can expand to the micro-business and consumer segment. In addition to supporting digital services development in PT Pegadaian, technological developments require PT Pegadaian to renew and construct the infrastructure of information technology. Additional funds can be obtained from within or outside the company. Additional capital from outside the company that can be obtained is through debt and shares. PT Pegadaian has issued bonds and medium-term notes to collect additional funds from outside the company. In addition, PT Pegadaian also has a bank loan and a loan from the government.

PT Pegadaian has a credit rating according to PEFINDO is AAA. This indicates that PT Pegadaian bonds have the highest investment grade rating and safe for investors. The quality of these bonds is determined by PT Pegadaian's ability to pay its bonds at maturity, and the ability of PT Pegadaian to pay interest and coupons during the bond issuance period. The next plan for PT Pegadaian to get additional funds is through the issuance of shares. PT Pegadaian plans to do an Initial Public Offering (IPO), the firm's stock public sale for the first time. PT Pegadaian has planned to do an initial public offering (IPO) for 7 years ago. PT Pegadaian always maintains their financial condition is always good and has a healthy financial ratio to attract many investors. In the pawn industry, PT Pegadaian still domination market share and outstanding loan compared to private pawn and pawning services at Islamic banks.

The IPO process includes pricing the issue. PT Pegadaian must determine a fair price of the stock when offered to an investor. Prior to the IPO PT Pegadaian conducted a valuation to assess the fair price or intrinsic value of PT Pegadaian. It is also necessary for the analyzation the internal and external environment of the company and the analysis swot. This analysis is expected to help gain insight into company performance.

1.2 Company Profile of PT Pegadaian

PT Pegadaian is a state-owned enterprise (SOE) engaged in the non-bank financial sector, which is a pawn industry with three main services, that is financing, gold, and various services. The establishment of PT Pegadaian aimed to prevent loan shark, ijon, and other unfair loans, to increase the prosperity of the minor community, and to assist the program from the government in the economy and development of nations. The history of PT Pegadaian was founded in 1796 by the VOC as Bank Van Leening. In 1811, the British government expropriates then dissolved the Bank Van Leening. The community allowed established the business of pawn freely.

The state pawnshop in Indonesia was founded on 1st April in year 1901 in Sukabumi. In 1905, Pegadaian was in the official form of "Jawatan". The regulation of Government based on Lieu of Law (Perpu) No. 19 of 1960 Jo Government Regulation (PP) No. 178 In 1961, Pegadaian changed its legal form from "Jawatan" to "PN". In 1969, Pegadaian changed its legal form from "PN" to "PERJAN" based on Government Regulation (PP) No. 7 of 1969. In 1990, Pegadaian changed its legal form from "PERJAN" to "PERUM" based on Government Regulation (PP) No. 10 of 1990 updated with Government Regulation (PP) No. 103 of 2000. Furthermore, based on Government Regulation (PP) No. 51 of 2011, Pegadaian on 1st April in year 2012 changed its legal form to "PERSERO" from the previously "PERUM". (Pegadaian, 2020)

1.2.1 Company's Vision

Be Indonesia's most precious financial company and as the public's first preferred financial participation agent.



Figure 1.1. Company's Vision

Source: Pegadaian Annual Report 2018

1.2.2 Company's Mission

- Provides benefits and optimal profits by the core business development toward stakeholders.
- New businesses development with build more diverse business for customers and stakeholders of adding value propositions.
- Doing the customer focus with providing excellent service through digital and easy business processes, up-to-date and reliable information technology, practices of sturdy risk management and human resources with professionalism and culture of good performance.

1.2.3 Company's Roadmap

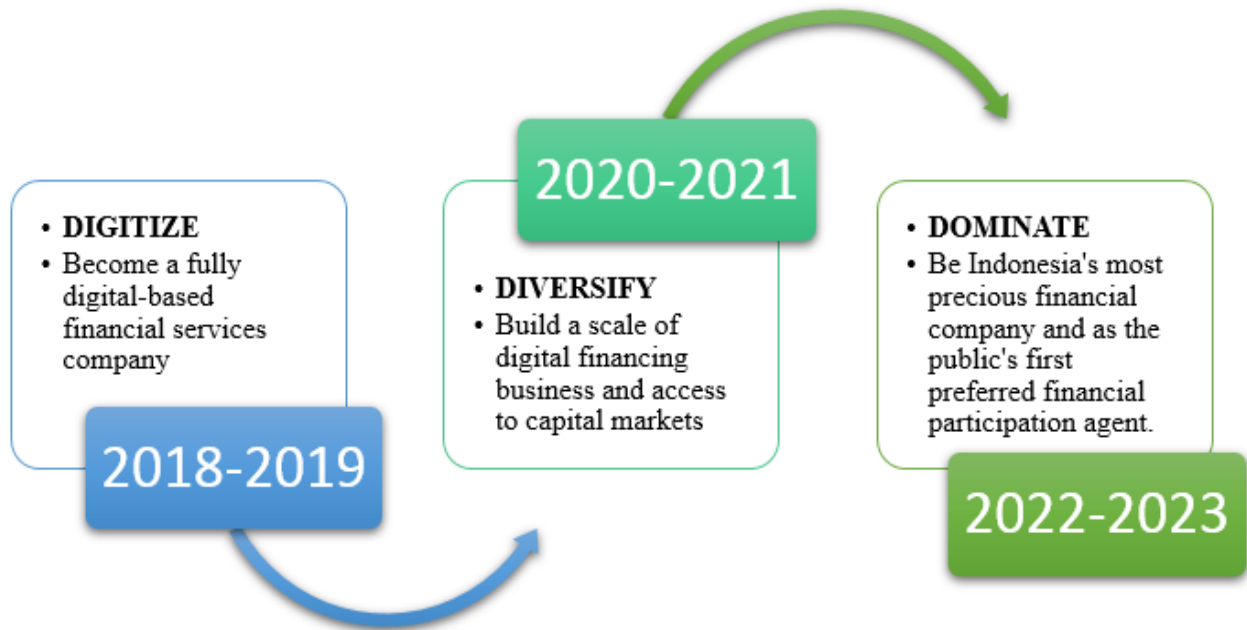


Figure 1.2. Company's Roadmap
Source: Pegadaian Annual Report 2018

1.2.4 Company's Strategy G-Star Generation (5G's)

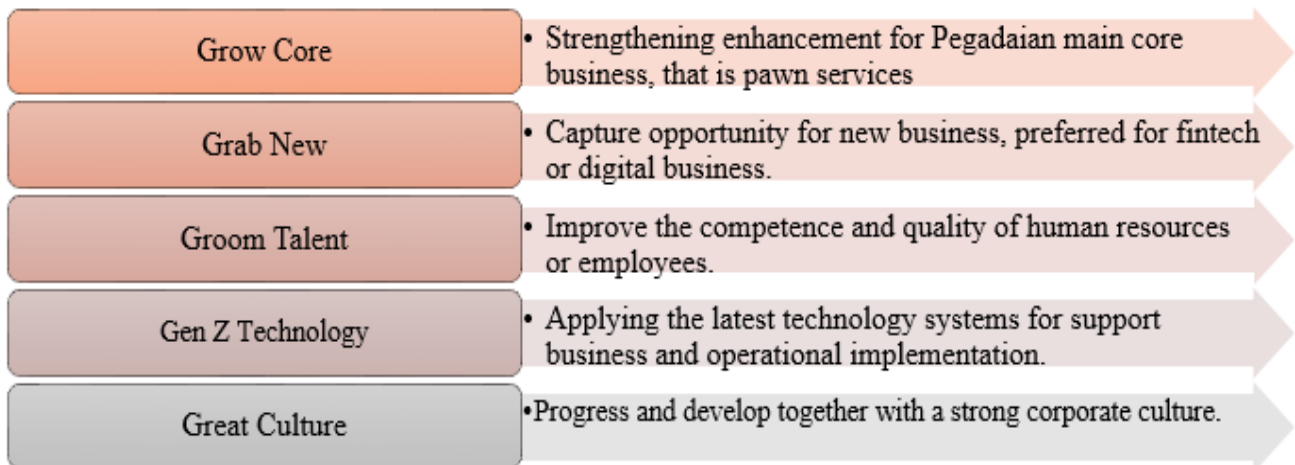


Figure 1.3. G-Star Generation (5G's)
Source: Pegadaian Annual Report 2018

1.2.5 Company's Culture

To support the realization of the Company's vision and mission, corporate culture has been established that must always be studied, understood, internalized, and carried out by all Pegadaian employee that is **G-Values** consisting of **Integrity, Professional, Mutual Trust, Customer Focus, and Social Value.** (Pegadaian, 2020)

1.3 The Structure of the Company's Group



Figure 1.4. The Structure of the Company's Group

Source: Pegadaian Annual Report 2018

1.4 The Structure of Organizational

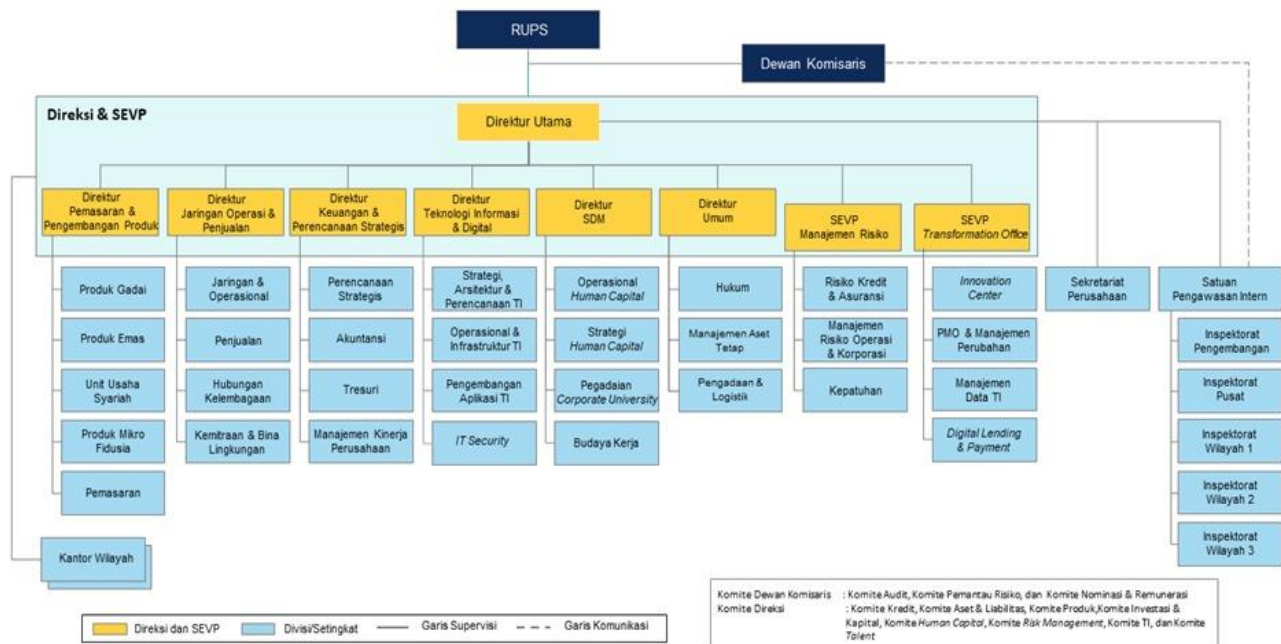


Figure 1.5. The Structure of Organizational

Source: Pegadaian Website (2020)

1.5 Main Services

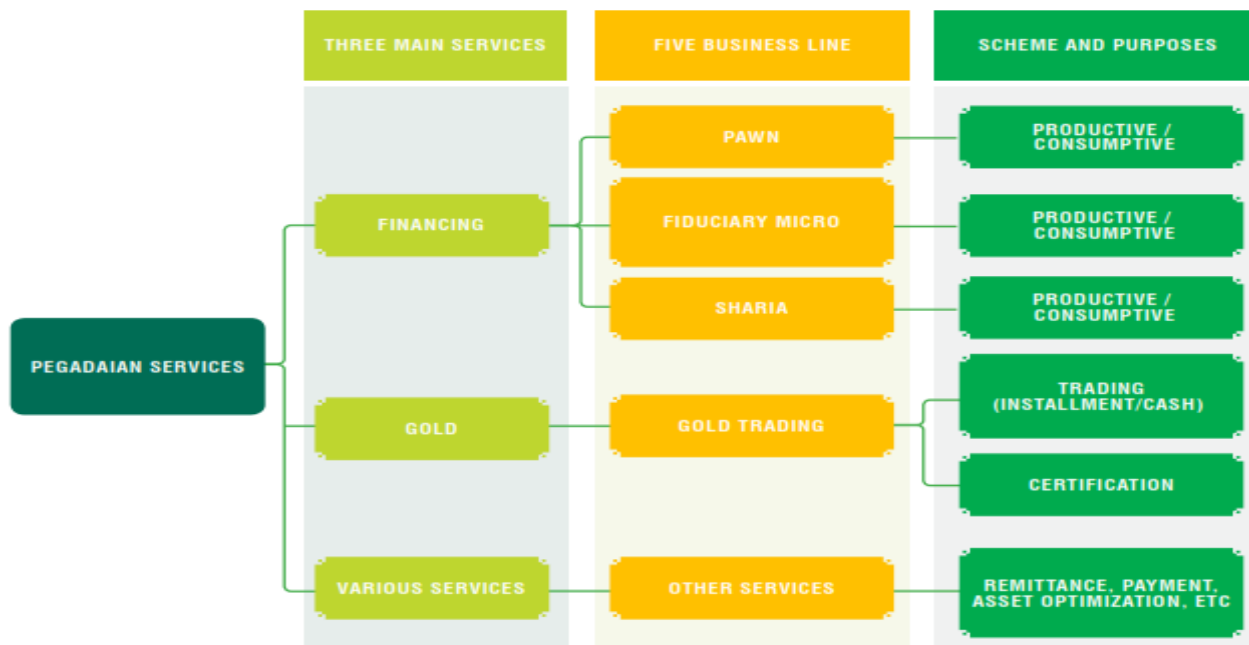


Figure 1.6. Pegadaian’s Main Services

Source: Pegadaian Annual Report 2018

1.5.1 Financing Services

Financing services consist of 3-lines business that are Pawn Business, Fiduciary Micro Business and Sharia Business.

Pawn Business Line

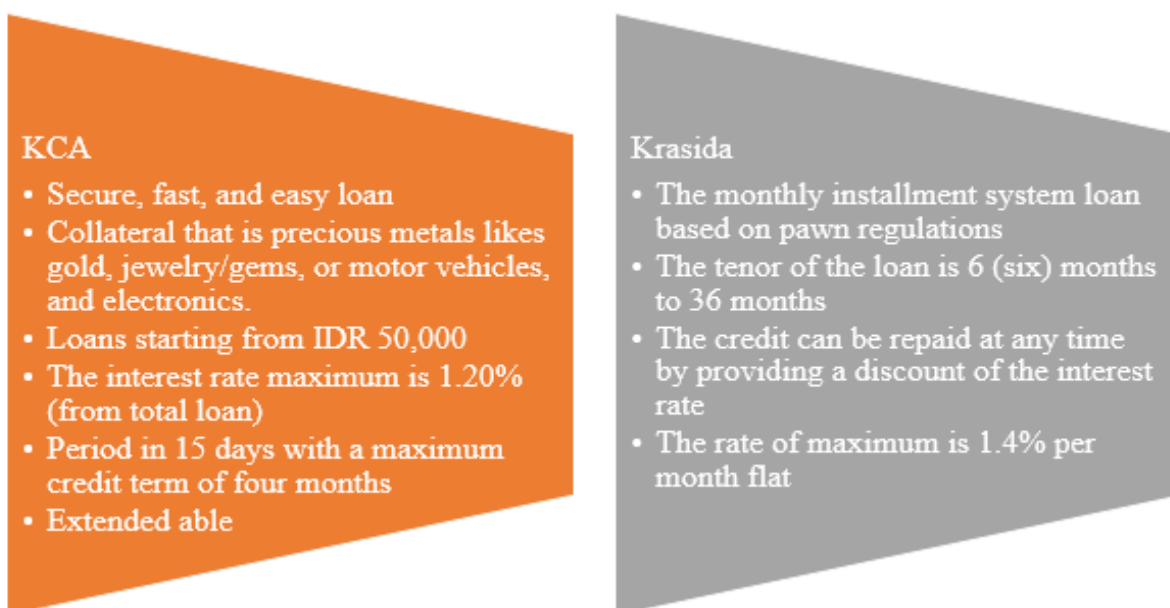


Figure 1.7. Pawn Business Line

Source: Pegadaian Annual Report 2018

Fiduciary Micro Credit Business Line

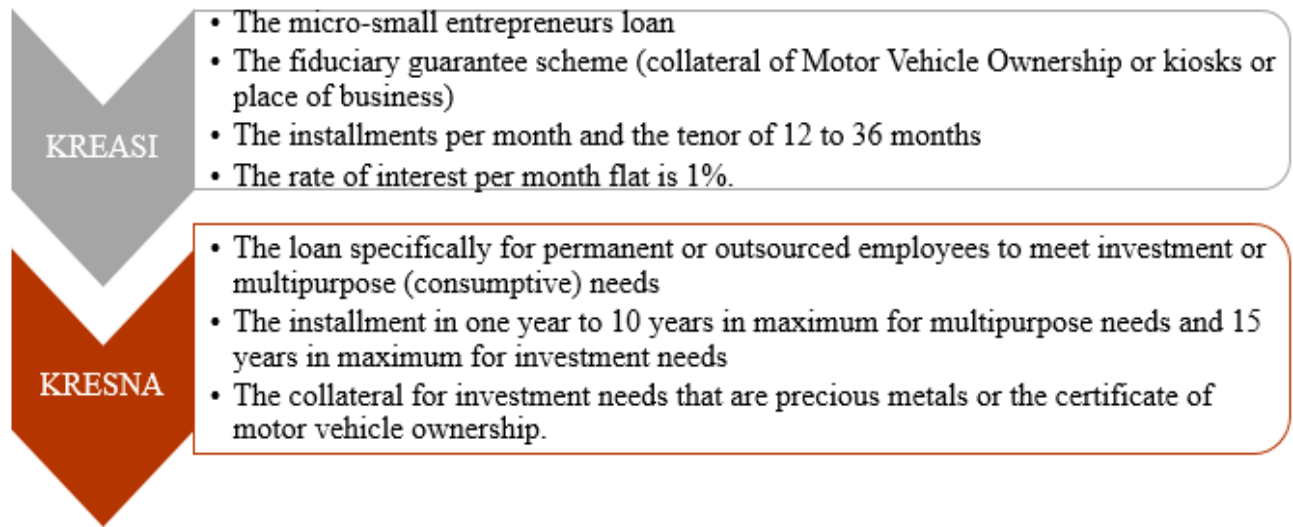


Figure 1.8. Fiduciary Micro Credit Business Line

Source: Pegadaian Annual Report 2018

Sharia Business Line

Rahn	Arrum	Amanah
<ul style="list-style-type: none"> • The syar'i, easy, fast, and secure loan • The collateral is bars of gold, jewelry of gold, diamond bound jewelry, cars, laptops, motorcycles, cellphones, and other electronic goods • Loans start from Rp.50,000, and the fee of maintenance or mu'nah starting at 0.45% (estimated) • The period in 10 days until 120 days for maximum credit period • Extended able 	<ul style="list-style-type: none"> ○The Arrum Mikro, the collateral can used for business, the maintenance rate per month flat is 0.7% from the price of the vehicle with a period of 12, 18, 24, 36 to 48 months. ○The Arrum Emas, gold collateral is deposited at the Pegadaian with Mu'nah Maintenance rate of 0.95% per month flat from the appraisal of collateral (Gold) with a term financing 12, 18, 24, 36 months. ○The Arrum Haji, the gold collateral and hajj registration files are kept at Pegadaian. The Mu'nah Maintenance Rate is 0.95% per month flat from the appraisal of collateral (Gold, and Hajj registration file) with a financing period of 12, 18, 24, 36, 48, and 60 months. 	<ul style="list-style-type: none"> • Financing for the purchasing/owning of new or used motor vehicles in Sharia principles • The installment period is 12, 18, 24, 36 months for motorbikes and 12, 18, 24, 36, 48, and 60 months for cars • The mu'nah rate of 0.9% per month flat from the price of the vehicle.

Figure 1.9. Sharia Business Line

Source: Pegadaian Annual Report 2018

1.5.2 Gold Services

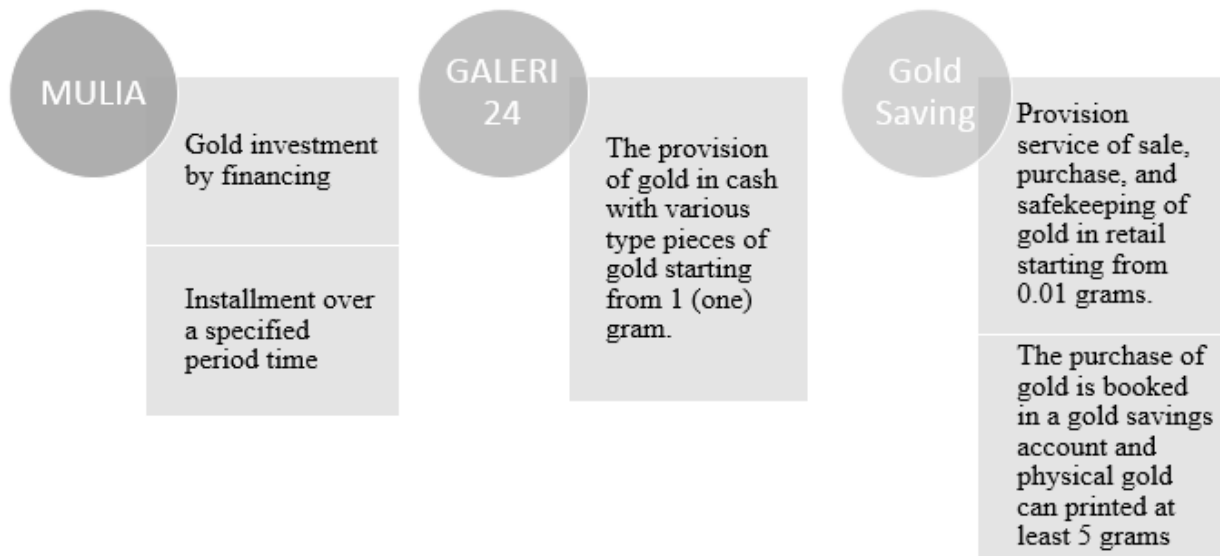


Figure 1.10. Gold Services
Source: Pegadaian Annual Report 2018

1.5.3 Various Services

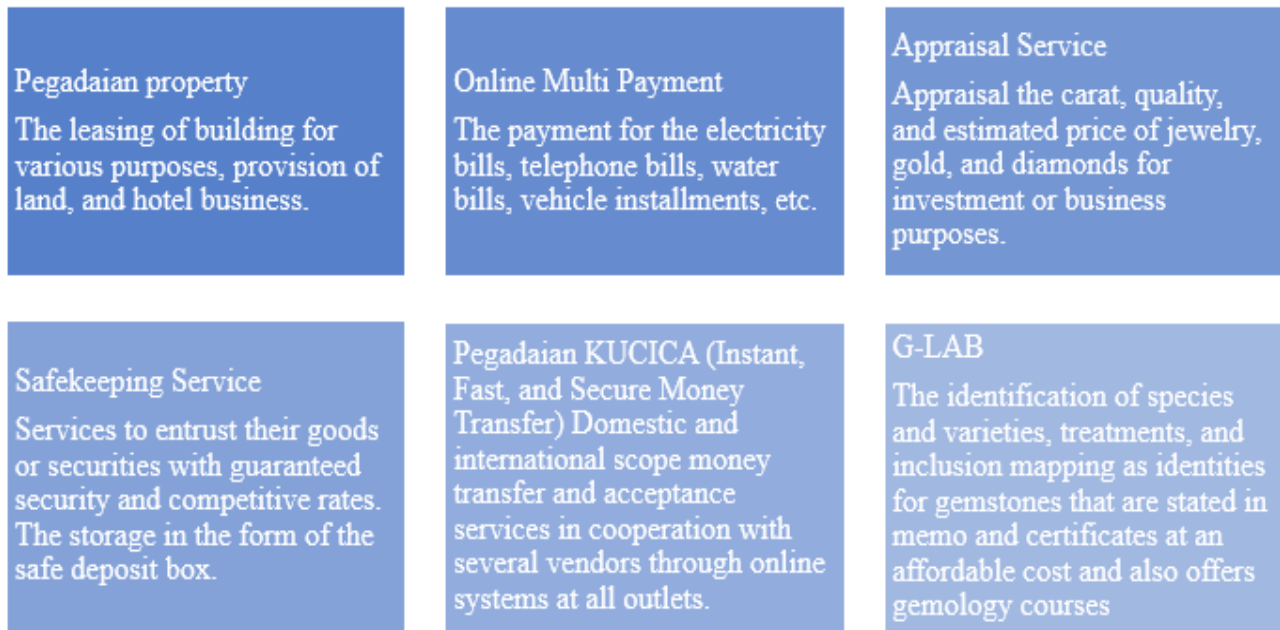


Figure 1.11. Various Services

Source: Pegadaian Annual Report 2018

1.6 Composition of Shareholders

In accordance with the legal status of Pegadaian, Pegadaian's capital is in the form of shares from the capital participation of the Republic of Indonesia. Therefore, Pegadaian's shares are

100% fully owned by the Republic of Indonesia, represented by the Ministry of State-Owned Enterprises, of which the Republic of Indonesia is the holding entity.

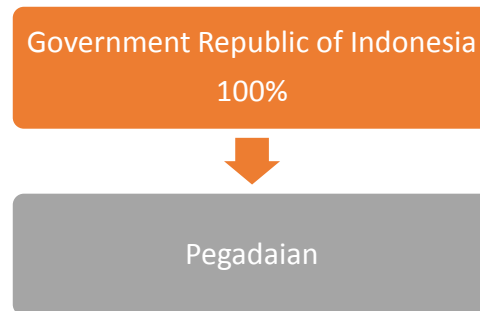


Figure 1.12. Composition of Shareholders

Source: Pegadaian Annual Report 2018

1.7 Business Issue

The technological development more sophistication motivates Pegadaian in response to this transformation with developing its services to be more efficient and better. Pegadaian has 14.57 million customers, but that number is still not a guarantee in the future. Competition in the financial industry is increasingly tight. The presence of financial technology companies and rival substitute products from banks makes Pegadaian must improve itself. It's to keep customer loyalty and new customer acquisition to maintain the existence of Pegadaian in the financial services industry.

Pegadaian continues to improve itself to increase the quality and comply with international standards. Pegadaian expects through the capital market, Pegadaian afford to attract global market investors. From the management side, by entering the capital market company management will be more transparent and open about the performance of the company. Pegadaian being a publicly listed company is not just a matter of seeking new funding but can also apply more professional and transparent company management. This is implemented by using the audit services from public accountants to audit Pegadaian's financial statements. Pegadaian has prepared strategy is known as G5star, consisting of Grow Core, Grab New, Groom Talent, Gen Z technology, and Great Culture to support this transformation.

In order to achieve its vision in 2019-2023, which is to be Indonesia's most precious financial company and as the public's first preferred financial participation agent, Pegadaian plans to become a public company and doing an IPO. The IPO plan has been prepared by Pegadaian from 7 years ago. Additional capital from the IPO use to funding business development and create innovative products to boost revenue. Pegadaian always maintains a stable financial condition, as seen from a healthy financial ratio and a low NPL ratio compared to other financial industry averages. This is expected to be an added value to attract potential investors. The initial price of shares when the IPO is expected to attract investors to buy Pegadaian shares.

1.8 Research Objectives

- To analyze and estimate the intrinsic value of Pegadaian.
- To provide recommendations for investors.

1.9 Limitation of the Study

- This research uses secondary data from Pegadaian's website such as financial reports, annual reports, and company profiles.
- The data used historical data from 2015 to 2019 and the calculation of researcher in primary data.
- The forecasting period in valuation method is from 2020 to 2029.

CHAPTER II

BUSINESS ISSUE EXPLORATION

2.1 Research Framework

The research framework for assessing the intrinsic value of PT Pegadaian's stocks will be used fundamental analysis. The fundamental analyses are consisting of external analysis, internal analysis, and SWOT analysis. Then continued step is company valuation using two approaches that is absolute valuation and relative valuation. The result of external analysis, internal analysis, SWOT analysis, and company valuation will be to provide recommendations for the investor to buy or not PT Pegadaian's stocks.

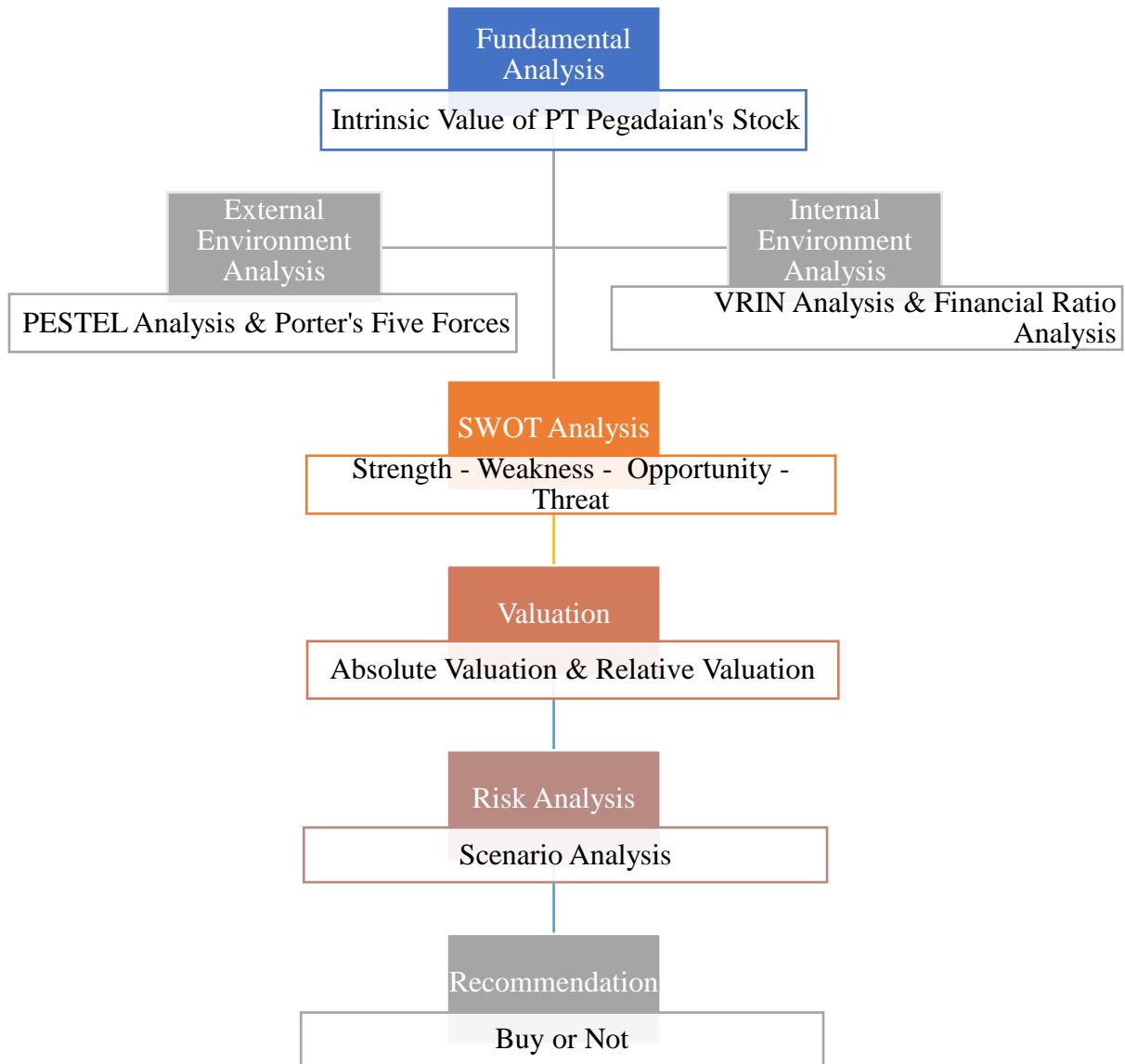


Figure 2.1. Research Framework

Source: Analysis (2020)

2.2 Methods of Data Collection

Methods of data collection in this research will be used as secondary data. Sources of secondary data that are company profile and annual report from the Pegadaian website. Other sources of secondary data that is the Bank of Indonesia website, the central bureau of statistics, and online news media. This research will be used data period from 2015 to 2019.

2.3 Literature Review

According to Damodaran (2006), fundamental analysis means the true value analysis of the firm based on related to its characteristics of financial i.e. the cash flow, the prospects of growth, and the profile of risk. According to Bodie and Kane (2013), Generally, fundamental analysts commenced with an examination of company financial statements and a learn of past earnings. This analysis consists of an evaluation of the quality of management, the position of the firm in its industry, economic analysis, and a whole of industries prospect. Obtain insight towards the performance in the future of the firm where the rest of the market is not recognized yet is its expectation.

2.3.1 Initial Public Offering

The initial public offering (IPO) means the public sale of a firm's stock for the first time. These have three alternatives to a firm sell its stock in the primary market that is first, the public offering means selling of share through the firm offers to the general public; next, the rights offering means the new shares of the firms sold to existing stockholders, or then the placement privately means directly sold the new securities to an investor or group of investors. The investment banker chosen gives to advise the company and selling the securities. The forming a selling syndicate with other investment bankers by the lead investment banker. The steps of the IPO process get the approval from SEC, then the promotion of offering to investors, and the pricing of issue stock. (Gitman & Zutter, 2015)

2.3.2 External Environment Analysis

The company's situation especially consists of two situations: 1. The external environment is the situation where the company operates associated with the competition of the industry, and 2.the internal environment is the company of resources and organizational capabilities. The company's external environment provides concepts and the tools of analytic for emphasis in on those attention centers aspects on the context of the broad environmental specifically market arena around operate of the company, the change drivers, the rival company positions and actions, and determine the factors of success from competitive. (Thompson, 2016)

2.3.2.1 PESTEL Analysis

According to Thompson (2016), a macro environment that every company operates comprises six factors i.e. the factors political, conditions of economic in the general environment of the firm, the factors sociocultural, the factors technological, the factors environmental (concerning the natural environment), and the factor conditions of legal or regulatory. The likelihood affection the firm's competitive environment by each of these components, even though several tend have a more influence than others. PESTEL analysis means the impact analysis of factors which is consists of an acronym of six components.

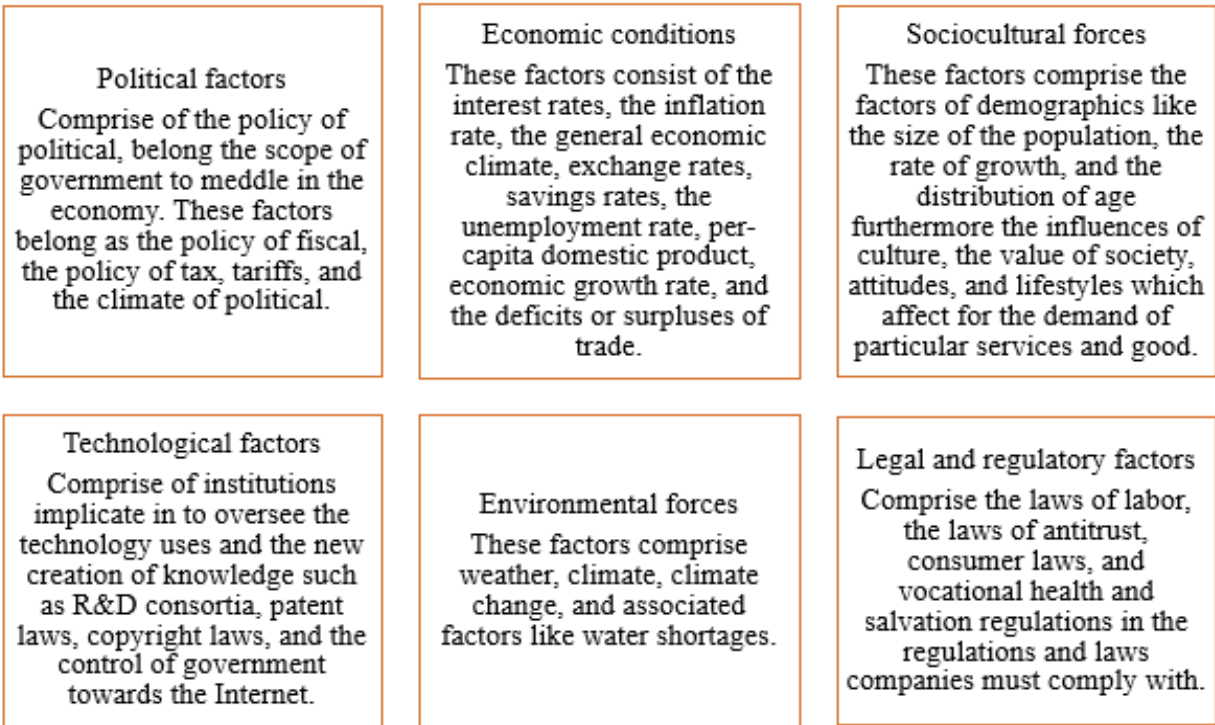
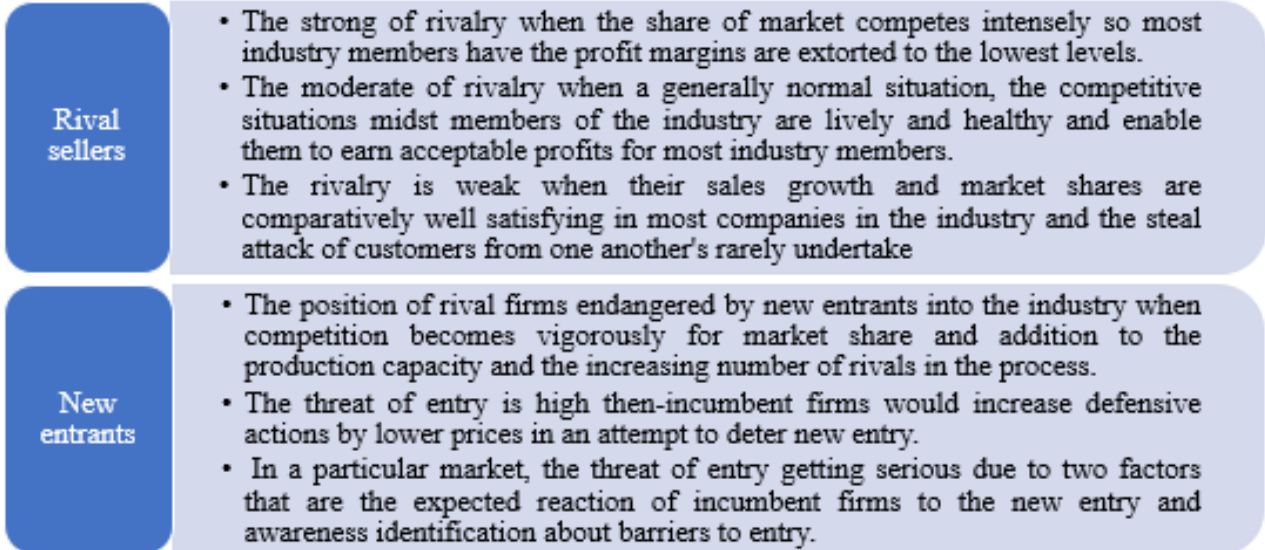


Figure 2.2. PESTEL Analysis
Source: Thompson (2016)

2.3.2.2 The Porter’s Five Forces Model

The framework of five forces means the tool for analyzing pressures of principal competition in the market and already used most widely. This framework consists of five sources that come from competitive pressures on companies within an industry. The used of the five forces model to prescribe the eminence and character of competitive pressures in a certain industry. (Thompson, 2016). Including (1) the competitive pressure by rival sellers, (2) the competitive pressure by the industry new entrants potency, (3) the competitive pressure by substitute products, (4) the bargaining power of supplier, and (5) the bargaining power of the customer.



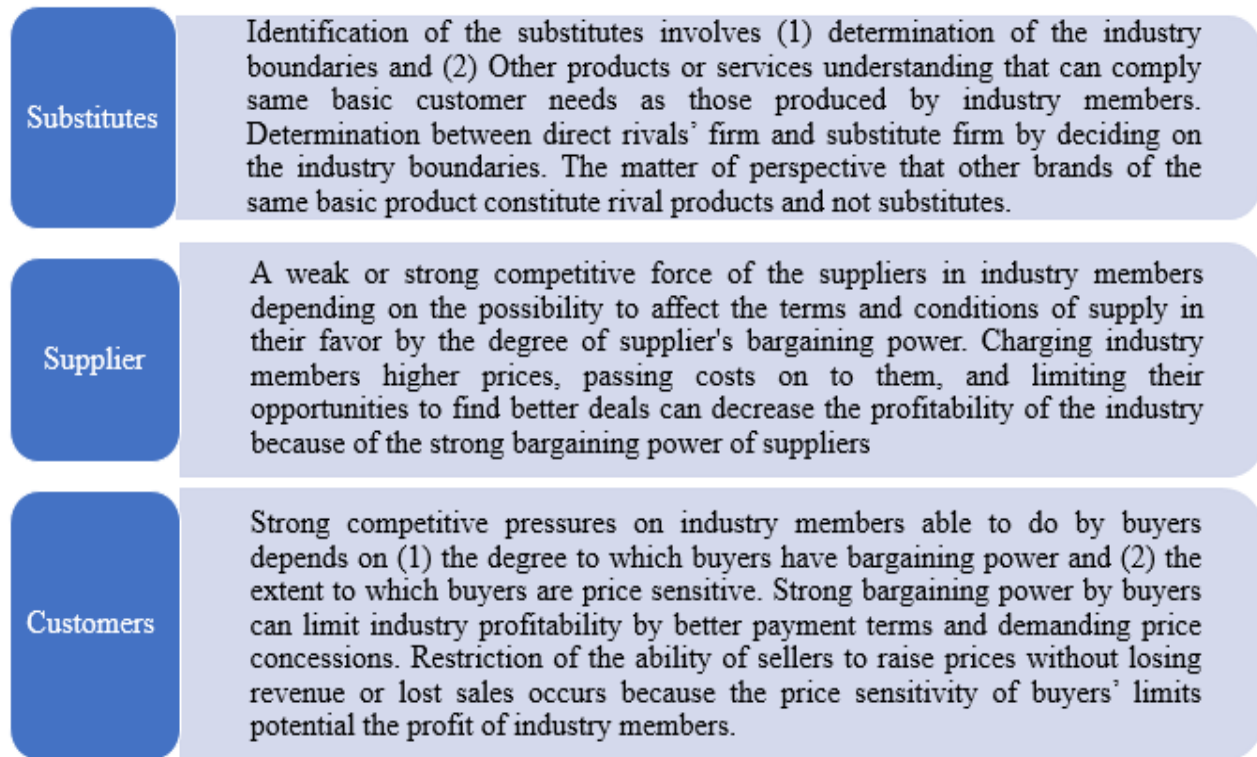


Figure 2.3. The Porter's Five Forces Model

Source: Thompson (2016)

2.3.3 Internal Environment Analysis

Recognize notably the company's resources and organizational capabilities is the purpose of the internal environment analysis. The evaluate technique for the company's internal situation belong to the internal environment analysis contain set of resource and capability and the activity along its value chain. Determined the strategy that the possibility to obtain the company with a valuable competitive edge over rival firms bring through by the internal analysis. (Thompson, 2016)

2.3.3.1 Resource Based Analysis

The resource-based analysis purpose is the assess tool for competing assets of the company and determines its potential ability to present the basic requirement to success in compete at the marketplace. Identify the main resource of company and classify become two categories: resource of tangible and resource of intangible. The resources of physical sundry category that many classified as tangible resources like the facility of manufacturing and the resource of mineral. Furthermore, a company's technological resources, financial resources, and the resources of organizational like the system for communication and control of company.

The sundry assets of human and the capital of intellectual classified as intangible resources like brand of company, image of company, and asset of reputational. Furthermore, such as the company's culture, communication of company with buyers, suppliers, or partners, and the incentive system of company. (Thompson, 2016)

2.3.3.2 Financial Ratio Analysis

The purpose of financial ratios is to examine the company's financial condition and recent performance, examine profit margins, compute growth rates of sales, profits or unit volume, the composition of the cost structure, and conceive revenue-cost-profit relationships currently. (Thompson, 2016)

Ratio	Formula
Operating Profit Margin The operating profit margin aim to gauge the percentage of each sales dollar over after all expenses and costs except taxes, interest, and preferred stock dividends are subtracted.	Operating Profit Margin = $\frac{\text{Operating Profits}}{\text{Sales}}$
Net Profit Margin The net profit margin aims to gauge the percentage of each sales dollar over after all expenses and costs belong to taxes, interest, and preferred stock dividends have been subtracted.	Net Profit Margin = $\frac{\text{Earnings Available For Common Stockholders}}{\text{Sales}}$
Return on Total Asset (ROA) The return on total asset (ROA) aims to gauge the effectiveness of management in resulting profits with its existing assets overall.	Return on Total Asset (ROA) = $\frac{\text{Earnings Available For Common Stockholders}}{\text{Total assets}}$
Return on Equity (ROE) The return on equity (ROE) aims to gauge the return obtain on the common stockholders' investment in the firm.	Return on Stockholder's Equity = $\frac{\text{Earnings Available For Common Stockholders}}{\text{Common Stock Equity}}$
Current Ratio The current ratio aims to gauge the firm's capability to fulfill short-term obligations.	Current Ratio = $\frac{\text{Current assets}}{\text{Current liabilities}}$
Debt to Equity Ratio The debt-to-equity ratio aims to gauge the relative comparison of total liabilities to common stock equity purposed to finance the firm's assets.	Debt to Equity Ratio = $\frac{\text{Total Liabilities}}{\text{Common Stock Equity}}$
Debt Ratio The debt ratio aims to gauge the comparison of total assets financed by the firm's creditors.	Debt Ratio = $\frac{\text{Total Liabilities}}{\text{Total assets}}$
The Non-Performing Loan Ratio The NPL ratio represents nonperforming loans that are a part of the bank's loan book and hence describe the degree on a percentage basis, extent a bank has lent money to borrowers who are not paying it back	NPL Ratio (%) = $\frac{\text{Total Nonperforming Loans}}{\text{Total Loans}} \times 100$

Figure 2.4. Financial Ratio Analysis

Source: Gitman & Zutter (2015) and Golin & Delhaise (2013)

Profitability ratio

The purpose of profitability ratio to assess the firm's profits regarding a given level of sales, the owners' investment, or a certain level of assets. (Gitman & Zutter, 2015)

Liquidity Ratio

The liquidity ratio of a firm aims to gauge the capability to fulfill its short-term obligations when coming due. (Gitman & Zutter, 2015)

Financial Leverage Ratio

Financial leverage ratio aims to enlargement of risk and returns by the use of fixed-cost financing, instance debt, and preferred stock. (Gitman & Zutter, 2015)

Assets Quality Ratio

The credit quality of a bank's interest-earning portfolio related to the asset quality ratio. The purpose is the level of a bank's earning asset specifically its financial assets instance loans and bond holdings that are generating and are probability to proceed to achieve appropriate with their regulation. Thus, the asset quality ratio indicates the level of credit risk related to a bank's financial assets. (Golin & Delhaise, 2013)

2.3.3.3 VRIN Analysis

VRIN is an acronym of four components for Valuable, Rare, Inimitable, and Non-substitutable. The first two tests specify if a resource or capability can espouse a competitive advantage. The last two specify if the competitive advantage can be sustained. This measures the competitive power of a resource or capability by the extent to which of four specific tests it can exceed. These tests aim to specify a sustainable competitive advantage. (Thompson, 2015)

Valuable	Rare	Inimitable	Non-substitutable
<ul style="list-style-type: none"> • Is the resource or capability competitively Valuable? • A resource or capability must be properly appropriate to the company's strategy to be competitively valuable and making the company a more effective competitor. 	<ul style="list-style-type: none"> • Is the capability or resource Rare — is it something lack of rival? • When the resource and capabilities general in the midst of firms and amply available. Its cannot be a source of competitive advantage. 	<ul style="list-style-type: none"> • Is the resource or capability Inimitable — is it hard to copy? • The company's resources or capability must difficult and costly for competitors to imitate. So, the more possibility that resources or capability can also to be a sustainable competitive advantage. 	<ul style="list-style-type: none"> • Is the resource or capability Non-substitutable? • If rivals possess equivalent substitute resources, the possibility to the company's resource and capability declined competence to offer competitive advantage although resources that are competitively valuable, rare, and costly to imitate

Figure 2.5. The Four Component of VRIN Analysis

Source: Thompson (2015)

The combination of four criteria of sustainable competitive advantage results in the competitive consequences and performance implications. This analysis helps to determine the strategic value of a firm's capabilities. (Hitt, Ireland, and Hoskisson, 2011)

Is the Resource or Capability Valuable?	Is the Resource or Capability Rare?	Is the Resource or Capability Costly to Imitate?	Is the Resource or Capability Non-substitutable?	Competitive Consequences	Performance Implications
No	No	No	No	Competitive disadvantage	Below-average returns
Yes	No	No	Yes/No	Competitive parity	Average returns
Yes	Yes	No	Yes/No	Temporary competitive advantage	Average returns to above-average returns
Yes	Yes	Yes	Yes/No	Sustainable competitive advantage	Above average returns

Figure 2.6. The Combination of Four Criteria of Sustainable Competitive Advantage

Source: Hitt, Ireland, and Hoskisson (2011)

2.3.4 SWOT Analysis

SWOT analysis aims to gauge a company's strengths and weaknesses, the company's market opportunities, and the external threats to its sustainability. The SWOT analysis presents the guidelines to compile a strategy that utilizes the company's strengths, resolves its weaknesses, intends to capture the company's best opportunities, and stands to confront competitive and macro-environmental threats. (Thompson, 2016)

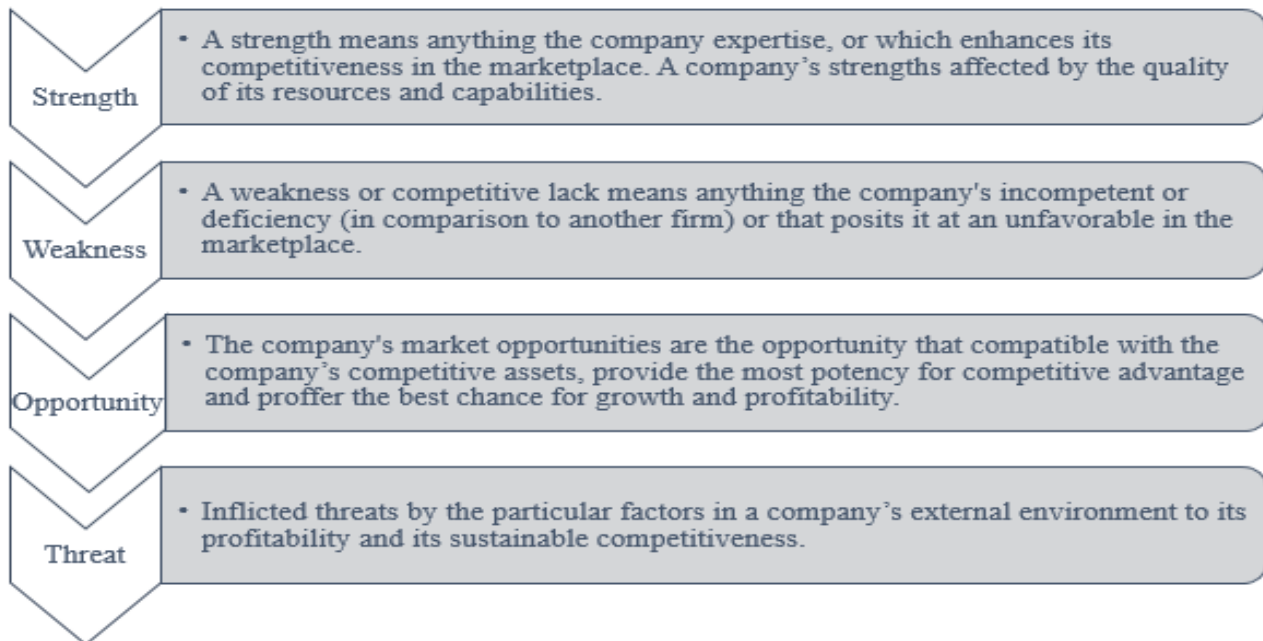


Figure 2.7. SWOT Analysis

Source: Thompson (2016)

2.3.5 Intrinsic Value

The future net cash flows expected in the present value of a firm's discounted by the required rate of return is the intrinsic value. (Bodie & Kane, 2013). In discounted cash flow valuation, the intrinsic value of an asset estimated based on its fundamentals. The inherent value to the firm is the intrinsic value, the cash flows expected estimating correctly for the firm, and to value the cash flows also attaches the exact discount rate. (Damodaran, 2012). Measuring the intrinsic value of an asset means the cash flows generated by that asset, the cash flows growth expected, the life of the asset, and the cash flows risk associated. (Damodaran, 2015).

2.3.6 Valuing Financial Service Firms

The financial service firm means the firm which provides for individuals or other firms financial products and services. For valuing financial service firms, we must value equity rather than the entire firm. Valuing equity for financial service firms with discounting cash flows to equity investors at the cost of equity. Discounted cash flow models to value financial service firms, the researcher used two alternatives that are the free cash flow to equity model, and the excess return model. For knowing the types of reinvestment in financial service firms through the free cash flow to equity measure. (Damodaran, 2012)

2.3.7 Discounted Cash Flow Valuation

Valuing asset for discounted cash flow model that is the expected of the present value cash flows generated by that asset. Firstly, is the cost of equity estimate, next is the cashflow to equity model analyzation and the last is the excess return models examination. (Damodaran, 2012)

2.3.7.1 Inputs to model

Valuing the company using the cash flow to equity discount model, firstly the cost of equity estimate, the payout ratio expectation, and the growth rate expectation in overtime the earnings per share.

- Cost of equity

The cost of equity of the financial service firm for the marginal investor of stock can describe as represented the portion of the risk in the equity which cannot be diversified away. To estimate the risk using a beta in a multifactor or arbitrage pricing model or using a beta in the capital asset pricing model. When has remained unchanged over the period is regulatory restrictions and is not expected to change in the future, the beta of regression can be used continued with some confidence. The caution about not using regression betas is continued to hold in periods when the rules are changing, and regulatory environments are shifting. The non-financial service firms estimating betas emphasized the importance of unlevering betas historical or sector averages and then relevering them, using a firm's current debt to equity ratio. The financial service firms for the bottom-up beta for the firm being analyzed will use the average levered beta for comparable firms.
- Payout ratios

The payout ratio means the dividend divided by the earnings. For banks, investment banks, insurance companies, and investment firms are much higher than similar statistics for the rest of the market in the dividend payout ratios and dividend yield. Rather than the other firms, the financial service firms in dividends payout more than firms in sectors such as technology because they operate in mature businesses. In the net capital expenditures for

financial service firms invest less than other firms. So, the net income of the financial service firms can be paid out as dividends more than for a manufacturing firm. The reputation as a reliable payer of high dividends by financial service firms causing difficulty to change dividend policy. In way to returning cash to stockholders with increasing stock buybacks. The stock buybacks increase each year to the dividends paid and to the composite payout ratio computation and since stock buybacks vary widely across time should look at the number over several years.

- Expected growth

When dividends are based on earnings, the expected growth rate is the value of the expected growth rate in earnings. The estimate of earnings growth in one of three ways:

No.	The Three Ways to Estimate of Earnings Growth
1.	<p>Historical growth in earnings. The banks and insurance companies have histories in a long period and usually possible to estimated historical growth. For financial service firms, the correlation between past earnings growth and expected future growth used to be much higher than for other firms. If the regulatory environment is changing, however, you have to be cautious about projecting past growth into the future.</p>
2.	<p>Analyst estimates in growth in earnings. The expected growth rates in earnings estimated by analysts for many publicly traded firms, though the extent of coverage varies widely. Many large banks and insurance companies are widely followed, allowing you to get these estimates of future growth.</p>
3.	<p>Fundamental growth. The expected growth in earnings per share means the function of the retention ratio and the return on equity is stable.</p>

Figure 2.8. The Three Ways to Estimate of Earnings Growth

Source: Damodaran (2012)

$$\text{Expected growth}_{\text{EPS}} = \text{Retention ratio} \times \text{ROE}$$

The earnings per share expected growth rate mean the return on equity is expected to change over time:

$$\text{Expected growth}_{\text{EPS}} = \text{Retention ratio} \times \text{ROE}_{t+1} + (\text{ROE}_{t+1} - \text{ROE}_t) / \text{ROE}_t$$

The expected growth rate is the retention ratio measures the quantity of reinvestment, and the return on equity measures their quality. The retention ratio in a bank measures the equity reinvested back into the firms. Furthermore, the regulatory focus on capital ratios and expansion in the future.

- Stable growth

Stable growth is growth that is less than or equal to the growth rate of the economy (or the risk-free rate). For a financial service firm will become a stable growth firm, you have to consider three factors.

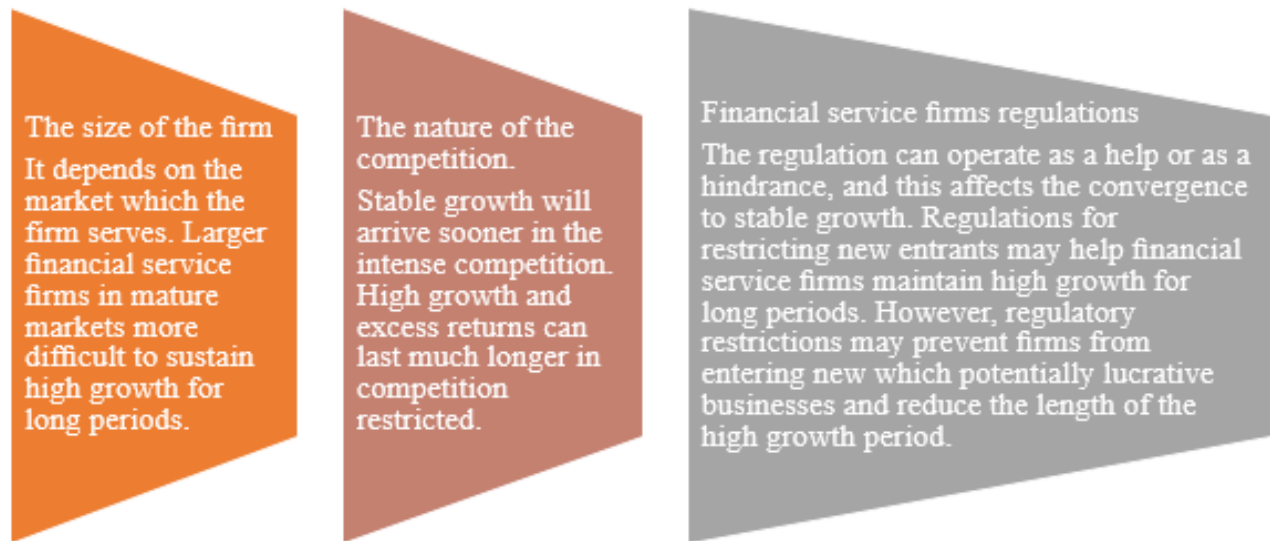


Figure 2.9. Stable Growth

Source: Damodaran (2012)

To estimate the cost of equity, betas are used in stable growth. The payout ratio with stable growth rate that is:

$$\text{Payout ratio in stable growth} = 1 - g/\text{ROE}_{\text{stable growth}}$$

- **Risk Premium**

The investment that has more risk must have a higher expected return than investments which more safe to be regarded as good investments. The risk premium estimate using the historical premium generated by stocks in long time periods. For estimates historical premiums necessary to compute average return on the stock. There two method to compute the average return that are arithmetic average and geometric average. Based on empirical studies, the arithmetic average return will overstate the premium, so make the argument for geometric average return becomes even stronger. (Damodaran, 2012).

In this study, we will use the geometric average return, or we know too as the geometric mean return to calculated risk premium. The calculation uses of geometric mean usually to investment returns over multiple periods and measuring compound growth rates. The geometric mean for calculating a returns data set needs to add 1 to each value under the radical and then subtract 1 from the result. (CFA Level 1 Book 1, 2019). The formula of geometric mean return is as follow:

$$R_G = \sqrt[n]{(1 + R_1) \times (1 + R_2) \times \dots \times (1 + R_n)} - 1$$

Where:

R_t = the return for period t

2.3.7.2 Cash Flow to Equity Models

According to Damodaran (2009), The cash flow to equity is defined as the cash flow left over for equity investors after debt payments have been made and reinvestment needs met. For financial

service firms, the reinvestment generally the investment is in human capital and regulatory capital and the capital as defined by the regulatory authorities that determine the limits on future growth and neither take the form of a plant, equipment, or other fixed assets.

$$FCFE_{\text{Financial Service Firm}} = \text{Net Income} - \text{Reinvestment in Regulatory Capital}$$

Define two parameters for estimating the reinvestment in regulatory capital

No.	Two Parameters for Estimating the Reinvestment in Regulatory Capital
1.	The book equity capital ratio will determine the investment. The choices made by a bank will be heavily influenced by regulatory requirements. The conservative banks might choose to maintain a higher capital ratio than required by regulatory authorities. When aggressive banks may push towards the regulatory constraints.
2.	The profitability of the activity interprets net income. Specify how much net income the bank will generate with the additional loans

Figure 2.10. Parameters for Estimating the Reinvestment in Regulatory Capital

Source: Damodaran (2009)

2.3.7.3 Excess Return Models

According to Damodaran (2009), the equity value in the firm means the total of current investment capital in the firm and the expected excess returns to equity investor in the future at present value.

Value of Equity = Equity Capital invested currently + Present Value of Expected Excess Returns to Equity investors

The fair return rate on investment in market earn through invest its equity by the firm. Information about its equity market value on the invested equity capital currently need to knowed by the firm. The equity market value down below the equity capital currently invested, when the equity investments earns a below-market return.

In the excess return model need two inputs to value equity: 1. The size of equity capital currently invested in the firm 2. The expected excess returns to equity investors in future periods. In general, the equity capital invested currently in a firm is measured as the book value of equity in the firm.

Stock buybacks and extraordinary or one-time charges can affect the book value of equity. The equity capital invested in the firm may understate by the book value of equity for financial service firms. The excess returns are defined in terms of the return on equity and the cost of equity.

$$\text{Excess Equity return} = (\text{Return on equity} - \text{Cost of equity}) (\text{Equity capital invested})$$

The return on equity from the current and past periods can obtain when analyzing a financial service firm and the expected future return is the return on equity which required.

2.3.8 Relative Valuation

The multiples will be used to examine financial service firms is equity multiples. Generally, the most known equity multiples are price-to-sales ratios, price-earnings ratios, and price-to-book value ratios. The sales or revenues are cannot really estimate for financial service firms is an excuse

why price-to-sales ratios cannot be used in financial service firms. The relative valuation will use to analyzing Pegadaian are price-earnings and price-to-book value ratios. (Damodaran, 2012).

2.3.8.1 Price-Earnings Ratio

PE Ratio = Price per share / Earnings per share

The function of three variables that are the expected growth rate in earnings, the payout ratio, and the cost of equity is the price-earnings ratio. For financial service firms, the price-earnings ratio should be higher with higher expected growth rates in earnings, higher payout ratios, and lower costs of equity as with other firms. The use of provisions for expected expenses is an issue that is specific to financial service firms is. Supposing, provisions for bad loans routinely set aside by banks. These provisions reduce the reported income and affect the reported price-earnings ratio. (Damodaran, 2012).

2.3.8.2 Price to Book Value Ratio

Price-to-book ratio = Price per share/Book value of equity per share

Price-to-book ratios consist of the variables i.e. the expected growth rate in earnings per share, the dividend payout ratio, the cost of equity, and the return on equity. Higher price-to-book ratios result from higher growth rates in earnings, higher payout ratios, lower costs of equity, and higher returns on equity. The return on equity of these four variables has the biggest impact on the price-to-book ratio. On the basis of that, the return on equity identified as the companion variable for the ratio. For financial service firms should be stronger than other firms in terms of the strength of the relationship between price-to-book ratios and returns on equity because the book value of equity is much more likely to track the market value of equity invested in existing assets. (Damodaran, 2012)

2.3.9 Risk Analysis

2.3.9.1 Scenario Analysis

Scenario analysis can describe as appraising of risk through behavior analysis by uses few alternative potential situations to get an overview from the variation of intrinsic value. Scenario analysis used to capture the variability of intrinsic value in a deal with risk. Generally, kind of approaches scenario to gauge the intrinsic value i.e. pessimistic, most likely, and an optimistic measuring of the value of equity. Subtracting the result of intrinsic value between the pessimistic situation and the optimistic situation to determine the range. The asset is said to have more variability or risk when the greater the range. (Gitman & Zutter, 2015)

2.4 Business Analysis

The analysis of Pegadaian will be explained in this section which consists of external analysis, internal analysis, and SWOT analysis which will facilitate reflecting the company's condition.

2.4.1 External Analysis

2.4.1.1 PESTEL Analysis

a. Political factors

Perppu No. 1 of 2020 about State Financial Policies and Financial System Stability for the deal with of the coronavirus pandemic (COVID-19) issued by the Government of Indonesia. The

budgeting and deficit financing could exceed 3% (three percent) of Gross Domestic Product (GDP) with an additional budget of Rp405.1 trillion that did not yet exist in the 2020 State Budget for the handling of the COVID-19 situation. In Perppu No. 1 of 2020, the government provided tax relaxation with adjustments to the rate of Income Tax for domestic corporate taxpayers, and the permanent establishment is 22% for 2020-2021 and 20% starting in 2022. (Kemenkeu, 2020)

To follow up on Perppu No.1 Year 2020 concerning State Financial Policy and Financial System Stability, Financial Services Authority (OJK) has issued five of OJK regulations (POJK). In POJK Number 14 / POJK.05 / 2020 concerning countercyclical policies on the impact of the pandemic of coronavirus for non-bank financial service institutions. In this POJK, contains provisions regarding the determination of asset quality in the form of financing and financing restructuring. POJK Number 14 / POJK.05 / 2020 as a basis for Banks and Financing Companies in carrying out credit/financing restructuring. (OJK, 2020)

b. Economic conditions

Indonesia's economy in the first quarter of 2020 decreased to 2.97 percent from the first quarter of 2019, slowing compared to the achievements of the first quarter of 2019 which amounted to 5.07 percent. (BPS, 2020). The inflation rate in April 2020 is 2.67% and in August 2019 is 3.49% (BI, 2020). Since August 2019 inflation in Indonesia has decreased every month. Declining inflation indicates a decline in people's purchasing power and causing low economic growth. BI 7-Day Repo Rate as of May 19, 2020, is 4.5%. (BI, 2020) BI 7-Day Repo Rate has decreased from the previous as of January 23, 2020, it is 5% and as of February 20, 2020, it is 4.75%. The reduction in the 7-Day Repo Rate BI rate is expected to have an impact on reducing bank lending rates. This policy is expected to encourage public consumption and increase economic growth.

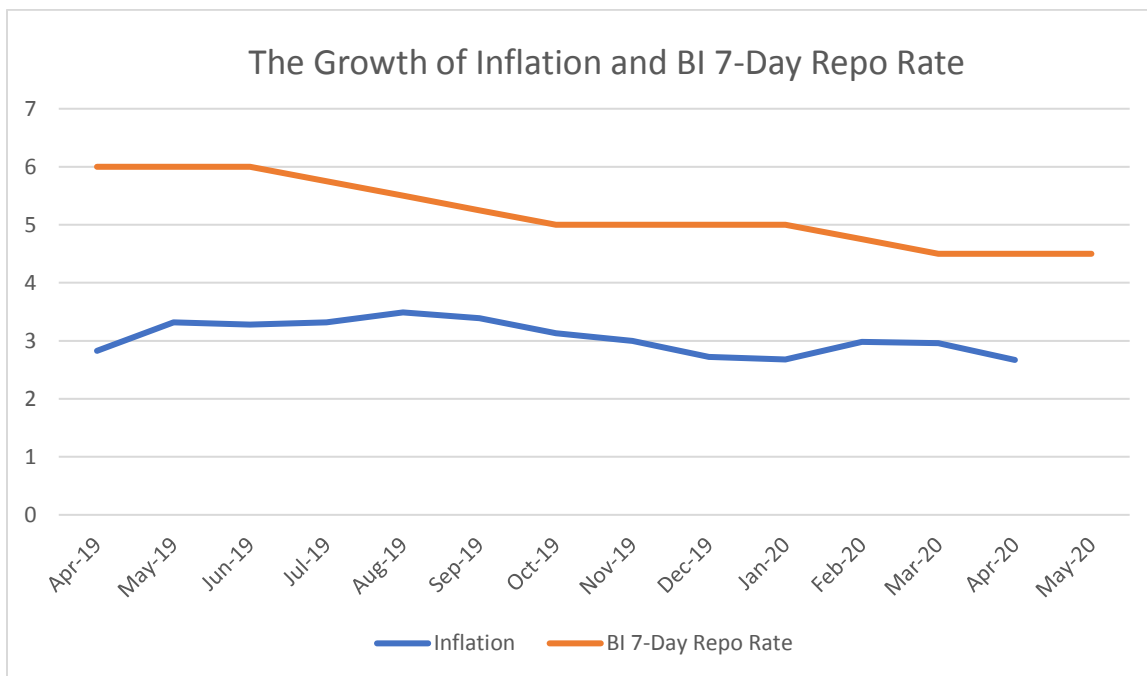


Figure 2.11. The Growth of Inflation and B1 7-Day Repo Rate

Source: BI (2020)

c. Sociocultural forces

Sociocultural factors consist of demographic factors such as population size, growth rate, age distribution, cultural influences, societal values, attitudes, and manifestations that impact demand for particular goods and services.

- In February 2020, the total workforce was 137.91 million people, and increase 1.73 million people compared to February 2019. (BPS, 2020)
- The working population in February 2020 is 131.03 million people, there an increase of 1.67 million people from February 2019. (BPS, 2020)
- Unemployment Rate fell to 4.99 percent in February 2020. (BPS, 2020)
- The poverty rate of the Indonesian population as of September 2019 is 9.22%, equivalent to 24.79 million people. (BPS, 2020)
- Indonesia's population projection in 2019 is 267 million people. (BPS, 2020)

d. Technological factors

Currently, competition in the financial services industry is becoming tighter. The development of technology will be an added value for the company that can sustain in this industry. To facing competition in the industrial revolution 4.0 that is about digitalization for all industry include financial technology. According to the Bank of Indonesia website, Financial technology (FinTech) is the combination of financial services with technology. The result of this combination impacted changes in the business model from conventional to moderate. For example, in the payment method in the conventional method bring some cash, nowadays can make transactions by making payments with financial technology such as e-wallet that can be done in a matter of just seconds.

The Financial Stability Board (FSB, 2017) classification FinTech activities into four categories of financial services that is

<p>Payments, clearing, and settlement</p>	<ul style="list-style-type: none"> • This fintech provides payment system services both organized by the banking industry and those carried out by Bank Indonesia such as Bank Indonesia Real Time Gross Settlement (BI-RTGS), National Clearing System of BI (SKNBI) and Scripless Securities Settlement System of BI (BI-SSSS). For example, such as MidTrans, Doku, Gopay, and Ovo.
<p>e-aggregator</p>	<ul style="list-style-type: none"> • This fintech provides data collection and processing services. The consumer can use to help decision making. In addition, it provides product comparisons as prices, features, and benefits. For example, such as Cekaja, Cermati, and KreditGogo.
<p>Investment management</p>	<ul style="list-style-type: none"> • This fintech provides services notably robo advisors is a software that provides financial planning services such as e-trading platforms and e-insurance platforms. For example, Bareksa, IPOTFUND, PasarPolis, and Rajapremi.

Peer to peer lending and crowdfunding

- Peer to peer lending (P2P) is fintech providing services to connect lenders (investors) with loan seekers in one platform. Investors will get an interest from the funds lent. While crowdfunding is the process of collecting some money to finance a product/business by several people together. Investors will get a portion of the stock or get a reward from the funds given. For examples such as Akseleran, Modalku, Investree, Amarnya, and KoinWorks. (Franedya, 2018)

Figure 2.12. The Four Categories of Financial Services

Source: FSB (2017)

e. Environmental forces

Currently, the environmental issue has become a consideration of Financial Services Institutions to provide financing loans. Sustainable financial programs are a further step to support environmental sustainability in the financial sector. According to the Financial Services Authority (OJK, 2017), a sustainable finance program is the overall support of the financial services sector to create sustainable economic growth by coordinating economic, social, and environmental interests. The aim of sustainable financial programs is to increase the resilience and competitiveness of financial service institutions so that they are able to grow and provide the funding sources needed by the community, while at the same time maintaining environmental sustainability. Based on POJK, each financial service institution must prepare a sustainable financial action plan.

Sustainable Financial Action Plan can describe as the business activities plan and work programs of Financial Services Institutions in short-term (one-year) and long-term (five-year) in accordance with the principles used to implement Sustainable Finance, including strategies to realize these plans and work programs in accordance with a set target and time, with due regard to the fulfillment of circumspection provisions and the application of risk management. There are 3 (three) priorities for the implementation of Sustainable Finance that is: 1) Development of Sustainable Finance products and/or services, including increasing the portfolio; 2) Development of human resource in Financial Services Institutions (LJK); or 3) Organizational adjustments, risk management, governance, and/or standard operating procedure. (OJK, 2017)

f. Legal and regulatory factors

Currently, the draft law on pawn business is preparing by the ministry of finance. The pawn business currently only has Financial Services Authority Regulations (POJK) that regulates and oversees the pawn business that is POJK No.31/POJK.05/2016 about Pawn Business. The pawns business law as a stronger regulation can strengthen the existing Financial Services Authority (OJK) regulations. The increase of illegal pawn business is a reason for required a law that becomes the legal basis for regulating pawn businesses and protecting the rights of pawn business consumers. Later, the pawn business law will regulate such as definitions, licensing, corporate governance and prudential regulation, and capital adequacy. Furthermore, the requirements of place and capital to deposited, supervision, reporting, examination, and penalties.

2.4.1.2 The Porter's Five Forces Model

a) Competition from rival sellers,

In the pawn industry, PT Pegadaian still has the largest outstanding loan compared to private pawn and pawning services at Islamic banks. (Annual Report of PT Pegadaian, 2018). The percentages are PT Pegadaian 85.64%, Bank Syariah Mandiri 7.77%, BNI Syariah 4.39%, BRI Syariah 1.6%, Pusat Gadai Indonesia 0.3%, and HBD Gadai 0.3%. Based on that reason, PT Pegadaian has more advantages in competition with rival firms, therefore the threat among competitors tends to be weak.

b) Competition from potential new entrants to the industry,

To protect consumer's rights in pawning businesses, the Financial Services Authority (OJK) requires private pawn companies to apply for a business license. As of March 2020, the total number of pawn companies was 87 companies. With the number of licensed and registered pawn companies, there are 44 companies, and 43 companies are only newly registered. The growth in the number of licensed pawn companies from January 2020 to March 2020 there was an increase of 8 companies. Illegal pawn companies will be dealt with firmly and their business can be terminated if it has the potential to harm consumers. Therefore, the threat of competition from potential newcomers to PT Pegadaian is medium.

c) Competition from producers of substitute products,

Many new competitors cause competition in the financial industry is getting tougher. PT Pegadaian's main competitor instead comes from substitute products. PT Pegadaian's substitution product is banking products, mainly through the people's business credit (KUR) program, in which there are state subsidies and relatively low-interest rates because of that it is difficult to compete. In addition, there is an increasing growth of peer to peer lending companies and crowdfunding companies, which provide online easy transactions and fast services. This makes the threat of a substitution company for PT Pegadaian is high.

d) Supplier bargaining power, and

Capital is a source of raw material for PT Pegadaian which will become the main financing source. PT Pegadaian to achieve financing targets, strong capital sources are needed. PT Pegadaian's main capital source is from bank loans. Bank loans take a portion of 62%. In addition, other funding sources are the issuance of bonds and medium-term notes by 28% and 10% from other funding sources. Bank loans are used for the company's financing activities based on pawn laws or non-pawn products or services. Based on that, the bargaining power of suppliers is high.

e) Customer bargaining power.

Technological developments make product competition in financial services increasingly tough. The openness of information makes customers are well informed about products, quality, and price. Customer costs of switching to competing products are low. Customers are sensitive about loan interest rates and services. The speed of technology and the simple of transactions and requirements cause many customers to switch to financial technology companies such as P2P lending. Other than that, lower loan interest rates, causing many customers to turn to the people's business credit (KUR) loans. This makes the bargaining power of the customer is high.

2.4.2 Internal Analysis

2.4.2.1 Resource Based Analysis

Tangible Resource

Physical resources

Office	Address
Head Office of PT Pegadaian (Persero)	Jl. Kramat Raya No. 162 Jakarta 10430, Indonesia PO Box 1090
PT Pegadaian Galeri Dua Empat	Wisma Bhakti Mulya #311 Jl. Kramat Raya No 160 Jakarta Pusat 10430
PT Pefindo Biro Kredit (Associate)	AD Premier, 2 nd floor Jl. TB Simatupang No. 5 Jakarta Pusat 12550
Regional Office I Medan	Jl. Pegadaian No. 112 Medan – 20151 Sumatra Utara
Medan II	Jl. Setia Budi Komplek Ruko Milala Mas No. B4 Kel. Tanjung Rejo. Kec. Medan Sunggal, 20352 (Lantai 2)
Banda Aceh	Jl. Imam Bonjol No.14 Kel Kampung Baru Kec.Baiturrahman, Banda Aceh, 23242
Rantau Prapat	Jl. Cut Nyak Dhien No. 23 Kel Candana Kec. Rantau Prapat Kab. Labuhan Batu, 21413
Regional Office II Pekanbaru	Jl. Arifin Ahmad No. 9 – Gedung Nusantara, Pekanbaru, Riau
Area Office Pekanbaru	Jl. Durian no 58 c Labuh Baru Timur, Pekanbaru
Batam	Komp. Ruko Rafflesia Blok B No.3 Batam Center – Batam
Padang	Jl. Belakang tangsi no 16 Padang Sumatra Barat 25121
Regional Office III Palembang	Jl. Merdeka No. 11 Palembang – 30132 Sumatra Selatan
Palembang	Jl. Demang Lebar Daun Ruko Duta Demang No 3 Palembang 30137
Lampung	Jl. Wr Supratman No. 08 Teluk Betung Bandar Lampung
Jambi	Jl. Gatot Subroto No.264 Jambi
Regional Office IV Balikpapan	Jl. Jend. Sudirman No. 38 Stalkuda Balikpapan – 76114 Kalimantan Timur
Banjarmasin	Jl. Pegadaian No.1 Pekapuran Laut, Banjarmasin 70233 Kalimantan Selatan
Pontianak	Jl. Hos Cokroaminoto No.264, Pontianak 78117 Kalimantan Barat
Samarinda	Jl. Ir. H. Juanda Komp Ruko Plasa Juanda Blok A No.7, Samarinda 75124 Kalimantan Timur
Balikpapan	Jl. KH. Agus Salim No. 43, Balikpapan – Kalimantan Timur
Tarakan	Jl. Yos Sudarso No.9, Tarakan, 77112 Kalimantan Utara
Regional Office V Manado	Jl. Dr. Soetomo No. 199 Pinaesaan Manado – 95221 Sulawesi Utara
Manado	Jl. Piere Tendean, Kawasan Mega Mas Boulevard Manado – Sulawesi Utara 95114
Gorontalo	Jl. HB Jassin No. 264 Kel. Dulalowo Gorontalo 96128

Palu	Jl. Dr. Sam Ratulangi No. 60 – Palu Sulawesi Tengah 94118
Jayapura	Jl. Gerilyawan No. 1 F Lt. 2 Kel. Awiyo Distrik Abepura Kota Jayapura – Papua
Sorong	Jl. Selat Seram No. 4 Remu Selatan. Sorong – Papua Barat 98400
Regional Office VI Makassar	Jl. Pelita Raya Blok A 24/3 Makassar, Sulawesi Selatan
Makassar 1	Jl. Sulawesi No.285 Makassar
Makassar 2	Jl. Sultan Alauddin, Ruko Alauddin Makassar
Parepare	Jl. Singa No.35 Kodya Parepare
Kendari	Jl. Mayjend Sutoyo No.96 Kodya Kendari
Palopo	Jl. Merdeka No.43 Kodya Palopo
Bantaeng	Jl. Manggis No.69 Bantaeng
Ambon	Jl. W.R. Supratman No.34 Ambon
Regional Office VII Denpasar	Jl. Puputan No. 23C Renon Denpasar – 80226 Bali
Ampenan	Jl. Koperasi No 1 Ampenan, Lombok Barat 83112
Dompu	Jl. Udang Dompu, Bima 84213
Ende	Jl. Garuda No 1 Ende
Kupang	Jl. Brawijaya No 1 Kupang 855221
Regional Office VIII & IX Jakarta 1 & 2	Jl. Senen Raya No. 36 Jakarta – 10410
Kramat Jati	Jl. Kelapa Gading W/A, Jakarta Timur DKI Jakarta – 13510
Bogor	Jl. Ir. Juanda No.02 Bogor Tengah – Kota Bogor, Jawa Barat – 16123
Jatiwaringin	Jl. Raya Jatiwaringin Ruko Asem Baru No. 5-6 Jawa Barat – 17411
Bekasi	Jl. Ir. H. Juanda No. 28 Jawa Barat – 17141
Tanjung Priok	Jl. Rawabadak No.1 Rt.04/12 Rawabadak Utara, Koja, Jakarta Utara 14320
Tangerang	Jl. A. Damjati No.7 Rt.51/07 Sukarasa, Tangerang, Banten 15111
Cirendeu	Jl. Aria Putra No.11 Rt.01/09 Ciputat, Tangerang, Banten
Kalideres	Jl. Peta Utara No.27 Rt.01/07 Pegadungan, Jakarta Barat
Kebayoran Baru	Jl. Wijaya Ix No.17 Rt.02/05 Kel.Melawai, Kec.Kebayoran Baru, Jakarta Selatan 12160
Regional Office X Bandung	Jl. Pungkur No. 125 Bandung – 40252, Jawa Barat
Bandung 1	Jl. Jend. Ahmad Yani No. 240, Kacapiring, Batununggal, Bandung
Bandung 2	Jl. Sukup Baru No.1A Bandung 40612
Cirebon	Jl. Palang Merah No.1 Cirebon 45100
Tasikmalaya	Jl. Oto Iskandardinata No.08 Tasikmalaya 46113
Regional Office XI Semarang	Jl. Ki Mangunsarkoro No. 7 Semarang – 50241 Jawa Tengah
Semarang	Jl. Sidodadi Barat No. 2A Semarang Jawa Tengah – 50124

Surakarta	Jl. Sultan Syahrir No. 39 Surakarta Jawa Tengah – 57133
Yogyakarta	Jl. Gadean No.3, Ngupasan, Yogyakarta – 55122
Purwokerto	Jl. Jendral Soedirman No. 299, Purwokerto, Central Java – 53146
Tegal	Jl. KS Tubun No. 46, Kejambon, Tegal Central Java – 52115
Pati	Jl. Jend. Sudirman No. 80, Kudus Kota, Kudus, Central Java – 59312
Regional Office XII Surabaya	Jl. Dinoyo No 79 Surabaya – 60265 Jawa Timur
Surabaya 1	Jl. Kapasari No 7 Surabaya
Surabaya 2	Jl. Mojopahit No. 116 Sidoarjo – 63215
Madiun	Jl. Cokroaminoto No. 45 Madiun – 63153
Pamekasan	Jl. P Diponegoro No. 98 Pamekasan – 69315
Malang	Jl. Ade Irma Suryani No. 2 Malang – 65119
Jember	Jl. Samanhudi No. 47 Jember – 68131
Probolinggo	Jl. Panglima Sudirman No. 75 Probolinggo – 67214

Figure 2.13. Subsidiaries, Associates, Regional Offices, and Area Offices Location

Source: Pegadaian Annual Report 2018

Intangible Resources

Awards and Certifications

- The Most Active Issuer at KSEI Award by Kustodian Sentral Efek Indonesia
- Top Digital PR Award at Indonesia Top Digital Award by Trans & Co Consulting
- Best SOE CEO at SOE Satisfying Performance Appreciation by 7SkyMedia
- Jakarta DGT Regional Tax Office at Best Taxpayer 2018 by Ministry of Finance, Republic of Indonesia
- Best SOE at BUMN Marketeers Award 2018 by Markplus. Inc
- Active Supporter at Millennial Young Generation Development Literacy Through Watching Together 2018 World Cup by Minister of Youth and Sports
- Best SOE Company at Human Capital Award IV 2018 by Majalah Economic Review
- Active Supporter at Guyub Rukun Homecoming, Happy Homecoming by Ministry of Transportation, Republic of Indonesia
- Best SOE Company at 7th SOE Award of 2018 by BUMN Track Magazine
- Best CEO at 7th SOE Award of 2018 by BUMN Track Magazine
- Gold Champion at Brand Asia 2018 (Based on Brand Asia Survey 2018 in Indonesia) by Markplus.Inc & Nikkei BP Consulting, Inc.
- Best ICT Implementation in Sales & Marketing (Top 3) at Indonesia Best e-Mark Award 2018 by Telkom University and SWA Magazine
- SOE with Very Good Predicate at Infobank 9th SOE Award by Infobank Magazine
- Top Leader on CSR Commitment at Top CSR 2018 by KNKG, Indonesia CSR Society, Top Business Magazine

- Financial Non-Banking at The Best CEO, The Best IT Data Governance, The Best IT Data Center by Data Gov.Ai Summit & Award 2018
- Best Chief Marketing Officer at BUMN Branding & Marketing Award by BUMN Track Magazine
- Best Corporate Communication at BUMN Branding & Marketing Award 2018 by BUMN Track Magazine
- Best Brand Identity at BUMN Branding & Marketing Award by BUMN Track Magazine

Figure 2.14. Awards and Certifications

Source: Pegadaian Annual Report (2018)

2.4.2.2 Financial Ratios Analysis

In the pawn industry, PT Pegadaian have competitor are private pawn companies and pawning services at Islamic banks. Private pawn companies that are Pusat Gadai Indonesia and HBD Gadai didn't present financial reports publicly on the company's website. This analysis used the firm's Financial Report 2015-2019 from PT Pegadaian, Bank Syariah Mandiri, Bank BNI Syariah, and Bank BRI Syariah. This analysis show result of compared the financial ratio among PT Pegadaian and the average competitor firm for 5 years.

Profitability ratio

The profitability ratio is to assess the firm's profits regarding a given level of sales, the owners' investment, or a certain level of assets.

- Operating Profit Margin

The operating profit margin aim gauge the percentage of each sales dollar over after all expenses and costs except taxes, interest, and preferred stock dividends are subtracted.

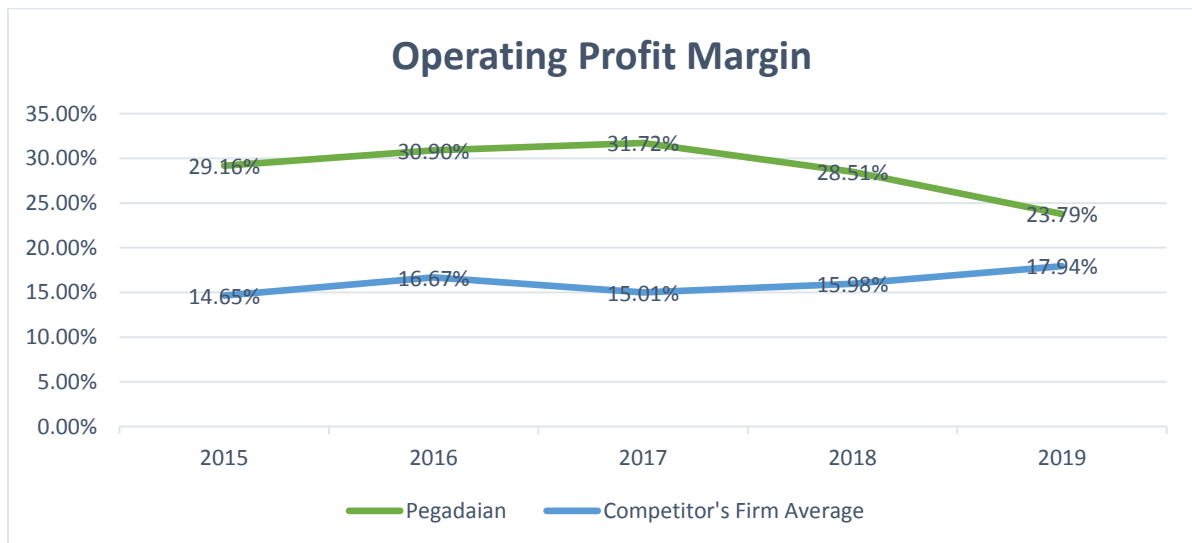


Figure 2.15. Operating Profit Margin

Source: Analysis (2020)

The higher of operating profit margin, the better of operations a company. This means that PT Pegadaian operations have better efficiency compared to the competitor's firm average.

This indicates that PT Pegadaian could generate better profits than the competitor's firm average.

- **Net Profit Margin**

The net profit margin aim gauge the percentage of each sales dollar over after all expenses and costs belong taxes, interest, and preferred stock dividends have been subtracted.

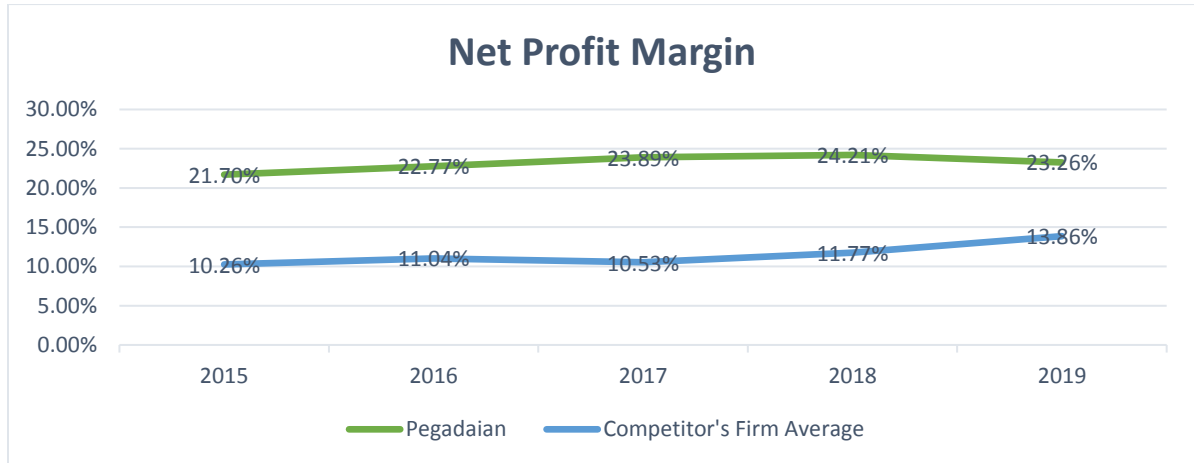


Figure 2.16. Net Profit Margin

Source: Analysis (2020)

The net profit margin of PT Pegadaian is higher than the average of competitor firms. This indicates how much profit Pegadaian gets from all of its sales. This means that the company can manage its profitability well and the potential to get higher growth.

- **Return on Total Asset (ROA)**

The return on total asset (ROA) aims to gauge the effectiveness of management in resulting profits with its existing assets on the whole.

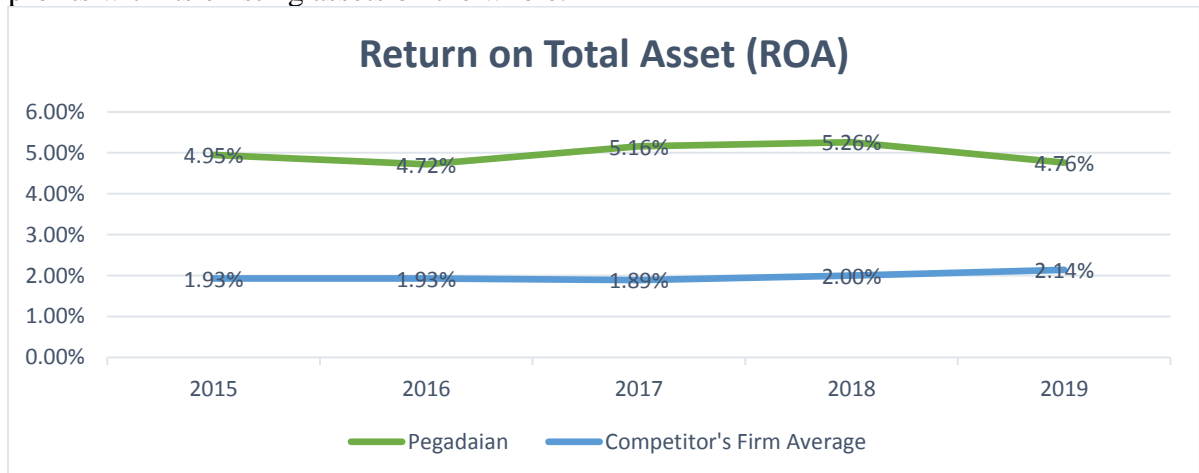


Figure 2.17. Return on Total Asset (ROA)

Source: Analysis (2020)

The return on the total asset of PT Pegadaian is higher than the competitor's firm average. This shows that PT Pegadaian performance in generating net profit from the utilization of its assets is better than the average of the competitor.

- Return on Equity (ROE)

The return on equity (ROE) aims to gauge the return obtain on the common stockholders' investment in the firm.

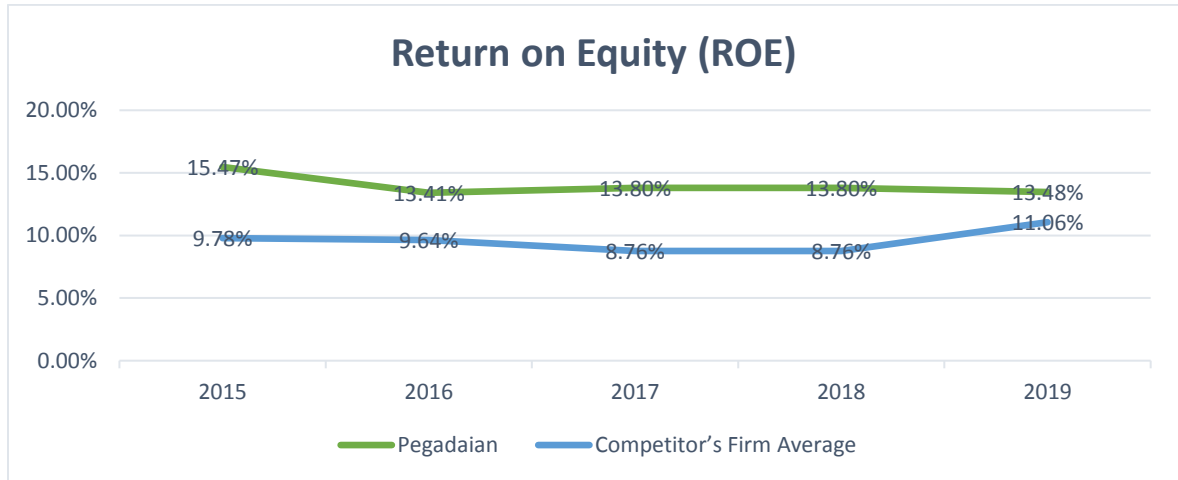


Figure 2.18. Return on Equity (ROE)

Source: Analysis (2020)

PT Pegadaian gets a better ROE Ratio than the competitor's firm average. So, PT Pegadaian is effective in invested the shareholders' investment in the company and generates profit for shareholders.

Liquidity Ratio

The liquidity ratio of a firm aims to gauge the capability to fulfill its short-term obligations when coming due. (Gitman & Zutter, 2015)

- Current Ratio

The current ratio aims to gauge the firm's capability to fulfill short-term obligations.

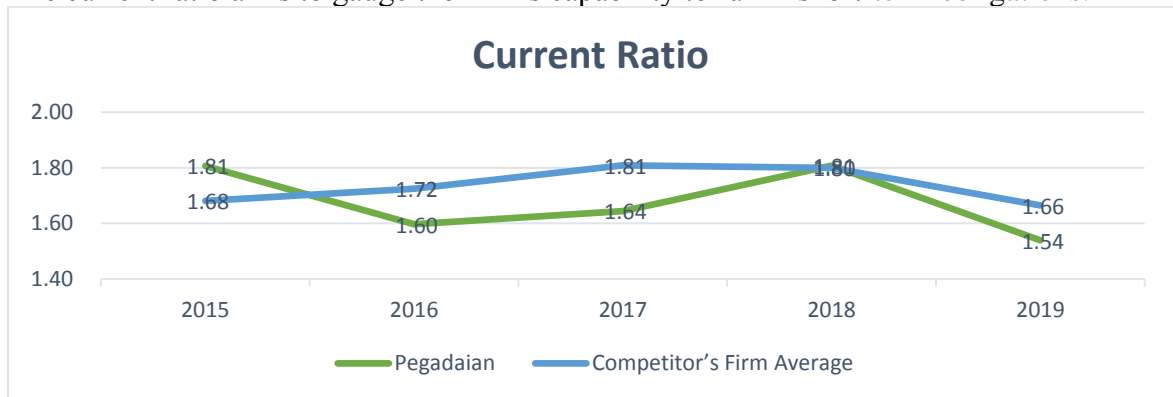


Figure 2.19. Current Ratio

Source: Analysis (2020)

The current ratio of PT Pegadaian is slightly low compared to the average of the competitor's firm. This means the capability of PT Pegadaian to pay its short-term debt is still well. To measure how liquid a company can be using this ratio.

Financial Leverage Ratio

Financial leverage ratio aims to enlargement of risk and returns by the use of fixed-cost financing, instance debt, and preferred stock. (Gitman & Zutter, 2015)

- **Debt to Equity Ratio**

The debt-to-equity ratio aims to gauge the relative comparison of total liabilities to common stock equity purposed to finance the firm's assets.

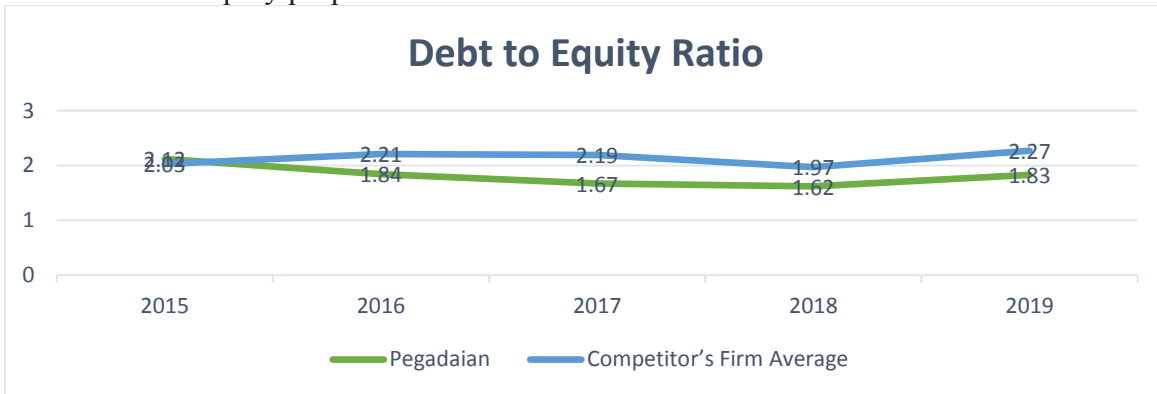


Figure 2.20. Debt to Equity Ratio

Source: Analysis (2020)

The competitor's firm average has a debt to equity ratio higher than PT Pegadaian's. This means the average of competitor firms financing the business with debt. The greater the value of the debt to equity ratio, it can be interpreted that the financial resources of the company will be increasingly funded by debt, not by his own financial source. For a finance company, it can have a very high debt to equity ratio, reaching up to 4. This is not a bad thing and can still be said reasonably. Based on the Minister of Finance Regulation number 169 / PMK.010 / 2015 that finance companies are excluded or freed from the provisions of the ratio between debt and equity.

- **Debt Ratio**

The debt ratio aims to gauge the comparison of total assets financed by the firm's creditors.



Figure 2.21. Debt Ratio

Source: Analysis (2020)

The debt ratio of PT Pegadaian higher than the competitor’s firm average. This indicates PT Pegadaian has a number of assets financed by debt higher than the average of competitor firms. This shows that the higher the debt interest expense that must be borne by the company.

Assets Quality Ratio

The credit quality of a bank’s interest-earning portfolio related to the asset quality ratio. The purpose is the level of a bank’s earning asset specifically its financial assets instance loans and bond holdings that are generating and are probability to proceed to achieve appropriate with their regulation. Thus, the asset quality ratio indicates the level of credit risk related to a bank’s financial assets. (Golin & Delhaise, 2013)

- **The Non-Performing Loan Ratio**
 The NPL ratio represents nonperforming loans that are a part of the company loan book and hence describe the degree on a percentage basis, extent a company has lent money to borrowers who are not paying it back.

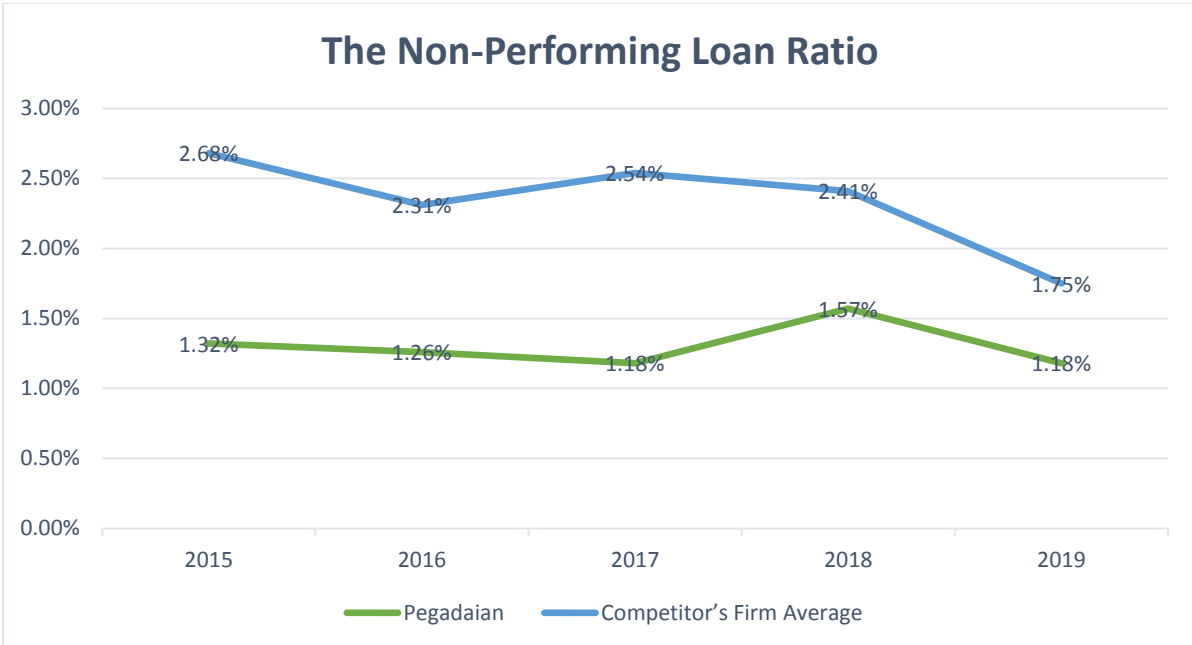


Figure 2.22. The Non-Performing Loan Ratio
 Source: Analysis (2020)

PT Pegadaian has an NPL ratio lower than the competitor’s firm average. This means that PT Pegadaian has good performance in managing loans and credit risk management. Thus, the credit risk borne by PT Pegadaian is lower than the competitor’s firm average.

2.4.2.3 VRIN Analysis

PT Pegadaian responded to competition in the digitalization era by releasing a mobile application that is Pegadaian digital. Pegadaian Digital application is expected to attract millennial interest

especially for gold investment where this is one of the main features in the Pegadaian Digital application. These tests aim to specify a sustainable competitive advantage and measures the competitive power of a resource or capability by the extent to which of four specific tests it can exceed.

Is Pegadaian Digital capability valuable?	Is Pegadaian Digital capability rare?	Is Pegadaian Digital capability costly-to-imitate?	Is Pegadaian Digital capability Non-substitutable?	Competitive consequences of Pegadaian Digital	Performance implications of Pegadaian Digital
Yes	No	No	No	Competitive parity	Average returns
The Pegadaian Digital application increasing millennial customer	Other pawn applications have sprung up	Sophisticated technology makes the mobile application likes Pegadaian Digital easily to develop	Financial technology is progressing rapidly		

Figure 2.23. VRIN Analysis

Source: Analysis (2020)

The results of the test can be analyzed that company capabilities from Pegadaian Digital have competitive consequences is competitive parity and performance implications is the average return.

2.4.3 SWOT Analysis

Strengths

1. PT Pegadaian has many awards and certifications that prove PT Pegadaian operates the company well.
2. PT Pegadaian has many branches spread throughout Indonesia, which are 1 Head Office, 12 Regional Offices, 59 Area Offices, 642 Branch Offices, and 3,579 Branch Service Unit Offices.
3. PT Pegadaian can maintain the largest domination of Outstanding Loans compared to private pawn and pawning services at Islamic banks.
4. PT Pegadaian has a good financial condition. This is shown from the profitability ratio that is higher than the industry average.
5. PT Pegadaian is a state-owned company that has good management and has experienced for 119 years.

Weaknesses

1. Users of the Pegadaian Digital application are still low
2. Service limitations in the Pegadaian Digital application
3. Lack of feature innovations available at Pegadaian Digital
4. Lack of digitizing in business processes and marketing programs.

Opportunities

1. Develop a transformation of digital-based products and services.
2. Credit penetration in Indonesia is still low
3. Increasing and expand customers from millennials, microbusinesses, and consumer segments that are new centers of growth for credit in Indonesia.
4. Construct information technology infrastructure to support the development of distribution channels and digital services.

Threats

1. The decline of new customer acquisition.
2. The increasing of growth private pawn companies.
3. The rapid development of Financial Technology and the increasing trend using financial services through mobile applications in Indonesia.
4. The presence of Unsecured Loan products by banking that offers lower interest rates with a salary deduction system through payroll.

To face challenges, Pegadaian uses the G-Star strategy to transform. Through product diversification and process digitalization, Pegadaian will grow its main business (Grow Core). Big data analysis and strong risk management to support the development of potential new businesses (Grab New). Reliable and potential human resources and increasing competence are needed in accordance with the needs of the company (Groom Talent). Efforts to support business processes and data analysis using the latest technology system (Gen Z-Tech). Improving company performance by changing the mindset and work culture of employees to be more productive (Great Culture).

Based on the swot analysis, it can be concluded that PT Pegadaian has the strength and opportunity to grow even greater. One of PT Pegadaian's opportunities is constructed information technology infrastructure to support the development of distribution channels and digital services, which requires additional capital to be able to reach throughout Indonesia. PT Pegadaian's strengths and opportunities can reduce weaknesses and overcome threats. From PT Pegadaian's IPO, the addition of capital can obtain, and it can further develop strength and opportunity then grow even greater.

CHAPTER III

BUSINESS SOLUTION

3.1 Discounted Cash Flow Valuation

Financial service firms have the nature of the business that makes it difficult to estimate capital expenditures, working capital, and debt. Financial service firms use equity valuation models for the estimated value of the equity in a firm. Equity valuing by discounting cash flows to equity at the cost of equity. For financial service firms have three stages to estimate the value of equity. First, estimates the cost of equity. Second, measure for the types of reinvestment that financial service firms make with adapts the free cash flow to equity. Third, valued equity is the sum of equity capital invested currently augmented with the present value of the expected excess return. (Damodaran, 2009). This study will estimate the cost of equity, then analyze free cash flow to equity models and the excess return models.

3.1.1 Cost of Equity

The cost of equity means the rate of return that investors require to invest in the equity of a firm. The calculation of the cost of equity involves a risk-free rate, beta, and a risk premium. Financial service firms have capital structure tends to be similar, basically due to regulations. For financial service firms, the average levered beta from comparable firms able to use as the bottom-up beta for the firm being analyzed. (Damodaran, 2015)

Cost of equity = Risk-free rate + Beta * Risk Premium

No.	Financial service Industry	Levered Beta
1.	Adira Dinamika Multi Finance Tbk.	0,936
2.	BFI Finance Indonesia Tbk.	1,205
3.	Clipan Finance Indonesia Tbk.	0,920
4.	Verena Multi Finance Tbk.	0,448
5.	HD Finance Tbk.	0,426
6.	Wahana Ottomitra Multiartha Tbk.	0,912
7.	Intan Baruprana Finance Tbk.	0,711
8.	Mandala Multifinance Tbk.	0,734
9.	PT Tifa Finance Tbk	0,907
10.	PT Batavia Prosperindo Finance Tbk	0,818
	Average	0,80

Table 3.1. Levered Beta of PT Pegadaian

Source: Pefindo (2020)

The levered beta by comparable firms based on the latest data update by Pefindo beta stock, 11th September 2020. In this study refer to the calculation above, the beta of Pegadaian is 0,80. The risk-free rate will be used for ten years Indonesia Government Bond yield on 11th September 2020

is 7,09 %. The risk premium using the geometric mean return of JKSE Index over 10-year period. The geometric mean return will deduct with the risk-free rate to generate the risk premium.

Date	JKSE	Return	(1+R)
30-Dec-2009	2.534,28		
30-Dec-2010	3.703,40	46,13%	1,46
30-Dec-2011	3.821,88	3,20%	1,03
28-Dec-2012	4.316,56	12,94%	1,13
30-Dec-2013	4.274,05	-0,98%	0,99
30-Dec-2014	5.226,79	22,29%	1,22
30-Dec-2015	4.592,87	-12,13%	0,88
30-Dec-2016	5.296,71	15,32%	1,15
29-Dec-2017	6.355,65	19,99%	1,20
28-Dec-2018	6.194,50	-2,54%	0,97
30-Dec-2019	6.299,54	1,70%	1,02
Geometric mean return (Rm)			9,533%
Risk free rate (Rf)			7,09%
Risk Premium (Rm – Rf)			2,443%

Table 3.2. Risk Premium

Source: Analysis (2020)

Afterward, the calculation of the cost of equity that is,

$$\begin{aligned} \text{Cost of equity} &= 7,09 \% + 0,80 * 2,443 \% \\ &= 9,05 \% \end{aligned}$$

3.1.2 Free Cash Flow to Equity Models

According to Damodaran (2009), financial service firms cannot be easily identified its net capital expenditures and non-cash working capital. Thus, to estimate cash flow to equity through define reinvestment differently. For financial service firms, the reinvestment generally does not take the form of fixed assets. The capital by the regulatory authorities that are the investment of regulatory capital then determined the limits on future growth. For estimating the reinvestment in regulatory capital must define capital ratio and risk-adjusted assets.

(in million rupiahs)	2015	2016	2017	2018	2019
Adjusted capital	13.901.628	17.942.985	19.747.857	21.532.074	24.870.280
Risk adjusted assets	12.019.305	13.810.681	14.268.333	16.011.467	19.773.682
Capital ratio	116%	130%	138%	134%	126%
Growth of risk adjusted assets	10,51%	14,90%	3,31%	12,22%	23,50%
Average growth of risk adjusted assets	12,89%				

Table 3.3. The Average Growth of Risk Adjusted Assets

Source: Analysis (2020)

The basic assumptions will be used for calculated intrinsic value using the free cash flow to equity model of PT Pegadaian as follow:

- Based on SEOJK No. 1/SEOJK.05/2016 about the level of the financial health of financing companies, capital ratio is the ratio between adjusted capital and adjusted assets, which is the adjusted asset as referred to is the asset multiplied by the risk weight of the asset.
- The calculation of regulatory capital is the result of multiple risk-adjusted assets and capital ratios.
- The growth of risk-adjusted assets assumed will grow on the average growth of risk-adjusted assets from 2015-2019 in the next ten years that is 12,89%.
- The amount of reinvestment in regulatory capital depends on the growth of risk-adjusted assets annually and further also depends on the Pegadaian decision about maintained their risk-adjusted asset and this reflected in the target capital ratio each year. For the next ten years, the author assuming the capital ratio of Pegadaian in 2029 will be 90%. This assumption considering to historical of Pegadaian's capital ratio in the five past years that never below 90%. The capital ratio each year estimates to decline by 3.6 % each year to get the target capital ratio is 90% in 2029.
- For calculating net income, the author assuming that the return on equity growth in 2020-2029 will be 2 bps, 2 bps, 5 bps, 5 bps, 10 bps, 10 bps, 10 bps, 15 bps, 15 bps, 15 bps. The increasing growth of ROE each year considered Pegadaian optimized will be stable after pandemic COVID 19. The calculation of net income is the result of multiplying by ROE and regulatory capital each year.
- In the next ten years, the terminal value assumed to grow at a stable rate of growth. Constant in the long run is a stable growth rate, the required sets of strong limitations about the high rate can be reached. (Damodaran, n.d.). Companies cannot grow forever at a rate higher than the growth rate of the economy wherein the company is operating. Thus, the constant growth rate cannot be higher than the growth rate of the economy overall. The stable growth which used in this valuation is the average growth rate of the Indonesia economy from 2000-2019 that is 5,3%.
- Pegadaian has 6.250.000 shares with a par value per share is IDR 1 million, thus total share capital is IDR 6.250 billion. Assuming, Pegadaian will sell which amounts to 40% of the total capital placed in the company and that the par value of the public's share is IDR 100. Hence, issued public shares is 25 billion shares at IPO.

	Risk Adjusted Assets	Capital Ratio	Regulatory Capital	Reinvestment in Regulatory Capital
2019	19.773.682	126%	24.870.280	
2020	22.322.204	122%	27.272.076	2.401.796
2021	25.199.192	119%	29.879.855	2.607.779
2022	28.446.979	115%	32.706.816	2.826.961
2023	32.113.356	111%	35.766.139	3.059.323
2024	36.252.272	108%	39.070.761	3.304.622
2025	40.924.630	104%	42.633.092	3.562.332
2026	46.199.184	101%	46.464.669	3.831.577
2027	52.153.546	97%	50.575.721	4.111.051
2028	58.875.333	93%	54.974.639	4.398.918

2029	66.463.455	90%	59.667.337	4.692.698
------	------------	-----	------------	-----------

Table 3.4. Reinvestment in Regulatory Capital (in million rupiahs)

Source: Analysis (2020)

According to Damodaran (2009), reinvestment can be viewed as the portion of net income that does not get paid out.

$FCFE_{\text{Financial service firm}} = \text{Net Income} - \text{Reinvestment in Regulatory Capital}$

	ROE	Net Income	Reinvestment in Regulatory Capital	FCFE	Cumulative cost of equity	PV
2019	13,48%	3.108.078				
2020	13,50%	3.681.196	2.401.796	1.279.400	1,09	1.173.238
2021	13,52%	4.039.171	2.607.779	1.431.392	1,19	1.203.700
2022	13,57%	4.437.674	2.826.961	1.610.713	1,30	1.242.103
2023	13,62%	4.870.647	3.059.323	1.811.324	1,41	1.280.900
2024	13,72%	5.359.743	3.304.622	2.055.121	1,54	1.332.712
2025	13,82%	5.891.058	3.562.332	2.328.727	1,68	1.384.832
2026	13,92%	6.466.972	3.831.577	2.635.394	1,83	1.437.156
2027	14,07%	7.115.013	4.111.051	3.003.962	2,00	1.502.216
2028	14,22%	7.816.317	4.398.918	3.417.399	2,18	1.567.160
2029	14,37%	8.573.027	4.692.698	3.880.329	2,38	1.631.797
Total						13.755.813

Table 3.5. The Present Value of FCFE (in million rupiahs)

Source: Analysis (2020)

$$\begin{aligned}
 \text{Terminal Value} &= \frac{FCFE_{10} \times (1 + g_n)}{(K_e - g_n)} \\
 &= \frac{3.880.329 \times (1 + 5,3\%)}{(9,05\% - 5,3\%)} \\
 &= \text{IDR } 108.999.215,84 \text{ (in million)}
 \end{aligned}$$

TV	IDR 108.999.215,84 (in million rupiah)
Cumulative cost of equity	2,38
PV	IDR 45.837.497,62 (in million rupiah)
Sum of PV FCFE	IDR 59.593.310.236.924
Share outstanding	25.000.000.000 share
Intrinsic value per share	IDR 2.383,73

Table 3.6. The Intrinsic Value per Share – FCFE Model

Source: Analysis (2020)

So, the terminal value resulted is IDR 108.999.215,84 (in million rupiahs). The terminal value is discounted at Pegadaian's cumulative cost of equity and resulted in the present value of terminal value is IDR 45.837.497,62 (in million rupiahs). After that, summed the present value of terminal value and the present value of the next ten years of FCFE and dividing that with share outstanding. The result of dividing the present value of the next ten years of FCFE and terminal value by share

outstanding is IDR 2.383,73. So, the intrinsic value per share using the FCFE models is IDR 2.383,73.

3.1.2.1 Free Cash Flow to Equity Model Risk Analysis: Scenario Analysis

The scenario analysis was set up three scenarios that are pessimistic (worst), most likely (expected), and optimistic (best) used assumption as shown below. In this study, the base of the scenario analysis is the most likely scenario.

Scenario Analysis	Pessimistic	Most Likely	Optimistic
Levered beta	0,60	0,80	0,90
Risk Premium	7,05 %	9,05 %	10,05 %
Risk-free Rate	5,09 %	7,09 %	8,09 %
Stable Growth Rate	3,3 %	5,3 %	6,3 %
The Range of Intrinsic Value (Monte Carlo Simulation)	IDR 632,36 – 2.080,06/share		

Table 3.7. FCFE Models – Scenario Analysis

Source: Analysis (2020)

This study used the Monte Carlo simulation to rans 1000 schemes. The resulted of the Monte Carlo simulation is the range of the intrinsic value that is IDR 632,36 – 2.080,06/share, as shown in the graph below.

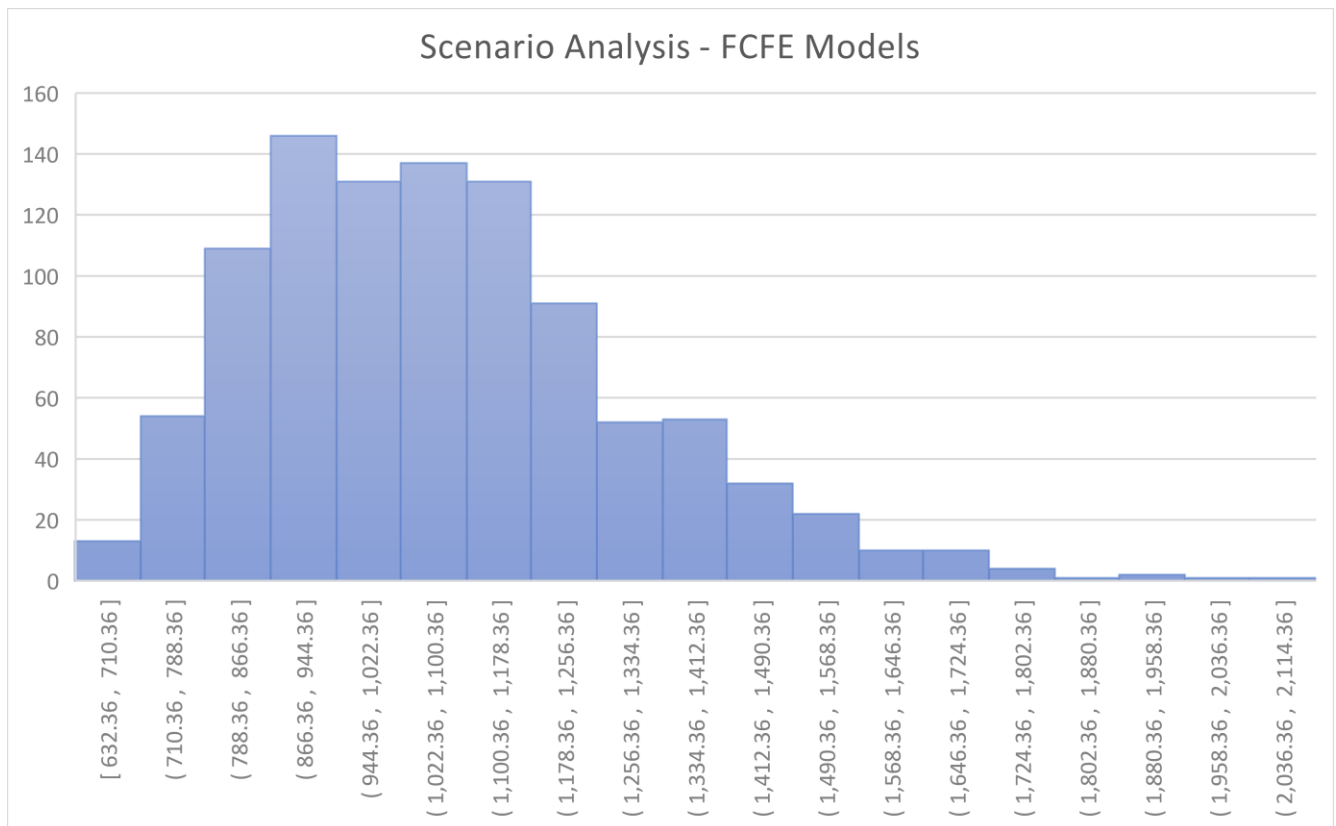


Figure 3.1. The Range of Intrinsic Value – FCFE Model

Source: Analysis (2020)

3.1.3 Excess Return Models

The one approach for valuing financial services firms uses an excess return model. For valuing the financial firm in excess return models applied are the total of equity invested in the firm currently and the expected excess return to equity investors in present value. Valuing financial service firm using an excess return model focus only on equity. Valuing equity in the excess return models needed two inputs. First, measure the equity capital invested in the firm currently. Usually, the current equity capital is measured as the book value of equity in the financial service firm. Defined in equity terms, the excess return stated in terms of the return on equity, and the cost of equity. (Damodaran, 2009)

The basic assumptions will be used for calculated intrinsic value using the excess return model of PT Pegadaian as follow:

- The beginning book value of equity is obtained from the sum of the previous year's book value of equity and the remaining net income after deducting by the portion that is paid out as a dividend.
- The cost of equity multiplied by the beginning book value of equity will result in equity cost.
- This study will be used the dividend payout ratio to refer to the average of the dividend payout ratio in past five years that is 35,38%. Based on the historical dividend payout ratio, Pegadaian's dividend payout has been maintained around worth 35,38%.
- The net income is calculated by multiplying the return of equity and the beginning book value of equity each year.
- Computing the excess equity return by deduction between net income and equity cost.
- The present value of the expected excess equity return is the result of multiplying between the cumulative cost of equity and the expected excess equity return.

	Beginning BV of Equity	Cost of Equity	Equity Cost
2020	23.060.310	9,05%	2.086.644
2021	25.071.608	9,05%	2.268.639
2022	27.261.570	9,05%	2.466.801
2023	29.651.629	9,05%	2.683.069
2024	32.260.807	9,05%	2.919.164
2025	35.120.424	9,05%	3.177.920
2026	38.256.213	9,05%	3.461.666
2027	41.696.706	9,05%	3.772.984
2028	45.487.027	9,05%	4.115.957
2029	49.665.984	9,05%	4.494.095
TV	52.298.281	9,05%	4.732.282

Table 3.8. The Equity Cost (in million rupiahs)

Source: Analysis (2020)

	ROE	Net Income	Equity Cost	Excess Equity Return	Cumulative cost of equity	PV of Excess Equity Return
2020	13,50%	3.112.690	2.086.644	1.026.046	1,090	940.907

2021	13,52%	3.389.190	2.268.639	1.120.551	1,19	942.304
2022	13,57%	3.698.861	2.466.801	1.232.060	1,30	950.104
2023	13,62%	4.037.971	2.683.069	1.354.902	1,41	958.136
2024	13,72%	4.425.551	2.919.164	1.506.387	1,54	976.867
2025	13,82%	4.852.955	3.177.920	1.675.034	1,68	996.098
2026	13,92%	5.324.515	3.461.666	1.862.849	1,83	1.015.865
2027	14,07%	5.865.910	3.772.984	2.092.925	2,00	1.046.627
2028	14,22%	6.467.364	4.115.957	2.351.407	2,18	1.078.315
2029	14,37%	7.136.029	4.494.095	2.641.934	2,38	1.111.014
TV		7.514.238	4.732.282	74.212.440	2,38	31.208.596
					Total	41.224.832

Table 3.9. PV of Excess Equity Return (in million rupiahs)

Source: Analysis (2020)

The calculation of the terminal value of excess return to equity investors after ten years is,

$$\text{Terminal value of excess return} = \frac{\text{Net Income}_{11} - (\text{Cost of Equity}_{11})(\text{BV of Equity}_{11})}{\text{Cost of Equity} - g_n}$$

$$\begin{aligned} \text{Terminal value of excess return} &= \frac{7.514.238 - (9,05\% \times 52.298.281)}{9,05\% - 5,3\%} \\ &= \text{IDR } 74.212.440 \text{ (in million)} \end{aligned}$$

According to Damodaran (2009), the formula for the value of equity using the excess return model as follow:

Value of equity = Equity Capital invested currently + Present Value of Expected Excess Return to Equity Investors

Beginning BV of Equity	IDR 23.060.310 (in million)
PV of Excess equity return	IDR 41.224.832 (in million)
Value of equity	IDR 64.285.142.186.323
Share outstanding	25.000.000.000 /share
Intrinsic value per share	IDR 2.571,41 /share

Table 3.10. The Intrinsic Value per Share – Excess Return Model

Source: Analysis (2020)

The calculation of the value of equity is summed up of the three components, beginning book value of equity in 2020 which augmented with the present value of the expected excess returns over the next ten years, and the present value of the terminal value of the expected excess return. Furthermore, the result of the value of equity divided by share outstanding is intrinsic value per share of Pegadaian based on the excess return models is IDR 2.571,41/share.

3.1.3.1 Excess Return Model Risk Analysis: Scenario Analysis

Similar to previously analyzed, the scenario analysis for excess return models that set up with three scenarios too, pessimistic (worst), most likely (expected), and optimistic (best) used assumption as shown below.

Scenario Analysis	Pessimistic	Most Likely	Optimistic
Levered beta	0,60	0,80	0,90
Risk Premium	7,05 %	9,05 %	10,05 %
Risk-free Rate	5,09 %	7,09 %	8,09 %
Stable Growth Rate	3,3 %	5,3 %	6,3 %
The Range of Intrinsic Value (Monte Carlo Simulation)	IDR 658,22 – 2.240,00 /share		

Table 3.11. Excess Return Models – Scenario Analysis

Source: Analysis (2020)

Using Monte Carlo simulation, the scenario analysis for excess return models ran 1000 schemes. Based on the result below the range of intrinsic value between IDR 658,22 – 2.240,00/share.

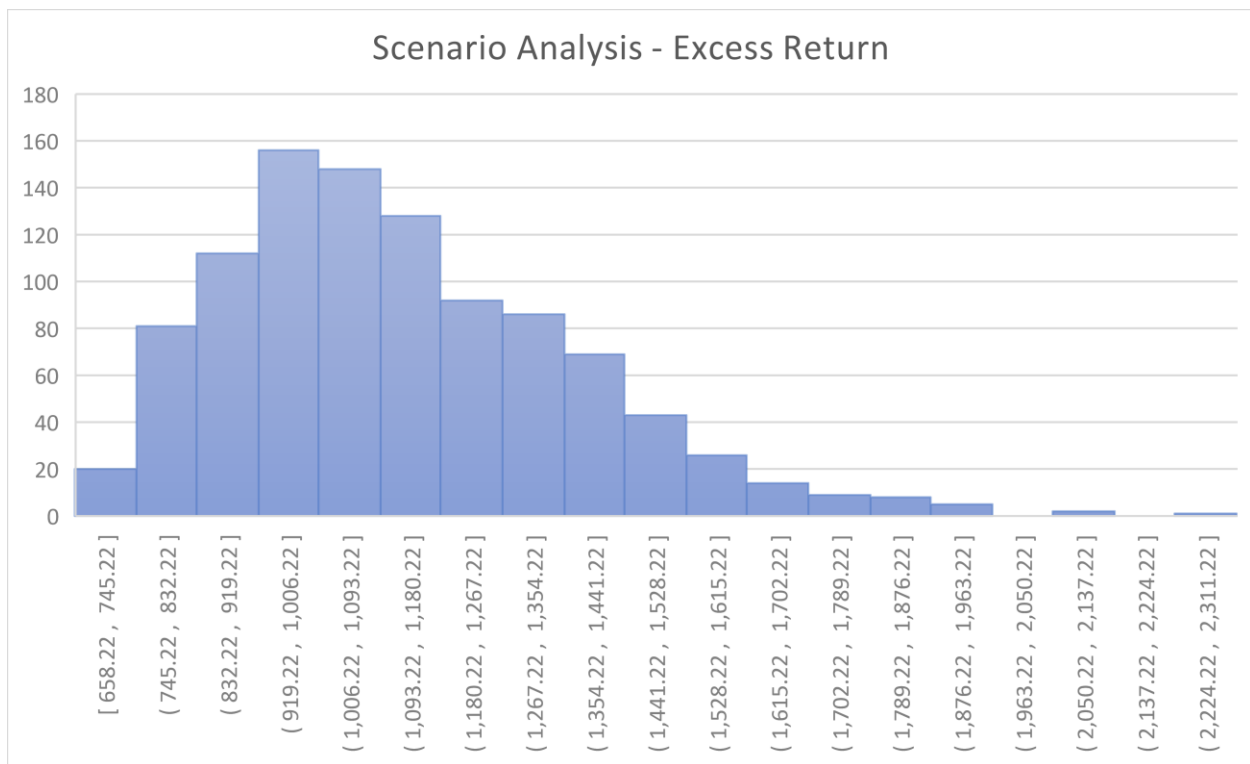


Figure 3.2. The Range of Intrinsic Value – Excess Return Model

Source: Analysis (2020)

3.2 Relative Valuation

For financial service firms using value to EBITDA or value to EBIT by firm value multiples, cannot be easy to adapt. This is because operating income cannot estimate easily for financial service firms. The equity multiples appropriated to analyze financial service firms. There are two equity multiples most widely used are price-earnings ratios and price to book value ratio. This study will use the price-earnings ratio and the price to book value ratio for relative valuation.

3.2.1 Price to Earnings Ratio

According to Damodaran (2009), the definition of the price to earnings ratio is the ratio of the price per share to the earnings per share.

$$\text{Price Earnings Ratio} = \frac{\text{Price per share}}{\text{Earnings per share}}$$

There two kinds of P/E Ratios, that is trailing P/E Ratio and forward P/E Ratio. This is based on EPS. Earnings per share have two main types, that are trailing twelve months (TTM) earnings per share, such as in trailing P/E ratio, and future or expected earning to share, such as in the forward P/E ratio. This study will use the forward P/E Ratio of the industry average to calculate the fair price per share of Pegadaian.

Fair price per share = Industry Average Forward P/E Ratio × Expected EPS

The basic assumptions will be used for calculated fair price per share of PT Pegadaian using the price to earnings ratio as follow:

- For estimate earnings per share in the year 2020, assuming growth of earnings (total revenue) respective with Compound Annual Growth Rate (CAGR) from 2015- 2019.
- For calculating the EPS 2020, the EPS(TTM) 2019 for each company will be multiplied with a growth rate from the CAGR of the total revenue in 2015-2019.
- Continuous the previous assumption, the researcher assumed PT Pegadaian issued public shares is 25 billion shares at IPO.

COMPANY	2015 TOTAL REVENUE (in million rupiahs)	2019 TOTAL REVENUE (in million rupiahs)	CAGR
Adira Dinamika Multi Finance Tbk.	8.066.259	11.337.726	9%
BFI Finance Indonesia Tbk.	2.831.000	5.241.000	17%
Clipan Finance Indonesia Tbk.	1.111.000	2.165.000	18%
Verena Multi Finance Tbk.	279.000	333.000	5%
HD Finance Tbk.	546.692	263.595	-17%
Wahana Ottomitra Multiartha Tbk.	1.740.347	2.643.687	11%
Intan Baruprana Finance Tbk.	443.024	186.570	-19%
Mandala Multifinance Tbk.	1.700.357	1.745.719	1%
PT Tifa Finance Tbk	20.062	33.034	13%
PT Batavia Prosperindo Finance Tbk	41.742	74.857	16%
PT Pegadaian	8.933.336	13.360.528	11%

Table 3.12. The Compound Annual Growth Rate of Total Revenue From 2015-2019

Source: Analysis (2020)

	Market Price (IDR)	2019 EPS (TTM) (IDR/share)	2019 P/E (TTM)	2020 EPS (IDR/share)	Forward P/E
Adira Dinamika Multi Finance Tbk.	7.400	2.108,69	3,51	2.296,02	3,22
BFI Finance Indonesia Tbk.	360	44,48	8,09	51,88	6,94
Clipan Finance Indonesia Tbk.	199	90,75	2,19	107,22	1,86
Verena Multi Finance Tbk.	107	5,96	17,95	6,23	17,18
HD Finance Tbk.	150	(81,00)	(1,85)	(67,50)	(2,22)
Wahana Ottomitra Multiartha Tbk.	220	74,19	2,97	82,36	2,67
Intan Baruprana Finance Tbk.	298	(78,62)	(3,79)	(63,33)	(4,71)
Mandala Multifinance Tbk.	1.080	145,03	7,45	145,99	7,40
Tifa Finance Tbk	480	30,03	15,98	34,02	14,11
Batavia Prosperindo Finance Tbk	1.200	41,59	28,85	48,13	24,93
Pegadaian		124,32		137,48	
Average					7,14

Table 3.13. The Average of Forward P/E Ratio

Source: Analysis (2020)

The EPS of PT Pegadaian in 2019 can be calculated at IDR 124,32/share. Furthermore, the expected EPS in 2020 of Pegadaian with a growth rate corresponding with the Compound Annual Growth Rate (CAGR) of total revenue from 2015-2019 can be estimated at IDR 137,48/share. The fair price per share of Pegadaian using forward P/E Ratio can be calculated,

Fair price per share = 7,14 x IDR 137,48 /share

= IDR 981,35 /share

3.2.2 Price to Book Value Ratio

According to Damodaran (2009), the definition of price to book value ratio is the price per share dividing by the book value of equity per share.

$$\text{Price to Book Value Ratio} = \frac{\text{Price per share}}{\text{Book value of equity per share}}$$

In investment analysis, the price to book value ratio mostly used by the investor for the benchmark. The book value can be compared to the market price cause measure of value that relatively stable and intuitive. For comparison estimates of value for investors, the book value is a simpler

benchmark. This study will use the average of the industry expected price to book value ratio 2020 to find the fair price per share of Pegadaian in 2020.

Fair price per share = Industry Average Expected PBV Ratio x Expected BV of Equity per Share

The basic assumptions will be used for calculated fair price per share of PT Pegadaian using the price to book value ratio as follow:

- For estimate book value of equity per share in the year 2020, assuming growth of book value of equity respective to Compound Annual Growth Rate (CAGR) from 2015- 2019.
- For calculating the book value of equity per share 2020, the book value of equity per share 2019 each company will be multiplied with a growth rate from the CAGR of the total equity in 2015-2019.
- Pegadaian assumed to issued 25 billion shares when IPO.

COMPANY	2015 TOTAL EQUITY (in million rupiahs)	2019 TOTAL EQUITY (in million rupiahs)	CAGR
Adira Dinamika Multi Finance Tbk.	4.360.789	8.078.795	17%
BFI Finance Indonesia Tbk.	4.019.103	6.080.180	11%
Clipan Finance Indonesia Tbk.	3.598.928	4.705.682	7%
Verena Multi Finance Tbk.	284.348	668.594	24%
HD Finance Tbk.	496.611	594.294	5%
Wahana Ottomitra Multiartha Tbk.	755.591	1.370.577	16%
Intan Baruprana Finance Tbk.	568.865	275.365	-17%
Mandala Multifinance Tbk.	1.594.385	2.277.895	9%
PT Tifa Finance Tbk	296.243	370.710	6%
PT Batavia Prosperindo Finance Tbk	499.219	819.327	13%
PT Pegadaian	12.532.944	23.060.310	16%

Table 3.14. The Compound Annual Growth Rate of Total Equity From 2015-2019

Source: Analysis (2020)

	Market Price (IDR)	2019 Book Value of Equity per share (IDR)	2019 PB Ratio	2020 Book Value of Equity per share (IDR)	2020 Expected PBV Ratio
Adira Dinamika Multi Finance Tbk.	7,400	8,079.00	0.92	9,425.47	0.79

BFI Finance Indonesia Tbk.	360	380.79	0.95	422.31	0.85
Clipan Finance Indonesia Tbk.	199	1,180.99	0.17	1,262.87	0.16
Verena Multi Finance Tbk.	107	117.56	0.91	145.58	0.74
HD Finance Tbk.	150	97.47	1.54	101.95	1.47
Wahana Ottomitra Multiartha Tbk.	220	393.68	0.56	456.88	0.48
Intan Baruprana Finance Tbk.	298	181.48	1.64	151.37	1.97
Mandala Multifinance Tbk.	1,080	859.58	1.26	939.77	1.15
Tifa Finance Tbk	480	343,34	1,40	363,14	1,32
Batavia Prosperindo Finance Tbk	1.200	459,61	2,61	520,21	2,31
Pegadaian		922,41		1.074,31	
Average					1,12

Table 3.15. The Average of Expected PBV Ratio

Source: Analysis (2020)

The book value of equity in 2019 that is IDR 23.060.310 (in million). Pegadaian's book value of equity per share in 2019 can be calculated at IDR 922,41/share. So, the expected BVPS in 2020 of Pegadaian with a growth rate corresponding with the Compound Annual Growth Rate (CAGR) of total equity from 2015-2019 can be estimated at IDR 1.074,31/share. Furthermore, the fair price per share of Pegadaian using PBV Ratio can be calculated,

$$\begin{aligned}\text{Fair price per share} &= 1,12 \times \text{IDR } 1.074,31 / \text{share} \\ &= \text{IDR } 1.206,39 / \text{share}\end{aligned}$$

3.3 Valuation Summary

The intrinsic value of Pegadaian estimated by absolute valuation and relative valuation. The weighted average from the result of absolute valuation and relative valuation needed to know the weighted average of the Pegadaian's intrinsic value. The calculation of the weighted average the intrinsic value is multiplying the result of absolute valuation and relative valuation with confidence level weight from each valuation model. As the table below listed the result of the weighted average Pegadaian's intrinsic value.

Valuation Models	Valuation Result	Confidence Level Weight	Weighted Average Intrinsic Value
Excess Return Models	IDR 2.571,41/share	55%	IDR 1.414,27/share
Free Cash Flow to Equity Models	IDR 2.383,73/share	35%	IDR 834,31/share
Price to Book Value Ratio	IDR 1.206,39/share	5%	IDR 60,32/share
Price to Earnings Ratio	IDR 981,35//share	5%	IDR 49,07/share
Total Weighted Average		100%	IDR 2.357,97/share

Table 3.16. The Weighted Average Intrinsic Value

Source: Analysis (2020)

As the weighted average intrinsic value table above, the weighted average intrinsic value calculated using the result of the four valuations model with each confidence level weight. The calculation using the absolute valuation better than the relative valuation, which is the researcher confides in. In this study, the excess return models that the researcher confides in valuation compared to other models. The researcher confides in 55% to the excess return models, 35% for the free cash flow to equity models in this study. Therefore, the remaining 5% for the price-to-earnings ratio and 5% for the price-to-book value ratio. This delivered the results of the weighted average intrinsic value is IDR 2.357,97//share. The researchers estimated that the intrinsic value of Pegadaian when IPO in the around of IDR 2.357,97/share.

CHAPTER IV

CONCLUSION AND RECOMMENDATION

4.1 Conclusion

PT Pegadaian has planned to do an initial public offering (IPO) more than seven years ago. According to the initial plan, PT Pegadaian planning to do an IPO in 2020, but because of the coronavirus disease pandemic, it seems that PT Pegadaian has postponed its plans to do an IPO this year. Coronavirus disease pandemic causes global economic growth to decline and causes several countries to hit a recession economy. Even though the Indonesia and global economic conditions are in decline, PT Pegadaian is still preparing to plan an IPO in the following years by still presented good company performance in order to attract the attention of investors.

Based on the external analysis, PT Pegadaian still domination outstanding loan compared to private pawn and pawning services at Islamic banks. The number of new private pawn companies that established has not had a major influence on the growth of Pegadaian's market share. Besides that, technological developments in the financial services industry (Financial technology) make the competition even tighter. Pegadaian responds to this challenge as a new opportunity by launching service features that make it easier for consumers.

In the internal analysis, PT Pegadaian has around 14,57 million customers and is optimistic that it will continue to grow. PT Pegadaian has branch companies are all over Indonesia and has received many awards and certifications from various institutions for various categories. Furthermore, based on financial ratio analysis, PT Pegadaian has a profitability ratio above the average of its competitors. From the financial leverage ratio, it can be seen that PT Pegadaian uses debt as its financial source. Furthermore, PT Pegadaian also has a better liquidity ratio than the competitor's average. PT Pegadaian's capability to pay its short-term debt is well. Besides, PT Pegadaian also has an NPL ratio that is smaller than the competitor's average, so in managing loans and credit risk management, PT Pegadaian is well.

PT Pegadaian has many strengths to minimize weaknesses and that create opportunity from challenges to make the company grow even greater. The unavoidable digitization becomes an opportunity to build digital products, which later can attract more consumers, especially millennials. This opportunity is used by PT Pegadaian by building various digital-based products and services that entice consumer interest and make it easier for consumers to make transactions.

The absolute valuation and relative valuation used for the valuation of Pegadaian's intrinsic value in this study. The absolute valuation insists on two valuations that is free cash flow to equity models, and excess return models. The result of the intrinsic value using the free cash flow of the equity model is IDR 2.383,73/share. Followed by the scenario analysis using Monte Carlo simulation, the result is obtained the range of intrinsic value that is IDR 632,36 – 2.080,06/share. Next, the result of the intrinsic value using the excess return model is IDR 2.571,41/share. Followed by the scenario analysis using Monte Carlo simulation, the result is obtained the range of intrinsic value that is IDR 658,22 – 2.240,00/share.

Furthermore, the valuation using the relative valuation insists on two valuations that is price to earnings ratio and price to book value ratio. The result of intrinsic value using the price to earnings ratio is IDR 981,35/share. Then, the result of intrinsic value using the price to book value ratio is IDR 1.206,39/share. The relative valuation tends to be easier in the calculation and does not think about the underlying factors such as risk assumptions, growth, and potential cash flow. For estimating short terms valuation, the relative valuations are suitable.

The intrinsic value from the result of the four-valuation model will be calculated with each confidence level weight and obtain the results of weighted average intrinsic value. The researcher believes that the calculation using the absolute valuation better than the relative valuation. The researcher more confides in the excess return model valuation compared to other models in this study. For confident level weight, the researcher confides in 55% to the excess return models, 35% for the free cash flow to equity models, 5% for the price-to-earnings ratio, and 5% for the price-to-book value ratio. The weighted average of the intrinsic value calculated by multiplying the result of absolute valuation and relative valuation with confidence level weight from each valuation model. Based on the result, researchers expected that the intrinsic value of Pegadaian when IPO around at IDR 2.357,97/share.

4.2 Recommendation

Based on the result of analyzing and valuation PT Pegadaian's intrinsic value, so the researcher proposed a recommendation to PT Pegadaian and investor as follow,

Recommendation for PT Pegadaian

PT Pegadaian has the potential to create a new customer acquisition by developing a transformation of digital-based products and services because users of the Pegadaian Digital application are still low. PT Pegadaian must construct information technology infrastructure to support the development of distribution channels and digital services to improve service limitations in the Pegadaian Digital application. Besides that, the innovations of feature and digitizing in business processes and marketing programs must need to do by PT Pegadaian. PT Pegadaian must target customers from millennials, microbusinesses, and consumer segments that are new centers of growth for credit in Indonesia because credit penetration in Indonesia is still low.

Recommendation for investors

The high intrinsic value of the result valuation underlies the researchers providing recommendations for investors to buy PT Pegadaian shares during the IPO. The matter which investor must consider buying PT Pegadaian stock as a feasible investment that are:

- The result of valuation based on financial ratio analysis of PT Pegadaian can conclude that PT Pegadaian has good performance.
- PT Pegadaian has the largest domination of Outstanding Loans compared to private pawn and pawning services at Islamic banks.
- Based on SEOJK No. 1/SEOJK.05/2016 about the level of the financial health of financing companies, the result capital ratio of PT Pegadaian is health that means PT Pegadaian could bear the risk of the productive asset than can finance operational activities and make a large enough contribution to profitability. The financial health of PT Pegadaian can increase

customer security and increase customer confidence and have a positive impact on increasing profitability.

- The last insight, PT Pegadaian is a state-owned company which is good management with experience for 119 years. Besides that, PT Pegadaian has many branches and already received many awards and certifications. That means PT Pegadaian has good brand image value.

Furthermore, this study aims to provide an overview of the condition of PT Pegadaian as consideration for buying PT Pegadaian shares during the IPO. For any decisions made based on this recommendation, the researcher is not responsible. The researcher does not have any affiliation with PT Pegadaian.

REFERENCES

- Badan Pusat Statistik. (2020, January 15). *Persentase Penduduk Miskin September 2019 Turun Menjadi 9,22 Persen*. Retrieved May 21, 2020, from Badan Pusat Statistik: <https://www.bps.go.id/pressrelease/2020/01/15/1743/persentase-penduduk-miskin-september-2019-turun-menjadi-9-22-persen.html>
- Badan Pusat Statistik. (2020, February 5). *Ekonomi Indonesia 2019 Tumbuh 5,02 Persen*. Retrieved September 19, 2020, from Badan Pusat Statistik: <https://www.bps.go.id/pressrelease/2020/02/05/1755/ekonomi-indonesia-2019-tumbuh-5-02-persen.html>
- Badan Pusat Statistik. (2020, May 5). *Ekonomi Indonesia Triwulan I 2020 Tumbuh 2,97 Persen*. Retrieved May 17, 2020, from Badan Pusat Statistik: <https://www.bps.go.id/pressrelease/2020/05/05/1736/ekonomi-indonesia-triwulan-i-2020-tumbuh-2-97-persen.html>
- Badan Pusat Statistik. (2020, May 5). *Februari 2020: Tingkat Pengangguran Terbuka (TPT) sebesar 4,99 persen*. Retrieved May 21, 2020, from Badan Pusat Statistik: <https://www.bps.go.id/pressrelease/2020/05/05/1672/februari-2020--tingkat-pengangguran-terbuka--tpt—sebesar-4-99-persen.html>
- Badan Pusat Statistik. (2020). *Proyeksi Penduduk Indonesia 2015-2045 Hasil SUPAS 2015*. Retrieved June 20, 2020, from Badan Pusat Statistik: <https://www.bps.go.id/publication/download.html?nrbfveve=NzhkMjRkOTAyMDAyNmFkOTVjNmI1OTY1&xzmn=aHR0cHM6Ly93d3cuYnBzLmdvLmlkL3B1YmxpY2F0aW9uLzIwMTgvMTAvMTkvNzhkMjRkOTAyMDAyNmFkOTVjNmI1OTY1L3Byb3lla3NpLXB1bmR1ZHVrLWluZG9uZXNpYS0yMDE1LTIwNDUtaGFzaWw3VwYXMTMjAxNS5odG1s&twoadfnarfeauf=MjAyMC0xMC0xOCwNjoyMT00Ng%3D%3D>
- Bank Indonesia. (2020). *BI 7-Day (Reverse) Repo Rate*. Retrieved May 21, 2020, from <https://www.bi.go.id/en/moneter/bi-7day-RR/data/Contents/Default.aspx>

- Bank Indonesia. (n.d.). *Financial Technology*. Retrieved May 22, 2020, from <https://www.bi.go.id/id/edukasi-perlindungan-konsumen/edukasi/produk-dan-jasa-sp/fintech/Pages/default.aspx>
- Bank Indonesia. (2020). *Inflation Report (Consumer Price Index)*. Retrieved May 17, 2020, from <https://www.bi.go.id/en/moneter/inflasi/data/Default.aspx>
- Bodie, Z., Kane, A., Marcus, A.J. (2013). *Essentials of Investments*, 9th Edition. New York: The Mc Graw-Hill Companies, Inc.
- Damodaran, A. (2006). *Damodaran on Valuation: Security Analysis for Investment and Corporate Finance*, 2nd Edition. New Jersey: John Wiley & Sons, Inc.
- Damodaran, A. (2006). *Valuation Approaches and Metrics: A Survey of The Theory and Evidence*. Retrieved September 26, 2020, from NYU Stern School of Business: <http://people.stern.nyu.edu/adamodar/pdfiles/papers/valuesurvey.pdf>
- Damodaran, A. (2009). *Valuing Financial Service Firms*. Retrieved March 10, 2020, from NYU Stern School of Business: <http://people.stern.nyu.edu/adamodar/pdfiles/papers/finfirm09.pdf>.
- Damodaran, A. (2012). *Investment Valuation: Tools and Techniques for Determining the Value of Any Assets*, 3rd Edition. New Jersey: John Wiley & Sons, Inc.
- Damodaran, A. (2015). *Applied Corporate Finance*, 4th Edition. New Jersey: John Wiley & Sons, Inc.
- Damodaran, A. (2020, July 1). *Country Default Spreads and Risk Premiums*. Retrieved September 12, 2020, from NYU Stern School of Business: <http://pages.stern.nyu.edu/~adamodar>

/New_Home_Page/datafile/ctryprem.html

Damodaran, A. (n.d.). *Chapter 21: Valuing Financial Service Firms*. Retrieved March 10, 2020, from NYU Stern School of Business: <http://pages.stern.nyu.edu/~adamodar/pdfiles/valn2ed/ch21.pdf>.

Damodaran, A. (n.d.). *The Stable Growth Rate*. Retrieved September 19, 2020, from NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/valquestions/stablegrowthrate.htm

Damodaran, A. (n.d.). *V. Valuing Financial Service Companies*. Retrieved September 26, 2020, from NYU Stern School of Business: <http://people.stern.nyu.edu/adamodar/podcasts/valfall15/valsession15.pdf>

finance.yahoo.com. (2020). *Summary PT Adira Dinamika Multi Finance Tbk (ADMF.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/ADMF.JK?p=ADMF.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Batavia Prosperindo Finance Tbk (BPFI.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/BPFI.JK?p=BPFI.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT BFI Finance Indonesia Tbk (BFIN.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/BFIN.JK?p=BFIN.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Clipan Finance Indonesia Tbk (CFIN.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/CFIN.JK?p=CFIN.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Intan Baruprana Finance Tbk (IBFN.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/IBFN.JK?p=IBFN.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT KDB Tifa Finance Tbk (TIFA.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/TIFA.JK?p=TIFA.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Mandala Multifinance Tbk (MFIN.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/MFIN.JK?p=MFIN.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Radana Bhaskara Finance Tbk (HDFA.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/HDFA.JK?p=HDFA.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Verena Multi Finance Tbk (VRNA.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/VRNA.JK?p=VRNA.JK&.tsrc=fin-srch>

finance.yahoo.com. (2020). *Summary PT Wahana Ottomitra Multiartha Tbk (WOMF.JK)*. Retrieved September 21, 2020, from: <https://finance.yahoo.com/quote/WOMF.JK?p=WOMF.JK&.tsrc=fin-srch>

Financial Stability Board. (2017, June 27). *Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention*. Retrieved May 22, 2020, from: <https://www.fsb.org/wp-content/uploads/R270617.pdf>

Franedy, R. (2018, January 10). *Ini Dia Empat Jenis Fintech di Indonesia*. Retrieved May 22, 2020, from: <https://www.cnbcindonesia.com/tech/20180110145800-37-1126/ini-dia-empat-jenis-fintech-di-indonesia>

Gitman, L.J., & Zutter, C.J. (2015). *Principles of Managerial Finance*, 14th Edition. Pearson Education.

Golin, J., Delhaise, P. (2013). *The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers, and Investors*, 2nd Edition. Singapore: John Wiley & Sons Singapore Pte, Ltd.

Hayes, A. (2020, March 17). *Price-to-Earnings Ratio – P/E Ratio*. Retrieved September 26, 2020, from Investopedia.com: <https://www.investopedia.com/terms/p/price-earningsratio.asp>

Hitt, M.A., Ireland, R.D., Hoskisson, R.E. (2011). *Strategic Management: Competitiveness and Globalization: Concepts*, 9th Edition. South-Western Cengage Learning.

Kementerian Keuangan. (2015). *Peraturan Menteri Keuangan Republik Indonesia Nomor 169/PMK.010/2015 Tentang Penentuan Besarnya Perbandingan Antara Utang dan Modal Perusahaan Untuk Keperluan Penghitungan Pajak Penghasilan*. Retrieved June 15, 2020, from: <https://jdih.kemenkeu.go.id/fullText/2015/169~PMK.010~2015Per.pdf>

Kementerian Keuangan. (2020). *Perppu 1/2020 Tentang Kebijakan Keuangan Negara dan Stabilitas Sistem Keuangan Untuk Penanganan Pandemi Corona Virus Disease 2019 (COVID-19) dan/atau Dalam Rangka Menghadapi Ancaman yang Membahayakan Perekonomian Nasional dan/atau Stabilitas Sistem Keuangan*. Retrieved May 17, 2020, from: <https://www.pajak.go.id/sites/default/files/2020-04/Perpu%20Nomor%201%20Tahun%202020.pdf>

Otoritas Jasa Keuangan. (2016). *Lampiran 1 Surat Edaran Otoritas Jasa Keuangan Nomor 1/SEOJK.05/2016 Tentang Tingkat Kesehatan Keuangan Perusahaan Pembiayaan*. Retrieved September 20, 2020, from ojk.go.id: <https://www.ojk.go.id/id/kanal/iknb/regulasi/lembaga-pembiayaan/surat-edaran-ojk/Documents/LampiranI-TKK-PP.pdf>

Otoritas Jasa Keuangan. (2016). *POJK No. 31/POJK.05/2016 Tentang Usaha Pergadaian*.

Retrieved May 22, 2020, from ojk.go.id: <https://www.ojk.go.id/id/regulasi/otoritas-jasa-keuangan/peraturan-ojk/Documents/Pages/POJK-usaha-pergadaian-/POJK-Usaha-Pergadaian.pdf>

Otoritas Jasa Keuangan. (2017). *POJK No. 51/POJK.03/2017 Tentang Penerapan Keuangan*

Berkelanjutan Bagi Lembaga Jasa Keuangan, Emiten, dan Perusahaan Publik. Retrieved May 22, 2020, from ojk.go.id: <https://www.ojk.go.id/sustainable-finance/id/peraturan/peraturan-ojk/Documents/SAL%20POJK%2051%20%20keuangan%20berkelanjutan.pdf>

Otoritas Jasa Keuangan. (2020). *POJK No. 14/POJK.05/2020 Tentang Kebijakan Countercyclical*

Dampak Penyebaran Coronavirus Disease 2019 Bagi Lembaga Jasa Keuangan Nonbank. Retrieved May 17, 2020, from ojk.go.id: <https://www.ojk.go.id/id/regulasi/Documents/Pages/Kebijakan-Countercyclical-Dampak-Penyebaran-Coronavirus-Disease-2019-bagi-Lembaga-Jasa-Keuangan-Non-Bank/pojk%2014-2020.pdf>

Otoritas Jasa Keuangan. (2016). *Surat Edaran Otoritas Jasa Keuangan Nomor 1/SEOJK.05/2016*

Tentang Tingkat Kesehatan Keuangan Perusahaan Pembiayaan. Retrieved September 20, 2020, from ojk.go.id: [https://www.ojk.go.id/id/regulasi/Documents/Pages/SEOJK-tentang-Tingkat-Kesehatan-Kuangan-Perusahaan-Pembiayaan/SAL%20-SEOJK%20Tingkat%20Kesehatan%20Keuangan%20Perusahaan%20Pembiayaan%20\(TKK\).pdf](https://www.ojk.go.id/id/regulasi/Documents/Pages/SEOJK-tentang-Tingkat-Kesehatan-Kuangan-Perusahaan-Pembiayaan/SAL%20-SEOJK%20Tingkat%20Kesehatan%20Keuangan%20Perusahaan%20Pembiayaan%20(TKK).pdf)

Pemeringkat Efek Indonesia. (2020, September 11). *PEFINDO Beta Stock Edition: 11 September*

2020. Retrieved September 12, 2020, from pefindo.com: <https://www.pefindo.com/fileman/file/940>

PT Bank BNI Syariah. (2020). *Laporan Tahunan 2019: Strong Commitment to Quality Growth*.

Retrieved June 15, 2020, from: <https://www.bnisyariah.co.id/Portals/1/BNISyariah/Perusahaan/Hubungan%20Investor/AR/Annual%20Report%20BNI%20Syariah-bahasa.pdf>

PT Bank BRISyariah Tbk. (2020). Laporan Tahunan 2019: *Berinovasi Untuk Pertumbuhan Berkelanjutan*. Retrieved June 15, 2020, from: https://www.brisyariah.co.id/images/upload/reports/6f6071509e6597a1060a2398f1fd4b20_Laporan_Tahunan.pdf

PT Bank Syariah Mandiri. (2020). Laporan Tahunan 2019: *Memberikan Nilai Tambah Melalui Pengembangan Kapabilitas Internal*. Retrieved June 15, 2020, from: [https://www.mandirisyariah.co.id/assets/pdf/annual-report/Bank-Syariah_mandiri-Annual-Report2019\(Update\).pdf](https://www.mandirisyariah.co.id/assets/pdf/annual-report/Bank-Syariah_mandiri-Annual-Report2019(Update).pdf)

PT Pegadaian. (2019). Laporan Tahunan 2018: *Menuju P(era)n Baru*. Retrieved May 02, 2020, from: https://www.pegadaian.co.id/uploads/laporan/V1_IND_AR_PEGADAIAN_2018_280819.pdf

PT Pegadaian. (2020). Laporan Tahunan 2019: *Digitalisme*. Retrieved September 23, 2020, from: https://www.pegadaian.co.id/uploads/laporan/AR_Pegadaian_2019_IND_220920.pdf

PT Pegadaian. (2020). *Struktur Organisasi*. Retrieved October 15, 2020, from: <https://www.pegadaian.co.id/profil/struktur-organisasi>

PT Penilai Harga Efek Indonesia. (2020, September 11). *Harga dan Yield Wajar Obligasi Pemerintah Indonesia Seri Benchmark*. Retrieved September 12, 2020, from [ibpa.co.id: http://www.ibpa.co.id/DataPasarSuratUtang/HargadanYieldHarian/tabid/84/Default.aspx](http://www.ibpa.co.id/DataPasarSuratUtang/HargadanYieldHarian/tabid/84/Default.aspx)

Schweser, K. (2019). *CFA Level 1 Book 1: Ethical and Professional Standards and Quantitative Methods*. United States of America: Kaplan.

Thompson, A.A., Peteraf, M.A., Gamble, J.E., Strickland III, A.J. (2016). *Crafting and Executing Strategy: The Quest for Competitive Advantage: Concepts and Cases*, 12th Edition. McGraw-Hill Education.

Walfajri, M. (2020, January 8). *Sudah Tahun 2020, Apa Kabar Rencana IPO Pegadaian?*
Retrieved June 12, 2020, from [Keuangan.kontan.co.id: https://keuangan.kontan.co.id/news/sudah-tahun-2020-apa-kabar-rencana-ipo-pegadaian](https://keuangan.kontan.co.id/news/sudah-tahun-2020-apa-kabar-rencana-ipo-pegadaian)

APPENDIX

APPENDIX 1. Operational Profit Margin From 2015-2019

Pegadaian (in million rupiahs)			
Years	Operating Profit	Sales	Operating Profit Margin
2015	2.605.357	8.933.336	29,16%
2016	3.000.183	9.708.058	30,90%
2017	3.337.968	10.522.797	31,72%
2018	3.634.602	12.748.054	28,51%
2019	4.208.553	17.693.653	23,79%

BSM (in million rupiahs)			
Years	Operating Profit	Sales	Operating Profit Margin
2015	369.915	5.960.016	6,21%
2016	442.987	6.467.897	6,85%
2017	470.206	7.286.674	6,45%
2018	839.990	7.688.793	10,92%
2019	1.809.264	8.417.750	21,49%

BNIS (in million rupiahs)			
Years	Operating Profit	Sales	Operating Profit Margin
2015	287,599	2,429,243	11,84%
2016	391,130	2,801,575	13,96%
2017	422,913	3,189,183	13,26%
2018	566,310	3,595,886	15,75%
2019	841,962	4,067,301	20,70%

BRIS (in million rupiahs)			
Years	Operating Profit	Sales	Operating Profit Margin
2015	158,979	1,397,310	11,38%
2016	239,232	1,598,700	14,96%
2017	139,494	1,622,606	8,60%
2018	157,473	1,803,207	8,73%
2019	118,378	2,053,977	5,76%

Years	Competitor Firm Average
2015	14,65%
2016	16,67%
2017	15,01%
2018	15,98%
2019	17,94%

APPENDIX 2. Net Profit Margin From 2015-2019

Pegadaian (in million rupiahs)			
Years	Operating Profit	Sales	Operating Profit Margin
2015	1.938.429	8.933.336	21,70%
2016	2.210.252	9.708.058	22,77%
2017	2.513.538	10.522.796	23,89%
2018	2.775.481	11.464.462	24,21%
2019	3.108.078	13.360.528	23,26%

BSM (in million rupiahs)			
Years	Net Profit	Sales	Net Profit Margin
2015	289.576	5.960.016	4,86%
2016	325.414	6.467.897	5,03%
2017	365.166	7.286.674	5,01%
2018	605.213	7.688.793	7,87%
2019	1.275.034	8.417.750	15,15%

BNIS (in million rupiahs)			
Years	Net Profit	Sales	Net Profit Margin
2015	228.525	2.429.243	9,41%
2016	277.375	2.801.575	9,90%
2017	306.686	3.189.183	9,62%
2018	416.080	3.595.886	11,57%
2019	603.153	4.067.301	14,83%

BRIS (in million rupiahs)			
Years	Net Profit	Sales	Net Profit Margin
2015	122.637	2.424.752	5,06%
2016	170.209	2.634.201	6,46%
2017	101.091	2.816.524	3,59%
2018	106.600	3.120.307	3,42%
2019	74.016	3.374.862	2,19%

Years	Competitor Firm Average
2015	10,26%
2016	11,04%
2017	10,53%
2018	11,77%
2019	13,86%

APPENDIX 3. Debt to Equity Ratio From 2015 – 2019

Pegadaian (in million rupiahs)			
Years	Total Liabilities	Common Stock Equity	Debt to equity ratio
2015	26.625.016	12.532.944	2,12
2016	30.396.979	16.476.913	1,84
2017	30.476.832	18.210.260	1,67
2018	32.674.699	20.116.489	1,62
2019	42.263.867	23.060.310	1,83

BSM (in million rupiahs)			
Years	Total Liabilities	Common Stock Equity	Debt to equity ratio
2015	9.883.107	5.613.739	1,76
2016	11.232.797	6.392.437	1,76
2017	13.531.435	7.314.241	1,85
2018	14.477.262	8.039.165	1,80
2019	19.052.303	9.245.835	2,06

BNIS (in million rupiahs)			
Years	Total Liabilities	Common Stock Equity	Debt to equity ratio
2015	3.310.505	2.215.658	1,49
2016	4.684.758	2.486.566	1,88
2017	6.612.712	3.807.298	1,74
2018	9.787.200	4.242.166	2,31
2019	13.413.684	4.735.076	2,83

BRIS (in million rupiahs)			
Years	Total Liabilities	Common Stock Equity	Debt to equity ratio
2015	6.421.537	2.339.812	2,74
2016	8.464.428	2.510.014	3,37
2017	9.100.455	2.602.841	3,50
2018	10.849.009	5.026.640	2,16
2019	11.880.036	5.088.036	2,33

Years	Competitor Firm Average
2015	2,03
2016	2,21
2017	2,19
2018	1,97
2019	2,27

APPENDIX 4. Debt Ratio From 2015 – 2019

Pegadaian (in million rupiahs)			
Years	Total Liabilities	Total Assets	Debt ratio
2015	26.625.016	39.157.960	0,68
2016	30.396.979	46.873.892	0,65
2017	30.476.832	48.687.092	0,63
2018	32.674.699	52.791.188	0,62
2019	42.263.867	65.324.177	0,65

BSM (in million rupiahs)			
Years	Total Liabilities	Total Assets	Debt ratio
2015	9.883.107	70.369.709	0,14
2016	11.232.797	78.831.722	0,14
2017	13.531.435	87.939.774	0,15
2018	14.477.262	98.341.116	0,15
2019	19.052.303	112.291.867	0,17

BNIS (in million rupiahs)			
Years	Total Liabilities	Total Assets	Debt ratio
2015	3.310.505	23.017.667	0,14
2016	4.684.758	28.314.175	0,17
2017	6.612.712	34.822.442	0,19
2018	9.787.200	41.048.545	0,24
2019	13.413.684	49.980.235	0,27

BRIS (in million rupiahs)			
Years	Total Liabilities	Total Assets	Debt ratio
2015	6.421.537	24.230.247	0,27
2016	8.464.428	27.687.188	0,31
2017	9.100.455	31.543.384	0,29
2018	10.849.009	37.869.177	0,29
2019	11.880.036	43.123.488	0,28

Years	Competitor Firm Average
2015	0,31
2016	0,32
2017	0,31
2018	0,32
2019	0,34

APPENDIX 5. Current Ratio From 2015-2019

Pegadaian (in million rupiahs)			
Years	Current Assets	Current Liabilities	Current Ratio
2015	33.559.369	18.576.889	1,81
2016	38.269.643	23.961.942	1,60
2017	39.661.960	24.118.917	1,64
2018	43.525.272	24.076.012	1,81
2019	53.830.391	34.976.438	1,54

BSM (in million rupiahs)			
Years	Current Assets	Current Liabilities	Current Ratio
2015	18.029.593	9.435.469	1,91
2016	22.394.415	10.787.193	2,08
2017	26.463.894	13.106.247	2,02
2018	29.909.923	13.203.623	2,27
2019	35.950.554	17.537.068	2,05

BNIS (in million rupiahs)			
Years	Current Assets	Current Liabilities	Current Ratio
2015	5.118.545	2.952.720	1,73
2016	7.706.835	4.263.806	1,81
2017	11.024.249	6.204.549	1,78
2018	12.590.889	9.077.849	1,39
2019	17.242.668	12.394.376	1,39

BRIS (in million rupiahs)			
Years	Current Assets	Current Liabilities	Current Ratio
2015	7.360.464	5.785.041	1,27
2016	9.291.739	6.550.555	1,42
2017	12.020.512	6.696.155	1,80
2018	15.365.821	8.844.975	1,74
2019	15.435.769	9.193.648	1,68

Years	Competitor Firm Average
2015	1,68
2016	1,72
2017	1,81
2018	1,80
2019	1,66

APPENDIX 6. ROA, ROE and NPL Ratio From 2015 – 2019

Pegadaian (in million rupiahs)			
Years	ROA	ROE	NPL
2015	4,95%	15,47%	1,32%
2016	4,72%	13,41%	1,26%
2017	5,16%	13,80%	1,18%
2018	5,26%	13,80%	1,57%
2019	4,76%	13,48%	1,18%

BSM (in million rupiahs)			
Years	ROA	ROE	NPL
2015	0,56%	5,92%	4,05%
2016	0,59%	5,81%	3,13%
2017	0,59%	5,72%	2,71%
2018	0,88%	8,21%	1,56%
2019	1,69%	15,66%	1,00%

BNIS (in million rupiahs)			
Years	ROA	ROE	NPL
2015	1,43%	11,39%	1,46%
2016	1,44%	11,94%	1,64%
2017	1,31%	11,42%	1,50%
2018	1,42%	10,53%	1,52%
2019	1,82%	13,54%	1,44%

BRIS (in million rupiahs)			
Years	ROA	ROE	NPL
2015	0,77%	6,33%	3,89%
2016	0,95%	7,40%	3,19%
2017	0,51%	4,10%	4,75%
2018	0,43%	2,49%	4,97%
2019	0,31%	1,57%	3,38%

Years	ROA Competitor Firm Average	ROE Competitor Firm Average	ROA Competitor Firm Average
2015	1,93%	9,78%	2,68%
2016	1,93%	9,64%	2,31%
2017	1,89%	8,76%	2,54%
2018	2,00%	8,76%	2,41%
2019	2,14%	11,06%	1,75%

APPENDIX 7. FREE CASH FLOW TO EQUITY VALUATION MODEL

FCFE MODEL VALUATION							
	2015	2016	2017	2018	2019		
Adjusted capital	13,901,628	17,942,985	19,747,857	21,532,074	24,870,280		
Risk adjusted assets	12,019,305	13,810,681	14,268,333	16,011,467	19,773,682		
Capital ratio	116%	130%	138%	134%	126%		
Growth of risk adjusted assets	10.51%	14.90%	3.31%	12.22%	23.50%		
Average growth of risk adjusted assets	12.89%						
Component Assets	Risk Weight	2014	2015	2016	2017	2018	2019
Loans - current and spesial mentioned	37.50%	10,388,313	11,464,301	13,030,459	13,563,431	14,973,293	18,449,859
Loans - substandard	50.00%	21,463	96,507	209,831	182,493	224,576	285,663
Loans - doubtful	62.50%	5,034	2,857	3,244	8,529	19,858	35,505
Loans - loss	75.00%	146,859	247,483	311,234	286,541	420,416	445,907
Equity capital for subsidiaries and associatio	75.00%	221,295	123,840	236,833	217,435	371,809	553,986
Other Assets	100.00%	93,194	84,317	19,081	9,905	1,516	2,762
Total		10,876,159	12,019,305	13,810,681	14,268,333	16,011,467	19,773,682
	Risk Adjusted Assets	Capital Ratio	Regulatory Capital	Reinvestment in Regulatory Capital			
2019	19,773,682	126%	24,870,280				
2020	22,322,204	122%	27,272,076	2,401,796			
2021	25,199,192	119%	29,879,855	2,607,779			
2022	28,446,979	115%	32,706,816	2,826,961			
2023	32,113,356	111%	35,766,139	3,059,323			
2024	36,252,272	108%	39,070,761	3,304,622			
2025	40,924,630	104%	42,633,092	3,562,332			
2026	46,199,184	101%	46,464,669	3,831,577			
2027	52,153,546	97%	50,575,721	4,111,051			
2028	58,875,333	93%	54,974,639	4,398,918			
2029	66,463,455	90%	59,667,337	4,692,698			
	ROE	Net Income	Reinvestment in Regulatory Capital	FCFE	Cum. cost of equity	PV	
2019	13.48%	3,108,078					
2020	13.50%	3,681,196	2,401,796	1,279,400	1.14	1,126,950	
2021	13.52%	4,039,171	2,607,779	1,431,392	1.29	1,110,594	
2022	13.57%	4,437,674	2,826,961	1,610,713	1.46	1,100,812	
2023	13.62%	4,870,647	3,059,323	1,811,324	1.66	1,090,409	
2024	13.72%	5,359,743	3,304,622	2,055,121	1.89	1,089,756	
2025	13.82%	5,891,058	3,562,332	2,328,727	2.14	1,087,699	
2026	13.92%	6,466,972	3,831,577	2,635,394	2.43	1,084,262	
2027	14.07%	7,115,013	4,111,051	3,003,962	2.76	1,088,632	
2028	14.22%	7,816,317	4,398,918	3,417,399	3.13	1,090,889	
2029	14.37%	8,573,027	4,692,698	3,880,329	3.56	1,091,069	
Total							10,961,072
TV	49,661,640.64						
Cummulative cost of equity	3.56						
PV	13,963,829.69						
Sum of PV FCFE	24,924,901,653.674						
Share outstanding	25,000,000,000						
Intrinsic value per share	997.00						

APPENDIX 8. EXCESS RETURN VALUATION MODEL

EXCESS RETURN MODEL VALUATION						
	Beginning BV of Equity	Cost of Equity	Equity Cost			
2020	23,060,310	13.53%	3,119,518			
2021	25,071,608	13.53%	3,391,600			
2022	27,261,570	13.53%	3,687,850			
2023	29,651,629	13.53%	4,011,169			
2024	32,260,807	13.53%	4,364,129			
2025	35,120,424	13.53%	4,750,968			
2026	38,256,213	13.53%	5,175,167			
2027	41,696,706	13.53%	5,640,585			
2028	45,487,027	13.53%	6,153,326			
2029	49,665,984	13.53%	6,718,641			
TV	52,298,281	13.53%	7,074,729			
	Net Income	Equity Cost	Excess Equity Return	Cummulative Cost of Equity	PV of Excess Equity Return	
2020	3,112,690	3,119,518	(6,828)	1.135	(6,015)	
2021	3,389,190	3,391,600	(2,409)	1.29	(1,869)	
2022	3,698,861	3,687,850	11,011	1.46	7,525	
2023	4,037,971	4,011,169	26,802	1.66	16,135	
2024	4,425,551	4,364,129	61,421	1.89	32,569	
2025	4,852,955	4,750,968	101,986	2.14	47,636	
2026	5,324,515	5,175,167	149,348	2.43	61,445	
2027	5,865,910	5,640,585	225,325	2.76	81,657	
2028	6,467,364	6,153,326	314,038	3.13	100,246	
2029	7,136,029	6,718,641	417,388	3.56	117,361	
TV	7,514,238	7,074,729	5,341,858	3.56	1,502,020	
		Total			1,958,711	
Beginning BV of Equity	23,060,310					
PV of Excess equity return					1,958,711	
Value of equity	25,019,020,982,403					
Share outstanding	25,000,000,000					
Intrinsic value per share	1,000.76					

APPENDIX 9. RELATIVE VALUATION MODEL – PRICE TO EARNINGS RATIO

Price to Earnings Ratio								
Fair price per share = Industry Average Forward P/E Ratio × Expected EPS								
981.35								
Company	2015 Total Revenue	2019 Total Revenue	CAGR	Market Price	2019 EPS (TTM)	2019 P/E Ratio(TTM)	2020 EPS	Forward P/E Ratio
Adira Dinamika Multi Finance Tbk.	8,066,259	11,337,726	9%	7,400	2,108.69	3.51	2,296.02	3.22
BFI Finance Indonesia Tbk.	2,831,000	5,241,000	17%	360	44.48	8.09	51.88	6.94
Clipan Finance Indonesia Tbk.	1,111,000	2,165,000	18%	199	90.75	2.19	107.22	1.86
Verena Multi Finance Tbk.	279,000	333,000	5%	107	5.96	17.95	6.23	17.18
HD Finance Tbk.	546,692	263,595	-17%	150	(81.00)	(1.85)	(67.50)	(2.22)
Wahana Ottomitra Multiartha Tbk.	1,740,347	2,643,687	11%	220	74.19	2.97	82.36	2.67
Intan Baruprana Finance Tbk.	443,024	186,570	-19%	298	(78.62)	(3.79)	(63.33)	(4.71)
Mandala Multifinance Tbk.	1,700,357	1,745,719	1%	1,080	145.03	7.45	145.99	7.40
PT Tifa Finance Tbk	20,062	33,034	13%	480	30.03	15.98	34.02	14.11
PT Batavia Prosperindo Finance Tbk	41,742	74,857	16%	1,200	41.59	28.85	48.13	24.93
PT Pegadaian	8,933,336	13,360,528	11%		124.32		137.48	
Average								7.14

APPENDIX 10. RELATIVE VALUATION MODEL – PRICE TO BOOK VALUE RATIO

Price to Book Value Ratio								
Fair Price per Share = Industry Average Expected PBV Ratio x Expected BV of Equity per Share								
1,206.39								
Company	Market Price	2015 Total Equity	2019 Total Equity	CAGR	2019 Book Value of Equity Per Share	2019 PBV Ratio	2020 Book Value of Equity Per Share	2020 PBV Ratio
Adira Dinamika Multi Finance Tbk.	7,400	4,360,789	8,078,795	17%	8,079.00	0.92	9,425.47	0.79
BFI Finance Indonesia Tbk.	360	4,019,103	6,080,180	11%	380.79	0.95	422.31	0.85
Clipan Finance Indonesia Tbk.	199	3,598,928	4,705,682	7%	1,180.99	0.17	1,262.87	0.16
Verena Multi Finance Tbk.	107	284,348	668,594	24%	117.56	0.91	145.58	0.74
HD Finance Tbk.	150	496,611	594,294	5%	97.47	1.54	101.95	1.47
Wahana Ottomitra Multiartha Tbk.	220	755,591	1,370,577	16%	393.68	0.56	456.88	0.48
Intan Baruprana Finance Tbk.	298	568,865	275,365	-17%	181.48	1.64	151.37	1.97
Mandala Multifinance Tbk.	1,080	1,594,385	2,277,895	9%	859.58	1.26	939.77	1.15
PT Tifa Finance Tbk	480	296,243	370,710	6%	343.34	1.40	363.14	1.32
PT Batavia Prosperindo Finance Tbk	1,200	499,219	819,327	13%	459.61	2.61	520.21	2.31
PT Pegadaian		12,532,944	23,060,310	16%	922.41		1,074.31	
Average								1.12