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Speed of Adjustment of Capital Structure (Empirical Study on the Aviation Industry in Indonesia and Malaysia)

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Abstract

The purpose of this study is to prove how much SOA capital structure, what factors affect the optimal leverage and what factors affect the SOA capital structure in the airline industry in Indonesia and Malaysia. Hypothesis testing in this study was conducted using panel data regression. The sample used is 10 aviation industry companies in Indonesia and Malaysia with 100 observations from 2010-2019. The regression model is determined based on the results of the Chow and Hausman tests. Empirical findings from 100 observations of panel data variables of company size, short-term debt and non-debt tax shield have a positive and significant effect on optimal leverage. Profitability, asset growth, and business risk variables have a negative and significant effect on optimal leverage. Partial adjustment model (PAM) to measure the speed of firm adjustment to optimal leverage. From the partial adjustment model estimation results, the significant leverage lag indicates that airline industry companies in Indonesia and Malaysia adjust their capital structure towards optimal leverage with SOA of 46.20% per year. Generalized methods of moments (GMM) to estimate the speed of capital structure adjustment. The results show that macroeconomic variables, namely GPD growth, have a negative and significant influence on the speed of capital structure adjustment. In conclusion, it is evident that the funding behavior in the airline industry in Indonesia and Malaysia tends to follow the dynamic trade off theory.

Keywords: Dynamic capital structure, leverage optimal, speed of adjustment, dynamic trade off theory.

1. Introduction

The increasingly tough competition in the business world will require companies to continue to develop and increase company value. This can be done by increasing shareholder prosperity. The existence of shareholders and good management in a company will determine the amount of profit that a company will receive. Companies must continue to make progress, one of which is by carrying out effective and efficient managerial functions, both in the field of human resources, marketing or finance. One of them is the financial aspect, a manager must be able to make decisions on funding sources or capital structure to finance his business activities. With high sources of capital funds, a company can maintain its competitiveness and improve the quality of

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production, so that the goods produced by the company are of good quality for consumers. (Margaretha&Ramadhan, 2010).

There are several types of financing used by companies in carrying out their business activities, one of which is financing with short-term debt, long-term debt, issuing bonds, shares and retained earnings (Putri, 2012). In managing the company's business activities, it is completely delegated to the manager. The manager must be able to decide whether the financing uses his own capital or the financing uses debt. One of the important decisions faced by (financial) managers in relation to the continuity of company operational activities is funding decisions or capital structure decisions, namely financial decisions relating to debt composition. Preferred shares and ordinary shares must be used by the company (Prabansari & Kusuma, 2005).

The existence of asymmetric information causes a hierarchy of company financing where, if the company's internal capital is limited to meet investment funding and dividends, the company will access external funding with external funding prioritized for debt issuance compared to equity (Yulianto et al., 2015). High levels of debt will result in high financial risks for the company, and this will reduce the profitability presentation. Conversely, when the amount of debt is low that leads to increased profitability (Khafid & Nurlaili, 2017).Several researchers discuss capital structure, capital structure is an important thing for a company, because good or bad capital structure will have a direct effect on the company's financial position (Wahyuni, 2012). Company structure needs to be considered because the funding mix directly influences company value (Riyantina & Ardiansari, 2017). This motivates company management to decide on the optimal capital structure.

Capital structure is the balance or comparison between debt and own capital (Nugraha, 2013). External capital is defined in this case as debt, both long term and short term. Meanwhile, capital itself can be divided into retained earnings and can also be divided into company ownership. The capital structure reaches optimal value, if the composition of debt and capital is able to increase the value of the company. Capital structure is an important issue for companies because it will have a direct impact on the company's financial position which will in turn affect company value (Ridhloah, 2010).Speed of adjustment (SOA) is the speed of adjustment to the optimal capital structure, this is determined by the costs of moving from one capital structure to another (Dewi & Ramli, 2016). Choosing an optimal capital structure can describe production activities, and can increase profits obtained by shareholders, thereby increasing company value. Optimal capital structure is a capital structure that optimizes the balance between risk and return so as to maximize share prices (Sari, 2013).

The good and bad capital structure in a company describes the condition of the company. If a company has a good capital structure, then the company will have large profits, conversely if the capital structure is bad, then the company will have low profits and the value of the company will decrease, thereby harming shareholders and also determining the speed of adjustment (SOA) structure. capital, there are several variables that influence it (Ranitasari, 2018).The aviation industry is a capital-intensive industry, meaning it is an industry built with large capital and supported by high technology. The majority of airlines own aircraft on lease or purchase using loans at large interest rates (Black, 1996). Therefore, many airlines have decided to stop

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operations and return their fleet to lessors. For example, Lufthansa airline has announced to land 6 percent of the fleet includes low-cost airlines – German wings (Ziady, 2020). Major aircraft manufacturers such as Airbus and Boing have seen aircraft order cancellations recently (Oestergaard, 2020). Many airlines are even planning to retire their old fleets prematurely.

Chadha & Sharma (2016) argue that there are many companies that go bankrupt because of their loans or inappropriate capital mix. As a result, optimal capital structure plays an important role for aviation industry companies. Studies on target capital structure include, Wendy & Salim, (2019) conducted research in Indonesia whose objects were non-financial companies listed on the Kompas 100 index using the predictor variables profitability, asset tangibility, size, growth opportunities, non debt tax shield, growth DPG and inflation. Warmana. et al., (2020) conducted research in Indonesia whose objects were manufacturing companies listed on the Jakarta Stock Exchange with a sample size of 109 manufacturing companies and the predictor variables were potential growth, profitability, company size, ratio between capital structure and its target, short term loan , asset maturity, growth of GDP and inflation. Meanwhile, this research was conducted on aviation industry companies in Indonesia and Malaysia, because in these two countries Garuda Indonesia and Malaysia Airlines are full service airlines, and Lion Air and Air Asia are Low Cost Carrier (LCC) airlines (Rumuat, 2018) . And the predictor variables are profitability, asset growth, firm size, business risk, short term debt, non-debt tax shield, and GDP growth, and perhaps this is the first research conducted in the aviation industry.

Darminto., (2008) states that adjustments to optimal leverage in Indonesia are relatively fast, around 44% per year. Wetty (2013) believes that the average SOA in Indonesia is 83% per year or almost double that of (Darminto., 2008). Carrying out similar research in Indonesia, namely (Wendy & Salim, 2019) found that the adjustment to the capital structure SOA was 57.44% and (G. Oka Warmana et al., 2020) found that the adjustment to the capital structure SOA was 64.73% per year. Researchers are still asking how big the SOA of the capital structure is and what factors determine the SOA of the capital structure in aviation industry companies in Indonesia and Malaysia. These heterogeneous findings encourage researchers to examine the factors that influence the SOA of capital structure.

2. Method

The research design used in this research is causal, which explains the causal relationship between research variables, carried out to determine the pattern of causal relationships from the dependent variable to the independent variable. The dependent variables in this research are Optimal Leverage, Speed of Adjustment (SOA), while the independent variables are Profitability, Asset Growth, Firm Size, Business Risk, Short-Term Debt, Non-Debt Tax Sheild, GDP Growth.

Sample

In this research, the population used is all aviation industry companies listed on the Stock Exchange in Indonesia and Malaysia in 2010-2019. The sampling technique in this research used the purposive sampling method. The criteria for determining the sample in this research can be seen in the table below:

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Table 1 Determination of Sample Criteria

No.	Sample Criteria	Total
1.	Aviation industry companies listed on the Stock Exchange in Indonesia and Malaysia during 2010-2019	20
2.	Aviation industry companies that do not have complete research variables	10
3.	Aviation industry companies that present complete annual reports for 2010-2019	10
Number of companies that meet the research criteria and are used as research samples (10 X 10)		100

Model Specifications

This research uses a partial adjustment model (PAM) as found in the literature by (Hovakimian et al., 2004) and (Miguel & Pindado, 2001) to estimate the speed of company adjustment. The use of PAM is preferred for GMM because it may be sensitive to parameter or model normalization. GMM estimates can be biased and inefficient in small samples. Additionally, there is no speed in GMM. If the market is assumed to be perfect, then the firm's current leverage should be equal to its target leverage. These assumptions are modeled as follows:

$$L_{i,t} - L_{i,t-1} = L^*_{i,t} - L_{i,t-1} \quad (1)$$

However, market imperfections can prevent this condition from occurring. Obstacles such as adjustment costs and asymmetric information will inevitably slow down a firm's adjustment speed toward its target leverage. Therefore, the previous model must be rearranged as follows:

$$L_{i,t} - L_{i,t-1} = \delta (L^*_{i,t} - L_{i,t-}) + \varepsilon_{i,t} \quad (2)$$

Where :

$L^*_{i,t}$ = Optimal leverage of company i in period t

$L_{i,t}$ = Actual leverage of company i in period t, measured by ROA

$L_{i,t-1}$ = Actual leverage of company i in period t-1

Δ = Company's speed of adjustment. If the value of $\delta = 1$ then the company has achieved its capital structure target. Any value above 1 and less than 1 represents overadjustment and partial adjustment processes, respectively.

$\varepsilon_{i,t}$ = Error term

Adjustments to target leverage can only be made when information from previous periods is available. Thus, the model must be rearranged once again as follows:

$$L_{i,t} - L_{i,t-1} = \delta (L^*_{i,t} - L_{i,t-1}) + \varepsilon_{i,t} \quad (3)$$

Because target leverage is an unobservable variable, its value must be estimated based on the following function:

$$L^*_{i,t} = \beta 0 + \beta 1 \text{Profitability}_{i,t} + \beta 2 \text{Growth Asset}_{i,t} + \beta 3 \text{Firm Size}_{i,t} + \beta 4 \text{Business Risk}_{i,t} + \beta 5 \text{Short Term Debt}_{t} + \beta 6 \text{Non Debt Tax Shield}_{i,t} + \varepsilon_{i,t} \quad (4)$$

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Where :

Profitability = Profitability of company i in period t, measured by ROA

Growth Asset = Growth in company i's assets in period t, measured by the percentage change in total assets from the previous year to the current year

Firm Size = Firm size i in period t, measured by the natural logarithm of total assets

Business Risk = Business risk of company i in period t, measured by EBIT/Total Assets

Short Term Debt = Short term debt of company i in period t, measured by total short term debt divided by total debt

Non Debt Tax Shield = Non Debt Tax Shield of company i in period t, measured by the ratio of depreciation to total assets

$\varepsilon i,t$ = error term

Adjustment speed is affected by several variables that can increase or slow the speed rate. The variables are asset growth and GDP growth.

$\delta t = \beta 0 + \beta 1$ Growth Asset $i,t + \beta 2$Growth GDP$i,t + \varepsilon i,t$ (5)

Where:

δt = The company's speed of adjustment in period t

Growth assets = company i in period t, measured by the percentage change in total assets from the previous year to the current year

GDP Growth = GDP Growth measured by GDPt – GDP t-1

$\varepsilon i,t$ = error term

3. Results

This research used a sample of 10 aviation industry companies in Indonesia and Malaysia for 10 years which resulted in 100 observations. The regression model is determined based on the results of the Chow and Hausman tests. The first is done to determine whether to use the pooled least squares or fixed effects model, on the other hand it serves as a basis for choosing between a fixed effects model or a random effects model. Using E-views to perform the Chow test, the p-value of the cross-section chi-square was found to be 0.0000. In Chow test, if the value is found to be less than 0.05, then the fixed effect model is preferred. Furthermore, the Hausman test results produce a p-value of 0.0000 (less than 0.05). The results concluded that the fixed effect model or what is usually called the least square dummy variable is the most appropriate estimation method for individuals and can be accommodated by differences in intercepts. Slope, on the other hand, is the same across individuals.

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Table 2 Fixed effect panel data estimation model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.990330	0.270860	-3.656239	0.0004
Profitability (X1)	-1.979234	0.679974	-2.910750	0.0046
Growth Asset (X2)	-0.026717	0.015791	-1.691905	0.0944
Firm Size (X3)	0.147733	0.030819	4.793632	0.0000
Business Risk (X4)	-0.100961	0.018432	-5.477402	0.0000
Short Term Debt (X5)	1.503855	0.594195	2.530914	0.0132
Non Debt Tax Shield (X6)	3.106655	0.938712	3.309488	0.0014
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.826552	Mean dependent var		0.305898
Adjusted R-squared	0.795579	S.D. dependent var		0.245939
S.E. of regression	0.111196	Akaike info criterion		-1.409395
Sum squared resid	1.038625	Schwarz criterion		-0.992568
Log likelihood	86.46975	Hannan-Quinn criter.		-1.240698
F-statistic	26.68636	Durbin-Watson stat		0.961049
Prob(F-statistic)	0.000000			

Table 2. Shows the influence between the company's optimal leverage and the predictor variables (profitability, asset growth, firm size, business risk, short term debt, non-debt tax shield). As a result, firm size, short term debt, and non-debt tax shield have a positive and significant effect on optimal leverage. Meanwhile, profitability and business risk have a negative and significant effect on optimal leverage. And meanwhile, asset growth has a negative and insignificant effect on optimal leverage. The adjusted R-squared value shows that 79.56% of the optimal leverage variable can be explained by the linear relationship between optimal leverage and the independent variable. The remaining 20.44% can be explained by other variables not included in the model. Table 3 presents the regression results in the partial adjustment model. The results confirm that there is partial readjustment behavior of aviation industry companies in Indonesia and Malaysia, as suggested in the dynamic trade-off theory.

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Table 3 Partial adjustment regression model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.076760	0.030846	-2.488453	0.0150
LEVIT(-1)	0.538050	0.089673	6.000150	0.0000
LEV_OP	0.715114	0.087678	8.156137	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.910291	Mean dependent var		0.303817
Adjusted R-squared	0.897640	S.D. dependent var		0.254555
S.E. of regression	0.081442	Akaike info criterion		-2.054287
Sum squared resid	0.517357	Schwarz criterion		-1.720979
Log likelihood	104.4429	Hannan-Quinn criter.		-1.919878
F-statistic	71.95244	Durbin-Watson stat		1.670003
Prob(F-statistic)	0.000000			

The leverage coefficient in the previous period ((Li,t-1) is shown to be 0.538050. This value shows that, on average, the speed of adjustment of aviation industry companies in Indonesia and Malaysia is This value shows that, the average speed of adjustment of the capital structure of industrial companies aviation in Indonesia and Malaysia is about 46.20% (1 - 0.538050). This implies that these airline industry companies need about 26 months (less than three years) (2.16 times 12) to fully adjust to optimal leverage The adjusted R-squared value indicates that the model is a good fit for the data. About 90% of the current leverage variable can be explained by the linear relationship between current leverage and its predictors. Table 3 presents the regression results between adjustment speed and its predictors.

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Table 4 Generalized moment method (GMM) regression model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SOA(-1)	-0.119992	0.006865	-17.47911	0.0000
Growth Asset (X2)	-1.365927	0.632210	-2.160560	0.0338
Growth PDB (X7)	3.176855	0.374049	8.493142	0.0000
Effects Specification				
Cross-section fixed (first differences)				
Mean dependent var	0.152085	S.D. dependent var		22.49763
S.E. of regression	21.37573	Sum squared resid		35182.98
J-statistic	6.642826	Instrument rank		10
Prob(J-statistic)	0.466991			

The results shown in table 3 confirm the validity of the hypothesis (negative influence between asset growth and speed of adjustment), while the coefficient of GDP growth found is not as expected. The macroeconomic variables in this model prove to be very significant. Growth assets on the other hand, have a negative and significant value. Therefore, the speed of adjustment of aviation industry companies largely depends on the GDP growth rate.

4. Discussion

Speed of Adjustment

Dynamic trade off theory postulates that companies have an optimal capital structure that changes over time according to fluctuations in internal and external factors. In addition, they readjust partially to target leverage due to adjustment costs. Evidence of the company's partial adjustment and speed of adjustment can be concluded from table 3. Based on empirical results, Li,t-1 is proven to have a coefficient of 0.538050. This implies that airline industry companies in Indonesia and Malaysia converge towards optimal leverage at a rate of 46.20% (1 - 0.538050) per year. Full readjustment (at 100%) would take 2.16 years (100% divided by 46.20%) or about 26 months (2.16 times 12). Meanwhile (G. Oka Warmana et al., 2020) found an adjustment speed of 64.75% in their research. Nosita (2016) concluded that companies in Indonesia have an adjustment speed of 40.15% and (Wendy & Salim, 2019) concluded that companies in Indonesia have an adjustment speed of 57.44%.The difference in the adjustment speed of this study with previous studies may be caused by the first sampling period. G. Oka Warmana et al. (2020) used a sample of manufacturing companies from 2012 to 2016). Meanwhile, this research uses a sample of aviation industry companies in Indonesia and Malaysia during the period 2010 to

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2019. Therefore, it can be concluded that the economic development of developed countries allows companies to adapt more quickly.

Influence of Profitability (X1) on Optimal Leverage (Y)

Empirical results show that there is a negative but statistically significant relationship between profitability and optimal leverage. This result is not in line with the trade-off theory which posits that highly profitable firms pursue higher target debt ratios to reduce taxable income and the level of agency problems. (Jensen, 1986) found that excess cash in a company can cause possible conflicts of interest between managers and shareholders. By taking on more debt, managers cannot take on less than optimal investments due to obligations to pay creditors. The discussion of the influence of each independent variable on the dependent variable is partially explained as follows: Profitability is theoretically a trade off, the greater the profit earned, the faster the company adjusts its capital structure, and conversely, the smaller the profit earned by a company, the slower the company will adjust its capital structure, so that profitability is positively related to the speed of capital structure adjustment. company (Mukherjee & Mahakud, 2011).The research results show that the coefficient of the profitability variable (ROA) is negative and significant on optimal leverage. (Baskin, 1989) and (Bontempi, 2002), state that the profitability variable is a variable that can be used to predict whether a company applies trade off theory or pecking order theory. The negative results show that aviation industry companies are listed on the stock exchanges in Indonesia and Malaysia when the macro economy improves, so that the availability of internal funds increases as a result, in accordance with the pecking order theory, companies tend to reduce their debt. Profitability is a proxy for the availability of internal funds, increasing profitability causes an increase in free cash flow. This shows that when profitability increases, the company's response to adjusting the capital structure (leverage) will slow down the company's ability to adjust the capital structure (leverage), and vice versa if company profitability decreases, companies will tend to quickly adjust their capital structure (leverage) in aviation industry companies in Indonesia and Malaysia during abnormal conditions. The higher the profitability, the further away from the value 1 is the capital structure adjustment of aviation industry companies in Indonesia and Malaysia during abnormal times. The results of this study are in line with research (Chang et al., 2014, Thippayana, 2014, Jian Chen, Chunxia Jiang, 2014, Getzmann et al., 2014, Öztekin, 2015, Serghiescu & Văidean, 2014, Serrasqueiro & Caetano, 2015, Köksal & Orman, 20 15, Matias & Serrasqueiro, 2017, G. Oka Warmana et al., 2020) which states that profitability (ROA) has a significant effect on target leverage.

Influence of Growth Assets (X2) on Optimal Leverage (Y)

Asset growth is theoretically a trade off, the greater the increase in assets owned by a company, indicating that the faster the company can adjust its capital structure and conversely, the lower the increase in a company's assets, the slower the company will adjust its capital structure, so that asset growth is positively related. on the speed of adjustment of the company's capital structure (Mukherjee & Mahakud, 2010).The negative coefficient of this variable is in line with the trade off theory which argues that companies with excellent investment opportunities need less debt financing. The reason is, the ability to send positive signals to the capital market allows them to issue shares at high prices. In addition, the level of agency costs is lower in growing

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companies due largely to their excess funds. Ozkan (2001) argues that a negative relationship may occur due to the high number of intangible assets in developing companies. These assets cannot support a high leverage ratio because they are illiquid and cannot be collateralized. However, the relationship was not significant.The research results show that asset growth does not have a significant effect on the speed of capital structure adjustment. This shows that the growth of assets owned by the company does not become a basis for the company to immediately adjust its capital structure (leverage) during abnormal conditions even though the asset growth structure is experiencing an increase or decrease in aviation industry companies in Indonesia and Malaysia, because asset growth in This research is not based on illiquid fixed assets. The results of this research are in line with research (Wendy & Salim, 2019, G. Oka Warmana et al., 2020), which states that growth assets do not have a significant effect on target leverage.

Influence of Firm Size (X3) on Optimal Leverage (Y)

In theory, company size is a trade off. The larger the size of a company, the faster the company can adjust its capital structure and can correct deviations from the optimal capital structure. On the other hand, the smaller the company size, the slower the company will adjust its capital structure, so the size of the company positively related to the speed of adjustment of the company's capital structure (Drobetz & Wanzenried, 2006).The research results show that the coefficient of the size variable is positive and significant on optimal leverage. This shows that the total amount of assets consisting of fixed assets and non-fixed assets in this study, non-fixed assets owned by the company during abnormal times, is an aid for companies to adjust their actual debt towards optimal debt in aviation industry companies in Indonesia and Malaysia. The higher the size, the closer the value is to 1 in adjusting the capital structure of aviation industry companies in ASEAN countries during abnormal times. The results of this study are in line with research (Drobetz & Wanzenried, 2006, Frank & Goyal, 2004, G. Oka Warmana et al., 2020). They argue that large firms have a better reputation in the market which leads to lower agency debt costs. Therefore, it can be concluded that large aviation industry companies in Indonesia and Malaysia are pursuing a higher debt ratio target than small aviation industry companies in Indonesia and Malaysia.

Influence of Business Risk (X4) on Optimal Leverage (Y)

Based on trade off theory, (Antoniou et al., 2008) companies with high earnings volatility experience difficulty in obtaining loans due to poor financial conditions, low income and inability to pay their debts. Companies with high profit volatility have limited access to capital funding to make capital structure adjustments. This implies that earnings volatility is inversely proportional to SOA. Companies that have high profitability are able to fund their business activities internally (Dewi, 2014). The higher the company's profitability, the higher the company's efficiency in utilizing company facilities. Elsas & Florysiak (2011) and Abdul Rashid (2015) investigated different risks and produced different findings. Elsas & Florysiak, (2011) focused on the influence of default risk on SOA of capital structure. The results show that the high risk group has a shorter SOA capital structure than the low risk group. Meanwhile (Abdul Rashid, 2015) analyzed the influence of company-specific risks and r macroeconomic risks on

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capital structure adjustments. The finding is that capital structure adjustments occur more quickly when the level of risk is low because adjustment costs are lower when firm-specific and macroeconomic risks are low. Hayati (2014) and Warmana. et al. (2020), which explains that companies that have high volatility will cause low profit persistence, thereby making capital structure adjustments more quickly. The research results show that the coefficient of the business risk variable is negative and significant. Companies that have high business risk tend to have high income volatility, so they have a high risk of bankruptcy due to high uncertainty in principal and interest payments due to high debt. The results of this study are in line with research in line with research (Heshmati, 2001, Lööf, 2004, Nivorozhkin, 2003).

Effect of Short Term Debt (X5) on Optimal Leverage (Y)

Based on agency theory, short-term debt requires managers to periodically provide information to investors to evaluate returns and risks allowing investors to use new information to re-evaluate debt as it matures. Kim et al. (2006) and Aybar-Arias et al. (2012) use short-term debt levels as financial flexibility. Kim et al. (2006) state that companies with relatively high short-term liabilities can adjust their leverage more quickly and easily compared to companies with low short-term liabilities. Kim et al., (2006), examining the dynamics of the capital structure of companies in South Korea, stated that the ratio of current liabilities to total liabilities has a positive effect on the SOA of the capital structure. Aybar-Arias et al. (2012) found that the group of companies with a ratio of current liabilities to long-term liabilities also had a shorter SOA. The research results show that the coefficient of the short term debt variable is positive and significant. The results of this research are in line with research by (Kim et al., 2006) and (Aybar-Arias et al., 2012), that companies that use short-term debt can adjust their capital structure more quickly. Kim et al. (2006) show that it is easier to adjust short-term debt than long-term debt.

Effect of Non Debt Tax Shield (X6) on Optimal Leverage (Y)

Companies that are subject to high taxes to a certain extent should use a lot of debt because of the tax shield. One thing that can be used as a tax deduction is the depreciation value of assets. This variable according to (DeAngelo & Masulis, 1980) is a variable that may have a deductible in addition to debt to reduce their company's tax burden. Therefore, in terms of obtaining a tax shield, Non Debt Tax Sheild (NDTS) can act as a substitute for debt financing. Companies with high levels of fixed asset depreciation use less debt in their capital structure (Titman & Wessels, 1988). This is because debt financing results in interest expenses and the risk of suffering financial distress costs. The NDTS, on the other hand, does not incur such fees. Apart from that, most studies also conclude that there is a negative relationship between leverage and NDTS (Miguel & Pindado, 2001). Therefore, these two variables are expected to be negatively correlated. The results of this research have a significant influence on optimal leverage. The NDTS coefficient is positive. The average leverage of aviation industry companies in Indonesia and Malaysia has a significant influence on optimal leverage. Getzmann et al. (2014) stated that trade off theory predicts a positive correlation between leverage and industry median leverage. The findings of this research are in accordance with the trade off theory.

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The Influence of Asset Growth on Speed of Adjustment

Asset growth is theoretically a trade off, the greater the increase in assets owned by a company, indicating that the faster the company can adjust its capital structure and conversely, the lower the increase in a company's assets, the slower the company will adjust its capital structure, so that asset growth is positively related. on the speed of adjustment of the company's capital structure (Mukherjee & Mahakud, 2010). Empirical results show a negative but significant influence. The results of this study are in line with research (Banerjee et al. 2000, Lööf, 2004, Wetty. 2013, Lemma & Negash, 2014)

The Effect of GDP Growth on Speed of Adjustment

A negative and significant relationship is found to exist between GDP growth and speed of adjustment. This suggests that companies adjust more quickly during recessions. One possible reason to explain this phenomenon is perhaps a change in interest rates. During a recession, central banks are more likely to cut interest rates to stimulate economic growth. Thus, companies may find it cheaper to make adjustments to their target leverage. By using GDP growth as a measure of macroeconomic conditions. The research is in line with research (Mukherjee & Mahakud, 2010, Cook & Tang, 2010, Chipeta & Mbululu, 2013, Wang, 2013, (Lemma & Negash, 2014, De Jonghe & Öztekin, 2015, Wendy & Salim, 2019, G. Oka Warmana et al., 2020).

Acknowledgments

Based on analysis and discussion, the conclusions in this research are as follows, on average, aviation industry companies in Indonesia and Malaysia are not always at their optimal leverage. The statistical results show that the airline industry companies partially readjusted at a rate of 46.20%.Regression carried out on the fixed effect panel data estimation regression model confirms that profitability has a negative and significant effect on optimal leverage, asset growth has a negative and insignificant effect on optimal leverage, firm size has a positive and significant effect on optimal leverage, business risk has a negative and significant effect on optimal leverage, short term debt has a positive and significant effect on optimal leverage, non debt tax shield has a positive and significant effect on optimal leverage.Regression carried out on the generalized moment method (GMM) model confirms that asset growth has a negative and significant effect on the speed of adjustment and GDP growth has a positive and significant effect on the speed of adjustment.

Aviation industry companies in Indonesia and Malaysia with a high number of assets should aim for higher optimal leverage. The positive direction of the coefficient of this variable indicates that collateral allows the company to reduce taxable income with minimized risk. Apart from that, the author also advises large companies to pursue higher optimal leverage. Cash flow stability and lower levels of information asymmetry provide them with access to capital markets.GDP growth was found to have a negative and significant influence on the speed of company adjustment. Therefore, companies must adjust more quickly during periods of recession because central banks can cut interest rates to stimulate economic growth.

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