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Capital Structure, Corporate Governance and Financial Sustainability in Microfinance

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ABSTRACT

This study investigated the relationship of capital structure on financial sustainability for MicroFinance Institutions (MFIs) and the moderating effect of corporate governance (CG) on that relationship. Time series data covering the three-year period 2012-2014 were analyzed using multivariate analysis (SEM-PLS) which could simultaneously analyze multiple variables with many indicators, thus providing more precision in the testing of theory.The results confirmed that capital structure have a positive effect on financial sustainability, which means that higher debt in the composition of capital structure have a positive effect on financial sustainability consistent with agency theory. However, CG did not appear to moderate the relationship between capital structure and financial sustainability and moderation testing showed that the CG variable is a predictor variable.

JEL Classification: JEL G 21, JEL G24.

Keywords: Capital structure, corporate governance, financial sustainability, microfinance.

1. INTRODUCTION

There is no doubt that Micro Finance Institutions (MFIs) have been working to assist marginalized people around the world by providing access to financial resources (Helms, 2006, Guntz, 2011, Robinson, 2001) and the uniqueness of its business are economies of small scale, profit-driven and social welfare (Aghion and Morduch, 2005, Torre and Vento, 2006, Robinson, 2001, Ledgerwood, 2008). According to (Morduch, 2002, Woller and Schreiner, 2000) the institutionalist approach to microfinance emphasizes the importance of financial sustainability. This approach has shifted MFIs to transform into formal institutions, independent and operating as profitable institutions (Christen and Drake, 2002, Christen, 2001, Hoque et. al., 2011)

and directing MFIs to take advantage of market-based funding (Frank, 2008, Guntz, 2011) has led to transformation into complex capital structures.

In addition, lack of capital (Bogan, 2012) has prevented MFIs from meeting the enormous demand whilst inelastic funding (Dehejia et. al., 2012), requires MFIs to expand their sources of funds. However, access to market funds, will increase their cost of funds and raises liquidity risks. Thus, capital structure transformation, has become a far more important issue for financial sustainability.

Since the seminal paper by Modigliani and Miller in 1958, The study of capital structure and firm value has advanced both in the case of countries and industries, such as in the banking sector (Berger and Patti, 2006, Margaritis and Psillaki, 2007, Uremadu, 2012), small firms (Cassar and Holmes, 2003), non-profit corporations (Lynch, 2003) and other sectors. Various studies in this industries have contributed various results and conclusions. However, recent studies in this area newly developing in the microfinance industry context.

There has been some research on the capital structure of microfinance such as Kyereboah-Coleman (2007), tested the effect of capital structure on outreach performance in Ghana. Hoque et. al., (2011) examined the impact of commercialization on capital structure, mission and performance of MFIs and Bogan (2012)explored how changes in capital structure can improve operational efficiency of MFIs. However, the capital structure issues in microfinance are still controversial and puzzling.

Previous research has tried to solve a direct relationship between capital structure and sustainability or performance and has reported mixed results and conflicting. Rocca (2007) has stated that there has been contradictory empirical findings on that relationship possibly caused by not accommodate the role of corporate governance (CG). Some studies (Myers, 2000, Bhagat and Jefferis, 2002, Berger and Patti, 2006, Mahrt-Smith, 2005)have suggested to consider the importance of contributions from CG. In the context of microfinance, Labie (2001) has noted that the mechanisms of CG are important as extensive support control in MFIs.

This study has examined the case of Indonesia in the South-East Asian region, as Indonesia was the first country to develop commercial microfinance in Asian. This started in the late 19th century with the founding of the Bank Kredit Rakyat (BKRs) and the Lumbung Desa providing microfinance services spread across thousands of islands. In 1930, the Afdeelingsbank (AB) regulations transformed the BKRs and the Lumbung Desa into Bank Perkreditan Rakyat (BPRs) (Robinson, 2001). PAKTO, (1988) provided a convenient regulation to establish BPRsby allowing non-formal institutions to be transformed into formal institutions.

The purpose of this study was to investigate the direct effect of capital structure and financial sustainability and moderating effect of CG on this relationship. The regulations from Afdeelingsbank, PAKTO 1980, Act No. 7/1992, Act No. 10/1998 and Act No.1/2013 have implications for the transformation of capital structure in regulated MFIs. Based on PBI 14/9/2012 the major element in CG is the Board of Commissioners. This study contributed to the literature on microfinance capital structure, CG and financial sustainability in MFIs and should have policy implications especially for practitioners in the regulated microfinance industry.

This paper has been organized as follows: After this introduction the second part relates to theory, literature review and hypothesis; part three is the research methodology; part four, the empirical results

and discussions and finally the conclusions, limitations, implications, recommendations and future research agenda.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. Theoretical Framework

Agency theory has been widely used in research into capital structure in the financial and banking literature such as (Uremadu, 2012, Harris and Raviv, 1990, Berger and Patti, 2006). Jensen and Meckling (1976) have explained that the organization can not be separated from the intersection between the interests of individuals or groups. In microfinance, Capital structure decisions can not be separated from the conflict of interest of a diversified choice of funding. Therefore, the composition of the capital structure should consider the relationship between the firm, the debt holders and the shareholders to minimize conflicts that could raise agency costs.

In agency theory perspective, the agency problem can be solved by a control mechanism to increase funding with debt. The selection of higher debt will reduce agency costs for outside equity and enhance the value of the firm by limiting or encouraging managers to act more in the interests of shareholders (Saltaji, 2013). A lower equity to asset ratio or higher leverage in the capital structure will reduce the agency costs of outside equity, and will increase the value of the firm by holding, pushing or pulling managers to act in the interests of shareholders (Berger and Patti, 2006).

2.2. Empirical Literature

Various studies on the effect of capital structure on the value of a firm in various sectors have provided a variety of research results. The empirical evidence is still mixed. Positive relations have been documented in several studies, such as (Margaritis and Psillaki (2007), Berger and Patti (2006), Uremadu (2012), Margaritis and Psillaki (2010), Jermias (2008), Abor (2005)). Other studies have documented a negative relationship viz: (Fama and French (1998), Salim and Yadav, 2012). Still other studies by (Umar et. al., (2012), Hung et. al., (2002), Zeitun and Tian (2007)) concluded with mixed results.

In the context of microfinance, the study by Kyereboah-Coleman (2007), documented a positive relationship. Highly leveraged microfinance institutions perform better by reaching a larger customer base and have a reduced non-performance ratio. The clear implication of their findings was that an MFI is better to use more debt relative to equity to finance their operations. Bogan (2012), explored how changes in capital structure can improve efficiency and MFI operational adequacy and found that the capital structure was negatively related to operational adequacy. Hoque et. al., (2011) examined the impact of commercialization on capital structure, mission and performance of MFIs. Evidently, increasing debt and costs of capital, decreased the productivity and outreach performance due to lower conversion from savers to borrowers who determined the yield rate. Hoque et. al., (2011) rejected such transformation of microfinance for violating the motivation and mission of microfinance and supported a non-commercial approach to changes in the capital structure.

In summary, several studies provide the entry point to the study of microfinance capital structure and financial sustainability. Capital structure problems are very varied and are susceptible to the financial

sustainability of MFIs, regardless of whether they operate as commercial banks, finance companies, co-operatives, or non-profit organizations.

2.3. Development of Hypothesis

2.3.1. Capital Structure and Financial Sustainability

Capital structure in microfinance is unique because although the capital structure transformation occurs in order to access market funding, MFIs can still receive grant funding, including safety nets amid comprehensive regulation. MFI capital structure decisions are generally governed by portfolio growth and risk-return. However, with the transitioning of MFIs to formal regulated entities, capital structure decisions are affected by liquidity regulations and minimum capital requirements.

Capital structure decisions in microfinance are strongly related to agency costsviz. whether capital structure decisions will reduce or increase agency costs. Agency theory states that the firm which is funded by equity tends to have higher agency costs, because managers will not maximize the value of the shareholders' equity (Jensen and Meckling, 1976). Instead, managers of firms which are funded by debt tend to engage in a risk shift strategy when they have free cash flow available. Debt gives effect to discipline the managers because they are forced to generate a continual cash flow (Jensen, 1986). Debt financing could be considered as a bonding mechanism for management (Dherment-Ferere and Renneboog, 2010). The capital structure becomes a direct determinant of risk and overall cost of capital (Margaritis and Psillaki, 2007). Sources of capital have important consequences that can affect value and in this case financial sustainability (Baker and Martin, 2011). Like most financial decisions, capital structure decisions involve risk-return trade-offs so that capital structure decisions need to be highly competitive in the long term.

Many studies have confirmed that capital structure decisions have positive effect on value and performance of the firm, viz: (Uremadu, 2012, Margaritis and Psillaki, 2010, Margaritis and Psillaki, 2007, Berger and Patti, 2006). For MFIS, capital structure decisions have been associated with better performance and sustainability, thus (Kyereboah-Coleman, 2007) found a positive relationship between long-term debt and outreach and (Bogan, 2012) found that higher asset size and capital structure of an MFI was associated with better performance. Based on the theoretical framework and empirical literature, the hypothesis tested is:

H1: The capital structure have a positive effect on financial sustainability.

2.3.2. Capital Structure, Corporate Governance and Financial Sustainability

Agency theory states that the choice of capital structure can help reduce agency costs. Nevertheless, the results of research on capital structure and value within the agency theory framework have still shown mixed results. The effect of leverage imposes constraints on managerial discretion. Some researchers have shown that many firms use leverage rates less than predicted by theory or that are preferred by shareholders (Myers, 1984, Agha, 2013).Thus, the extent to which managers use optimal leverage must rely on the strength of the CG.

Incontrovertible evidence about the relationship between capital structure and value (Harris and Raviv, 1991) is still hard to find as it is associated with the need to consider the specific structure of CG (Heinrich,

2000, Mahrt-Smith, 2005, Berger and Patti, 2006, Bhagat and Jefferis, 2002, Brailsford et. al., 2004). Agha (2013)has proposed a causal model that describes a complex phenomenon that looks stimulating and promising for future research. Contradictory findings in previous studies depended upon the approach used. This may be due to not providing for the role of CG in relation to the capital structure and the value of the firmRocca (2007). Furthermore, Labie (2001) noted that the CG mechanism is the main support for value in microfinance because MFIs are not in the stock market.

Based on these arguments, this research has also developed an hypothesis to involve the CG with a moderating role on the capital structure and financial sustainability. In particular, one further hypothesis that will be tested is:

H2: Corporate governance positively moderate the relationship between the capital structure and financial sustainability.

3. RESEARCH METHOD

3.1. Population and Sample

The population in this study were 1,643 formal MFIs (BPRs)in 33 provinces and districts/cities in Indonesia. The estimated sample size using the formula from Rao (1996) with a 5% margin of error (moe) and 322 sample to be obtained. The distribution of the samples was determined based on the distribution of BPRs in the 33 provinces and in the districts/cities. Data was obtained from the Bank of Indonesia (BI) and the Financial Services Authority (OJK) for the period 2009-2015. However complete ownership data was not available for the period 2009-2011 so only the observations for the three year period2012-2014 were used. The period after 2014 was not included in the observations because of different events of issuance Act No.4/2015 about CG implementation in BPR.

3.2. Variable Measurement

3.2.1. Financial Sustainability

Financial sustainability was peroxide by profitability and financial self-sufficiency (FSS). Microfinance sustainability was defined as the ability to generate profits (Robinson, 2001), MFIs need to generate profitability in their operations because profitability is a signal for their life in the future. At the level of sustainability, an institution can generate positive net income and return for shareholders (Foster et. al., 2003). Profitability is measured by the Return on Assets (ROA) ratio. ROA reflects the ability of productive assets to generate revenue as measured by the ratio between income before tax to total assets. FSS indicates the financial sufficiency to cover all direct costs, including financing costs, allowance for bad debts, operational costs plus indirect costs (Ledgerwood, 2013). FSS ≥ 110% indicates that an institution can achieve financial sustainability and vice versa.

3.2.2. Capital Structure

The capital structure of BPRs is unique, although similar to that of banks it is not as complex as the capital structure of commercial banks. This study explored the individual funding characteristics of BPRs and the variable of debt in their capital structure. Based on SAK ETAP paragraphs 2:35(Indonesian Accountants

Association, 2009), savings, deposits and loans are included in liabilities. Savings and deposits are short-term debts and highly liquid. Loans are categorized as long-term debts, which accounts for linkage, subordinated loans and capital loans. These are loans derived from outside parties with differing contractual agreements.

Grants, equity, and earnings are included in capital. Basically setting are: (1) SAK ETAP Chapter 19 on capital, (2) Act No. 40/2007 for private capital (PT) BPR, (3) Act No. 25/1992 for cooperative BPRs and (4) PBI No. 8/26/2006 about BPR. Equity is initial equity capital plus funds paid for additional equity capital, grants is donations capital and earnings which are the total earnings from special-purpose reserves, general reserves and retained earnings. Individual funding measurements are grant, equity, income, savings, deposits, linkages, subordinated and quasi as the ratio of total assets. Total debt are measured by total debt to equity ratio (DER) and total debt to assets ratio (DAR).

3.2.3. Corporate Governance Mechanism

The centre of the CG mechanisms relates to the board and directors, because this is the crucial issue in BPRs. According to PBI regulation No. 14/9/PBI/2012, each of the directors of the board must have passed a fit and proper test and be capable of performing good corporate governance. At least 50% of the board members must be experienced and knowledgeable about banking. An independent board member is a special person who has both academic and practitioner competence. Independent board is measured by the total number of independent directors to total boards.

BPR ownership is characterized by dispersed ownership, small capital, the proximity of high-ownership and 70% of the directors positions are filled by the owner. Because BPRs are not in the stock market and do not currently go public, the owner's presence is involved in the management and will lead to supervision of the policies adopted and is regarded as an appropriate control mechanism to sustain the operations of MFIs(Labie, 2001). The greater the proportion of managerial ownership, the more the management will tend to harder for the shareholders' interests which are none other than themselves. Managerial ownership is measured by the ratio of the amount of managerial ownership to the total capital.

3.2.4. Control Variable

This study used a control variable for controlling other variables that are not hypothesized but could affect the dependent variable. Jermias (2008) research used size to verify that the results do not differ in performance. Kyereboah-Coleman (2007) used size as a control variable to see the effects on performance of outreach and the default rate. Total assets were used to control the effects of other factors on financial sustainability in this research.

3.3. Technique of Analysis

The technique of analysis used multivariate analysis (SEM-PLS) which could analyze multiple variables with many indicators simultaneously, thus providing more precision in testing the theory. This was in contrast to previous studies (Bogan, 2012, Hoque et. al., 2011, Kar, 2012, Kyereboah-Coleman, 2007)which used OLS, 2SLS, STATA and multiple regression with critical path analysis which could not analyze different models simultaneously. Therefore, the conclusion for a mixed capital structure on performance would be

biased. This study tested the theory with a mixed capital structure relationship to financial suistanability and the role of moderating CG.

3.4. Model Specifications

This study used moderated regression analysis (MRA) with quasi-moderation type tests and an econometric equation viz.:

$$Sustain_i = \alpha_o + \beta 1 Cap\_Str_i + \beta 2 CG_i + \beta 3 Cap\_Str_i \times CG_i + \varepsilon_i$$

where, sustain is the financial sustainability for the firm *i*, Cap_Str is the capital structure for the firm *i*, CG is the corporate governance for the firm *i* and ε is the term for error.

4. EMPIRICAL RESULT AND DISCUSSIONS

4.1. Hypothesis Testing

To test the hypothesis, we used the program WarpPLS 4.0 to evaluate the measurement model and the structural model simultaneously to obtain estimated coefficient path and rates of significance. The Measurement model evaluation are shown in Table 1. Indicator weight output presents that outer weight GRA, EqRA, EaRA, DER, Man_Ow, Ind_Boa, ROA and FSS provide *p*-value and VIF significant. Whilep-value and VIF for SRA indicators are not significant. *p*-value for DRA, LRA, DAR was significant and VIF was insignificant. Conversely, *p*-value for SubRA and QRA was not significant and VIF was significant.

However, Hair Jr et. al., (2016) have stated that in order to determine to remove or retain formative indicators, one should consider the indicator loading contribution, significancy and theoretical perspective relevancy even though the indicator weight is not significant. Output results presents indicator loadings for SRA, DRA, LRA < 0.50 but significant at *p*-value < 0.05 and in theory these indicators are primary measurements which have intermediary functions in institutions, therefore these indicators should be retained. While SubRA and QRA < 0.50 were insignificant so that they were eliminated from the test. In essence, the elimination of two indicators will not change the capital structure constructs significantly because there are eight more significant indicator theoretically to continue the process of structural model testing.

Table 1
Measurement Model Evaluation

	Cap_Str	*CG*	*Sustain*	*P value*		*VIF*	
GRA	–0.064	0.000	0.000	0.015	sig	1.038	sig
EqRA	–0.364	0.000	0.000	<0.001	sig	2.546	sig
EaRA	0,186	0.000	0.000	<0.001	sig	2.273	sig
SRA	0.024	0.000	0.000	0,146528	not sig	35.614	not sig
DRA	0,104	0.000	0.000	<0.001	sig	83.526	not sig
LRA	0,122	0.000	0.000	<0.001	sig	41.083	not sig
SubRA	–0.012	0.000	0.000	0,238	not sig	1.055	sig
QRA	–0.016	0.000	0.000	0,201	not sig	1.026	sig
DER	0,233	0.000	0.000	<0.001	sig	1.427	sig

	Cap_Str	*CG*	*Sustain*	*P value*		*VIF*	
DAR	0,2	0.000	0.000	<0.001	sig	82.918	not sig
Man_Ow	0.000	0,458	0.000	<0.001	sig	1.023	sig
Ind_Boa	0.000	0,458	0.000	<0.001	sig	1.023	sig
ROA	0.000	0.000	0,385	<0.001	sig	1.638	sig
FSS	0.000	0.000	0,385	<0.001	sig	1.638	sig

Notes: Rules of thumb: P values < 0.05 and multicolinearity VIFs < 3,3 are desirable for formative indicators; VIF = indicator variance inflation factor, (Kock, 2014).

GRA = grant divided by total assets. EqRA = Equity divided by total assets. EaRA = Earning divided by total assets. SRA = Saving divided by total assets. DRA = Deposit divided by total assets. LRA = lingkage divided by total assets. SubRA = Subordinated divided by total assets. QRA = Quasy divided by total assets. DER = total debt divided by equity. DAR = total debt divided by total assets. ROA = profit before taxe divided by total assets. FSS = operating income divided by operating expense + cost of capital + Allowance for bad debt. Man_Ow = total managerial ownership divided by total equity. Ind_Board = total independent board divided by total board.

The structural model results from testing were appropriate with the rule of thumb which indicated that our model was fit (Table 2). Table 3 shows R-Squared about 12.4%, Q-squared about 0.126 is greater than zero and the full colinearity VIF value is less than 3.3 so the model was free from any colinearity problem. Table 2 shows that the Cap_Str-Sustain coefficient value was 0.33 and significantly positive at $p = 0.01$ (***), therefore, hypothesis 1 was accepted. These results are consistent and in line with the agency theory perspective, that stated one way to reduce agency costs is through capital structure decisions (Saltaji, 2013), that enable reconciliation of conflicts of interest between shareholders, debt holders and managers to enhance shareholder value.

It can be confirmed that BPRs now have an increasingly wide scope of capital sources, which gives these institutions the diversification of eight individual choices for their sources of funds. Every funding decision will contribute an effect to the capital structure, in this case each was shown by an indicator weight in the results test (Table 2) by weighting individual sequences: EqRA −0.364, EaRA 0.186, LRA 0.122, DRA 0.104, GRA −0.064, SRA 0.024.

Table 2
Testing of Structural Model

Model fit and quality indices:	APC = 0.135,	P < 0.001
	ARS = 0.115,	P < 0.001
	AARS = 0.113,	P < 0.001
	AVIF = 1.015,	Acceptable if <= 5, ideally <= 3.3
	AFVIF = 1.065,	Acceptable if <= 5, ideally <= 3.3
Path coefficients and P values:	S_Modal-Sustain	0.34P < 0.001
	CG-Sustain	0.06P = 0.02
	CG*S_Modal	0.01P = 0.42

Notes: P values < 0.05 are desirable for APC, ARS dan AARS.
AVIF, AFVIF < 3,3 are desirable for multicollinearity.

Table 3
R-squared, Q-squared and Full Colinearity VIF

	S_Modal	*CG*	*Sustain*	*CG*S_Modal*
R-squared			0.12	
Adj. R-squared			0.11	
Full colliniearity VIF	1.116	1.014	1.118	1.013
Q-squared			0.126	

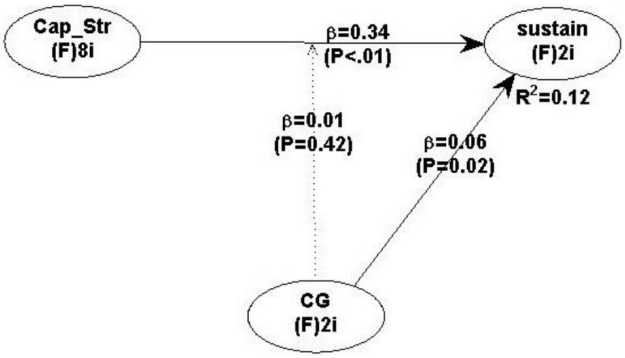

Figure 1: Warp PLS Results

Equity (EqRA) provides the biggest contribution to capital structure but with a negative sign, meaning the use of equity capital has a negative effect on capital structure. It is believed that larger equity funds will increase agency costs due to increases in monitoring costs and the self-interest of managers to have free cash flows. As stated by Jensen and Meckling (1976) firms that are funded by equity tend to have high agency costs, because the managers will not maximize the value of the shareholders' equity.

Earnings (EaRA) contributes the second largest contribution and has a positive sign. Internal funding from profit has small risk compared to debt and equity because the institutions have no obligation to pay interest costs and thus it has a positive effect on capital structure. Linkages (LRA), deposits (DRA) and savings (SRA) also have positive signs. Deposits are the largest source of funding compared with savings, equity and linkages. Linkages provide a greater effect to discipline managers than deposits and savings.

Grants (GRA) are the smallest contribution and have a negative sign, which means that grant funding creates institutional dependency and managers did not discipline to use no-risk resources efficiently. On average only 2.5% of all the BPR were using grant funding. This is in line with transformation and commercialization to achieve financial sustainability by reducing reliance on grants/subsidies and by shifting funding to accessing capital through the market system. This shift will increase MFIs operational efficiency and sustainability and will reduce dependence on donor agencies (Aghion and Morduch, 2005, Robinson, 2001).Meanwhile, QRA and SubRA have been excluded from the model because they were not statistically significant.

In total, DER and DAR are weighted which are total debt and both have positive signs. Although debt is risk capital and raises the cost of funds, nevertheless debt financing was able to increase the expected returns and provide a positive sign to the capital structure. Whilst increasing debt can increase the risk for the firm it also tends to increase the expected returns (Weston and Brigham, 1990).

Results from studies have demonstrated a significant positive effect on capital structure and financial sustainability, which means that BPRs which have a capital structure composition with debt as the greatest funding source get a positive effect on increasing financial sustainability. ROA and FSS confirm that 91.5% of BPRs have a positive ROA, and 81.57% have FSS values ≥ 110% .

From the agency theory perspective, the use of debt capital is consistent with agency theory. Jensen and Meckling (1976) which states that managers of firms funded by debt tend to engage in a risk shifting strategy when they have available free cash flow. Debt tends to discipline managers because managers are forced to generate continual cash flows (Jensen, 1986). Debt financing could be considered as a bonding mechanism for management (Dherment-Ferere and Renneboog, 2010). High debt will reduce agency costs from outside equity and can encourage managers to act more in the shareholders interests in order to increase the value of the firm (Saltaji, 2013). Thus, debt financing of capital tends to improve financial sustainability.

Hypothesis 2 expected that CG would positively moderate the relationship of capital structure with financial sustainability. This hypothesis is not consistent with the study findings that CG not moderates that relationship ($\beta = 0.013$, $p = 0.42$). Quasy moderation testing also showed that the role of the CG variable in relation to Cap_Str to Sustain is not classified in quasy moderation but is an independent or predictor variable. This is demonstrated by the CG moderator variable is significantly associated with the criterion (Sustain) ($\beta = 0{:}06$, $p = 0.02$) but is not interacting with the predictor (Cap_Str) ($\beta = 0.013$, $p = 0.42$).

These results were not as expected, CG which is peroxide by managerial ownership and independent board does not appear to moderate the relationship of capital structure to financial sustainability. From the agency theory perspective, this suggests that the role of CG to control opportunistic behavior to mitigate agency problems is apparently not effective in affecting capital structure decisions. An explanation for the apparent inconsistency in these results is that BPRs as formal MFIs are now strongly regulated by the Bank of Indonesia and the Financial Services Authority in relation to capital. Regulatory controls and strict supervision of movement of capital in BPRs which directly affects their capital structure by setting minimum capital requirements for equity. Regulators conduct inspections and take action to contain the effects of financial distress, bankruptcy or liquidation of the agency costs arising from the obligations of BPRs. Thus, the role of the regulators is greater than managerial ownership and independent board.

4.3. Robustness Checks

Relative to control variables, results showed the size of the firm is significantly positively related to financial sustainability ($\beta = 0{:}19$, $p < 0.001$). Overall, results from the study without control variables did not differ from the results with control variables. Cap_Strwas significantly positively related to financial sustainability ($\beta = 0.26$, $p < 0.001$) and CG did not moderate the Cap_Strand financial sustainability ($\beta = -0.01$, $p = 0.33$). R-Squared and Q-squared increased by 14% and 14.6%.

Non-moderating testing has verified that CG became an independent variable similar to the results obtained from the main moderation quasi testing from previous models ($\beta = 0{:}06$, $p = 0.02$). A sensitivity analysis with parametric re-sampling method and a Robust Path Analysis algorithm method provided results that are consistent with the main test results.

5. CONCLUSIONS, RECOMENDATIONS, LIMITATIONS AND FUTURE RESEARCH

This study investigated the influence of capital structure on financial sustainability and the moderating effect of CG in relation to capital structure with financial sustainability in formal MFIs. Results from the study are consistent with hypothesis 1 and agency theory but not with Modigliani and Miller (1958). The important conclusion is that the result supports the transformation of microfinance to a commercial approach with changes in capital structure especially for formal MFIs. This conclusion is not consistent with Hoque et. al., (2011).

However, the lack of moderating effects of CG on capital structure was not consistent with the result expected from the hypothesis. Thus, the role of the regulators is greater than manageral ownership and independent board, so that the effects of CG become insignificant in relation to capital structure and sustainability. This finding is in contrast to that of Labie (2001)who stated that CG was the main support mechanism for overseeing microfinance management policy.

This study has several important recommendations, viz: BPRs should not consider increasing equity funds because this will have a negative effect on capital structure. Linkage could be a better prioritization than deposits and savings because it provides more weight and positive impact for the capital structure. Also BPRs should not depend on grants or subsidies since they have a negative effect on capital structure. Relative to CG, the results indicate that CG acts as a predictor variable, not a quasi moderator. These results have support for CG implementation immediately in BPRs as formal MFIs through the new regulation No. 4/PJOK.3/2015, which became effective in April 2015 and will be fully implemented in 2017.

This study has several limitations. First, it did not look at measurement of outreach performance as one of the unique purposes of microfinance (the double bottom-line principle) because of data limitations. Future research should include performance measurement of outreach if data availability. Second, this study did not distinguish between capital structure sensitivity based on different types of legal entity and differences in the nature of BPR ownership, which could be developed as sensitivities study. Third, this research has not been able to measure all components, elements and principles of the CG moderating variable, considering that the application of CG in the BPRs in the period of the study was only for boards and directors based on PBI No: 14/9/PBI/2012.With the enactment of the new OJK regulations No. 4/PJOK.3/2015 about CG in BPRs with full implementation to commence in 2017, the measurement of CG components and elements both structures and processes could be developed in future studies. Research could also be done on the application of the principles of good CG and their relationship to outreach, social mission and sustainability.

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