FINANCIAL FLEXIBILITY AND COMPANY PERFORMANCE ON INVESTMENT: A STUDY IN PT KERETA API INDONESIA (PERSERO)

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Abstract

This study attempted to find out the effect of financial flexibility on financial performance using investment as the moderating variable. This study was conducted in Indonesia's only state-owned railway transportation service provider, PT KAI, using quarterly financial reports from 2010 to 2019. This study provided a depiction and enriched literature on financial flexibility, especially in the context of state-owned enterprises that are prone to agency costs. The data of the study were processed using Eviews. The result indicated that financial flexibility affects company performance. The investment was also found to moderate the effect of financial flexibility on company performance.

Keywords: Financial Flexibility, Company Performance, Investment

1. Introduction

Investment emerges as one of the issues faced by State-owned Enterprises' (SOE) management, including PT Kereta Api Indonesia (PT KAI). PT KAI, as the country's national railway service provider, plays an important role in infrastructure development investment and provision of railway facilities in Indonesia in order to support the Government's need for efficient, timely, comfortable, and affordable mass transport. The service quality improvement may enhance the transportation customers' satisfaction(de Oña et al., 2013).

As a state-owned enterprise, PT KAI potentially faces an issue of agency cost, an issue regarding a contractual relationship between principal and agent, where both parties hold different interests in operating a company (Shapiro, 2005; Jensen and Meckling, 1976). One of the agency costs in management is related to the investment issue, where massive investment in railway infrastructure and facilities often leads to a suboptimal return of investment, adversely affecting the financial performance. Such a condition is reported by Li et al (2020), study where most state-owned enterprises' investment decisions are driven by political consideration or government' influence. Similarly, Chang and Ma (2019) also found that managerial efficiency may vary in an organization's lifecycle and is viewed as maintaining cost level when measuring the effect of financial flexibility on company financial performance. It is necessary for the company to apply financial flexibility in order to anticipate the negative effect of investment (Bancel and Mittoo, 2011; Jagannathan, R., Meier, I. and Tarhan, V, 2011; Brounen et al., 2004). This study aimed to find out the effect of financial flexibility on company performance as measured by the profitability of financial performance with investment as the moderating variable. The previous study reported that financial flexibility affects the company investment (Yung, 2015) and company performance (Cherkasova and Kuzmin, 2018; Denis and McKeon, 2012; de Jong et al, 2012; Marchica and Mura, 2010; Ma and Jin, 2016). For the purpose of this

study, a time series analysis of an Indonesian state-owned railway service provider, i.e., PT. KAI was performed by considering that This company has made numerous investments in facilities and infrastructure. In addition to improving the company's performance and operation, the purpose of the company's investment is to carry out the government's role in public service. In any investment, the company needs to manage its financial flexibility.

The present study selected a railway company based on several considerations. First, most railway companies have a large debt ratio. As presented in railway companies' financial reports, most of them bear a huge debt for their infrastructure investment. Railway companies prefer debt overselling their share as they can use their assets or rolling stocks for collateral, as Lawrence and Ollivier (2014) reported. Previous studies also highlight the importance of leverage policy to improve financial flexibility (Billett et al., 2007; Byoun, 2008; Campello et al., 2010). Second, railway companies are bound to the government's policy to provide a public service while at the same time working professionally to gain profit. This dilemma is faced by Indian Railways (Ali, 2015) where they serve as both public service and profit-oriented company at the same time.

The result of the study showed that, in terms of profitability, financial flexibility affects the financial performance of PT KAI. It is also reported that investment (measured using the amount of investment fund realization) positively moderates the effect of financial flexibility on financial performance. This study shows that the increase or decrease in financial flexibility negatively affects the company's performance. The study results support the previous finding that PT KAI's investment is expected to improve the operational cash flow in the future. Thus its effect on the financial performance in the year the investment was made is insignificant (Byoun, 2011; Marchica and Mura, 2010). The result of the study also contributes to the literature regarding the effect of financial flexibility on financial performance through investment made by state-owned railway companies.

This article is organized into the following sections: Section 1 discusses the development of PT KAI investment, followed by the concept of financial flexibility and hypothesis development. Section 2 describes the method, data, and sample. The data were analyzed and discussed in section 3, while the conclusion and recommendation are presented in section 4.

1.1 Development of Investment in PT KAI

The train is one of the modes of transport capable of safely transporting passengers and goods on a large scale in a more energy- and space-efficient manner than other long-distance transport modes.

The growth and development of railway transports are carried out by constructing new railway tracks, reactivating old tracks, developing double-track railways, and improving the railway tracks to support Indonesia's railway infrastructures and facilities.

Currently PT KAI serves as the only railway transportation company in Indonesia. However, its monopoly is under the supervision of the Indonesian government through the Directorate General of Transportation and Ministry of State-Owned Enterprise. As a state-owned company, PT KAI is obliged to provide a public service and should not merely focus on gaining profit. Moreover, from a theoretical perspective, monopoly(especially the one emerging from the government's action) may cause subversion of "natural distribution" of workforce and capital

among certain economic sectors, i.e., economic resources allocation that is different from the one determined by free-market competition (Salvadori and Signorino, 2014).

In addition to providing needs for public transportation, PT KAI is appointed to work on several investment projects to develop railway infrastructures and facilities in Indonesia. The realization of investment in railway infrastructure and facilities exhibited a significant increase from 2010 to 2019, as displayed in the following table:

Table 1. Investment 2010-2019

(in Billion Rupiah)

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Investment	0,5	1.126	1.152	3.994	1.434	2.519	2.331	2.912	11.594	6.508	33.571

Source: PT KAI

The problems arise when the government's demand for rapid, reliable, affordable, and comfortable transport does not have adequate financial support. According to the Ministry of Transportation data, it needs 233 trillion rupiahs (16,410 million USD) to achieve the Ministry's strategic plan and 605 trillion rupiahs (42,609 million USD) to achieve the 2030 National Plan. However, the Directorate General of Railway Transport allocation was only 4.7 trillion rupiahs (331 million USD) in 2011 and 18.8 trillion rupiahs (1,324 million USD) in 2015.

This condition becomes the management concern, as PT KAI is required to make huge government-assigned investments to realize the public service while at the same time making a business investment to support its operation and increase the company's profit.

To fulfil huge investment responsibility, the company applies for a loan from a third party (e.g., banking) or issues a financial obligation.

Table 2. Loan from 2010-2019

(in Billion Rupiah)

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Short Term Loan	773	1.238	749	1.629	2.864	2.748	2.487	2.131	1.723	1.533
Long Term Loan	812	881	750	4.244	4.631	6.385	8.310	10.542	10.416	14.021
Total Loan	**1.586**	**2.118**	**1.499**	**5.873**	**7.495**	**9.133**	**10.797**	**12.673**	**12.140**	**15.555**

Source: PT KAI

Company performance plays an important role in ensuring prospective investors and creditors. The present study is different from previous studies, where there is no study reporting the effect of facilities and infrastructure investment on the company's performance in Indonesia's railway

industry. This study involved PT KAI as the only railway company in Indonesia, whose 100% of its share is owned by the Indonesian Government. This company, in addition to achieving its commercial purposes, is required to invest in railway infrastructures and facilities in Indonesia. This condition potentially put the company at risk of agency cost. Previous Studies used panel data from the heterogeneous company, while the present study employed time-series data from a single company and excluded non-productive assets. Thus, it is expected to provide a clearer depiction of the effect of investment realization on the company's financial performance.

1.2 Literature review and Hypothesis Development

Agency Theory

Academic literature on economy regarding agency theory was firstly developed in 1970 by Ross (1973) and Jensen and Meckling (1976). The theory grew and spread to management literature, including Eisenhardt (1989) that concludes that agency theory has a significant contribution to organization theory. It contributes through the agency theory of risk, outcome uncertainty, incentives, and information system.

Agency theory depicts the contractual relationship between principals and the agents, where both parties hold different interests in operating an organization. (Shapiro, 2005). The principal refers to the party who owns the organization, whose interests are often different from the agents' interests as the decision-maker, leading to conflict of interest between the two parties (Jensen and Meckling, 1976). Agency theory believes that agency cost is likely to present between the principal (i.e., the company owner) who make a management contract with the agent due to conflict of interest regarding the company's policy.

Agency theory primarily assumes that an individual tends to make policies and decisions that improve his/her welfare (Cuevas-Rodrigues et al., 2012). Literature on agency theory also analyzes the control and corporate governance, including the role of a board of directors, the organizational strategy and agency implications from various capitalization policies made by the company (Shapiro, 2005). A state-owned company's investment decision is mostly driven by political consideration/ government influence (Li et al., 2020). A state-owned company is obliged to provide public service while maintaining its financial performance as the basis for the external stakeholders (i.e., investors and creditors) assessment. Therefore, it is necessary to manage the company's financial flexibility during and after the investment period.

Financial Flexibility

Financial flexibility refers to the company's ability to access and restructure its funding at a low cost. This notion denotes a company's ability to make timely action and optimize values to make changes in its cash flow (Miller and Franco modigliani, 1961; DeAngelo & DeAngelo; 2007; Bancel & Mittoo, 2011; Jagannathan, R., Meier, I. & Tarhan, V, 2011; Brounen et al., 2004). The company's management demands optimal financial flexibility in their company. From an operational perspective, financial flexibility refers to maintaining its "reserve borrowing capacity" adequacy by considering the management's forecast on capital market condition, the company's needed fund, consequences of capital shortage, and the management's confidence in their forecast (Eugene F. Brigham and Joel F. Houston, 2019). A company can enhance its financial flexibility by developing an "intertemporal dependence" between financial decisions

and investment (Almeida et al., 2011) and (Denis, 2011). A company is considered financially flexible when it possesses adequate cash reserve or can maintain its debt ratio to avoid using reserve borrowing capacity for profitable new projects or collecting funds from external parties through debt or equity issuance. (Meier et al., 2013; Daniel et al., 2010; DeAngelo et al., 2018; Ang et al., 2018; Ferrando et al., 2016). A financially flexible company may address issues on underinvestment by the combination of lower long-term debts and higher short-term debt. (Datta et al., 2005).

The present study specifically focuses on company's financial flexibility that is affected by the company' leverage policy, considering that Companies' investments and including   PT KAI typically contain a huge values and funded mostly by debt instead of the company's internal cash. Studies in four European countries (i.e., England, the Netherlands, Germany, and France) and USA found that financial flexibility emerges as the most important factor in determining a company's debt ratio (Graham and Harvey, 2001; Bancel and Mittoo, 2004; Brounen et al., 2006). Previous studies showed that companies that adopt conservative leverage to their financial flexibility (Marchica and Mura, 2010; de Jong et al., 2012) or those whose leverage policy equals zero (Bessler et al., 2013) have higher sensitivity to the financial flexibility. According to (Byoun, 2011) there is a relationship between leverage and the company's financial flexibility. Previous studies report that financial flexibility affects the company's investment and improve the company's performance (Cherkasova and Kuzmin, 2018; Ma and Jin, 2016; Denis and McKeon, 2012).

Company Performance

A company performance and financial position can be measured through financial report analysis. (K. R. Subramanyam, John J. Wild, 2008) and (Eugene F. Brigham and Joel F. Houston, 2019). By analyzing a company's financial report, one can evaluate the company's past success and forecast the future (Bogicevic et al., 2016)

The financial ratio may represent a range of the company's performance. Managerial efficiency may vary in each company's life cycle and be viewed as managing cost to measure the effect of financial flexibility on the company's financial performance. (Chang and Ma, 2019). Evaluating the investment activities of a company can be done by considering the efficiency and profitability, which can be assessed using a number of turnover ratios. The most frequently used ratios are Return on Assets (ROA), Return on Capital (ROC), and Return on Equity (ROE) (Zvi Bodie, Alex Kane, Alan J. Marcus, 2017)

Some scholars use ROA to measure the effect of investment on company's performance (Jin and Xu, 2020) and the effect of financial flexibility on the company's financial performance (Ma and Jin, 2016)

Investment

Investment is measured based on the natural logarithm of the fund spent in an investment project. It may serve as the moderating variable between financial flexibility and company performance (Ma and Jin, 2016; Marchica and Mura, 2010). Previous studies report a relationship between financial flexibility, future investment, and financial performance (de Jong et al., 2012). It is reported that financial flexibility may improve the company's realized investment, which eventually improves the company's performance. Financial flexibility affects the company

investment (Yung, 2015) and performance (Cherkasova and Kuzmin, 2018), as also reported in (Denis and McKeon, 2012) study. Companies with conservative leverage and high investment value are likely to imply a considerable agency cost (Marchica and Mura, 2010) which is highly possible in a state-owned enterprise where the government hold the majority of the company shares.

Hypotheses

Financial Flexibility offers a range of advantages, including easy access to external capital for fulfilling funding needs, or optimizing growth and new investment, in addition to avoiding suboptimal investment and poor performance during a crisis. (Arslan-Ayaydin et al., 2014). Financial flexibility may affect and improve the company's Financial Performance (Cherkasova and Kuzmin, 2018; Denis and McKeon, 2012; de Jong et al, 2012). Marchica and Mura (2010) conclude that a company with adequate financial flexibility can invest more in long-term performance analysis. We believe that a financially flexible company's investment ability allows easier external funding raising, which may improve the company's ability to enhance its' performance/ profitability. Thus, we expect that:

Hypothesis 1. Financial flexibility positively affects and improve financial performance.

In the context of the present study, PT KAI recently exhibited an increase in investment realization. Among Investments made, there are assignments investment that have longer payback periods and low profitability as they are primarily aimed at realizing the government's public service programs. This is different from private companies where investment is made to boost their operations and eventually enhance their financial performance. Previous studies have predicted the relationship between financial flexibility, investment, and financial performance. A financially flexible management may enhance the company's investment realization, which improves the company's financial performance (Denis and McKeon, 2012; de Jong et al., 2012; Marchica and Mura, 2010). In other words, investment serves as the moderating variable between financial flexibility and the company's performance. In this study, we attempted to find a causal relationship between financial flexibility, investment, and performance of PT KAI. we expect that:

Hypothesis 2. Investment, as the moderating variable, may promote the relationship between financial flexibility and financial performance.

This study examines the relationship between financial flexibility and financial performance of PT.KAI during the railway infrastructure and facilities investment period in Indonesia.
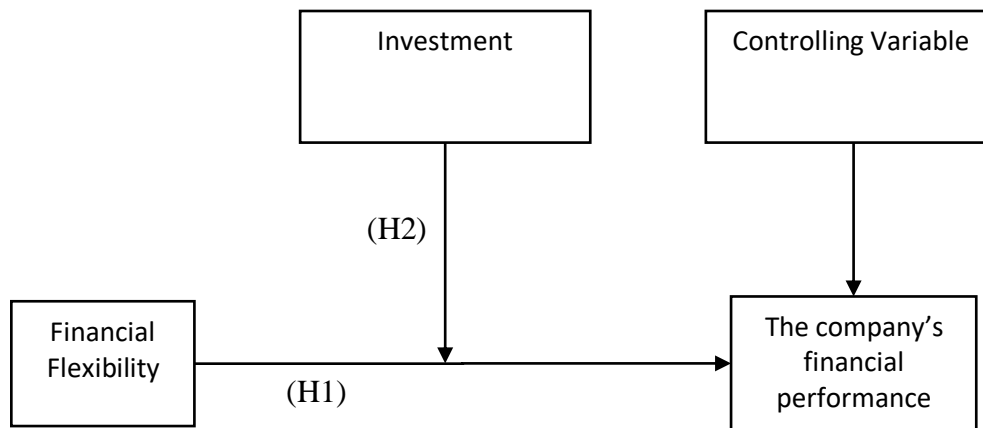
Figure 1. Research Framework

Desc:

H1: Financial flexibility positively affects and improve the company's *Financial Performance* (Cherkasova and Kuzmin, 2018; Denis and McKeon, 2012; de Jong et al, 2012)

H2: Investment moderates the effect of financial flexibility on financial performance (Ma and Jin, 2016; Marchica and Mura, 2010)

2. Method

This study applied a quantitative approach, aiming to describe or predictor extend and test a theory (Cooper & Schindler, 2017). The purposive sampling technique was applied to take time-series data from PT KAI's quarterly report, issued from 2010 to 2019. Forty data were collected based on the data availability on financial statements reported to the Ministry of State-Owned Enterprise and Ministry of Finance.

Financial Flexibility (FF)

This study adapt previous studies   (i.e., Cherkasova and Kuzmin, 2018; Marchica and Mura, 2010; Lambrinoudakis et al., 2019; Yung, 2015) to find out the company's financial flexibility, consisting of two stages:

Stage I

By estimating the company's predicted leverage value from the baseline model (Frank and Goyal, 2009), adjusted to the Indonesian railway condition, the following model is obtained:

$$\text{Lev}_{it} = \alpha\text{Leverage}_{it\text{-}1} + \beta_1\text{Size}_{it} + \beta_2\text{Tangibility}_{it} + u_{it}$$

Where,

Leverage_{it}: Book value of total debt-to-total asset ratio of company i in period t

$\text{Leverage}_{it\text{-}1}$: Book value of total debt-to-total asset ratio of company i in period t -1

Size_{it}: Natural logarithm of the book value asset of company i in period t. A big company is considered having higher debt capacity and have larger leverage accordingly, and

considered having lower default risk as investors possess many information about the company.

Tangibility$_{it}$: Fixed asset to total asset ratio of company i in period t. A company with huge fixed asset possesses higher liquidity values in case of default. Such a company also hold large debt capacity, thus expected to have bigger leverage. Tangibility denotes the company's guarantee.

Stage II

In this stage, the deviation between the predicted value (calculated in stage I) and the realization value of the company's debt/leverage is calculated. A period when the company has negative difference between actual and predicted leverage is assumed to have spare debt capacity. This indicates that the company prefer not to use its debt capacity, exhibiting their financial flexibility.

Financial Performance (FP)

Some scholars use ROA to measure the effect of investment on company's performance (Jin and Xu, 2020) and the effect of financial flexibility on the company's financial performance (Ma and Jin, 2016)

$$= \frac{Net\ Income}{Total\ Assets}$$

Investment (Inv)

Investment is measured based on natural logarithm of the fund spent in an investment project. Investment may act as the variable moderating financial flexibility and the company performance (Ma and Jin, 2016) dan (Marchica and Mura, 2010), as de Jong et al. (2012) state, financial flexibility is associated with financial flexibility, the company's future investment, and financial performance. Companies with conservative leverage and high investment value are likely to imply a considerable agency cost (Marchica and Mura, 2010) which is highly possible in a state-owned enterprise where the government hold the majority of the company shares.

Sales Growth

The company sales growth, compared to previous period. In state-owned enterprise's context, investment is positively related to the company's sales growth (Li et al., 2016)

$$= \frac{Operating\ revenue\ t}{Operating\ revenue\ t-1}$$

Cash Flow (Cash)

(Cherkasova and Kuzmin, 2018) Previous studies (e.g., Li et al., 2016) used cash flow as the controlling variable. Marchica and Mura (2010) reporting negative relationship between cash flow and financial flexibility, which is interesting for further investigation.

$$= \frac{Earnings\ before\ interest, taxes, depreciation\ and\ amortization}{Total\ Assets}$$

Employee

Natural logarithm of employees in a certain period based on quarterly financial statement. Previous study found that state-owned enterprises increase the number of their employees to improve the company's investment (Li et al., 2016)

Econometric Model

To describe the effect of financial flexibility on financial performance, an econometric model Eq. (1) was employed:

$$FP = \alpha + \beta_1 FF + \beta_2 Sales + \beta_3 Cash + \beta_4 Employee + \varepsilon \qquad \text{…..…..(1)}$$

Meanwhile, to describe investment as the moderating variable in the effect of financial flexibility and financial performance, the following econometric model Eq. (2) was employed:

$$FP = \alpha + \beta_1 FF + \beta_2 Inv + \beta_3 FF \text{ x } Inv \qquad \text{………(2)}$$

3. Analysis and Discussion

The object of the present study was Indonesian national railway company, PT Kereta Api Indonesia. The data of this study were time series data from PT KAI's quarterly report, issued from 2010 to 2019. Forty data were collected based on the data availability on financial statement reported to the Ministry of State-Owned Enterprise and Ministry of Finance.

Table 3. Descriptive Statistic

Variable	Obs.	Mean	Std. Dev.	Min	Max
Financial Performance (FP)	40	3.52	1.61	0.99	7.03
Financial Flexibility (FF)	40	-0.0000005	0.96	-1.66	2.44
Investment (Inv)	40	1,906,828.55	2,510,236.90	0.00	11,594,092.41
Sales	40	117.13	10.30	92.79	141.13
Cash Flow (Cash)	40	8.32	3.56	2.64	15.31
Employee	40	30,144.05	5,578.61	25,345.00	42,844.00

Source: PT KAI

The company's financial performance, measured using ROA, is used to measure the company's performance (Jin and Xu, 2020) to find out the effect of financial flexibility on the company's financial performance and to measure the effect of investment on the company's performance (Ma and Jin, 2016). Based on the data issued by PT KAI from 2010 to 2019, the ROA was 3.52, with a standard deviation of 1.61. The highest financial performance (7.03) was found in Q3 2010, while the lowest financial performance (0.99) was found in Q1 2012.

The financial flexibility is measured using Spare Debt Capacity (SDC), depicting the company's debt capacity. SDC negative value indicates a company's preference not to use its capacity, which represents its financial flexibility and its ability to make a timely decision and optimize values toward changes in its cash flow (Miller and Franco modigliani, 1961). In this study, the average value of financial flexibility of PT. KAI from 2010 to 2019 was -0.0000005 with a standard deviation of 0.96. The highest financial flexibility value (2.44) was found in Q4 2013, whereas the lowest financial flexibility value (-1.66) was found in Q1 2010.

Investment, as the moderating variable, was measured based on the natural logarithm of the fund spent in an investment project. The average investment realization from 2010 to 2019 was 1,906,828.55, with a standard deviation of 2,510,236.90. The lowest value was 0, and the highest investment realization was 11,594,092.41 in Q4 2018.

The average sales growth of PT KAI from 2010 to 2019 was 117.13 Meanwhile, the average cash flow of the company from 2010 to 2019 was 8.32. Regarding the number of employees, the average number of employees of PT KAI from 2010 to 2019 was 30,144.05.

In order for the regression model in this study to be consistent and unbiased, several classical assumption tests were conducted on both regression/econometric models, there are normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The results of the assumption test based on the data used as displayed in table 4:

Table 4. Classical Assumption Tests

Classical Assumption Tests	Model 1	Model 2	Keterangan
Normality Test – Jarque Bera (Jarque-Bera Value and significance level)	2,534 (0,282)	1,274 (0,529)	Normal Distribution
Multicollinearity Test (Variance Inflation Factor/VIF Value)	1,072 – 1,279	1,371 – 5,970	Non Multicollinearity
Heteroscedasticity Test – White (Prob. Chi Square Value)	0,058	0,849	Non Heteroscedasticity
Autocorrelation Test - Breusch-Godfrey Serial Correlation LM (Prob. Chi Square Value)	0,168	0,178	Non Autocorrelation

The data normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution. A good regression model is data that is normally distributed or close to normal (Ghozali dan Ratmono, 2017). Based on (Suliyanto, 2011), the residual data normality test used the Jarque-Bera (JB) statistical test. The results of the normality test of the residual value show the significance value of Jarque-Bera in both models, namely 0.282 and 0.529 so that both models have a significance level above 0.05. Therefore, it can be said that the data in this study are normally distributed as shown in figures 1 and 2.
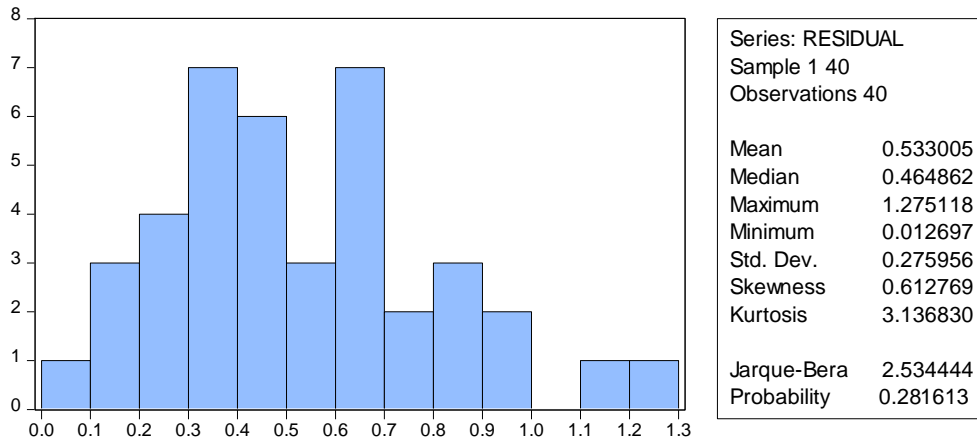
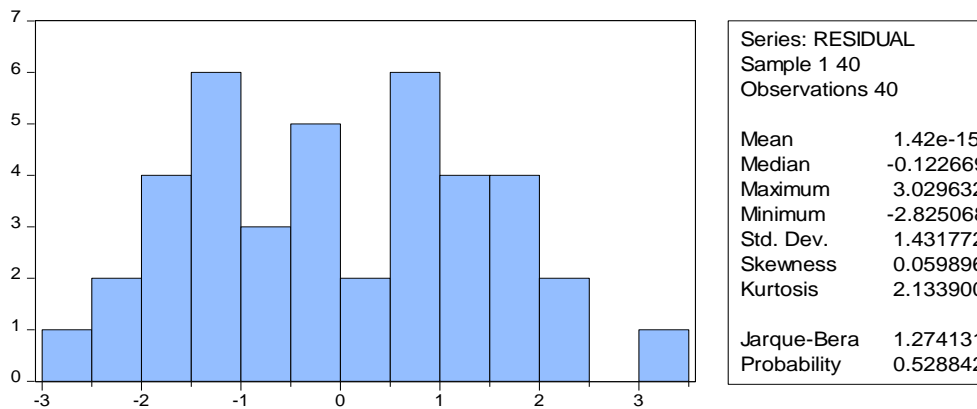Figure 2. Normality Test Result (Reggression/econometric model 1)

Figure 3. Normality Test Result (Reggression/econometric model 2)

The multicollinearity test aims to test between one independent variable and another independent variable that has a direct relationship (correlation). Multicollinearity can be seen from the value of VIF (Variance Inflation Factor). The VIF value for each independent variable in regression model 1 is 1.072 – 1.279 and in regression model 2 is 1.371 – 5.970, it shows that the VIF value of both models is below 10 so there is no multicollinearity.

The heteroscedasticity test aims to see whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. If the residual variance from one observation to observation has a fixed distribution, then it is called homoscedasticity and if it is different it is called heteroscedasticity. The method used is the White test with the provision that if the probability value is > 0.05 then the regression model does not contain heteroscedasticity (Ghozali dan Ratmono, 2017). Based on the results of heteroscedasticity, the probability values obtained from the white test on both regression models are 0.058 and 0.849 or greater than 0.05. This shows that the two regression models of this study are free from heteroscedasticity symptoms.

The autocorrelation test was conducted to test whether in a linear regression model there is a correlation between the confounding error in period t and the error in period t-1. The method used is the Breusch-Godfrey Serial Correlation LM Test with the condition that if the probability

value is > 0.05 then the regression model does not contain autocorrelation(Ghozali, 2016). Based on the results of autocorrelation, the probability values obtained from the Breusch-Godfrey Serial Correlation LM Test on both regression models are 0.168 and 0.178 or greater than 0.05. This shows that the two regression models of this study are free from autocorrelation symptoms. Independent variables of the study do not exhibit high inter-variable correlation, as displayed in table 5:

Table 5. Correlation Matrix

	FP	FF	Sales	Cash	Employee	Investment
FP	1					
FF	-0.346	1				
Sales	0.218	-0.275	1			
Cash	0.938	-0.241	0.129	1		
Employee	-0.003	-0.287	-0.099	-0.010	1	
Investment	0.0524	0.281	-0.041	0.236	0.349	1

Table 6 displays the regression result where financial performance serves as the dependent variable. As display in Table 6, it can be seen that the coefficient of determination used to measure the model's ability to explain the variation of the dependent variable. The result of the coefficient of determination (R Squared) is 0.901 which can be interpreted simultaneously with the variables of financial flexibility, income, cash flow, and number of employees that can affect financial performance by 90.1% or it can be said that the research model can explain variations in financial performance by 90.1% and the rest by 9.9% explained by other factors outside the variables studied. The calculated F value is 79.443 and the significance is 0.000 so that the calculated F value is greater than F table and the significance is less than 0.05, which means that the regression model applied in this study is considered feasible to be used in predicting the dependent variable and it can be concluded that there is a simultaneous effect of the variables of financial flexibility, income, cash flow, and number of employees on the dependent variable of financial performance.

The financial flexibility variable has a significant effect on financial performance at the 90% confidence level. This is evidenced by a significance value of 0.062 (significance less than 0.10). The value of the regression coefficient is -0.194 so it can be said that there is a negative influence, meaning that the higher the financial flexibility, the lower the financial performance. This value can also be interpreted as a decrease in financial performance by 0.194 for every one-unit increase in financial flexibility. From the results, it can be concluded that H1 is not supported by the data, because the data shows that the significant effect of financial flexibility on financial performance is inversely proportional or has a negative relationship. The cash flow control variable has a significant effect on financial performance, the regression coefficient value is 0.408 so it can be said that there is a positive influence, meaning that the higher the cash flow, the higher the financial performance. Income and number of employees variables have no significant effect on financial performance, this is evidenced by a significance value greater than 0.05

Table 6. Regression result of Financial Performance (FP)

	(1) Financial Performance (FP)
FF	-0.194*
	(-1.927)
SALES	0.011
	(1.203)
CASH	0.408***
	(16.348)
EMPLOYEE	-0.196
	(-0.365)
_cons	0.902
	(0.154)
N	40
R²	0.901
Adj.R²	0.889
F-statistic	79.443
Prob (F-statistic)	0.000

Note. The table display the regression result based on Eq. (1):

$$FP = \alpha + \beta_1 FF + \beta_2 Sales + \beta_3 Cash + \beta_4 Employee + \varepsilon$$

The sample period was from 2010:Q1 to 2019:Q4. FF represents Financial Flexibility, i.e., deviation between the predicted leverage value calculated using the realization value from the company's spare debt capacity. SALES represents sales growth, operational revenue in year t, divided by the operational revenue of previous year. CASH represents cash flow, i.e., earnings before interest, tax, deprecation, and amortization, divided by total asset. EMPLOYEE represents number of employee i.e.,., natural logarithm of number of employees. N represents the number of quarter data. Number in parentheses refers to t statistics. Symbol (*) represents the level of statistical significance, i.e., $^*p < 0,1$, $^{**}p < 0,05$, $^{***}p < 0,01$.

Table 7 displays the regression result where financial performance serves as the dependent variable and investment as the moderating variable. Table 7 shows the coefficient of determination used to measure the model's ability to explain the variation of the dependent variable. The result of the coefficient of determination is 0.209 which can be interpreted together with the financial flexibility variable, investment, and financial flexibility moderating variable with the realization of investment on financial performance can affect financial performance by 20.9% or it can be said that the research model can explain variations in financial performance by 20.9% and the remaining 79.1% is explained by other factors outside the variables studied. The calculated F value is 3.189 and the significance is 0.035 so that the calculated F value is greater than F table and the significance is less than 0.05, which means that the regression model applied in this study is considered feasible to be used in predicting the dependent variable and it can be concluded that there is a simultaneous effect of financial flexibility variables, investment, and financial flexibility moderating variables with investment realization on financial performance.

The financial flexibility variable has a significant effect on financial performance at the 95% confidence level. This is evidenced by a significance value of 0.012 (significance less than 0.05). It can be concluded that H2 is supported by the data. Investment realization and financial flexibility moderating variables with investment realization on financial performance have a significant effect on financial performance at the 90% confidence level. This is evidenced by a significance value less than 0.10.

Table 7. Regression Result of Moderating Variable

	(1)
	Financial Performance
FF	-1.608**
	(-2.649)
INV	0.089*
	(1.726)
FF*INV	0.081*
	(1.732)
_cons	2.377***
	(3.536)
N	40
R^2	0.209
$Adj.R^2$	0.144
F-statistic	3.189
Prob (F-statistic)	0.035

Note. The table display the regression result based on Eq. (2):

$FP = \alpha + \beta_1 FF + \beta_2 Inv + \beta_3 FF \times Inv$

The sample period was from 2010:Q1 to 2019:Q4. FF represents Financial Flexibility, i.e., deviation between the predicted leverage value calculated using the realization value from the company's spare debt capacity. INV represents natural logarithm of the actual fund spent in an investment project. FF*INV represents moderating variable of the relationship between financial flexibility and the company's financial performance. Number in parentheses refers to t statistics. Symbol (*) represents the level of statistical significance, i.e., $^*p < 0,1$, $^{**}p < 0,05$, $^{***}p < 0,01$.

The Effect of Financial Flexibility on Financial Performance

The regression analysis result, as displayed in Table 5, showed that financial flexibility significantly and negatively affected financial performance by -0.194, which contradicts the proposed hypothesis 1, (Cherkasova and Kuzmin, 2018; Denis and McKeon, 2012; de Jong et al., 2012). This study found that higher spare debt capacity (indicating that the company has less financial flexibility) in a certain period may lower the company's financial performance in that period, as reported by Byoun, (2011) that companies with moderate growth, adequate growth opportunities, moderate operating cash flow, and moderate credit level tend to have higher leverage as they expect high future financial performance. This is in line with Marchica and Mura (2010) who state that financial flexibility may affect the company's long-term performance.

In this study, PT KAI uses its financial flexibility to make significant, long-term investments in railway infrastructure and facilities, which may improve the company's future operating cash flow and future financial performance. However, the effect of this investment is insignificant for the short-time period. The use of the company's leverage to fund capital expenditure may increase the company's interest cost from loan and obligation, lowering the profitability and company' financial performance. The average interest cost of PT KAI from 2010 to 2019 is quite high, as it equals 47% or almost half of the company's profit.

Table 8. Finance Cost and Profit

(in Billion Rupiah)

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Finance Cost	-	26	71	308	629	692	648	710	1.002	995
Profit	216	202	426	560	866	1.398	1.029	1.718	1.555	2.023
Finance Cost to Profit (%)	-	13	17	55	73	50	63	41	64	49

Source: PT KAI

The statistical data on the effect of financial flexibility on the company's performance, supported by Annual Average Growth Rate displayed in table 9, showed that the average growth of long-term loan represents the company's financial flexibility growth by 66%, while the Annual Average Growth Rate of profit that describes the company's performance only 35% growth.

Table 9. Investment, Long-term Loan and Profit

(in Billion Rupiah)

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AAGR
Investment	0,5	1.126	1.152	3.994	1.434	2.519	2.331	2.912	11.594	6.508	70%
Long term Loan	812	881	750	4.244	4.631	6.385	8.310	10.542	10.416	14.021	66%
Profit	216	202	426	560	866	1.398	1.029	1.718	1.555	2.023	35%

Note: AAGR = Annual Average Growth Rate
Source: PT KAI

Another factor that becomes the burden for PT KAI's investment activities is the mandatory investment project for public service purposes that should be carried out by the Government. This implies the presence of agency cost in the relationship between PT KAI as the agent and the Indonesian government as the principal, as highlighted by the previous study that the investment decision of state-owned enterprises is mostly driven by political consideration/government influence (Li et al., 2020). In the context of the present study, the investment responsibility assigned to PT KAI by the government obliges the company to sacrifice its financial flexibility by borrowing from the banking sector and issuing obligations. This condition results in the company high leverage and insignificant profit, preventing the company from optimally improving their profit.

Table 10. Business Existing and Assignment Investment

(in Billion Rupiah)

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Business Existing Inv.	0,5	1.126	1.152	3.984	1.359	2.459	1.982	1.125	1.674	2.095	16.957
Assignment Inv.	-	-	-	10	75	61	349	1.787	9.920	4.413	16.614
Total	**0,5**	**1.126**	**1.152**	**3.994**	**1.434**	**2.519**	**2.331**	**2.912**	**11.594**	**6.508**	**33.571**

Source: PT KAI

The moderating role of Investment in the Effect of Financial Flexibility on Financial Performance

The regression result, as displayed in table 6, showed that the investment (Inv) as moderating variable strengthen the financial performance, as indicated by the coefficient of regression value of 0.08. In other words, The increase in financial flexibility, followed by the investment realization, may strengthen the effect of financial flexibility on the company's financial performance. As displayed in figure 1, the investment, long-term loan, and profit if drawn a linear line suggest an increasing trend from 2010.
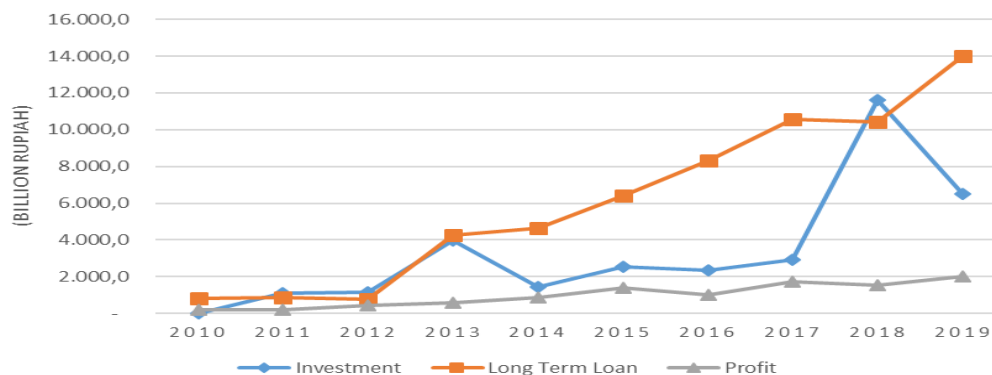

Figure 4. Investment, Long-term Loan and Profit Trend Growth

Thus, it could be concluded that investment (Inv), as the moderating variable, strengthen the effect of financial flexibility on the company's financial performance. This result support previous studies (Ma and Jin, 2016; Marchica and Mura, 2010) that investment moderate financial flexibility and the company's financial performance. This finding is also consistent with previous findings on the relationship between financial flexibility, investment, and financial performance (Denis and McKeon, 2012; de Jong et al., 2012; Cherkasova and Kuzmin, 2018), which is also associated with the company's financial flexibility management through leverage policy (DeAngelo et al., 2011).

4. Conclusion and Recommendation

This study aimed to find out the effect of financial flexibility on the company's financial performance by considering the company's investment. Using quarterly reports issued by an Indonesian state-owned railway company, PT KAI, this study provides empirical evidence of the company's financial flexibility. This study found that financial flexibility negatively affects financial performance. The company's investment as moderation is also found to affect financial performance.

Different from previous studies, the present time-series study shows that the company's financial flexibility negatively affects financial performance. This finding may be accounted for by the company's investment that is expected to improve PT KAI's future operating cash flow and future financial performance. Thus, the effect of the investment has not been significant at the time the investment is made. The use of the company's leverage to fund capital expenditure may increase the company's finance cost, lowering the company's profit and financial performance. The present study revealed the presence of agency problems in the relationship between PT KAI as the agent and the Indonesian government as the principal due to the significant amount of government-assigned investment PT KAI should make. This study also showed that the company's financial condition is burdened by the government-assigned investment.

To address this issue, PT KAI is recommended to reduce its investment in huge infrastructure investment with suboptimal returns by conducting a feasibility study on the potential projects. It is also necessary to minimize external loans and apply for state equity participation to minimize the negative effect on the company's performance and soundness.

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