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Board Size and Gender Diversity on Boardrooms and Its Impact of Corporate Risk Taking: Evidence from Indonesia

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Abstract

The role of company boards are very important to make strategic corporate decision. This paper investigates the determinant of corporate risk taking through the size of board and the existence of gender diversity on boardrooms. Focusing on the boards in the non-financial companies, there were 262 companies from period of 2013 to 2016 could be analyzed based on certain criteria. The result of multiple regression analysis showed that the corporate risk taking positively influenced by board size. In contrary, the gender diversity has small negatively effect on corporate risk taking. It suggested that the greater size of the board will increase the volatility of ROA, but the presence of female on boards tends to decrease the volatility of ROA. Finally, this paper documented that the importance of determining the proportion between male and female boards, as a way to scheming appropriate board composition in company.

Keywords

Board Size; Gender Diversity; Corporate Risk Taking

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Introduction

The main of company's purposes is to maximize the firm value in order to prosper its shareholders. Moeljadi (2006) stated that in achieving the purpose, company needs to take a proper financial decisions which are relevant and could increasing the firm value. Those financial decisions to be meant consist of investment decision, financing decisions, and dividend decisions. Companies will be in a difficult situation during the decision-making process, when managers and owners begin to prioritize their own personal interests and goals, which will ultimately affect the company's profitability, corporate prospects and corporate survival (Shah, et al. 2012). This situation could be interpred as agency problem which caused by the existing of a conflict of interest between shareholders (principal) and managers (agent). Agency problems, which occur due to the separation of ownership with control of the company, can be resolved by the existence of corporate governance.

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Corporate governance is required to reduce agency problems between owner and manager (Isnanta, 2008).

Implementation of corporate governance is expected could serve as a tool to give confidence to investors that they will receive a return over the funds they have invested (Ujiyantho and Pramuka, 2007). Therefore, managers have to make proper financial decisions to give benefit to all stakeholders. Managers must work effectively and efficiently with the goal of lowering capital costs, minimizing risks, and increasing profitability so investors will earn high returns (Nuswandari, 2009). In corporate governance framework, different ownership structures have a dominant role in investment and financial decision making. One of the key parameters in the decision-making process is the readiness of owners and management of the company in taking the existing risk level.

Decision in terms of risk taking is very critical to company success (Nakano and Nguyen, 2012), particularly in improving the company's performance and profitability which in turn to increase shareholder's wealth (Firdaus and Adhariani, 2017). Some of companies often fail as a result of the risk they take, few even try to grow without incurring a certain risk level. Fama (1980) argued that agency conflict plays important role in determine differences in risk taking across firms. In one side, managers tend to be reluctant to take on risky projects because of concerns to their personal welfare, so that managers with higher positions became more secure to reduce their risk taking (Low, 2009). But in other side, better monitoring from multiple large shareholders influence the higher risk taking (Mishra (2011). In those context, board of directors' size is recognized as having an important role in the corporate governance process, so that they may have an impact on managers' risk taking behaviour (Adam and Mehram, 2003).

Company's board size is associated with corporate risk taking (Firdaus and Adhariani, 2017). The higher number of board directors is, the higher the use of advanced instruments to hedge against the increased risk, which allows managers to take excessive risks (Blanchard and Dionne, 2004). Sarens and Christopher (2010) documented that the number of board members should be tailored to the complexity of the company in order to remain effective in decision-making. However, it takes consequences to the company policy, in which different mindset among member of board creates different way to face a risk. Moreover, Abeysekera (2010) argued that large of board size is more effective than small board size. In terms of the schemes of managerial compensation on investment and financing policy, small boards more force CEO to bear more risk than larger boards as a result of larger incentive they gave (Wang, 2012). The number of board members greatly influence the control and supervision activities in the companies (De Andres, et al. 2005).

There was some previous studies which analyze the effect of board size and corporate risk taking. Cheng (2008) found that the risk taking can be affected by the board size depends on the firm characteristics. Ferrero-Ferrero, et al. (2012) and Huang and Wang (2015) also found that larger boards are generally detrimental to risk taking depend on the composition of the board. Wang (2012) examined the effect of financial decision on overall firm risk and found that smaller company's boards are related with higher future risk, as an impact of they take lower leverage but more risky investment. In contrary, Nakano and Nguyen (2012) found that the larger boards exhibit lower performance volatility as well as lower bankruptcy risk, in which this implies that the larger boards are associated with lower corporate risk taking.

Other factor which is believed to be affecting the risk taking decision is board diversity. In agency theory perspective,

diverse directors may increase the ability of board of directors' monitoring and decision-making process so that affecting firm outcomes (Carter, et al. 2010). Diversity in board rooms is also expected to encourage the objective and comprehensive decision making because its can be taken from a variety of viewpoints (Faccio, et al. 2016). The existence of a range of viewpoints of this pose can made a variety of risks. Faccio, et al. (2011) stated that the level of risk taken by decision makers in the decision-making process can affect the level of efficiency of investment. The corresponding relationship between the efficiency of investment with gender diversity, Faccio, et al. (2016) argued that the Chief Executive Officer (CEO) shall not allocate capital efficiently due to CEO women tend to avoid high risk than a male CEO. This implies that such policies can undermine the value held by the shareholders, as CEO women women have a tendency to skip the lucrative investment opportunities that have a higher risk. However, Campbell and Mínguez-Vera (2008) argue that greater gender diversity among members of the board produces a more diverse opinions and critical thinking are varied so as to make decision making more time-consuming and less effective.

The board's diversity can be measured across with age, gender, ethnicity, education background, experience, and socio-economic status (Sessa and Jackson, 1995 in Firdaus and Adhariani, 2017). However, gender diversity at higher levels of management has been shown to result in more effective decision making (Firdaus and Adhariani, 2017). Davies (2010) reported that gender diversity in board level matters because 'inclusive and diverse boards are more likely to be effective boards and in turn leads to better decision making, as a result of benefit of new perspectives, new ideas, strong challenge and broad experiences. Moreover, if board's gender diversity does matter for firm outcomes, this may be caused by gender-based behavioural differences between male and female directors (Mohan, 2014). Female directors may differ from their male counterparts due to their unique experiences, knowledge, and values which affect directors' behaviour in terms of ethical reasoning and risk taking (Post and Byron, 2014). Relatively, women are appointed to CEO positions when the corporate is in a good financial state, but it is not clear whether the new female CEOs doing steps to change the corporate risk profile after appointment (Adams, et al. 2009).

Based on the data of gender diversity index on Russel 3000 index (R3000), the percentage of board seats held by women was 16.0% in 2017 and risen to 17.7% in the 2018. While the data on Fortune 1000 companies showed that in year 2017 women hold 20.4% of the board seats and risen to 22.0% in the 2018 (2020 Women on Boards, 2018). Globally, The Deloitte Global Center for Corporate Governance (2017) analyse the number of women on company boards compiled of nearly 7,000 companies in 44 countries, spanning Asia, Middle East, Australasia, Europe, Africa, and the Americas. In 2017, the average of percentage of board seats held by women from 12 countries of the Asia is 7.8%, while in Middle East the women hold 11.3% of the board sets. The greater representation of women board is showed by some countries in the Africa, Australasia, and Europe, with average of 18.8%, 20.8%, and 22.6% respectively. Meanwhile, In the Americas, the percentage of women on company board showed the average of 14.5% in North America and 7.2% in Latin and South America. Spesifically, when compared with some countries in Asia, such as Malaysia and India, in 2013 Indonesia has a percentage of women board at 11%, which is higher than Malaysia and India (8.3% and 7.3%). However, in 2017, the percentage of women board in Indonesia decreased to 7.9%, while in India and Malaysia showed the significant increased to 13.7% and 12.4% respectively (The Deloitte Global Center for Corporate Governance, 2017).

The above phenomenon shows that the business case for women on boards is compelling. A report by Carter and Wagner (2011) found that Fortune 500 companies with representation of three or more women on their boards significantly outperformed those with low representation by 84% on return on sales, by 60% on return on invested capital and by 46% on return on equity. According to Hunt, et al. (2014) gender diverse companies are 15% more likely to have financial returns above their respective national industry medians. Kersley and O'Sullivan (2012) surveyed 2,360 companies globally and found that companies with at least one female board member delivered better share price performance (by 26%) than those with no women on their boards.

Empirically, the findings of gender diversity on board and corporate risk taking are mixed. Eckel and Grossman (2008) found no difference in attitudes between men and women in the face of risk. However, Bansak, et al. (2011) found that there is relationship between mix genders in team member board in corporate risk taking, and the correlation between gender diversity and equity risk disappears once they account for the endogeneity of the gender selection choice (Sila, et al. 2016). Hansen, et al. (2010) and Brady, et al. (2011) found that women more risk averse and/or less overconfident than men. These evidence accordance with Elsaid and Ursel (2011) who proved that there is a relationship between risk by gender in decisions that women are significantly more risk averse than men. Wilson and Altanlar (2011) also found that insolvency risk have negatively associated with the proportion of female directors. In contrary, Adams and Ragunathan (2013) and Berger, et al. (2014) found that banks with more women on their boards appear to take more risk (or at least not less risk) than banks with fewer female board members.

Regarding inconsistency of many previous studies, this study will investigate the effect of board size and board gender diversity on corporate risk taking in case of non-financial companies in Indonesia. The model development is according to Nakano and Nguyen (2012); Baixauli-Soler, et al. (2015); Huang and Wang (2015); Khaw, et al. (2016); and Faccio, et al. (2016). Particularly, the board size is considered of the total number of directors who siting on the boardroom. The greater of board size will have an important factor in determining corporate risk-taking. While the gender diversity is considered on two groups, consist of the only male in all the members of board directors and commissioners on the board and the mix of male and female on the board directors and commissioners. Mix gender compositions can be a good way for take a corporate risk.

While the effect of board size on the company performance is well documented in the literature, relatively few studies explicitly investigate the board size is related to corporate risk taking, which particularly focus on volatility of a firm's return on assets (ROA). In other side, the existence of women in the boardroom also have an important role on the company performance. This is because women have a character of its own in the face of risks. There are pros and cons regarding the presence of women in the composition of top management. At this time, there have been rather limited empirical studies that investigate related issues for Indonesia companies. In this study, an investigation was made to determine the effect of board size and board gender diversity on corporate risk-taking choices for non financial companies listed in Indonesian Stock Exchange (IDX) for the period 2011 to 2014. The contribution of this study is to expanding literature in order to corporate board and risk, so that achieve a better understanding of the evolving the practice of corporate governance in Indonesia companies and give some useful information for other countries any stakeholders.

Theoretical Framework and Hypotheses

The company is more likely engage in risky projects to gains positive net present value as a way to generate returns for shareholders. As explained that firm value can be viewed as the rise of share price, the high demand for shares of the company will also increase the fluctuations in the company's stock returns. This indicates a high risk-taking behavior, which assumed that risk and return are considered by managers (Sila, et al. 2016). Agency theory suggests that managers tend to be reluctant to take a risk (risk averse) due to concerns to their own personal welfare (Fama, 1980). However, managers can be also induced to make risky choices through mechanism of corporate governance. Corporate governance mechanism is a procedure and a clear relationship between the parties who took the decision and the parties who supervise or control the decision-making (Tricker, 2015). One governance mechanism is believed to have a significant impact on risk is the board of directors, thus the greater of board of director's size may have an impact on managers' risk taking behaviour (Adam and Mehram, 2003). Board diversity is also have an affect on risk taking decision, in which the more diverse directors will made variety of risks in decision making process through variety of viewpoints (Carter, et al. 2010, Faccio, et al. 2011, Faccio, et al. 2016).

Board Size and Corporate Risk Taking

The board of directors is an essential governance mechanism that mitigate the agency problem between shareholders and management. Bhagat and Bolton (2008) argue that the board size is assessed as one aspect of board characteristics which have affecting its ability to function effectively, since board of directors has the final responsibility in functioning of the firm. Hence, the firm should embrace small boards in order to face the possibility slow decision making made from the larger board (Lipton and Lorsch (1992).

Despite the fact that there is no optimal board size for all firms, the board size appears to improve the corporate value, the choice of corporate policy and risk-taking (Uchida, 2011). Smaller boards size can improve the corporate value-increasing, while a larger board size can be more facilitates the manager supervision and remark the problems related with all boards members. Thus, the board size has large impact on corporate performance and subsequent risk-taking (Wang, 2012).

Literature of group behavior give a basic theoretical of why group risk taking is associated to the group size. Kogan and Wallach (1964) argues that the decision maker's group size decreases the tendency to take risks. The board size is believed to be aspects of effective decision making. Board size will provide greater strength in the oversight function performed by the board of commissioners and board of director. The greater number of members the board, indicated could be easier to control the Chief Executives Officer (CEO) and more effective in monitoring management activities (Cohen, et al. 2010).

Empirically, Cheng (2008) showed that the risk taking can be affected by the board size depends on the firm characteristics. When firms have greater need for advice and monitoring, they actually benefit from operating with bigger boards. Ferrero-Ferrero, et al. (2012) and Huang and Wang (2015) suggests that larger boards are generally detrimental to risk taking. In contrary, Chen and Al-Najjar (2012) found that the larger board size, the more less likely to function effectively. Nakano and Nguyen (2012) also found that the larger boards are associated with lower corporate risk taking. Then Wang (2012) found that smaller board size is related to higher future risk, as an impact of they take lower leverage but more risky investment.

In this regard, the larger board of directors are expected to give a better control to the managers, encourage the increasing performance and firm value, and improve the corporate risk-taking. Accordingly, the following hypothesis is proposed:
Hypothesis 1. The board size positively influences the corporate risk taking

Gender Diversity and Corporate Risk Taking

Risk-taking is a level where person is willing to take on large and risky decisions with respect to the company's resources, which may result in additional costs if an error occurs (Miller and Fiesen, 1978). Ferreira, et al. (2012) suggest that the propensity to risk associated with an activity that has the potential for success under 100 percent. The concept of risk-taking itself has been associated with gender on boards of directors for a long time.

The business case for diversity holds that diverse in team members can be improve corporate governance by introducing broader knowledge bases and experiences. One important task that must be done by the board of directors is making decisions. In connection with the decision, they should consider in advance the risks that will be faced, there is evidence that gender diversity has an influence on company decisions. Literature on behavioral considerations declare the significance of gender differences in decisions making (Huang and Kisgen, 2013: Liu, et al. 2014).

During this time members of the board of directors considered the woman has not been able to lead the company, related to the gender issue. In a general sense, women were considered less assertive in decision making and tend to have less competitive instinct. However, women have prudence high, tend to avoid risk, and more thoroughly than men. Side is what makes women do not rush into making a decision. For that the presence of women on the board of directors, can help make decisions more appropriate and lower-risk. Due to a better understanding, Carter, et al. (2003) explained that the positive relationship between gender diversity and corporate value, also increasing innovation and creativity brought into a female board of directors. Based on the opinion of Adams and Ferreira (2009), which provides evidence that the correlation between gender diversity can give poor results in the financial performance.

The relationship between gender diversity and corporate risk taking received limited attention in prior finance research. Established in the literature said that female generally less individualistic, female manager's place more personal relation than men (Brock, 2008 and Morrison, 2009). Regarding uncertainty avoidance, females are perceived more cautious in making an important decision than male (Levi, et al, 2014). Moreover, corporate which undertaken by female CEOs are found to have lower leverage (Faccio, et al. 2011).

Empirically, study by Eckel and Grossman (2008) found no difference in attitudes between men and women in the face of risk. However, Bansak, et al. (2011) found that there is relationship between mix gender in team member board in corporate risk taking. Elsard and Ursel (2011) analyze that gender-related variables are important in determining the risk-taking profiles of corporations, and the likelihood that women will be chosen as CEO respectively. This study proves that there is a relationship between risk by gender in decisions, in which women are significantly more risk averse than men. Charness and Gneezy (2012); Baixauli-Soler, et al. (2015); Khaw, et al. (2016); and Faccio, et al. (2016) also found that women make smaller investments in the risky asset than do men, and so appear to be financially more risk averse. In contrary, Adams and Ragunathan (2013) and Berger, et al. (2014) found that banks with more women on their boards appear to take more risk (or at least not less risk) than banks with fewer female board

members. In this regards, mix gender compositions can be a good way for take the decisions making. Therefore, leads us to formulate the hypothesis:

Hypothesis 2. The gender diversity on boardrooms negatively influences the corporate risk taking

Methodology

Data and sample

In this study, we focus on boards in the non-financial companies included in Indonesia Stock Exchange (IDX) database for the period 2013 to 2017 observation. Financial companies are excluded from sample frame due to their unique financial structure, different firm's characteristic, and special accounting rules for financial sector. We take Indonesian local companies which has own two-tier system (board of commissioners and board of directors) in their corporate governance policy differently. Indonesian local companies should be compliance with government policies, this accordance to Decree of the Minister of State 117/2002 (KNKG, 2010). Sampling was conducted by taking samples from a population based on certain criteria. The several considerations, i.e.: Indonesian companies are listed on the Indonesia stock exchange IPO before doing years of research (before 2013) and has board more than three persons. From all the criteria considered, the final sample consist of 262 companies. Since the data covers a four year period, the unit of analysis calculated is 1048.

Variables

This study is analyzed by using multiple linear regression, which performed through regression analysis in order to estimate the causal relationship between the variables. Following the model formulated, the dependent variable in this study is the corporate risk taking, while its independent variable consist of the board size and gender diversity. For the control variabel, we use firm size and leverage.

Corporate risk taking

Following John, et al. (2008), Boubakri, et al. (2013), and Faccio, et al. (2016), we use Return on Asset (ROA) as proxy for corporate risk taking. ROA can defined as the ratio of operating profits to total assets, which have two measures to proxy. Risk 1 focus on volatility of a firm's return on assets (ROA) over five year periods. For example, the amount of risk-taking for year 2013 is measured as the volatility of ROA from year 2013 to 2016. We use four year windows to calculate the volatility of ROA. Risk 2 refers to the difference between maximum and minimum ROA over four years' period of observation.

Board size

The first independent variable is board size. As we know that the number of board size usually has more than one people. Consistent with Faisal (2005) and Andres and Vallelado (2008), we use the number of membership of the board as a proxy of board size, which is measured by the natural log of the total number of directors on the board of directors and board of commissioners, who siting on the board in the company. According to the regulations of Bank Indonesia No. 55/8/4/PBI/2006 on Implementation of Good Corporate Governance, the number of Board members at least 3 (three) people. It is considered with the two main reasons. First, board size is believed to be an important factor in determining the risk-taking management (Ujiyantho and Pramuka, 2007). Second, increasing number of personnel who became commissioners may result in worsening the performance of the company (Ujiyantho and Pramuka, 2007).

Gender Diversity

We also use gender diversity as a second independent variable. In some previous research, the diversity is measured by

several aspects, such as age, ethnicity, nationality and gender. There is also a diversity in terms of ownership, experience, educational background, and socioeconomic status (Khaw, 2016). This study focus on gender diversity as a proxy of diversity in boardrooms. To measure the effect of gender diversity, we take two variables as dummy, are:

Male-only
A dummy variable equal to zero if all the members of board directors and commissioners on the board are male.

Mix Gender
A dummy variable equal to one if there are female members on the board directors and commissioners.

As referred previously, diversity on the board of commissioners and board of directors is expected to drive objective and comprehensive decision-making, we know that decisions can be made from a variety gender or people, so that can be effect to their each viewpoints.

Control Variables

With respect to the control variables, we use firm size and leverage as in other studies (Faccio, et al. 2011; Boubakri, et al. 2013; Khaw, et al. 2016). Control variables are usually variables that related to the dependent variable to avoid the bias of data analysis resulted.

The firm size is considered as control variable because smaller firms are found to be more risk-seeking than larger firms (John, et al. 2008; Faccio, et al. 2011; Boubakri, et al. 2013). Firm size is measured by the natural log of total assets.

In other hand, leverage is measured as total debt to total assets, which is found to be positively related to corporate risk-taking (Boubakri, et al. 2013). The lower leverage indicated that company's leader has not optimistic predictions about taking the risk (Faccio, et al. 2011).

Results

Descriptive Analysis

Descriptive statistics and correlations for all the variables is analyzed by regression model. Table I shows the result of descriptive analysis which is consist of corporate risk taking as dependent variable, board size and gender diversity as independent variables. Firm size and leverage are included in our model as control variables. This result also shows the data of each variable which represent of 262 firms in four years observation.

As presented in Table 1, the corporate risk taking that using the volatility of ROA as a proxy, showed the mean value as much as 3.9116 with minimum value is -174.90 and maximum value is 56.70. While the coefficient of variation is about 3.5174 or 352%, indicates that the level of corporate risk taking was vary. This higher variation of the data is mainly caused by the greater difference in volatility of ROA in each company, thus can be concluded that most of companies have a high volatility in their profitability.

Table 1. Result of Descriptive Analysis

	No. of obs	Min	Max	Mean	SD	Coefficient Variance (SD/Mean)
Dependent Variable						
Corporate Risk Taking	1048	-174.90	56.70	3.9116	13.7585	3.5174
Independent Variables						
Board Size	1048	1.3863	3.0445	2.1567	0.3522	0.1633
Gender Diversity	1048	0	1	0.38	0.486	1.2789
Control Variables						
Firm Size	1048	8.5330	19.2790	14.5835	1.7374	0.1191
Leverage	1048	0.0003	11.8443	0.5925	0.7308	1.2335

Source : data processed

The mean value of board size was 2.1567, which implies that the number of directors in nonfinancial companies in Indonesia had an average proportion of about 2.2 persons, with the minimum size is one director, while the maximum size is 3 directors. Furthermore, the coefficient of variation as much as 0.163 (16%), suggesting that variation of data was quite small and it showed that the data was almost homogenous. Thus, the result indicates that the number of directors in each companies almost have the same proportion, in which that number was determined by Indonesian government in accordance to the regulations of Bank Indonesia No. 55/8/4/PBI/2006 on Implementation of Good Corporate Governance.

The gender diversity on boards was measured with dummy variables, which as valued at 0 if all the board members are male and valued at 1 if there are female members on the boardrooms. The result (see Table 1) reported the mean score of 0.38 for average level of diversity in companies. This implies that less than 50 % (only 38%) of all the companies which have mix gender in their board composition. In other hand, the coefficient of variation (CV) showed value of 1.2789 or about 128%, which indicates that variation of data was quite high and data more heterogeneus. It can be concluded that there was significant diversity in context of mix gender on boardrooms, in which percentage of all-male boards in our sample is about 62 percent, while percentage of mix gender on boards (including male and female boards) is about 38 percent.

Among the control variables, firm size of samples was quite large with the mean of 14.5835 or about 146%. The coefficient of variation (CV) shows the smalest data distribution (12%) than the other variables, meaning that the firn size had a relatively small variation, so that the data can be assumed to be homogeneous. The leverage ratio, as another control variable, had the minimum leverage of 0.0003 and the maximum of 11.8443. The range of 11.8441 in this variable showed high differentiation level in each company. The mean of leverage was 0.5925 and data variation (123%) shows quite high and also seems to be more heterogeneous, which is indicates that the level of leverage in each company was quite diverse. It represents the company's ability to meet their long-term liabilities.

Multiple Regression Analysis

Table 2 shows the results of our model, which provides the results of the effect of the independent variables on the dependent variable. Estimation procedure for multiple regression analyses was performed using SPSS software.

Table 2. Result of Multiple Regression Analysis

Independent Variable	Coefficients	Probability Value	Remark
Board Size	0.283	0.000	Significant
Gender Diversity	-0.063	0.020	Significant
Firm Size	-0.123	0.001	Significant
Leverage	-0.439	0.000	Significant
F-Value	88.763	0.000	Significant
Adjusted R Square	0.251		

Source : data processed

Based on the results shown in Table 2 above, the F-value of 88.763 is higher than F-table of 2.70, with a probability of 0.000 (below α = 0,05). This confirms our regression model indicate that board size and gender diversity could be used to predict corporate risk taking. Also, the contribution of board size and gender diversity was 25.1% for explaining the corpoarate risk taking, which is shown by the adjusted R square as valued at 0.251, whereas the rest of 74.9% indicates an error or other variables that were not included in this regression model. The coefficient value of each explanatory variable indicates different direction. Board size showed positive effect of 0.283 on their coefficient values. This suggests that the rise of board size as much as 1% would increase the corporate risk taking by 28.3%. While gender diversity showed negative effect of – 0.063 on their coefficient values, which suggests that the rise of gender diversity as much as 1% would decrease the corporate risk taking by 6.3%.

This regression model used two control variables, i.e. firm size and leverage. The firm size showed negative coefficient value of - 0.123. This can be interpreted that if the level of firm size increased by 1%, then the corporate risk taking would decrease by 12.3%. Similar with this, the coefficient value of leverage was also negative (β= - 0.439). This suggests that if the leverage increased by 1%, then the corporate risk taking would decrease by 43.9%.

Hypotheses Testing

In this section, we examine the association of board size and gender diversity on corporate risk taking. In our first hypothesis, we presume that board size has positive consequences on corporate risk taking. We test this hypothesis using t-test, as illustrated in Table 2. Our results show that the board size have positive significant effect on corporate risk taking. The coefficients of board size on corpoate risk taking were positive and statistically significant ($p<0.01$) offering support for this hypothesis. This suggests that board size could brings a new function and monitoring behavior that reflects a board's effective functioning.

Hypothesis 2 predicted that the gender diversity on boardrooms negatively influences the corporate risk taking. Consistent wih our hypothesis, this study also show the negative and significant coefficient of the gender diversity (-0.063, p. 0.020). It suggested that there is an inverse relationship between the level of gender diversity on boards and the variability of corporate risk taking. However, this study reveals a relatively little effect on corporate

risk taking. The greater the percentage of gender diversity, the less corporate would take a risk in general. Our two hypotheses are also supported by our regression results.

Discussion

Effect of Board Size on Corporate Risk Taking

The results of this study provide evidence that board size has a significant effect on the corporate risk taking in the sample of non-financial companies in Indonesia. This also suggests that the greater board size in a company will increase their taking of risk. This result was consistent with Hutchinson (2001) who found that the member of board of directors taken more risk behavior, particularly if they have reasonable shareholding in the firm. Also, Kim, et al. (2012) who found that firm risk in term of firm acquisition and investment policy performance increase when the directors in board (especially outside director) also perform as an advisor. Moreover, Adams, et al. (2005) and Lewellyn and Muller-Kahle (2012) showed the more powerful CEOs have the higher firm risk-taking, because there was an extreme consequences from the decisions they made. In contrary, the result of this study was not consistent with Faleye (2004) who found that the larger board size will decrease the CEO turnover in relates with return. It give a possibility that larger boards are less likely to oust a CEO or replace a CEO with an outsider. Nakano and Nguyen (2012) and Wang (2012) also found that the boards size negatively influences the corporate risk taking, it means the smaller board size will showed the higher corporate risk taking and vice versa. In agency theory perspective, the boards have significant role in efficiently designing corporate monitoring and ratification mechanisms, which is regulates all the activities done by management (Chumba, 2015). In term of reducing agency cost at the level of board, there is three key decision rights made by boards of directors, i.e. monitoring, ratification, and reward and punishment rights. Such decisions may involve the high risks taking or low risk taking through conservative implementation of strategies. In other hand, board governance is also core of corporate governance, thus the effect of the board on firm risk-taking should be concerned (Li, 2016). Due to the large boards could provide the diversity in order to secure important resources and reduce environmental uncertainties (Goodstein, et al. 1994).

Board size is also relevant to the firm performance (Alam and Shah, 2013), the more of the number of board directors are, the better decision-making will be. The firm performance depends on level of quality of monitoring and decision making by the board of directors (Yermack, 1996). As theoretical context, when the number of board of directors increases, the board's capacities for monitoring increase. Also, a larger board is assumed more likely offers a broader knowledge and expertise on which to draw a risk. Following Lipton and Lorsch (1992) and Jensen (1993), the boards are well should be neither too small, nor too large. In their perspective, Lipton and Lorsch favor the boards of eight or nine, while Jensen argues that boards must not exceed seven or eight people. Moreover, Lipton and Lorsch (1992) argue that if board size increases, directors become less to criticize the policies of top managers. It also means that the larger boards are tend to become dysfunctional, which give impact on greater co-ordination problems, slower decision making, and more risk averse. While, Jensen (1993) argues that boards are seen more symbolic than their function in strategic and monitoring, thus the larger board groups are more possible to control by the CEO. Hence, board size is very important to determine how the firm performs. In decision theory, it suggests that diversified opinions in large groups are expected could lead to a compromise in the final decision (Sah and Stiglitz, 1991).

Basically, this finding supports the theory of firm behavioral which proposes that decision makers may be risk-seeking depend on their aspiration level in firm (Cyert and March, 1963). As opinion of Huang and Wang (2015) that higher performance sensitivity that showed by greater executive may affecting the higher risk investment spending and less usage of debt financing. Firms controlled by a dominant shareholder are more likely to pursue suboptimal low-risk investment policy. The more number of boardrooms in the company can lead increasingly difficult decisions agreed by the company. Due to the large variety of opinions and desires that arise from each of the personnel board. Result of this study showed that the larger of board size affecs the higher risk taking into company. Risk taking in this context is based on the fluctuations in ROA, meaning of the more number of board of director then the higher the ROA fluctuations. There is two reason, firstly, the larger board size is more likely occurs the bias in decisions as impact of different interests, so that potentially affecting firm profitability in current period. Secondly, the riskier effect from the decision of investment of asset is proposed to better future performance. To be more precise, larger boards may necessarily lead to higher risk taking and therefore higher firm value. As explained by Li (2016) that directors who have advising experience or expertise are usually help the managers to identify and evaluate potential opportunities and undertake some risky but value-enhancing investments. In that case, the level of corporate risk taking is likely to increase.

Furthermore, Indonesia is one of the countries that embraced a two tier system. A two-tier system has two separate bodies, namely the board of commissioners and board of directors. the board of directors is in charge of managing and representing the company under the direction and supervision of the board of commissioners. while the board of commissioners tasked to oversee the management tasks. The larger board plays a better advisory role (Coles, et al. 2008). Based on previous evidence, Larmou and Vafeas (2010) documented that the relationship between board size and firm risk can be explained by firm's characteristics, beside of cultural differences and specific institutional environments.

Effect Of Gender Diversity On Corporate Risk Taking

In taking the decision, the company are often influenced by a few things. One of them that may affect decisions is a risk tolerance that dared dared to be borne by the company. This can be occured since often companies facing the uncertain condition in their decision making process, so that risk tolerance usually starts before a decision is taken. Boardrooms at companies in Indonesia currently have a greater of gender diversity, not only male boards but also the mix gender (the mix between male and female). Result of this study showed that gender diversity in boardrooms influence the corporate risk taking, in which mix gender in boards composition decrease the risk taking in object of non financial companies in Indonesia.

The result of this study was consistent with Charness and Gneezy (2012); Baixauli-Soler, et al. (2015); Khaw, et al. (2016); and Faccio, et al. (2016) who found that there is relationship between mix gender in member of board toward corporate risk taking (mix gender has a negative influence to decision making). In contrary, this result was not consistent with Adams and Ragunathan (2013) and Berger, et al. (2014) who found that firm with larger female of boards are tend to take more risk than firm with fewer female board members. Otherwise, Wilson and Altanlar (2011) found that there is no significant influence of the presence of female board on firm risk-taking.

Based on agency theory, diverse directors may improve the monitoring ability of board of directors and decision-making

process, thus it can be affected firm outcomes (Carter, et al. 2010). Generally, gender-based differences refers to the attitude toward risk, which regard to several aspects, i.e. aggressiveness, caution, and leadership (Johnson and Powell, 1994). When we focus on gender differences on boards with respect to the behavior toward risk, Charness and Gneezy (2012) and Halko, et al. (2012) argue that women are more likely risk averse than men in case of financial and investment decisions. While Bernasek and Shwiff (2001) and Arano, et al. (2010) underline it's difference in retirement asset investments. In other opinion, Croson and Gneezy (2009) indicate possible factors that may caused male and female boards to differ in their responses to risk, such as gender differences in term of emotional reactions on risky situations, different levels of confidence and different looks to uncertainty situations as either a challenge or a threat. However, the gender diversity on board does matter for company outcomes, due to difference of gender-based behavioral between male and female boards (Mohan, 2014), which particularly in term of knowledge, specific experiences, and values so that impacting on ethical reasoning and risk taken (Post and Byron, 2014). Based on the data of board composition in Indonesia companies, particularly for non financial companies, the number of male boards and female boards have not proportionate yet. It means that they are tend to use male proportion in boardrooms. This leads us that there is still a gender diversity gap in most of companies. In fact, the proportion of women in boardrooms is lower that men, this is in line with paternalistic culture in some aspect, including in business organization. As Mateos de Cabo, et al. (2012) said that the taking of firm risk may influence the decision about hiring a male or a female executive. There is possibility that due to they averse the higher risk, the corporate exclude women from those positions which are more concerned with risk taking. In other words, the corporate which aim to operate such riskier projects are more likely to hire the men rather than women, in which common perception that female executives would rather less willing to make the risky decisions that might be needed for the firm's success. However, in same argumentation, those firms with high levels of risk that are trying to reduce their exposure to risk would prefer to appoint female executives (Martin, et al. 2009). This view integrates the assumptions of executive risk aversion of agency theory (Jensen & Meckling, 1976). Specifically, there is different gender charateristic among the boards, in which female boards place more interest on personal relationships and denote more relational behavior than men (Jogulu and Vijayasingham, 2015). In other side, men are also tend to be oriented on self-enhancing attributes (Miller and Ross, 1975) and more expect to have masculine tasks than women (Beyer and Bowden, 1997).

This finding suggest that the presence of female boards give impact on reducing the firm risk taking, which is reflected of lower volatility of ROA. Must be underlined that the composition of board members have an important role, due to it placed great hopes for company's performance sustainability. The homogeneity among male and female boards, such as similarity in backgrounds, education and networks, was seen to produce the similar thinking. The gender diversity at board level is believed to be important because the boards which more inclusive and diverse are tend to be effective boards, have a lot benefit from new ideas, fresh perspectives, and vigorous challenge, have broader experience, and have beter understanding on their customers and stakeholders (Davies, 2010). Stellingwerf (2016) argue that the key aspect to improve a problem of diversity on boards is to have women on board. Moreover, investors have more positive reaction on women board appointment (Kang, et al. 2010). Francoeur, et al. (2008) suggested that women (such as ethnic minorities, external shareholders, and foreigners) often have a fresh perspective

regarding complex issues, and this can help correct informational biases. When we compare to male counterparts, female board is more likely to take active roles on their boards (Virtanen, 2012). Hence, finding of this study indicates that in one side the presence of women in boards can reduce the possibility to improved firm's gains, because their averse behavior on riskier project as a way to avoid uncertainty. But in other hand, the women on board give some benefits in order to a tougher monitors than men, and therefore they looks more active in joining the monitoring committees and also demanding the higher audit efforts (Adams and Ferreira, 2009). Also, as expected, a more gender diversity in boardroom could be more efficient and more contribute to lower information asymmetries and effective capital allocation process. Thus, can be concluded that having female boards may changes the decision-making dynamics in the boardrooms (Elstad and Ladegard, 2012).

Conclusion

This study is devoted to analyze the effect of board size and gender diversity on boardrooms toward corporate risk taking, with object of financial companies listed in Indonesia stock exhange. Since the Indonesia board model is a two-tier system, this study is focused on supervisory boards as well as a stategic decision maker in companies.

Firstly, this finding showed that there are positive influence between board size and corporate risk taking. It means the greater size on boards may increase the risk taken by corporate. The larger board size is more likely occurs the bias in decisions as impact of different interests, so that potentially affecting firm profitability in current period. Also, the riskier effect from the decision of investment of asset is proposed to better future performance. To be more precise, larger boards may necessarily lead to higher risk taking and therefore higher firm value.

Secondly, the gender diversity on boardrooms is found to have negative effect on corporate risk taking, in which mix gender in boards composition decrease the risk taken by corporate. This finding suggest that the presence of female boards give impact on reducing the firm risk taking, which is reflected of lower volatility of ROA. In one side the presence of women in boards can reduce the possibility to improved firm's gains, because their averse behavior on riskier project as a way to avoid uncertainty. But in other hand, the women on board give some benefits in order to a tougher monitors than men.

The contribution of this study is to give expanding literature particularly on corporate board and risk, and furthermore give a broader understanding of the evolving the practice of corporate governance in Indonesia companies. Also, this results provide practical implication about the importance of determining both the size of boards and the proportion between male and female boards, as a way to scheming appropriate board composition in company. Corporate governance and structural factors (board size and gender) become the most serious thing to be considered and understood its implementation by the companies. Future studies is suggested to consider other factor in determine corporate tisk taking, such as including the ownership structure or capital structure to giving a broader result which more comprehensive and representative.

Notes on Contributor

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References

Abeysekera, I. (2010). The Role of Corporate Governance in Intellectual Capital Disclosure of Kenyan Listed Firms. *Journal of Intellectual Capital, 11* (4), 14.

Adams, R. B. and Mehran H. (2003). Board Structure and Banking Firm Performance and the Bank Holding Company Organizational Form. *Working Papers of Federal Reserve Bank of Chicago*, 408-422.

Adams, R. B. Almeida, H, and Ferreira, D. (2005). Powerful CEO's and Their Impact on Corporate Performance. *The Review of Financial Studies*, *18* (4).

Adams, R. B., and Ferreira, D. (2009). Women in the Boardroom and Their Impact on Governance and Performance. *Journal of financial economics*, *94* (2), 291-309.

Adams, S., Gupta, A. and Leeth, J. (2009). Are Female Executives Over-Represented In Precarious Leadership Positions? *British Journal of Management*, *20*, 1-12.

Adams, R. B. and Ragunathan, V. (2013). *Lehman Sisters*. University of New South Wales & University of Queensland working paper.

Alam, Abdullah and Syed Zulfiqar Ali Shah. (2013). Corporate Governance and its Impact on Firm Risk. *International Journal of Management, Economics and Social Sciences*, *2* (2), 76 –98.

Andres, P. de and Vallelado, E. (2008). Corporate Governance in Banking: The Role of the Board Of Directors. *Journal of Banking and Finance*, *32* (12), 2570-2580.

Arano, K., Parker, C., and Terry, R. (2010). Gender-Based Risk Aversion and Retirement Asset Allocation. *Economic Inquiry*, *48* (1), 147–155.

Baixauli-Soler, J. S., Belda-Ruiz, M., and Sanchez-Marin, G. (2015). Executive Stock Options, Gender Diversity In The Top Management Team, And Firm Risk Taking. *Journal of Business Research, 68* (2), 451-463.

Bansak, C. A., Graham, M. E., and Zedebee, A. A. (2011). The Effects af Gender Composition Of Senior Management On The Economic Fallout. *Applied Economics Letters*, *18* (16), 1603-1607.

Berger, A.N., Kick, T., and Schaeck, K. (2014). Executive Board Composition and Bank Risk Taking. *Journal of Corporate Finance*, *28*, 48–65.

Bernasek, A. and Shwiff, S. (2001). Gender, Risk and Retirement. *Journal of Economic Issues*, *35* (2), 345–356.

Beyer, S. and Bowden, E. M. (1997). Gender Differences in Self-Perceptions: Convergent Evidence from Three Measures of Accuracy And Bias. *Personal. Soc. Psychol. Bull, 23* (2), 157– 172.

Bhagat, S. and Bolton, B. (2008). Corporate Governance and Firm Performance. *Journal of Corporate Finance, 14*, 257-273

Blanchard, D. and Dionne G. (2004). Gestion Des Risques Et Gouvernance D'entreprise. *Assurances Et Gestion Des Risques*, *71*, 397-406.

Boubakri, N., Cosset, J.-C., and Saffar, W. (2013). The Role of State and Foreign Owners In Corporate Risk-Taking: Evidence From Privatization. *Journal of Financial Economics*, *108* (3), 641-658.

Brady, D., Isaacs, K., Reeves, M., Burroway, R. and Reynolds, M. (2011). Sector, Size, Stability, and Scandal: Explaining the Presence of Female Executives In Fortune 500 Firms. *Gender in Management: An International Journal*, *26*, 84-104.

Brock, B. L. (2008). When Sisterly Support Changes To Sabotage. *Journal of Women in Educational Leadership*, *6* (3), 211-226.

Campbell, K. and Mínguez-Vera, A. (2008). Gender Diversity In The Boardroom And Firm Financial Performance. *Journal of business ethics, 83* (3), 435-451.

Carter, D. A., Simkins, B. J., and Simpson, W. G. (2003). Corporate Governance, Board Diversity, And Firm Value. *Financial Review*, *38*, 33–53.

Carter, D. A., D'Souza, F., Simkins, B. J., and Simpson, W. G. (2010). The Gender And Ethnic Diversity Of US Boards And Board Committees And Firm Financial Performance. *Corporate Governance: An International Review*, *18* (5), 396-414.

Carter, N. M., and Wagner, H. M. (2011). *The Bottom Line: Corporate Performance And Women's Representation On Boards (2004–2008)*. Catalyst, 1.

Charness, G. and Gneezy, U. (2012). Strong Evidence For Gender Differences In Risk Taking. *Journal of Economic Behavior and Organization*, *83* (1), 50-58.

Chen, C. H. and Al-Najjar, B. (2012). The Determinants Of Board Size And Independence: Evidence from China. *International Business Review*, *21* (5), 831-846.

Cheng, S. (2008). Board Size And The Variability Of Corporate Performance. *Journal Of Financial Economics, 87* (1), 157-176.

Chumba, Sammy Kimutai. (2015). Effect of Board Structure on Risk Taking: The Moderating Role of Firm Performance. *Research Journal of Finance and Accounting*, *6* (10), 220-228.

Cohen, J. R., G. Krishnamoorthy, and A. M. Wright. (2010). Corporate Governance in the Post Sarbanes Oxley Era: Auditors' Experiences. *Contemporary Accounting Research*, *27* (3), 751-786.

Coles, J., Daniel, N., and Naveen, L. (2008). Boards: Does One Size Fit All? *Journal of Financial Economics*, *87* (2), 329–356.

Croson, R. and Gneezy, U. (2009). Gender Differences in Preferences. *Journal of Economic Literature*, *47* (2), 448–474.

Cyert R. and March J. (1963). *Behavioural Theory of the Firm*. Blackwell Publishing, Oxford.

Davies. (2010). *Women on Boards*. Accessed on 20 October 2018. http://www.bis.gov.uk/assets/biscore/businesslaw/docs/w/11-745-women-on-boards.pdf.

Deloitte Global Center for Corporate Governance. (2017). *Women in the Boardroom: A Global Perspective*. Fifth Edition. Accessed on 10 November 2018. https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/risk/deloitte-cn-ra-ccg-e1-women-in-the-boardroom-a-global-perspective-fifth-edition.pdf.

De Andres, P., Azofra, V., and Lopez, F. (2005). Corporate Boards in OECD Countries: Size, Composition, Functioning and Effectiveness. *Corporate Governance: An International Review, 13* (2), 197-210.

Eckel, Catherine C. and Philip J. Grossman. (2008). Men, Women and Risk Aversion: Experimental Evidence. *Handbook of Experimental Economics Results, 1* (7), 1061-1073.

Elsaid, E. and Ursel, N. D. (2011). CEO Succession, Gender and Risk Taking. *Gender in Management: An International Journal, 26* (7), 499-512.

Elstad, B. and Ladegard, G. (2012). Women on Corporate Boards: Key Influencers or Tokens? *Journal of Management Governance*, *16* (4), 595–615.

Faccio, M., Marchica, M.-T., and Mura, R. (2011). Large Shareholder Diversification And Corporate Risk-Taking. *Review of Financial Studies, 24* (11), 3601-3641.

Faccio, M., Marchica, M.-T., and Mura, R. (2016). CEO Gender, Corporate Risk-Taking, and the Efficiency Of Capital Allocation. *Journal of Corporate Finance, 39*, 193–209.

Faisal. (2005). Analisis Agency Cost, Struktur Kepemilikan dan Mekanisme Corporate Governance. *Jurnal Riset Akuntansi Indonesia*, *8* (2), 175-190.

Fama, E. (1980). Agency Problems and the Theory Of The Firm. *Journal of Political Economy*, *88*, 288–307.

Faleye, O. (2004). Are Large Boards Poor Monitors? Evidence from CEO Turnover. *EFMA Basel Meetings Paper.*

Ferrero-Ferrero, I., Fernández-Izquierdo, M. Á., and Muñoz-Torres, M. J. (2012). The Impact of the Board of Directors Characteristics On Corporate Performance And Risk-Taking Before And During The Global Financial Crisis. *Review of Managerial Science, 6* (3), 207-226.

Ferreira, J. J., Raposo, M. L., Rodrigues, R. G., Dinis, A., and Paço, A. D. (2012). A Model of Entrepreneurial Intention: An Application of the Psychological and Behavioral Approaches. *Journal of Small Business and Enterprise Development*, *19*, 424–440.

Firdaus, Lana Meutia and Desi Adhariani. (2017). Board of Directors' Gender, Managerial Ownership and Corporate Risk-taking: Evidence from Indonesia. *Pertanika Journal Social Sciences and Humanities*, *25* (S), 281 – 298.

Francoeur, C., Labelle, R., Sinclair-Desgagné, B., (2008). Gender Diversity in Corporate Governance and Top Management. *Journal of Business Ethics*, *81*, 83–95.

Goodstein J., Gautam K., and Boeker W. (1994). The Effects of Board Size and Diversity on Strategic Change. *Strategic Management Journal*, *15* (3), 241-250.

Halko, M. L., Kaustia, M., and Alanko, E. (2012). The Gender Effect in Risky Asset Holdings. *Journal of Economic Behavior & Organization, 83*, 66–81.

Hansen, M., Ibarra, H. and Peyer, U. (2010). The Best-Performing Ceos In The World. *Harvard Business Review*, *88*, 104-113.

Huang, Jiekun and Darren J. Kisgen. (2013). Gender And Corporate Finance: Are Male Executives Over Confident Relative To Female Executives?. *Journal of Financial Economics*, *108*, 822–839.

Huang, Y. S. and Wang, C.-J. (2015). Corporate Governance And Risk-Taking Of Chinese Firms: The Role Of Board Size. *International Review of Economics & Finance, 37*, 96-113.

Hutchinson, M. (2001). Firm Risk, Corporate Governance And Firm Performance, In Governance And Corporate Social Responsibility In The New Millennium. *Governance And Social Responsibility Conference: Proceedings of the 2001 Conference*, 26th & 27th November 2001, School of Accounting and Finance, Deakin University, Burwood, Vic., 1-16.

Hunt, V., Layton, D., and Prince, S. (2014). *Diversity Matters*. McKinsey & Company.

Isnanta, R. (2008). Pengaruh Corporate Governance Dan Struktur Kepemilikan Terhadap Manajemen Laba Dan Kinerja Keuangan. UII, Yogyakarta.

Jensen, M. C. and Meckling,W. H. (1976). Theory Of The Firm: Managerial Behavior, Agency Costs And Ownership Structure. *Journal of Financial Economics*, *3*, 305–360.

Jensen, M. (1993). The Modern Industrial Revolution, Exit, And The Failure Of Internal Control Systems. *Journal of Finance*, *48*, 831–880.

Jogulu, U. and Vijayasingham, L. (2015). Women Doctors, On Working With Each Other. *Gender in Management: An International Journal*, *30* (2), 162–178.

John, K., Litov, L., and Yeung, B. (2008). Corporate Governance And Risk-Taking. *The Journal of Finance, 63* (4), 1679-1728.

Johnson, J. E. V. and Powell, P. L. (1994). Decision Making, Risk And Gender: Are Executives Different?. *British Journal of Management, 5* (2), 123–138.

Kang, E., Ding, D. K., and Charoenwong, C. (2010). Investor Reaction To Women

Directors. *Journal of Business Res*., *63*, 888–894.

Kersley, R. and O'Sullivan, M. (2012). Gender Diversity And Corporate Performance. *Credit suisse AG, Research Institute*.

Khaw, K. L.-H., Liao, J., Tripe, D., and Wongchoti, U. (2016). Gender Diversity, State Control, And Corporate Risk-Taking: Evidence from China. *Pacific-Basin Finance Journal*.

Kim, K., Mauldin, E., and Patro, S. (2012). Outside Directors and Board Advising and Monitoring Performance. *Journal of Accounting & Economics*, *57*, 110-131.

Komite Nasional Kebijakan Governance (KNKG). (2010). *Pedoman Umum Good Public Governance*. Jakarta: Komite Nasional Kebijakan Governance.

Kogan, N. and Wallach, M. (1964). *Risk Taking: A Study In Cognition And Personality*. New York: Holt.

Larmou, Sofia and Nikos Vafeas. (2010). The Relation Between Board Size And Firm Performance In Firms With A History Of Poor Operating Performance. *Journal Management Governance*, *14***,** 61–85.

Levi, M., Li, K. and Zhang, F. (2014). Director Gender and Mergers and Acquisitions. *Journal of Corporate Finance, 28*, 185–200

Lewellyn, K. B. and Muller-Kahle, M. I. (2012). CEO Power And Risk-Taking: Evidence From The Sub Prime Lending Industry. *Corporate Governance: An International Review, 20* (3), 289-307.

Li, Jianping. (2016). Board Advising, Risk-Taking, and Firm Performance. Journal of Financial Risk Management, 5: 149-160.

Lipton, M. and Lorsch, J. (1992). A Modest Proposal For Improved Corporate Governance. *Business Lawyer*, *48*, 59–77.

Liu Yu, Zuobao Wei, and Feixue Xie. (2014). Do Women Directors Improve Firm Performance in China?. *Journal of Corporate Finance*, *28***,** 169–184.

Low, A. (2009). Managerial Risk-Taking Behavior and Equity-Based Compensation. *Journal of Financial Economics, 92***,** 470–490.

Martin, A. D., Nishikawa, T., and Williams, M. A. (2009). CEO Gender: Effects on Valuation and Risk. *Quarterly Journal of Finance and Accounting*, *48* (3), 23–40.

Mateos de Cabo, R., Gimeno, R., and Nieto, M. J. (2012). Gender Diversity on European Banks' Boards of Directors. *Journal of Business Ethics*, *109*, 145–162.

Miller, D. T. and Ross, M. (1975). Self-Serving Biases In The Attribution Of Causality: Fact Or Fiction?. *Psychology Bulletin, 82* (2), 213.

Miller, D. and Friesen, P. H. (1978). Archetypes of Strategy Formulation. *Management Science*, *24* (9), 921-933.

Mishra, D. (2011). Multiple Large Shareholders and Corporate Risk Taking: Evidence from East Asia. *Corporate Governance: An International Review*, *19***,** 507–528.

Mohan, N. (2014). A Review of the Gender Effect on Pay, Corporate Performance And Entry Into Top Management. *International Review of Economics & Finance*, *34*, 41-51.

Morrison, R. L. (2009). Are Women Tending And Befriending In The Workplace? Gender Differences in The Relationship Between Workplace Friendships And Organizational Outcomes. *Sex Roles*, *60* (1-2), 1-13.

Nakano, M. and Nguyen, P. (2012). Board Size And Corporate Risk Taking: Further Evidence From Japan. *Corporate governance: An international review, 20* (4), 369-387.

Nuswandari, Cahyani. (2009). Pengaruh Corporate Governance Perception Index Terhadap Kinerja Perusahaan Pada Perusahaan Yang Terdaftar Di Bursa Efek Jakarta. *Jurnal Bisnis dan Ekonomi* (JBE), *16* (2), 70-84.

Moeljadi. (2006). *Manajemen Keuangan Pendekatan Kuantitatif dan Kualitatif.* BPFE. Yogyakarta.

Post, C. and Byron, K. (2014). Women on Boards and Firm Financial Performance: A Meta-Analysis. *Academy of Management Journal*.

Sah, R. K. and Stiglitz, J. (1991). The Quality of Managers In Centralized Versus Decentralized Organizations. *Quarterly Journal of Economics*, *106*, 289–295.

Sarens, G. and Christopher, J. (2010). The Association between Corporate Governance Guidelines and Risk Management And Internal Control Practices: Evidence From A Comparative Study. *Managerial Auditing Journal, 25* (4), 288-308.

Shah, Abid A., Rehana K., Muhammad A, and Ch. Mazhar H. (2012). The Impact of The Corporate Governance and The Ownership Structure on The Firm's Financial Performance and its Risk Taking Behavior. *International Research Journal of Finance and Economics, 93*, 45-55.

Sila, V., Gonzalez, A., and Hagendorff, J., (2016). Women On Board: Does Boardroom Gender Diversity Affect Firm Risk?. *Journal of Corporate Finance*, *36*, 26–53.

Stellingwerf, Nick. (2016). The Influence of Board Gender Diversity on Corporate Risk Taking In US Non-Financial Firms. *Thesis (Published),* University of Groningen, Faculty of Economics and Business, Msc International Financial Management.

Tricker, B. (2015). *Corporate Governance: Principles, Policies, and Practices*: Oxford University Press. USA.

Uchida, K. (2011). Does Corporate Board Downsizing Increase Shareholder Value? Evidence from Japan. *International Review of Economics & Finance*, *20*, 562–573.

Ujiyantho, M. A. and Pramuka, B. A. (2007). Mekanisme Corporate Governance, Manajemen Laba dan Kinerja Keuangan. *Simposium Nasional Akuntansi X*, 26-28.

Virtanen, A. (2012). Women on the Boards of Listed Companies: Evidence from Finland. *Journal of Management Governance, 16*, 571–593.

Wang, C.-J. (2012). Board Size And Firm Risk-Taking. *Review of Quantitative Finance and Accounting, 38* (4), 519-542.

Wilson, N. and Altanlar, A. (2011). Director Characteristics, Gender Balance and Insolvency Risk: An Empirical Study. *Unpublished Working Paper*.

Yermack, D. (1996). Higher Market Valuation of Companies with a Small Board Of Directors. *Journal of Financial Economics, 40* (1), 185-211.

2020 Women on Boards. (2018). *Gender Diversity Index.* Accessed on 20 October 2018. https://www.2020wob.com/companies/2020-gender-diversity-index.