

Motivation on accounting choice of actuarial gain (loss)

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ABSTRACT

This research aims to test whether there is any motivation from the management to choose their accounting policy in recognizing actuarial gain (loss) related to the defined benefit plan between corridor method and full recognition through OCI method based on IAS 19 (2004). Motivation theories in this research are asset pricing motivation, contracting motivation, and influencing external parties' motivation. The research was done by using logit model and cross-section. The sample was taken from listed companies in 17 Europe's Premier Indices from 2005 to 2012. The result shows that there are debt covenant motivation and these affect external parties motivation from management to recognize actuarial gain or loss. This result also shows that risk that affects management decision to switch from corridor method to full recognition through OCI method at which companies having high risk tend to avoid full recognition through OCI method to prevent fluctuation on financial statements. This research conclusion confirms previous research that there are management motivations in selecting accounting method.

ABSTRAK

Penelitian ini bertujuan untuk menguji apakah ada motivasi dari manajemen untuk memilih kebijakan akuntansi dalam mengetahui keuntungan (kerugian) aktuarial yang berkaitan dengan rencana keuntungan yang ditentukan antara metode corridor dan full recognition melalui metode OCI. Teori motivasi dalam penelitian ini adalah asset pricing motivation, contracting motivation, dan influencing external parties motivation. Penelitian dilakukan dengan menggunakan model logit and cross-section. Sampel diambil dari perusahaan yang terdaftar di 17 Europe's Premier Indices dari 2005 hingga 2012. Hasil penelitian menunjukkan bahwa debt covenant motivation dan influencing external party motivation digunakan manajemen dalam mengetahui keuntungan atau kerugian aktuarial. Hasil ini juga menunjukkan bahwa risiko mempengaruhi keputusan manajemen untuk beralih dari metode corridor ke full recognition melalui metode OCI di mana perusahaan yang memiliki risiko tinggi cenderung menghindari full recognition melalui metode OCI untuk mencegah fluktuasi terhadap laporan keuangan. Kesimpulan penelitian ini menegaskan kesimpulan penelitian sebelumnya yang menyatakan bahwa ada motivasi manajemen dalam memilih metode akuntansi.

1. INTRODUCTION

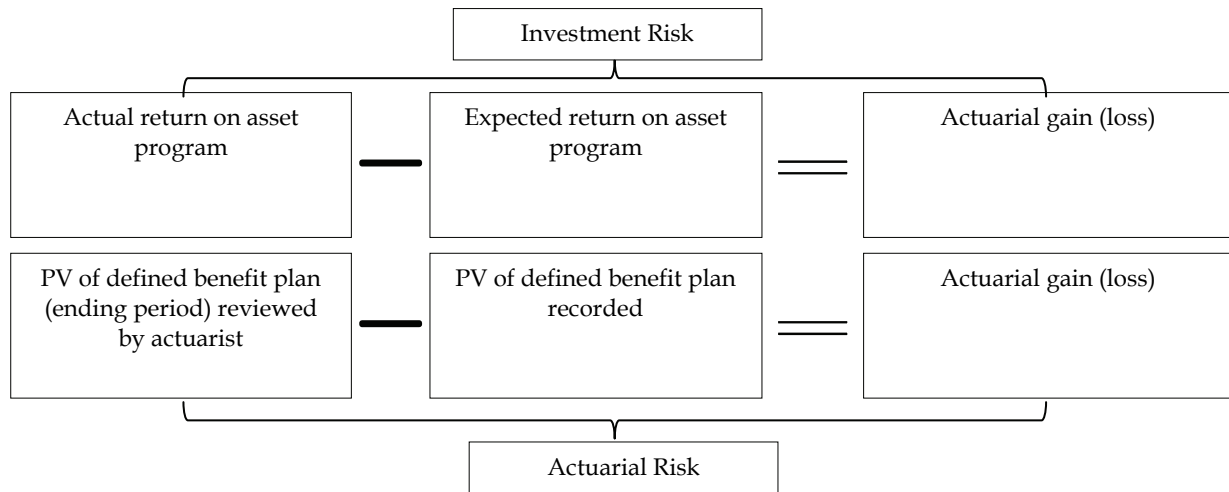
IAS/IFRS provides the management with alternatives to choose certain accounting method as their accounting policy, i.e. IAS 2 provides accounting method alternatives in recognizing inventory value between FIFO and weighted-average cost. Besides that, IAS 16 provides many depreciation methods alternatives (straight line method, double declining method, etc.). Again, IAS 19 (2004) discussing employee benefit provides 3 alternatives to recognize actuarial gain (loss) for defined benefit plan among

corridor method, full recognition through profit or loss method, and full recognition through OCI method. The previous IAS 19 only allowed the use of the corridor method, so that with the new standard some companies decided to move to the new method. Each alternative has a different impact on the financial statements.

Fields et al. (2001) concluded that there are some motivations of management in choosing accounting policy. The research about accounting method choice for defined benefit plan was actually done by

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Figure 1
Main Component of Actuarial Gain (Loss)



Fasshauer et al. (2008) but he only explained descriptively using percentage of each methods used per 2005 without explaining why management voluntarily change their accounting policy, especially from corridor method to full recognition through OCI method. For that reason, this research aims to fill that gap by investigating whether any management motivation to voluntarily change their accounting policy based on Fields et al. (2001). This research only focuses on choices between corridor method and full recognition through OCI method due to lack of use of full recognition through profit or loss method. This research also aims to confirm research conclusion done by Fields et al. (2001) regarding the management motivation to choose certain accounting policy such as depreciation method and inventory method. In addition, this research focuses on management motivation in choosing the method of actuarial gain (loss).

2. THEORETICAL FRAMEWORK

IAS 19 before IAS 19 (2004) only had corridor method to recognize actuarial gain (loss). On 16 June 2011, IASB issued IAS 19 (2004) opening 2 other alternatives to recognize actuarial gain (loss): full recognition through profit (loss) method and full recognition through OCI. IAS 19 (2004) was effective from 2006 (with early adoption option) to 2012 because in 2013, every company has to use full recognition through OCI method according to IAS 19 (2011). Actuarial gain (loss) has 2 components which are investment risk and actuarial risk that can be explained on Formula 1 and Figure 1.

ActuarialGain =

$$\frac{\text{UnrecognizedAG}_{(\text{Beg.Period})} - 10\% \text{HigherOfDBO \& PlanAsset}_{(\text{Beg.Period})}}{\text{ExpectedAverageEmployees' WorkingYears}_{\text{ParticipatedInPlan.Assetprogram}}}$$

(1)

Investment risk is the risk of any possibility that asset program is owned by company is not enough to pay benefits to their employees because of change in PV of asset program. Actuarial risk is the risk of change in benefits' value born by company because of change in PV of defined benefit plan reviewed by actuary. Actuarist review PV of defined benefit plan based on 2 variable: demographic variable (employees' turnover and mortality rate), and financial variable (expected employees' wage rise and employees' medical cost). Company using corridor method has its own advantage because the amount of actuarial gain (loss) becomes more stable so that it can be explained as in equation 1.

Smoothing process that can be seen from function 1:

1. Company only has to recognize actuarial gain (loss) if the amount exceeds unrecognized actuarial gain (loss).
2. Even though actuarial gain (loss) amount exceed unrecognized actuarial gain (loss), the excess is still divided by expected average employees' working years participated in plan.

The corridor method is different from full recognition through OCI which directly recognize actuarial gain (loss) in OCI. The different impacts between corridor method and full recognition through OCI method will affect the amount recognized in defined benefit plan expense (e.g. pension expense) on income statement and defined benefit plan liability on statement of financial position. Figure 2 and 3 present illustration of differences between the two methods. There are some points that can be explained from those figures as the following:

1. In corridor method, unrecognized actuarial

Figure 2
Impact on Using Corridor Method

	PV of Defined Benefit Plan (DBP)	+	Current service cost
		—	Interest expense on DBP
—	FV of asset program (AP)	+	Expected return on AP
—	Unrecognized Past Service Cost (PSC)	+	Amortization of Past Service Cost
+	Unrecognized actuarial gain	—	Actuarial loss (Corridor)
—	Unrecognized actuarial loss	—	Actuarial gain (Corridor)
==	DBP liability on statement of financial position*	==	DBP expense recognized on income statement

*The amount has been adjusted with current actuarial gain (loss) recognized.
Source: Our understanding based on IAS 19 (2004).

Figure 3
Impact on Switching to Full Recognition through OCI Method

	PV of Defined Benefit Plan (DBP)		Current service cost
—	FV of asset program (AP)	+	Interest expense on DBP
—	Unrecognized Past Service Cost	—	Expected return on AP
==	DBP liability on statement of financial position	+	Amortization of PSC
+	Accumulated unrecognized actuarial gain	—	No actuarial gain (loss) recognized on income statement
—	Accumulated unrecognized actuarial loss	+	
+	Actuarial gain (+) or loss (-) that has been recognized in past years under corridor method	==	DBP expense recognized on income statement
==	Accumulated Other Comprehensive Income		

Source: Our understanding based on IAS 19 (2004).

gain (loss) will increase (decrease) the defined benefit plan liability. 'Unrecognized' means that actuarial gain (loss) is not recognized yet on income statement but deferred into net liability/asset value and will be disclosed only on notes to financial statements. Unrecognized actuarial gain (loss) will be recognized only on income statement if they exceed certain corridor amount.

2. In full recognition through OCI method, actuarial gain (loss) is fully recognized on other

comprehensive income instead of income statement. Actuarial gain (loss) recognized in OCI will not affect the net liability/asset value.

3. If company decides to change from corridor method to full recognition through OCI method, it must apply the changes retrospectively based on IAS 8 (2003) as part of changes in accounting policy. The accumulated unrecognized actuarial gain (loss) previously affected the net liability/asset under corridor method. It also affects the accumulated OCI in

equity section. This change will increase (decrease) the net liability/asset previously recognized. Direct impact when companies change their method from corridor method to full recognition through OCI method is the defined benefit plan liability presented on statement of financial position will reflect the real surplus/deficit.

Godfrey, J. et al. (2010) explained that since 100 years ago there has been a conflict of interests among stakeholders such as between shareholders and management or between controlling shareholders and non-controlling shareholders. In agency theory concept, all stakeholders are believed to have their own interest to maximize their utility. Accounting method choice is believed to rise another agency problem because it's different impact to financial statement from each method. For that reason, management is assumed to choose certain accounting method that fulfills their interest. Fields et al. (2001) concluded that there are 3 main motivations by management in accounting choice. There are asset pricing motivation, contracting motivation (bonus motivation and debt covenant motivation) and influencing external parties motivation. Those motivations were concluded from previous studies on certain accounting choices such as depreciation method and inventory method. None of those previous studies had examined the motivations related to actuarial gain (loss) methods in defined benefit plan.

Asset pricing motivation comes from information asymmetry in the market because market participants do not perfectly aggregate information they have, i.e. trading restriction. This condition can be used by management to choose certain accounting method that maximize company's earnings, so the company's stock will rise and then the company reputation will be increased as well as the management compensation (Fields et al. 2001). Companies having accumulated unrecognized actuarial gain are benefited when switching to full recognition through OCI method because the full amount of accumulated unrecognized actuarial gain is directly recognized in other comprehensive income (OCI). Thus, the equity will increase but liability will decrease. Research done by Chambers et al. (2007) concluded that OCI is still considered by investors in assessing company's value.

Gaver & Gaver (1998) concluded that gain above and below the line (i.e. OCI) can affect management's compensation while loss below the line (i.e. OCI) will not affect management's compensation. It is expected that companies switch into full

recognition through OCI method when they have actuarial gain position to increase their value for investor and to increase management's compensation. Most companies in the sample have bonus scheme based on financial performance so we decide to exclude bonus variable from this research due to lack of variety of data. Because of asset pricing motivation, we expect that companies will switch from corridor method to full recognition through OCI method when companies have actuarial gain. So, we present hypotheses that:

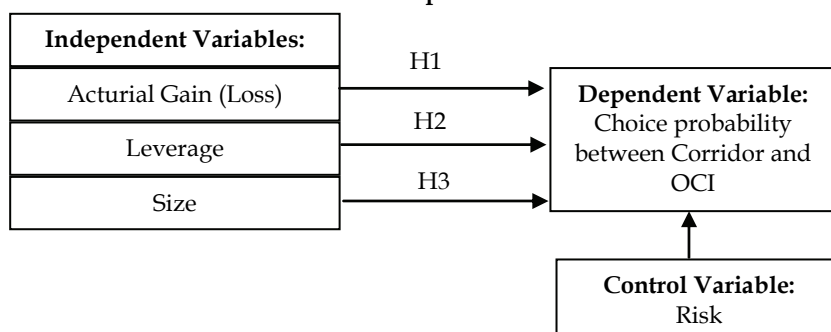
H₁: Actuarial gain (loss) will increase (decrease) probability that companies will switch from corridor method to full recognition through OCI method.

Companies choosing to switch from corridor method to full recognition through OCI method must adjust their Defined Benefit Plan (DBP) liability amount retrospectively based on IAS 8 (2003). The main impact will cause companies to recognize accumulated gain (loss) directly into DBP liability amount so it will reflect real surplus/deficit. According to debt covenant motivation, companies will try to avoid debt covenant violation by choosing the more conservative method. Switching from corridor method to full recognition through OCI method will cause OCI amount become more fluctuate (potentially to be less conservative). When companies have accumulated unrecognized actuarial loss, they directly also increase the DBP liability amount that will increase probability of debt covenant violation. Due to such debt covenant motivation, the study here presents hypotheses as follows. H₂: As leverage amount is increasing, it will decrease probability for companies switching from corridor method to full recognition through OCI method.

Fields et al. (2001) divided influencing external parties' motivation into 2 aspects: regulation aspect and tax aspect. From regulation aspect, companies will choose certain accounting method that can prevent companies from regulation violation, i.e. capital adequacy ratio regulation. Beaver (1993) and Watts (1993) in Watts (2003) concluded that regulator tends to choose conservative accounting treatment to decrease companies' visibility in front of regulator point of view. However, from tax aspect, companies are expected to switch to full recognition through OCI method in order to defer tax from actuarial gain (loss) recognized in OCI. On the contrary, under corridor method the actuarial gain (loss) will be directly charged with tax as component of net income (IAS 12 2010).

Watts & Zimmerman (1986) in Watts & Zim-

Figure 4
Research Concept Framework



merman (1990) linked influencing external parties motivation with political cost hypotheses where large companies will tend to choose accounting method that can decrease current reporting income. Because of different conclusion from regulation aspect and tax aspect point of view, we do not determine certain direction (+/-) from hypotheses given. Therefore, the researchers present hypothesis as follows.

H₃: Companies' size affects probability for companies to switch from corridor method to full recognition through OCI method.

3. RESEARCH METHOD

There are 3 motivations tested in this research based on Fields et al. (2001): asset pricing motivation, contracting motivation, and influencing external parties' motivation. Contracting motivation consist of bonus motivation and debt covenant motivation. All motivations except bonus motivation will be tested using 3 independent variables: actuarial gain (loss), leverage, company's size; and risk (beta) as control variable.

All variables are based on Christie (1990) in Watts & Zimmerman (1990). Dependent variable is OCI that has function as dummy variable (1 if switch to OCI, 0 if not). Based on literature explained earlier, the researchers describe the research concept framework as in Figure 4.

This research uses only one year sample during 2005 (early adoption) to 2012, when the companies switched from corridor method to full recognition through OCI method. IAS 19 (2004) states that every companies that switching to full recognition through OCI method must apply the method consistently in the future. They can not switch back to corridor method or switch to another method. Because of the reason above, this research's structure is cross section, and methodology used in this research is adjusted with the structure and the purpose of this research.

The companies that switch from corridor

method to full recognition through OCI method are paired with companies staying with corridor method in the same industry, based on the closest company's size and the stock price data availability. This matching process is important as a control so each pair will have similar external and internal condition to deal with. The industry classification is based on big sector from IDX (Indonesia Stock Exchange) instead of international classification due to variety of cross country industry classification.

The test was done using logit model because the dependent variable is dummy (Gujarati 2011): 1 if companies switch to full recognition through OCI method and 0 if companies stay with corridor method. Logit model was not analyzed using odd ratio or marginal effect because the purpose of this research is just to obtain the level of significance and direction from each independent variable over dependent variable. Equation 2 shows the model to test hypothesis 1, 2, and 3.

$$L_i = \ln \left(\frac{P_t}{1 - P_t} \right) = \beta_1 + \beta_2 \text{Gain}_i + \beta_3 \text{Leverage}_i + \beta_4 \text{Size}_i + \beta_5 \text{Risk}_i + u_i \quad (2)$$

In which :

$L_i = \ln \left(\frac{1}{0} \right)$ = if company switches to full recognition through OCI method

$L_i = \ln \left(\frac{0}{1} \right)$ = if company stays with corridor method

$P_i = 1$ if company switches to full recognition through OCI method and 0 if company stays with corridor method.

Gain_i = Actuarial gain in the year they switch to full recognition through OCI method and negative amount for actuarial loss, divided by current revenue.

Leverage_i = Total liability is divided by total equity in the year they switch to full recognition through OCI method.

Size_i = Natural log of beginning total asset in the

Table 1
List of 17 Europe's Premier Indices

No.	Index Name	Country
1	AEX	Netherlands
2	Athex 20	Greece
3	ATX	Austria
4	BEL 20	Belgium
5	CAC 40	France
6	DAX 30	Germany
7	FTSE 100	England
8	IBEX 35	Spain
9	ISEQ 20	Ireland
10	LuxX	Luxemburg
11	FTSE MIB	Italy
12	OBX	Norwegian
13	OMXC 20	Denmark
14	OMXH 25	Finland
15	OMXS 30	Sweden
16	PSI 20	Portugal
17	SMI	Switzerland

Source: Fasshauer et al. (2008).

year they switch to full recognition through OCI method.

$Risk_i$ = Company beta in the last 12 months before they switch to full recognition through OCI method.

All variables are based on research done by Christie (1990) in Watts & Zimmerman (1990). Leverage is ratio of total asset divided by total equity based on Alkhatib (2012). This research method is appropriate to seek if there is any management motivation regarding accounting method choice in recognizing actuarial gain or loss just like previous study model used by Fields et al. (2001). However, this research model adds one incremental input: risk variable based on Khan & Bradbury (2014). Risk variable is used because it has function as a control and there is a relationship between comprehensive income and market-based risk such as beta. OCI data were taken manually from financial statements of sample companies included in 17 Europe's premier indices based on Fasshauer et al. (2008). The list of companies analyzed is taken from each European index and then cross check it to Thomson Reuters Eikon. If the companies switch from corridor method to full recognition through OCI method, then OCI will be given value 1 and if they stay in corridor method (paired sample) then OCI will be given value 0.

Actuarial gain (loss) data is taken from companies' financial statement in the year they switched to full recognition through OCI and in the same year for paired sample. The researchers use total revenue as denominator because OCI is part of comprehensive income, so it will be more useful to

use than total asset to estimate how great the impact of switching method to companies' comprehensive income from corridor method to full recognition through OCI method.

Leverage data is calculated by dividing total liability by total equity in the beginning of year when they switch to full recognition through OCI method and in the same year for paired sample. The researchers decide to use that leverage ratio based on Alkhatib (2012). Source of companies' total liability and total equity is companies' financial statement. Size data was taken manually from companies' financial statement. Risk data is calculated by using Microsoft Excel 2010 from 12-month companies' stock price fluctuation before they switched to full recognition through OCI method. Stock price data was taken mostly from Thomson Reuters Eikon, Euronext website and last alternative: Yahoo Finance website.

This research use population of companies included in 12 Europe's premier indices based on Fasshauer et al. (2008). Sample time period is taken from 2005 (early adoption) to 2012 (final year that the choice was still opened). Table 1 presents the list of 17 Europe's premier indices.

This research does not differentiate companies based on their industry because of limited amount sample to be tested. Sampling technique is using purposive judgment sampling because the sample must meet certain research's criteria. The criteria are listed below:

1. Companies must be listed in the index when they switched to full recognition through OCI method.
2. Companies have defined benefit plan.
3. Companies that are cross-listed are be taken from one exchange only (another is excluded).
4. Companies do not have negative equity value. Companies having negative equity value are difficult to interpret and they have high default risk (Brown et al. 2008). Negative equity value will cause leverage amount become negative and it can disrupt regression result.
5. Companies have English financial statement.
6. Companies adopt IAS/IFRS as their reporting standard.
7. Companies have sufficient information to be tested.

4. DATA ANALYSIS AND DISCUSSION

Table 2 explains the sample selection process by eliminating companies that do not meet research criteria. Table 3 to 7 explain descriptive statistic from all variables used in research model.

Table 2
Sample Selection Summary

Description	Company (Qty)
Companies that were listed in 17 Europe's premier indices (approx.)	565
Companies that sold other than stocks in index	(2)
Companies that do not have defined benefit plan	(53)
Companies that were not listed yet when switching to full recognition through OCI	(18)
Companies that are cross-listed	(16)
Companies having negative equity value	(1)
Companies that didn't have English financial statements	(11)
Companies that didn't use IFRS (IAS)	(169)
Companies that do not have sufficient information	(68)
Total companies that did not meet sample criteria	(338)
Companies that have defined benefit plan with sufficient information	227
Companies using full recognition through profit or loss method	(48)
Total sample	179
Companies switching to full recognition through OCI method	80
Companies staying with corridor method (paired sample)	99

Table 3
Common Descriptive Statistic

Dummy Variable						
Variables	Total Score of 1 Given		Total Score of 0 Given			
OCI	80		99			
% companies	44.69%		55.31%			
Bonus	172		7			
% Companies	96.09%		3.91%			

Independent and Control Variables						
Variables	N	Min	Max	Average	Median	St.Dev
Gain(Loss)	179	(0.70324)	0.68714	(0.005713)	(0.00195)	0.0985
Leverage	179	0.0535856	31.253	5.231824	1.985	7.3422
Size	179	€2.27e+08	€6.45e+12	€1.40e+11	€1.38e+10	€5.59e+11
Risk	179	(0.20023)	2.334802	0.9831263	0.946	0.450

Source: Our Analysis Based on Stata 12 Output

OCI

As in Table 3, 80 companies decided to switch to use full recognition through OCI method. The fact is in Table 3 that most companies switching to full recognition through OCI method switched in early period (2005-2006) and last period (2011-2012) while there is few companies switching to full recognition through OCI method in middle of testing period. Analysis about this fact will be discussed further at regression result analysis, so it will show clear linkage between descriptive facts and regression results.

Bonus

As shown in Table 3, most of companies have bonus scheme based on financial performance and stock price performance. Because of the inappropriate variety of characteristic of bonus variable, so it will be excluded in this research.

Gain

Based on Table 3, gain variable has negative mean

and median. This shows that companies reporting actuarial loss were more than companies reporting actuarial gain. Consistent with table 5, it is clear that most of companies were reporting current year actuarial loss. An interesting fact from table 5 that 66.25% of companies switching to full recognition through OCI method were reporting actuarial loss, while in theory developed before, companies are expected to switch when they have actuarial gain.

Leverage

As presented on Table 3, leverage variable has mean value more than 5 and median value of 1.8. This shows that companies have high leverage is more than companies have low leverage in this sample. Based on table 6, 82.68% of companies in the sample have high level of leverage. Companies switching to full recognition through OCI is just 16.25% that have low level of leverage and 81.82% of companies staying with corridor method has low level of leverage.

Table 4
Descriptive Statistic of Companies Switching to OCI Method

	Time of Switch (Year)							
	2005	2006	2007	2008	2009	2010	2011	2012
Desc.	15	18	9	5	4	3	13	13
Percentage (%)	18.75	22.5	11.25	6.25	5	3.75	16.25	16.25
Total								
	80							

Table 5
Descriptive Statistic of Gain (Loss)

Desc.	Switch and Gain	Switch and Loss	Total Switch	Stay and Loss	Stay and Gain	Total Stay	Loss from Grand Total	Grand Total
Total	27	53	80	69	30	99	122	179
Total (%)	33.75%	66.25%	100%	69.7%	30.3%	100%	68.16%	100%

Table 6
Descriptive Statistic of Leverage

Desc.	Switch and <1	Switch and >1	Total Switch	Stay and >1	Stay and <1	Total Stay	Lev. >1 from Grand Total	Grand Total
Total	13	67	80	81	18	99	148	179
Total (%)	16.25%	83.75%	100%	81.82%	18.18%	100%	82.68%	100%

Table 7
Descriptive Statistic of Risk

Desc.	Switch and <1	Switch and >1	Total Switch	Stay and >1	Stay and <1	Total Stay	Risk>1 from Grand Total	Grand Total
Total	51	29	80	59	40	99	88	179
Total (%)	63.75%	36.25%	100%	59.6%	40.4%	100%	49.16%	100%

Table 8
VIF Test Result

Variables	VIF	Result
Size	6.71	No Sign of Multicollinearity
Risk	6.56	
Leverage	1.72	
Gain	1.05	
Mean VIF	4.01	

Source: Our Analysis Based on Stata 12 Output.

Size

Based on Table 3, size variable has high mean value and standard deviation value. But according to median value, we can conclude that there is balance distribution where number of large companies in the sample is more likely the same with small companies.

Risk

Based on Table 3, risk variable has mean and median value close to 1. It means that number of companies having high risk and low risk is quite balance. Based on Table 7, companies having risk > 1 is 49.16% and companies having risk < 1 is 50.84%, so we can say that the distribution is balance. The percentage of companies switching to full recognition through OCI method that have low risk is 63.75% while the percentage of companies staying with corridor method that have high risk is 59.6%.

Multicollinearity, LR-stat, and Other Tests

Based on classic assumption test, this research model does not have any multicollinearity model showed by VIF value (Table 8) that does not exceed 10 and there is no correlation value more than 0.8. This logit model research does not need any heteroscedasticity test because logit model has assumed homoscedastic (Clive Lennox 1999). Autocorrelation test is not needed because of cross section data structure.

Table 9 explains significance tests done in this research model. All the test results indicate that the model has no problem to be used and ready to be tested. Table 10 shows regression result using Stata 12. The next section will discuss regression result.

Regression Result Analysis

Gain Variable

Hypotheses 1 states that actuarial gain (loss) will

Table 9
Correlation Test Result

	Gain	Leverage	Size	Risk
Gain	1			
Leverage	-0.1395	1		
Size	-0.1243	0.6831	1	
Risk	-0.1940	0.3122	0.3105	1

Source: Our Analysis Based on Stata 12 Output.

Table 10
Summary of Overall Signification Test (LR-Statetest)

Test	Value	Interpretation
LR-Statistic Test (prob > chi2)	13.56 (0.0089)	Model is significant at $\alpha = 5\%$
Goodness-of-Fit: -Count R2	Count R2 = 65.36% Pearson:	Count R2: model is good enough to explain the relationship between independent variable and dependent variable.
-Pearson Test (prob > chi2)	0.3739	Pearson and Hosmer-Lemeshow: H0 stating that the model fit with sample can not be rejected. It means that data imputed in model is appropriate.
-Hosmer-Lemeshow Test (prob > chi2)	Hosmer-Lemeshow: 0.8380	
ROC Test	66.45%	Research model has good predictive model
Specification Error Test (prob > z _hatsq)	0.911	H0 stating model do not contain specification error can not be rejected. It means all independent variables are relevant in this model.

Source: Our Analysis Based on Stata 12 Output.

increase (decrease) probability of companies to switch from corridor method to full recognition through OCI method. Based on regression result, gain variable is not significant affecting management decision, so hypotheses 1 is not accepted. There are 3 reasons why gain variable is not significant:

According to Cahan et al. (2000), OCI value does not have more incremental value relevance than net income, so companies may feel that no problem to report actuarial loss in OCI section because they may think that it will not be valued by investor.

Based on descriptive statistic on Table 5 that show there is only 68.16% of companies reporting actuarial loss, maybe it is in line with Gaver & Gaver (1998) conclusion that CEO compensation is only related to gain below the line and not related to loss below the line. We expect that most CEOs do not worry to switch to full recognition through OCI although they have actuarial loss because it will not affect their compensation. If they stay with corridor method, then it will affect their compensation because although actuarial value has already been smoothed, actuarial loss is still recognized as net income deduction.

Descriptive fact showed at table 3 that gain variable has mean of -0.57% and median of -0.2% indicates that the effect of actuarial gain (loss) is relatively small to companies' comprehensive income, so we expect that companies will have no worry to switch to full recognition through OCI

method as the value is relatively small.

Leverage Variable

Hypotheses 2 states whether leverage amount is increasing, it will decrease probability for companies switching from corridor method to full recognition through OCI method. Based on the regression result, leverage is significantly and negatively affecting management decision, so hypotheses 2 is accepted. With descriptive fact (Table 3) that mean value of leverage in the sample is about 5, we expect that leverage factor is one of the most important factors of company to determine their accounting policy. This result is also supported by Ahmed, et al. (2002) conclusion that accounting conservatism will resolve bondholder-shareholder conflict so it will reduce firm's debt cost.

Zhang (2008) also concluded that lenders will reduce their interest rate for conservative borrowers. Their conclusions support this result because corridor method is more conservative than full recognition through OCI method. Corridor method will result less fluctuation on financial statements because actuarial gain (loss) is not recognized directly in financial statements. Recognizing actuarial loss directly in OCI as the result of change from Corridor to OCI method can increase liability or leverage.

Size Variable

Hypotheses 3 states that Companies' size affects

Table 11
Summary of Partial Signification Test Result

Variable	Coefficient	z-Stat	Prob > z
Gain	-1.020118	-0.60	0.546
Leverage	-0.0596309	-1.93	0.053*
Size	0.2472225	2.14	0.033**
Risk	-1.069401	-2.71	0.007**
Count R2 = 65.36 %		Total observation = 179	
LR-Statistic = 13.56		Dependent variable (1) = 80	
Prob (LR-Stat) = 0.0089		Dependent variable (0) = 99	

*significant at $\alpha = 10\%$

**significant at $\alpha = 5\%$

Research Model:

$$Li = \ln\left(\frac{Pt}{1 - Pt}\right) = \beta_1 + \beta_2 \text{Gain}_i + \beta_3 \text{Leverage}_i + \beta_4 \text{Size}_i + \beta_5 \text{Risk}_i + u_i$$

H1: Actuarial gain (loss) will increase (decrease) probability that companies will switch from corridor method to full recognition through OCI method.

H2: As leverage amount is increasing, it will decrease probability for companies switching from corridor method to full recognition through OCI method.

H3: Companies' size affect probability for companies to switch from corridor method to full recognition through OCI method.

Source: Researchers' Analysis Based on Stata 12 Outputs.

probability for companies to switch from corridor method to full recognition through OCI method. Based on regression result, it is clear that size variable is significantly affecting management decision to switch to full recognition through OCI method, so hypotheses 3 is accepted. The positive coefficient of size indicates that as companies become larger then it will increase the probability to switch to full recognition through OCI method. By switching to full recognition through OCI method, it is possible to report lower comprehensive income.

Regarding descriptive evidence in Table 5 that 66.25% of companies switching to full recognition through OCI method was reporting actuarial loss, maybe this result support conclusion made by Watts & Zimmerman (1986) in Watts & Zimmerman (1990) about political cost hypotheses that large companies tend to use accounting method that can reduce current reported income. If descriptive fact and regression result is linked, then this research result supports political cost hypotheses made by Watts & Zimmerman (1990).

Risk Variable

Risk variable may be not tested in this research because of its function that is just as a control variable, but based on regression result, then risk variable is significantly affecting management decision to switch or stay with corridor method. Negative coefficient of risk indicates that companies will switch from corridor method to full recognition through OCI method when companies risk relative to market condition is low, *vice versa*.

Researchers expect that this risk factor is significant because actuarial gain (loss) is affected by

economy condition itself, not by management. For example, fair value of net assets is purely based on market mechanism, and present value of defined benefit obligation is actuarist decision based on demographic and financial component that can not be control fully by management. This result support Khan & Bradbury (2014) conclusion that there is relationship between comprehensive income and market-based risk like beta.

If we link it with the fact that few companies switching in middle of testing period as explained before, then it is clear that risk factor is very affecting management decision. We expect that economic crisis in United States and Europe in 2008-2009 made the market condition become worst and not stable so it made companies become more cautious in switching to full recognition through OCI method.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATION

This research is the first one researching about actuarial gain (loss) on defined benefit plan. The topic, result and sample used in this research is still relevant because the accounting choice between corridor and OCI method was just closed in 2013 and we test full period when the option is opened (from 2005 to 2012).

It can be concluded that this research confirms most of motivation theory proposed by Fields et al. (2001). Only asset pricing motivation that can not be proven in this research and it is predicted that the amount of actuarial gain is not material enough to influence management judgment. The other motivations are successfully confirmed by this research.

Company with high leverage will choose conservative accounting method (corridor method) to reduce cost of debt (debt covenant motivation). Also, large companies tend to use accounting method that can reduce current reported income (full recognition through OCI method) to avoid political cost.

This research result also indicates that risk strongly affects management decision to switch from corridor method to full recognition through OCI method. The negative relationship means that high risk companies tend to stay with corridor method rather than to switch to full recognition through OCI method.

This research has limitation as follows:

1. This research does not classify companies based on their industry because of limited sample. The future research is suggested to include non-listed companies so more sample can be taken.
2. This research does not yet consider the effect of different characteristics that each country has like economic and legal characteristic. The future research can consider these characteristics.
3. This research does not consider the effect of IFRS 3 (2008) explaining that parent company and its subsidiary must have the same accounting method in a consolidated financial statement. It is possible that some companies in this sample change to full recognition through OCI method because of consolidation purpose with their parent company.
4. This research use weekly return to count beta number without considering whether the weekend effect will happen as different day will cause return to be higher on Friday and lower on Monday (Chen & Singal 2003). The future research is suggested to consider this effect.

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