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Determining Factors by using Hedging Policies Derivative Instruments in Non-Financial Companies in Indonesia

Yusbardini

Fakulty Ekonomic, Universitas Tarumanagara

ABSTRACT: The purpose of this study is to examine the determinants of hedging policy in manufacturing companies listed on the Indonesian Effect Exchange. The determining factors tested in this study are financial distress, market to book value of equity, and liquidity against the company's hedging policy with foreign currency derivative instruments. The proxy used to measure financial distress is the debt-to-equity ratio (DER). Market to book value of equity (MBVE) is usually to measure firm value and current ratio as a proxy for liquidity. This study uses panel data. The study was conducted on 41 companies and 246 observations during the period 20102015. This study used a logistic regression model. The results showed that financial distress, firm value, and liquidity had a significant influence on hedging policy. The results of testing on the second hypothesis, financial distress affected. positive and significant impact on hedging policies in public companies listed on the Indonesian Stock Exchange. The test results on the second hypothesis, firm value have a positive and significant effect on hedging in public companies listed on the Indonesian Stock Exchange. The test results on the third hypothesis, liquidity has a negative effect. and significant to the hedging policy of public companies listed on the Indonesia Stock Exchange.

KEYWORDS: Hedging, financial distress,market to book value of equity, liquidity

1.INTRODUCTION

Increased competition or volatility in market prices can increase business uncertainty or risk. Many companies are closing down due to external debt. Fluctuations in foreign exchange rates that occur can threaten the survival of the company because it can cause the risk of uncertainty in the value of assets and liabilities. To anticipate the risk of changes in foreign currencies, companies need to implement a hedging policy. Hedging is an activity related to hedging, which is carried out to anticipate movements in foreign currencies. The benefit of hedging is to protect the company's assets from potential foreign currency losses, as well as reduce variations in future cash flows. Meanwhile, the principle of hedging is to cover the loss in the initial asset position with the gain from the hedging instrument position.

Hedging is an action taken to protect the company from exposure to exchange rates (Madura, 2000). Exposure is the rate at which the company's cash flow is affected by changes in exchange rates. Companies that make payments and/or receive income in foreign currencies will experience foreign exchange exposure. Foreign exchange exposure arises because foreign exchange rates are always changing (Hocht et. Al., 2009). To anticipate the risk of cash flow deviations due to fluctuations in currency exchange rates, companies can adopt a risk hedging strategy. Hedging can also increase manager satisfaction, this was stated in Manager's Utility Maximization Theory. This theory reveals that the use of hedging can increase manager satisfaction. Another goal of hedging companies is to increase shareholder value, this is following the Shareholder Value Maximization Theory which notes that companies that use hedging have a higher proportion of foreign assets, sales, and income because the volatility of cash flows can be reduced, thereby increasing value. Shareholders (Bartram et al., 2006) Shareholder value maximization theory states that hedging policy is to maximize shareholder value through financial distress costs, taxes, underinvestment costs, and asset substitution costs (Ammon, Ekholm and Nguyen, 2006)

Factors that encourage companies to hedge include financial distress, namely the company's financial difficulties to pay off its debts. When a company owes in foreign currency, the amount of debt will be affected by the exchange rate and has the opportunity to cause financial distress. By hedging, companies can reduce financial distress, because hedging can maintain the amount of debt at a certain level so that the risk of default due to currency exchange rate fluctuations can be reduced (Ameer, 2010 and Goldberg, et. Al., 1998). Financial distress is an important factor in determining company hedging policies, financial distress is also positively related to hedging activity (Nance, et. al., 1993; Arnold et.al., 2014; Clark and Judge, 2005; Heaney, 2005; Brown, G., 2001. However, research others recorded financial distress that had no relationship with hedging policies.

In maximizing shareholder value, the company applies to hedge policies to reduce cash flow fluctuations and minimize financial distress. The majority of previous studies used debt to equity ratio as a proxy for financial distress as research conducted

by Shaari, et. al (2013) said that the debt to equity ratio positive and insignificant effect. In contrast to Suriawinata (2005), Paranita (2011) and Putro (2012) get the results that the debt to equity ratio positive and significant effect. Also, companies will be more motivated to implement hedging policies when facing higher underinvestment costs because they have greater investment growth opportunities. Paranita (2011), Chaudhry, et.al (2014), Repie and Sedana (2014) use the market to book the value of equity as a proxy for underinvestment costs. Then, companies that have liquid assets tend not to be burdened with asset substitution costs and require fewer hedging instruments because they have hedging substitution. Liquidity is proxied by the current ratio (Shaari, et.al, Putro, Ahmad and Haris, and paranita).

Research on non-financial sector companies recorded market to book value of equity to have a positive and significant impact on hedging policies (Naveed, et. Al., 2014; Ahmad, 2012). Research with survey methods that have been conducted with the market to book value of equity variable shows that the market to book value of equity influences hedging policy (Clark and Judge, 2005). Other research shows that there is a negative relationship between market to book value of equity and hedging policy (Mian, 1996). Also, research with the liquidity variable notes that liquidity has a negative and significant effect on hedging policy (Ahmad, 2012; Shaari, et. Al., 2013) Referring to the research that has been done, shows results that there is a research gap between one study and another. Besides, there is still limited research on company hedging decisions in Indonesia, so further research is still needed using the financial distress variable, the company value proxied by the market to book value of equity and liquidity on hedging policy. The purpose of this study is to examine financial distress, the value company's proxied market to book value of equity, and liquidity on the company's hedging policy, while the contribution of this study can be used as a guideline or reference in determining the right hedging policy.

2. THEORETICAL BASIS

A. Theory of Hedging Motives for Risk Management .

Nguyen (2006) states that the theory of hedging motives for risk management or hedging motive theory in risk management is a theory which constructs an explanation in the company's risk management motives, viz the first through the shareholder value maximization theory and the second is manager's utility maximization theory.

a. Shareholder Value Maximization Theory

Nguyen (2006) shareholder value maximization theory argues that risk management can increase the market value of a company by reducing financial distress, improving taxable income levels, and eliminating the problem of underinvestment. Meanwhile, according to Paranita (2011), shareholder value maximization theory explains that the rationality of hedging policy is to maximize shareholder value through reducing tax liabilities, financial distress, underinvestment, and asset substitution.

b. Manager's Utility Maximization Theory

According to Nguyen (2006), a manager's utility maximization theory states that hedging is in managers' incentives to maximize their utility function so that through this theory, risk management is said to reduce managerial risk aversion and agency cost. Managerial risk aversion according to Smith (1985) companies with managerial ownership the larger ones usually tend to hedge more of the volatility of the manager's wealth. Agency cost according to Gitman (2012) states that agency cost is costs borne by shareholders to prevent or minimize agency problems and to maximize their interests before shareholders' interests. A manager who owns a large number of company shares will be motivated to use derivatives to reduce the risk of the company because their wealth is related to the market value of the company. Hedging is said to reduce agency costs allowing companies to have a higher debt to equity.

B. The Influence between Variables and Hypotheses

1. The effect of financial distress on hedging

Based on the theory of corporate risk management, financial distress creates huge costs for the company. This can be seen from the company's cash flow which shows that there are high direct and indirect costs for the bankruptcy experienced by the company (Geczy, et.al. 1997). Companies that have an indication of bankruptcy from financial distress calculations will take steps to protect the company from the various risks that are involved. will worsen the condition of the company. So that management will carry out hedging activities to protect the company from various risks that may occur (Arnold et. Al., 2014). By using derivative instruments for hedging purposes, companies can maximize firm value and reduce the risk of financial difficulties. Companies experiencing financial difficulties prefer to do financially secure hedging (Stulz, 1996; Stulzdan Smith, 1985). Financial distress can occur because the greater the company's activities that are financed by debt, which results in the greater the company's obligation to pay the debt. Company debts can be measured using the solvency ratio. The debt to equity ratio (DER) is one type of solvency ratio.
H1: Financial distress has a positive effect on hedging

2. Effect of Liquidity on hedging

According to the shareholder value maximization theory, companies that have liquid assets tend not to be burdened by the asset substitution problem. Liquidity means the ability of current assets to meet current liabilities when needed and requires fewer hedging

instruments because they have hedging substitution. Liquidity is proxied by the current ratio (Shaari, et.al, Putro, Ahmad and Haris, Paranita) The current ratio or current ratio is one measure of the liquidity ratio that is often used. Powers and Needles (2012) states that the current ratio measures the ability to pay the short-term debt. Mian, (1996) research with the liquidity variable records that liquidity has a negative and significant effect on hedging policy (Ahmad, 2012; Shaari, et. Al., 2013)
H2: liquidity has a negative effect on hedging

3. The effect of firm value (Market to Book Value of Equity) on hedging

According to Husnan (2012) states that the market to book value of equity or also known as stock market value and book value can be used to measure company value, the greater the market to book value of equity ratio, the higher the company is valued by investors. Meanwhile, Zainuddin and Jogiyanto in Erlina (2007) states that the market to book value of equity is a ratio that reflects that the market assesses that the return on the company's investment in the future will be greater than the expected return on equity. Another definition is expressed by Chung and Charoen Wong (1991) which defines the market to book value of equity by the number of shares outstanding multiplied by the closing price of the shares then divided by the total equity. So that it can be concluded that the Market to Book Value of Equity or what is known as Stock market value and book value are the ratios used to measure the value of the company utilizing the number of shares outstanding multiplied by the closing price of the shares which is then divided by total equity, so that the greater the ratio of market to book value of equity, the higher the company is valued. Research by using survey methods that have been conducted with the variable market to book value of equity shows that the market to book value of equity influences hedging policy (Clark and Judge, 2005). Other studies have shown a negative relationship between market to book value of equity and hedging policy (Mian, 1996).
H3: market to book value of equity affects hedging

3. RESEARCH METHODOLOGY

A. Variable Operationalization

1. Variable Dependent Hedging

Hedging is a risk management activity performed by a company by taking a position in the futures market as opposed to the position held in the physical market in the same number of contracts to reduce or eliminate the risk of exchange rate effects or exposure. Hedging is a dummy variable, scoring the company if: • Not hedging with foreign currency derivatives = 0
• Hedging with foreign currency derivatives = 1

2. Independent Variables.

The independent variables in this study are:

a. Financial distress

is a measurement that indicates difficulties in repaying debts to creditors, or it can be referred to as a measure of company bankruptcy. The occurrence of financial distress can occur because the greater the company's activities are financed by debt which results in the greater the company's obligation to pay this debt. Financial distress in this study is proxied by the Debt-to-Equity ratio. Haari, et. al (2013).

$$\text{Debt to Equity rasio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

b. The Value of the Company

The company value is proxied by Market to Book Value of Equity, which is a measurement of the market value of a company and the book value that can be used to measure the value of the company. market to book value of equity can be measured by the number of shares outstanding multiplied by the closing price of the shares then divided by total equity. Chung and Charoen Wong (1991)

$$\text{Number of Shares X Stock price market to book value of equity} = \frac{}{\text{Total Equity}}$$

c. Liquidity

Liquidity is the ability of current assets to meet current liabilities. Liquidity is proxied by the current ratio (Shaari, et.al, Putro, Ahmad and Haris, Paranita)

$$\text{Current asset currentratio} = \frac{}{\text{Current Liabilites}}$$

B. Data Analysis Techniques

The data obtained will be processed and analyzed using the method electronic data processing, namely by using SPSS version 21 software. The analysis tool uses Logistic Regression. Logistic regression is carried out when the researcher wants to test whether the probability of the occurrence of the dependent variable can be predicted by the independent variable (Ghozali, 2011). The logistic regression model in this study is stated as follows:

$$\text{Log } Pi = \frac{Pi}{1-Pi} = Bo + B1X1 + B2X2 + B3X3 + e$$

Where:
Li: The dependent variable, namely hedging
Pi: Probability (Dummy variable, 1 = hedging, 0 = not doing hedging) 0: constant
1: regression coefficient X1
2: regression coefficient X2
3: regression coefficient X3
X1: Debt to equity ratio (DER)
X2: Market to book value of equity (MBVE)
X3: Current ratio (CR) e: error
Determination of the values of 1 and 0 as hedging variables by looking at the records of the financial statements in each company. Logistic regression model testing analysis (Ghozali, 2011; Kuncoro, 2001; Gujarati, 2006).

C. Hypothesis test

1. F Test

This test is conducted to test whether the independent variables consisting of debt to equity ratio, market to book value of equity and current ratio simultaneously affect the bound variable, namely hedging. This test is also called the maximum likelihood test. The test results obtained are in the form of an omnibus test of the coefficient model.

2. T Test

The regression coefficient test is carried out to test how far the independent variables included in the model partially affect the dependent variable. The test results obtained are in the form of table variables in the equation by looking at the coefficient value of the wald statistics value and significance.

4. RESEARCH RESULTS

Logistic Regression Equation

In this study, the dependent variable is the dichotomous hedging, where if the data is hedged it will be given a value of 1, whereas if the data does not hedge it will be given a value of 0. The logistic regression equation can be seen in the results of statistical data processing obtained from the table variables in the equation below:

Tabel 4.1. Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	DER	.245	.101	5.922	1	.005	1.278
	MBVE	.205	.094	4.780	1	.039	1.227
	CR	-.746	.245	9.258	1	.012	.474
	Constant	-.404	.498	.661	1	.416	.667

Based from: software SPSSversi 21, data diolah

The logistic regression equation can be seen in the results of statistical data processing obtained from the table variables in the equation column B. from the logistic regression equation above, it can be seen that the log of odds the company hedging is positively related to the debt to equity ratio (DER) and the market to book value of equity (MBVE), while the company hedging is negatively related to the current ratio (CR).

The F test

This test is conducted to test whether the independent variables consisting of debt-to-equity ratio, market to book value of equity and current ratio simultaneously affect the dependent variable, namely hedging. From the results of statistical data processing, the omnibus test of the model coefficient table is obtained in the table below:

Tabel 4.2. Omnibus Tests ofModel Coefficients

		Chi-square	Df	Sig.
Step		34.941	3	.000
St ep 1	Block	34.941	3	.000
Model		34.941	3	.000

Sumber: software SPSSversi 21, data diolah

	B	S.E.	Wald	df	Sig.	Exp(B)
DER	.245	.101	5.922	1	.005	1.278
MBVE	.205	.094	4.780	1	.039	1.227
Step 1[a]	-.746	.245	9.258	1	.012	.474
CR	-.404	.498	.661	1	.416	.667

The chi-square value in table 4.13 above is obtained from the selection of the value-2 Log-Likelihood on block 0 which has decreased with -2 Log-Likelihood on block1, which is equal to 34,941 (315,865-280,924 = 34,941).

T Test

The regression coefficient testing is carried out to test how far all the independent variables entered in the model have an influence on the dependent variable. The test results obtained are in the form of a display of table variables in the equation. From the results of statistical data processing, the table variables in the equation presented earlier are obtained:

Table 4.3 Variables in the Equation

Constant

Variable(s)entered onstep 1: DER, MBVE, CR

Based on the results of the table above, it can be explained:

1.Financial distress to hedging

From the test results, it is found that the debt-to-equity ratio, which is a proxy for financial distress, has a significant positive effect on hedging, so that the higher the debt to equity ratio, the higher the hedging policy implemented by the company. The debt-to-equity ratio is one indicator to measure Financial distress. Financial distress conditions can occur because the greater the company's activities that are financed by debt will result in a high level of financial distress and tend to bring the company in need of a hedging policy, this is due to the need for debt repayment which encourages a high debt ratio. with previous research conducted by Suriawinata (2005), Paranita (2011), and Putro (2012) which showed the probability of companies implementing hedging policies positively and related debt to equity ratio which tends to affect the level of financial distress. Another study that states that the debt-to-equity ratio is positively related is Shaari et. al (2013) who got positive but insignificant results.

2. Company value against hedging.

Similar to the variable debt to equity ratio, the market to book value of equity proxy of firm value also gets positive and significant results. Thus, it means that the greater the company value as measured by the company's market to book value of equity, the probability is that it can be said. companies to implement hedging policies will be even greater. Market to book value of equity is a crucial indicator for obtaining external financing as measured by market capitalization. External financing is very important for a company because it is part of the source of funds to finance the company's investment. When external risks affect the company's internal cash flow which results in a decrease in the company's ability to fund certain investments, it will cause underinvestment costs. To reduce dependence on high external funding which can lead to underinvestment, companies can use derivative hedging to maximize the investment.

Positive and significant research is found by Repie and Sedana (2014) and Ahmad (2012). The greater the market to book value of equity (reaching above one), the higher the company is

assessed by investors relative to the funds that have been invested in the company and the higher the interest of investors to buy shares.

3.Liquidity against hedging

The test results obtained for the current ratio, which is a proxy for liquidity, are significant negative, which means that the higher the current ratio, the lower the probability of the company implementing hedging policies. This is because the company tends not to be burdened by the asset substitution cost.

Conversely, if the lower the current ratio of a company, the greater the probability of the company implementing a hedging policy. The higher the current ratio owned by a company means the ability of current assets to meet current liabilities when needed, this is in line with Ahmad (2012). Paranita (2011) and Suriawinata (2005) also found research that shows that the current ratio is

negatively related, but it is not significantly proven. In contrast to Shaari, et.al (2013) who got a significant positive result, and Putro (2012) positive insignificant.

5. CONCLUSION

Based on the results of data analysis and discussion, the conclusions of this study are as follows:

1. Financial distress, firm value, and liquidity have a significant influence on hedging policies in public companies listed on the Indonesian Stock Exchange.
2. Financial distresses have a positive and significant impact on hedging policies in public companies listed on the Indonesian Stock Exchange.
3. Firm value has a positive and significant effect on hedging of public companies listed on the Indonesian Effect Exchange.
4. Liquidity has a negative and significant effect on hedging policies in public companies listed on the Indonesia Stock Exchang.

REFERENCES

1) Ahmad, Noryati dan Balkis Haris. (2012). Factors for Using Derivatives: Evidence: from Malaysian Non-Financial Companies. *Journal of Finance and Accounting. Vol 3. No 9. ISSN 2222-1697*
2) Ameer, *Rashid. (2010). Determinants of Corporate* Hedging *Practices in Malaysia.* International Business Research. Vol. 3, No. 2.
3) Arikunto, Suharsimi, 2002. "Prosedur Penelitian Suatu Pendekatan Praktek". Jakarta. PT. Rineka Cipta.
4) Aritonang, R. Lerbin. 2007. "Teori dan Praktik Riset Pemasaran*".* Bogor: Ghalia Indonesia.
5) Arnold, Matthias, et. al. (2014). Determinants of Corporate Hedging: A (Statistical) Meta-Analysis. *The Quarterly Review of Economics and Finance 54 (2014) 443–458.*
6) Ammon, Norbert. 1998. "*Why hedge? – A Critical Review of Theory andEmpirical Evidence". Center for European Economic Research.* Berk, Jonathan and Peter DeMarzo. 2014. "*Corporate Finance, third edition".*United States: Pearson.
7) Brealey, Richard and Stewart Myers. 2006. "*Principles Of Corporate Finance, 7th Edition". Mc Graw Hill Book Company*.
8) Brigham, Eugene F. dan Houston. 2011. "Dasar-dasar Manajemen Keuangan*".* Salemba Empat: Jakarta.
9) Chaudhry. *Et. al.* 2014. "*Determinants of Corporate Hedging Policies and Derivatives Usage in Risk Management Practices of Non-Financial Firms".*MPRA Paper no 57562, (*July* 2014).
10) Chung, Kee H., dan Charlie Charoenwong. 1991. "*Investment Options, Assets inPlace, and The Risk of Stocks*". *Financial Management*
11) Damodar Gujarati. 2003."Ekonometrika Dasar, Edisi Keenam". Jakarta: Erlangga.
12) Erlina dan Sri Mulyani. 2007.*"*Metodologi Penelitian Bisnis: Untuk Akuntansi dan Manajemen". Cetakan Pertama USU Press: Medan.
13) Ekayana Sangkasari Paranita. 2011 "Kebijakan *Hedging* Dengan Derivatif Valuta Asing Pada Perusahaan Publik di Indonesia". Seminar Nasional Ilmu Ekonomi Terapan, Fakultas Ekonomi UNIMUS 2011.
14) Ekholm, hanna and Nguyen. 2006. "*Hedging Core and Non-Core Risks: Evidence from the Forestry and Paper Industry*". *Lund University.*
15) Gitman, J.Lawrence and Chad J.Zutter 2012. "*Principles of Managerial Finance,13th edition".* England: Pearson.
16) Harahap, Sofyan Syafri. 2011. "Analisis Kritis Atas Laporan Keuangan". Jakarta:Raja grafindo Persada.
17) Horne, *et. al*. 2007. "*Fundamental of Financial Management*, Edisi 12".Diterjemahkan oleh Fitriasari dan Kwary. Jakarta: Salemba Empat.
18) Hull, J. 2006. "*Option, Futures, and Other Derivative Securities*" *Prentice-Hall International, Inc*: Toronto.
19) Husnan dan Pudjiastuti. 2012. "Dasar-Dasar Manajemen Keuangan (6th ed)". Yogyakarta: UPP STIM YKPN.
20) Imam Ghozali. 2011. "Aplikasi Analisis *Multivariate* Dengan Program IBM SPSS Edisi Kelima". Semarang: Universitas Diponegoro.
21) 2012. "Aplikasi Analisis Multivariate Dengan Program SPSS*"*. Semarang: Universitas Diponegoro.
22) Iman S Suriawinta. 2005 "*Investigating The Simultaneity of Corporate Hedgingand Debt Polcies: Empirical Evidence from Indonesia". Gajah MadaInternational Journal of Business.* Vol 7, no 2 (*May-August*, 2005).
23) James C, Van Horne, james C dan Wachowicz. 2005. "Prinsip-prinsip Manajemen Keuangan, Edisi Kedua Belas". Jakarta: Salemba Empat.
24) Kasmir. 2012. "Analisis Laporan Keuangan". Jakarta: PT Raja Grafindo Persada.
25) Leuthold R, *et. al.* 1979. "A*Semi strong From Evaluation of The Efficiency ofHog Future Market*". *American Journal of Agricultural Economics*
26) Madura, Jeff. 2000. "Manajemen Keuangan Internasional, Edisi 4, Jilid 1".Jakarta: Erlangga.
27) Mudrajat Kuncoro. 2001. "Metode Kuantitatif Teori dan Aplikasi Untuk Bisnis dan Ekonomi, Edisi Pertama". Yogyakarta: UPP AMP YKPN.

28) Megginson, William L., Scott B. Smart. 2011. "*Introduction to Corporate Finance"*. *Cengange Learning*
29) Myers, S.C. 1977. *Determinants of corporate borrowing, Journal of FinancialEconomics*.
30) Noryati and Haris. 2012. "*Factors forUsing Derivatives: Evidence from Malaysian Non-Financial Companies". Research Journal of Finance andAccounting.* Vol 3, no 9 (2012).
31) Nance, *et. al.* 1993. "*On The Determinants of Corporate Hedging*" *Journal ofFinance*.
32) Nguyen, H. & Faff, R. (2003). Can The Use of Foreign Currency Derivatives Explain Variations in Foreign Exchange Exposure? Evidence from Australian companies. *Journal of Multinational Financial Management, 193-215.*
33) Norpratiwi. 2007. "Analisis Korelasi *Investment Opportunity Set* terhadap *Return Saham pada* saat Pelaporan Keuangan Perusahaan". Jurnal Akuntansi danManajemen, Vol. 18.
34) Narimawati. 2010. "Penulisan Karya Ilmiah". Bekasi: Penerbit Ganesis.
35) Needles, Belverd E. & Powers, Marian. 2012. *"Principles of Accounting* (*11thed*)" *Cincinnati: Cengage Learning.*
36) Siahaan, Hinsa. 2008. *"*Seluk–Beluk Perdagangan: Instrument Derivatif: Opsisaham *call &put, rights, warrants, convertible bonds, swap* tingkat bunga,indeks, dan *swap* valuta asing*".* Jakarta: PT. Elex media Komputi
37) Septama Hardanto Putro. 2012. "Analisis Faktor yang Mempengaruh iPenggunaan Instrumen Derivatif Sebagai Pengambilan Keputusan*Hedging". Diponogoro Business Review.* Vol 1, no 1 (2012).
38) Shaari *et. al*. 2013. "*The Determinants of Derivative Usage: A study on MalaysianFirms". Interdisciplinary journal of contemporary research in business*. Vol5, no 2 (*June*, 2013)
39) Smith, Clifford and Stulz. 1985. "*The Determinants of Firms' Hedging Policies*".*Journal of Financial and Quantitative Analysis.* Vol 20, no 4, (*December*1985).
40) Spano, Marcello. (2007). Managerial Ownership and Corporate Hedging. *Journal of Business Finance & Accounting, 34(7) & (8), 1245–1280.*
41) Toto Prihadi. 2012. "Analisis Laporan Keuangan Lanjutan Proyeksi dan Valuasi". Jakarta: PPM. *Referensi:* Ahmad,
42) Shiu, Yung Ming, et. al. (2001). On The Determinants of Derivative Hedging by Insurance Companies: Evidence from Taiwan. *Asian Economic and Financial Review 2(4):538-552.*
43) Repie and Sedana. 2014. "Kebijakan *Hedging* Dengan Instrumen Derivatif Dalam Kaitan Dengan *Underinvestment Problem* di Indonesia". Fakultas Ekonomidan Bisnis Universitas Udayana. Bali: Indonesia.
44) www.bi.go.id
45) www.idx.co.id
46) www.finance.yahoo.com
47) www.kompasiana.com
48) www.sahamok.com