

MODERATING EFFECT OF MONETARY INDICATORS ON THE PECKINGORDER THEORY VALIDITY IN INDONESIA STOCK EXCHANGE (BEI)

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Abstract

Management decision with regard to alternative funding that will be used for the development of investment, a debt that is due soon or for the payment of dividends, is a very strategic financial decisions as it affects the company's financial performance in both the short and long term. Pecking Order Theory is a theory of capital structure that is commonly used by management in making funding decisions of the company. Capital structure model based Pecking Order Theory using the company's internal variables as independent variables that affect the company's capital structure and does not include monetary indicators in particular external variables into the model the company's capital structure. The purpose of this study was to determine the effect pemoderasian monetary indicators of the validity of the Pecking Order Theory in the Indonesia Stock Exchange. Tests using a regression model with panel regersi models that use three approaches, namely Pooled least squares, fixed effects and Random Effect. Based on the analysis of the regression model, obtained the conclusions that the comparison direction coefficient estimated according to the theory with the results of the study, showed a model of capital structure Pecking Order Theory, can explain / valid influence of independent variables on the capital structure of the issuer's industry non-financial in Indonesian Stock Exchange.

Keywords: Pecking order theory, moderating variables, least square Pooled, Fixed effect and Random Effect

INTRODUCTION

Sources of funding for the company for investment, repayment of maturing debt or for the payment of dividends, the first time will be funded using internal fund source which is the accumulation of retained earnings of previous periods and profit for the period, and when internal funds are not sufficient, condition the company must decide alternative sources of funding are available, namely financing with loans or financing with the issuance of new shares (external). Decisions regarding the choice of an alternative source of funding is a strategic financial decision as it affects the company's financial performance, especially, a good performance in the short term and long term.

Pecking order theory (Myers, 1984) gives the proposition that the management in making funding decisions are not thinking down into the framework of trade-offs, funding decisions with the first priority use of internal funds, the next priority use of loans and issuance of new shares is the last priority because this periority is costly emissions are relatively large.

Some of the results of research conducted testing related determinants of capital structure resulted in the same conclusion among researchers. Research related to the relationship of profitability on the capital structure, the results of research by Strebulaev (2003) using the refinancing model found a positive relationship between profitability and capital structure, the results are not consistent with the pecking order theory. Other studies by Baskin (1989), Rajan, Raghuran and Zingales (1995) gives the results of different studies, the results of their research concluded that profitability has a negative relationship with the capital structure. The results of this study are consistent with the pecking order theory.

Research related to the relationship between the growth of the company with the capital structure conducted by several researchers between Iain Titman and Wessels (1988), Harris and Raviv (1991), Rajan and Zingales (1995), which showed evidence of a negative relationship with the company's growth and debt. Result studies were not consistent with the pecking order theory, which states companies with high growth resulted internal funds available are not sufficient to finance the investment, so that the deficit will be financed with debt, which will impact the increase the company's capital structure.

Trade off theory argues that high-growth companies will use debt is relatively small, it is because companies with high growth in its stock market price is relatively high, so the company will tend to issue new shares to fund the deficit. Another argument is given, the company with high growth tends to bear the cost of great financial distress, so as to minimize the risk, the company will reduce the use of debt.

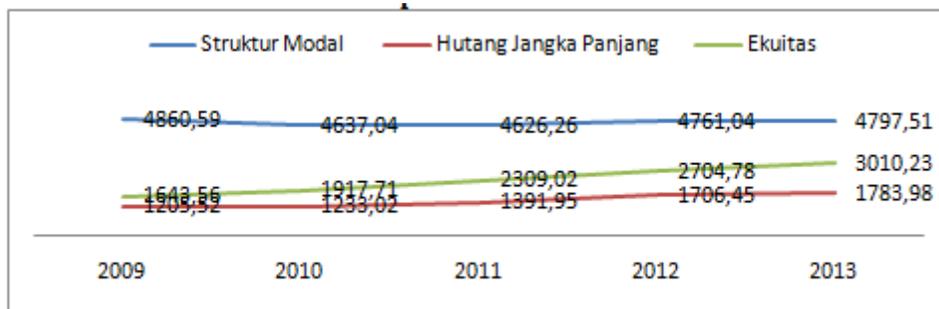
Discussion of the theory of capital structure, which is based on the model of Modigliani-Miller (1958), does not include external variables especially monetary indicator variables such

as interest rates, exchange rates and inflation as a variable in the model of capital structure is formed. In developing the model of capital structure, MM assumes monetary indicators in particular external variables held constant. In developing countries with monetary stability which is relatively unstable, where fluctuations in interest rates and the exchange rate and inflation are always caused by monetary policy taken by the government, then the variable monetary indicators should be included as independent variables or moderating variables into the model of capital structure that will be developed.

The results of research related to the influence of monetary indicators of the company's capital structure has a lot was done by several researchers in different countries. Based on these results empirically provable there are significant monetary indicators of the company's capital structure decisions. Booth et al., (2001), proved that the company's capital structure is a function of the rate of economic growth, inflation, capital market development, maturing liabilities and tax advantages. Their research was based on the assumption that the company is in a boom period will use a lot of debt, and use the profits from the fund to pay all financial obligations arising from debt.

The phenomenon of the capital structure on a non-financial industry companies listed on the Indonesian Stock Exchange for the period 2009 to 2013 show the phenomenon in which companies in the industry group tends to under-leverage in their capital structure. As illustrated in Figure 1 can be seen from 2009 to 2011 there is a decrease in the company's capital structure, in which the ratio of debt to total assets in 2009 amounted to 48.6% down to 46.37% in 2010 and fell further to 46.26% in 2011. for the years 2012 and 2013 the company's capital structure where the back has increased in 2012 to 47.6% in 2013 and rose again to 47.97%.

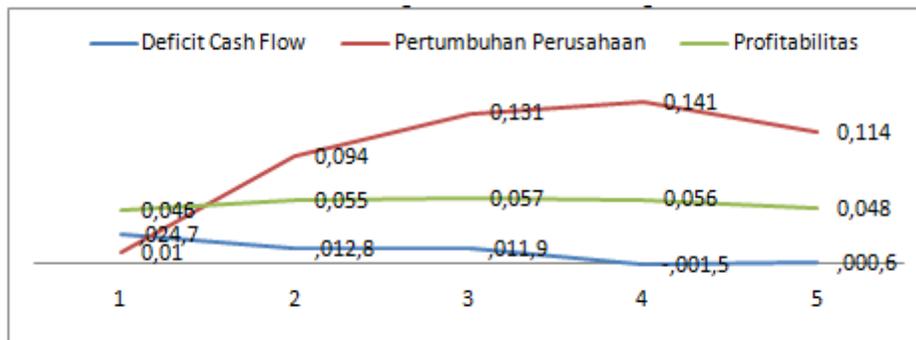
Figure 1. The description of Capital Stucture Trend



Source: Compiled by author

In the same period the phenomenon trend of variable capital structure profitability, cash flow deficit and the growth of the company as depicted in Figure 2 portray the following conditions:

Figure 2. The description of Research Variable Trend



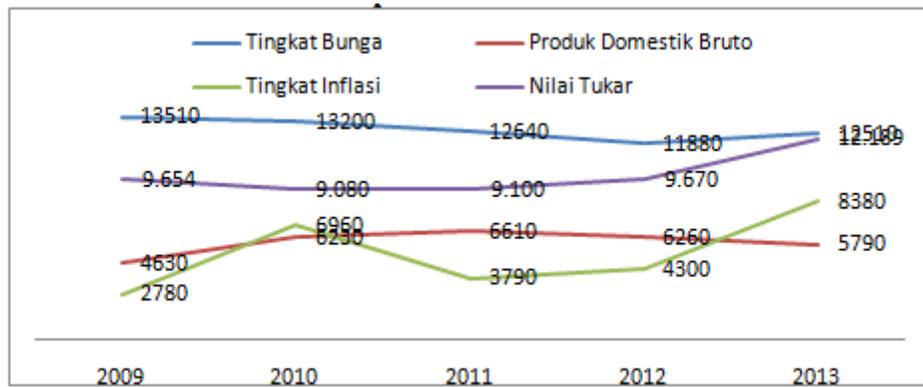
Source: Compiled by author

According to the pecking order theory, firms with higher asset growth and a deficit of cash flow, will increase the use of debt to finance an increase in assets or a cash flow deficit. The phenomenon that is happening is the opposite, where in the period 2009 to 2012 growth rate of non-financial companies in the industry experienced an increase of 4.6% in 2009, rising to 9.4% in 2010, increased again to 13.1% in 2011 and reached the peak in 2012 to 14.1% before it fell again to 11.45 in the year 2013. In that period actually experienced decline from capital structure of 48.6% in 2009, fell to 46.37% in 2010 and fell further to 46.26 in 2011 before increasing again in 2012 into 47.61 and 47.97 in the year 2013. the preliminary results, showing a phenomenon which during the observation period, there was an indication of companies in non-financial industries use more resources than equity funds with loans to cover funding needs.

The tendency for companies in non-financial industries to reduce the use of debt in the capital structure, in their condition should increase lending, allegedly demoderation particular external monetary conditions, which affect weaken the company's desire to use the loan by them.

The company's growth and profitability were relatively small during the observation period, it can be an indication of the lack of improvement in macro-economic conditions after coming out of the 2008 financial crisis, especially for issuers of non-financial industries. Macroeconomic conditions are less encouraging, reflected fluctuations in stock returns listed non-financial industries, where in 2009 the stock return of 7.5% in 2010 rose to 10.51% and in 2011 fell to 1.35%, in 2012 rose again to 2.39% and by the end of 2013 stock return fell further to 0.96%. Changes in the stock returns in relation to the changes in gross domestic product, interest rates and the rupiah against the US \$ looks as follows:

Figure 3. The description of Economic Indicator Trend



Source: Compiled by author

Picture trend gross domestic product, interest rates and the rupiah against the US \$ explains why during the period 2009 to 2013 the company's growth and profitability for issuers in non-financial industries are relatively small. When the conditions economic assumed by companies with limited good, there are no positive NPV projects then under these conditions the company tends to reduce debt in the capital structure of the company, its needs will be funded with more priority funding sources internal or increase capital stock than from the use of loans with fees relatively large.

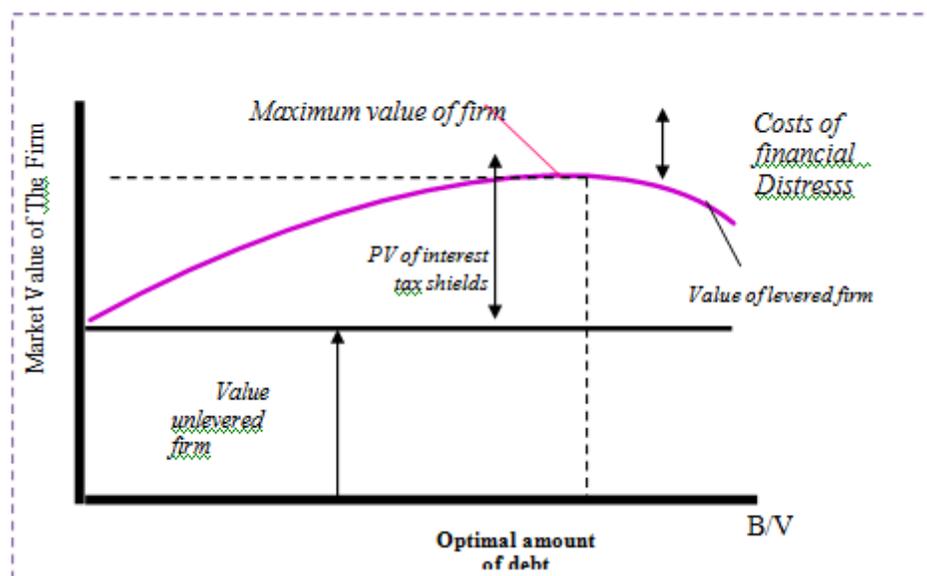
Based on the above description, and supported by many research studies, this dissertation research will try to develop the theory of capital structure pecking order theory, where the limits to monetary indicators, namely the interest rate and the exchange rate as a moderating variable that gives the role strengthen or weaken the relationship between the variables of growth, profitability and cash deficit flow to variable capital structure of the company.

LITERATURE AND HYPOTHESES

The trade-off theory (Myers 1984), "The company will owe to the level of certain debt obligations, which the tax savings (tax shields) on additional debt is equal to the cost of financial difficulties (financial distress)".

View of trade-off theory implies that the manager would think within the framework of a trade-off between tax savings and the cost of financial difficulties in determining the capital structure as shown in Figure 4 below.

Figure 4. The Theory of Capital Structure Trade-off Theory (Myers, 1984)



Based on the trade-off theory, the value of a company that owes money can be formulated as follows:

$$VL = VU + T.D - \{[PV \text{ of cost of financial distress}] - [Agency cost]\}.$$

In view of the pecking order theory, there is no optimal capital structure, the company's management does not think in terms of trade-offs between the benefits and risks of debt. Pecking order theory does not indicate the target of optimal capital structure, the theory explains the sequence of priority funding will be taken by the company.

Behaviour of the pecking order in the Company's funding policy is driven by the presence of asymmetric information. Asymmetric information is a condition where the manager has more information about the company's prospects and future operations compared with the investor or the candidate investors.

Research related to the relationship between the growth of the company with the capital structure undertaken by several studies there are Titman and Wessels (1988), Harris and Raviv (1991), Rajan and Zingales (1995), which showed evidence of a negative relationship with the company's growth is in line with trade leverage. That conclusion based on trade off theory, which states the company with high growth tends to finance its investments by issuing new shares, since stock prices are relatively high. Pecking order theory argue to the contrary, where the company's growth positive effect on debt. Companies with high growth, investment fund can not be met by internal funds, so that the shortage of funds will be obtained from the issuance of debt.

Modigliani and Miller (1958) with the trade off theory explains that firms with high profitability will use debt as financing options in order to obtain the benefits of tax-saving facilities. The results are consistent with the theory of static shows that companies have profitability above average profitability of the industry tend to choose debt as a funding priority, vice-versa. Thus also, Jensen (1986) argues that the presence of asymmetric information into a signal that is positive for the company are profitable to increase the debt, which means profitability positively correlated with leverage.

Other studies are consistent with the pecking order theory to prove that the debt ratio is inversely related to profitability (Rajan and Zingales, 1995; Ozkan, 2001) . Their study revealed that the more profitable a company is expected to have a source of internal funding increasingly higher.

Moderating variable is a variable that has the effect of dependence (contingent effect) is strong against independent variable relationship with independent variabel, where the presence of moderating variables alter the initial relationship between variable and dependent variable (Sekaran: 2007). Effect of dependency which is owned by a moderating variable results in these variables will contribute significantly to the ability of the independent variables affect the dependent variable.

The decision to call if a variable is the independent variable, or moderating depending on how these variables affect each other. An independent variables are variables that affect or be cause changes or the emergence of dependen variables. In a model of capital structure, variable growth, profitability, business risk, tax shield and cash flow deficit is the independent variable of capital structure, all of these variables directly affect or the cause of the occurrence of changes or capital structure. While moderating variables does not directly affect the dependent variable, these variables affect the dependent variabel by interacting with the independent variables, so that they contribute interaction strengthen or weaken a previous relationship / early between independent variables and the dependent variable.

Based on the above literature review supporting a research hypothesis to be tested, as follows:

H1. Company's growth has positive effect on the capital stucture.

H2. Profitability has negative effect on the capital structure.

H3. Cash deficit has negative effect on the capital structure.

H4. Interest rate and rupiah exchange rate as moderating variable give weaken the role of profitability on the capital structure.

RESEARCH METHOD

The study was designed as a descriptive research and verification through a qualitative and quantitative approach using secondary data. The research objective was to determine the effect of moderating macroeconomic against the validity of the theory of capital structure that pecking order theory, is lacking then analyzed statistically to be concluded.

Sources and How To Determine Data / Information

The population in this study is emiten industry non-financial listed in Indonesia Stock Exchange (BEI) from 2009 to 2013. The total population in the Indonesia Stock Exchange listed companies as many as 492 companies, which are grouped into 9 groups Industry. The number of companies that belong to the financial industry as many as 81 companies, so that the population for this study conducted on eight industry with a total of as many as 411 companies. This study uses secondary data is based on reports the data obtained through the company's annual financial statements of listed companies in the industry to the Indonesia Stock Exchange (IDX) ranging from 2009 to 2013.

Operationalization Variable

Table 1. Operationalization of research variables

Variable / Dimention	Theoritic explanation / empiric	Indicator / Proksi	Scale	Size
Company's Growth (Growth)	Empiric an annual change of the total assets of the company	$\frac{\text{Total aset}_{t+1} - \text{Total aset}_t}{\text{Total aset}_t}$	Rasio	%
Profitability (Prof)	The company's ability to earn a profit on the level of sales, total assets and certain capital	Ebit/Total Assets	Rasio	%
Defisit cash flow (Def)	Cash generated from operation are not sufficien to finance invesments dividen and changes in worting capital	$\text{Def} = (\text{DIVit} + \text{lit} + \Delta\text{Wit}) - \text{Cit}$	Rasio	%
Interest rate (Intr)	The ammount of interest paid per unit of time or have to pay for the opportunity to borrow money	The amount of the loan interest rate	Ratio	%
Exchange rate (Kurs)	Indicates the number of domestic money needed to buy one unit of a particular foreign currency	The amount of rupiah per 1 US\$	Rasio	%
Capital Stucture (SM)	Ratio or the balance of total liabilities to total assets of the company	Total Liability/ Total assets (DTA)	Rasio	%

Proposed Research Model

In this study hypothesized variables as varaibel moderating namely interest rates and the rupiah exchange rate. The moderating variables will interact with the variable profitability and business risk. Based on this hypothesis, the research model that will be tested in this study are:

$$SM = \beta_0 + \beta_1 \text{Growth}_{it} + \beta_2 \text{Prof}_{it} + \beta_3 \text{Def}_{it} + \beta_4 \text{Intr}_{it} + \beta_5 \text{Kurs}_{it} + \beta_8 \text{Prof} * \text{Intr}_{it} + \beta_{10} \text{Prof} * \text{Kurs}_{it} + \varepsilon_{it}$$

Where:

SM = Capital Structure

Growth = Growth Companies

Prof = profitability of the Company

Def = Deficit Cash Flow

Intr = Interest rate

Kurs = The rupiah exchange rate

Prof * intr = Profitability x interest rate

Prof * kurs = Profitability x The rupiah exchange rate

β = regression coefficient

β_1 = Constant

ε = Error term

ANALYSIS AND DISCUSSION OF RESULTS

Descriptive statistics of the variables built into the econometric model with the research unit consisting of 190 listed non-financial industries for the observation period from 2009 to 2013 is presented in Table 2 below.

Table 2. The description of Statistic Varible Research

	Y?	X1?	X2?	X3?
Mean	0.487369	0.097992	0.055688	303014.6
Median	0.517873	0.092804	0.049331	4270.000
Maximum	0.942681	0.898728	0.507910	81238524
Minimum	0.003868	-0.660293	-0.633011	-41584111
Std. Dev.	0.188922	0.170000	0.084969	4707805.
Skewness	-0.392982	0.193120	-0.636910	10.73830
Kurtosis	2.665140	5.409905	13.69411	207.1911
Jarque-Bera	15.17523	123.8523	2411.553	876478.0
Probability	0.000507	0.000000	0.000000	0.000000
Sum	243.1969	48.89808	27.78811	1.51E+08
Sum Sq. Dev.	17.77435	14.39227	3.595448	1.10E+16
Observations	499	499	499	499
Cross sections	100	100	100	100

Variable capital structure proxied by the ratio of total debt to total assets, has an average value of 48.7% with a standard deviation of 18.89%. The highest value capital structure of 94.2% and the lowest at 0.3%.

Growth companies variable with proxy annual change of total assets, has an average value of 9.7% with a standard deviation of 17%. The highest growth of 89.8% and the lowest growth of minus 66%.

Variable profitability proxied by the ratio between net income / loss before and tax / EBIT to total assets, has an average value of 5.5% with a standard deviation of 8.4%. The highest profitability of 50.7% and the lowest rate of minus 63.3%.

Variable cash flow deficit portrait of a deficit of cash from operating activities to fund additional investment business, dividend payments and changes in working capital. Deficit cash flow, using proxies difference in operating cash flow to dividend payments, capital expenditures and expenses for changes in working capital. The average value of the cash deficit flowsebesar 303 014 with a standard deviation of 4,707,805. The highest deficit cash flow value of 81,238,524 and minus 42,584,111 the lowest value.

Estimation of the panel data model starts with using a fixed effect estimation results, followed by estimation using random effect. To choose between the two methods (fixed effect or random effect) are better suited, do Hausman test (Hausman test). Results using a fixed effect estimation on the model of capital structure as shown in Table 3 below:

Table 3. The Estimation of Capital Structure Model

Variable	Coefisien Estimation	Panel 1 Without Moderating Variable		Panel 2 with interest rate and exchange rate as moderating variable	
	POT	Coefisien	Probability	Coefisien	Probability
Constanst	+	0.491995	0.0000	0.449228	0.0000
Company's Growth	(-)	0.075268	0.0000	0.092750	0.0000
Profitability	+	-0.342383	0.0000	-1.586029	0.0024
Deficit cash flow	(-)	-3.00E-10	0.0389	-2.52E-10	0.0535
Interest rate	(-)			-0.219498	0.6311
Exchange rate	(-)			7.87E-60	0.0000
Profitability x Interest rate	(-)			17.26770	0.0000
Profitability x Exchange rate				-0.000100	0.0000
F – statistic		188.7400		172.7336	
Prob (F-statistic)		0.000000		0.000000	
Adjusted R-squared		0.975586		0.974315	

The test results obtained capital structure model as shown in Table 3 show that the model is very decent used by F-test significant at the 1% level. The value of adjusted R or determination coefficient of 97.43%, which states that the five independent variables and moderated by the variable interest rate and the exchange rate may explain variations in capital structure data for

97.43% and other variables of 2.57%. The coefficient of determination is large enough to provide assurance that the variable is a variable capital structure determinants of industrial non-financial corporate issuers listed on the Indonesia Stock Exchange.

The constant value / intercept capital structure model has a value of 44.92%, which means, a listed non-financial industries in Indonesia Stock Exchange using less debt than the use of equity (55.08%). The constants for each of these companies is the result of the summing of constant coefficients in the model of capital structure of 44.92% with a coefficient of each company of the regression equation.

Partial assay results variable interaction which is the multiplication of profitability variable with interest rate and profitability variable with the exchange rate as illustrated in Table 3 on panel 2, shows the interaction variable between profitability and interest rate and profitability variable with the exchange rate is significant at $\alpha 5$. Variabel% interest rate as the independent variable is not significant at α level of 5% and exchange rate variable as independent variables is significant at α level of 5%. This indicates that the exchange rate is a pure moderating variable on the relationship between profitability and company's capital structure.

The impact moderating exchange rates on the relationship of profitability on the capital structure can be seen from the comparison of test results of the regression model of capital structure without the moderating variable (panel 1) and using the moderating variable (panel 2) as illustrated in Table 3. The impact of moderation can be seen in changes in the value of the constants and the coefficient of the resulting capital structure models, which showed connect strengthen the relationship between profitability and capital structure. Under conditions of the rupiah weakened against the US \$, will diminish the desire of companies to use debt.

CONCLUSION

The company's growth and profitability variables significant at α level of 5%, while the cash flow deficit significant at α 10%. Variabel growth companies have a positive relationship, which means the increase in the company's growth will increase the company's capital structure. The results of this study are consistent with the pecking order theory. Variable profitability and cash flow deficit has a negative relationship, which means increased profitability and cash flow deficit will reduce the use of debt in the capital structure of the company. Companies in conditions of high profitability will use their own capital to fund the company's needs. Likewise, companies that experience high cash flow deficit would use their own capital to cover cash flow deficits. This finding is also consistent with the pecking order theory. Exchange value as moderating variable significantly weaken the role of the company's desire to use the debt in the capital structure of the company.

REFERENCES

- Alworth, J., and G. Arachi, (2000); The Effect of Taxes on Corporate Financing Decisions: Evidence from a Panel of Italian Firm; *International Tax and Public Finance*, Vol.8, pp353-376
- Antoniou, Antonios, Yilmaz Guney and Krishna Paudya (2002); *Determinants of Corporate Capital Structure: Evidence from European Countries*; Department of Economics and Finance, University of Durham, 23-26 Old Elvet, Durham, DH1 3HY, UK.
- Baskin, J. (1989); *An Empirical Investigation of The Pecking Order Hypothesis*; *Journal of Finance*, Spring edition.
- Baye, Michael R, (2006); *Managerial Economic & Business Strategy*, 5th edition, USA: Mcgraw-Hill International.
- Bevan, A.A., J Danbolt, (2002); *Capital Structure and Determinants in The UK – a Decompositional analysis*; *Applied Financial Economic*, Vol 12, 55-66
- Booth, L., Aivazian, V., Demircug-Kunt, A.E and Maksimovic, V (2001); *Capital Structures in Developing Countries*; *Journal of Finance*, Vol 39, 857-878.
- Burgman, Todd A, (1996); *An Empirical Examination of Multinational Corporate Capital Structure*; *Journal of International Business Studies*, Vol 27, pp. 553-570.
- Cai, Francis and Arvin Ghosh, (2003); *Test of capital structure theory: A Binomial Approach*; *Journal of business and economics studies*, Vol 9 No.2, pp.20-32
- Camara, Omar (2012); *Capital Structure Adjustment Speed and Macroeconomic Conditions: U.S MNCs and DCs*; Euro Journals Publishing.
- Chen, C.R., Weiyu Guo and Vivek Mande (2006); *Corporate Value, Managerial Stockholdings and Investment of Japanese Firms*; *Journal of International Financial Management and Accounting*. Vol.17, No.1, pp. 29-51.
- Choi, Young Rok, (2003); *Taxes and Corporate Capital Structure*; *Journal of Business*, University Of Missouri Columbia.
- Dammon, W. (1988); *Handbook of Child Psychology, The Fifth Edition*; New York: Jhon Wiley and Son, Volume 1-4,
- DeAngelo, H. and R.W. Masulis, (1980); *Optimal Capital Structure Under Corporate and Personal Taxation*; *Journal of Financial Economics*, Vol. 8, 3-29
- Deesomsak, Rataporn, Krishna Paudyal and Gioia Pescetto (2004); *The Determinants of Capital Structure: Evidence from the Asia Pacific Region*; Durham University.
- Dokko, Yoon (1989); *Effects Unexpected Inflation on Wealth Redistribution and Stock Price : Test of The Nominal Contracting Hypothesis*; Bureau of Economic and Business Administration, University of Illinois Urbana-Champaign.
- Donaldson, G.(1991); *Corporate Debt Capacity: A Study of Corporate Debt Policy and the Determination of Corporate Debt Capacity*; Boston: Division of Research, Harvard School of Business Administration.
- Ellija, Setyawan. (2004); *Dampak Reformasi Pajak Tahun 2000 Pada Struktur Biaya, Pengeluaran Modal dan Profitabilitas Perusahaan (Studi pada perusahaan Manufaktur di Bursa Efek Jakarta)*. Tesis. Fakultas Ekonomi Universitas Diponegoro.
- Euis dan Taswan (2002); *Pengaruh Kebijakan Hutang Terhadap Nilai Perusahaan Serta Beberapa faktor Yang Mempengaruhinya*; *Jurnal Bisnis dan Ekonomi*.
- Frank dan Vidham K. Goyal, (2009); *Capital Structure Decisions : Which factors Are Reliability Important*; *Social Science Research Net Work*.
- Frederic, S Mishkin (2012); *The Economics of Money, Banking and Financial Market*, Business School Edition; Pearson series in Economics, Amozon.

- Gajurel, D.P, (2005); Macroeconomic Influences on Corporate Capital Structure; Trubhuvan University, Kurtipur, Nepal
- Gau, George W., and Ko Wang (1990); Capital Structure Decisions in Real Estate Investment; Areuea Journal, Vol.18 No.4
- Gujarati, Damodar N and Dawn C. Porter, (2009); Basic Econometrics, Fifth Edition; McGraw-Hill International Editions
- Harris, Milton and Arthur Raviv, (1991); The Theory of Capital Structure : Model Based on Agency Cost; The Journal of Finance, Vol XLV, NO.1, 451-471
- Hoque, Ziaul Mohammad and Mohammad Zakir Hossain (2008); Flawed Interest Rate Policy and Loan Default: Experience from a developing country; International Review of Business Research Papers Vol.4 No.5 October –November Pp. 235-246
- Homaifar, Ghassem, et al, (1994); An Empirical Model Of Capital Structure Some Of Evidence; Journal of Business Finance and Accounting Vol.21, pp1-14
- Jalilvand, Abolhassan and Robert S Harris (1984); Corporate Behavior in Adjusting to Capital Structure and dividend Target: An Econometric Study; Journal of Finance, Vol.13 issue 1;pp. 45-127.
- Jensen, Mickel C. and W. Meckling, (1976); Theory of The Firm: Managerial Behavior, Agency Cost, and Ownership Structure; Journal of Finance Economics ,December, Vol.3; pp. 305-360
- Jensen, Michael C. (1986); Agency Cost of Free Cash Flow, Corporate Finance and Take Overs; American Economics Review Vol. 76, No 2, pp.323-329.
- Jensen, Michel C. and Clifford W Smith (1985); Stockholder, Manager, and Creditor Interests: Application of Agency Theory; Harvard Business School.
- Ju, Nengjiu, Robert Parrino, Allen M. Poteshman, and Michael S. Weisbach., (2005); Horses and Rabbits? Trade-off Theory and Optimal Capital Structure”. Journal of Financial and Quantitative Analysis, Vol. 40, No.2, pp. 259-280.
- Klein, L.S., Thomas J.O.B., Stephen R. Peters (2002); Debt vs Equity and Asymmetric Information: A Review; The Financial Review. Vol.37, pp.317-350.
- Kraus, Alan., and Litzenberger, Robert H (1972); A State-Preference Model of Optimal Financial Leverage; Journal finance, volume 28, issued4, pages 911-922.
- Lakshmi Shyam-Sunder, Lakshmi and Myers, Steward, (1999); Testing static tradeoff against pecking order models of capital structure; Journal of Financial Economics, Vol 51; pp.219-244
- Leland, Hayne E., and David H. Pyle, (1977); Informational Asymmetries, Financial Structure, and Financial Intermediation; Journal of Finance, Vol. XXXII, No. 2, 371-387
- Low, Pek Yee and Kung H. Chen (2004); Diversification and Capital Structure: Some International Evidence; Review of Quantitative Finance and Accounting, Vol.23, pp.55-71.
- Mackie-Manson, Jeffrey, “Do Taxes Affect Corporate Financing Decisions” Journal of Finance, 1990.
- Madura, Jeff. (1995); International Financial Management, Fourth edition; West Publishing Company, St Paul, New York.
- Mao, Connie X. (2003); Interaction of Debt Agency Problems and Optimal Capital Structure: Theory and Evidence; Journal of Financial and Quantitative Analysis, Vol.38, No.2, pp.399-423.
- Masulis, Ronald W. (1983); The Impact of Capital Structure Change on Firm Value: Some Estimates; The Journal of Finance, Vol XXXVIII, No. 1, pp.107-126.
- McConnel, Jhon J., and Chris J. Muscarella, (1984); Corporate Capital Expenditure Decisions and Corporate Capital Expenditure Announcements; Purdue: Purdue University, Lavayette, Inc
- Miller, M.H (1988); The Modigliani-Miller Proposition After Thirty Years; Journal of economic Perspectives, Vol.2, pp.99-120.

- Modigliani, F. and M. Miller (1958); The Cost of Capital, Corporation Finance and the Theory of Investment; The American Economic Review, Vol.48; pp 261-297.
- Modigliani, F. and M. Miller (1963); Corporation income Taxes and The cost of Capital: A Correction; The American Economic Review, Vol.53; pp 433-443.
- Myers Stewart.C., (1977), Determinants of Corporate Borrowing, Journal of Financial Economics 9, November, pp.147-176.
- Myers, Stewart. C. (1984); The Capital Structure Puzzle; The Journal of Finance, Vol 39, No.3, pp.575-592.
- Myers, Stewart. C., and Nicholas S Majluf (1984); Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have; Journal of Financial Economics, Vol 13, pp.187-221.
- Nisa Fidyanti. (2003); Faktor-Faktor Yang Mempengaruhi Kebijakan Hutang Perusahaan; Journal Ekonomi, Manajemen dan Akuntansi". Vol.1 Nomor 1 Januari.
- Nopirin (1992); Ekonomi Moneter, Edisi ke Empat; BPFE Yogyakarta.
- Ojah, Kalu and Justo Manrique (2005); Determinants of corporate debt structure in a privately dominated debt market: a study of the Spanish capital market; Applied Financial Economics, Vol. 15, pp.455-468.
- Ozkan, A., 2001; Capital Structure Choice and Adjustment to Long Run Target: Evidence from UK Company Panel Data; Journal of Business Finance & Accounting, Vol 28 (1) & (2), 175-198
- Panno, A (2003); An Empirical Investigation on The Determinants of Capital Structure: the UK and Italian Experience; Applied Financial Economics, Vol 13, pp.97-112.
- Pao, Hsiao Tien, and Yau Yu Chih, (2005); Comparison of Linear and Nonlinear Models for panel Data Forecasting: Debt Policy in Taiwan; Review of Pacific Basin Financial Markets and Policies, Vol.8 No.3, 525-541
- Pawlina, Grzegorz and Luc Renneboog (2005); Is Investment-Cash Flow Sensitivity Caused by Agency Costs or Asymmetric Information? Evidence from the UK; European Financial Management, Vol. 11, No.4, pp.483-513.
- Rajan, Raghuram and Luigi Zingales (1995); What Do We Know about Capital Structure? Some Evidence from International Data; The Journal of Finance, Vol. 1, No.5, pp.1421-1460.
- Rataporn Deemsomsak, Krisnha Paudal, Gioia Pasceeto, (2004); The determinant of capital structure : Evidence from the Asia Pacific Region; Journal Multinational Management, Vol.14 (2004) pp 387-405
- Ross, Stephen A. (2001); Essentials of Corporate Finance, Third edition , New York : McGraw-Hill Companies.
- Ross, Stephen A. (1977); The Determination of Financial Structure: The Incentive Signaling Approach ; Bell Journal of Economics and Management Science, Vol. 8, pp.23-40.
- Ross, Stephen., Westerfield, Randolph., and Jaffe, Jeffrey,(2006); Corporate Finance 9Th Edition; McGraw-Hill.
- Rubinstein, Mark E. (1973); A Mean-Variance Synthesis of Corporate Finance Theory; Journal of Finance, Vol.28, No.1; pp.167-181.
- Sayilgan, Guven., Hakan Karabacak, and Guray Kucukkocaoglu, (2006); The Firm Specific Determinants of Corporate Capital Structure: Evidence From Turlies Panel Data; Investment Management and Financial Innovation, Vol 3, issued3, 125-139.
- Seftianne dan Ratih Handayani, (2011); Faktor-Faktor Yang Mempengaruhi Struktur Modal Pada Perusahaan Publik Sektor Manufaktur; Jurnal Bisnis dan Akuntansi, Vol.13, No.1; pp.39-56
- Sekaran, Uma (2003); Research Methods For Business: A Skill Building Approach; John Wiley & Son, Singapore.
- Shum, Pauline M, (1999); Tax and Corporate Debt Policy in Canada: An Empirical Investigation; Canadian Journal of Economics, Vol.29-3; pp.556-572.

Shyam-Sunder, L. and S. Myers,(1999); Testing Static Trade-off Against Pecking Order Model of Capital Structure; Journal of Financial economics, Vol.51;No.2: pp 219-244

Smart, Scott B., Megginson, William L., and Gitman, Lawrence J,(2004); Corporate Finance Second Edition;Harvard Business Publishing.

Stiglitz, Joseph E. (1969); A Re-Examination of the Modigliani-Miller Theorem; American Economic Review, Vol.59,No.5; pp. 784-793.

Strebulaev, Ilya A. (2003); Do Test of Capital Structure Theory Mean What They Say?;Job Market Paper, London Business School, pp.1-42.

Thies, C., and Klock, M, (1992); Determinants of capital structure; Review of Financial Economics, Vol.1; pp.40-52

Titman , (1988); Financial Market and Corporate Strategy; Irvin Professional Publishing, USA

Titman and wessels, (1998); The determinants of Capital Structure Choice; The Journal of Finance, Vol.43 No.1; pp.1-19

Tong, Guanqun., and Christoper J.Green, (2005); Packing Order or Trade-off hypothesis? Evidence on the capital structure of China Companies; Applied economics, Vol.37, pp.2179-2189.

Voulgaris, F., D. Asteriou, and G. Agiomirgianakis (2002), "Capital structure, asset utilization, profitability and growth in the Greek manufacturing sector". Applied Economics. Vol 34, pp.1379-1388.

Zhi Dong, (2011); Foreign Exchange Rate and Capital Structure Decision: A Study of New Zealand Listed Property Trust" 17th Pacific Rim Real Estate Society Conference Gold Coast, Australia, Januari 2011.