Contingency Variable Interaction Model:  
Implementation on Credit Risk Management System  
of the Commercial Banks In Indonesia

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Abstract
Research on credit risk management systems in Indonesia commercial banks beyond moderating contingency variables such as competitive strategy, corporate culture, external environment and organizational structure has never been done. The research objectives are: (1) to analyze the influence of contingency variables (competitive strategy, corporate culture, external environment and organizational structure) on the bank's credit risk management system in Indonesia, (2) to analyzed the effect of the credit risk management system on the performance of banks in Indonesia, (3) to analyze between contingency moderating variables (competitive strategy, corporate culture, external environment and organizational structure) and credit risk management system on organizational performance of commercial banks in Indonesia and (4) to analyze consistency of commercial banks performance between primary and secondary data years 2004 - 2008 in Indonesia.

Secondary and primary data collection is done through a survey of 97 commercial banks in Indonesia as a unit of study samples. A set of questionnaires as primary data collection instruments were distributed to the directors, managers and heads of commercial banks on credit division as research respondent and secondary data analysis of the financial statements of Commercial Banks operations in the period 2004 to 2008 was obtained from Bank Indonesia. Furthermore, statistically processed data, whether a descriptive analysis and verification analysis were conducted. Multiple regression analysis and T test are used to test hypotheses.

The research results prove that: (1) competitive strategy, corporate culture and organizational structure affect the bank's credit risk management system, (2) credit risk management systems affect the performance of commercial banks, (3) competitive strategy, corporate culture and organizational structure to strengthen moderation credit risk management system on the performance of commercial banks and the most powerful moderation is the corporate culture and (4) The performance of commercial banks in Indonesia as a whole is good enough and the line with financial performance from Annual Report, Bank of Indonesia, while the best is State of Commercial Bank (Persero). In other words, the performance of state commercial banks (Persero) is better relative than the performance of other competitors of commercial banks.

Keywords: contingency variables, credit risk management system, commercial banks performance

Background
Directorate of Banking Research and Regulation of Bank Indonesia, said the national banking industry has had Indonesian Banking Architecture (IBA) which is the blueprint of the direction and long-term national banking structure. IBA is fundamental objective is the creation of the national banking industry is healthy, strong and efficient
financial system in order to create stability in order to promote national economic growth. The phenomenon of disintermediation is happening in America is the beginning of the emergence of the credit crunch issue, obstruction of bank lending as a result of very tight monetary policy to tackle inflation by the Federal Reserve. Results summary of some studies, such as Stiglitz and Weiss (1981); and Lown Bernanke (1991); Supreme et., al. (2001); Lesmana (2006) revealed the occurrence of banking lending decreased sharply as a result of the decline in banking activity in lending to businesses and to encourage the banks to address credit risk more carefully with a more adequate facilities. Agung (1998) and Agung (2000) in his research to explain bank lending division is one indicator of successful management of funds in addition to other divisions, beginning with lending procedures, types of loans are promoted, the approach of authority in the approval and granting of loans as agreed. There are several approaches used to monitor the process of bank credit agreement as to know the parties involved in the process of granting credit, monitoring facilities and equipment after the credits disbursed and repayment process.

Several previous studies have examined a number of contingency factors that could affect the company's management control system such as control systems in order to improve the performance of firms (Govindarajan and Fisher of 1990; Fishers in 1995 and 1998; Yasukata and Kobayashi, 2001; Hendricks et., al., 2004; Sawitri 2006). Through a background of credit risk problems that occur, the researchers took the initiative to do research to find out the relationship and the influence caused by the contingency variables on the effectiveness of credit risk management systems, including competitive strategy, external environment, corporate culture and organizational structure. (Miller and Friesen 1982; Govindarajan and Gupta 1985; Hofstede et al., 1990; Murray 1990; Govindarajan 1986; Govindarajan and Fisher 1990)

Development of credit risk assessment began at about the 1960's and grow a lot of attention for researchers and practitioners in the banking world. The results generally help the policy of developing country governments in avoiding failures in the provision of credit. However, research on anticipatory management of credit risk through the identification of variables in strengthening the system of contingency management of credit risk in banking in many countries still have not been found, including in Indonesia. This can encourage the creation of credit risk management models anticipation by observing the interaction of contingency variables to be used as a reference and an alternative answer to the weakness of the banking credit management. Therefore, the attention of researchers to identify and study the internal mechanisms, management systems, resources and standards of banking operations in the process of loan approval is appropriate and correct. This attention appears related to the need to identify in the application of credit risk management in a transparent and consistent, for lending leak that still occur can be minimized. The motivation of this research is to study the interaction between contingency variables and credit risk management systems to organizational performance, empirical studies on credit risk management divisions of commercial banks in Indonesia.

Contingency theory is used to analyze the design, management and research systems on management accounting systems to provide information that can be used by
companies for various purposes (Otley 1980) and to face competition (Mia and Clarke 1999). Contingency approach is based on the premise that no system of management research that is universally used by organizations in various environments (Otley 1980; Muslichah 2003; Faisal 2006). Contingency approach in this research, is used to evaluate environmental factors, culture and strategies that allegedly can cause the system to the management of a company becomes more effective. Several previous studies using the contingency approach to examine the relationship between contextual variables (information technology, competitive strategy and environment) on information systems and performance, such as Chong and Chong (1997), Chenhall and Morris (1986); Abernethy and Bouwens (2000) Sawitri (2006), Faisal (2006) states that organizations need to consider these contextual variables of a system for information generated becomes more effective. Traditionally dominated management accounting information financial information, but in its development also provide information on non-financial. Many phenomena that explains the research on risk and risk management in various banking industry in many countries, including Indonesia. Therefore, the researchers tried using a contingency approach to explain the link between credit risk management systems on organizational performance in this case is a public bank.

The main priority of this research is strengthening credit risk management system of changes in competitive strategy, corporate culture, external environment and organizational structure of banking and can contribute to the success of the overall credit disbursement in order to improve the performance of the banking and economic growth in Indonesia. This study also attempted to analyze comparative financial performance of commercial banks during the period 2004 - 2008 of consolidated Bank Indonesia with the performance of commercial banks through the analysis of primary data. The purpose of this study was (1) analyze the influence of contingency variables (competing strategies, corporate culture, external environment and organizational structure) to the credit risk management system of commercial banks in Indonesia. (2) analyze the effect of credit risk management system against organizational performance of commercial banks in Indonesia. (3) to analyze the influence of interaction between contingency variables (competitive strategy, corporate culture, external environment and organizational structure) and credit risk management system on organizational performance of commercial banks in Indonesia. (4) analyze the comparative performance of commercial banks between primary and secondary data years 2004 to 2008 in Indonesia.

**Theoretical Study**

Aguais and Forest (2000); Aguais et., al. (2001a); Angerer (2004), Kim (2005) states that risk as the uncertainty of a loss (uncertainty of loss) which contains two elements of uncertainty (uncertainty) and losses (loss). Risks are classified as speculative risks (the risk of speculative/dynamic), which is the risk that gives the possibility of profit (gain) or loss (loss), or no profit and no loss (break even). Pure risks (pure risk), which is the risk that only have one result is a loss. Research Aguais et., al. (2001b); Angerer (2004), Kim (2005) also expressed about the risk of fundamental (fundamental risk) as a cause or a consequence of risk impersonal (not related to
someone), where the losses arising from risks which are fundamental usually not only affects an individual but happen to many people. While the special risks (particular risks) is the risk caused by individual events with a limited effect. The definition of risk according to Alexander and Sheedy (2004), Kim (2005) in a broad view includes explicit network, expectations, goals and stakeholders. Risk is characterized by a probability and loss relating to that described by the stakeholder's with an expectation or target, where the latter have different expectations. The amount of risk is usually measured from two aspects, namely the possibility of the occurrence and magnitude of the impact event. Altman and Saunders (1998), Altman (2002); gup (2003); Alexander and Sheedy (2004); Angerer (2004) and Lesmana (2006) explains the credit risk management is a process of joint activity identification, measurement and control of response selection and supervision of credit risk. Modelling the primary activity of credit risk management and ease of doing its management led to the need for the creation of a model or mathematical formula is quite simple, but may reflect the true credit risk management process contained from its credit risk management. The mathematical model is expected to be implemented by banks in assessing the level of credit risk management from year to year.

**Credit Risk Management Application Process**

Credit risk according to the Directorate of Banking Research and Regulation, Bank Indonesia (2003) is a risk that occurs due to failure of the other party (counterparty) to fulfill its obligations. Credit risk can be sourced from a variety of functional activities such as lending banks/provision of funds, treasury, investment and trade financing, which was recorded in the banking book and trading book. There are policies, procedures and limits which is a sound credit granting criteria. Banks must have sufficient information to conduct a comprehensive assessment of the risk profile of borrowers. Factors to be considered and documented in the credit agreement include:

a) credit purposes and the sources of payment; b) the current risk profile of borrowers and collateral and the level of sensitivity to economic conditions and market developments; c) analytical ability to pay back, both historically nor in the future based on historical financial development and cash flow projections with various scenarios (ex ante and ex post analysis); d) the ability of the debtor and the condition of the business sector of the economy/business borrower and lender positions in certain industries; e) requirements for the proposed credit, including an agreement designed to limit the risk exposure changes to debtor in the future.

The process of identification, measurement, monitoring and credit risk management information system consists of: 1) Identification of credit risk. a) The Bank should identify the credit risk inherent in all products and activities. Identification of credit risk is the result of study of the characteristics of credit risk inherent in certain functional activities, such as credit (provision of funds), treasury, investment and trade financing; b) The activities of credit and trade finance services through credit risk assessment must consider the financial condition of borrowers and ability to pay in a timely manner, as well as guarantees or collateral provided. To risk borrowers, the assessment should include analysis of the debtor environment, characteristics of
business partners, shareholders and managers of quality, condition of the last financial statement, the cash flow projection, the quality of business plans and other documents that can be used to support a thorough analysis of the condition and credibility debtor; c) The treasury and investments, credit risk assessment must consider the financial condition of counterparties, rating, instrument characteristics, types of transactions and market liquidity as well as other factors that may affect credit risk. 2) Measurement of credit risk. a) The Bank shall have written procedures to make measurements that allow for centralized risk exposure on balance sheet and off balance sheet credit risk of each debtor or a group of debtors or certain counterparties based on the concept of single obligor; assessment of the different categories of credit risk level by using a combination of qualitative and quantitative aspects of the data, the selection criteria and distribution of information on the results of risk measurement is complete for the purpose of monitoring by the relevant unit; b) credit risk measurement systems considering the characteristics of each type of transaction the credit risk, the financial condition of borrowers and the terms of the loan agreement such a period and interest rates, credit period (maturity profile) is associated with potential changes in the market, aspects of security, collateral, the potential for failure to pay (default), both based on the results of the assessment of conventional approaches and results of the assessment approach that uses process rating is done internally (internal risk rating) and the ability of banks to absorb the potential failures (default); c) the Bank's risk measurement technique that uses an internal risk rating approach should perform data validation on a regular basis; d) The parameters used in measuring credit risk include non-performing loans (NPLs), the concentration based on the borrower's credit and economic sector, the adequacy of collateral, credit growth, non-performing portfolio of treasury and investment (non-credit), treasury and investment portfolio composition (among banks, securities and investments), adequacy of reserves of treasury and investment transactions, trade financing transactions by default, the concentration of trade financing facilities; e) Mark to market on a particular credit risk transactions included to measure the credit risk of the transaction caused over the counter or on a particular market, especially market derivative transactions. 3) Credit Risk Monitoring consists of the bank must develop and implement information systems and procedures to monitor the condition of each debtor or counterparty on all bank credit portfolio, credit risk monitoring system includes the measures in order: (1) ensure that the bank's financial condition last to know of the debtor or counterparty, (2) monitor compliance with the terms of the loan agreement or contract transactions credit risk, (3) assess the adequacy of collateral than the debtor or counterparty obligations, (4) identify and classify inaccuracies payment of nonperforming loans in a timely manner, (5) dealing with problem loans quickly. 4) Credit Risk Management Information System. Efforts to improve the effectiveness of the process of measuring credit risk, banks must have a management information system that provides reports and data are accurate and timely information to support decision making by directors and other officials. Management information system should also generate reports or information in order to monitor actual exposures against established limits and excess exposure to risk limits that require attention from the directors. Management information system should also
provide accurate data and timely information on the total credit exposure of individual borrowers and counterparties, credit portfolio and credit risk limits report exclusions. Banks must have information systems that allow directors to identify the existence of concentration risk in credit portfolios.

Model Research Approach

Studying the relationship of each variable on research related to the contingency variables that I use and enriched with literature on research conducted by Govindarajan and Fisher (1990); Hofstede et., al. (1990), Miller and Friesen (1982), Murray (1990), Govindarajan (1986); Aguais, et., al. (2001); Mia and Clarke (1999), Govindarajan (1988); Yasukata and Kobayashi (2001); Yurniawati (2003); Sawitri (2006), the model which the authors formulate the research approach is as follows. Testing models of research done in stages. $Y = \alpha + \beta_1 \text{CRMS}$. $\text{CRMS} = \alpha + \beta_1 \text{Xi} + e$. Where: $Y =$ organizational performance, $\text{CRMS} =$ credit risk management system, $\text{Xi} =$ contingency variable i: competitive strategy, corporate culture, external environment, organizational structure.

Testing the research model to determine the effect of contingency variables interaction with credit risk management system jointly against organizational performance in banks. Testing between credit risk management systems with organizational performance using simple linear regression, the following stages of testing to be performed (1) Calculating a simple linear regression between the credit risk management systems with organizational performance: $Y = \alpha + \beta_1 \text{CRMS}$. (2) Calculating the influence of each variable contingency against credit risk management system. When the coefficient $(\beta_1)$ is positive and significant, then in accordance with the expectations of contingency theory which shows compatibility of credit risk management system with variable kontingensinya. $\text{CRMS} = \alpha + \beta_1 \text{Xi} + e$. (3) Calculating the influence of each variable contingency interaction with credit risk management system with organizational performance $Y = \alpha + \beta_1 \text{CRMS} + \beta_2 \text{Strategy} + \beta_6 \text{CRMS.Strategy} + e$. $Y = \alpha + \beta_1 \text{CRMS} + \beta_3 \text{Culture} + \beta_7 \text{CRMS.Culture} + e$. $Y = \alpha + \beta_1 \text{CRMS} + \beta_4 \text{Environment} + \beta_8 \text{CRMS.Environment} + e$. $Y = \alpha + \beta_1 \text{CRMS} + \beta_5 \text{Organizational structure} + \beta_9 \text{CRMS.Organizational structure} + e$. (4) If there is a significant increase in $R^2$, it can be said that each of these contingency variables contributed a significant influence in explaining variations in organizational performance. Hypothesis 1: The contingency variables (competitive strategy, corporate culture, external environment and organizational structure) affect the credit risk management system of commercial banks in Indonesia. Hypothesis 2: credit risk management systems influence the organizational performance of commercial banks in Indonesia. Hypothesis 3: Interaction between contingency variables (competitive strategy, corporate culture, external environment and organizational structure) and credit risk management systems influence the organizational performance of commercial banks in Indonesia.

Determination of population conducted by the method based on the judgment purposive sampling, namely: (1) The banking industry which included a group of commercial banks that are domiciled and have a real business in the territory of
Discussion

Testing models of this research to know how big the influence caused by the independent variable that is competitive strategy, corporate culture, external environment and organizational structure of the dependent variable against credit risk management system. This research model was tested by running multiple regression analysis by including contingency factor that describes the compatibility between contingency variables with the identification and mechanism of credit risk management system. The model predicts that the impact identification and mechanism of credit risk management system is higher when the value of his contingency factor is higher.

Results of regression analysis the number R2 of 67.4%, F = 8391 with a significant p less than 0.05, meaning there is a positive relationship ($\beta_5 = 0.0332$, $\beta_3 = 0.0013$, $\beta_2 = 0.0057$) a significant correlation between variables of contingency with credit risk management system, unless the environment variable that have external significance value 0.054 (p greater than 0.05) with the resulting equation as follows.

$$CRMS = 56.747 + 0.057X2 + 0.013X3 + 0.035X4 + 0.332X5 + e.$$ Variation of credit risk management system changes described by the contingency variables of 67.4%, the remainder explained by other variables, this is in accordance with the expectations of researchers that there are contingency variables influence the strengthening of this relationship, the contingency as a moderating variable in the relationship between credit risk management system with performance commercial banks can be predicted that showed the greater influence. These results are consistent with the results of the study Miller and Friesen (1982), Govindarajan (1988), Govindarajan and Fisher (1990), Syafruddin (2001) and Sawitri (2006) in management control systems that have a positive relationship and significant influence on company performance.
Results of regression analysis the number $R^2$ of 41.1%, $F = 3.416$ with a significant $p$ less than 0.05, meaning there is a positive relationship ($\beta_1 = 0.421$) a significant correlation between the variables of credit risk management systems with organizational performance with the resulting equation as follows. $Y = 13.372 + 0.421X_1 + e$. Variation explained by changes in organizational performance variables of credit risk management system for 41.1%, the remainder explained by other variables, this can be predicted in the relationship between credit risk management system with the performance of commercial banks that can show results that the greater influence. These results are consistent with the results of research Govindarajan and Fisher (1990), Koach and Scott (2000), which states that the relative size of the control system's effectiveness in enhancing enterprise performance, in other words the company's performance could be improved if the use of control systems are applied consistently in company. Thus, these results support the hypothesis 2, namely credit risk management systems affect organizational performance.

External environment variable does not moderate the relationship of credit risk management systems with organizational performance, because it shows negative and insignificant coefficient. No increase in the value of $R^2$, while the other contingency variables moderate the relationship of credit risk management systems with organizational performance. This is also consistent with the notice a significant increase in $R^2$, which means that each of these contingency variables provide significant contributions in explaining variations in organizational performance through the use of credit risk management system.

Regression results showed overall that, (1) the interaction between competitive strategy, credit risk management system on the performance of the organization have a significant ($p < 0.05$) and a positive value that is equal to 9.017, it is proving competitive strategy to strengthen ties of moderation to the relationship of credit risk management system with organizational performance, the resulting equation is: $Y = 46.436 + 6.442X_1 + 4.029X_2 + 9.017X_1X_2$. Differences competitive strategy and the increasingly competitive in press charges made by the company, the more can reduce the risk occurring and the more credit to improve organizational performance. (2) The interaction between the culture of the company with credit risk management system on the performance of the organization have a significant ($p < 0.05$) and a positive value that is equal to 8.010, this proves the company's culture also strengthen the ties of moderation on the relationship of credit risk management systems with organizational performance, the equation produced is: $Y = 45.584 + 5.961X_1 + 4.763X_3 + 8.010X_1X_3$. The more applied-oriented culture in the process, orientation on the job, the culture is professional, open system culture, culture of tight control and normative culture of the company, the more can reduce the risk occurring and the more credit to improve organizational performance. (3) The interaction between the external environment with credit risk management system on organizational performance is not significant ($p > 0.05$) and a negative value that is equal to -1.005, it does show the external environment does not strengthen the ties of moderation on the relationship of credit risk management systems with organizational performance, the equation produced is: $Y = -11.921 + 2.504X_1 + 1.343X_4 - 1.005X_1X_4$. The higher the change
in dynamics, the level of small differences in diversity and threats that arise which can be predicted by the company, not the better chance to reduce the credit risk occurs. (4) The interaction between organizational structure with credit risk management system on the performance of the organization have a significant (p < 0.05) and a positive value that is equal to 3026, it is proving organizational structure to strengthen ties of moderation to the relationship of credit risk management systems with organizational performance, the resulting equation is: \( Y = 57.397 + 10.593 X_1 + 4.236 X_5 + 3.026 X_1.X_5 \). The better the job description, procedures and regulations, the level of delegation of authority and a high level of complexity departmentalization and specializes in working on the company, the greater the opportunity to reduce the risk occurring and the more credit to improve organizational performance. Thus, these results support the hypothesis 3 that the interaction of contingency variables (competitive strategy, corporate culture, external environment and organizational structure) together with credit risk management systems affect organizational performance.

Interaction of credit risk management system with which corporate culture affects organizational performance with significant results by 0018. Interaction of credit risk management systems with competitive strategy and credit risk management system interaction with the external environment also positively affect organizational performance, but not significant. These results reinforce the results of testing hypotheses that explain the use of credit risk management systems affect organizational performance that involve interaction with contingency variables, it is also evident from the increasing value of the coefficient R2. The resulting equation is as follows. \( Y = 8.235 + 2.083 \text{CRMS} + 1.644 \text{Culture} + 2.001 \text{CRMS.Strategy} + 6.286 \text{CRMS.Culture} - 2.577 \text{CRMS.Environment} + e \).

**Analysis of Hypothesis Test Results of Commercial Banks in Indonesia**

The analysis of test hypothesis 1 indicates that the contingency variables have significant influence on credit risk management system. This is supported by analysis of information from the State Commercial Banks (Persero), which consists of PT Bank Mandiri (Persero) Tbk, PT Bank Negara Indonesia (Persero) Tbk, PT Bank Rakyat Indonesia (Persero) Tbk and PT Bank Tabungan Negara (Persero) as a whole has adopted job descriptions, job execution procedures, delegation of authority duties, the division of the department of labor and specialization of work is very good, because it has an average rating of 28.25, held above the median value is 27.00, better than any other competitor banks.

The influence of corporate culture on credit risk management system of commercial banks when analyzed as a whole from the National Private Bank Foreign Exchange which consists of 24 banks, has an average rating of 86.79, well above the median value is 86.00 owned, better than any other competitor banks (ranging value with a value of 5 to 6). Application of the line has been carried out by foreign banks are believed Enterprise Risk Management (ERM) as an approach to manage all risks. ERM requires a proactive risk management process, a systematic, disciplined, professional-oriented and covers all the risks involved in all activities. Integrated cultural or
Enterprise Risk Management should be applied strictly in all parts of the commercial banks for bank management using a comprehensive risk management approach based on the principles and values set by the Banking Supervision Directorate, Bank Indonesia.

The effect caused by the competitive strategy in credit risk management system, is seen in the group of Non National Private Bank Foreign Exchange consisting of 27 banks. On average have a value of 32.67, well above the median value that is owned 32.00, higher than any other competitor banks (ranging dominant value 5). Application of the line has been carried out by non-foreign exchange banks through a differentiation strategy on risk management are clearly defined, have the right board structure and committees are actively working with the roles, responsibilities, authority and a clear delegation level.

External environment does not provide sufficient support on credit risk management system, although the visible extent of the differences in perception of environmental conditions of commercial bank group. Overall, the Regional Development Banks (BPD), which consists of 19 banks, has an average rating of 73.34, below the median value is 74.00 owned and has a level of speed and depth of no better on the environmental condition of the bank's other competitors (ranging dominant value 3 and 4). This shows that the strategy of regional development banks have not been able to adjust to environmental changes, although these changes in a relatively short period of time. Global competition in the future demands of commercial banks as banks that have sought to develop its employees to be professional and always tried to follow the development environment, although very diverse. The dynamics of the environment which must continue to be observed is a step change marketing practices to adjust to the market and competitors, speed of product so as not to become obsolete, competitors' behavior is predictable (as in credit) and the technology and models of bank products that do not undergo much change.

The result of hypothesis test 2 shows that the variables of credit risk management system has a considerable influence on organizational performance with the results of a significant and positive coefficient. Support analysis of information from the Public Bank group mixture consisting of 15 banks, has an average rating of 67.33, held above the median value is 67.00, meaning is often applied to a large extent on the operations of the bank (values ranged from 5 to grade 6). Support group analysis also found on the Foreign Commercial Bank consists of 8 banks with an average rating of 70.12, well above the median value that is owned 70.00, also has been frequently applied to a large extent on the operations of the bank (ranging dominant value 6). The effort is mostly done by banks and foreign banks mixture is to build cooperation with government banks or other banks, such as that conducted by PT Bank Negara Indonesia, Tbk with ABN Amro Bank in order to strengthen credit risk management that focuses on the areas of consultation and supervision through the Operational Risk Management (ORM). PT Bank Negara Indonesia, Tbk in 2008 has a value of Capital Adequacy Ratio (CAR) of 15:13%. Non Performing Loan (NPL) of 6:53% and Loan to Deposit Ratio (LDR) of 73.20%. Similarly, ABN Amro Bank in 2008 has a value of Capital Adequacy Ratio...
(CAR) is 16.18%. Non Performing Loan (NPL) is quite low at 1.15% and Loan to Deposit Ratio (LDR) of 92.57%.

The result of hypothesis test 3 shows that the variables strengthen the corporate culture in moderating the relationship of contingency between credit risk management systems with organizational performance, in addition to competitive strategy variables and organizational structure, because it has the highest value of R2 of 0.0646 of all donations of determination value of contingency variables and significant other. These results are consistent with PT Bank Mandiri (Persero) Tbk, which states that one of the problems in managing the banking system in order to report on its development is cultural diversity of employees in the management of credit risk. Another important function of credit risk management unit is to monitor and systematically assess the bank's risk profile, assess the impact of the risk of a new product or service, setting out the procedures and methods of portfolio management, as well as helping the credit division in developing awareness and adherence to the principles of management credit risk in question.

The direction of interactions that occur can be predicted by testing against the results derived from the differential regression to the model hypothesis 3, the statistical values shown by the analysis is the most significant, only the external environment variable is not significant ie 0.699. The impact of interactions between variables strategy to compete with credit risk management system against organizational performance reflected from the following equation \( Y = 46.436 + 6.442X_1 + 4.029X_2 + 9.017X_1X_2 \). Derivation of differential equation above is \( \delta Y / \delta X_1 = 6.442 + 9.017X_2 \).

The interaction between cultural variables Vendor with credit risk management system against organizational performance reflected from the following equation results \( Y = 45.584 + 5.961X_1 + 4.763X_3 + 8.010X_1X_3 \). Turunan diferensial dari persamaan diatas adalah \( \delta Y/\delta X_1 = 5.961 + 8.010X_3 \). The interaction between organizational structure variables with credit risk management system against organizational performance reflected from the following equation \( Y = 57.397 + 10.593X_1 + 4.236X_5 + 3.026X_1X_5 \). Derivation of differential equation above is \( \delta Y/\delta X_1 = 10.593 + 3.026X_5 \).

The higher the value of organizational structure through the implementation of job descriptions, standard procedures and regulations made by the company through the interactions that occur more and give a positive influence on credit risk management systems to increase organizational performance. This is evident from the range of values through X5 organizational structure indicated by a score of respondents' answers. Empirical testing of these variables showed that the increase in credit risk management standards provide a large enough effect on improving credit risk management system from the influence of organizational structure variables.

**Conclusion**

The conclusion obtained is competitive strategy, corporate culture and organizational structure influence on credit risk management system of commercial banks in Indonesia, except the external environment. These results are consistent with the results of the study Miller and Friesen (1982), Govindarajan (1988), Govindarajan
and Fisher (1990) and Syafruddin (2001) contingency variables have a positive relationship and influence on management control system. This is perfecting the supervision system of compliance-based regulation (compliant based) into bebasis risk. Supervision should be more active, such as through the implementation of early warning systems (early warning system) terahadap emergence of risk. The better the job description, procedures and regulations, the small level of delegation of authority, the high level of complexity departementalisasi and specializes in work that is applied by the company, the greater the opportunity to reduce credit risks that occur.

Credit risk management system has a considerable influence on organizational performance of commercial banks in Indonesia. These results are consistent with the results of research Govindarajan and Fisher (1990), Koach and Scott (2000), which states that the more effective control system, the company increased the company's performance. If the credit risk management systems are applied consistently and compliance, as the basis for strengthening policies for commercial banks to anticipate the credit leakage occurred during the performance of banks is increasing. The more often the bank to identify and use the tools of risk control in the selection process of granting credit, the more significant levels of risk measurement mechanisms in conducting credit analysis, tighter supervision and control risk in credit approval, the greater the opportunity to reduce credit risk occurring and increasing the organizational performance of commercial banks in Indonesia.

Organizational performance of commercial banks in Indonesia as a whole is very good and the line between primary and secondary data, while the best is State Commercial Banks (Persero). In other words, the performance of state commercial banks (Persero) is relatively better than the performance of commercial banks other competitors.

Daftar Pustaka


