






“Mediation role of human capital on gender diversity and credit risk: Evidence of Indonesian rural banks”

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MEDIATION ROLE OF HUMAN CAPITAL ON GENDER DIVERSITY AND CREDIT RISK: EVIDENCE OF INDONESIAN RURAL BANKS

Abstract

This study uses human capital that shows the intangible asset's core in reducing the risk or improving firm performance to solve previous inconsistent results of women's role in firm performance. Thus, this paper examines the role of human capital as the mediator in the influence of gender diversity on credit risk in a rural bank. This examination involves 433 rural banks based on the purposive sampling method. The result reveals that higher gender diversity has higher human capital ($\alpha = 0.135$, $\rho = 0.005$) and higher human capital has lower credit risk ($\alpha = -0.205$, $\rho = 0.000$). It also revealed that when gender diversity is controlled by human capital as a mediator on credit risk, gender diversity does not affect credit risk ($\alpha = -0.022$, $\rho = 0.625$). However, human capital still affects credit risk ($\alpha = -0.205$, $\rho = 0.000$). It implies that the higher a woman on the board of directors, the lower the credit risk through her education competence. Women as organization leaders have high self-appreciation from organization members in implementing their strategies and supervising them. High credit risk in rural banks needs appropriate management as a part of an internal governance mechanism. This study contributes to gender diversity literature through the ability to manage risk in measuring women's role as strategic agents. This study also contributes to investor protection through the reputation of women on boards as monitoring agents.

Keywords

corporate governance, risk management, bank performance, intangible assets, agency theory

JEL Classification

G21, G32, M41

INTRODUCTION

Analysis of gender diversity on boards that refer to the percentage of women on boards (directors and board of commissioners) is still interesting to examine from the firm's performance perspective. A woman has the same role as her man counterpart as monitoring and strategic agent on boards. However, prior research shows that the relationship between both variables needs an optimum examination. Further study in Indonesia that uses non-financial firms stated that it does not significantly affect firm performance unless the relationship is mediated by innovation (Hasina & Bernawati, 2021). A meta-analysis of 1,269 citations for more sample (in an international study) and measurement analysis by Post and Byron (2015) shows that institution with higher women representation on the board has higher accounting performance. Still, women's positive role in performance can only be optimized in high investor protection countries. Unfortunately, Indonesia is not categorized as a country with high investor protection (La Porta et al., 1999, 2006).

This study solves the inconsistency in gender diversity by examining the role of human capital as the mediator between gender diversity and credit risk. First, the relationship between gender diversity and

credit risk can prove women's achievement on boards about their ability in risk management. That is inappropriate if it is measured in accounting performance, such as return on assets or profitability. Rural banks in Indonesia are categorized as non-listed firms owned by individuals or groups of individuals. The government encourages establishing a rural bank because it funds micro, small, and medium enterprises. As a member of boards, women have a responsibility to maintain the banks' reputation, especially in implementing good governance through the low non-performing loan, so the ability shows a strategic decision to attract depositors in achieving bank sustainability.

Regulation of the Indonesian government does not formulate the specific percentage of women on boards. Previously, women implemented better supervising policies (Oradi & Izadi, 2020). Others suggested that agency conflict can be reduced by strong corporate governance and intellectual capital efficiency (Jensen & Meckling, 1976). It implies that influencing and supervising organization members will reduce credit risk, such as a low non-performing loan.

Second, prior research also revealed that women have lower self-confidence, skill, and experience in entrepreneurship than males. Therefore, women have lower self-desirability and self-feasibility and less confidence in managing the business (Daim et al., 2016; Fairlie & Robb, 2009; Shava, 2018; Tsyganova & Shirokova, 2010). Women's education competency is an intangible asset that showed skilled staff could use to gain a competitive advantage by implementing several creative strategies (El-Bannany, 2008). Her education competence easily influences organization members to behave as the organization's values, such as doing business ethically to achieve low credit risk. It can counter the prior research that women on boards have no impact on firm performance and bankruptcy (Hedija & Němec, 2021).

The paper details the importance of competent human bank management in the literature review section. This study also identifies prior research in gender diversity and discusses the research methods, namely variables and a model. Next, the study explains the hypothesis examination that also shows the implications of the results, discussion, and conclusion.

1. LITERATURE REVIEW

It is critical to observe the declining performance of rural banks in Indonesia. Since April 2015, the Indonesian government has implemented governance specifically for Indonesian rural banks that specialize in providing credit to SMEs. On the other hand, there are no specific regulations regarding women in the governance structure. However, previous research revealed that women have advantages in establishing relationships with subordinates and acting conservatively. Therefore, the literature review discusses the role of human capital in reducing credit risk in rural banks and the role of women with specific competencies as part of the rural bank governance mechanism.

1.1. Human capital and credit risk

Credit risk is the most crucial risk of a bank (OJK, 2015) because the central bank profits come from the credit due to interest earned on credit

(Almekhlafi et al., 2016). In other words, it consistently influences the banks' financial performance (Boffey & Robson, 1995). The more credit risk increases, the more the cost of debt and cost per credit increases; ultimately, it reduces bank profitability (Musyokil & Kadubo, 2012; Nawaz & Munir, 2012). Therefore, non-performing loans or credit risk negatively correlate to indicators of financial performance (Takang & Ntui, 2008).

According to phenomena in Indonesian rural banks, the Financial Services Authority (OJK) must apply the governance principles stipulated in POJK No. 4/POJK.03/2015 April 1, 2015. However, the average performance of Indonesian rural banks for 2016, 2017, 2018, and 2019 according to data from the Financial Services Authority (OJK, 2019), still shows a deteriorating trend compared to 2012 to 2015 (see Table 1). For illustration, during 2012–2019, the non-performing loan ratio is higher, the return on assets ratio is lower, and the return on equity ratio is lower too.

Table 1. Performance of Indonesian rural banks, 2012–2019

Source: OJK (2019).

Indicator	2012	2013	2014	2015	2016	2017	2018	2019
Non-performing loan ratio (%)	4.75	4.41	4.75	5.37	5.83	6.15	6.37	6.81
Return on assets ratio (%)	3.46	3.44	2.98	2.71	2.59	2.55	2.48	2.31
Return on equity ratio (%)	32.63	31.41	27.89	24.76	23.61	23.06	22.24	21.00

Indonesian rural banks have weak external governance characteristics. It is based on the supervision carried out by the OJK, which emphasizes compliance with regulations. Oversight from other external parties is also weak in terms of the characteristics of Indonesian rural banks, which are not public institutions and have the features of collective ownership. Gillan (2006) states that internal governance should be prioritized for financial institutions with weak external governance characteristics.

Governance mechanisms are divided into internal and external governance mechanisms. Internal governance mechanisms, especially relating to the boards, consist of board size, ownership, board education, board demographics, and board evaluation (Basyith, 2016). The board size consists of independent commissioners, independent directors, board of directors, board of commissioners, foreign directors, women directors, and committee size. Basyith (2016) found that the board demographics consist of directors' gender, age, and ethnicity. Ownership includes insider ownership, block holder ownership, and public ownership. Finally, board education comprises directors' qualifications and skills.

Regarding the continuous decline in the financial performance of Indonesian rural banks caused by their poor management, this paper uses human capital theory. This theory is vital for the service industry, especially the bank sphere. Human capital is the intellectual capital that affects service quality in the short term. Moreover, it influences various organizational outcomes (Aryee et al., 2016; Mahoney & Kor, 2015; Seleim & Bontis, 2013). As part of intellectual capital, human capital increases innovation and company performance (McDowell et al., 2018). In addition, the competence level of human capital affects the competitive advantage of companies (Ployhart & Moliterno, 2011; Reed et al., 2006). It consists of skilled employees, management knowledge, and

philosophy; these reduce risk or enhance performance, including banking sector, which relies more on human capital (Nielsen et al., 2006). On the contrary, organizations view human capital as a core asset, which comprises education, skills, knowledge, experience, competence, attitudes, commitment, and individual personality characteristics. Therefore, it implies that human capital is critical for a business.

According to governance, human capital significantly affects company risk, performance, CEO duality, board size, board independence, and gender diversity (Khan & Ali, 2018). Therefore, strong corporate governance practices and high human capital are essential for creating a competitive advantage (Barney, 2000). Furthermore, in companies that provide professional services, according to Chang and Birkett (2004), human capital emphasizes the ability of innovation, productivity, and creativity of organizational members. Therefore, it is associated with the professional competencies of corporate members (Chang & Birkett, 2004). As a result, human capital is vital to lowering banks' production costs (providing cost advantages) and differentiating their products (thus offering a competitive advantage) (Soriya, 2015).

1.2. Gender diversity, human capital, and credit risk

Several scholars have found that gender diversity affects company risks or financial performance (Adams & Ferreira, 2009; García-Meca et al., 2015; Singh et al., 2001; Smith et al., 2006). On the contrary, it was found that it has no impact on financial performance (Dwyer et al., 2003; Shrader et al., 1997).

Studies on gender diversity and credit risk conclude that women are more risk-averse (Croson & Gneezy, 2009; Faccio et al., 2016; Francis et al., 2015). However, some contradiction findings stated that "the motivators for women's risk-taking are the same as those identified in the study as gener-

al motivators that do not pay attention to gender issues.” In other words, male and female executive risk-taking show the same degree (Maxfield et al., 2010). Therefore, it can be concluded that women directors do not directly affect credit risk. Therefore, it needs a mediator in the effect of women directors on credit risk.

Regarding gender diversity on the board, Lee et al. (2014) explain that women are a good source of interaction with human resources. They also help companies maintain and develop relationships with investors, stakeholders, and customers, leading to higher company outcomes. Organizational productivity and profitability are positively affected by a higher percentage of women on the board of directors (Von Bergen et al., 2005). Women’s educational background, experience, expertise, and personality traits influence company decision-making (Liao et al., 2015). Women on bank boards with higher numbers and qualifications than men have higher decision-making and control functions (Sahay et al., 2017).

Thus, the paper finds that the percentage of women on the board is an internal governance mechanism that can increase the board’s role in monitoring bank performance. In addition, women have inherent characteristics such as being risk-averse, so their role is more optimal through their educational competence. Relating to human capital theory, these features, namely risk-averse and education competence, will reduce credit risk and support their ability to manage risk.

1.3. Aim and hypotheses

This study examines the role of human capital as the mediator between gender diversity and credit risk. Based on the literature review, the research hypotheses are:

- H1: *Human capital has a negative effect on credit risk.*
- H2: *Gender diversity has a positive effect on human capital.*
- H3: *Human capital mediates the effect of gender diversity on credit risk.*

2. METHODS

The increase in credit risk for Indonesian rural banks occurs in banks below 50 million in the core capital. This study seeks solutions by applying gender diversity as an internal governance mechanism. This study uses the non-performing loans ratio to measure women’s board ability to manage risk. As in previous studies, management ability is not appropriately measured by company performance, such as profitability.

2.1. Sampling

The sample data were obtained through the purposive sampling method from Indonesian rural banks in 2016–2019, namely the application of governance and competence of human resources issues at Indonesian rural banks. The criteria used in this purposive sampling are:

1. Indonesian rural banks have core capital up to IDR 50 billion. According to OJK (2017), most rural banks in Indonesia, or 1,184 (68%), have a limited core capital below IDR 6 billion.
2. Indonesian rural banks still operate as of December 31, 2019.
3. Indonesian rural banks published annual financial reports and other information from 2016 to 2019 on the Financial Services Authority (OJK) website that the financial performance may not be affected by the COVID-19 pandemic (macro domain).
4. Indonesian rural banks published information related to the required data on the Indonesian rural banks’ website from 2016 to 2019.
5. This study excludes data on Sharia rural banks because they have different operating principles and their governance is also explicitly regulated by the other OJK’s rule.

2.2. Variables definition

The dependent variable is the credit risk of Indonesian rural banks. Credit risk is defined as the liability resulting from the client’s inability to pay off their debts or the funds they are expected

to pay to the bank on time and in full (de Aghion & Morduch, 2006; Kolapo et al., 2012; Limei et al., 2019; Mendoza & Rivera, 2017; Noman et al., 2015; Ruziqa, 2013). To measure Indonesian rural banks' credit risk, the indicator is the non-performing loan ratio (NPL). This indicator is widely used to represent credit risk and credit quality. A lower ratio indicates better asset quality and lowers doubtful credit, therefore, lower credit risk (Ekinci & Poyraz, 2019). More specifically, the use of NPL as the dependent in this study is Net NPL which is calculated using the Formula 1.

$$NPL = \frac{\text{Loan Loss}}{\text{Total Loans Disbursed}} \cdot 100\%. \quad (1)$$

Gender diversity as the independent variable is proxied by the proportion of women on the board of directors. The prior research uses the proportion of women on the board of directors (García-Meca et al., 2015; Gulamhussen & Santa, 2015; Labelle et al., 2015). It is shown by the Formula 2.

$$GD = \frac{\text{number of women directors}}{\text{total board of directors}} \cdot 100\%. \quad (2)$$

This study has a mediating variable, namely human capital. One of the human capital characteristics is learning and education (Sharabati et al., 2010). According to OJK (2017), the level of human resources education in Indonesian rural banks is mainly graduated at the level of high school 42.6%, undergraduate 42.0%, Diploma-3 10.7%, and below high school 3.8%. Meanwhile, the human resources graduate at the level of doctoral only 0.1% and master only 0.8%. In this study, the human capital indicator is indicated by the suitability of board member education (directors and commissioners) with the undergraduate in economics or business (Harjanto & Rahmawati, 2018). It is indicated by 1 (one) if their education level is below S1 (bachelor); 2 (two) if they have an undergraduate education level from a non-economic or business major; and 3 (three) if they have a bachelor's degree in economics or business (Harjanto & Rahmawati, 2018). This indicator is adapted according to Indonesian rural banks' conditions from research using educational backgrounds that contain information about the suitability of

the type of degree held in economics and business, consisting of bachelor's, master's, or doctorate degrees (King et al., 2016).

The loan to deposit ratio (LDR) is the first controlling variable. The LDR ratio states how far the bank can repay the withdrawal of funds made by depositors. The higher the LDR, the higher the bank's profit, assuming it can channel its credit effectively so that the funds owned by the bank are not idle (Martin et al., 2014). Therefore, this ratio can signal whether a loan can still experience expansion or otherwise be limited (Dahir et al., 2018). Banking liquidity has to be managed regarding the effectiveness of loan (credit) distribution to borrowers (debtors). If the LDR value is too high, banks do not have sufficient funds to cover their customers' obligations. LDR is the ratio of total loans disbursed to total funds received. Therefore, the loan-to-deposit ratio formula is $LDR = (\text{Loans Granted} / \text{Total Deposits Received}) \times 100\%$.

This study also set the Indonesian rural banks' paid-in capital as the second controlling variable. It is based on the OJK (2017), which states that the growth rate of assets from 2011 to 2015 increased by 16%. However, the vast majority of 1,184 Indonesian rural banks (68%) are rural banks with a limited core capital of less than Rp6 billion. They are below Rp 50 billion. The use of firm size as the controlling variable in this study is manifested in the natural logarithmic (Ln) variable paid-in capital of Indonesian rural banks.

2.3. Data analysis

The secondary data related to the research variables collected were processed and analyzed by multiple-step regression. The mediation function test in this study was carried out based on Baron and Kenny's (1986) mediation function testing model. The role of the variable as a mediator can be analyzed from:

1. Variation in the mediating variable can significantly explain the dependent variable variation.
2. Variations in independent variables can explain the variations in mediating variables significantly.

3. The effect of the independent on dependent variables is insignificant when controlled by the mediating variable.

The meaning of significant here means that the independent variable can predict the dependent variable directly, but its value is smaller than the expected value of the mediating variable. Baron and Kenny (1986) call a variable mediating if the variable also influences the relationship between the predictor (independent) and criterion (dependent) variables. The mediation model hypothesizes that the independent variable affects the mediating variable, influencing the dependent variable. The model of Hypothesis 1, 2, and 3 testing are shown by Formula 3, 4, and 5.

$$H1: CR = \alpha + b1HC + b2LDR + b3LnPC + \varepsilon \quad (3)$$

$$H2: HC = \alpha + b1GD + b2LDR + b3LnPC + \varepsilon \quad (4)$$

$$H3: CR = \alpha + b1GD + b2HC + b3LDR + b4LnPC + \varepsilon \quad (5)$$

where *GD* = Gender Diversity of Indonesia rural banks, which is proxied using the proportion of women on the board of directors. *HC* = Human Capital of Indonesian rural banks is proxied using the board members' education suitability with undergraduate economics or business. *CR* = Credit Risk proxied using the non-performing loan ratio of Indonesian rural banks. *LDR* reflect the lending to deposit ratio of Indonesian rural banks. *LnPC* reflects the natural logarithm (Ln) paid-in capital of Indonesian rural banks.

3. RESULTS

This study uses gender diversity measured by the proportion of women on the board of directors. Based on data from 433 rural banks as the sample, the minimum gender diversity is 0.00%, the maximum is 100.00%, the mean women on board of directors is 21.132%, and the standard deviation of women on board of directors is 29.616% (Table 2). Surprisingly, there are no women on the board of directors in some rural banks, but there are 100%

women in others. Based on women on the board of directors, rural banks in Indonesia rarely hire women.

This study measures credit risk by the non-performing loan ratio. It implies that a lower ratio has better asset quality and lower doubtful credit. Data from 433 rural banks shows that the minimum of non-performing loans is 0.01%, and the maximum of non-performing loans is 47.00%. Data also shows that the mean of non-performing loans is 5.940%, and the standard deviation of non-performing loans is 5.662%. It indicates that the sample of some rural banks in Indonesia has high credit risk, although low credit risk of the others.

Human capital as the mediating variable is measured by the board members' education suitability with undergraduate economics or business. The minimum of human capital is 2, and the maximum of human capital is 18. The sample has a mean of 8.55 and a standard deviation of 3.36 of the human capital score. This study also details the lending to deposit ratio and Ln. Paid-in capital has a minimum score of 37.21% and 13.81, and a maximum score is 198.04% and 24.635. The mean of lending to deposit ratio and Ln. Paid-in capital is 96.462% and 18.010, respectively. Finally, the standard deviation of lending to deposit ratio and Ln. Paid-in capital is 20.070% and 3.623, respectively. The lending to deposit ratio shows the ability of banks to repay the withdrawal of funds made by depositors. Therefore, the higher the LDR, the more effective credit the bank distributes. Paid in capital indicates the growth of bank assets and higher assets larger bank size. However, this study uses a sample of the rural bank under IDR 50 billion. It implies that the rural bank sample has enough effective risk management.

This study examines the role of human capital as the mediator between gender diversity and credit risk. For examination of *H1*, this study includes gender diversity, human capital, Ln. Paid-in capital and loan to deposit ratio. From the *H1* testing, the linear regression of education scores of directors and commissioners as independent variables and non-performing loans as the dependent variable has a significant level of 0.000 with a regression coefficient of -0.208 (Table 3).

Table 2. Descriptive statistic

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Gender Diversity (Independent)	433	0.00%	100.00%	21.132%	29.616%
Credit Risk (Dependent)	433	0.01%	47.00%	5.940%	5.662%
Human Capital (Mediating)	433	2	18	8.55	3.36
Loan to Deposit Ratio (Controlling #1)	433	37.21%	198.04%	96.462%	20.070%
Ln. Paid-in Capital (Controlling #2)	433	13.816	24.635	18.010	3.623

Table 3. Hypothesis testing results

Variables	H1		H2		H3	
	Credit Risk (Dependent)		Human Capital (Dependent)		Credit Risk (Dependent)	
	Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
(Constant)		.000		.000		.000
Gender diversity (Independent)			.135	.005***	-.022	.625
Human Capital (Mediating)	-.208	.000***			-.205	.000***
Loan to Deposit Ratio (Controlling #1)	-.260	.000***	.033	.496	-.260	.000***
Ln. Paid-in Capital (Controlling #2)	.080	.080*	.033	.489	.079	.083*
Adjusted R Square	11.6%		1.3%		11.4%	
F	19.865		2.945		14.932	
Sig	0.000		0.033		0.000	

Note: *** means significant at < 1%. * means significant at < 10%.

The second hypothesis (*H2*) examines gender diversity, loan to deposit ratio, and Ln. Paid-in Capital to human capital. The results of this test indicate that *H2* is accepted based on gender diversity having a significance level of 0.000, and coefficient = 0.135. It shows that the percentage of women on the board of directors has a positive effect on the suitability of human capital on boards. The third hypothesis (*H3*) examines the women directors' proportion as the independent variable and the educational score of the directors and commissioners as the dependent variable. This examination also includes loan deposit ratio and Ln paid-in capital. The result shows that education scores have a significance level of 0.000 with a regression coefficient of -0.205. The proportion of women directors does not significantly correlate to non-performing loans ($\rho = 0.625$).

The results of this test indicate that *H3* is accepted. Human capital mediates the influence of gender diversity on credit risk. When this study performs human capital as a mediator, gender diversity does not significantly affect credit risk. In this test, the higher the human capital, the lower the credit risk. The first controlling variable is liquidity risk. During the first and second examination, liquidity risk affects non-performing loans signif-

icantly ($\rho = 0.000$). The higher the liquidity risk, the lower the credit risk. The second controlling variable, paid-in capital, is included in testing the influence of women's leadership and human capital on credit risk. This variable (paid-in capital) does not affect non-performing loans because the significance level is moderate or $\rho = 0.083$.

4. DISCUSSION

Previous studies stated that gender diversity does not directly affect credit risk. Looking for other factors that become mediators or intermediaries between gender diversity and credit risk is necessary. *H1* test results indicate that human capital has a negative effect on credit risk. The higher the human capital indicator, the lower the credit risk. This finding supports the statement that human capital will reduce company risk (Nielsen et al., 2006). It also supports King et al. (2016) that the level and competence of special education in economics and business by focusing on the bank's business model affects implicit strategic choices in identifying actions and decisions better.

The findings for *H2* testing are in line with previous studies. A higher percentage of women in

governance structure increases organizational productivity and profitability (Von Bergen et al., 2005). The women's educational background, experience, expertise, and personality traits influence company decision-making (Liao et al., 2015). Higher women on bank boards and qualifications than men perform higher quality decision-making and control functions (Sahay et al., 2017). In addition, it is also in line with the statement that human capital is positively related to corporate governance, where internal governance mechanisms support and improve strategic human resource management policies (Lajili et al., 2020).

Furthermore, it is associated with the results of *H1* testing, which indicate that human capital negatively affects credit risk. In association with *H2* testing results, gender diversity positively impacts human capital. In that case, it can be concluded that gender diversity needs to be mediated by human capital. *H3* testing result shows that gender diversity does not directly affect Indonesian rural banks' credit risk. However, human capital still negatively affects credit risk. It is proof that human capital has a significant relationship

with board size, board independence, CEO duality, gender diversity, and company risk/performance (Khan & Ali, 2018). Human capital has a mediating role in the influence of gender diversity on credit risk. This influence is mainly related to lending policies and estimating the client's ability to repay loans. For this reason, rural banks must have human resources at the level of directors and commissioners with appropriate qualifications to formulate strategies, implement strategies, and supervise them properly.

The first control variable test findings indicate that banks can channel their credit effectively. This finding shows that liquidity risk is a variable that directly affects the financial performance of rural banks and is not affected by the mediating role of human capital. This finding also strengthens the opinion of Martin et al. (2014). Thus, aggressively providing measurable credit in its effectiveness is necessary to low Indonesian rural banks' credit risk. On the other hand, the second control variable test finding indicates no difference in the effect of differences in the amount of paid-in capital on the financial performance of Indonesian rural banks.

CONCLUSION

This study examines 433 Indonesian rural banks regarding understanding the role of human capital in gender diversity and credit risk relationships. It was triggered by the inconclusive results of previous research regarding the role of women on boards as monitoring agents. Therefore, this study includes competency education as a measure of human capital. Thus, the percentage of women on boards with competency education following their duties will act as intellectual capital that optimizes their role as risk management supervisors.

Results reveal that gender diversity does not directly affect credit risk when controlled by human capital as a mediator on credit risk. However, human capital has a negative correlation with credit risk, and also gender diversity positively affects human capital. It implies that higher-quality women on boards have lower credit risk (coefficient = -0.205 , significance level = 0.000).

Previous research has revealed that women have the ability to communicate with their subordinates, act more carefully in decision-making, and act more ethically than their male counterparts. However, in such conditions, women are considered unable to increase company profitability. Therefore, this study includes educational competence for women who are members of boards as reinforcement for their abilities in these inherent characteristics.

As agents who monitor the actions of their subordinates, women on boards need strengths recognized by members of the organization, namely their educational competence. This result has advantages over previous research related to the sample in rural banks that do not go public, so internal control is very much needed. In addition, women on boards with these characteristics are necessary to maintain the

reputation of rural banks because the financial statements of rural banks in Indonesia are the only communication media for banks with their customers. This study also has advantages related to using credit risk to measure women's ability on these boards. The ability of rural banks to survive is not enough just to be measured by the ability to generate profits but also the ability to manage risk as a determinant of sustainability. Thus, the relationship between women on boards and educational competence is more valid when measured by their ability to reduce credit risk.

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