

## **The Relation Between Cash Compensation of Banking Executives, Charter Value, Capital Requirements and Risk Taking**

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### **ABSTRACT**

This research analyzes for the effect of cash compensation, charter value, and capital requirements on risk-taking as measured by non-performing loans (NPL), loan-to-deposit ratio (LDR), and operational risk (OR). This research sample includes 28 banks listed on the Indonesia Stock Exchange (IDX) in the period 2006-2017 with 336 observations. The analytical method of the research employed the random-effects model and common effect model. The results of the research indicate that cash compensation and charter value have a significantly negative impact on NPL, LDR, and OR. This research has limitations because it used a measure of compensation with cash incentives and risk-taking with an accounting risk approach.

*JEL Classification: G32*

*Keywords: risk-taking; charter value; capital requirements*

## I. INTRODUCTION

The world financial crisis occurring of 2008 resulted in a decline in the economic growth of almost all countries, which was marked by a sharp decline in stock prices across global markets and substantial losses and defaults borne by many banks in the US, Europe, and Asia. Economists argue that the main problem causing the banking industry crisis is related to the issue of executive compensation policies. Some experts argue that executive compensation structures can encourage executives to take too many risks that could jeopardize the stability of their companies (Gupta et al., 2009; De Young et al., 2013; Guo et al., 2015; IMF, 2014; Bouras and Gallali, 2016).

The policy that allows bank executives to make decisions within the limits set by the regulator can have a significant impact on risks faced by the company. Therefore, compensation is an instrument to intermediate these differences in interests, but compensation can also motivate executives to take strategies that will raise bank risk. When bank executives are given a certain level of compensation, they will strive to meet the targets that have been set so that they can earn more compensation, but those targets will present risks in every decision that will be made by the executive, especially related to the number of loans provided to customers with the goal of meeting short-term profits. This occurs as shareholders cannot fully monitor executive activities that open the possibility for differences in interests to exist with the firm owner and the executive (Jensen and Meckling, 1976).

A number of studies found no clear correlation with executive compensation and risk-taking. Studies conducted by Acrey et al. (2011) and Guo (2014), for example, show that there is no clear correlation between executive compensation and risk-taking. The results of this study are supported by Gehrig et al. (2009) that bonus compensation is not a major risk-taking factor in the banking industry in Germany and Switzerland, but in the US high bonus compensation has an influence on risk-taking. On the other side, the findings of Brewer et al. (2003), and John and Qian (2010) show a positive relationship between risk and equity-based compensation. This gives an indication of a positive relationship between risk and compensation paid to the CEO of the bank.

Research conducted by Panetta, Angelini, and Albertazzi. (2009) find evidence of a positive relationship between risk-taking and CEO compensation, but the risk-taking had not reached excessive levels. Rajgopal (2001) discovers a significant positive relationship between compensation in the form of stock options and risk-taking. This is in line with the research of Coles (2004), who finds that there is a positive influence of the compensation structure on risk-taking. On the other side, the findings of Balachandran et al. (2011) show that cash incentive-based compensation payments are considered less risky because they point to performances and are not based on market values such as seen in equity compensation. This argument is supported by the findings of Chen et al. (2006), who show that there is an inverse relationship between compensation and risk-taking which supports the argument about risk-averse by Smith and Stulz (1985).

Meanwhile, bank managers and shareholders tend to choose a higher level of risk with higher return expectations. This situation will encourage moral hazard problems to emerge. Therefore, in order to deal with this problem, the ability of banks to generate profits in future cash flow (charter value) is needed in reducing the level of risk taken (Keeley, 1990; Marcus, 1984). According to Acharya (1996), banks that have higher

charter value will be more careful in taking risks so that moral hazard problems can be minimized. As a result of the higher charter value, banks will be very careful about taking risks, but to a certain extent, banks will increase risk-taking (Niu, 2012). Thus, there is a need for efforts to improve the situation by putting forward the idea of right risk-taking practices and greater capital as a buffer as stipulated in Basel III by setting the capital requirement that must be owned by banks as reflected in the fulfillment of the capital adequacy ratio. Banks are required to provide minimum capital in accordance with the risk profile with a percentage of 8% to 14% of risk-weighted assets (Financial Services Authority, 2014).

This topic is very interesting to study as the banking industry has special characteristics, one of which is that the executive compensation of bankers in Indonesia is the highest compared to their counterparts in other countries in the ASEAN region (Infobank, 2014). According to DeYoung et al. (2013) and IMF (2014), one of the main factors inciting the banking industry crisis is the executive compensation policy that encourages them to take too much risk that can endanger the stability of the company. In addition, large banks that experience financial problems will trigger the domino effect (too big to fail), which causes the collapse of the entire economic system, inviting the government to get involved in providing assistance in the event of financial failure. This condition affects the behavior of banking executives that can lead to moral hazard (Houston and James, 1995).

In Indonesia, cash compensation for executives has been regulated by the Financial Services Authority (No 45 / POJK.03 / 2015): executive cash compensation is called 'remuneration', and it is mandatory to at least pay attention to business scale, inflation rate, financial conditions and capability, and must not conflict with applicable regulations, the provision of variable remuneration for executive, board of commissioners or employees must consider performance and risk can be given in the form of cash or shares or stock-based instruments issued by the bank.<sup>1</sup>

This study aims to expand the previous research (De Young et al., 2013; Niu, 2012; Swamy, 2012), by looking at the effect of executive cash compensation<sup>2</sup>, charter value, and capital requirements on bank risk-taking. Specifically, this research highlights the link between risk management practices and executive compensation, charter value, and capital requirements. Executive compensation in this paper focuses on cash compensation, namely salaries, benefits, and bonuses as existing research considerations more likely to be equity-based executive compensation or in the form of stock options.

Furthermore, in this paper, the author will investigate three main types of risk, namely credit risk, liquidity risk, and operational risk because these three risks reflect the size of accounting risk (Bank Indonesia Regulation No. 13/1/PBI/2011). Risk measurement that is based on accounting data will provide more consistent test results compared to risk measurement based on market data. Company internal data or accounting data provide a better picture of risk-taking by bank management and associate it with a set of explanatory variables to verify the hypothesized relationship. Our findings indicate that directors' compensation has a significant negative effect on risk-taking for non-performing loans and operational risk. These results show that the higher cash compensation given to directors, the more benefits gained in the form of a reduction in credit risk and bank operational risk, indicating that compensation in cash reflects the performance of the board of directors and not based on market value,

thereby minimize moral hazard behavior of the board of directors in risk-taking (Balachandran et al., 2011). These findings also indicate that the directors of banking companies in Indonesia are more risk averter in taking credit risk and bank operational risk (Smith and Stulz, 1985).

The charter value variable has a significant negative impact on risk-taking for non-performing loans, loan-to-deposit ratio, and operational risk. These results indicate that companies that increase the charter value will be negatively related to risk-taking. This means that banks avoid high-risk projects with their increased charter value (Gonzalez, 2005). Meanwhile, the capital requirements variable does not have an impact on bank risk-taking. This implies that capital requirements are increasingly used for other investments, not to raise the allocation of loans or to cover credit risk that has occurred (Rashid, et al., 2011). The next section is presented to review the relevant literature and explain our hypothesis. Section III is presented to describe the data and methodology. Finally, Section IV discusses the research findings and Section V presents conclusions and implications.

## **II. HYPOTHESES AND RELATED LITERATURE**

### **A. Hypotheses**

We will test the influence of cash compensation, charter value, and capital requirements on risk-taking in the country of the sample in Indonesia. Indonesia is members of groups from 20 countries with the largest economy in the G20 group (The Group of Twenty). Compared the two banking markets between developed and developing countries in the United States and in Indonesia in terms of capital, they have followed the same rules regarding risk management, namely the reference from Basel III, of the twenty-seven jurisdictions that made the Basel Committee, twenty-five has now published the last set of Basel III-based capital rules. Indonesia and Turkey have a basis for drafting rules and efforts are currently underway to solve them. Recently, the European Union and the United States published the final rules in June and July 2013. In addition, some members slowly began to move towards preparing and introducing rules for liquidity ratios and leverage. The capacity of banks to engage in financial markets may differ depending on the size of the bank (Basel committee on banking supervision, 2013). From the Indonesian banking market and the United States, there are contrasting differences evidenced in the study of Naceur et al. (2018). Banks in the U.S. increase their risk management capabilities as they expand their credit activities. The 2008 financial crisis was largely caused by the risk-taking of banks from the U.S. and from all over the world, which has been in big trouble since then. One of the major questions raised by remuneration methods in bank risk-taking encouraging (Le, 2018). In Indonesia, high bank market capacity will be linked to low insolvency risk and high capital ratios. High market capacity will adversely affect financial stability in private banks and state-owned banks (Yusgiantoro et al., 2019). The banking risk focus of Indonesia highlights the focus areas of the main risk management of bankers, Bank performers like to manage risk areas that they perceive as a lower priority in Liquidity and Market Risk and dislike higher priority risks such as Operational Risk, Credit Risk, Technology Risk, and Liquidity Risk.<sup>3</sup> n addition, if you see the stability of the market capability in Indonesian banks it is important to reason. First, the performance of banks

in Indonesia tends to be higher compared to banks in other countries. Vinayak et al. (2016) produce a study that the ROE ratio of Indonesian banks (return on equity) was the highest in Asia, reaching 20.3% in 2014. Second, banks constitute the majority in the financial sector in Indonesia; therefore, banks play a very important role in economic development in Indonesia (Hadad et al., 2013). Third, the Indonesian banking sector produces the highest level of net interest gains except this was explained in Trinugroho et al. (2014).

In the executive compensation variable, we will discuss cash compensation given to the executive of the bank such as compensation, salary, allowances, and bonuses that usually become equity-based compensation given to the executive or in the form of stock options associated with risky decisions related to risk credit, operational and liquidity that executives will take from the compensation they will get. Francis et al. (2015) find that changes in regulations accompanied by compensation controls and certain managerial management can bring caution to risk taking behavior and then that impact correlates with the characteristics of bank governance. Likewise, in Swanepoel and Smit's (2016) study, it was found that when remuneration in the form of cash increases, risk returns decrease, when executive remuneration in the form of equity decreases, risk-taking increases.<sup>4</sup> Matousek and Tzeremes (2016) show higher salary and bonus payments not always aligned with higher levels of technical efficiency. Le (2018) who studies 63 large banks in Europe, Canada, and the United States from 2004 to 2008 finds that CEO salaries and CEO bonuses are reduced with most types of bank risk, other annual CEO compensation increased with bank risk. These CEO compensation components are illustrated as having no relationship with changes in bank risk during the crisis and finding that limited stock use to compensate CEOs during the pre-crisis period has no effect on abnormal changes in bank risk during the crisis period, while the use of stock options to compensate the CEO on at the same time the period added to the manifestation of the bank's risk in a crisis.<sup>5</sup> Abascal and Gonzalez (2019) find there is a risk sensitivity reduction, and provided support for measures to increase shareholder rights in bank executive compensation agreements. The first hypothesis propose is:

*Hypothesis 1: Executive cash compensation has an influence on risk-taking making in Indonesian banking.*

Charter value is the present value of future profits that are expected in our company to assume that charter value can reduce risk-taking in which banks prefer to take low risks to maintain this value. Keeley (1990) and Demsetz et al. (1996) state the charter assesses the present value expected in a company's economic rent as the most effective benchmark for controlling moral hazard incentives because it can provide banks with quality monopoly resources and away from failure.<sup>6</sup> To strive for and maintain this competitive advantage, banks will take less risk by managing more capital because the value of their charter will increase. Conversely, when the value of a bank's charter falls, incentives will rise for banks to take greater risks and harm the choice of deposit insurance. Therefore, the correlation of reciprocity must exist in the value of charters and risks. The charter value will play a role of self-discipline on managers' appetite for risk, therefore helping to reduce the level of deviation from the best first with agency conflicts that existed in the past (e.g., Jensen and Meckling, 1976;

Cadenillas et al., 2004; Cadenillas et al., 2007). Jones, Miller, and Yeager (2011) argue that chartered value is important in the charge industry because of its performance to reduce moral hazard, but obtaining a value charter has decreased over time, contributing to the added effect on risk taking leading to the subprime financial crisis. Niu (2012) finds a U-shaped relationship because the charter value increased, the first risk reduction decreased and then increased. Lai et al. (2012) discover that moral hazard causes managers to lead to more complex levels of risk than directly chosen levels, the best environment without conflicts of interest with managers and shareholders. The second hypothesis purpose is:

*Hypothesis 2: Charter Value has an influence on risk-taking making in Indonesian banking.*

In the variable capital requirements, we argue that capital needs have an impact on risk-taking. Gauthier et al. (2012) establish the bank's capital requirements and their risk contribution from the banking system, considering that the risk of the banking system is the contribution of each bank charges as the bank's equity capital is reallocated and is positively correlated with future capital collected by banks and future losses in equity values. Bitar et al. (2016) find the impact of capital requirements on bank performance is more pronounced for bank failures, banks in crisis and banks in countries with good governance. Zhou (2013) examines the impact of capital requirements on systemic risk, which shows that systemic risk in a regulated system can be higher than that of an unregulated system. Miles et al. (2013) find that the changes in the capital may affect financial activity through their effect on the cost of financial intermediation. Uluc and Wielandec (2018) study the impact on risk-taking. Gauthier, Lehar, and Souissi (2012) establish the regulation of capital requirements based on their contribution to the overall risk of the banking system, considering that the risk of the banking system and the risk contribution of each bank charges as the bank's equity capital is reallocated and positively correlated with future capital collected by banks and future losses in equity values. Bitar et al. (2016) and Zhou (2013) examine the impact of imposing capital requirements on systemic risk, shows that it is more pronounced for bank performance on bank performance. The systemic risk in a regulated system can be higher than that of an unregulated system Miles et al. (2013) find that changes in the capital may affect financial activity through their effect on the cost of financial intermediation. Uluc and Wielandec (2018) find that there is a rise from 100 basis points in individual mortgage loans in the case of an individual mortgage loan size. Rahmana et al. (2017) argue that tight capital requirements can be found in banks that has a positive relationship on financial intermediation, while a negative relationship on bank risk-taking variables. Thakor (2019) produces regulators will not like the weaknesses of banks, and then the regulation of credit allocation must be equated with higher capital requirements. In the individual mortgage loan size, this is the third hypothesis of the purpose is:

*Hypothesis 3: capital requirements has an influence on risk-taking making in Indonesian banking*

## B. Related Literature

This paper related to several literature strands. First, it relates to the literature that analyzes the determinants of bank executive compensation. Giving compensation is one of the ways companies align their interests in overcoming agency conflicts between owners and agents and to ensure that managers will act to maximize shareholder wealth (Acrey et al., 2011). The literature also provides partial support in all hypotheses, without completely overriding the entire hypothesis of industrial and commercial companies.<sup>7</sup> The literature that analyzes the relationship between executive compensation and corporate risk-taking, generally results in research that is a relationship in both directions. Companies with high risk-taking opportunities tend to have high-risk sensitivity also on executive salaries (Guay, 1999; Coles et al., 2006; Ge'Czy et al., 2007) and also companies that have greater sensitivity to executives who will pay for the risk and will use risky policies (Agrawal, and Mandelker., 1987; DeFusco et al., 1990; Coles et al., 2006). This literature also indicates that the granting of stock options is associated with higher risk-payment sensitivity and, therefore, will create greater company risk. Various empirical results prove that the sensitivity of payment performance is not related to incentives for risk-taking because it has no impact with risk-taking (Low, 2009; Dong et al., 2010) or may even reduce or reduce it (Guay, 1999; Knopf et al. , 2002; Coles et al., 2006; DeYoung et al., 2013) In addition, several empirical results that prove that executive compensation does not only have a risk-taking effect but also affect various existing company policies such as dividends (Fenn and Liang, 2001 ), investment (Cai and Vijn, 2007) and earnings management (Burns and Kedia, 2006). However, less attention has been diverted to executive compensation at banks, because traditional higher-level regulations concerning banks limit the use of compensation to encourage risk-taking (Bai and Elyasiani, 2013; DeYoung et al., 2013). For the US banking industry in the 1970s and earlier, executive compensation was set to encourage risk-taking because it was in more stringent rules (Smith and Watts, 1992; Houston and James, 1995). This has changed with the deregulation of the industry to expand the reach of investment opportunities of banks. With increased compensation such as equity and the sensitivity of performance payments after this deregulation, shareholders are likely to provide incentives for managers to open up opportunities for higher investment risk returns (Crawford et al., 1995; Hubbard and Palia, 1995; Cun˜at and Guadalupe, 2009; Hagendorff and Vallascas, 2011). A small amount of banking research has identified changes in payment risk sensitivity. From our research, it was found that CEOs pay for risk sensitivity that increased from the late 1990s when US banks were invited to enter into insurance and investment banking activities (e.g., Chen et al., 2006; Bai and Elyasiani., 2013; DeYoung et al., 2013).

Compensation provided by the company is not only in the form of salary, but also bonuses, stock options, severance packages, and compensation based on performance (Faulkender et al., 2010). Therefore, the amount of compensation provided affects executive behavior on investment decisions, funding, and company risks (IMF, 2015). This study examines the impact of cash incentive compensation in the form of salaries, bonuses, many studies have been carried out on executive compensation in relation to risk-taking, including by Cheng and Hong (2010) who examine the relationship between compensation and taking risks using total compensation, namely

the amount salaries, bonuses, value of selected grants, other annual compensation, limited share grants, long-term incentive payments. The results show that compensation has a positive effect on bank risk. This argument is supported by De Muda et al. (2013), Guo et al. (2015), and the IMF (2014), stating that one of the causes of the 2008 financial crisis and was seen as the main cause of non-bank financial problems was the compensation structure for banking executives. A positive relationship between risk and equity-based rewards, which gives an indication of a positive relationship between risk and compensation paid to the CEO (e.g., Brewer et al., 2003; John and Qian, 2003). This finding is supported by Panetta et al. (2009), who identify evidence of a relationship between risk and CEO compensation but this does not take excessive risk, which means that it is still in line with the study of Coles (2004), who sees the positive effect of compensation structures on risk-taking.

On the other hand, Houston and James (1995) find that compensation policies did not encourage risk-taking in the banking industry. However, findings from Balachandran et al. (2011) show that equity-based compensation payments increase the probability of default, while non-equity payments such as cash and bonuses reduce the probability of default. They argue that equity-based compensation tends to encourage risk-taking behavior. Meanwhile, cash incentives based on company performance are considered less risky because they refer to performances and are not based on future market value. In addition, the findings of Chen et al. (1998) show that there is an inverse relationship between compensation and risk-taking that supports Smith and Stulz (1985) argue about avoiding the risk that higher ownership bonuses that can be obtained by executives will increase risk aversion or unwillingness to take risks. In addition, the results of this study are also consistent with John et al. (2000), and Palia and Porter (2004), which prove that increasing compensation with a certain amount for executives will reduce risk.

Risk-taking can be measured in various ways. According to Basel Standard II, there are several alternatives to measure banking risk that are in line with the bank's risk profile (Goyal, 2010). Bank Indonesia (2013) uses eight types of assessment of alternative risk profiles that must be managed and reported by banks in Indonesia. They are credit risk assessment, operational risk, market risk, liquidity risk, compliance risk strategic risk, legal risk, and reputation risk. Adopting Basel II and Bank Indonesia Standards (2013), this study focuses more on credit risk, liquidity risk, and operational risk that reflects non-performing loans, the ability of banks to meet short-term obligations, and measure how much operating costs are used in companies (Bank Indonesia, 2003).

Compensation given at a certain level for executives encourages them to try to meet the set targets, so compensation can be secured, but they will target the risk for each decision that will be made by the executive. Therefore, to overcome this problem, the ability of banks to generate profits in future cash flows (charter value) is needed. Charter value is the present value of a bank's future profit. This value is based on the bank's authority in doing business, market structure, and human resources (Fisher et al., 2001). This is cited in some literature where the value of charter is the result of imperfect competition and imperfect bad credit. When competition is low, banks set higher lending costs, encouraging them to do more risk-taking so that the risk of failure can improve. When competition between banks is high, they charge lower borrowing costs and are forced to have a reduced income because they need to cover losses from



bad credit, so the risk of failure is high (Repullo, 2004; Boyd and Nicolo, 2005; Mierra and Repullo, 2010).

Niu (2012) explains that banks will be very careful about taking risks as a result of increasing the value of the charter, but to a certain extent, they will increase risk-taking. Therefore, banks will provide more capital than regulators need to limit exposure to large risk debtors. Capital acts as a buffer against possible losses in addition to functioning as the main source of financing for operational activities. This is the main focus of the bank supervision authority (Bank Indonesia, 2013). The supervisory authority sets a minimum amount of capital that must be guaranteed by the bank by issuing requirements regarding minimum capital. This requirement fulfillment can be considered as one component of the assessment of bank supervision reflected in the fulfillment of the capital adequacy ratio (Financial Services Authority, 2014; Stiroh and Rumble, 2005; Lepetit et al., 2008; Distinguin et al., 2010) find that capital requirements have a significant positive effect on risk. However, the higher the capital needs ratio means the better the ability of banks to cover risks because they have large capital reserves. Banks that have a high level of capital adequacy will be encouraged to take risks and provide loans to high-risk borrowers (Swamy, 2014).

### III. RESEARCH METHOD

The unit of analysis of this study was the banks. The population was publicly-listed companies whose shares were listed on the IDX. The 12-year research period began before the global financial crisis in 2006 to 2017, involving 28 banks with 336 observations. In particular, the financial sector in Indonesia has determined the grouping of different sizes of bank core capital that the regulator has set,<sup>8</sup> but we do not follow bank groupings here only focus on analyzing cash compensation, charter value and Capital Requirements on risk-taking in all banking categories.

The analysis of PLS model selection was conducted with a fixed-effects model (FEM) and then between the FEM and REM models could be seen in the Chow test and Hausman test results. For NPL and LDR, the result of the Chow test showed that Prob = 0.1000 for cross-section F, which is higher than 0.05, thus H<sub>0</sub> is accepted. Therefore, it can be concluded that with a 95% confidence level, the common effects model is better than the panel model. As for OR, the Chow test result showed that Prob = 0.0000 for cross-section F, which is less than 0.05, thus H<sub>0</sub> is rejected. Therefore, it can be concluded that with a 95% confidence level, the panel model is better than the common effects model. Then the Hausman test was conducted, resulting in Prob = 0.0306 for random cross-section, which is smaller than 0.05. The decision is to accept H<sub>0</sub> so that it can be concluded that with a confidence level of 95%, the random-effects model is better than the fixed effects model.

The panel data regression equation is as follows:

$$\begin{aligned} \text{RiskTak}_{it} = & \alpha_{oit} + \beta_1 \text{Comp}_{it} + \beta_2 \text{CVe}_{it} + \beta_3 \text{CR}_{it} + \beta_5 \text{Ag}_{it} + \beta_6 \text{CAP}_{it} \\ & + \beta_7 \text{Size}_{it} - \beta_8 \text{ROA}_{it} + \text{HHI}_{it} + e_{it} \end{aligned} \quad (1)$$

**Table 1**  
Profile of sample banks in Indonesian mean and standard deviation

|      | NPL                | LDR                | OPRISK             | Comp                | CV                 | CR                 | Age                 | Cap                 | Size                | ROE                | HHI                |
|------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|--------------------|--------------------|
| BBRI | 0.0233<br>(0.0136) | 2.0115<br>(0.1650) | 0.0099<br>(0.0069) | 24.3788<br>(0.8054) | 0.1354<br>(0.0433) | 3.9990<br>(0.0353) | 0.3245<br>(0.0822)  | 33.8463<br>(0.6504) | -0.6104<br>(0.1478) | 0.0167<br>(0.0108) | 0.6120<br>(0.0535) |
| BBTN | 0.0331<br>(0.0048) | 1.8614<br>(0.2731) | 0.0178<br>(0.0054) | 23.4677<br>(0.5231) | 0.1151<br>(0.0314) | 3.9539<br>(0.0337) | 0.0999<br>(0.0280)  | 32.2814<br>(0.5631) | 1.0284<br>(0.2434)  | 0.0427<br>(0.0154) | 0.7034<br>(0.0530) |
| BMRI | 0.0543<br>(0.0632) | 2.0010<br>(0.7915) | 0.0159<br>(0.0084) | 24.5639<br>(0.9476) | 0.1318<br>(0.0229) | 3.9638<br>(0.0204) | 0.1924<br>(0.0536)  | 33.9830<br>(0.4859) | 0.1497<br>(0.1133)  | 0.0211<br>(0.0091) | 1.1046<br>(0.1200) |
| BBNI | 0.0386<br>(0.0288) | 2.4478<br>(0.8544) | 0.0218<br>(0.0096) | 23.9378<br>(0.9182) | 0.1195<br>(0.0325) | 3.9917<br>(0.0281) | 0.1653<br>(0.0680)  | 33.4053<br>(0.4737) | -0.5592<br>(0.1182) | 0.0285<br>(0.0104) | 0.5742<br>(0.0812) |
| BACA | 0.0132<br>(0.0092) | 0.8038<br>(0.2326) | 0.0309<br>(0.0169) | 21.3444<br>(0.4777) | 0.1954<br>(0.0192) | 3.9248<br>(0.0319) | 0.0788<br>(0.0217)  | 29.1297<br>(0.6940) | 1.9880<br>(0.6538)  | 0.1495<br>(0.1169) | 0.1424<br>(0.0621) |
| BBCA | 0.0077<br>(0.0039) | 2.6885<br>(0.8114) | 0.0137<br>(0.0056) | 24.5404<br>(0.6287) | 0.1425<br>(0.0503) | 3.9711<br>(0.0405) | 0.2654<br>(0.0360)  | 33.5956<br>(0.4693) | -0.0566<br>(0.0458) | 0.0044<br>(0.0021) | 0.1293<br>(0.0067) |
| BBKP | 0.0325<br>(0.0065) | 1.3204<br>(0.1459) | 0.0135<br>(0.0049) | 23.2538<br>(0.8129) | 0.1482<br>(0.0264) | 3.9018<br>(0.0644) | 0.1299<br>(0.0616)  | 31.6803<br>(0.4502) | -0.7704<br>(0.5791) | 0.0195<br>(0.0076) | 0.2053<br>(0.0119) |
| BBNP | 0.0249<br>(0.0199) | 2.6215<br>(0.5220) | 0.0052<br>(0.0017) | 22.1037<br>(0.6421) | 0.1242<br>(0.0302) | 3.9536<br>(0.0425) | 0.2958<br>(0.0143)  | 29.4333<br>(0.4060) | -1.2483<br>(0.1134) | 0.0389<br>(0.0062) | 0.2608<br>(0.0108) |
| BCIC | 0.1397<br>(0.0255) | 0.8942<br>(0.2780) | 0.0138<br>(0.0048) | 22.3480<br>(0.5506) | 0.1387<br>(0.0407) | 3.8833<br>(0.0241) | -0.7736<br>(0.1839) | 30.1741<br>(0.3308) | 0.5039<br>(0.0978)  | 0.6576<br>(0.2996) | 0.2356<br>(0.0112) |
| BDMN | 0.0284<br>(0.0081) | 1.5372<br>(0.2932) | 0.0147<br>(0.0023) | 23.8402<br>(0.1322) | 0.1421<br>(0.0223) | 3.8749<br>(0.0843) | 0.2029<br>(0.0484)  | 32.5238<br>(0.2984) | -0.9498<br>(0.6676) | 0.0390<br>(0.0067) | 0.1882<br>(0.0450) |
| BEKS | 0.1389<br>(0.0331) | 0.8937<br>(0.0107) | 0.0445<br>(0.0306) | 21.4204<br>(0.8580) | 0.1633<br>(0.0413) | 3.9635<br>(0.0325) | -0.2885<br>(0.1413) | 28.9229<br>(0.8399) | 0.7080<br>(0.1715)  | 0.1656<br>(0.1194) | 0.2539<br>(0.0968) |
| BKSW | 0.0331<br>(0.0262) | 1.1960<br>(0.0337) | 0.0127<br>(0.0069) | 21.2768<br>(0.8407) | 0.1424<br>(0.0661) | 3.7838<br>(0.0290) | -0.0310<br>(0.0281) | 29.4625<br>(0.7919) | 1.0007<br>(0.1104)  | 0.1112<br>(0.0630) | 0.1627<br>(0.0843) |
| BNBA | 0.0140<br>(0.0082) | 0.9676<br>(0.0196) | 0.0598<br>(0.0303) | 20.9313<br>(0.6430) | 0.1573<br>(0.0530) | 3.9856<br>(0.0235) | 0.1232<br>(0.0238)  | 28.8776<br>(0.5149) | -0.3501<br>(0.1349) | 0.0745<br>(0.0353) | 0.0442<br>(0.0019) |
| BNGA | 0.0308<br>(0.0065) | 1.6536<br>(0.2131) | 0.0127<br>(0.0044) | 23.3697<br>(0.1433) | 0.1124<br>(0.0044) | 3.9000<br>(0.0235) | 0.1346<br>(0.0593)  | 32.7135<br>(0.4272) | -0.3883<br>(0.1886) | 0.0095<br>(0.0031) | 0.1991<br>(0.0536) |
| BNII | 0.0277<br>(0.0070) | 1.4114<br>(0.1630) | 0.0115<br>(0.0031) | 23.1694<br>(0.0976) | 0.1254<br>(0.0227) | 3.9165<br>(0.0319) | 0.0802<br>(0.0355)  | 32.2139<br>(0.4710) | 0.4380<br>(0.0883)  | 0.0382<br>(0.0159) | 0.1240<br>(0.0510) |
| BNLI | 0.0265<br>(0.0219) | 1.4967<br>(0.1628) | 0.0166<br>(0.0018) | 23.1343<br>(0.1197) | 0.1262<br>(0.0120) | 3.9471<br>(0.0438) | 0.0284<br>(0.0127)  | 32.1953<br>(0.6097) | 0.5989<br>(0.2310)  | 0.0197<br>(0.0087) | 0.1776<br>(0.0327) |
| BSWD | 0.0398<br>(0.0130) | 1.0746<br>(0.4777) | 0.0142<br>(0.0094) | 20.6430<br>(0.3682) | 0.1489<br>(0.0331) | 3.9456<br>(0.0424) | 0.0094<br>(0.0038)  | 28.5209<br>(0.6339) | 2.3287<br>(0.8668)  | 0.0704<br>(0.0316) | 0.1135<br>(0.0019) |

|      | NPL                | LDR                | OPRISK             | Comp                | CV                 | CR                 | Age                 | Cap                 | Size                | ROE                | HHI                |
|------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|--------------------|--------------------|
| BTPN | 0.0087<br>(0.0056) | 1.1153<br>(0.1190) | 0.0156<br>(0.0060) | 23.4718<br>(0.2573) | 0.1088<br>(0.0100) | 3.9297<br>(0.0321) | 0.2527<br>(0.0580)  | 31.2497<br>(0.9253) | -0.0402<br>(0.0395) | 0.0041<br>(0.0012) | 0.2018<br>(0.0411) |
| BVIC | 0.0378<br>(0.0220) | 0.7226<br>(0.0134) | 0.0181<br>(0.0058) | 21.0285<br>(1.4865) | 0.1322<br>(0.0351) | 3.9345<br>(0.0364) | 0.0860<br>(0.0418)  | 30.1055<br>(0.7335) | 0.5024<br>(0.1364)  | 0.0441<br>(0.0133) | 0.0816<br>(0.0338) |
| INPC | 0.0316<br>(0.0160) | 1.0708<br>(0.0814) | 0.0288<br>(0.0048) | 23.5691<br>(0.1797) | 0.0835<br>(0.0093) | 3.9604<br>(0.0312) | 0.0406<br>(0.0260)  | 30.5436<br>(0.3232) | 1.3343<br>(0.8125)  | 0.0595<br>(0.0082) | 0.1910<br>(0.0391) |
| MAYA | 0.0206<br>(0.0158) | 1.0690<br>(0.0155) | 0.0332<br>(0.0046) | 23.5883<br>(0.4700) | 0.1229<br>(0.0264) | 3.9437<br>(0.0306) | 0.1129<br>(0.0342)  | 37.4012<br>(0.3892) | 0.6209<br>(0.4560)  | 0.0419<br>(0.0291) | 0.2173<br>(0.0915) |
| MCOR | 0.0251<br>(0.0164) | 0.9396<br>(0.1845) | 0.0295<br>(0.0014) | 21.4337<br>(0.4683) | 0.1460<br>(0.0774) | 3.9114<br>(0.0372) | 0.0505<br>(0.0435)  | 29.2665<br>(0.8447) | 1.3572<br>(0.4660)  | 0.0963<br>(0.0323) | 0.1126<br>(0.0597) |
| MEGA | 0.0189<br>(0.0073) | 1.4207<br>(0.7058) | 0.0403<br>(0.0028) | 23.7643<br>(0.3747) | 0.1073<br>(0.0335) | 3.9761<br>(0.0303) | 0.1406<br>(0.0471)  | 31.6100<br>(0.3345) | -0.2172<br>(0.2043) | 0.0374<br>(0.0118) | 0.0512<br>(0.0140) |
| NISP | 0.0184<br>(0.0077) | 1.6142<br>(0.2471) | 0.0168<br>(0.0064) | 23.3560<br>(0.4270) | 0.1144<br>(0.0130) | 3.9215<br>(0.0310) | 0.1143<br>(0.0193)  | 31.8110<br>(0.6342) | -0.4970<br>(0.3862) | 0.0160<br>(0.0053) | 0.1450<br>(0.0543) |
| PNBN | 0.0334<br>(0.0167) | 1.6435<br>(0.3478) | 0.0274<br>(0.0041) | 21.9470<br>(0.7920) | 0.1328<br>(0.0235) | 3.9653<br>(0.0230) | 0.1336<br>(0.0271)  | 32.3677<br>(0.5585) | -0.3014<br>(0.1043) | 0.0227<br>(0.0122) | 0.0871<br>(0.0618) |
| SDRA | 0.0172<br>(0.0044) | 1.1762<br>(0.2627) | 0.0180<br>(0.0022) | 20.3959<br>(0.3388) | 0.1323<br>(0.0357) | 3.9317<br>(0.0188) | 0.1553<br>(0.0346)  | 29.3924<br>(0.8354) | 0.1764<br>(0.0843)  | 0.0560<br>(0.0379) | 0.2306<br>(0.0490) |
| AGRO | 0.0425<br>(0.0379) | 1.0247<br>(0.0897) | 0.0090<br>(0.0084) | 21.9785<br>(0.8255) | 0.1526<br>(0.0233) | 3.9618<br>(0.0350) | 0.0554<br>(0.0491)  | 29.2003<br>(0.6054) | 1.0314<br>(0.1271)  | 0.1093<br>(0.0223) | 0.1823<br>(0.0669) |
| BABP | 0.0525<br>(0.0132) | 1.0562<br>(0.1321) | 0.0064<br>(0.0039) | 21.7383<br>(0.5569) | 0.1205<br>(0.0218) | 3.9076<br>(0.0777) | -0.0723<br>(0.0474) | 29.7354<br>(0.2732) | 0.9472<br>(0.1274)  | 0.1103<br>(0.0456) | 0.1894<br>(0.0548) |

Notes: Table 1 describes mean and standard deviation of 28 banks in the sample that has passed all banks in Indonesia, information obtained from www.idx.co.id

### A. Data Acquisition Method

The data used in this study is secondary data. The acquisition method used for secondary data was the documentation method. Some data were obtained from the financial statements published in the company. The descriptive statistical analysis shown in Table 1 illustrates company-specific variables, namely risk-taking (NPL, LDR, and OR), cash compensation, charter value, capital requirements, and company control variables, namely the age of executives, capitalization, firm size, company profit, and competition.

**Table 2**  
Descriptive statistics

|           | OPRI  |       |       |        |       |       |        |        |        |       |       |
|-----------|-------|-------|-------|--------|-------|-------|--------|--------|--------|-------|-------|
|           | NPL   | LDR   | SK    | COMP   | CV    | CR    | AGE    | CAP    | SIZE   | ROE   | HHI   |
| Mean      | 0.036 | 1.419 | 0.020 | 22.647 | 0.133 | 3.936 | 51.274 | 31.270 | 31.267 | 0.057 | 0.250 |
| Median    | 0.034 | 1.320 | 0.017 | 23.134 | 0.132 | 3.948 | 52.000 | 30.273 | 31.178 | 0.042 | 0.105 |
| Maximum   | 0.031 | 1.320 | 0.017 | 23.134 | 0.163 | 3.678 | 58.000 | 31.273 | 38.853 | 0.042 | 1.105 |
| Minimum   | 0.031 | 1.320 | 0.017 | 23.134 | 0.132 | 3.038 | 41.000 | -13.03 | 26.758 | 0.001 | 0.044 |
| Std. Dev. | 0.049 | 0.819 | 0.017 | 0.8385 | 0.090 | 0.948 | 0.838  | 0.041  | 0.934  | 0.033 | 0.130 |

Notes: Table 2 represents the parameter coefficients of the descriptive statistic results, maximum, minimum, mean, median, and standard deviation. NPL is the percentage of bank's non-performing loans, LDR is the loan-to-deposit ratio, OPRISK is the operational cost to operational income ratio. COMP is the compensation in cash for the executive, CV is the equity to paid-in capital ratio, CR is the equity to risk-weighted assets ratio. AGE is the average age of executive, CAP is the equity to total assets ratio. SIZE is the natural logarithm of total assets, ROA is the net income to assets ratio. HHI is the Herfindahl-Hirschman Index.

Table 3 explain the correlation matrix. From the correlation matrix, it is depicted that compensation, charter value, age, capitalization and profitability (ROA) is negatively correlated with the risk-taking (NPL, LDR, and OR). This indicates the fact that whenever there is an increase in these variables it will decrease the risk-taking of banks. Table 3 shows also the results of the correlation test between the variables of the study, the correlation value between independent variables signify that there are no symptoms of multicollinearity. This can be seen from the correlation between the independent variables <0.8.

**Table 3**  
Collinearity test

|      | NPL    | LDR    | OR     | COMP   | CV     | CR     | AGE    | CAP    | SIZE  | ROE   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| NPL  | 1.000  |        |        |        |        |        |        |        |       |       |
| LDR  | 0.156  | 1.000  |        |        |        |        |        |        |       |       |
| OR   | -0.283 | -0.057 | 1.000  |        |        |        |        |        |       |       |
| COMP | -0.194 | -0.067 | -0.236 | 1.000  |        |        |        |        |       |       |
| CV   | -0.185 | -0.102 | -0.079 | 0.289  | 1.000  |        |        |        |       |       |
| CR   | 0.086  | 0.080  | 0.088  | -0.218 | -0.123 | 1.000  |        |        |       |       |
| AGE  | -0.252 | -0.246 | -0.076 | 0.202  | -0.049 | -0.011 | 1.000  |        |       |       |
| CAP  | -0.151 | 0.231  | 0.127  | 0.066  | 0.171  | -0.131 | -0.024 | 1.000  |       |       |
| SIZE | 0.331  | 0.096  | 0.141  | 0.065  | 0.065  | -0.031 | 0.121  | -0.103 | 1.000 |       |
| ROE  | -0.166 | -0.322 | -0.168 | 0.332  | 0.376  | -0.197 | 0.187  | 0.094  | 0.117 | 1.000 |

#### IV. RESULTS AND DISCUSSION

Table 4 presents the results of multiple linear regression tests with PLS and REM. Of course, In addition to the main variables, many company-specific factors can explain bank risk-taking such as age, capitalization, size, profitability, and competition. The results of estimation and statistical models show a significant impact of compensation, charter value, executive age, capitalization, ROE, size, and HHI on risk-taking. At the same time, the capital requirement variable does not affect risk-taking.

**Table 4**  
Regression results of cash compensation, carter value, and capital requirement on risk-taking

|                         | PLS                               |                                   | RE                               |  |
|-------------------------|-----------------------------------|-----------------------------------|----------------------------------|--|
|                         | NPL<br>Coefficient<br>(Std Error) | LDR<br>Coefficient<br>(Std Error) | OR<br>Coefficient<br>(Std Error) |  |
| CONSTANT                | 0.0311**<br>(0.0549)              | 0.0562**<br>(0.0163)              | 0.0127*<br>(0.0215)              |  |
| COMP.                   | -0.0040**<br>(0.0023)             | -0.1403<br>(0.0688)               | -0.0026**<br>(0.0007)            |  |
| CV                      | -0.0031**<br>(0.0011)             | -0.0446**<br>(0.0324)             | -0.0025**<br>(0.0035)            |  |
| CR                      | 0.0488<br>(0.0516)                | 0.0369<br>(0.0539)                | 0.0245<br>(0.0160)               |  |
| AGE                     | -0.0016**<br>(0.0080)             | -0.0470**<br>(0.0238)             | -0.0016**<br>(0.0003)            |  |
| CAP                     | -0.0256***<br>(0.0030)            | -0.0677*<br>(0.0891)              | -0.0020**<br>(0.0009)            |  |
| SIZE                    | 0.0008*<br>(0.0016)               | 0.0248**<br>(0.0467)              | 0.0007***<br>(0.0003)            |  |
| ROA                     | -0.1413***<br>(0.0170)            | -0.5632**<br>(0.5072)             | -0.0043**<br>(0.0075)            |  |
| HHI                     | -0.1003**<br>(0.0345)             | -0.1397<br>(0.1024)               | -0.0476***<br>(0.0238)           |  |
| Adjusted R <sup>2</sup> | 0.3512                            | 0.4769                            | 0.4196                           |  |
| No. of Obs              | 360                               | 360                               | 360                              |  |
| Firm-Year               |                                   |                                   |                                  |  |

Notes: This table presents the parameter coefficients of the panel data regression results with the PLS and Random models. NPL is the percentage of the bank's non-performing loans., LDR is the loan-to-deposit ratio, OR is operational risk. COMP is the compensation in cash for the executive, CV is the equity to paid-in capital ratio, CR is the equity to risk-weighted assets ratio, AGE is the average age of executive. CAP is the equity to total assets ratio. SIZE is the natural logarithm of total assets, ROA is the net income to assets ratio. HHI the Herfindahl-Hirschman Index. Denotes \*\*\* statistical significance at the 1% level, \*\* statistical significance at the 5% level, and \* statistical significance at the 10% level.

The results of the executive compensation test have a negative effect on non-performing loans and operational risk. However, the influence of executive compensation on the loan-to-deposit ratio is not significant. These results indicate that a higher amount of executive compensation helps reduce the risk of non-performing

loans and operational risk (John et al., 2000, and Palia and Porter, 2004). This makes *Hypothesis 1* accepted in line with Francis, Gupta, and Hasan, (2015) the greater the cash compensation was given to the executive, the lower the risk received the greater the cash compensation was given or certain changes in managerial compensation controls will make the executive more careful in taking or making risky decision behaviors.

The results of this study are in accordance with the results of the study by Balachandran et al. (2011) who show that non-equity compensation payments such as cash and bonuses refer to the company's performance and are not based on the future market value. This is in line with the research of Chen et al. (1998) that there is an inverse relationship between compensation and risk-taking, which supports the argument about risk-averse where the higher the ownership bonus that can be obtained by the executive, the higher the risk-averse or unwillingness to take risks will be (Smith and Stulz, 1985). In addition, the results of this study are also consistent with John et al. (2000), and Palia and Porter (2004) who have proven that increased compensation for executives at a certain amount will reduce the risk of non-performing loans and operational risk. The results of this study are also in line with several studies that examined samples from United States banks (Swanepoel and Smit, 2016; Le, 2018), indicating that if cash compensation is given higher then it will reduce the risk of the bank in Indonesian or United States banks.

In the meantime, the results of the charter value test show a significant negative effect on risk-taking for non-performing loans, loan-to-deposit ratio, and operational risks. This happens because a higher charter value will reduce the company's involvement in activities or investments that are not profitable or in other words, the company will be more careful in taking risks. Thus, *Hypothesis 2* is accepted. Studies conducted by Acharya (1996) and Gonzales (2005) provide supporting results that banks with high charter value will be more careful in taking risks so that moral hazard problems can be overcome. In line with (Keeley, 1990; Demsetz, et al., 1996; Niu, 2012) must have a reciprocal relationship between risk and charter value. The higher the charter value, the risk-taking level will decrease, this will also contribute to the reduction of the causes of the subprime financial crisis (Jones et al., 2011).

However, based on the test results, the capital requirement does not have any impact on risk-taking, so *Hypothesis 3* is rejected. The results show that the higher capital requirement is increasingly used for other investments, not to raise the allocation of loans or to cover credit risk that has occurred (Rashid et al., 2014). The effect of requirements on the bank will only be felt for banks that are close to bankruptcy and banks in the crisis period (Zhou, 2013), not in line with Thakor (2019) in Indonesian banks. The allocation of credit does not have to be accompanied by higher capital requirements.

A control variable such as the age of the executive has a significant negative effect on risk-taking. This shows that the older the executive, the more reluctant they are to take the risk. We also found that capitalization has a significant negative impact on risk-taking. This indicates that the more bank capital increases, the smaller the risk that will be faced by the company (Keeley and Furlong, 1990). Meanwhile, size has a positive effect on risk-taking. This shows that banks that have large assets tend to be more aggressive to take risks by channeling large amounts of loans that, in many cases, may go to illegible debtors (Berger and De Young, 1997). The reason is that large

banks can be encouraged to increase the number of loans disbursed and this tends to go too low-quality debtors, resulting in a high level of bank risk (Misra and Dhal, 2010). This high risk is taken by big banks (too big to fail) as they hope to get government protection in the event of default (Stern and Fieldman, 2004). A large bank can have the benefit of its reputation and can facilitate its wider access to the equity and debt markets. Small banks will face greater costs due to raising equity status because of the greater asymmetric information problems they will face. Therefore, the change in supply-loan response to capital requirements is much stronger for small banks than for large banks (Aiyar et al., 2016). ROA is negatively related to risk-taking. This indicates that lower ROA corresponds to higher risk-taking. This is because bank income is disrupted by risk-taking such as debtor-constrained loans, loan-to-deposit ratio, and operational risk (Ghosh, 2014; Louzis et al., 2011). We also found that competition (HHI) would negatively affect risk-taking behavior (credit) because lower competition will avoid aggressive risk-taking (interest rates) as stated by Boyd and De Nicolo (2005).

## V. ROBUSTNESS TEST

In this study, we conducted a number of robustness tests to ensure that the results were strong against alternative empirical specifications and possible biases. To test the robustness, we added a control variable namely growth (gross domestic product). The panel data regression presented in Table 5 below shows a statistically significant relationship between executive compensation and risk-taking for non-performing loans with a significant probability value of 5% and operational risk with a significance level of 1%. The robustness test results show that the compensation and charter value variables have a significant impact on risk-taking, while the capital requirement variable does not have a significant impact on risk-taking. The age of executive, capitalization, size, and ROA has a significant impact on risk-taking, but growth has no significant impact on risk-taking because of the remaining influence of the previous crisis and the recapitalization program that has been carried out by the government.

This is in line with the research of Ouhiby and Hammami, Vatansever, and Hepsen (2015) that gross domestic product growth had no significant effect on risk-taking. The results of this study show consistent evidence that compensation and charter value are negatively related to bank risk-taking.

## VI. CONCLUSION AND IMPLICATIONS

Based on the results of the study, it can be concluded that compensation provides benefits for reducing bank risk, proxied by NPL, LDR, and OR which are measured based on accounting data. This means that the provision of cash compensation in the form of salaries, bonuses, and benefits is considered as an implication of the performance of the executive to reduce risk with NPL and OR proxies and to overcome agency problems in the banking industry. Cash compensation does not play a role in encouraging bank risk-taking, but equity compensation can increase the risk-taking of

**Table 5**  
Regression results of cash compensation, charter value, and capital requirement on risk-taking

|                         | PLS                               |                                   | RE                               |
|-------------------------|-----------------------------------|-----------------------------------|----------------------------------|
|                         | NPL<br>Coefficient<br>(Std Error) | LDR<br>Coefficient<br>(Std Error) | OR<br>Coefficient<br>(Std Error) |
| CONSTANT                | 0.0152**<br>(0.0345)              | 0.0365*<br>(0.0133)               | 0.0387***<br>(0.0266)            |
| COMP                    | -0.0126**<br>(0.0112)             | -0.1206<br>(0.0786)               | -0.0019***<br>(0.0023)           |
| CV                      | -0.0189**<br>(0.0034)             | -0.0354*<br>(0.0567)              | -0.0018**<br>(0.0023)            |
| CR                      | 0.0237<br>(0.0246)                | 0.0447<br>(0.0675)                | 0.0133<br>(0.0189)               |
| AGE                     | -0.0045**<br>(0.0078)             | -0.0352**<br>(0.0165)             | -0.0155***<br>(0.0023)           |
| CAP                     | -0.0213***<br>(0.0046)            | -0.0765<br>(0.0675)               | -0.0045**<br>(0.0067)            |
| SIZE                    | 0.0017**<br>(0.0013)              | 0.0456**<br>(0.0345)              | 0.0019*<br>(0.0012)              |
| ROA                     | -0.1264***<br>(0.0124)            | -0.2452<br>(0.1145)               | -0.0089<br>(0.0067)              |
| HHI (kompetisi)         | -0.0257**<br>(0.0011)             | 0.0267**<br>(0,0455)              | -0.0346**<br>(0.0568)            |
| GRW                     | 0.0340<br>(0.008)                 | 0.0450<br>(0.109)                 | 0.0450<br>(0.013)                |
| Adjusted R <sup>2</sup> | 0.4835                            | 0.4998                            | 0.5356                           |
| No. of Obs. Firm-Year   | 360                               | 360                               | 360                              |

Notes: The table above presents the parameter coefficients of the panel data regression results with the PLS and Random models. NPL is the percentage of the bank's non-performing loans, LDR is the loan-to-deposit ratio, OR is operational risk. COMP is the compensation in cash for the executive. CV is the equity to paid-in capital ratio. CR is the equity to risk-weighted ratio, AGE is the average age of the board of executive. CAP is the equity to total assets ratio, SIZE is the natural logarithm of total assets, ROA is the net income to assets ratio. HHI is the Herfindahl-Hirschman Index. GRW is gross domestic product growth. Denotes: \*\*\* statistical significance at 1%, \*\* statistical significance at 5%, \* statistical significance at 10%.

the bank if it occurs excessively and can cause a financial crisis phenomenon in a country. However, when viewed from a risk-taking perspective, a banking executive in Indonesia are classified as risk-averters because they are very careful in providing credit and dealing with the company's operational risks.

These results explain that a certain level of compensation given to executives will reduce risk-taking in banking companies listed on the IDX. Likewise for the bank's charter value which shows that the increase will avoid companies making high-risk investments so it is useful in disciplining banks to be more careful in taking risks and controlling the moral hazard. The results of the tests with panel data regression do not provide the maximum charter value that can detect risk-taking potential by the bank and this actually provides benefits for regulatory improvement and increasing charter value can also reduce the causes of the subprime financial crisis.



This study does not separate the compensation factors between directors, commissioners and management, and does not sort compensation in-depth such as salaries, bonuses, benefits and compensation in the form of stock options. Information is disclosed by the sample companies during the observation period. It is hoped that further research will separate compensation between directors, commissioners, and management and be able to sort compensation in depth. Risk-taking variables are limited because they only use risks based on accounting risk. For further research, it would be a better risk proxy for banking risk-taking, such as the risk of using market size.

### ENDNOTES

1. Indonesian Financial Services Authority Regulation NUMBER 45 /POJK.03/2015 concerning Implementation of Governance in Granting Remuneration for Commercial Banks, Pasal 12, Pasal 15, Pasal 16 and 17.
2. Executive compensation discussed is cash compensation given to executives such as salaries, bonuses and bills but does not impose equity instruments such as stock options.
3. Indonesia Banking Survey (2018) - Lower satisfaction with credit risk management is driving changes in local banks compared to foreign banks, Indonesia Banking Risk Focus 2018
4. Swanepoel and Smit (2016) research the impact of executive remuneration on risk-taking of six large international banks in the United States and United Kingdom.
5. Le (2018) separately analyzes the impact of each CEO compensation component, which includes CEO salaries, CEO bonuses, other CEO annual compensation, CEO salary percentages, CEO bonus percentages, other annual compensation percentages and equity-based compensation, on risk taking in banking sector.
6. The value of the charter can be accepted by the bank owner if the bank is sold before bankruptcy or failure, but as long as the market is sufficiently liquid. The closing decision, however, will eventually be controlled by the bank supervisor so that the owner is not allowed to sell their bank. As a result, bank owners with high charter values have an incentive to keep their banks from closing due to failure.
7. Frydman and Jenter (2010) Survey the Literature on Executive compensation in Commercial and industrial firms.
8. Types of ownership, Indonesia's existing banks are divided into private banks, state-owned banks, joint banks, regional development banks, and foreign-owned banks. In addition, bank groupings based on bank size divided by core capital have four categories (BOOK 1, BOOK 2, BOOK 3 and BOOK 4) regulated by Bank Indonesia in PBI Regulation No. 26/26/2012. Banks under BOOK 4 are banks with a core capital of more than IDR 30 trillion. Bank BUKU 3 is a bank with a core capital of Rp. 5 trillion to Rp. 30 trillion. BOOK 2. The bank consists of banks with core capital from IDR 1 trillion to IDR 5 trillion. BOOK 1 consists of banks with core capital of less than Rp. 1 trillion.

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