The Effect of Gender Diversity, Profitability, and Leverage on Intellectual Capital Disclosure (Study of Banking Companies Listed in Indonesian Stock Exchange 2017-2020 Period)

Leny Suzan and Andrea Rhegina Putri
Faculty of Economics and Business
Telkom University
Bandung, Indonesia
lenysuzan@telkomuniversity.ac.id, andrearhegina@student.telkomuniversity.ac.id

Abstract

The intellectual capital disclosure is the additional information presented by the company which includes human capital, structural capital, and relational capital to reduce asymmetric information and use the indicators of intellectual capital. Banks play a significant role in driving the national economy because they are involved in all economic activities, including the primary driver of Indonesian GDP. Consumption, investment, and export and import activities are the primary drivers of the national economy. Banking has major role in these three activities and also serves as an intermediary institution that provides financing for both consumption and production. The purpose of this study is to determine the impact of gender diversity, profitability, and leverage on the disclosure of intellectual capital in banking companies listed on the Indonesia Stock Exchange between 2017 and 2020. The population for this study is the company banks listed on the Indonesia Stock Exchange from 2017 to 2020. Purposive sampling is used in this study and obtained thirty data samples. In this study, descriptive statistical analysis and panel data analysis were used as analysis techniques. According to the study's findings, the keywords gender diversity, profitability, and leverage all have an impact on intellectual capital at same time. For the 2017-2020 period, gender diversity and profitability have no influence on intellectual property in banking companies listed on the Indonesia Stock Exchange, whereas leverage has a negative influence on intellectual capital in banking companies listed on the Indonesia Stock Exchange.

Keywords
Intellectual Capital Disclosure, Gender Diversity, Profitability, Leverage

1. Introduction

Intellectual capital is an intangible asset tied to a company that can assist in managing and running the company's business in order to compete with other competitors, so the management and the intellectual capital disclosure are important for companies as a form of strategy that can increase the added value for the company. In addition, the intellectual capital disclosure can build the investors' trust in the additional information disclosed by the company as a source of decision making for investors, which has an impact on the investors' trust in the company. Intellectual capital disclosure can reduce asymmetric information, so the greater the disclosure of intellectual capital, the greater the disclosure of intellectual capital becomes a source of additional information for investors and the company's strategy to increase added value (Anna et al., 2018).

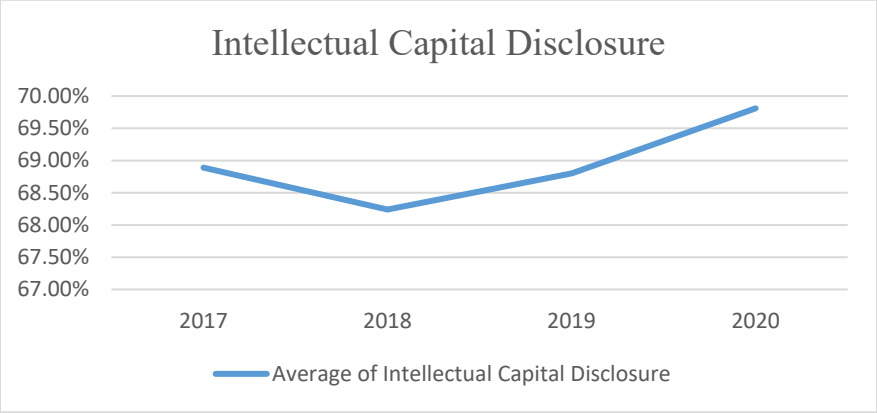

Figure 1. Average of Intellectual Capital Disclosure on banking companies listed on the Indonesia Stock Exchange in 2017-2020 period

Source: Processed Data (2022)

Figure 1 shows that intellectual capital in banking companies listed on the Indonesia Stock Exchange (IDX) amounted to 68,94 percent of the 100 percent disclosure that the company must disclose, and an increase of 1,57 percent in four years is still quite sufficient, describing that banking companies listed on the Indonesia Stock Exchange (IDX) have not yet realized the significance of intellectual capital disclosure in the preparation of the company. This is due to the absence of a regulation that requires companies to disclose intellectual capital. One of the banks that experienced a decrease in the disclosure of intellectual capital was Panin Dubai Syariah Bank Tbk (PNBS).

Gender diversity is a factor that can affect intellectual capital disclosure since women generally have detailed thoughts when making decisions, ability to expand intellectual capital disclosure. Profitability is the next measure of a company's performance. Profitability describes a company's ability to generate profits over a specific time period while maintaining a certain level of sales, assets, and share capital. Next is leverage, which is a debt-financing activity. The greater the leverage ratio, the greater the company's reliance on debt.

According to Nadeem et al. (2019), gender diversity has a positive impact on the disclosure of intellectual capital. However, Herli et al. (2021) discovered that gender diversity has no relationship with disclosure of intellectual capital. A study conducted by Ma'in et al. (2018) showed that the relationship between profitability and intellectual capital is positive. Meanwhile, Dey & Faruq (2019) discovered that profitability has no relationship with intellectual capital disclosure because there is no correlation between high and low profitability and intellectual capital disclosure. According to Naimah & Mukti (2019), the correlation of leverage and intellectual capital has a negative influence. However, Dey & Faruq (2019) discovered that leverage has no effect on intellectual capital disclosure. Based on the inconsistency of the results of previous studies and the phenomenon that occurs, this study was conducted since there are some companies that are still lacking in disclosing intellectual capital disclosure. Whereas, companies are required to disclose intellectual capital disclosures, so that the asymmetric information does not occur and can be a strategy for companies to increase added values. As a result, this study should be repeated to investigate the factors that influence intellectual capital disclosure.

1.1 Objectives

This study has the following objectives:

1. To find out gender diversity, profitability, leverage, and intellectual capital disclosure of companies in the consumer goods industry listed on the Indonesian Stock Exchange (IDX) for the 2017-2020 period
2. To find out the simultaneous influence of gender diversity, profitability, and leverage on the intellectual capital disclosure of companies in the banking industry listed on the IDX in 2017-2020
3. To find out the partial effect of gender diversity on the intellectual capital disclosure of companies in the banking industry listed on the IDX in 2017-2020
4. To find out the partial effect of profitability on the intellectual capital disclosure of companies in the banking industry listed on the IDX in 2017-2020
5. To find out the partial effect of leverage on the intellectual capital disclosure of companies in the banking industry listed on the IDX in 2017-2020

2. Literature Review

2.1 Stakeholder Theory

The stakeholder theory describes all activities in the organization or entity that are important to stakeholders and are reported in the annual report. As a result, all information about activities affecting stakeholders must be reported so that it can be used and become information for stakeholders, in addition to assisting company management in increasing the value of activities' impact and minimizing losses for stakeholders. According to this theory, an organization or entity discloses obligations in information about its environmental, social, and intellectual performance in order to meet stakeholder expectations and recognition (Ulum, 2017).

2.2 Intellectual Capital Disclosure

The intellectual capital disclosure is the additional information presented by the company which includes human capital, structural capital, and relational capital to reduce asymmetric information and use the intellectual capital indicators (Anggeline & Novita, 2020). According to Naimah & Mukti (2019), The amount of intellectual capital disclosure made by the company can be measured by comparing it to the maximum amount of intellectual capital disclosure that the company should make. The number of disclosure measured by scale 0 to 1; items disclosed by the company are assigned a value of 1, while items not disclosed by the company are assigned a value of 0.

$$\text{ICDi} = \frac{\text{Di}}{\text{M}}$$

Information:
ICDi : Intellectual Capital Disclosure Index
Di : Numbers of Disclosures
M : Maximum Numbers of Disclosures

2.3 Gender Diversity

Gender diversity, according to a study conducted by Pratiwi et al. (2018), is one of the human aspects that can attract the attention of academics to conduct the more in-depth studies. This issue began to receive attention since the emergence of the phenomenon that women began to get the opportunity to become part of the company's board of directors, although at first, some parties doubted the ability of women to lead and often put women's position as supporters, or second to men, when making decisions. The percentage of gender diversity in this research used as recommended by Roika et al. (2019) calculated with comparing the number of female directors to the total number of board members, because it represented the percentage of female directors in the total number of boards of directors. According to Nadeem et al. (2019), gender diversity has a positive effect on the intellectual capital disclosure.

H_1: Gender Diversity has positive effect on Intellectual Capital Disclosure

$$GD = \frac{FBD}{BD} X\ 100\%$$

Information:
GD : Gender Diversity
FBD : Female Board Director
BD : Total Board Director

2.4 Profitability

The profitability ratio is a measure of a company's ability to generate profits over a specific time period while maintaining a certain level of sales, assets, and share capital (Putra et al., 2018). The profitability ratio shows the company capability to generate profits. In this study, the profitability ratio is calculated using the Return on Assets ratio (ROA). Following the findings of Putra et al. (2018), this study employs ROA because the level of profitability as measured by ROA is thought to be higher in intellectual capital disclosure. A study by Ma'in et al. (2018) showed that the profitability has a positive effect on intellectual capital is.

H_2: Profitability has positive effect on Intellectual Capital Disclosure

$$ROA = \frac{\text{Net Profit Before Tax}}{\text{Total Asset}} X\ 100\%$$

Information:
ROA : Return on Asset

2.4 Leverage

The leverage ratio is a ratio that compares the funds provided by the owner to the funds borrowed from creditors by the company (Makiwan, 2018). The leverage ratio describes the company's ability to meet both short-term and long-term financial obligations. The Debt to Assets Ratio (DAR) is used in this study to measure the ratio of total debt to total assets. According to Naimah & Mukti (2019), the correlation of leverage and intellectual capital has a negative effect.

H_3: Leverage has a negative effect on Intellectual Capital Disclosure

$$DAR = \frac{\text{Total Liability}}{\text{Total Asset}} X\ 100\%$$

Information:
DAR : Debt to Asset Ratio

3. Methods

In this study, the type of study used is descriptive study. According to Sugiyono (2019), a descriptive study is one that uses data analysis methods to describe the object under study using existing sample or population data without analyzing and drawing widely accepted conclusions. This study uses quantitative research methods. According to Sugiyono (2019), quantitative research is data in the form of numbers or qualitative data presented in the form of numbers. This study uses a case study strategy. Case studies focus on gathering information about a particular object that has been found. This study's research object is a group of banking companies listed on the Indonesia Stock Exchange between 2017 and 2020. Purposive sampling will be used in this study, so the following criteria will be used:

1. Banking companies listed on the Indonesia Stock Exchange for the period of 2017-2020.
2. Banking companies listed on the Indonesia Stock Exchange consistently present annual reports for the 2017-2020 period.

The research background used is the non-contrived setting. The analysis technique in this study uses panel data which combines time series with cross sectional data. The panel data analysis method equations used in this study as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_3 X_3 + e$$

Besides, this study conducted classical and hypothesis tests, which is simultaneous test (F-Test), Determinant Coefficient Test (R^2), and Partial Test (T-Test).

4. Data Collection

The data is an annual report by companies in the banking industry for 2017-2020 which were retrieved from IDX website and the company's official website.

5. Results and Discussion

5.1 Numerical Results

5.1.1 Descriptive Statistics

Table 1. Results of Descriptive Statistical Tests

	ICD	GD	PROF	LEV
MAXIMUM	0,8056	0,7500	0,0397	0,9321
MINIMUM	0,5278	0	-0,1130	0,0524
MEAN	0,6894	0,1843	0,0077	0,7867
STANDARD DEVIATION	0,0046	0,0101	0,0085	0,0067
N	120	120	120	120

Source: Processed Data (2022)

According to the results of descriptive statistical table, which shows the value of each study variable, it shows that:

1. The intellectual capital disclosure (ICDi) value in intellectual capital disclosure is the lowest at 0,5278. According to the intellectual capital disclosure mean value of 0,6894 with a standard deviation of 0,0046, the sample data do not vary with the tendency to group.
2. The lowest gender diversity (GD) value is 0, while the highest gender diversity value is 0,7500 in the descriptive statistics results table. Based on the average gender diversity of 0,1843 and the standard deviation of 0,0101, the sample data do not fluctuate with the tendency to group.
3. The lowest profitability (ROA) value is -0,1130, while the highest profitability value is 0,0397. Judging from the average profitability of 0,0077 with a standard deviation of 0,0085, it can be concluded that the sample data vary with a tendency not to group.
4. The lowest leverage (DAR) value is 0,0524, while the highest leverage value is 0,9321. Judging from the average leverage of 0,7867 with a standard deviation of 0,0067, it can be concluded that the sample data do not vary with the tendency to group.

5.1.2 Classical Assumption Tests

1. Multicollinearity Test

The multicollinearity test determines whether or not the regression model has a perfect correlation between the independent variables. A regression model is said to have multicollinearity when the correlation coefficient is greater than 0,9, but if it is less than 0,9, there is no problem with multicollinearity.

Table 2. Multicollinearity Test

	GD	ROA	DAR
GD	1,000000	0,072938	0,120343
ROA	0,072938	1,000000	0,220801
DAR	0,120343	0,220801	1,000000

Source: Processed Data by Eviews 12 (2022)

Based on the results, the multicollinearity test reveals a values smaller than 0,9 indicating that there is no multicollinearity.

2. Heteroscedasticity Test

In a regression model, the heteroscedasticity test is used to determine whether or not there is a variance inequality between the residuals of one observation and the residuals of another observation. Heteroskedasticity appears to exist in a regression model if the correlation coefficient is less than 0,05 but not if it is greater than 0,05.

Table 3. Heteroscedasticity Test

Heteroskedasticity Test: White
Null hypothesis: Homoskedasticity

F-statistic	1.661653	Prob. F(9,110)	0.1069
Obs*R-squared	14.36187	Prob. Chi-Square(9)	0.1100
Scaled explained SS	8.857548	Prob. Chi-Square(9)	0.4505

Source: Processed Data by Eviews 12 (2022)

According to the test results, the regression model has no heteroskedasticity because the probability value is 0,1100 > 0,05.

5.1.3 Data Panel Regression Model Selection

1. Chow Test

The Chow test is used to determine whether to estimate panel data using a fixed effect or a common effect model. If the F cross-section probability in the Chow test is greater than 0,05, then H_0 is accepted, indicating that the common effect model (CEM) is preferable. H_0 is rejected if the F cross-section probability is less than 0,05, indicating that the fixed effect model (FEM) is more appropriate.

Table 4. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.476307	(29,87)	0.0000
Cross-section Chi-square	188.868125	29	0.0000

Source: Processed Data by Eviews 12 (2022)

Since the probability value of the chi-square cross-section is 0,0000 < 0,05, H_0 is rejected, and the fixed effect model is chosen in the Chow test (FEM).

2. Hausman Test

The Hausman test is used to determine whether to use the fixed effect or random effect model. If the chi-square probability is greater than 0,05, the Hausman test accepts H_0, indicating that the random effect model (REM) is more appropriate to use. If the chi-square probability is less than 0,05, H_0 is rejected, indicating that the fixed effect model (FEM) is preferable.

Table 5. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.003267	3	0.0029

Source: Processed Data by Eviews 12 (2022)

As shown, the probability value of a random cross-section is 0,0029 < 0,05, so H_0 is rejected, and the fixed effect model is chosen in the Hausman test (FEM).

5.1.4 Results of Panel Data Regression Analysis

Table 6. Fixed Effect Model Results

Dependent Variable: ICDI
Method: Panel Least Squares
Date: 06/12/22 Time: 22:28
Sample: 2017 2020
Periods included: 4
Cross-sections included: 30
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.801088	0.059089	13.55740	0.0000
GD	0.056548	0.046360	1.219757	0.2259
ROA	-0.375488	0.202931	-1.850319	0.0677
DAR	-0.151606	0.075119	-2.018224	0.0466

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.821544	Mean dependent var	0.689352
Adjusted R-squared	0.755905	S.D. dependent var	0.064216
S.E. of regression	0.031726	Akaike info criterion	-3.834918
Sum squared resid	0.087571	Schwarz criterion	-3.068358
Log likelihood	263.0951	Hannan-Quinn criter.	-3.523614
F-statistic	12.51607	Durbin-Watson stat	2.414717
Prob(F-statistic)	0.000000		

Source: Processed Data by Eviews 12 (2022)

$$Y = 0.801088 + 0.056548\ X1 - 0.0375488\ X2 - 0.151606\ X3 + e$$

Information:
Y : Intellectual Capital Disclosure
X_1 : Gender Diversity
X_2 : Profitability
X_3 : Leverage
e : Error term

5.1.5 Coefficient of Determination Test

Table 7. Coefficient of Determination Test (R^2) Results

R-squared	0.821544	Mean dependent var	0.689352
Adjusted R-squared	0.755905	S.D. dependent var	0.064216
S.E. of regression	0.031726	Akaike info criterion	-3.834918
Sum squared resid	0.087571	Schwarz criterion	-3.068358
Log likelihood	263.0951	Hannan-Quinn criter.	-3.523614
F-statistic	12.51607	Durbin-Watson stat	2.414717
Prob(F-statistic)	0.000000		

Source: Processed Data by Eviews 12 (2022)

Table 7 shows that adjusted R-squared was 0,755905, which meant that the independent variables were able to explain the intellectual capital disclosure by 75,59% and the remaining 24,41% was explained by other factors outside the study.

5.1.6 Simultaneous Hypothesis Testing (F Test)

Based on the probability value (f-statistic) of 0,000000 < 0,05, H_0 is rejected and H_1 is accepted. Gender diversity, profitability, and leverage, the independent variables of this study, simultaneously affected the dependent variable, namely intellectual capital disclosure on banking companies listed on the IDX for the 2017-2020 period.

5.1.7 Partial Hypothesis Testing (T Test)

Table 8. Partial Hypothesis Testing (T Test) Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.801088	0.059089	13.55740	0.0000
GD	0.056548	0.046360	1.219757	0.2259
ROA	-0.375488	0.202931	-1.850319	0.0677
DAR	-0.151606	0.075119	-2.018224	0.0466

Source: Processed Data by Eviews 12 (2022)

Partial hypothesis testing results table shows that:

1. Gender diversity has a probability value of 0,2259 > 0,05 and a coefficient of 0,056548, indicating that it has no effect on intellectual capital disclosure.
2. Profitability has a probability value of 0,0677 > 0,05 and a coefficient of -0,375488, indicating that it has no effect on intellectual capital disclosure.
3. Leverage has a probability value of 0,0466 < 0,05 and a coefficient value of -0,151606 indicating that it has a significant negative effect on intellectual capital disclosure.

5.2 Validation

5.2.1 The Effect of Gender Diversity on Intellectual Capital Disclosure

Gender diversity has a probability value of 0,2259 bigger than the significant level 0,05. Indicating that gender diversity has no effect on intellectual capital disclosure. The results are not in line with the hypothesis built by previous researches. Although, this research are in line with Herli et al. (2021) who stated that gender diversity did not have an effect on intellectual capital disclosure. This is possible because there is no requirement in Indonesia for companies to report intellectual capital components in their annual reports.

5.2.2 The Effect of Profitability on Intellectual Capital Disclosure

Profitability has a probability value of 0,0677 bigger than the significant level 0,05. Indicating that profitability has no effect on intellectual capital disclosure. The results are not in line with the hypothesis built by previous researches. Although, this research are in line with Anggeline & Novita (2020), Anna et al. (2018), and Naimah & Mukti (2019) who stated that profitability did not have an effect on intellectual capital disclosure. This can happen because the increase or decrease in profitability in the company does not affect the disclosure of intellectual capital disclosed. When the company has good or increasing profitability, the company will tend to report and disclose financial performance compared to intellectual capital and when the company's profitability decreases, the company will tend to report the current financial condition and disclose financial risks to mitigate it compared to disclosing intellectual capital which will increase additional costs for disclosure.

5.3.3 The Effect of Leverage on Intellectual Capital Disclosure

Leverage has a probability value of 0,0466 smaller than the significant level 0,05. leverage affected on intellectual capital disclosure in a negative direction. The results agree with the hypothesis built by previous researches. The

results also support previous studies conducted by Barokah (2019), Ma'in et al. (2018), and Naimah & Mukti (2019) which stated leverage affected intellectual capital disclosure in a negative direction. This can happen because the company prioritizes using company assets to pay off debt rather than managing it into intellectual capital so that intellectual capital disclosure is not optimal.

6. Conclusion and Recommendations

6.1 Conclusion

The result and discussion of this study, lead the following conclusions.

1. The independent variables, namely gender diversity, profitability, and leverage simultaneously affected on intellectual capital disclosure of banking companies listed on the Indonesia Stock Exchange (IDX) in 2017-2020.
2. Gender diversity did not affect intellectual capital disclosure of banking companies listed on the Indonesia Stock Exchange (IDX) in 2017-2020.
3. Profitability did not affect intellectual capital disclosure of banking companies listed on the Indonesia Stock Exchange (IDX) in 2017-2020.
4. Leverage, in a negative direction, partially affected intellectual capital disclosure of banking companies listed on the Indonesia Stock Exchange (IDX) in 2017-2020.

6.2 Recommendations

This research is expected to add information in the field of accounting, especially intellectual capital. Furthermore, the company is expected to pay attention to its leverage because leverage is one of the factors that affect the increase in intellectual capital disclosure.

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Biography

Dr. Leny Suzan, S.E., M.Si., CIFM is senior doctorate graduate of accounting science, Padjadjaran University, doctoral education in accounting. Position on campus as a permanent lecturer, specializing in cost accounting and management accounting.

Andrea Rhegina Putri is an accounting student from Telkom University