

Impact of IFRS Financial Instruments on Market Discipline: Evidence from Indonesia's Banking Sector

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ABSTRACT

The International Financial Reporting Accounting Standards (IFRS) of financial instruments were implemented in 2010. It was found to have major impacts on risk transparency of the banking industry in Indonesia. This study examines the impact of IFRS of financial instruments on market discipline of banks in Indonesia. Data from the study period between 2007 and 2013 was analysed, and findings show an increase in market discipline after the implementation of the IFRS of financial instruments. Specifically, the quality of loan loss provision information and the disclosure of financial instruments based on IFRS in financial statements had improved market discipline among Indonesian banks. The study therefore, concludes transparency of risk information in financial statements enhances the ability of bank stakeholders to perform monitoring functions, which in turn enables effective market discipline.

Keywords: Financial statements, financial instruments, IFRS, market discipline, risk transparency

INTRODUCTION

The adoption of IAS 32, IAS 39, and IFRS 7 with regard to financial instruments is part

of the convergence program of Indonesian accounting standards (PSAK) with international accounting standards (IFRS). The implementation of these international accounting standards significantly changed the scope, recognition and measurement, presentation, and disclosure of financial instruments in banks' financial statements. Indeed, implementation of IFRS for financial instruments has had a positive effect on the quality of financial statements. Prior research has examined the impact of IFRS

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on financial instruments using data from developed countries and found adoption of IAS 39 increases the relevance of accounting information (Duh, Hsu, & Alves, 2012; Fietcher, 2011) and decreases earnings management through loan loss provision (Leventis et al., 2011). Additionally, the disclosure of financial instruments based on IFRS 7 enhances the ability of users of financial statements to understand and interpret their contents (Bonetti, Mattei, & Palmucci, 2012; Gaynor et al., 2011).

Transparency is one of the important components that enable market discipline mechanisms to function (Bliss & Flannery, 2002; Nier & Bauman, 2006). Market discipline refers to market's power for taking disciplinary action against the bank management's excessive risk-taking behaviour (Hess & Feng, 2007). The market discipline mechanism can function due to the ability of stakeholders, including debtholders and shareholders, to influence the cost and funds available for the company as well as the valuation of company assets (Landskroner & Paroush, 2008). Banks which conduct their activities transparently make it easier for depositors, creditors, and governments (as agents of taxpayers) to observe the bank's risk choice to facilitate timely disciplinary action if the management takes excessive risks. Thus, the quality of accounting information and the disclosure of financial instruments affects the ability of stakeholders to perform monitoring and disciplinary functions on bank management's risk taking (i.e., market discipline). Previous studies reported that

quality of financial statements and extent of disclosures increased the effectiveness of market discipline on bank risk taking (Bushman & William, 2012; Nier & Bauman, 2006).

The purpose of this study is to investigate the effect of IFRS on the implementation of financial instruments, accounting information quality, and financial instruments disclosures on market discipline in the Indonesian banking sector. This paper contributes to the extant literature in two respects. First, it is one of the first studies to examine the effect of financial instruments accounting standards on market discipline in the banking industry. Prior research has mainly examined the consequence of financial instruments accounting standards on the relevance of financial statements from the perspective of equity investors (Barth et al., 1996; Duh et al., 2012; Song et al., 2010). In the banking industry, the implementation of IFRS for financial instruments affects the transparency of bank risk choices, which is important in allowing banks' liabilities investors to perform their monitoring function. Second, this paper examined the effect of financial instruments disclosures based on the effect of IFRS 7 on market discipline. Only a few studies have done this (Nier & Bauman, 2006). Although the disclosure proxy in Nier and Bauman (2006) measures the disclosure level in the bank's financial statements as an indicator of risk, the measurement has not yet accommodated the financial instruments disclosures based on IFRS 7. The financial instruments disclosures required by IFRS

7 are comprehensive and complex; thus, more resources are required to prepare them. Therefore, this study investigates whether such complex disclosures are useful for the bank's main stakeholders, such as depositors, other creditors, and regulators, in performing their monitoring function. Indonesian banking sector has unique characteristics in addition to having lower levels of penetration compared with other Southeast Asian countries, such as Singapore, Thailand, and Malaysia. However, Indonesian banking sector is considered one of the most attractive markets for financial institutions in Southeast Asia due to their high margin and healthy economic growth (EY, 2017). Indonesian banking presents several challenges, such as the large number of banks (currently 118 banks (EY, 2017) with different sizes and controlling shareholders (government, foreign, and family) and highly concentrated ownership structure, which might hinder the efficiency of the banking system. These unique characteristics means there is a need for separate research on the impact of IFRS on financial instruments in the Indonesian banking industry.

LITERATURE REVIEW

Implementation of IFRS for Financial Instruments in the Banking Sector

Three important features of IFRS for financial instruments affect the risk transparency in Indonesian banks' financial statements. First, IAS 39 uses an incurred loss model, which places more emphasis

on objective evidence, and which becomes the basis of the decline in value, and it also places more emphasis on the evaluation of the possibility of decline at the balance sheet date. This policy is more objective than previous accounting standards, and thus, it is expected to reduce the earnings management through loan loss provision. Second, IAS 39 increases the usage of fair value accounting for financial assets and financial liabilities compared with the previous local accounting standards. The usage of fair value is expected to cause the financial assets and liabilities information in the balance sheet to better reflect its true value. In addition, even though fair value increases income volatility, the latter reflects the true risk faced by the bank. Third, IAS 32 further revised to IFRS 7 requires more disclosures than previous Indonesian accounting standards. The IAS 32 further revised to IFRS 7 requires the disclosure of information about the significance of financial instruments to an entity, and the nature and extent of risks arising from those financial instruments, both in qualitative and quantitative terms. The IAS 32 and 39 were required to be applied in 2010, but due to many banks experiencing difficulties in implementing them, in 2010, banks were allowed to apply IAS 39 partially; for example, calculating valuation reserves collectively can be valued by using Bank Indonesia Regulations instead of being based on IAS 39. Nonetheless, in 2011, all banks had to completely adopt Indonesian IAS 32 and IAS 39.

Hypothesis Development

Market discipline refers to a market-based incentive scheme in which market participants (bank liability investors, such as creditors and depositors) monitor and discipline (punish) banks for excessive risk taking (Nier & Baumann, 2006). Bank transparency is important in the monitoring phase of the market discipline process and it affects the ability of a bank's main principals (i.e., creditors and depositors as liability investors, and also regulators) to observe bank risk choice. Financial statements as an instrument used by management to provide information to capital owners and depositors can describe the actual extent of risk through the non-performing loan value of losses reserved and disclosures of risks. A bank that discloses its risk profile exposes itself to market discipline, and will therefore be penalised by investors for taking excessive risks. Cordella and Yayeti (1998) showed that when a bank can choose its loan portfolio risk, then the disclosure of information regarding the risk chosen by the bank will reduce excessive risk-taking incentives, thereby reducing the possibility of bank failure. Prior studies found that corporate transparency can boost shareholder's wealth, as increased transparency improves the company's external parties' monitoring capabilities. In Indonesia, Widiastuti (2002) found the extent of voluntary disclosure in the financial statements reduces the uncertainty of the company's future prospects while companies with less transparent financial statements tend to suffer from over

investment (McNichols & Stubben, 2008). Nier and Baumann (2006) found extensive disclosure increases the effectiveness of market discipline in banking. Bushman and William (2012) revealed that opportunistic forward-looking loan loss provision (for income smoothing purposes) reduces the effectiveness of market discipline. Accordingly, based on arguments and relevant findings of the previous studies, the following hypotheses are proposed:

H1: Financial instrument disclosures in accordance with IFRS 7 positively affect market discipline among Indonesian banks.

H2: Accounting information quality as measured by the level of earnings management through loan loss provision positively affects market discipline in Indonesian banking.

The implementation of IAS 39 increases the risk relevance of accounting information because the adoption of fair value accounting causes the financial instruments recognised in the balance sheet to better reflect the actual current market situation. Increased usage of fair value measurement reduces earning volatility, which is unrelated to economic volatility (Duh et al., 2012). Barth et al. (1995) argued that the recognition of fair value changes in the balance sheet represents the more accurate variability of assets and liabilities than the other measures, such as historical cost. Ryan (2008) believed that the use of fair value accounting on financial instruments will improve the association between market

risk measurement and profit variability, while Duh et al. (2012) found that there was an increase in profit volatility in non-US commercial banks after the application of IAS 39. Duh et al. (2012) also found that the association between earnings volatility and risk (as measured by credit rating) increases after the implementation of IAS 39, which indicates an increase in the risk relevance of earnings. The IAS 32 further revised by IFRS 7 requires disclosures of information about the extent to which the entity is exposed to risks and requires disclosures of concentrations of risk and a sensitivity analysis of each type of market risk to which the entity is exposed to.

These changes in Indonesian accounting standards due to the adoption of IFRS for financial instruments increases the transparency in the bank's financial statements, particularly information regarding the exposure and bank risk choice. Thus, the adoption of IFRS for financial instruments increases the monitoring ability of the bank's liabilities investor so that there is an increase in the effectiveness of market discipline. Accordingly, the third hypothesis is proposed:

H3: The adoption of IFRS for financial instruments positively affects market discipline in the Indonesian banking industry

METHODS

Data and Sample

This study examined data from all 109 commercial banks operating in Indonesia

during 2007-2013. Only 64 banks had annual reports published since 2007 and out of that figure, only 30 banks are listed on the Indonesia Stock Exchange while 34 are not. This study was conducted three years before the implementation of IAS 32 / IAS 39 (2007-2009) and four years after its implementation (2010-2013). The pre-implementation period used in this study only cover three years because most banks' annual reports before 2007 are not available on the website of banks and other databases. A final sample of 408 bank-years was obtained. Only secondary data are available and accessed through the Economics and Business Data Center FEB UI (translated from Pusat Data Ekonomi and Bisnis a.k.a. PDEB UI) obtained from Thomson Reuters Datastream and Direktori Perbankan Indonesia accessed through the Central Bank of Indonesia's website (www.bi.go.id). Financial instruments disclosures and other data not available in Thomson Reuters Datastream was collected from bank's annual report from 2007 to 2013. Following prior researches (Ge & Liu, 2015; Numan & Willekens, 2012; Richardson & Taylor, 2015), to overcome the effect of outliers, all regression variables in all models were winsorised at the top and bottom 1% level.

Research Model

Disciplinary action can be in two forms: ex post discipline and ex ante discipline (Bliss, 2004). Ex post discipline arises as a market reaction to the actions of managers. Ex post discipline is the effect given by depositors and the banks shareholders

as pressure (i.e., deposit withdrawals or increase in the interest rate) on the bank's excessive risk-taking behaviour, so that later, the bank can reduce the level of risk taken. Ex ante discipline occurs when the bank management considers the impact of changes in risk in banks to make new decisions related to financial policy in capital cost and availability (i.e., capital buffer or leverage). This research will test the ex ante form, and the ex post form in an additional test. Additional testing with the ex post approach is necessary because the ex ante approach examines the effect of IFRS implementation on agent behaviour (bank manager) while the ex post approach examines the effect of IFRS implementation on the principal ability of the monitoring agent. Using both approaches will add robustness to the results of this study.

Main Test: Ex Ante Approach

In order to examine the impact of IFRS for the implementation of financial instruments on the market discipline of bank risk-taking, this study used an ex ante approach adopted in prior researches (Fonseca & Gonzalez, 2010; Hess & Feng, 2007; Lindquist 2004; Nier & Bauman, 2006). The model used relates factors affecting capital buffer. According to Nier and Bauman (2006), a strong market discipline will encourage banks to limit their default risk by choosing a higher level of capital buffer for a given assets risk after controlling for other factors affecting the amount of bank capital. Accordingly, empirical model used to test

hypotheses 1 and 2 is presented below:

$$CBUFF_{i,t} = \alpha_0 + \alpha_1 CBUFF_{(i,t-1)} + \alpha_2 ALLP_{it} + \alpha_3 DISC_{it} + \alpha_4 RISK_{it} + \alpha_5 ROE_{it} + \alpha_6 SIZE_{it} + \alpha_7 MPOWER_{it} + \alpha_8 GDPG_{it} + \alpha_9 INFL_{it} + \alpha_{10} PSP_{it} + \alpha_{11} UNDEP_{it} + \alpha_{12} CG_{it} + Error \dots \dots \dots (1)$$

where:

Dependent Variable: *CBUFF*: Capital Buffer. Following Fonseca and Gonzalez (2010), capital buffer is measured as the relative number, which is the difference between the capital ratio and the minimum capital ratio as determined by Bank Indonesia divided by the minimum capital ratio.

Independent Variable: *ALLP*: the quality of bank loan loss provision information. The ALLP is measured as the abnormal discretionary component of loan loss provision based on previous researches (Beaver & Engel, 1996; Kanagaretnam et al., 2004; Kanagaretnam *et al.*, 2010).

***DISC*:** the level of risk and financial instruments disclosures in the bank annual report measured as total risk disclosures score divided by maximum score. The risk disclosure index is developed based on IFRS 7 and the disclosure requirement from the bank regulator (OJK previously Bank Indonesia) SE BI. No.14/35/DPNP. The index of disclosure consists of the disclosure of credit risk, market risk, liquidity risk, operational risk, and fair value of financial instruments

Control Variable

All variables that have an effect on the amount of capital a bank holds as a buffer against risk were controlled based on prior research (Elizalde & Repullo, 2004; Fonseca & Gonzalez, 2010; Forssbaeck, 2011; Haddad, Agusman, Monroe, Gasbarro, & Zumwalt, 2011; Nier & Bauman, 2006). The control variables are as follows: (i) **RISK**: risk assets are measured as a bank's non-performing loan divided by total assets; (ii) **SIZE**: size of bank measured as the natural logarithm of total assets; (iii) **ROE**: return on equity; (iv) **UNDEP**: uninsured funding (i.e., deposits not guaranteed by the government); (v) **MPOWER**: bank market power measured by the Lerner index from De Guevara *et al.* (2005); (vi) **CG**: corporate governance quality measured as corporate governance scoring, which measures the effectiveness of the bank's Board of Commissioners with its committee; (vii) **GDPG**: GDP growth rate; (viii) **INFL**: inflation rate; and (ix) **PSP Own**: percentage of ownership of controlling shareholder

To test hypothesis 3 in model 1, the variables ALLP and DISC will be replaced by the dummy variable for IFRS for the implementation of financial instruments (POST). This variable shows the impact of the implementation of IFRS of financial instruments (IAS 32, IAS 39, and IFRS 7) on market discipline. The POST will be assigned a value of 1 for samples in the period 2010 -2013 and a value of 0 for the sample in the 2007-2009 period.

When market discipline is perfect, the bank's choice of capital buffer for the

given underlying risk exposure is likely to be efficiently high and vice versa (Nier & Bauman, 2006). Thus, the study is premised on the fact that banks for which market discipline is weak as a result of poor accounting information quality and low disclosures are likely to have a high risk of default and low capital buffer, all else being equal. The same interpretation applies when examining the effect of IFRS on the implementation of financial instruments. Banks for which market discipline is strong as a result of IFRS implementation are likely to have a lower risk of default and a high capital buffer, all else being equal.

Additional Test: Ex Post Approach

The ex post approach is tested by analysing the relationship between bank risk and interest rate on uninsured deposits and then interacting with the variables that influence the market ability of discipline with the bank risk variable. In this study, disclosure (DISC) variables, financial statement quality (DLLP and AI), and IFRS financial instruments implementation variables (POST) will be interacted with bank risk variables to test whether the variables improve market discipline. In this research, the bank risk variables used following Hadad *et al.* (2011), are: liquidity risk (LIQRISK), credit risk (CRRISK), and insolvency risk (ZSCORE).

Measuring the impact on market discipline by testing the interest rate sensitivity to the level of risk, the Basic Model below tests whether market discipline is effective:

$$\text{INTDEP}_{it} = \alpha_0 + \alpha_1 \text{INTDEP}_{i,t-1} + \alpha_2 \text{CRRISK}_{it} + \alpha_3 \text{LIQRISK}_{it} + \alpha_4 \text{ZSCORE}_{it} + \alpha_5 \text{ROE}_{it} + \alpha_6 \text{SIZE}_{it} + \alpha_7 \text{MPOWER}_{it} + \alpha_8 \text{GDPG}_{it} + \alpha_9 \text{INFL}_{it} + \alpha_{10} \text{PSP}_{it} + \alpha_{11} \text{UNDEP}_{it} + \alpha_{12} \text{CG}_{it} + \text{Error} \dots \dots \dots (2)$$

where:

Dependent Variable: INTDEP: implicit interest rate is measured by dividing the total interest expense by the average of the deposit.

Independent Variable: (i) **CRRISK:** credit risk is measured by a loan loss reserve divided by total assets; (ii) **LIQRISK:** liquidity risk is measured by the ratio of liquid assets divided by total assets; (iii) **ZSCORE:** other risks, especially insolvency risk, are measured using ZSCORE.

Control variables are as defined in model 1.

The implementation of IFRS for financial instruments increases the effectiveness of MD when the dummy interaction of POST with CRRISK shows a positive sign, or when the dummy interaction variables with LIQRISK and ZSCORE show a negative sign. The same interpretation applies by interacting the accounting information quality (ALLP) and financial instruments disclosures (DISC) with the bank risk variables.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 shows the descriptive statistics of the sample. The average CAR of the sample bank is high at 20.34%, which is well above

the minimum value set by BI / OJK of 8% before 2013 and 9.7% for 2013. The CAP buffer describes the available capital buffer relative to the minimum required amount BI / OJK; on average, the CAP BUFFER of the sample bank is 1.7 times the minimum required capital. The implicit interest rate is paid by the bank to depositors / creditors. Average interest rates paid by the sample banks to depositors and customers were 4.8% lower than the average SBIs during the study period at 7.1%.

The Results of Main Test: Ex Ante Approach

Following previous studies examining market discipline in banking (Fonseca & Gonzalez, 2010; Haddad et al., 2011; Maechler & McDill, 2003; Wu & Bowe, 2012), this study used a dynamic data model with generalised method of moments (GMM) estimators developed by Arellano and Bond (1991) because market discipline varies over time. All models satisfy the requirement of the GMM, including the Wald test, Sargan test, and Arellano-Bond test for testing zero autocorrelation on the first differenced error (Haddad et al., 2011). Column A in Table 2 shows the result of the influence of financial instrument disclosure (hypothesis 1) and loan loss provision information quality (hypothesis 2) on market discipline. Using the ex ante approach, the result shows the level of financial instruments disclosure and the quality of loan loss provision has a positive effect on the level of bank capital buffer. The higher level of disclosure of

Table 1
Descriptive statistics

Variable	Mean	Stdv	Min	Max	Variable	Mean	Stdv	Min	Max
Dependent Variables					Dummy Variable				
CARt	0.232	0.149	0.080	1.327	POST=1	62.04%	255 bank years		
CBUFFit	1.688	1.334	0.003	5.488	POST=0	37.96%	155 bank years		
INTDEP	0.048	0.019	0.002	0.136	Bank Characteristics Control Variables				
CAPBUFF	0.146	0.087	-0.1287	0.397	SIZE (ln)	10.055	0.751	7.416	11.865
Independent Variables					ROE	0.144	0.123	-0.358	0.639
CRRISK	0.025	0.021	0.001	0.091	UNDEP	0.042	0.049	0.000	0.196
NPL	0.026	0.024	0.000	0.104	MPOWER	0.383	0.200	-0.571	0.921
LIQRISK	0.264	0.122	0.005	0.723	PSP Own	0.723	0.227	0.220	1.000
ZSCORE	55.553	53.722	-2.586	232.114	Macro Control Variables				
ALLP					GDPG	0.059	0.007	0.044	0.066
DISC	0.503	0.182	0.049	0.963	INFL	0.06	0.018	0.043	0.102
N	400								

*Variables Explanation as defined in model 1 and model 2

bank financial instruments makes it easier for bank stakeholders to observe the risks faced by banks and shows how management manages those risks. The more observable bank risk choices by bank stakeholders will improve the monitoring capabilities of bank stakeholders (depositors / creditors and regulators) so that market discipline will be more effective. Consequently, banks will be more cautious and will maintain the level of capital buffer they have. This is consistent with the findings of Nier and Bauman (2006), who, using an ex ante approach, found that disclosures improve market discipline.

Column B in Table 2 shows the results of model 1 to investigate the effect of IFRS for financial instruments implementation on market discipline (hypothesis 3). The

result shows the implementation of IFRS for financial instrument (POST variable) has a positive effect on bank capital buffer. In the ex ante approach, the potential market disciplinary consequences cause managers to take action in accordance with the interests of the market from the beginning (ex ante). After the implementation of IFRS for financial instruments, banks tended to be more careful to maintain the level of bank capital buffer. This finding is consistent with Zhang's (2009) that the application of SFAS 133 using derivative accounting, which is increasingly stringent, encourages companies to adopt more prudent risk management. This shows that the implementation of new accounting regulations can influence management behaviour.

Table 2
The effect of accounting information quality and financial instrument disclosures on market discipline (Ex ante approach)

Variable	Pre-dic-tion	Dependent Variable: CBUFFit	
		Model 1 (ALLP & DISC) (A)	Model 1 (IFRS) (B)
		Coeff. Reg.	Coeff. Reg.
CBUFFT-1 (L1)	+	0.367 ***	0.374 ***
ALLP	H1: -	-6.788 *	
DISC	H 2: +	0.702 ***	
POST	H3: +		0.291 **
CRRISK	+	-1.322	-1.655
ROE	+	-2.799 ***	-2.82 ***
SIZE	-	-2.568 ***	-2.223 ***
MPOWER	+/-	-0.255	-1.066 ***
GDPG	+/-	12.222 ***	6.116 **
INFL	+/-	-8.558 ***	-7.071 ***
PSP OWN	-	-2.407 ***	-1.684 **
UNDEP	+	5.202 *	6.193 **
CG	+	0.008	-0.091
CONS		3.279	0.291 ***
WaldTest/Sargan Test Prob		0.000/0.353	0.000/0.239
Prob AR (1)/Prob AR (2)		0.020/0.170	0.017/0.167
N		258	260

***, **, * indicate significance at the 1%, 5%, and 10% levels

Explanation of variables as shown in model 1 and 2

The Results of Additional Test: Ex Post Approach

Additional test results using the ex post approach is presented in Table 3.

Column B of Table 3 shows the disclosure of financial instruments improves

market discipline in the Indonesian banking sector. This strengthens the relationship between insolvency and liquidity risk with interest costs. The qualitative and quantitative disclosure of risk exposure faced by banks increases the ability of depositors / creditors in disciplining bank management by increasing the interest rate charged to banks in the event of an increased risk. Opportunistic earnings management through loan loss provision causes the quality of loan loss provision information to be distorted, thus reducing the ability of stakeholders to observe bank risk so as to reduce the sensitivity of interest cost to risk. The quality of accounting information measured by the quality of loan loss provision information proved to affect positively the market discipline, especially for credit risk and liquidity risk. Column C of Table 3 shows the effect of IFRS for financial instrument implementation. The result shows an increase in market discipline after the implementation of IFRS for financial instruments especially for insolvency and liquidity risk. However, there is no increase in market discipline ability for credit risk and no increase in sensitivity of interest cost to credit risk after the implementation of IFRS for financial instruments. This may be due to the use of incurred loss model on IAS 39, which, although it is able to suppress earnings management, it tends to reduce the timeliness of reserve credit decline (loan loss provision) by limiting management's discretion to communicate expected future losses. Overall, most of the additional test results are consistent with the

main test results, that is, that the disclosure of financial instruments based on IFRS and the quality of accounting information positively affects market discipline. The implementation of IFRS for financial

instruments has also proven to increase market discipline in Indonesian banking, mainly due to the increased disclosure of bank risk options under IFRS for financial instruments.

Table 3
The result of the additional test (Ex post approach)

Variable	Prediction	Dependent Variable: INTDEP					
		Model 2		Model 2a (Effect of Transparency)		Model 2c (Effect of IFRS)	
		(A)		(B)		(C).	
		Coeff.	Reg.	Coeff.	Reg.	Coeff.	Reg.
INTDEP(L1)		0.218	***	0.263	***	0.249	***
ZSCORE	-	-0.001	***	0		-0.001	
ALLP*ZSCORE	H1: +			-0.098	**		
DISC*ZSCORE	H2: -			-0.002	*		
POST*ZSCORE	H3:-					-0.001	**
CRRISK	+	-0.062	***	-0.086		-0.061	**
ALLP*CRRISK	H1: -			-11.04	***		
DISC*CRRISK	H2:+			0.0628			
POST*CRRISK	H3:+					-0.001	
LIQRISK	-	-0.011	***	0.002		-0.002	
ALLP*LIQRISK	H1: +			2.646	***		
DISC*LIQRISK	H2: -			-0.042	**		
POST*LIQRISK	H3: -					-0.017	**
CONTROL VARIABLES (Not presented in the table)							
Wald T / Sargan Test Prob		0.000/0.174		0.000/0.209		0.000/0.437	
Prob AR (1)/ AR (2)		0.003/0.410		0.002/0.415		0.0025/0.318	
N		257		276		257	

***, **, *indicate significance at the 1%, 5%, and 10% levels

Variables Explanation as defined in model 1 and 2

LIMITATIONS OF THE STUDY AND CONCLUSION

The outcome of the implementation of IFRS for financial instruments with the ex ante approach shows the implementation

of IFRS for financial instruments improves market discipline in the Indonesian banking sector. Consistent with this, the result of the implementation of IFRS for financial instruments with the ex post approach

shows an increase in market discipline after the implementation of IFRS for financial instruments, especially for insolvency and liquidity risk.

The quality of accounting information as measured by the quality of loan loss provisions information, and the disclosure of financial instruments are proven to affect the ability of market discipline of Indonesian banks. Tests with the ex ante approach indicate that the quality of loan loss provision information and the disclosure of financial instruments have a positive effect on a bank's capital buffer. Tests with the ex post approach show that the disclosure of financial instruments enhances market discipline for insolvency and the liquidity risk of banks while the quality of loan loss provision information improves market discipline for credit and liquidity risk. Overall, the result using ex ante and ex post approach shows transparency increases market discipline in Indonesian banking.

This study is subject to several limitations. First, the sample size is too small due to data unavailability and additionally, firms are limited to the banking industry in Indonesia. Future research may use a larger sample over a longer period to examine selected developing countries. Second, the index for financial instrument disclosures in this study is based on IFRS 7 and the bank regulation of SE No.14 / 35 / DPNP, which was mandatory in 2012. This study observation period covers 2007-2013; thus, it does not distinguish between voluntary or mandatory disclosure and their respective motivation may differ. Subsequent research

may consider the difference in mandatory disclosure and voluntary disclosure of financial instruments in examining the relationship between the disclosures of financial instruments with market discipline.

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