



Effect of Corporate Governance on the Financial Performance (Sustainability) of Microfinance Institutions in Ethiopia

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ABSTRACT

The connection between corporate governance (CG) and MFIs' financial success was investigated in this study utilizing panel data that was balanced and a sample of 25 MFIs spanning the years 2012 to 2021. The study used secondary data and employed a descriptive research design and a quantitative research approach. The empirical results showed that female CEOs, women directors, internal auditors reporting to the board of directors, and profit orientation have a positive relationship and substantial influence on sustainability. The study suggested that microfinance institutions should consider the gender diversity of the CEO and the Board. Besides, the board of directors also gives attention to internal auditors to report directly to them. Moreover, the study suggested that future researchers may be interested in validating the stability of the outcomes and providing additional results for this study by incorporating more factors (Internal and external).

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Introduction

Microfinance Institutions (MFIs) are essential to the provision of financial facilities to the impoverished in rural regions and other unbanked populations, enabling them to break free from poverty. As stated by Robinson (2001), microfinance is the term for small-scale financial services; these services include lending and savings to people and collectives in neighboring developing nations, both in rural regions and in the city, who farm, run small businesses or microenterprises, or provide services.

Reaching business objectives is the focus of CG. As stated by Mersland and Strom (2009), MFIs prioritize reaching out to more clients in the lower socioeconomic strata, with financial sustainability coming in second. The study examines the connection between Ethiopian MFIs' financial success and their governance frameworks. According to Christen (2000), metrics like ROA & OSS are accustomed to gauge a MFI's overall profitability.

Corporate governance (CG) in today's business environment focuses on ensuring that MFIs' social and financial goals are balanced (Cadbury, 2002). The influence of governance on how a company is run, managed, and/or governed. MFIs can be successfully prepared to manage the inherent risks of managing an MFI with the help of proper corporate governance (Di Benedetto *et al.*, 2015).

Nonetheless, a fair number of scholars have studied the relevant topics in Ethiopian microfinance organizations. For instance, research on how CG practices affect MFI sustainability in Ethiopia has been carried out by (Belete, 2015; Bayeh, 2012; Bekana; Mohammed, 2019). To look into the impact of CG practices on the sustainability of Ethiopian microfinance institutions, the aforementioned research employed a small number of variables and omitted variables related to external governance systems.

The microfinance sector in Ethiopia has been characterized as giving higher attention to financial performance and social outreach and the sector is owned by Ethiopians and promotes both savings and credit products (Ebisa *et al.*, 2013; Bayeh, 2012). Having those characteristics, evaluating the effluences of governance variables on the sustainability of Ethiopian MFIs is essen-

tial because CG is the basic tool to achieve most of the above-mentioned characteristics or objectives, and studies that have been conducted related to this issue are less in Ethiopia (Bekana and Mohammed, 2019). Given this, the researcher is interested in observing the influence of CG factors on the sustainability of MFIs in Ethiopia.

Empirical Literature Review and Hypotheses Formulation

According to Horsthuis (2019), the term "Corporate Governance" denotes the internal and exterior systems that guide, oversee, and manage businesses. A wide area of research is directed toward explaining the association of governance with MFIs' sustainability, but the results are inconsistent. In this section, previous empirical studies provide the financial performance determinants in MFIs, and related studies spanning developed and under-developing countries are being reviewed. Following an examination of various literatures on the subject of CG systems, hypotheses have been developed.

Internal Governance Mechanisms

The ownership structure, management benefits, and board structure are examples of internal corporate governance processes (Horsthuis, 2019) and the ways and methods used by the institution that help the management improve the shareholders' value (Sharma, 2017). The research on MFIs acknowledges the significance of internal governance procedures (Helms, 2006), with board oversight and control of management being the primary focus (Hermalin and Weisbach, 2003). The owners-board connection is centered on the board's decisiveness, level of information, and alignment with owner interests (Bøhren and Strøm, 2005).

Board Size

The majority of rules acknowledge that the directors serve as CG's central authority. Researchers like Siele (2009); Muwamba (2012); Chenuos *et al.*, 2014; and Uchenna *et al.*, 2020 argue that larger numbers of boards are advisable. There is a belief that the financial success of MFIs benefits from larger boards (Bassem, 2009). Furthermore,

Bekana and Mohammed (2019) discovered that the MFIs' financial viability is significantly improved via the board's numbers. Smaller boards, as opposed to large ones, have been the focus of recent research and thought. Lipton and Lorsch (1992) contend that higher board members perform worse in comparison to small boards and the same result is found by (Jensen, 1993). According to research by Sanda *et al.*, 2003, smaller boards are positively correlated with an institution's financial performance compared to larger ones. Academics such as Jensen (1993) contended that a board may be more active if it is smaller in size. According to the review, there are mixed results regarding the association among board size and the MFIs' sustainability. Thus, the hypothesis has been articulated as follows:

H₁: Board size has a bearing on the sustainability of Microfinance Institutions.

Board Independence

According to the literature, since outside directors are better at keeping an eye on management, having more of them on the board should improve a company's financial performance (Adams and Mehran, 2003). According to research by Kyereboah-Coleman and Biekp (2005) and Bassem (2009), MFIs with a larger percentage of outside board members have enhanced sustainability. Besides, the sustainability of MFI is highly influenced by independent directors (Thrikawala and Locke, 2018). The degree of independence of the board has a direct bearing on how effective it is (Dalton *et al.*, 1998) similar result is found by the scholars (Singh and Gaur, 2009) as well as (Gaur *et al.*, 2015). They need to be more likely to form specialized committees in response to stakeholder demand (Gupta and Mirchandani, 2019). Thus, the study develops the following hypothesis.

H₂: Board independence has a positive significant relationship with the sustainability of MFIs.

Gender Diversity

Diversity on boards fosters successful international partnerships and improves the efficacy of business leadership (Robinson and Dechant, 1997). According to research on corporate governance, a board's diversity—specifically, the fraction of females and

minorities on the board—may have a favorable influence on a company's financial success (Bassem, 2009).

Research by Kyereboah-Coleman (2006) indicates that the sustainability of microfinance develops through a higher proportion of women board members. Furthermore, having a sizable fraction of women on the board would help the MFI differentiate between customers who have good intentions and those who don't (Mersland and Strom, 2007). Furthermore, the viability of microfinance banks is enhanced by a diverse board with a large fraction of female members (Bassem, 2009). In actuality, the organization's ability to serve the impoverished is increased when there are women on the board (Thrikawala and Locke, 2018). As stated by Safugha (2017), gender diversity on boards and financial viability are positively correlated. Increasing the number of women serving on the board will enhance top management control and board governance (Fondas and Salsalos, 2000). Moreover, Belete (2015) contended that improved financial viability is associated with a varied mix of women serving on boards. Thus, the following hypothesis is developed.

H₃: Gender diversity via female representation on a Board has a positive significant effect on the sustainability of MFIs

Female CEO

Mersland and Strom (2007) predict that sustainability will improve by way of increased knowledge of the CEO and the board. As documented by Armendariz-de Aghion and Morduch (2005), targeting female clients has been among the advances in microfinance. It makes sense that having a female CEO will help MFIs understand their clients better and help them differentiate between sincere clients and those who are not. As a result, both the MFI's operational expenses and total profitability should be impacted by this increased customer knowledge (Mersland and Strom, 2007). As demonstrated by the fraction of female directors, gender can also be seen as a measure of board heterogeneity (Shrader *et al.*, 1997). In the study conducted by Mersland and Strom (2007) and Kyereboah-Coleman (2006), MFIs with female CEOs do better financially. Furthermore, Belete (2015) provided evidence that the sustainability of MFIs is positively influenced via

female CEOs. Therefore, it makes sense that MFIs' sustainability would benefit from having female CEOs.

H₄: Female CEO has a positive significant effect on MFI sustainability.

CEO/chairman duality

If the chairman and CEO are two different people, the board of MFIs should be more cohesive (Mersland and Strom, 2007). The separation of the CEO's and chairman's positions means that the board must successfully carry out its supervisory role. This would facilitate the establishment of a unified chain of command inside the MFI, allowing the business to reassure interested parties (Waithaka *et al.*, 2003). A CEO/chairman duality may be a sign of entrenchment in the opposite direction of independence (Hermalin and Weisbach, 1991 and 1998), as the CEO may then employ tactics that are advantageous to him personally. Given that CEO/chairman duality is associated with lower ROAs and higher operating costs (Mersland and Strom, 2007), it makes sense to believe that it hurts sustainability. Furthermore, there is an adverse link between CEO/chairman duality and financial performance (Waithaka *et al.*, 2013). Moreover, Tchuigoua (2014) offered proof of the substantial and unfavorable correlation between financial sustainability and CEO dualism. It was decided that the CEO Chairman Duality would negatively affect sustainability (Coleman and Osei, 2008). Financial performance suffers when CEO dualism is common in financial firms (Sarkar and Sarkar, 2018). Thus, it is expected that CEO/chairman duality hurts the Ethiopian microfinance financial sustainability, and the hypothesis is formed as follows:

H₅: CEO/chairman duality has a negative significant effect on the sustainability of MFI.

Internal Board Auditor

Effective internal audit is the principle of effective financial institution oversight. Internal auditing assists in locating issue areas and preventing significant failure (Bassem, 2009). It is suggested in the policy papers of MFIs that internal auditors provide direct reports to the MFI board (Steinwand, 2000). MFIs' financial performance will improve as a result of this arrangement (Mersland and Storm, 2007). The financial

success of MFIs is improved when internal auditors report directly to the board, as mentioned by (Sinclair, 2012, Thrikawala *et al.*, 2013; and Mersland and Strom, 2007). Furthermore, there is a favorable correlation and substantial influence on the financial sustainability of MFIs when an auditor reports directly to the directors on the board (Mersland and Strom, 2009). The success of the company is positively correlated with independent auditors (internal) who report to the directors on the board (Ashari and Krismiaji, 2019; Bassem, 2009). Thus, the researcher anticipated that the board heads would receive direct reports from the internal board auditor.

H₆: The internal board auditor reports directly to the board have a positive relationship with the sustainability of MFIs.

Board Meeting's Frequency

The number of times the board meets in a given year is known as the meeting frequency. Mixed results are confirmed by empirical results that take into account the frequency of board meetings and sustainability. Several investigations concluded that holding more meetings has a detrimental effect on MFI performance. Vefas (1999) found a significant link between the number of board meetings and the financial success of MFIs. Regular meetings dramatically reduce ROA (Danoshana and Ravivathani, 2013). Furthermore, a negative and significant correlation was shown by Akpan (2015) between the frequency of board meetings and the financial success of MFIs. In a similar vein, Amran (2011) found that MFIs' sustainability declined with the increasing number of board meetings. On the other side, Karamanou *et al.*, 2005 found a relationship between management profitability estimates in microfinance enterprises and the frequency of board meetings. Mangena and Tauringana (2008) found a positive link between the frequency of board meetings and the financial success of MFIs. Similar findings were made by Ntim and Osei (2011), who discovered a significant and positive correlation between the frequency of MFI board meetings and the MFIs' financial success. Furthermore, Belete (2015) asserts that the regularity of board meetings has a substantial impact on MFI sustainability. Thus, the researcher has formed the following hypothesis in light of the literature review:

H₇: Board Meeting frequency has a significant influence on the sustainability of MFIs.

Audit Committee Size

The audit committee must be involved to address the competing interests that exist between the principals and management (Elbahar *et al.*, 2021). Strong financial sustainability is projected to be connected with an increase in the audit committee's size (Danoshana and Ravivathan, 2013). Committee size and firm performance are strongly positively correlated (Ashari and Krismiaji, 2019; AlMatari *et al.*, 2012; Elbahar *et al.*, 2021; Danoshana and Ravivathan, 2013). Conversely, the financial success of MFIs is adversely affected by the size of the audit committee (Belete, 2015; Ferede, 2012; Sharma *et al.*, 2009; Vafeas, 1999; Aldamen *et al.*, 2011; Kipkoech and Rono (2016). The results are inconsistent, as the empirical research has demonstrated. This conundrum has led to the formulation of the hypothesis.

H₈: There exists a significant relationship between Audit Committee size and sustainability.

Fixed Wage

According to John *et al.*, 2004, top management incentives have been identified as a crucial CG mechanism since they validate the management's alignment with the shareholders' interests. The competing interests between agent and principals are resolved. The greatest tool for balancing the interests of managers and stakeholders is compensation that combines fixed and performance-based payments (Hartarska, 2004). Brick *et al.*, 2006 claim that a company's financial success is impacted by management salaries. Managers may be encouraged to take more chances at the expense of MFI depositors if rewards are increased. Since these depositors would be the ones negatively impacted if the institution failed, it is advocated to have small pay-performance sensitivity (John and John, 1993). For companies with a mission, fixed executive pay is the best choice, claim (Easley and O'Hara, 1998). Managers will find it beneficial to tell the truth whether they want to or not because of the set salary.

Bassem (2009) and Hartarska (2004) have demonstrated that the variable fixed wage has a favorable impact on financial success. Furthermore, Hameed *et al.*

(2014) claimed that fixed compensation has a significant positive influence on a business's ability to make money. However, when compared to fixed salary payments, performance-based rewards have a favorable and significant influence on MFIs' financial success (Rehman *et al.*, 2021). Hartarska (2005) countered that it's possible MFI managers were unaffected by performance-based pay. Moreover, researchers like Houston and James (1995), have confirmed that financial firms had lower pay-performance sensitivity than other businesses and similar outcome is found by (Adams and Mehran, 2003). Thus, the following hypothesis has been developed based on empirical studies.

H₉: MFIs whose manager receives a fixed salary have a significant influence on the sustainability of MFIs

Profit Orientation

It might be argued that MFIs in particular, being more market-oriented in their commercialization, will be more efficient than profit-oriented firms (Roberts, 2013). Moreover, profit-oriented MFIs might be less concerned with reducing poverty overall and more with turning a profit, which would be a departure from the social objectives of helping the underprivileged (Copestake, 2007). However, compared to profit-focused MFIs, Gupta and Mirchandani (2019) found that socially oriented MFIs had a larger average loan amount and a stronger focus on attaining social goals with a large number of borrowers who are primarily female. On the other side, empirical research revealed comparable financial performance between profit and non-profit MFIs (Mersland and Strom, 2008 and 2009) and the result is confirmed by (Tchakoute Tchuigoua, 2010). It makes sense to presume that the sustainability of profit and non-profit MFIs will be comparable when examining empirical research. Thus, the hypothesis takes into account the empirical findings about profit orientation and the sustainability of MFIs. Thus, the hypothesis is formulated as follows:

H₁₀: Commercially oriented and socially oriented MFIs are similar in terms of sustainability.

External Governance Mechanisms

It is possible to use the external governance method when the internal CG factors lacks in itself while performing the best for the institution (Sharma, 2017;

Hartarska, 2005). In the MFI sector, rating agencies and audited financial reports provide information that donors and creditors rely on (Hartarska, 2005). External governance reduces informational asymmetries (Healy and Palepu, 2001). As stated by Hartarska (2005) in the absence of a developed stock and debt market, donors and investors rely on the impartial evaluation of MFIs' financial sustainability.

Rated

Rating agencies' perceptions of MFIs are based on their overall performance and capacity to meet their financial obligations. The corporate governance of MFI is ranked by raters who impartially and independently assess it, making comparisons easier. Organizations that rate microfinance loans evaluate the MFIs' overall financial performance (Bassem, 2009). According to Bassem (2009), microfinance rating agencies evaluate an MFI's overall sustainability performance and have a favorable effect on the financial success of MFI. On the other side, Tchuigoua (2014) discovered a substantial relationship between rating and MFIs' financial performance. Besides, Bhagat and Bolton (2008) offered proof of the strong association among a firm's rating and its sustainability. Furthermore, Renders *et al.*, 2010 exposed a strong and favorable link among firm financial success and rating. Furthermore, Letenah (2015) contended that having a rating from a rating agency helps to address more female clients and has a good, significant impact on ROA and OSS. Thus, it stands to reason that the rating and MFI's financial performance are positively correlated.

H₁₁: There is a significant positive relationship between rating and MFIs' sustainability.

Regular Onsite Supervision

MFIs use regular government agency onsite monitoring as an external governance tool (Hartarska, 2004). A supervised MFI is more likely to gain the confidence of clients and may have higher financial performance (Hartarska and Nadolnyak, 2007). Regular onsite supervision hurts financial performance (Cull *et al.*, 2011; Letenah, 2015). Bassem (2009) argued that supervised MFIs have a significant impact and positive link to ROA and OSS. According to studies by Hartarska

and Nadolnya (2007), it is negligible factor in determining the sustainability or financial success of MFIs and Mersland and Strom (2007) confirmed with similar result. On the other side, regular on-site supervision could affect the performance of MFIs (Hartarska, 2004). Therefore, based on observations made in the empirical literature, the hypothesis is established as follows:

H₁₂: Regular onsite supervision influences the financial performance of MFIs.

Data and Methodology

This study uses descriptive analysis to describe, measure, compare, and classify the association and effects of CG variables (explanatory) with the sustainability (dependent variables) of MFIs in Ethiopian. The study employed a quantitative research approach. Accordingly, secondary sources of data (panel in nature) are used and collected from the annual financial statements of MFIs which have been over ten years (2012-2021), the Association of Ethiopian MFIs, and the National Bank of Ethiopia.

The target population is all Ethiopian MFIs. By the end of 2019/20, the number of MFIs reached 41 (NBE, 2020). This study utilizes the purposive sampling method to choose the required sample from total MFIs, seniority, and data availability was mandatory i.e. the selection criteria set by the researcher is that MFIs should operate before the year 2012 have annual reports for consecutive ten years. The number of MFIs starting operations before the year 2012 is 31. Even though the study proposed to utilize all 31 MFIs as a sample, it was taken only 25 MFIs based on their data available to produce generalized results.

There are some diagnostic tests that the researcher is required to examine the data for the analysis result to be reliable and valid. Based on this, the researcher conducted a multicollinearity, autocorrelation, and heteroscedasticity test in this study. To solve autocorrelation and heteroscedasticity problems the researcher used robust regression analyses. In addition, the LM test is applied to identify Panel effects on the pool. Furthermore, the Durbin-Wu-Hausman (DWH) test is implemented to select between random and fixed effects.

Variables Description

The following table provides explanations for both dependent and independent variables as follows:

Table 4.1: Definitions of dependent and explanatory variables and their hypothesized sign

Variables	Explanations	Expected Sign.
ROA	Return On Assets	
OSS	Operational Self-Sufficiency	
Board-size	Number of board members	+/-
Independent-boards	The percentage of the voting board members who are not connected to any MFI stakeholders	+
Women on the board	The percentage of female board members	+
Female CEO	A dummy representing a CEO who is female when 1	+
CEO/chairman duality	A dummy variable that, in the event that the chairman and CEO are the same person, equals 1	-
Internal board auditor	If the internal board auditor responded to the board, they are considered dummy as 1	+
Meeting frequency	The count of board meetings held annually within the reviewed period	+/-
Fixed-wage	A dummy that is 0 otherwise and equals 1 if the manager gets a fixed salary	+/-
Audit Committee Size	The number of members of the audit committee	+/-
Regular onsite Supervision	A dummy is one if regular on-site oversight by banking regulators takes place	+/-
Rated	If the MFI is rated by a specialized MFI rating agency, the dummy equals one; if not, it equals 0	+
Profit-Orientation	Dummy that is set to 1 in the case of a profit MFI and Zero in the case of a non-profit MFI	+
<i>Control variables</i>		
MFIage	The number of years since the beginning	
MFIsize	The logarithm of the MFI's total assets	
Rural/urban market	If the primary market is urban, a dummy is 1	
Loan methodology	If the MFI relied mostly on an individual lending approach, a dummy is equal to 1; if not, it equals 0.	

Model Specification

A panel regression model (Fixed and random) is used to evaluate the influence of CG on the MFIs' Financial sustainability. Therefore the model that incorporates the variables to test the hypotheses of this study is:

In the model, j represents k number of control variables, denote slope coefficients of control variables and CV represents Control variables. ϵ is the error term, or residual variable, which stands for the features of the MFIs that are not observable and are not included in the model.

Results and Discussions

Descriptive Statistics

Table 6.1 is an overview of the descriptive statistics that were used to provide broad descriptions of the data (both dependent and explanatory variables). The number of observations for every factor is 250 (i.e., 10 years of data for 25 Microfinance institutions). Accordingly, maximum, minimum, standard deviation and mean values of both dependent and explanatory variables for Ethiopian MFIs from 2012-2021 were demonstrated as follows:

Table 6.1: Descriptive statistics of variables (N.ob= 250)

Variable	Mean	Std. Dev.	Min	Max
ROA	.017206	.2072705	-1.29	1.2
OSS	126.1079	46.93771	.67	257
BSize	6.512	1.665217	5	11
Bindp	.191088	.1700196	0	.429
Womdire	.09048	.1197025	0	.89
FemCEO	.192	.3946632	0	1
CEOdual	.32	.4674119	0	1
INTauditor	.496	.500987	0	1
BMetgFreq	4.684	2.008052	2	12
Acszize	2.888	.8087474	2	5
Fwage	.536	.4997027	0	1
ProfitOrn	.492	.5009389	0	1
ROsuper	.424	.4951816	0	1
Rating	.484	.5007464	0	1
Mfage	16.22	4.747817	3	24
Mfsize	18.95256	2.468628	13.35	27.72
Main market- urban	.432	.4963481	0	1
Loan metho. (Mainly individual)	.536	.4997027	0	1

Source: STATA 14.1 output

As shown in the table, for the total sample, the average value of ROA ranged from -1.29 - 1.2 i.e. a minimum of -1.29 and a maximum of 1.2. It has 0.017 of an average value, showing a deviation of 0.21 from its mean. A negative minimal ROA value suggested that certain Ethiopian microfinance firms had losses throughout the chosen analysis period. Concerning a standard deviation, Ethiopian MFIs' ROA deviates by 21% from the mean. The sample's average ROA was found to be 0.017, meaning that MFIs generate an average return of 1.7 percent on their assets. In a similar vein, the average OSS for the examined MFIs is 126.11 percent, with the lowest and highest amounts of 0.67 percent and 257 percent, respectively. The departure from the mean value is 46.93 percent, suggesting a widely dispersed performance in terms of cost coverage. It gauges, on average, how successfully the MFI can use operating revenues to pay for its expenses.

Among the independent variables included in this study, the mean number of people serving on the boards of microfinance institutions is 7, with a variance of 1.67. The highest and lowest sizes of these boards are 11 and 5 respectively, indicating that these boards are not widely distributed. The average is about 7 directors, which is within the range of 7 to 9 directors suggested by the CMEF (2005) (Mersland and Strom, 2007). With a deviation of 0.17 and a highest of 0.43, the unaffiliated boards account for an average of 19% of the board members, indicating a narrow distribution of independent boards.

According to the descriptive statistics, the fraction of females on boards is, on average, 9%, with a high ratio of 0.89 and a low of zero. With a deviation of 0.39, the aforementioned table indicates that 19.2 percent of Ethiopian microfinance institutions are led by female CEOs. A single person serves as both the CEO and chairman of 32% of the companies, with a standard deviation of 0.47. One method to link internal business governance with board governance is to have an auditor (internal) who replies to the board. With a deviation of 0.5, approximately half (49.6%) of the MFIs in this study had an auditor i.e. internal who reports to the board directly.

The mean frequency of board meetings is 4.7 times per year, with a variation of 2, and a maximum of 12 times per year, as shown by the descriptive data. Furthermore, the audit committee size ranged from 2 to 5, or a lowest of 2 and a highest of 5 members, with a mean value of 2.9 and a deviation of 0.81. The fixed wage has an average value of 53.6 percent and a deviation of 0.5 representing that most Ethiopian MFI managers have fixed wages rather than performance-based ones. As shown in the table on average 49.2 percent of microfinance in Ethiopia are profit-oriented with a standard deviation of 0.5 and the other MFIs are non-profit or NGOs representing 50.8 percent of the sample. Concerning regular onsite supervision, the average value is 42.4 percent, and the standard deviation of 0.5. This result indicated that 42.4 percent of the microfinance institutions in Ethiopia are regularly supervised by the NBE. The table also revealed that the standard deviation is 0.5 and that, on average, 48.5 of the MFIs that make up the sample are rated.

In terms of control variables, the descriptive statistics show that the mean age standing for the MFI sector of Ethiopia is about 16 years and ranges from 3 to 24 years of operation. The microfinance size falls between 13.4 and 27.7 on the log of total assets. The entire assets have a mean of 19 and a deviation of 2.47. As shown in the table, the average percentage of the rural market was 56.8%, significantly higher than the urban market. This illustrates the difficulties the MFI has entering the urban market. The table then displays the group and individual loan approach categories. If individual loans are the MFI's primary loan methodology, then the dummy is 1. The results show that, with a standard variation of 0.5, 53.6% of the cases include the individual lending methodology. Individual loans are therefore comparatively more significant.

Regression Analysis

Table 6.2 below presents the outcome of Fixed-Effect (ROA) and random-effect (OSS) regression models made to evaluate the influence of independent variables on the MFIs' sustainability. Thus, the regression outcome reveals both coefficients of independent variables as well as corresponding p-values as follows:

Table 6.2: Regression Results of Fixed and Random Effects Models

VARIABLES	ROA	OSS
BSize	0.0123 (0.465)	-6.156*** (0.00483)
Bindp	0.278 (0.164)	28.28 (0.145)
Womdire	0.393** (0.0210)	43.01*** (0.00126)
FemCEO	0.0550** (0.0179)	12.90** (0.0180)
CEOdual	-0.438** (0.0343)	-6.693 (0.287)
INTauditor	0.0710* (0.0904)	16.33*** (0.00201)
BMetgFreq	-0.0164** (0.0366)	0.234 (0.852)

Acsize	0.0216 (0.310)	-9.105** (0.0182)
Fwage	0.0163 (0.120)	8.131** (0.0225)
ProfitOrn	0.0888** (0.0174)	16.61*** (0.00545)
ROsuper	0.0551** (0.0252)	-11.58** (0.0287)
Rated	0.0239 (0.508)	8.828 (0.106)
<i>Control Variables</i>		
Mfage	-0.0265*** (0.000605)	-1.546* (0.0556)
Mfsize (Total Assets)	0.0570*** (0.00327)	12.72*** (0)
Rura/Urbamkt	-0.00125 (0.951)	-11.86*** (0.00907)
Loanmetho-individual	0.00659 (0.563)	0.843 (0.816)
Constant	-0.784*** (0.00981)	-53.31** (0.0316)
R-squared	0.536	0.4098
F-statistic	0.000	0.000

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: STATA 14.1 Outputs

Discussion of Findings

Consequently, the basic objective of this research is to evaluate the financial performance determinants of MFIs. The estimation outcome of the two models (Fixed and random effect) that present the impact of explanatory variables on financial sustainability is discussed as follows:

Table 6.2 results showed that, although there was no significant link between board size and ROA, there was a substantial adverse correlation between board size and OSS. Board size and ROA of Ethiopian microfinance institutions were shown to be positively correlated. Rejected the hypothesis concerning ROA and not rejected with OSS. The outcome is consistent with (Bassem, 2009; Sanda *et al.*, 2003 and Bekana, 2019). As suggested by Agency theory, independent boards

have a favorable influence on MFIs' sustainability (Hartarska, 2004). Similarly, the study indicated that board independence has a positive relationship but negligible impact on financial success. In this case, the hypothesis is not accepted.

There is a significant correlation and favorable influence of female directors on ROA as well as OSS (financial performance). Particularly, if a woman director took the place of one board member, would help to improve ROA by 39.3 and OSS by 43 percentage points as compared to the male directors of MFIs. The hypothesis is not rejected and the outcome is similar to those (Kyereboah-Coleman, 2006; Bassem, 2009; Safugha, 2017; Belete, 2015). Female CEO has a positive association and significant effect on sustainability. With this finding, the hypothesis is not rejected and the same result is found (Kyereboah-Coleman, 2006; Mersland and Strom, 2007). Keeping all other variables constant, MFIs with a Female CEO have on average 5.5 and 12.9 percentage points higher ROA and OSS respectively than MFIs with a CEO represented by a male. The discovery of female CEOs demonstrates the significance of gender for MFIs, as female clients are frequently regarded as particularly valuable.

The outcome indicated that duality has an adverse relationship and substantial influence on ROA and an adverse but statistically insignificant impact on OSS. The hypothesis is not rejected with the result concerning ROA and the study outcome confirms the results of (Coleman and Osei, 2008; Sarkar and Sarkar, 2018). Keeping all other variables constant, MFIs with a CEO duality have on average 43.8 and 6.7 percentage points lower ROA and OSS respectively than MFIs that have separate CEO and chairman. Moral hazard in the principal-agent connection may be the cause of the CEO/chairman duality's detrimental effects (Mersland and Strom 2007).

ROA and OSS have a substantial and favorable correlation with internal auditors who report directly to the board. Consequently, the hypothesis is not rejected and the same result is found by (Thrikawala *et al.*, 2013; Ashari and Krismiaji, 2019; Bassem, 2009). Holding all other factors fixed, MFIs with internal auditors directly reporting to the board have on average 7.1 and 16.33 percentage points higher ROA and OSS respectively than MFIs without direct reports to boards by internal auditors. Thus, MFIs that permit their internal auditors

to submit reports to the board immediately ought to exhibit improved financial outcomes.

Board meeting frequency has an adverse link and substantial impact on ROA and has a favorable insignificant impact on OSS. Thus, the hypothesis is not rejected with the result related to ROA. The same result is found by (Danoshana and Ravivathani, 2013; Vefas, 1999; Akpan, 2015). Although statistically negligible, the number of audit committees has a favorable impact on ROA, the result is similar to that found in (Danoshana and Ravivathan, 2013; Ashari and Krismiaji, 2019; Elbahar *et al.*, 2021) but, has an adverse and significant influence on OSS. The hypothesis is accepted with the outcome in OSS. The finding is similar to previous researchers' results (Vafeas, 1999; Sharma *et al.*, 2009; Ferede, 2012; and Belete, 2015). We can conclude that when the number of Audit committees increased by one, ROA improved by 0.022 and OSS decreased by 9.1 percent.

The coefficient of fixed-wage is positive but it makes a minimal impression on ROA but has a favorable substantial impact on OSS. The hypothesis is not rejected the result is based on OSS. This outcome supports earlier discoveries, including those (Bassem, 2009; Hartarska, 2005; Hameed *et al.*, 2014; O'Hara, 1998). Other factors remain unchanged; MFIs managers with a fixed salary have on average 1.63 and 8.13 percentage points higher ROA and OSS respectively than MFIs which have fixed wage plus a performance-based bonus.

Concerning profit-oriented MFI; it has a positive nexus and substantial influence on ROA & OSS. Consequently, the idea that the financial success of MFIs with a commercial emphasis and one with a social orientation is similar is unsupported by the outcome of this research. The outcome is in line with the discoveries of (Dilven, 2017; Gupta and Mirchandani, 2019) because the result found that profit orientation MFIs have a substantial effect on sustainability. Therefore, profit and non-profit MFIs are not similar regarding financial success. Other factors remain unchanged; Profit-oriented MFIs have on average 8.88 and 16.61 percentage points higher ROA and OSS respectively than non-profit MFIs.

Concerning external governance mechanisms, regular onsite supervision has a positive association

and significant influence on ROA and the result is consistent with earlier empirical research by (Cull *et al.*, 2011), and has an adverse relationship and significant influence on OSS. The result is similar to previous empirical studies found by (Letenah, 2015). The hypothesis that regular onsite supervision affects the financial sustainability of MFIs is not rejected. All other things remain fixed; MFIs with regular onsite supervision by central bank authorities have on average 5.51 and 11.58 percentage points higher ROA and lower OSS respectively. Regular Onsite Supervision does affect the performance of Ethiopian MFIs (ROA and OSS).

The overall performance of MFIs is rated by microfinance rating agencies (Bassem, 2009). Regarding MFIs' financial success, Rated has a statistically little impact but a positive correlation. The hypothesis is rejected and the outcome is similar to the findings of (Bhagat and Bolton, 2008; Tchougoua, 2014; Bassem, 2009). All the other factors are unchanged; MFIs rated by independent rating agencies have on average 2.39 and 8.83 percentage points higher ROA and OSS respectively than MFIs without rated by rating agencies. The outcomes showed that none of the performance metrics are impacted by an independent agency's rating. Given that MFIs have been investing a lot of resources to be rated, this is a noteworthy outcome (Hartarska, 2004).

Finally, control variables are included that are unique to the MFIs. These control factors will also contribute to the ongoing discussion in the literature on MFIs (Mersland and Strom, 2007). The result in Table 6.2 indicated that the Microfinance age has a negative link and a significant influence on ROA as well as OSS. The outcome is comparable with (Barron *et al.*, 1994; Akben-Selcuk, 2016) who suggest that aging can hurt firms' performance due to inertia effects and leading institutions to become inflexible and difficulties in fitting the rapid change in a business environment in which they operate. Microfinance size has a substantial influence and favorable link to the ROA and OSS. The mainly urban market is associated negatively and has a statistically insignificant influence on ROA but it has an adverse relationship and significant effect on OSS. Other variables remain unchanged; MFIs that have a mainly urban market have on average 0.125 and 11.86 percentage points lower ROA and OSS respectively than MFIs that have a mainly rural market. Concerning

Loan methodology, individual lending has a favorable but statically negligible influence on sustainability. Other factors remain the same, MFIs that have individual lending have on average 0.659 and 0.84 percentage points higher ROA and OSS respectively than MFIs that have group lending methodology.

Conclusions and Suggestions

The econometric estimation results of internal governance mechanisms show that Female CEOs, women directors, and internal board auditors reporting directly to the board and profit orientation have a favorable relationship and statistically substantial impact on MFIs' sustainability. Having said that, board size has a positive link but an insignificant impact on ROA and is associated negatively with OSS, which has statistically a significant effect. An unaffiliated board has a positive relationship but an insignificant influence on sustainability. CEO/chairman duality has an adverse relationship and statistically significant effect on ROA and an adverse but statistically insignificant impact on OSS. While there is a positive correlation, fixed pay has a minor effect on ROA but a substantial positive influence on OSS. The frequency of board meetings has a positive, non-significant influence on OSS but a negative, statistically significant effect on ROA. However, the size of the audit committee has a favorable link with ROA but a negligible impact.

Concerning external governance mechanisms, Regular onsite Supervision has a positive association and statistically substantial influence on ROA and has an adverse relationship and statistically significant effect on OSS. Finally, control variables are included that are specific to the MFIs. Microfinance size has a significant influence and has a positive link to ROA and OSS. The study recommended that MFIs should consider the diversity of gender on CEO within the directors and also give attention to internal auditors to report directly to them. This research was undertaken only in Ethiopian MFIs. Therefore, using these research outcomes as a benchmark other researchers need to conduct comparative studies with other countries' microfinance institutions. Moreover, the study suggested that future researchers may be interested in

validating the stability of the result and providing additional results for this study by including other variables (Internal and external) such as busy board, Board experience, and regulation.

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