

# Diversity Among the Board of Commissioners and Stock Return: A Study on the Influence of Nationality, Gender and Educational Background

Muhammad Ridwan, M. Afuan, Rio Andhika Putra and Nora Putri Ayu\*

*Faculty of Economics and Business Universitas Putra Indonesia "YPTK", Padang, West Sumatera, Indonesia*

*\*Corresponding author. Email: m.afuan311@gmail.com*

## ABSTRACT

This study analyzes the influence of board nationality, diversity, gender, and educational background as independent and dependent variables on stock returns. Two control variables were used namely, the audit quality and company age, with secondary data obtained in the form of financial statements and annual reports from 2011 to 2017. The samples in this study were 266 companies listed on the Indonesia Stock Exchange. The results showed that the board of commissioners' nationality diversity and audit quality (as control variable) have negative and significant effect on stock returns, while gender, educational background, and company age do not.

**Keywords:** *Nationality, Gender, Educational Background Diversity, Board of Commissioners, Stock Return*

## 1. INTRODUCTION

The capital market efficiency is always related to information provided to both current and potential investors. Therefore, high stock returns show a company's good performance with impact on investors, by convincing them to invest their funds in the capital market.

Stock return is one of the factors that motivate investors to invest and a reward for the courage to bear all the risks associated with their investments. According to Sukcharoensin and Sukcharoensin (2018), good stock returns positively influence investors to put their funds and make allocation decisions in the future.

The board of commissioners supervises and provides advice to directors with the aim of providing unique characteristics for corporate governance, such as nationality diversity, gender, and educational background (Hassan and Marimuthu, 2017).

According to Hadya and Susanto (2018), nationality diversity shows an individual's heritage. The existence of a board with foreign citizenship, in general, triggers a high level of loyalty and professionalism in a company.

According to Leszczynk (2018), gender also improves corporate governance, because the participation of women commissioners is more effective in improving its quality and fostering good communication between investors and other stakeholders (Abad et al. 2017). Melmusi et al. (2019) stated that the number of women in the board of commissioners in Indonesia is still small compared to men. In addition, the increase in corporate governance also encourages management to seek human resources with an adequate level of education. It affects the way individuals think and act, thereby, making them more selective and careful at work. According to Kuo, Wang, and Yeh (2017), educational background is an important factor related to corporate governance in decision making.

Its background creates an information screen for directors to selectively interpret and analyze the information provided by the board, causing differences between the situation and perceptions faced when making strategic choices (Tseng and Jian, 2016). In addition, it influences the decisions and input given to the board of directors. Furthermore, different educational backgrounds of board members cause different perceptions of risk management in a company. Therefore, commissioners with the ability and sharp business instincts are required.

A research conducted by Ooi, Hooy, and Som (2017) found that board diversity in human and social capital does not significantly improve the corporate governance, but reduces the negative impact of the crisis that affects corporate governance. Manita et al. (2017) examined the board gender diversity and found no relationship between them and the disclosure of ESG (Environmental, Social and Governance). Furthermore, research conducted by Hartojo, Laksamana and Yang (2018) revealed that board nationality and background diversity were positively related to CSP (Corporate Social Performance). However, it is different from the research conducted by Noorkhaista and Sari (2017) which found that gender diversity measured by percentage and dummy, does not affect the performance of manufacturing companies in Indonesia.

## 2. LITERATURE REVIEW

### 2.1 Nationality Diversity

Nationality diversity shows an individual cultural heritage. Foreign commissioners are allowed to bring the cultural values of a company's role in the society (Hartojo, Lakmana and Yang, 2018).

According to Harjoto, Laksmana, and Yang (2018), the board nationality diversity has positive effect on CSP (corporate social performance), and none on financial performance, as stated in a research conducted by Assenga, Aly, and Hussainey (2018). While Fernandez and Thams (2019) found that nationality diversity increases the effectiveness of stakeholders in managing the company.

H1: Board nationality diversity affects stock returns.

### 2.2 Gender Diversity

Abad et al. (2017) stated that the participation of women commissioners in a company is effective in improving the quality of corporate governance and encourages good communication between investors and other stakeholders. Research conducted by Abbasi, Ali, and Bibi (2018) found that gender has positive but not significant effect on corporate governance since women tend to reduce its success expectations owing to difficulty in adapting to the company environment. Conversely, Luanglath, Ali, Mohannak (2019) found that in the top management team (TMT) gender diversity has positive effect on increasing worker productivity among 172 companies listed on the Australian securities exchange. Referring to the description above, the following hypothesis is developed:

H2: Board gender affects stock returns.

### 2.3 Educational Background Diversity

The diverse educational backgrounds of board of commissioners lead to perceptions on company's risk management. Therefore, commissioners with ability and intelligent business instincts are needed (Kuo, Wang and Yeh, 2017). Also, those with higher education are expected to bring the company towards good corporate governance. Research conducted by Ooi, Hooy, and Som (2017) found that board diversity measured through the educational background in human and social capital does not significantly influence corporate governance, but reduced the negative impacts. In contrast, research conducted by Kuo, Wang and Yeh (2017), found that education does not affect the company's R&D investment, however, corporate governance has positive effect on the relationship with R&D investment.

H3: Board educational background diversity affects stock returns.

## 3. METHOD

This study used the secondary data source obtained from Annual Reports of 266 public companies listed on the Indonesia Stock Exchange (IDX) from 2011 to 2017, which were published on the IDX website ([www.idx.co.id](http://www.idx.co.id)).

The dependent variable used in this study is stock returns as opposed to the researches carried out by Carpenter et al. 2001; Azzoz and Khamees, 2016; Rostami, Kohansal 2016. The formula is as follow:

$$Stock\ Return = (Price_t + Dividend_t - Price_{t-1}) / (Price_{t-1})$$

Furthermore, the independent variables used are nationality, gender, and educational background diversity of board of commissioners measured using Blau Index (Miller and Triana, 2009, Ujunwa et al. 2012, and Luanglath, Ali, Mohannak 2019). The formula for nationality diversity is formulated using Blau Index as follow (Hartojo, Laksmana and Yang, 2018):

$$Blau\ index = 1 - \sum_{i=1}^n P^2$$

### Multiple Linear Regression Analysis

During analysis, Eviews was used to analyze the influence of board nationality, gender, and educational background diversity on company performance with audit quality and company age as control variables. The regression equation model is stated as follow:

$$RS_{it} = \alpha + \beta_1 NDDK_{it} + \beta_2 GDK_{it} + \beta_3 LBPDK_{it} + \beta_4 K_{it} + \beta_5 CA_{it} + e$$

Description:

RS = Stock Return

NDDK = Nationality Diversity (X<sub>1</sub>)

GDK = Gender (X<sub>2</sub>)

LBPDK = Education Background (X<sub>3</sub>)

K<sub>a</sub> = Audit Quality

CA = Company Age

ε = error

## 4. FINDING AND DISCUSSION

Descriptive statistics was used to provide data such as median, mean and standard deviation, as well as maximum and minimum values.

**Table 1** Descriptive Statistics Result of Research Data

	obs	min	max	medi an	Mea n	Std. Dv
RS (ratio)	186 2	- 1.00	2.550	0.000	0.12	0.56 8
NDKK (index)	186 2	0.00 0	0.720	0.000	0.11	0.19 2
GDK (index)	186 2	0.00 0	0.500	0.000	0.13	0.18 9
LBPDK (index)	186 2	0.00 0	0.750	0.480	0.42	0.22 4
K <sub>a</sub> (dumm y)	186 2	0.00 0	1.000	0.000	0.34	0.47 4
CA (th)	186 2	9.00 0	123.0 00	33.00 0	35.5	15.4 04

Note : RS (Stock Return), NDDK (Nationality Diversity), GDK (Gender), LBPDK (Education Background), KA (Audit Quality), CA (Company Age)

Table 1 explains the audit quality ranging from 0,000 to 1,000 with a median of 0,000, mean of 0.340, and standard deviation of 0.474. In addition, the company age ranges from 9 to 123 years with a median of 33 years, mean of 35,573 years, and standard deviation of 15.404 years.

**Table 2** Hausman Test Results

Test	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	22.938	5	0.000

From Table 2 above, the random Cross-section probability is 0,000 (less than 0.05). Therefore,  $H_a$  is accepted and the fixed-effect model is utilized.

**Table 3** Fixed-Effect Model Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0.123	0.040	3.100	0.002
NDDK	-0.143	0.070	-2.042	0.041
GDK	0.084	0.068	1.225	0.221
LBPDK	0.062	0.058	1.066	0.286
KA	-0.059	0.027	-2.119	0.034
CA	-0.080	0.001	-0.092	0.927
R <sup>2</sup>	0.052			
Adjusted R <sup>2</sup>	0.046			
F value	0.000			

Note: \*\* indicates a 5% significant, RS (Stock Return), NDDK (Nationality Diversity), GDK (Gender), LBPDK (Education Background), KA (Audit Quality), CA (Company Age)

A t-test was used to observe the effect of independent variables partially on the dependent variable. It is carried out with the provisions that when probability < 0.05, the independent variable partially influences the dependent one. Conversely, when probability > 0.05, the independent variable does not affect the dependent. The table above shows the influence of the board nationality diversity (NDDK), gender (GDK), educational background (LBPDK) with audit quality (KA) and company age (CA) as control variables on stock returns (RS).

The results showed that nationality diversity of board of commissioners (NDDK) has a regression coefficient of -0.143 and  $t_{\text{statistic}}$  of -2.042 with a probability value of 0.041. Since  $0.041 < 0.10$ , it is concluded that nationality diversity variable (NDDK) partially has negative and significant effect on stock returns among public companies listed on the Indonesia Stock Exchange from 2011 to 2017. This is consistent with the description of theories and hypotheses previously proposed, whereas stock returns were affected by board nationality diversity. According to Noorkhaista and Sari (2017), board of commissioners in a company with a variety of nationalities (nationality diversity) tends to have

more diverse knowledge and experience which increases its stock returns. This result is in line with the research conducted by Hartojo, Laksmana, and Yang (2018) stating that nationality diversity positively influences CSP (Corporate Social Performance). Conversely, the research results conducted by Hadya and Susanto (2018) stated that nationality diversity does not affect CSR.

Furthermore, the results also show that gender diversity of board of commissioners (GDDK) has regression coefficient,  $t_{\text{statistic}}$ , and probability values of 0.084, 1.225, and 0.221 respectively. However, since GDK value is greater than 0.05 ( $0.221 > 0.05$ ), gender variable has no significant effect on stock returns among the public companies listed on the Indonesia Stock Exchange from 2011 to 2017. This is not consistent with the theories and hypotheses previously proposed, whereas gender associated with board affects the stock returns.

According to the research conducted by Abad et al. (2017), women's participation in the board of commissioners tends to improve the quality of corporate governance and encourage good communication between investors and other stakeholders, thereby, achieving adequate stock returns. This indicates that the higher the gender diversity in a company, the better the stock returns, and vice versa. The results of this study are in line with the ones conducted by Kagzi and Guha (2018), in which gender does not influence company performance. Furthermore, research conducted by Hadya and Susanto (2018) stated that gender has positive and significant effect on CSR.

Besides, the analysis shows that board of commissioners' educational background (LBPDK) has regression coefficient and statistic value of 0.062 and 1.066 with a probability value of 0.286, or greater than 0.05 ( $0.286 > 0.05$ ). It is inferred that educational background (LBPDK) partially has no significant effect on stock returns among public companies listed on the Indonesia Stock Exchange from 2011 to 2017. This result is also not consistent with the theories and hypotheses previously proposed, whereas the board's educational background affects stock returns. According to Tseng and Jian (2016), educational background creates an information screen that companies need in making strategic decisions. Therefore, the higher it is, the higher the ability and business instinct taken by the board of directors. This is in line with the research conducted by Kuo, Wang, and Yeh (2017) in which education does not affect R&D Investment Company. Meanwhile, the research conducted by Hartojo, Laksmana, and Yang (2018) shows that educational background improves CSP.

Moreover, from data analysis, the audit quality (KA) has regression coefficient of -0.059 and  $t_{\text{statistic}}$  of -2.119 with probability value of 0.034 or less than 0.05 ( $0.034 < 0.05$ ). Therefore, it is assumed that the audit quality variable (KA) partially has negative and significant effect on stock returns among public companies listed. This indicates that companies whose financial statements are audited by The BIG FOUR Public Accounting Firms tend to attract investors due to their superiority in auditing financial statements that are integral, understandable, relevant, reliable and reasonable to be presented, when being used in

decision making by internal and external parties (Puspita and Utama, 2016). The results of this study are in line with one conducted by Nnadi, Efobi, and Oledinma (2018) and Puspita and Utama (2016), whereas audit quality affected stock returns.

Company age (CA) has regression coefficient of -0.080 and  $t_{\text{statistic}}$  of -0.092 with probability value of 0.927 or greater than 0.05 ( $0.927 > 0.05$ ). It means that company age variable (CA) does not have significant effect on stock returns among the listed companies. This research indicates that the longer the company age, the lower the stock returns and vice versa. According to Tanggono and Christiawan (2017), older companies tend to have more experience compared to those newly established, thereby, making investors more confident in investing. Also, it results in higher profits for the company and higher stock returns to the investors. This result is not in line with the research conducted by Agustia and Suyarni (2018), whereas company age has positive and significant effect on stock returns. In addition, a study conducted by Karadag (2016) also stated that company age has significant impact on financial management performance, which impacts stock returns.

Based on Table 3 above, the F-statistic, probability and error-rate values are 9,227 0,000, and 0.05 respectively. Since the probability value generated is  $0,000 < 0.05$ , then the nationality diversity, gender, and educational background of the board of commissioners, as well as audit quality and company age simultaneously have positive and significant effect on stock returns among these companies. It also showed that the coefficient of determination generated in the Adjusted R-squared test is 0.046. Furthermore, it indicates that the nationality diversity, gender, and the educational background diversity of board of commissioners, with audit quality and company age as control variables, contribute to the variation of stock returns by 4.6%, while the remaining 95.4% are influenced by other variables.

## 5. CONCLUSION

Based on the results obtained by conducting the hypothesis testing, several important conclusions are put forward as the core answers to the problems discussed in this study. Some of these include the board nationality diversity which has negative and significant effect on stock returns, while gender and educational background do not. Furthermore, the audit quality as control variable has negative and significant effect on stock returns along with company age variable. The suggestions for further researchers is to add other variables capable of affecting stock returns, the number of observation, and the extension of research period.

## ACKNOWLEDGMENT

We wish to express our gratitude to Mr. H. Herman Nawas, the Chairperson of the YPTK Padang Computer College Foundation, Dr. Hj. Zerni Melmusi, SE, MM, Ak, CA, Prof. H. Dr. Sarjon Devit, Skom, Mkom, as the Chancellor of the

University of Putra Indonesia "YPTK" Padang for their moral and material support. In addition, we are grateful to all those who assisted us in one way or another, May Allah repay you all in multiples. Aamiin.

## REFERENCES

- [1] Abad, D., Lucas-Pérez, M. E., Minguez-Vera, A., & Yagüe, J. (2017). Does gender diversity on corporate boards reduce information asymmetry in equity markets? *BRQ Business Research Quarterly*, 20(3), 192–205.
- [2] Abbasi, Farhad Khurshid., Ali dan Bibi, Naila. 2018. Analisis of Skill Gap for Business Graduates: Managerial Perspective from Banking Industry, Vol. 60(4) 354-467.
- [3] Agustia, Yofi Prima dan Suryani, Elly. 2018. Pengaruh Ukuran Perusahaan, Umur Perusahaan, Leverage dan Profitabilitas terhadap Manajemen Laba. Vol 10(1). 63-74.
- [4] Assenga, M. P., Aly, D., & Hussainey, K. (2018). The impact of board characteristics on the financial performance of Tanzanian firms. *Corporate Governance: The International Journal of Business in Society*, 18(6), 1089-1106.
- [5] Azzoz, Abdel-Razeq A. dan Khamees, Basheer A. 2016. The Impact of Board of Directors and Audit Committes on Stock Return of Jordanian Financial Companies. *Administration Sciences* Vol.43, No. 2.
- [6] Dewi, Luh Gede Krisna. 2017. Pengaruh Diversitas Dewan Komisaris dan Direksi pada Tax Avoidance. *E-Jurnal Akuntansi Universitas Udayana*, Vol. 18 (1). 763-789.
- [7] Fernandez, W. D., & Thams, Y. (2019). Board diversity and stakeholder management: the moderating impact of boards' learning environment. *The Learning Organization*, 26(2), 160-175.
- [8] Goldwin, Jessica dan Crhrisriawan, Yulius J. 2017. Pengaruh Penerapan Corporate Governance Terhadap Kinerja Keuangan Perusahaan dengan Ukuran Perusahaan sebagai Variabel kontrol. *Bussiness Accounting Review*. Vol. 5(2). 217-228.
- [9] Hadya, Rizka dan Susanto, Romi. 2018. Model Hubungan Antara Keberagaman Gender, Pendidikan dan Nationality Dewan Komisaris terhadap Pengungkapan Corporate Social Responsibility. *Jurnal Benefita*, Vol 3(20), 149-160.

- [10] Harjoto, M. A., Laksmana, I., & Yang, Y. (2018). Board nationality and educational background diversity and corporate social performance.
- [11] Hassan, Rohail dan Marimuthu, Maran. 2017. Bridging and Bonding: Having a Muslim Diversity on Corporate Governance Boards and Firm Performance. *Journal of Islamic, Accounting and Business*. Vol. 9, No.3
- [12] Hermuningsih, S., Rahmawati, Anisya R., dan Mujino. 2018. Faktor-Faktor yang mempengaruhi Return Saham. Universitas Sarjanawiyata Tamansiswa Yogyakarta.
- [13] Kagzi, Muneza dan Guha, Mahua. 2018. Does Board Demographic Diversity Influence Firm Performance? Evidence From Indian Knowledge Intensive Firms. *Indian Institute of Management Rohtak*, Vol. 25, No. 3.
- [14] Karadag. 2016. The Impact of Industry, Firm Age and Education Level on Financial Management Performance in Small and Medium-Sized Enterprises (SMEs). *Journal of Entrepreneurship in Emerging Economies*, Vol. 9(3). 300-314.
- [15] Kuo, Hsien-Chang., Wang, Lie-Huey dan Yeh, Li-Jen. 2017. The Role of Education of Directors in Influencing Firm R&D Investment.
- [16] Leszczynsk, Monika. 2018. Mandatory Quotas For Woman On Boards Of Directors in the European Union: Harmful to or Good for Company Performance?. Vol. 61.
- [17] Luanglath, Nalongded, Muhammad Ali, and Kavoo Mohannak. "Top management team gender diversity and productivity: the role of board gender diversity." *Equality, Diversity and Inclusion: An International Journal* 38.1 (2019): 71-86.
- [18] Manita, R., Bruna, M. G., Dang, Rey., dan Houanti, L. 2017. Board Gender Diversity and ESG Disclosure: Evidence from the USA. *Journal of Applied Accounting*. 19(2).
- [19] Masulis, Ronald W., Cong Wang, and Fei Xie. "Globalizing the boardroom—The effects of foreign directors on corporate governance and firm performance." *Journal of Accounting and Economics* 53.3 (2012): 527-554.
- [20] Melmusi, Zerni, Desi Ilona, and Ade Kurniawan. "Do Diversity of Directors Improve Market Performance." *KnE Social Sciences* (2019): 125-136.
- [21] Nnadi, M., Efobi, U., dan Oledinma, A. 2017. Audit Quality, Family Business and Corporate Governance Mechanism: the case of Morocco. *Journal of Accounting in Emerging Permanent*. Vol. 7(4). 507-527.
- [22] Noorkhaista, Erfelinda dan Sari, Dahlia. 2017. Kinerja Modal Intelektual, Keragaman Gender, dan Keragaman Kewarganegaraan dalam Dewan Direksi. *Akruel: Jurnal Akuntansi*, Vol. 9, No.1. 1-19.
- [23] Ooi, C., Hooy, C. dan Som, Ahmad P. M. (2017). The influence of board diversity in human capital and social capital in crisis, Vol. 43(6). 700-719.
- [24] Pratiwi, Ida Ayu Ika V., Badera, I Dewa N., dan Budhiarta, I Ketut. 2018. Kemampuan Kepemilikan Institusional Memoderasi Pengaruh Diversitas Gender, Kebangsaan, Pengalaman Dewan pada Luas Intellectual Capital Disclosure. *E-Jurnal Akuntansi Universitas Udayana*, Vol 7(2). 543-574.
- [25] Puspita, Made Ayu Prilla Winda, and I. Made Karya Utama. "Fee Audit Sebagai Pemoderasi Pengaruh Kualitas Audit Terhadap Integritas Laporan Keuangan." *E-Jurnal Akuntansi* (2016): 1829-1856.
- [26] Roy, Amitava. 2016. Corporate Governance and Firm Performance: A Study of Indian Listed Firms. *Indian Institute of management*. Vol. 15, No.1. hal 31-46.
- [27] Salehi, Mahdi., Tagribi, Masomeh dan Farhangdoust, Shayan. 2018. The Effect of Reporting Quality on Stock Returns of Listed Companies on the Tehran Stock Exchange. *International Journal of Productivity and Performance Management*, Vol.67.
- [28] Sayari, Naz dan Marcum, Bill. 2018. Reducing Risk in the Emerging Markets: Does Enhancing Corporate Governance Work?. *Business Research Quarterly*, Vol.21, Hal 124-139.
- [29] Sukcharoensin, Sorasart dan Sukcharoensin, Pariyada. 2018. Ownership Structure and Stock Asymmetries in ASEAN-5 Stock Markets: A Firm-Level Analysis. National Institute of Development Administration, Bangkok, Thailand.
- [30] Tanggono, S., dan Christiawan Yulius J. 2017. Pengaruh Kepemilikan Keluarga terhadap Profitabilitas Perusahaan pada Perusahaan menggunakan Firm Size, Firm Age dan Sales Growth sebagai Variabel Moderasi. Vol. 5(2), 397-408.
- [31] Tseng, C., dan Jian, J. 2016. Board members Educational Backgrounds and Branding Success in Taiwanese Firms, Vol. 21. 111-124