DETERMINANTS OF BANK BUSINESS RISK ACCORDING TO RISK-BASED BANK RATING COMPONENTS APPROACH (A CASE IN COMMERCIAL BANKS THAT LISTED ON INDONESIA STOCK EXCHANGE)

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Abstract

Banks have important role on economy of Indonesia, with a fully-regulated principle, Banking Sectors in Indonesia concern to keep in a good performance according to Indonesia Bank Rules No. 13/1/PBI/2011 which emphasize on risk-based approach. Therefore, it is interesting to know the factors that affect commercial banks' business risk that listed on Indonesia Stock Exchange. Those factors consist of risk profile (credit risk, liquidity risk, and interest rate risk), good corporate governance, earnings, and capital. The sample used in this researsh are 26 commercial banks that listed on Indonesia Stock Exchange during research period since 2011-2013. This research uses multiple linear regression analysis. The result of the findings are credit risk has effect against business risk. While, liquidity risk does not have effect against business risk. Interest rate risk has effect against business risk. Good corporate governance does not have effect against business risk. Earnings has significant effect against business risk. Capital does not have effect against business risk. Hence, the entire implication of the research is commercial banks' business risk is affected by three factors from risk-based bank rating (credit risk, interest rate risk, and earnings).

Keywords: Risk-Based Bank Rating, Credit Risk, Liquidity Risk, Interest Rate Risk, Good Corporate Governance, Earnings, dan Capital, Bank's business risk

INTRODUCTION

The role of banking sector is very substantial for the economy of a nation. Through the function of financial intermediation, bank has the special role as intermediary fund from surplus party (lenders) to deficit party (borrowers). The existence of bank helps the process of production, distribution, and consumption through mobilizing the fund from and to the society to improve the monetary transmission. This role will contribute to stronger financial system, so economic development will be attained.

However, commercial bank faces several uncertainties on its business. The uncertainties could be damage its performance. Therefore, Go public commercial banks especiallye must maintain its performance in overall components of the business due its a form of responsibility for stakeholders.

According to (Wild, 2005 on Syafitri 2011), business risk on bank has a meaning of uncertainty that bank could not generate income against the investment upon the cost and income of its business activities. Meanwhile, (Keown, 2004) defined business risk as potential variability in earnings before interest and taxes generated from business environment of commercial bank.

The effect of risk on commercial bank impacted to the activity and decreasing performance because risks would lowering the working performance of employees that causing the fired decision. Also, the greater effect of risk exposure on commercial bank could lowering the level of service, decreasing variability and quality of products offer from bank and disabled bank to hold more cash (liquidity crisis) and decreasing the value of shareholders.

As a financial intermediaton and fund distributor, bank has inherent risk, risk loss on bank not only affect the condition of bank itself, but also affecting the customers and overall economic condiiton. Subsequently, bank's risk could cause instability of financial system. Bank is fragile to the systemic risk on banking industry. Systemic risk could not be prevented if the bank has risk loss.

To maintain the effect of business risk, commercial banks have to apply a reliable risk management and apply a good corporate governance. According to Indonesia Bank Regulation No. 13/1/PBI/2011, All of banks must do a self assessment in term to assess its performance by several components. The components used are based on risk profile, good corporate governance, earnings, and capital.

Therefore, it is very interesting to examine which risk determinant that give major effect for commercial bank by conducting a research against the banking business risk in Indonesia, so the research is entitled **"Determinants of Bank Business Risk According to Risk-Based Bank Rating Components Approach (A Case in Commercial Bank that Listed on Indonesia Stock Exchange)"**

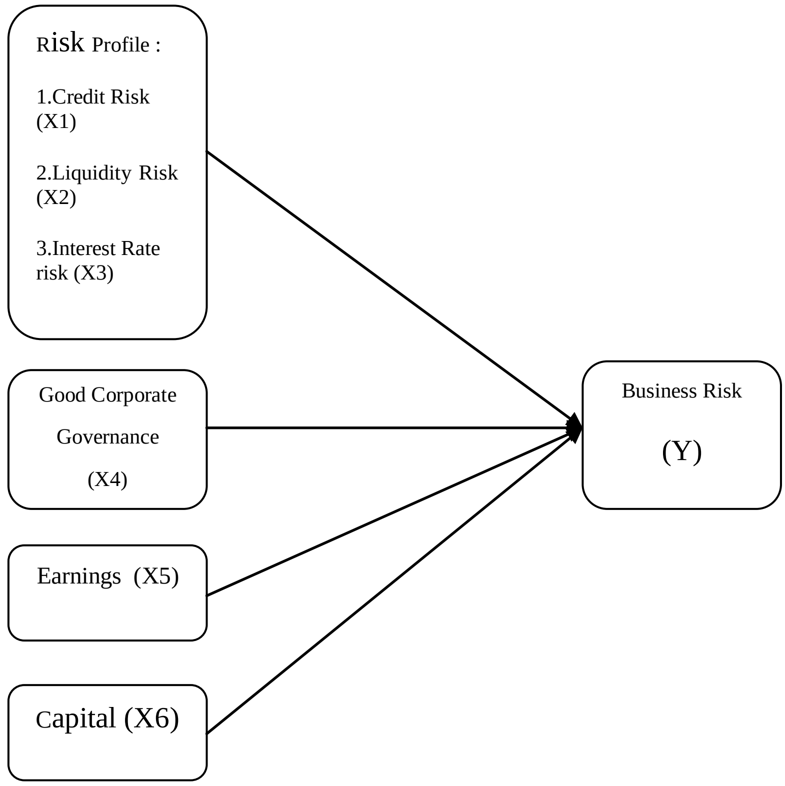
LITERATURE REVIEW

According to Sinkey (2002), Commercial Bank has similar meaning as "*department store of finance*" which provide various types as financial services, accepting deposit, making business loans, and offering basic investment product. The various product of financial services are main object of Commercial Bank to generating the profit, and maximizing the value of stockholders.

Bank Indonesia through the rules no 13/1/PBI/ 2011 stipulates an assessment for bank to evaluate performance according to risk profile that consist of eight risks in banking industries are credit risk, market risk, interest risk, liquidity risk, operational risk, legal risk, strategic risk and compliance risk. Second, the evaluation is based on Good Corporate Governance application, Earnings Factors, and Capital Adequacy.

CONCEPTUAL FRAMEWORK

According to the theoretical framework and research objective to be the basic of hypotheses determination, subsequently shown on research framework that depict the correlation among Credit Risk, Liquidity Risk, Interest Rate Risk, Good Corporate Governance, Earnings and Capital Adequacy against the Business Risk on Commercial Bank in Indonesia. The picture below depicts the conceptual research framework that shown :



HYPOTHESES

According to Theoretical Framework and Conceptual Research Framework, therefore the hypotheses on this research is shown below :

H_1 : Credit Risk has effect against business risk.

H_2 : Liquidity Risk has effect against business risk.

H_3 : Interest Rate Risk has effect against business risk.

H_4 : Good Corporate Governance has effect against business risk

H_5 : Earnings has effect against business risk.

H_6 : Capital has effect against business risk.

RESEARCH METHOD

This research is categorized as an explanatory research type. By using quantitative approach that focusing on hypotheses testing, In the process of data analysis, this study uses a statistical approach. The analytical testing using statistical formulas and multiple linear regression analysis from panel data (cross section and time series). The author uses EViews 8.00 as a statistical software tool to examine the relationship between variables in drawing conclusions.

Definition of Operational Variables

Business Risk (BR)

Business Risk is the potential variability in return on asset which genereated from business enterprise activities. This research uses standard deviation of ROA (SDROA) as an indicator of the bank business risk.

According to Stiroh dan Rumble (2005), SDROA used to measure the total volatility of profits, where the primary measure of performance based on the profit ratio, one of which is the Return on Assets (ROA). The formula of SDROA used in this research is :

$$SDROA = \sqrt{\frac{\sum_{i}^{n} = 1\ (ROA_i - \overline{ROA})^2}{n-1}}$$

Meanwhile, the formula of ROA according to Bank of Indonesia No. 13/24/DPNP on October 25th, 2011 is :

$$ROA = \frac{Earning\ Before\ Tax}{Average\ of\ Total\ Asset}$$

Credit Risk (CR)

Credit Risk is risk that coming from the failure of debtor to fulfill the obligation to the Bank. This research uses Non Performing Loan (NPL) ratio to show the risk occurence causing from total credit that bank distributed. According to (Syafitri, 2011), NPL is used to measure the credit risk because credit is major object of commercial bank business that could affect the bank performance.

$$NPL = \frac{Credit\ Quality\ substandard,\ doubtful\ and\ loss}{Total\ Credit}$$

Liquidity Risk (LR)

Liquidity risk is risk that occur if bank could not cover its liabilities such as from withdrawal deposit, loan demand, and administrative account off-balance sheet including the commitment liabilities and contingency liabilities.

Based on Indonesia Bank No. 13/24/DPNP on October 25th, 2011. Liquidity risk parameter could be obtain from asset composition, liabilities and administrative account off balance sheet (commitment liabilities and contingency liabilities).

$$\text{Liquidity Risk Indicator} = \left(\frac{\text{Commitment Liabilities} + \text{Contingency Liabilities}}{\text{Total Asset}}\right)$$

Commitment liabilities are composed by several components of Undisbursed loan facilities to debtors, undisbursed loan facilities to other banks, and outstanding irrevocable Letter of Credit (L/C). While, contingency liabilities are composed of Warranty and Domestic Letter of Credit (SKBDN) which can be canceled (revocable L / C) in order to trade in the country, and Sales of foreign exchange option. Hence, by adding up all components of both commitment liabilities and contingency liabilities. Obtained the indicator of liquidity risk.

Interest Rate Risk (IRR)

Interest rate risk is risk that coming from fluctuative interest that arise from fund rental which could be affecting the bak performance. As well, interest rate risk is variability of net interest margin ratio (Sinkey, 2002).

Here is the formula of standard deviation NIM :

$$\text{SD}NIM = \sqrt{\frac{\sum_{i}^{n}=1\ (NIM_i - \overline{NIM})^2}{n-1}}$$

While, the formula of NIM itself according to Bank of Indonesia No 13/24/DPNP on October 25th, 2011 is :

$$NIM = \frac{Net\ Interest\ Income}{Average\ of\ Productive\ Asset}$$

Good Corporate Governance (GCG)

Good Corporate Governance is a principle which directed and controlled companies to achieve goals with balancing strength and authority to give contribution to shareholders. According to Indonesia Bank Rules No 8/14/PBI/ 2006 to analyse the GCG Implication, used composite index that done by Banks through self-assessment. Table 3.1 shows the 11 indicators of GCG Implementation in Appendix 1

After finding the composite value, Could be determined the quality of GCG Implementation as follows :

Table 3.2

Good Corporate Governance Implementation Ratings

NO	Composite Value	Ratings
1	<1.5	Very Good
2	1.5 – 2.4	Good
3	2.5 – 3.4	Enough
4	3.5- 4.4	Bad
5	4.5- 5	Very Bad

Source Bank Indonesia Rules No 8/14/PBI/ 2006

Then, by categorized the quality of GCG index. Could be known the percentage of total indicators fulfilled by commercial banks. Table 3.2 shown the percentage of indicators fulfilled.

Table 3.3

Percentage of Total Indicators Fulfilled

Ratings	Note
1	Fulfilled 87.5%-100% of Total Indicators
2	Fulfilled 62.5%-87.4% of Total Indicators
3	Fulfilled 37.5%- 62.4% of Total Indicators
4	Fulfilled 12.5%-37.4% of Total Indicators
5	Fulfilled 0%-12.4% of Total Indicators

Adapted from Indonesia Bank Rules No 8/14/PBI/ 2006

Earnings (E)

Earnings are the net benefits of a corporation's operation. Earnings are also the amount on which corporate tax is due. For an analysis of specific aspects of corporate operations several more specific terms are used overhead expense and total asset (Indonesia Bank Letter 13/24/DPNP/2011).

Earning indicator is obtained by calculating the overhead expense divided by average total asset to know the efficiency of bank’s performance. According to Bank of Indonesia No 13/24/DPNP/2011 on October 25th, 2011 it formulated into :

$$\frac{Overhead\ Cost}{Average\ Total\ Asset}$$

Overhead expense including operational cost exclude the interest expense that annualized, consist of costs : Amortization, Workforce, Education,Insurance, Loss of Operational Risk, Research and Development, Rent, Promotion, Tax, etc

Capital (C)

Capital is one of the factors that are important for banks in develop its business and to accommodate losses (Taswan, 2006). Capital for banks as the company in general in addition to functioning as the main source of financing for activities also play an operational role, as a buffer against losses.

Capital is measured by Capital Adequacy Ratio which show the extent to which the entire assets of the bank that contain risks (credit, investments, securities, bills on other banks) is also financed from equity funds in addition to obtaining funds from sources outside banks (Dendawijaya, 2005).

According to Bank of Indonesia No 13/24/DPNP/2011 on October 25th, 2011 CAR could be formulated to :

$$CAR=\frac{Capital}{Risk\ Weighted\ Asset}$$

RESULT

Regression Model

Multiple linear regression equation was executed to find the relationship and the influence of independent variables on the dependent variable. The summary results are presented in Table 4.11 , as follows:

Variable	**Coefficient Regression**	**Standard Error**	**t – Test**	**Sig t α = 0,05**	**Result**
Constanta	0.123677	0.555836	0.222506	0.8251	
Credit Risk	0.278481	0.079549	3.500756	0.0012	Significant
Liquidity Risk	0.197772	0.780208	0.253486	0.8013	Not Significant
Interest Rate Risk	0.723660	0.153530	4.713483	0.0000	Significant
Good Corporate Governance	-0.0578	0.135130	0.275036	0.7848	Not Significant
Earnings	11.31716	3.658536	3.093356	0.0037	Significant
Capital	-0.041740	0.017942	0.230056	0.8193	Not Significant
R- Squared	0.880182		Durbin Watson	1.954	
Adjusted R Square	0.839192		Schwarz Crit.	1.83	
F Statistics	21.47300		Prob(F-statistic)	0.0000 (Significant)	

According to the data processed table 4.11, obtained the multiple regression equation as written below :

Business Risk = 0.124 + 0.278 Credit Risk + 0.198 Liquidity Risk + 0.724 Interest Rate Risk – 0.0578 Good Corporate Governance + 11.317 Earnings – 0.0417 Capital + e_i

Summary of the results of multiple linear regression analysis on the table 4.11 can be described as follows:

1. Multiple linear regression equation in this study indicates that a (constant) is positive at 0,124. This value has meaning as 0,124 of Business Risk will increasing variables if Credit Risk, Liquidity Risk, Interest rate risk, Good Corporate Governance, Earnings, and Capital are constant.
2. The regression coefficients on credit risk is positive 0.278 means that when Credit risk is increased by one unit will increase Business Risk of 0.278 with the assumption that Liquidity Risk, Interest Rate Risk, Good Corporate Governance, Earnings, and Capital are constant.
3. The regression coefficients on liquidity risk is positive for 0.198 means that when Liquidity Risk increased by one unit will increase Business Risk of 0.198 with the assumption that Credit Risk, Interest Rate Risk, Good Corporate Governance, Earnings, and Capital are constant.
4. The regression coefficient on the interest rate risk is positive of 0,724 means that if Interest Rate Risk is increased by one unit will increase Business Risk of 0,724 assuming that Credit Risk, Liquidity Risk, Good Corporate Governance, Earnings, and Capital are constant.
5. The regression coefficient on corporate governance is negative of 0.0578 means that if corporate governance is increased by one unit will decreased as 0.0578 of Business Risk, assuming that Credit Risk, Liquidity Risk, Interest Rate Risk, Earnings, and Capital are constant.
6. The regression coefficient on earnings is positive at 11,317 means that when earnings increased by one unit will increase Business Risk of 11,317 assuming that the Credit Risk, Liquidity Risk, Interest Rate Risk, Good Corporate Governance, and Capital are constant.
7. The regression coefficient of capital is the negative of 0.042 means that when capital is increased by one unit will decrease Business Risk of 0.042 with assumption that Credit Risk, Liquidity Risk, Interest Rate Risk, Good Corporate Governance, and Earnings are constant.

The regression coefficient of capital is the negative of 0.042 means that when capital is increased by one unit will decrease Business Risk of 0.042 with assumption that Credit Risk, Liquidity Risk, Interest Rate Risk, Good Corporate Governance, and Earnings are constant.

Conclusion

Based on the analysis and discussion of the findings and research, it can be concluded some as follows :

1. Credit Risk has significant effect against business risk. It means that, a failure of debtor to pay-off the obligation to bank would affect the operation of bank to suffers business risk.
2. Liquidity Risk does not have effect against the business risk, it means that bank has more liquidity to cover its obligation either it derives from withdrawal deposit, loan demand, or administrative transaction account.
3. Interest rate risk has significant effect on business risk. It means that, in the bank operation to distribute credit, the volatility of interest rate is very important to generate the income of bank.
4. Good Corporate Governance does not have effect but on business risk. It means that, a good implementation of Good Corporate Governance on commercial bank which stipulates by Indonesia Bank Regulation No. 15/15/DPNP/ 2013 would decreasing the risk of bank businesses.
5. Earning has significant effect on business risk. It means that, by using overhead expense to total assets as a parameter to calculate the earning of bank from the aspect of efficiency. Obtain the relationship that, a greater overhead expense also has a greater effect to the business risk. It indicates that bank faces inefficiency in its operation.
6. Capital does not have effect against business risk, it means that bank has sufficient amount of capital to cover obligation and according to Indonesia Bank Regulation No. 15/12/2013 that Commercial bank has to fulfill the minimum of capital adequacy of 8%.

Suggestion

According to the research of business risk. The results of this study would given advices for various parties as follows :

1. **For Investors**

Investors are expected to monitor the performance of commercial bank with go public status in which the capital is derived from capital market activities.

2. **For Bank Indonesia**

Bank Indonesia as monetary regulatory, it is necessary to increase the role of banks in the economy while maintaining the health of the bank with notice that the credit risk, interest rate risk,and earning, have significant effect on the bank's business risk.

3. For the Financial Services Authority

Bank failures have contagion effect, therefore there are needed of improving supervision from Financial Service Authority (OJK) that Credit risk, interest rate risk, and earning are having significant effect on business risk of commercial banks. Thereby, bank management also needs to improve accuracy of credit distribution to minimize credit risk. Furthermore, it necessary to raise capital because it can minimize the risk of business banks.

4. For Community

The advices for both depositors and borrowers are necessary to participate to maintain the banks performance by doing the obligations according to the regulation.

5. For academics

The result of this study serves as a reference for subsequent research with a view to the development of science in bank management.

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