



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

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ABSTRACT

This study investigated the relationship between the financial performance and corporate governance of microfinance institutions using a sample of 25 MFIs from 2012 to 2021 with a balanced set of panel data. 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, and internal auditors reporting directly to the board of directors and Profit Orientation have a positive relationship and statistically significant effect on financial performance (ROA and OSS). The study recommended as microfinance institutions should consider the gender diversity of CEO and on the Board of directors and the board of directors also give attention to internal auditors to report directly to them. Moreover, the study suggested for 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).

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Introduction

Microfinance Institutions (MFIs) are an essential service provider of finance for rural poor and other groups termed as unbanked people, helping them to escape from poverty. As stated by Robinson (2001), Microfinance refers to small-scale financial services; primarily credit and savings provided to people who farm, operate small enterprises or microenterprises, provide services, and to other individuals and groups in nearby developing countries, both rural and urban.

Corporate governance is about achieving corporate goals. As stated by Mersland and Strøm (2009) reaching more clients in the poorer level of the population is the first goal of MFIs followed by financial sustainability as the second goal. The study analyses the relationship between governance mechanisms and Ethiopian MFIs' financial performance. As stated by Christen (2000), financial performance is measured in terms of the overall profitability of MFIs, such as return on assets (ROA) and operational self-sufficiency (OSS).

In the present-day business world corporate governance is concerned with holding the balance of financial and social objectives of MFIs (Cadbury, 2002). Governance affects the way an organization is directed, administered, and/or controlled. With appropriate corporate governance, it can go successfully in preparing MFIs to handle well the risks that are inherently part of managing an MFI (Di Benedetto *et al.*, 2015).

However, a fair number of researchers have carried out their study on the related issues in Ethiopian Microfinance institutions. For instance, Belete (2015); Bayeh (2012); Bekana and Mohammed (2019) have studied the impact of Corporate Governance mechanisms on the sustainability/financial performance of MFIs in Ethiopia. The above studies used a limited number of variables and did not include external governance mechanism variables to analyze the impact of corporate governance mechanisms on the sustainability/financial performance of Ethiopian microfinance institutions.

The microfinance sector in Ethiopia has been characterized as giving higher attention to sustainability/financial performance and outreach/social performance and also the sector is owned by Ethiopians and promotes both savings and credit products (Ebisa *et al.*, 2013; Bayeh, 2012). Having those characteristics, evalu-

ating the effluences of governance variables on the sustainability/financial performance of Ethiopian MFIs is essential because corporate governance 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 to observe the effect of governance mechanisms which are internal and external on the Sustainability/Financial Performance of MFIs in Ethiopia.

Empirical Literature Review and Hypotheses Formulation

Corporate governance comprises internal and external mechanisms to direct, monitor, and control firms (Horsthuis, 2019). A wide area of research is directed toward explaining the association of corporate governance with MFIs' financial performance, 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. After reviewing kinds literature related to both the internal as well as external governance mechanisms, hypotheses have been formulated.

Internal Governance Mechanisms

The internal mechanisms of corporate governance include the structure of the board, management benefits, and also the ownership structure (Horsthuis, 2019) the ways and methods used by the institution which helps the management in improving the shareholders' value (Sharma, 2017). The importance of internal governance mechanisms is recognized in the MFIs-related literature (Helms, 2006) and the first and foremost concern is of board oversight and control of management (Hermalin and Weisbach, 2003). The owners-board relationship concerns how well the board is aligned with owner interests, how well the board is informed, and how decisive the board is (Bøhren and Strøm, 2005).

Board Size

Most guidelines recognize that the board of directors is the focal point for corporate governance. As Researchers like (Siele, 2009; Muwamba, 2012;

Chenuos *et al.*, 2014; Uchenna *et al.*, 2020) argue that a larger board size is advisable. There is a view that larger boards are better for the MFIs' financial performance (Bassem, 2009). Furthermore, Bekana and Mohammed (2019) found that the size of the board has a positive significant effect on the MFIs' financial performance. However, recent thinking and research evidence have been directed to smaller boards rather than large ones. Jensen (1993); Lipton and Lorsch (1992) argue that when comparing small boards, large boards are less effective. Sanda *et al.*, 2003 documented that institution financial performance has a positive relationship with small, as opposed to large boards. Scholars like Jensen (1993) argued that the smaller the size of the board the more active the board may be. According to the review, there are mixed results regarding the association between board size and the MFIs' performance. Thus, the hypothesis has been formulated as follows:

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

Board Independence

The literature suggested that increases in the proportion of outside directors on the board should increase a firm financial performance as they are more effective monitors of managers (Adams and Mehran, 2003). Kyereboah-Coleman and Biekpe (2005); Bassem (2009) documented that MFIs with a higher proportion of unaffiliated directors had better sustainability (measured by ROA & OSS). Thrikawala and Locke (2018) found that independent directors have a significant impact on MFI's financial performance. The board's efficacy relates strongly to its level of independence (Dalton *et al.*, 1998; Singh and Gaur, 2009; Gaur *et al.*, 2015). They should be more inclined to respond to pressures from stakeholders by creating specific committees (Gupta and Mirchandani, 2019). Therefore, the study expects a positive relationship of board independence with the MFIs' financial performance of devises the following hypothesis as follows.

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

Gender Diversity

Board diversity enhances the effectiveness of corporate leadership, and promotes effective global relationships

(Robinson and Dechant, 1997). Corporate governance literature argues that board diversity in terms of women and minority representation is potentially positively related to firm financial performance (Bassem, 2009). Fondas and Salsalos (2000) argue that diversity in board composition via greater female representation will lead to improved board governance and top management control. Furthermore, Kyereboah-Coleman (2006); Bassem (2009); Safugha (2017); Belete (2015) argued that board gender diversity has a positive association with financial performance. Thus, it is expected that the gender diversity of a board has a positive effect on Ethiopian MFIs' financial performance.

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

Female CEO

Mersland and Strøm (2007) expect that the better the CEO and the board are informed, the better will financial performance be. One of the innovations in microfinance has been the targeting of female customers (Armendariz de Aghion and Morduch, 2005). Alternatively, gender can be seen as a sign of board heterogeneity, specified by the fraction of women directors (Shrader *et al.*, 1997). The study conducted by Kyereboah-Coleman (2006); Mersland and Strøm (2007) revealed that MFIs with women CEOs enhance the financial performance of MFIs. In addition, Belete (2015) documented that female CEOs have a positive impact on MFIs' financial performance. Thus, it is expected that female CEOs have a positive effect on MFIs' financial performance.

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

CEO/chairman duality

In microfinance institutions, the board is supposed to be better aligned if the CEO and chairman are different persons (Mersland and Strøm, 2007). The effect of the separation of the role of the chairman and the CEO is likely to result in the board effectively exercising its supervisory role (Waithaka *et al.*, 2003). Moreover, Mersland and Strøm (2007); Coleman and Osei (2008) found that CEO/chairman duality

has a negative relationship to financial performance. Furthermore, Tchuigoua (2014) documented that the relationship between CEO duality and MFI financial performance is adverse with significant effects. CEO duality hurts financial institutions' financial performance where the incidence of CEO/chairman duality is high (Sarkar and Sarkar, 2018). Thus, it is expected that CEO/chairman duality hurts the Ethiopian microfinance financial performance and the hypothesis is formulated as follows:

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

Internal Board Auditor

Effective internal audit is the principle of effective financial institution supervision. Internal audit helps to identify problem areas and to avoid major failure (Bassem, 2009). The MFIs' policy papers are recommended that the internal auditors reported directly to the MFI board (Steinwand, 2000). Such an arrangement will help to increase the financial performance of MFIs (Mersland and Storm, 2007). As stated by Sinclair (2012); Thrikawala *et al.*, 2013; Mersland and Strøm (2007) internal auditors report directly to the board enhances the MFIs' financial performance. In addition, an internal auditor reports directly to the board has a significant impact and positive link to the MFIs' financial performance (Mersland and Strøm, 2009). Indeed, internal auditors reporting to the board of directors with independence has a positive link to the company's performance (Ashari and Krismiaji, 2019; Bassem, 2009). Thus, the researcher expected that the internal board auditor reports directly to the board leads to a positive association with the Ethiopian MFIs' financial performance.

H₆: Internal board auditor reports directly to the board have a positive relationship with the financial performance of MFIs.

Board Meeting's Frequency

The frequency of board meetings is measuring the intensity and effectiveness of corporate monitoring and discharging (Jensen, 1993). Empirical results on the impact of frequent board meetings and financial performance confirm mixed outcomes. Vefas (1999);

Danoshana and Ravivathani (2013); Akpan (2015) reported a statistical significance and negative association between the frequency of board meetings and the MFIs' financial performance. Similarly, Amran (2011) identified that the higher the number of meetings the worse the MFIs' financial performance. Whereas, Mangena and Tauringana (2008); Ntim and Osei (2011); Belete (2015) reported a significant impact and positive link between the frequency of board meetings and MFIs' financial performance. Thus, the researcher has developed the following hypothesis based on the reviewed literature as follows:

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

Audit Committee Size

The role of the audit committee is crucial in solving the conflict of interest between the owners and management (Elbahar *et al.*, 2021). Danoshana and Ravivathan (2013) anticipated that increasing Audit Committee Size leads to high financial performance. As documented by Ashari and Krismiaji (2019); Al-Matari *et al.*, 2012; Elbahar *et al.*, 2021; Danoshana and Ravivathan (2013); Ashari and Krismiaji (2019) there is a positive significant association between firm performance and committee size. On the contrary, Vafeas (1999); Sharma *et al.*, 2009; Ferede (2012); Belete (2015) Aldamen *et al.* 2011; Kipkoech and Rono (2016) found that audit committee size has a negative link and a significant effect on the MFIs' financial performance. As observed from the empirical literature, there are mixed results. In this dilemma, the following hypothesis has been formulated.

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

Fixed Wage

The top management incentives have been characterized as an important corporate governance mechanism as it confirms the association of the management with the shareholders' interest (John *et al.*, 2004). Compensation that contains a performance-based and a fixed-based payment is the best instrument to align the benefits of managers with that of stakehold-

ers (Hartarska, 2004). Brick *et al.*, 2006 underlined that management compensation affects the MFIs' performance. Easley and O'Hara (1998) argued that for mission-driven institutions, a fixed management salary is the best choice. As documented by Bassem (2009); Hartarska (2004); Hameed *et al.*, 2014; Rehman *et al.*, 2021 the variable fixed wage has a positive link to financial performance. Hartarska (2005) argued that MFIs managers may have not reacted to performance-based compensation. As verified by scholars like Houston and James (1995); Adams and Mehran (2003); John and Qian (2003) pay-performance sensitivity in financial institutions is lower than in other industries. Thus, based on empirical studies, the following hypothesis has been formulated.

H₉: *MFIs whose manager receives a fixed salary have a significant influence on the financial performance of MFIs*

Profit Orientation

MFIs specifically can be argued that profit-oriented will have improved efficiency since they focus more on the market in terms of commercializing (Roberts, 2013). Furthermore, profit-oriented MFIs may focus more on making a profit, resulting in a shift away from the social goals of serving poor clients and poverty reduction in general (Copestake, 2007). On the other hand, Gupta and Mirchandani (2019) documented that MFIs which have socially oriented revealed their stronger focus on achieving social goals with a large number of mainly female borrowers as well as an average lower loan size than MFIs that are profit-oriented. Alternatively, empirical studies showed that profit and non-profit MFIs are similar in terms of financial performance (Mersland and Strøm, 2008, 2009; Tchakoute-Tchuigoua, 2010). When looking at empirical studies, it can be expected that for-profit and non-profit MFIs are similar concerning financial performance. Therefore, the empirical results regarding profit orientation and MFIs' financial performance are taken into consideration for the hypothesis. Thus, the hypothesis is formulated as follows:

H₁₀: *Commercially oriented and socially oriented MFIs are similar in terms of financial performance.*

External Governance Mechanisms

The external governance mechanism can be implemented when the internal corporate governance mechanism lacks in itself while performing the best for the institution (Sharma, 2017; Hartarska, 2005). In the MFIs sector donors and creditors are relying on information from audited financial reports as well as rating agencies (Hartarska, 2005). External governance reduces informational asymmetries (Healy and Palepu, 2001). According to Hartarska (2005) in the absence of developed equity and debt market, donors and investors rely on the independent evaluation of MFIs' financial performance.

Rated

A rating agency's opinion of MFIs' is reflected in the overall performance and its capacity to satisfy its financial requirements. The raters evaluate objectively and independently the corporate governance in MFI and rank it, this helps for comparison. Microfinance rating agencies rate the overall performance of the MFI in terms of social and financial (Bassem, 2009). As stated by Bassem (2009); Tchuigoua (2014); Bhagat and Bolton (2008) rating has a positive link and significant influence on the MFIs' performance. Moreover, Letenah (2015) argued that being rated by rating agencies has a positive significant effect on sustainability (ROA and OSS) and helps to reach more women borrowers. It can thus be expected that there is a positive association between rating and MFI financial performance.

H₁₁: *There is a significant positive relationship between rating and MFIs' financial performance.*

Regular Onsite Supervision

Regular onsite supervision by a government agency is used as an external governance mechanism for MFIs (Hartarska, 2004). A supervised MFI has more chances to earn customer trust 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. Mersland and Strøm (2007); Hartarska and Nadolnyak (2007) documented as it is not an important variable to the financial performance/ sustainability of MFIs. On the other side,

regular on-site supervision could affect the performance of MFIs (Hartarska, 2004). Thus, as observed from the empirical literature, the following hypothesis has been developed.

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

Data and Methodology

This study is used a descriptive analysis to describe, measure, compare, and classify the association and effects of corporate governance variables (explanatory) with the financial performance (dependent variables) of Ethiopian MFIs. 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 is utilizing the purposive sampling technique to select the required sample from total MFIs, seniority, and data availability was mandatory i.e. the selection criteria set by the researcher is MFIs should operate before the year 2012 having 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, Durbin-Wu-Hausman (DWH) test is implemented to choose between fixed and random effects.

Variables Description

Both dependent and independent variables are explained in the following table as follows:

Table 4.1: Definitions of dependent variables

Variable	Explanation
Financial Performance:	
Sustainability	
ROA	Return On Assets = Net Operating Income/ Average Total Assets
OSS	Operational Self-Sufficiency = Financial Revenue/Financial Expense+Net Loan Loss Provision expense + Operating expense

Model Specification

A Panel regression model (Fixed and random) is used to evaluate the effect of corporate governance on the MFIs' sustainability/Financial performance. Based on the above explanation, the general model is formulated as follows:

$$Performance_{it} = \beta_0 + \beta_{it} + CorGOV + \varepsilon_{it} \quad (1)$$

Where: performance is the proxy for MFIs dependent variables and represents sustainability/ financial performance and is measured by return on assets (ROA) and operational self-sufficiency (OSS). β_0 is the intercept (y-intercept), β_{it} is the slope coefficient of explanatory variables. The subscript i denote the individual institution's characteristics across time dimension t. CorGOV is a vector of governance variables (independent) variables which are; Board size, board independence, the proportion of women on the board, Female CEO, CEO/ chairman duality, Internal board auditor, Meeting frequency of board, Audit Committee size, Fixed wage, Profit Orientation, Regular Onsite Supervision and Rating of microfinance institutions.

The above general empirical model is changed into the study variables to find out the effect of corporate governance variables on Microfinance Institutions' financial performance/ sustainability. Therefore the

Table 4.2: Definitions of independent variables and their hypothesized sign on financial Performance of MFIs'

Variable	Explanations	Expected Sign.
Board size	Number of board members	+/-
Independent boards	The proportion of voting board members who do not have an affiliation with any of the stakeholders of the MFI	+
Women on the board	The proportion of women on the board	+
Female CEO	A dummy indicating a female CEO when 1	+
CEO/chairman duality	A dummy variable which is equal to 1 if CEO and chairman are the same people	-
Internal board auditor	A dummy is one if the internal board auditor reports directly to the board	+
Meeting frequency	Number of Board meets in a year during the period under review	+/-
Fixed wage	A dummy that equals one if the manager receives a fixed salary, zero otherwise	+/-
Audit Committee Size	Number of Audit Committee members	+/-
Regular onsite Supervision	A dummy is one if onsite supervision occurs at regular intervals by banking authorities	+/-
Rated	A dummy that equals one if the MFI is rated by a specialized MFI rating agency and zero otherwise	+
Profit Orientation	Dummy that equals 1 when the MFI is for profit and 0 if the MFI is nonprofit	+
<i>Control variables</i>		
MFI age	Number of years since the commencement	
MFI size	The logarithm of the total assets of the MFI	
Rural/urban market	A dummy is 1 if the main market is urban	
Loan methodology	A dummy that equals one if the MFI used mainly individual lending methodology and zero otherwise	

model which 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. is the error term (residual variable) and represents the unobservable MFIs characteristics not captured in the model. The error term was a two-way error component model which is specified below and will be used to test the robustness of the estimation model.

$$\epsilon_{it} = \alpha_i + \mu_{it} + v_{it} \tag{3}$$

Where; α_i denotes the unobservable individual MFI-specific effects, u_{it} denotes the unobservable time effect firm-specific effect which captures all time-invariant variables (including omitted variables) that affect Y (unobservable individual specific effect), and v_{it} is the remainder of the disturbance that varies cross-sectionally and over time.

$$\begin{aligned}
 \text{MFIs' Financial Performance}_{it} = & \beta_0 + \beta_1(BS)_{it} + \beta_2(BIndependent)_{it} \\
 & + \beta_3(WomenDire)_{it} + \beta_4(FemCEO)_{it} + \beta_5(CEOduality)_{it} + \beta_6(IntAudit)_{it} + \\
 & \beta_7(BMetfre)_{it} + \beta_8(ACsiz)_{it} + \beta_9(FW)_{it} + \beta_{10}(ROsup)_{it} + \beta_{11}(Rated)_{it} + \\
 & \beta_{12}(ProOrien)_{it} \\
 & + \sum_{j=1}^k x_j CV_{j,it} + \epsilon_{it} \dots\dots\dots(2)
 \end{aligned}$$

Results and Discussions

Descriptive Statistics

The summary of descriptive statistics that was intended to give general descriptions of the data (both dependent and independent variables) is presented in Table 6.1. The number of observations for each variable 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 for dependent and independent 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 above 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 value. A negative minimum value of ROA indicated that some Microfinance institutions in Ethiopia

suffered losses in the selected period of analysis. A standard deviation indicated that the ROA of Ethiopian MFIs deviate from the mean value by 21%. The ROA average value in the sample is 0.017 which indicated that on average MFIs earn a return of 1.7 percent on assets. Similarly, the studied MFIs have on average an OSS of 126.11 percent with respectively a minimum and a maximum of 0.67 percent and 257 percent and show a deviation of 46.93 percent from its mean value, indicating a widely spread performance concerning covering the cost. It measures on average how well the MFI can cover its costs through operating revenues.

Among the independent variables employed in this study, on average, 7 persons serve on the board of microfinance institutions with a standard deviation of 1.67 coupled with a maximum board size of 11 and the minimum size of 5 suggesting that these boards are narrowly dispersed. The average is around 7 directors and falls within the Council of Microfinance equity funds (2005) recommendation which is ranged from 7-9 directors as indicated by (Mersland and Strom, 2007). The unaffiliated boards represent on average 19 percent of the board members with a maximum of 0.43 and a minimum of zero with a standard deviation of 0.17 suggesting that the independent boards are narrowly dispersed.

The descriptive statistics indicated that on average 9 percent of all boards are made up of women with a maximum ratio of 0.89 and a minimum of zero. As shown in the above table Female CEO represents 19.2 percent of Ethiopian micro Finance institutions with a standard deviation of 0.39. In terms of CEO Duality, 32% of the firms have one person as CEO and chairman with a standard deviation of 0.47. Having an internal auditor who reports directly to the board is a way to connect the governance of the board with internal firm governance. In this study, around half (49.6 percent) of the MFIs have an internal auditor reporting directly to the board with a standard deviation of 0.5.

The descriptive statistics also depicted that the mean board meeting frequency is 4.7 times in a year with a lowest of 2 and a maximum of 12 times in a year with a standard variation of 2. In addition, the mean value of audit committee size is 2.9 with a deviation of 0.81 and ranged from 2-5 i.e. a minimum of 2 and a maximum of 5 committee members.

The fixed-wage has an average value of 53.6 percent and a standard deviation of 0.5 indicating 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 nonprofit 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 national bank of Ethiopia. The table also depicted that on average 48.5 of the MFIs forming the sample are rated and the standard deviation is indicated as 0.5.

In terms of control variables, the descriptive statistics show that the average age standing for the Microfinance Institution sector of Ethiopia is about 16 years. Summary statistics indicate that the sample MFIs are not mature as the mean and range from 3 to 24 years of operation. The microfinance size is measured by the log of total assets and ranges from 13.4 to 27.7. The mean log of the total assets is 19 with a standard deviation of 2.47. The MFI's main market served is indicated with the two market variables of urban and rural and the mainly urban market is denoted by a dummy variable. Thus, we noticed that the rural market on average consisted of 56.8%, which is far greater than the urban. This reflects the MFI's trouble in reaching the urban market. Next, the table shows the two categories of loan methodology, group and individual. Thus, the dummy is 1 if the main loan methodology practiced by the MFI is individual loans. Based on the result, the individual lending methodology constitutes 53.6 % of the cases with a standard deviation of 0.5. Thus, individual loans are relatively more important.

Regression Analysis

Table 6.2 below presents the outcome of Fixed-Effect (ROA) and random-effect (OSS) regression models made to evaluate the impact of independent variables on the MFIs' financial performance. 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)
Acsiz	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, taking into consideration that the basic aim of this study is evaluated the financial performance determinants of MFIs. The estimation outcome of the two models (Fixed and random effect) that presents the impact of explanatory variables on financial performance was discussed as follows:

The result in Table 6.2 indicated that the size of the board has a positive relationship with the ROA of Ethiopian microfinance institutions, but there was no statistically significant association between the size of the board and ROA whereas, board size has a negative link with OSS and is statistically significant. The hypothesis is rejected 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 positive effect on MFIs' performance (Hartarska, 2004). Similarly, the study indicated that Board independence has a positive relationship but an insignificant effect on financial performance. In this case, the hypothesis is rejected.

Women directors have a positive relationship and statistically significant impact on ROA as well as OSS (financial performance). Specifically, replacing one board member with a woman director 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 finding is similar to those (Kyereboah-Coleman, 2006; Bassem, 2009; Safugha, 2017; Belete, 2015). Female CEO has a positive association and statistically significant impact on ROA and OSS. With this result, the hypothesis is not rejected and the same result is found in (Kyereboah-Coleman, 2006 and Mersland and Strøm, 2007). Holding all other factors fixed, MFIs with a Female CEO have on average 5.5 and 12.9 percentage points higher ROA and OSS respectively than MFIs which a CEO represented by a male. The finding of female CEOs confirms the importance of gender for MFIs, where female customers are often considered to be of special importance.

The study indicated that CEO/chairman duality has a negative relationship and statistically significant effect on ROA and a negative but statistically insignificant impact on OSS. The hypothesis is not rejected with

the result concerning ROA and the outcome of this study confirms the finding of (Coleman and Osei, 2008 and Sarkar and Sarkar, 2018). Holding all other factors fixed, 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. While the negative impact of the CEO/chairman duality may be seen as a result of moral hazard in the owner-manager relationship (Mersland and Strom 2007).

Internal auditor reporting directly to the board has a positive association and statistically significant effect on ROA and OSS (financial performance). Thus, the hypothesis is not rejected and the same result is found by (Mersland and Strøm, 2009; 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 allowing their internal auditors to report directly to the board should show higher financial performance.

Board meeting frequency has a negative link and statistically significant effect on ROA and has a positive insignificant effect on OSS. Thus, the hypothesis is not rejected with the result related to ROA. The same result is found by (Danoshana and Ravivathani, 2013; Vafeas, 1999; Akpan, 2015). The size of the Audit Committee has a positive but statistically insignificant effect 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 statistically significant influence on OSS. The hypothesis is not rejected with the result in OSS. The finding is similar to previous researchers' results (Vafeas, 1999; Sharma *et al.*, 2009; Kipkoech and Rono, 2016; Ferede, 2012; and Belete, 2015). We can conclude that when the Audit committee size increased by one, ROA improves by 0.022 and OSS decreased by 9.1 percent.

The coefficient of fixed-wage is positive but it has an insignificant impact on ROA but has a positive significant effect on OSS. The hypothesis is not rejected the result is based on OSS. This result confirms former findings, such as 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 statistically significant impact on financial performance (ROA & OSS). Thus, the hypothesis that commercially oriented and socially oriented MFIs are similar in terms of financial performance is not supported. The outcome is consistent with the findings of (Dilven, 2017; Gupta and Mirchandani, 2019) because the result found that profit orientation microfinance institutions have a significant influence on financial performance. Therefore, profit and not-for-profit MFIs are not similar in terms of financial performance. 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 statistically significant impact on ROA and the result is similar to previous empirical studies found by (Bassem, 2009; Cull *et al.*, 2011), and has an adverse relationship and statistically significant effect on OSS. The study result is similar to previous empirical studies found by (Letenah, 2015). The hypothesis, Regular onsite supervision influences the financial performance of MFIs is not rejected. All other things keep 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 (measured by the ROA and OSS).

Microfinance rating agencies rate the MFIs' overall performance (Bassem, 2009). Rated has a positive association but a statistically insignificant effect on the MFIs' financial performance. The hypothesis is rejected and the outcome is similar to the findings of (Bhagat and Bolton, 2008; Tchuigoua, 2014; Bassem, 2009). All the other factors are unchanged, MFIs with 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 finding revealed that rating by an independent agency does not affect any of the performance measures. This is an important result because MFIs have been spending significant resources to be rated (Hartarska, 2004).

Finally, control variables are included that are specific to the MFIs. The inclusion of these Control variables will also help to inform the ongoing debate in the MFIs literature (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. This finding is similar to the results of (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 (Measured by the log of total assets) has a significant influence and positive link on the ROA and OSS. The mainly urban market is associated negatively and has a statistically insignificant influence on ROA but it has a negative 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 have a mainly rural market. Concerning Loan methodology, mainly individual lending has a positive but statically insignificant influence on financial performance. 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 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 positive relationship and statistically significant effect on MFIs' financial performance (ROA and OSS). Having said that, board size has a positive link but an insignificant impact on ROA and associated negatively with OSS, which has statistically a significant effect. An unaffiliated board has a positive relationship but an insignificant influence on financial performance. CEO/chairman duality has an adverse relationship and statistically significant effect on ROA and an adverse but statistically insignificant impact on OSS. The fixed wage has a positive association but it has an insignificant impact on ROA but has a positive significant effect

on OSS. Board meeting frequency is associated with negatively and statistically significant effects on ROA and has a positive insignificant effect on OSS. On the other side, Audit committee size has a positive link but has an insignificant effect on ROA.

Concerning external governance mechanisms, Regular onsite Supervision has a positive association and statistically significant impact 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 (Measured by the log of total assets) has a significant influence and has a positive link to ROA and OSS. The study recommended as MFIs should consider the gender diversity of the CEO within the Board of 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 for 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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