

DERIVATIVE INSTRUMENT HEDGING ACTIVITY ON COMPANY'S INTERNAL AND EXTERNAL ECONOMIC FLUCTUATIONS**Dian Oktarina**

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Article Info:Received: 7 November 2016
in revised form: 17 December 2016
Accepted: 17 April 2017
Available Online: 12 November 2017**Keywords:***Hedging, Economic exposure, and Financial distress***Corresponding Author:**Email: dian.oktarina@perbanas.ac.id

Abstract; Between 2008-2009, Indonesia had financial crisis which made companies tried hard to stabilize its economy and found solutions or preventive action to resolve the problems of the crisis. Several ways can be applied to resolved these risks, and hedging activity was one solution. Data sampling in this article were taken from automotive industry listed at Indonesian Stock Exchange (BEI) between 2010-2014. The purpose of this study is to determine activity of derivative instruments to hedge the volatility in economic conditions of internal and external company. Internal economy condition is described by financial distress and external economy condition is described by economic exposure. Logistic regression analysis is a tool used in this research. The results indicate that financial distress provides significant negative effect on implementation of hedging activities, while economic exposure does not affect the implementation of hedging activities. Further research can use other sector or using all sector companies listed at the Indonesian Stock Exchange (BEI) and with a longer period of time. However, added some independent variables can affect hedging activities such as interest rates and inflation.

Abstrak; Penelitian ini bertujuan mengeksplorasi praktik laporan pertanggungjawaban pengeluaran pemeliharaan kendaraan operasional di instansi pemerintah daerah. Penelitian ini merupakan penelitian kualitatif menggunakan pendekatan metode studi kasus. Data penelitian dikumpulkan melalui wawancara, observasi, dan dokumentasi. Data yang telah dikumpulkan, kemudian dipilih, dipresentasikan, dan disimpulkan. Sebelum analisis, dilakukan validitas data dengan metode triangulasi. Hasil penelitian menunjukkan adanya ketidakberesan dalam laporan pertanggungjawaban pengeluaran pemeliharaan kendaraan operasional di instansi pemerintah daerah

INTRODUCTION

Recent global economic condition still has fluctuations. In Indonesia, this fluctuation can be seen from Rupiah's exchange rate on US Dollar that always changes every time. Financial crisis occurred in Indonesia between 2008-2009 led the Rupiah's exchange rate against US Dollar, that not only gave bad impact for the government but also investor or business participant. It makes a company tries to stabilize its economic condition and find the solution or preventive action if the crisis occurs in the future.

There are a lot of ways that can be taken by company to manage the risk, one of them is by conducting hedging activity or known by hedging. Basically, hedging activity or hedging can be conducted by any companies. However, not that all companies can run hedging activity well. A good hedging for a company is a hedging that can produce efficiency and effectiveness for the company in minimizing the risk.

According to Kim and Kim (2015), the bigger hedging activity, the lower company's probability hit by exchange risks. This study also finds a strong company's management will make the company prefer to use hedging. If a company has strong management, *hedging* activity and exchange rate exposure will have a positive relationship. In line with Kim and Kim (2015), Magee (2013) urges that currency hedging can reduce financial difficulty risk impact. In contrast with two previous studies, it is stated that hedging can reduce company financial risk including exchange rate risk, Fiskara et al. (2015) urges that currency hedging does not have a significant role to the company, in other word the hedging cannot overcome financial risk that exists in a company includes exchange rate risk.

The hedging activity implementation, besides affected by economic exposure, especially exchange rate exposure that reflects an external economic fluctuation, *hedging* activity is also affected by a company's internal economic fluctuations that is *financial distress*. Sianturi (2015) urges that *financial distress* gives a significant negative effect on *hedging* activity. A company that is experiencing *financial distress* has a limited ability to manage company's risk mainly exchange risk. Based on the phenomena, previous studies and inconsistency in previous studies, therefore, it is required to conduct a further study entitled: "Derivative Instrument *Hedging* Activity on Company's Internal and External Economic Fluctuations".

The existence of economic risk (*economic exposure*) that comes from company's external environment in which the company cannot prevent this risk, makes the company reduce economic risk (*economic exposure*) to maintain the company to keep operate. The high economic risk (*economic exposure*) and late to be reduced, will eventually have an impact on company's operational activity related to exchange rate since it always fluctuates yet cannot be predicted. Economic risk impact (*economic exposure*) is growing bigger if company's internal part experiences financial difficulty (*financial distress*). A company that cannot reduce economic risk (*economic exposure*) coupled with company's internal part that experiences *financial distress*, will get a bad impact on the company's operational activity that leads the company onto bankruptcy. Therefore, to reduce economic risk that occurs and prevent *financial distress*, the company needs to conduct hedging activity.

METODE PENELITIAN

Penelitian ini menggunakan pendekatan penelitian kualitatif. Menurut Sugiyono (2014: 347), penelitian kualitatif dapat diartikan sebagai metode penelitian yang berlandaskan pada filsafat post-positivisme/interpretif, digunakan untuk meneliti pada kondisi obyek yang alamiah, (sebagai lawannya adalah eksperimen) data dilakukan secara triangulasi (gabungan), analisis data bersifat induktif/kualitatif, dan hasil penelitian kualitatif lebih menekankan *makna* daripada *generalisasi*. Metode yang digunakan dalam penelitian ini adalah studi kasus. Menurut Yin (2014:18) studi kasus adalah suatu inkuiri empiris yang menyelidiki fenomena di dalam konteks kehidupan nyata, bilamana batas-batas antara fenomena dan konteks tidak tampak dengan tegas dan dimana multisumber bukti dimanfaatkan. Studi kasus memusatkan perhatian pada satu obyek tertentu yang kemudian diangkat menjadi sebuah kasus yang akan dikaji secara mendalam sehingga peneliti mampu untuk lebih memahami realitas dibalik suatu fenomena yang masih kasat mata yaitu kajian terhadap realitas tahap pertanggungjawabanbelanja kegiatan pemeliharaan kendaraan operasional pada Instansi Pemerintah Daerah dengan situs penelitian pada SKPD XX.

Sumber-sumber data dalam penelitian ini adalah data primer dan data sekunder. Data primer berasal dari informan-informan yang terlibat langsung dalam tahap pertanggungjawaban belanja kegiatan pemeliharaan kendaraan operasional pada Instansi Pemerintah Daerah. Data sekunder yaitu regulasi, peraturan pemerintah dan dokumen yang berkaitan dengan tahap pertanggungjawaban kegiatan tersebut. Teknik pengumpulan data yaitu dengan wawancara, observasi dan dokumentasi. Data dianalisis dengan teknik analisis interaktif (*interactive model of analysis*) model dari Miles and Huberman. Menurut Miles and Huberman yang dikutip (Sugiyono, 2005:91) mengemukakan bahwa aktivitas analisis data kualitatif dilakukan secara interaktif dan berlangsung secara terus menerus sampai tuntas, sehingga datanya sudah jenuh. Aktivitas analisis data yaitu *data reduction*, *data display*, dan *conclusion drawing/verification*. Metode triangulasi data dalam penelitian ini merupakan upaya untuk mencari validitas data. Metode triangulasi yang digunakan peneliti adalah triangulasi sumber yaitu membandingkan dan mengecek balik derajat kepercayaan suatu informasi yang diperoleh melalui waktu dan alat yang berbeda dalam penelitian kualitatif (Patton, 1987) dalam (Moleong, 2014:330).

RESEARCH METHOD

This study was a hypothesis test aiming at examining the hypotheses and explained a phenomenon in the form of variables interrelationship (Indriantoro dan Supomo, 2000). This study used causal-comparative, that investigated causal relationship possibility between *economic exposure* and *financial distress* on *hedging* activity. This study used secondary data that was indirectly obtained through several websites such as IDX, Bank Indonesia (BI) and etc. Time dimension used was time series started from 2010-2014 using automotive sector listed at Indonesia Stock Exchange (BEI).

Before conducting data analysis, first it was used variable investigation. Independent variables in this study were *economic exposure* (X_1) and *financial distress* (X_2), meanwhile, dependent variable was *hedging* activity (Y).

Hedging Activity (Y)

A hedge or known by hedging was a strategy to reduce unexpected business risk and this was one of economic functions of future trading, that was *transfer of risk*. In this study, hedging used derivative instrument such as *Future Contract*, *Forward Contract*, *Swap* and *Option (Option)*. Company's object that was examined in this study was company's annual report. If company's annual report used specified derivative instrument such as contract use *swap*, *option*, and etc., as hedging activity it would be given score 1, otherwise if it did not use as *hedging* activity it would be given score 0.

Economic exposure (X_1)

Basically, *Economic exposure* indicated an exchange rate fluctuations impact on company's cash flow which reflected company's value. In this study, *economic exposure* was related to individual stock *return* (Jeff Madura in Anggraeni 2004), thus it could be stated that economic exposure had a big effect on the concerned company's individual stock *return*. Exposure on each company could be measured using the following model :

$$R_{it} = \beta_0 + \beta_1 DR_{st} + \beta_2 R_{mt} + e_t, t = 1$$

Description:

R_{it} : Monthly individual stock *return*

DR_{st} : Rupiah's monthly exchange rate against USD

- R_{mt} : Monthly Indonesia Composite Index (IHSG)
 β_0 : The constant (*intercept*)
 β_1 : Exchange rate exposure coefficient
 β_2 : Regression coefficient
 e_t : *Error Standard*

Individual stock return

Individual stock *return* was the results obtained by investors or shareholders from their investment on the concerned stock. Stock *return* in this study was monthly stock realization *return* which was a stock sale result return rate on particular month compared to previous month, and the calculation used the following formula:

$$R_{i,t} = (IHSI_t - IHSI_{t-1}) / IHSI_{t-1} \times 100\%$$

Description:

$R_{i,t}$: Company i stock realization *return* on month t

$IHSI_t$: Company i stock price on month t

$IHSI_{t-1}$: Company i stock price on month t-1

Rupiah's exchange rate on USD

Rupiah's exchange rate used monthly forex middle rate listed at Bank Indonesia (BI). It was used the following formula:

$$\Delta R_{st} = (R_{st} - R_{st-1}) / R_{st-1} \times 100\%$$

Description:

ΔR_{st} : Rupiah's exchange rate on USD change in month t

R_{st} : Rupiah's exchange rate on USD in t month

R_{st-1} : Rupiah's exchange rate on USD in month t-1

Market Return

Market return was a whole stock return obtained from conducted transactions in the stock market. Market return was obtained from Indonesia Composite Index (IHSG) calculation. The Indonesia Composite in this study was taken from joint stock companies listed at Indonesia Stock Exchange during the observation period. The formula was as follow:

$$R_{Mt} = (IHSG_t - IHSG_{t-1}) / IHSG_{t-1} \times 100\%$$

Description:

- R_{Mt} : Market *return* in the month t
 $IHSG_t$: ICI (IHSG) in the month t
 $IHSG_{t-1}$: ICI (IHSG) in the month t-1

Financial distress (X_2)

Financial distress was a condition in which a company experienced financial difficulty that indicated an unsafe position, meaning that the company led to bankrupt. In this study, *financial distress* measurement referred to Wardhani (2007), using *interest coverage ratio*. *Interest coverage ratio* was a ratio or cooperation between interest's cost and company's operational profit. Mathematically *financial distress* could be formulated with *interest coverage ratio* as follows:

$$ICR = \text{Operating Profit} / \text{Interest Expense}$$

Description:

ICR : *Interest Coverage Ratio*

Operating Profit : Operating Profit

Interest Expense : Interest Expense

Population used in this study was all company data from automotive sector listed at Indonesia Stock Exchange (BEI), Rupiah's exchange rate on USD, and Indonesia Composite Index (IHSG) data. Sampling technique used in this study was *purposive sampling* that was automotive sector companies that met the following criteria:

1. Automotive sector company listed at Indonesia Stock Exchange on 2010-2014.
2. Automotive sector company produced a financial report continuously on 2010-2014.
3. Automotive sector company that provided data and completed financial report that was needed by the researcher.

The reason for selection period was to obtain more accurate result based on the current situation.

This study used secondary data, namely ICI (IHSG), Rupiah's exchange rate on USD, stock *return*, and others started from January 2010 until December 2014 obtained from several websites such as IDX, Bank Indonesia (BI) and others. Data collection used documentation from various sources. *Hedging* activity data retrieval was done in the Indonesia Stock Exchange's corner (BEI) while Rupiah's exchange rate on USD was taken from BI (Bank Indonesia) corner. In addition, data and information collection were performed from websites, articles, journals, and studying books that improved study's progress.

This study used logistic regression test used to design a relationship between hedging activity and *economic exposure* variable and *financial distress*, in which hedging activity variable was a binary/dichotomy data. Logistic regression could be used to predict dependent variable by one or more independent variable, to determine variance percentage in dependent variable that could be explained by independent variable; and to determine independent variable relative interest level on dependent. The following was used analysis model:

$$\ln (p / (1 - p)) = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

$$p = 1 / (1 + (e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2)}))$$

Description:

- p = Hedging activity probability
 β_0 = regression constant
 β_1 = economic exposure regression coefficient
 X_1 = economic exposure
 β_2 = Financial distress regression coefficient
 X_2 = financial distress

Logistic regression model test analysis (Ghozali, 2011):

Model Fit Assessment

First step to do was assess the model entirely. Model fit could be assess using the following hypothesis:

H₀ : The hypothesis model that probably fit with the data

H₁ : The hypothesis model that probably was not fit with the data

The assessment whether the model fit or not, could be seen from the likelihood value. To test null hypothesis and the alternative, L was transformed into -2LogL . -2LogL Statistics was known as *likelihood ratio χ^2 statistics*, in which χ^2 distribution with *degree of freedom* $n - q$, q was a parameter in the model. -2LogL Statistics also could be used if *economic exposure* variable was added into the model significantly to fix model fit. After L was transformed into -2logL , then it was compared -2logL value at the beginning (*block number*= 0) in which the model only entered a constant with -2logL after entered independent variable (*block number*= 1). If -2logL value *block number*= 0 > -2logL value *block number*= 1 therefore it shown good regression model. Statistic *log-likelihood* huge value indicated bad statistics model.

Cox and Snell's R Square

It was a size that replicated R^2 size on *multiple regression* that based on *likelihood* estimation technique with a maximum value less than 1 (one) so that it was very difficult to interpret. *Nagelkerke's R square* was modification of *Cox and Snell's* coefficient to ensure that its value varies from 0 (zero) until 1 (one). This was done by dividing *Cox and Snell's* value R^2 with its maximum value. *Nagelkerke's* value R^2 could be interpreted as R^2 value in *multiple regression*.

Hosmer and Lemeshow's Goodness of Fit Test

Test that was used to determine whether there was a difference or not between model and data so that it could be specified as fit. If *Hosmer and Lemeshow's Goodness-of-fit test statistics* value was less than equal 0.05, then null hypothesis was rejected which meant there was a significant difference between model and observation value. If *Hosmer and Lemeshow's Goodness-of-fit test* statistic value was bigger than 0.05, then null hypothesis was accepted which meant the model was able to predict its observation value.

Regression Coefficient Testing

A test that was conducted to examine *economic exposure* variable that entered into the model affected on *hedging* activity variable. Ho acceptance or rejection could be determine used *wald statistic* and probability value (sig) by comparing *wald statistic* value with *chi square* table, while probability value (sig) was compared with significance level of 5% with following criteria:

- a. Ho was accepted if *wald statistic* < *chi square* table and probability value (sig) > significance level (α). This meant H_a rejected or hypothesis that stated *economic exposure* variable effected on hedging activity was rejected.
- b. Ho was rejected if *wald statistic* > *chi square* table and probability value(sig) < significance level (α). This meant H_a accepted or hypothesis that stated *economic exposure* variable effected on hedging activity was accepted.

Classification Table

2x2 Classification Table was used to count the correct estimation value (*correct*) and incorrect (*incorrect*). The two columns were two predictive value from hedging activity variable they were performed hedging activity (1) and not performed hedging activity (0), while the two rows indicated the real observation value from variable that conducted hedging activity (1) and not conducted hedging activity (0). In the perfect model, all cases would be located on diagonal position with 100% forecasting precision. If logistic regression model had homoscedasticity, the correct percentage (*correct*) would be the same in the two rows.

ANALYSIS AND DISCUSSION

The population in this study is automotive sector company listed at Indonesia Stock Exchange (BEI) (www.idx.co.id). A company included in the sample must meet the following requirements:

1. Automotive sector company listed at Indonesia Stock Exchange on 2010-2014.
2. Automotive sector company that reported a financial report continuously on 2010-2014.
3. Automotive sector company that provided data and completed financial report that was needed by the researcher.

Based on the created sample criteria, from 18 companies in automotive sector listed at Indonesia Stock Exchange (BEI) there are only 16 that meets the criteria to be tested from 2010-2014, therefore there are 80 samples as the total amount in this study. The following is data analysis result that is performed by the researcher, from the descriptive analysis for each independent and dependent variable, to hypothesis test and its discussion.

Descriptive Analysis

Table 1

Descriptive Statistics Table

Variable	N	Minimum	Maximum	Mean	Std. Deviation
<i>Economic exposure</i> (X1)	80	-7.40	5.89	-0.7951	3.46168
<i>Financial distress</i> (X2)	80	-8.69	565.86	25.0788	88.23663
<i>Hedging</i> (Y)	80	0.00	1.00	0.5000	0.50315

Source: processed data

Table 1 indicates an *economic exposure* variable minimum value is -7,40 at PT United Tractors Tbk (UNTR) while its maximum value is 5,89 at PT Astra Internasional Tbk (ASII). *Economic exposure* variable has a mean value of -7,951 with its deviation standard is 3,46168.

Financial distress variable has minimum value of -8,69 at PT Gajah Tunggal Tbk (GJTL) while its maximum value is 565,86 owned by PT Hexindo Adiperkasa Tbk (HEXA). *Financial distress* variable mean value is 25,0788 with the standard deviation is 88,23663. Hedging variable as dependent variable has a minimum value of 0,00 for a company that does not conduct hedging activity and the maximum value is 1,00 for a company that conducts hedging activity.

It is obtained 8 companies conducting a hedge activity (hedging) and the rest do not conduct (hedging) activity after data tabulation process. The following data shows companies which conduct hedge activity(hedging) and companies which do not conduct hedge activity (hedging).

Table 2

Table of Companies Conduct and Do Not Conduct *Hedging* Activity

Conduct <i>Hedging</i> Activity			Do Not Conduct <i>Hedging</i> Activity		
No	Code	Company Name	No	Code	Company Name
1	ASII	PT Astra Internasional Tbk	1	GJTL	PT Gajah Tunggal Tbk
2	AUTO	PT Astra Otoparts Tbk	2	GDYR	PT Goodyear Indonesia Tbk
3	IMAS	PT Indomobil Internasional Tbk	3	HEXA	PT Hexindo Adiperkasa Tbk
4	INDS	PT Indospring Tbk	4	BRAM	PT Indo Kordsa Tbk
5	INTA	PT Intraco Penta Tbk	5	LPIN	PT Multi Prima Sejahtera Tbk
6	NIPS	PT Nipress Tbk	6	MASA	PT Multistrada Arah Sarana Tbk
7	TURI	PT Tunas Raden Tbk	7	PRAS	PT Prima Alloy Stell Tbk
8	UNTR	PT United Tractors Tbk	8	SMSM	PT Selamat Sempurna Tbk

Source: processed data

Based on ICR calculation (*Interest Coverage Ratio*), from 16 companies included in sample, only four companies experience *financial distress*, which spreads from 2010 to 2014 namely PT Gajah Tunggal Tbk (GJTL) in 2013, PT Intraco Penta Tbk (INTA) in 2014, PT Multi Prima Sejahtera Tbk (LPIN) in 2014, and PT Multistrada Arah Sarana Tbk (MASA) in 2012 to 2014.

Based on existing data, it is known there are 3 companies experiencing *financial distress* and do not conduct hedge activity (hedging) namely PT Gajah Tunggal, Tbk (GJTL), PT Multi Prima Sejahtera, Tbk (LPIN), and PT Multistrada Arah Sarana, Tbk (MASA), while for company experiencing *financial distress* and conduct hedge activity (hedging) is only PT Intraco Penta, Tbk (INTA).

Logistic Regression Analysis

The following is logistic regression test result conducted using SPSS 23 software.

Table 3

Model Fit Test Result

Model Fit Test	Result
<i>-2 Log Likelihood :</i>	
<i>Block 0</i>	110.904
<i>Block 1</i>	93.108
<i>Snell R Square and Nagelkerke R Square :</i>	
<i>Cox and Snell's R Square</i>	0.199
<i>Negerkerke R Square</i>	0.266
<i>Hosmer and Lemeshow's Goodness of Fit Test :</i>	
<i>Chi-Square</i>	12.536
<i>Significance</i>	0.129
<i>Classification Table :</i>	
<i>Overall Percentage</i>	68,8%

Source: processed data

The following is logistic regression test result explanation:

Model Fit Assessment

Table 3 indicates when *economic exposure* and *financial distress* variable are entered into a model with the total amount of 80 data, it is obtained *-2 Log Likelihood* value is 93,108. The value is smaller than *chi-square* (X^2) table on DF 77 that obtained from number of data minus number of independent variable minus by one, with probability of 0,05 is 98,484 therefore H_0 is accepted means a model with entering *economic exposure* and *financial distress* variable is fit with the data.

Cox and Snell's R Square

Nagelkerke R Square value is 0,266 and *Cox and Snell R Square* is 0,199, meaning that *economic exposure* and *financial distress* variable's ability is 0,266 or 26,6% and there is $100\% - 26,6\% = 73,4\%$ other factor outside the model explains *hedging* variable.

Hosmer and Lemeshow's Goodness of Fit Test

Based on Table 3, *Hosmer and Lemeshow's Goodness of Fit Test* produce *Chi-Square* score is 12,536 with significance of 0,129. Significance score is bigger than 0,05 means

logistic regression model is eligible for further analysis since it is able to predict the observed value.

Classification Table

Relatively, the classification accuracy from logistic regression model is 68,8% means, this study has good enough accuracy to know what factors affecting *hedging*.

Regression Coefficient Testing

Table 4

Logistic Regression Analysis Result

Variable	Coefficient (B)	Wald	Sig.	Exp (B)
Constants	0.802	5.781	0.016	2.229
<i>Economic exposure</i>	0.040	0.318	0.573	1.041
<i>Financial distress</i>	-0.106	6.328	0.012	0.899

Source: processed data

Based on Table 4 it can be formed the following logistic regression model:

$$\ln(p / (1 - p)) = 0,802 + 0,040 \text{ ECONOMIC EXPOSURE} - 0,106 \text{ FINANCIAL DISTRESS}$$

That logistic regression equation indicates *financial distress* variable has a negative effect on hedging implementation in a company, while *economic exposure* variable does not have an effect on *hedging* implementation in a company.

The following is hypothesis' discussion from previous studies, including:

Hypothesis 1

The first proposed hypothesis is *economic exposure* affects hedging activity. Based on the calculation result, it is obtained that *economic exposure* does not affect hedging activity implementation. Results of the study are in contrast with previous studies because of this study uses automotive sector companies, in which the external factors affect company's profit achievement whether in domestic or foreign sales enhancement which allows the company to conduct hedging activity to prevent from loss, is not economic exposure consisting of stock *return*, market *return* and composite index (IHSG), but interest rate fluctuations as it is related to Indonesia's people who tend to buy automotive by installment payment that is related to the market interest rate.

Hypothesis 2

The second proposed hypothesis is *financial distress* affects hedging activity. The third hypothesis is proven based on the calculation result. In addition, calculation result indicates that *financial distress* gives a negative effect on hedging. It means when a company has a tendency to experience a high *financial distress*, a company will reduce even not conduct hedging activity. Otherwise, when a company does not have tendency to experience *financial distress* therefore a company will conduct hedging activity. This condition proves hedging activity implementation is used to prevent loss so that it prevents the company to experience *financial distress*. Results of the study supports Kim and Kim (2015)

SUGGESTION AND CONCLUSION

Conclusion

Result and discussion indicates that only financial distress variable that has a negative significant effect on hedging implementation in a company. A negative effect of financial distress variable means that a company with a high tendency to experience financial distress, will reduce or even do not conduct hedging activity and vice versa. In contrast with financial distress variable, economic exposure does not affect hedging activity in a company.

Suggestion

Based on the study, there are suggestions that need to consider for further study, that is the use of a longer year range and using monthly data, where in that period there is a phenomenon of the world financial crisis on 2007-2008 affecting finance crisis in Indonesia as well. Therefore, it can be explored more detail information on derivative instrument hedging activity on company's internal and external economic fluctuations in normal and extraordinary condition. In addition, the next researcher should add other variables affecting on hedging activity such as interest rate and inflation. Furthermore, company's management should decide to implement hedging (hedge) carefully so that hedging can give a benefit to prevent or reduce financial distress.

REFERENCES

- Anggraeni, 2004, The Foreign Exchange Exposure pada Bank Bank Go Publik di BEJ, *Jurnal Ventura*, Vol.7, No.2, pp 51-67
- Ghozali, Imam, 2011, *Aplikasi Analisis Multivariate dengan Program IBM SPSS 19*, Badan Penerbit Universitas Diponegoro : Semarang.
- Indawan, Fiskawan et al, 2015, The Role of Currency Hedging on Firm Performance : A Panel Data Evidence in Indonesia, *Buletin Ekonomi Moneter dan Perbankan*, Volume 17, Nomor 3.
- Indriantoro, Nur dan Supomo, 2000, *Metode Penelitian Bisnis*, Edisi Pertama. Yogyakarta, Penerbit BPFE.
- Kim dan Kim, 2015, Financial Regulation, Exchange Rate Exposure, and Hedging Activities : Evidence from Korean Firm, *Emerging Markets Finance & Trade*, 51:S152-S173.
- Lestari dan Anggraeni, 2007, Forex Exposure pada Berbagai Sektor Industri yang Terdaftar di Bursa Efek Jakarta, *Jurnal Ventura*, Vol.10, No.3, pp. 87-107.
- Magee, Shane, 2013, The effect of foreign currency hedging on the probability of financial distress, *Accounting and Finance*, vol. 53, pp.1107-1127.
- Sianturi, Crissy Norris, 2007, Pengaruh Liquidity, Firm Size, Growth Opportunity, Financial distress, Leverage dan Managerial Ownership Terhadap Aktivitas Hedging Dengan Instrumen Derivatif, Fakultas Ekonomika dan Bisnis, Universitas Diponegoro, Semarang.
- Wardhani, Ratna, 2007, Mekanisme Corporate Governance Dalam Perusahaan Yang Mengalami Permasalahan Keuangan, *Jurnal Akuntansi dan Keuangan Indonesia*, Vol. 4, No. 1, hal. 95-114.
- www.idx.co.id
- Yudhistira dan Sukamulja, 2013, Optimal Hedge Ratio dan Efektivitas Hedging Aplikasi pada Turkdex-Bist 30 Index Futures Contract dan Turkdex-Bist 100 Index Futures Contract, Program Studi Manajemen, Fakultas Ekonomi, Universitas Atma Jaya, Yogyakarta.