The Influence between Debt to Asset Ratio and Debt to Equity Ratio towards the Profit Quality Based on Du Pont Analysis (Case Study of the Companies Listed in the Index of LQ45 in the Year of 2017)

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ABSTRACT
This study aims to examine the influence between debt to asset ratio and debt to equity ratio towards the quality of Du Pont Analysis-based company profit. This study used quantitative approach, where the selected samples were the company stocks belong to the index of LQ45 in Indonesia Stock Exchange in 2017. By using multiple linear regression, the conclusion of this article found that debt to equity ratio and debt to asset ratio simultaneously gave positive influence towards the quality of profit. Meanwhile, the debt to equity partially gave negative influence towards the quality of profit, whereas the debt to asset ratio positively influenced it too.

Keywords: Solvability Ratio, Debt Ratio, Profit Quality, Du Pont Analysis

INTRODUCTION

One of the functions of financial management is to maximize main wellness. It can only be earned by gaining maximum profit. In the effort of increasing profit and sustaining financial position of a company, management team is required to be proactive in anticipating the dynamics of financial situation, in which it sometimes runs unpredictably. Debt is one of the instruments in financial management which is used by management as the alternative in managing a company. Debt becomes crucial part in managing a company since the capital structure is the mix between long-term debt and equity (Situmorang, 2010, in Mahendra, 2015). The policy of debt structure to capital asset made by management team and its executives must be impacting positively for the company. It can be reflected in the profitability earned in the proportion of debt to asset and to the capital owned by the company itself. Ekawati and Tiomba (2008), Mulyani (2007), and Murwaningsari (2008) state their opinion, that capital asset and profit quality has negative relationship. Explained by Irawati (2012) that capital structure dominated by debt will be negatively influence the quality of the profit since its capital based-funding mainly comes from the investment debt in the company decreases. This indicates that the company is not able to hold the balance between the necessary capital and the obtained one. In different line with Irawati (2012), Handayani and Rachmawati (2014) contended that *Debt to Asset Ratio* positively influences to the profitability growth. Meanwhile, Windi (2012) argued that *Debt to Equity Ratio* influences positively to the growth of profitability. Irawati (2012) has the same opinion about this. She states that capital structure influences the profitability growth of a company.

On the next chapters, this article will discuss about how *Debt to Asset Ratio* and *Debt to Equity Ratio* influence the quality of profit. The sample used here are the companies enlisted in the index of LQ45 of Indonesia Stock Exchange in 2017.

According to the outline of the problems, the hypothesis of this study is:
Conceptual Framework about *Debt to Asset Ratio* and *Debt to Equty Ratio* toward the Quality of Profit
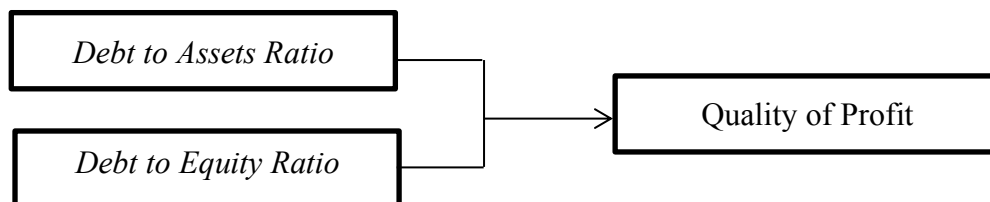
Picture 1. Hypothesis

Based on the thought framed above, the hypotheses of this study are as follows:
H0 = There is influence between *debt to asset ratio* towards quality of profit in the companies enlisted in the index of LQ45
H1= There is influence between *debt to equity ratio* towards quality of profit in the companies enlisted in the index of LQ45
H2= There is influence between *debt to equity ratio* and *debt to asset* towards quality of profit in the companies enlisted in the index of LQ45

LITERATURE REVIEW
Agency Theory
Agency Theory explains about two important things. They are the principal one and the agent with different purpose. Principal is the side who gives contract or stockholder, whereas agent is the one who accept contract and run the principal fund. These two parties have different purposes. Principal tends to make sure that the company runs well (*going concern*) and gaining maximum *return* and with faster pace over the investment value given previously so they will be demanding the agent to gain high profit. In the other side, agent has tendency to accept high compensation after the work to maintain the position in management so there will be much effort to gain profit even though we sometimes see unethical practices (*earnings management*). The earnings management that is carried on by agent could be the main cause of the downgrade of profit quality and the value of a company (Widjaja and Maghviroh, 2011).

Profit Quality
Profit quality is defined as the profit in financial report that reflects the actual financial performance (Irawati, 2012). Profit quality indicates the ability to show data about profit that depicts how market response based on that information. There is at least three methods that can be used to determine the profit quality; *Earnings Response Coefficient* (ERC) (Irawati, 2012), relationship between the profit of accounting and cash flow (Widjaja and Magviroh, 2011), and profit quality analysis based on *du pont system* (Yulius and Madyakusumawati, 2007). Here in this article, the profit quality will be measured using the *du pont system*. This is conducted since *du pont system* is able to give comprehensive picture about the financial performance based on the activity ratio and profitability, and the interactions among those ratios (Yulius and Madyakusumawati, 2007). *Du pont system* analysis used to estimate the quality of the profit described in this equation below, as it's written up by Yulius dan Madyakusumawati (2007):

$$ROE \quad = \quad NPM \quad X \quad TATO \quad X \quad EM$$

$$\frac{\text{Net Profit}}{\text{Total of Equity}} = \frac{\text{Net Profit}}{\text{Net Sales}} \ X \ \frac{\text{Net Sales}}{\text{Total Asset}} \ X \ \frac{\text{Total Asset}}{\text{Total Equity}}$$

Investment Performance Operational Performance Funding Performance

The higher the ROE score is, the better the profit earned (Yulius dan Madyakusumawati, 2007)

Solvability Ratio

A company can be valued by its solvability when the company has sufficient asset to pay all the debts, or in the other hand it can be said that the asset ratio is bigger better than debt. On the contrary, if the asset owned by the company is not sufficient enough to pay the debts, it means that company is *insolvable*. This drives opinion that the debt ratio is bigger better than the asset. The ratio used to measure this ability is DAR (*Debt to Assets Ratio*) which explains this main question, how much is asset of the company funded by debt. For creditor, if the DAR goes low, it depicts that the credit risk is lower caused by the protection to the credit is bigger on the asset to prepare things for the future liquidation. But different from the creditor, stockholders may prefer greater *leverage* since it would give better profit too (Brigham & Houston, 2010:143). The formula used to find the Debt to Asset Ratio is as follows:

$$\text{Debt to Total Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Asset}} \ x \ 100\%$$

Debt to Equity Ratio

Debt to Equity Ratio explains about how big a company provide capital as a guarantee over the debts. Kasmir (2015) states that, it is better if the ratio is bigger because when the debt ratio over equity is low, then it is a must that the company need to provide more funding by the owner. This correlates with the fact that the bigger percentage of the protection for the mortgage if loss emerges or if the asset goes shrink.

$$\text{Debt to Total Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Ekuity}} \ x \ 100\%$$

RESEARCH METHOD

A. Research Type

This study is a research that is aimed to examine the correlation between two variables or more (Sugiyono, 2004:11). The variables used in this study are, dependent variable; profit Quality and independent variables; *Debt to Equity Ratio* and *Debt to Assets Ratio.*

B. Population and Sample

The population used in this study is *annual report* of 2017 which is a list of companies that belong to Indonesia Stock Exchange. Meanwhile, the sample is selected using *sampling purposive* technique so it will suit the criterion that has been determined before. *Sampling purposive* is a technique used with several particular consideration. The criterion on how the sample is taken, is the companies listed in LQ45 index of Indonesia Stock Exchange.

Type of Data
The data in this study is secondary data taken from company financial report listed in Indonesia Stock Exchange.

Data Collection Technique
The data collection techniques used in this study are literature review and documentation.

Data Analysis
Multiple Linear Regression
Multiple Linear Regression is a statistical technique that uses several explanatory variables to predict the outcome of a response variable (Saefuddin, Notodiputro *et al*, 2009). This multiple regression analysis can be done if the independent variables are two or more. There are two independent variables which are; 1) *Debt to Asset Ratio* and 2) *Debt to Equity Ratio.*

RESULT AND DISCUSSION
Just like the other parametrical tests, this linear regression also has requirement or classical assumption that should be fulfilled so the prediction model of the output will be BLUE (Best Linear Unbiased Estimation). Classical assumptions in multiple linear regression are: Intervallic data or ratio, linearity, normality, homoscedasticity, and non multicollinearity

Normality Test

Table 1. One Sample Kolmogorov-Smirnov

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		45
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	21.59985881
Most Extreme Differences	Absolute	.257
	Positive	.257
	Negative	-.203
Kolmogorov-Smirnov Z		1.721
Asymp. Sig. (2-tailed)		.005

a. Test distribution is Normal.

With significant value of 0.005, the output of Kolmgorov-Smirnov normality test above shows the score of 1.721, which means that the normality distribution of this data exceed the significance of 0.005. It states that the data distribution is normal.

Linearity Test

Table 2. ANOVA

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Kualitas Laba * Rasio Hutang pada Aset	Between Groups	(Combined)	18194.311	31	586.913	2.245	.062
		Linearity	117.547	1	117.547	.450	.514
		Deviation from Linearity	18076.764	30	602.559	2.305	.056
	Within Groups		3398.667	13	261.436		
	Total		21592.978	44			

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ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Kualitas Laba * Rasio Hutang Pada Modal	Between Groups	(Combined)	3750.969	9	416.774	.818	.604
		Linearity	206.933	1	206.933	.406	.528
		Deviation from Linearity	3544.036	8	443.005	.869	.551
	Within Groups		17842.008	35	509.772		
	Total		21592.978	44			

From the result above we can see that the result obtained on the deviation from linearity value is more than 0.005. Both correlation between profit quality and debt to asset ratio and also profit quality and debt to equity ratio expose the evidence that there is linear correlation in each variable which linked significantly. Another thing we can see is the profit quality and the debt to asset ratio correlation that exposes the significance value of 0.056, while profit quality and debt to equity ratio correlation shows bigger significance, which is 0.551.

Multicollinearity Test

Table 3. Multicollinearity Test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.501	10.118		.445	.659		
	Rasio Hutang pada Aset	.280	.212	.279	1.325	.192	.510	1.961
	Rasio Hutang Pada Modal	-1.392	1.000	-.293	-1.392	.171	.510	1.961

a. Dependent Variable: Kualitas Laba

With the significance value which is >0.05 we see in debt to asset ratio and debt to equity ratio, that there are no multicollinearity indications since the significance value of both variables are 0.192 and 0.171

Heteroscedasticity Test

Table 4. Heteroscedasticity Test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.455	8.400		-.054	.957		
	Rasio Hutang pada Aset	.273	.176	.326	1.552	.128	.510	1.961
	Rasio Hutang Pada Modal	-1.080	.830	-.273	-1.301	.200	.510	1.961

a. Dependent Variable: abs_res

According to the data above, the first homogeneity significance score is 0.128 (>0.05) which means that the variable of debt to asset ratio is homogeneous, while the homogeneity significance score of 0.200 (>0.05) shows that the debt to equity ratio variable has no heteroscedasticity.

Linear Regression

Table 5. Multiple Regression Test

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1064.606	2	532.303	1.089	.346 [a]
	Residual	20528.372	42	488.771		
	Total	21592.978	44			

a. Predictors: (Constant), Rasio Hutang Pada Modal, Rasio Hutang pada Aset

b. Dependent Variable: Kualitas Laba

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.501	10.118		.445	.659		
	Rasio Hutang pada Aset	.280	.212	.279	1.325	.192	.510	1.961
	Rasio Hutang Pada Modal	-1.392	1.000	-.293	-1.392	.171	.510	1.961

a. Dependent Variable: Kualitas Laba

According to the F Calculate which has significance score of >0.005, the data shows that the debt to asset ratio variable and the debt to equity ratio variable simultaneously give positive influence towards profit quality with the F Calculate score of profit quality that lies on 1.089, while T table partially shows that the debt to asset ratio and the debt to equity ratio also influence towards profit quality. The debt to asset ratio influences significantly positive towards profit quality with the calculated score on T Table for 1.325, while the debt to equity ratio influences significantly negative towards profit quality where we can see it from the calculated score of T Table exposing the significance score valued at -1.392.

From the SPSS counting approach on multiple linear regression, we obtained regression formula that describes the correlation between profit quality and debt to asset ratio and debt to equity ratio which are as follows:

$$Y = 4.501 + 0.280X_1 - 1.392X_2$$

Where
Y = Profit Quality
X1 = Debt to Asset Ratio
X2 = Debt to Equity Ratio

CLOSURE

Conclusion:
1. Debt to Asset Ratio partially influences significantly positive towards Profit Quality.
2. Debt to Equity Ratio partially influences significantly positive towards Profit Quality.
3. Debt to Equity Ratio over Asset simultaneously influences positive towards Profit Quality.

Research Constraints
1. The samples taken are only limited on the companies listed in the LQ45 index only.
2. The samples taken are not well-classified according to its industrial segmentation. Thus, concern emerges when it comes to analyze biased information since they are in the different segments of industry.

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BIBLIOGRAPHY

Books

Brigham, E. F. dan Houston, J. F., 2010, Dasar-dasar Manajemen Keuangan, Penerjemah : Ali Akbar Yulianto, Buku1, Edisi 11, Jakarta: Penerbit Salemba Empat.

Saefuddin Asep, Notodiputro Khairil Anwar, Alamudi Aam, Sadik Kusman. 2009. Statistika Dasar. Jakarta: PT Grasindo

Sugiyono.2004. Metode Penelitian Bisnis. Bandung: CV ALFABETA

Journals

Irawati, Dhian Eka. 2012. Pengaruh Struktur Modal, Pertumbuhan Laba, Ukuran Perusahaan dan Likuiditas Terhadap Kualitas Laba. Jurnal: Accounting Analysis Journal. ISSN 2252-6765. Universitas Negeris Semarang

Kasmir. 2015. Analisis Laporan Keuangan. Jakarta: PT. Raja Grafindo Persada.

Madyakusumawati, Synthia. Yulius, Andi. 2007. Menilai Kualitas Laba Perusahaan Melalui Instrumen Analisa Du Pont. Jurnal Akuntansi Bisnis Vol.2 No.1. STIE Perbanas.

Mahendra, Prasetya Tri. 2015. Pengaruh Kebijakan Hutang, Struktur Modal, dan Profitabilitas Terhadap Aktivitas Investasi Perusahaan Manufaktur Barang Konsumsi yang Terdaftar di Bursa Efek Indonesia. Journal: EKSIS, Vol X no, 2. Oktober 2015. ISSN: 1907-7513.

Mulyani, Sri. 2007. Faktor-Faktor Yang Mempengaruhi*Earnings Response Coefisiens* Pada Perusahaan Yang Terdaftar di BEJ. JAAI. Vol. 11, No. 1, Juni 2007, hal 35-45.

Murwaningsari, Etty. 2008. Pengujian Simultan: Beberapa Faktor Yang Mempengaruhi *Earning Response Coefficient* (ERC). Fakultas Ekonomi Universitas Trisakti.

Rachmawati, Anggun Arif .2014. Pengaruh Rasio Keuangan dan Kebijakan DevidenTerhadap Pertumbuhan Laba Pada Perusahaan Manufaktur yang Terdaftar di BEI. Jurnal Imu & Riset Akuntansi, 3(3) : 1-14.

Tiolemba, Noviyanti dan Erni Ekawati. 2008. "Analisis Faktor-Faktor yang Mempengaruhi Koefisien Respon Laba pada Perusahaan Manufaktur yang Terdaftar di BEJ". Jurnal Riset Akuntansi dan Keuangan. Vol 4, No. 2, Agustus 2008. hal: 100-115.

Widjaja, Fendi Permana. Maviroh, Rovila El. 2011. Analisis Perbedaan Kualitas Laba dan Nilai Perusahaan Sebelum dan Sesudah Adanya Komite Pada Bank-Bank *Go Public* Di Indonesia. Journal: *The Indonesian Accounting Review*,Volume 1, No. 2, July 2011, pages 117 – 134.

Windi, Hartini. 2012. Pengaruh Financial Ratio Terhadap Pertumbuhan Laba dengan Pengungkapan Corporate Social Responsibility Sebagai Variabel Pemoderasi. Jurnal Manajemen, 1 (1) : 1-7.