1 **The effect of credit collection policy on portfolio at risk of microfinance institutions in Tanzania**

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3

4 **Abstract:**

5

6 This paper presents the results of the study on the effect of credit collection policy on portfolio at risk of

7 microfinance institutions in Tanzania. The study used cross-sectional survey data of microfinance

8 institutions in three regions of Dar es salaam, Morogoro and Dodoma. Random sampling was employed

9 to obtain a sample of 219 respondents in all three regions. Multiple linear regression analysis was used to

10 determine the effect of credit collection policy on portfolio at risk of microfinance institutions. Results

11 show that, there is a positive relationship between interest rates charged and portfolio at risk of

12 microfinance institutions. On the other hand, the variable for grace period on loans and loan sizes to

13 borrowers had a negative relationship with portfolio at risk of microfinance institutions. The study

14 recommends that, microfinance institutions in Tanzania need to reconsider the interest rates charged to

15 their clients to enhance sustainability of their loan portfolios. Moreover, microfinance institutions need to

16 enhance provision of grace period to their customers. Also, establish efficient loan product sizes which

17 suffice diverse client's needs. That would encourage and broaden client repayments, contribute to

18 financial performance and reduced risk of portfolio of microfinance institutions.

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20 **Keywords:** Credit collection, Portfolio at risk, Microfinance institutions

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23 **1.0 Introduction**

24

25 Microfinance institutions are proven to have significant contribution in reducing poverty among the low-

26 income earners and disadvantaged individuals in society. These institutions have been helpful in

27 facilitating entrepreneurship skills and provision of knowledge on capital, risks and empowerment in

28 economic activities (Colquitt, 2007). Microfinance institutions intended to simplify provision of micro

29 financial services to low income households and self-employed individuals (Brown and Moles, 2011). In

30 order to continue serving their clients with microcredit facilities. The lending institutes need to

31 effectively manage their loan portfolios. Microfinance portfolio management is the driving force to

32 enable sustainable financial performance. Microfinance institutions that experience high risk of its loan

1   portfolio, is an indication of high delinquency from customers. This may lead to underperformance of its

2   loan portfolio thus threatening the ability to continue in operation in the long-term (Ledgerwood, 1999).

3   Microfinance institution need to manage portfolio quality against delinquency and defaults, by

4   establishing effective strategies in the lending and collection processes. Efficient credit collection policy

5   within the institutional framework, helps credit management process be effective and hence timely

6   collection of funds from clients.

7

8   However, there have been controversy from the microfinance institutions concerning high rate of

9   default/delinquency by their clients. Increase of default rates in loan portfolios indicates that

10   microfinance institutions are not attaining the internationally accepted standard portfolio at risk of 3%. In

11   addition, MIX (2010) reported that MFIs in Sub Saharan Africa had increased portfolio at risk with

12   region records greater than 5%. This is a cause of concern since it erodes effort put forth of establishing

13   microfinance institution and ensure financial inclusion of poor people. Schmittlen, (2010); Colquitt,

14   (2007) pointed out that, weak credit collection policy has been the main cause of business failures

15   including microfinance institutions. The essence of microfinance credit collection policy is to facilitate

16   effective credit administration of disbursed funds. Also, ensure that microfinance institutions rate of

17   returns outweigh the cost incurred to delivering credit. Existence of efficient credit collection policy

18   within institutional framework, helps loan officers be effective and timely in collection of funds from

19   clients. Emphasis need to be put in appraising and credit supervision of borrowers. Microfinance

20   institution that invests into borrowers' ability to self-response to loan repayment have a better chance to

21   maintain quality loan portfolios (Edwards, 2004). Thus, institutions need to establish strategies that

22   would enable efficient loan recovery from clients before getting overdue.

23

24   Several studies have been conducted on factors for effective credit collection in MFIs; but, the level of

25   significance of factors varies with studies. Some of the determinants are found to be significant while

26   others not. At the same time, some determinants are significant to only set of MFIs. Empirical evidences

27   from the findings by Kar & Swain, (2014); Adongo and Stork, (2000); Nyamsogoro, (2010) and Zohair,

28   (2013) reported that interest rates, loan sizes and loan duration influence financial sustainability and

29   portfolio performance of microfinance institutions. This is contrary to the findings by Tundui and Tundui,

30   (2013); Folefack & Teguia, (2016); Onyeagocha, *et al.,* (2012) and Shu-Teng, *et al.* (2015) which

31   indicated that, the factors were positively associated to repayment problems and against quality loan

32   portfolio performance. Despite of essential contributions made on previous empirical studies, much of

1 past research suffers from mixed findings leading to inadequate conclusions. In addition, some past

2 studies have dwelt on member-based microfinance institutions while other studies focused on only one

3 microfinance programme. Consequently, they have been inefficient in establishing the factors

4 contributing to effective credit collection policy on portfolio at risk of microfinance institutions in

5 Tanzania. This study is comprehensive in coverage and focused on non-member-based microfinance

6 institutions. Therefore, it intends to fill that gap by providing further insight and information on the role

7 of microfinance credit collection policy on portfolio risk management in Tanzania.

8

9

10 **1.1 Specific Objective of the study**

11

12 This study was guided by the following specific objective;

13 (i)   To determine the effect of credit collection policy on portfolio performance of microfinance

14   institutions in Tanzania.

15 To accomplish the above specific objective, the study established the following research question:

16 (i)   What are the effects of credit collection policy on portfolio performance of microfinance

17   institutions in Tanzania?

18

19 **1.2 Scope of study.**

20

21 This study involved non-member-based microfinance institutions, specifically Financial NGOs and

22 Microcredit companies. These microfinance institutions have been in operations in the regions of Dar es

23 Salaam, Morogoro and Dodoma in Tanzania.

24 The paper is organized such that, the section that follows provides an overview of related literature.

25 Section three describes the research methods used in this study. Results and discussion of findings are

26 presented in the fourth section, whereas summary and conclusion are presented in the last section of this

27 study.

28

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30

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1 **2.0 Related Literature**

2

3 Microfinance institutions need to have credit collection strategies that would make clients attracted to

4 find it easy to repay their loans without enforcement. Institutions that constantly compels its clients to

5 service their debt reflects weak credit collection policy employed that ensure timely collection of funds

6 from clients. Palladini and Golgberg, (2010) considers credit collection policy as guidelines that establish

7 set of procedures used to collect accounts receivable getting overdue. It aims at maximizing rate of return

8 from microfinance loan portfolio in order to increase firms' assets value. The rationale of establishing a

9 set of policy is that, not all clients meet their obligations timely and without enforcement. There are

10 clients who simply forget and the rest don't have tendency of paying their dues until persuaded to do so.

11 Lending institutes that experience gradual repayment of loans from clients, increase bad debts of their

12 loan portfolios. Therefore, credit collection efforts are directed at accelerating loan recovery from clients.

13 Microfinance management efforts for making sure strict collection procedures are adhered; helps to keep

14 debtors alert and reduction of portfolio at risk (Warue, 2012). As such loan portfolio is the microfinance

15 institutions most important asset, that needs to be managed conscientiously against default risk. Survival

16 of any lending institution depends on successful loan portfolio performance which results into increasing

17 rate of return on various loan investment products.

18

19 Previous studies indicate that, portfolio performance of microfinance institution is influenced by various

20 factors. Existence of attractive and customer-oriented credit collection strategies contributes to sound

21 financial performance in microfinance institutions. Emran *et al.,* (2006) and Papias, & Ganesan, (2009) in

22 their study observed that, microfinance institutions that charges high interest rates are likely to affect

23 quality of loan portfolio due to increasing default rates. Consequently, impact negatively on overall

24 financial performance of MFIs. However, studies by Ayayi & Sene, (2010) added that individual-based

25 microfinance lenders charging higher interest rates are likely to be more profitable up to a certain level.

26 Beyond which the profitability of microfinance institution tends to be worse due to an increase in rates of

27 delinquency from their clients. As such, microfinance need to learn that, charging high interest rates

28 beyond a certain threshold is said to be unfavorable for the MFIs financial sustainability. On the other

29 hand, Hooman (2009) revealed that interest rate has the most significant effects on repayment

30 performances. In the same vein, Ledgerwood (2013) suggested that microfinance institutions should be

31 concerned about loan pricing of its products since it is an important aspect of loan product design. It is

1   argued that a balance has to be reached between what clients can afford and what the lending

2   organization needs to earn, to cover all costs involved in lending for sustainable microfinance operation.

3   Swain and Varghese (2013); Nyamsogoro, (2010) and Kar, & Swain, (2014) advised that, financial

4   institutions should charge higher interest rates only to credit facilities identified to have higher probability

5   of default. As such businesses with high risk of success should attract higher interest rates. However,

6   microfinance institutions should note that by introducing higher interest rates to borrowers, that may

7   contribute to loan defaults and hence impact on loan portfolio. Mckernan (2002) shared the same view

8   with Swain and Varghese that the high interest rates charged by most microfinance institutions on credit

9   facilities significantly contribute to loan default. It was further argued that even if microfinance

10   institutions may have effective appraisal and assessment strategies of their loan applicants. Increased

11   interest rates charged to borrowers may lead to default payment and high rate of portfolio at risk of the

12   microfinance institutions. At the other hand, a study by (Tundui & Tundui, 2013) showed that interest

13   rates charged to microfinance borrowers did not affect repayment performance of microfinance

14   institutions. Hence, this study needs to determine the influence of interest rates on portfolio performance

15   of microfinance institutions in Tanzania.

16

17   Moreover, Lidgerwood (2009) argued that, loan duration as designed by microfinance institution can

18   greatly affect borrowers' repayment schedule, financing costs to the client and the extent of loan use by

19   respective clients. Roslan and MohdZaini (2009); Godquin, (2004) added that, microfinance borrower

20   who prefers longer period to complete loan repayment indicates commitment to repay the loan. That may

21   contribute to improved financial performance and reduced risk of gross loan portfolio. These findings

22   were in line with Roslan, & Karim, (2009); Onyeagocha, *et al.,* (2012) & Shu-Teng, *et al.,* (2015) who

23   pointed out that, increase of loan duration to borrowers negatively associated to institutional financial

24   performance. Therefore, lending institutes need to devise various institutional mechanisms intended to

25   reduce the risk of loan default for sustainable microfinance portfolio growth.

26

27   In addition, grace period to borrowers in microfinance institutions is said to influence repayment

28   behavior of the borrowers. According to Barboni (2012), grace period as a technique of encouraging

29   borrowers' regular loan repayment and improve microfinance collection process is practiced in two

30   scenarios. Firstly, involves a situation where respective microfinance institution provides a borrower

31   specific number of days before start of making regular loan repayment until completion of his loan

32   amount. As such, there is no penalty for late payment after the given days expiry. The second technique

1   of grace period involves the situation where a microfinance institution provides a borrower with a period

2   of time where an interest rate is not charged on new loan offered. Abreham (2002) added that, provision

3   of grace period to microfinance borrowers influence positively repayment performance and reduction of

4   risk embedded in the microfinance loan portfolio. Similarly, microfinance institutions which provide a

5   grace-period to their clients are said to enhance borrowers' entrepreneurship capability and attract

6   borrowers into investment options of their business. Field *et al.,* (2011) observed that, grace period

7   increase microfinance institutions' financial performance thereby controlling for defaults rates to

8   borrowers. These findings were in line with Pande *et al.,* (2010) who found that microfinance borrowers

9   who were offered grace period were encouraged to invest more in their business and were capable to

10   finance their loan more regularly than clients without a grace period.

11

12   According to Shariff (2013) microfinance loan size offered to borrower influenced repayment

13   performance of microfinance institution. The loan sizes to borrowers can be designed into small, medium

14   or big loan sizes. Most microfinance institutions design small and medium loan products to carter

15   demands for low-income and poor household customers. Efficient loan size that fit capability of

16   borrowers to repay reduces portfolio at risk of the gross loan portfolios Crabb & Keller, (2006); Pischke

17   (1991). On the other hand, Nyamsogoro (2010) observed that, profitability of microfinance institution

18   lending business is associated with larger average loan sizes offered to their clients. However, Cull *et al.,*

19   (2007) argued that, microfinance institutions that provide smaller loans do accumulate higher profits in

20   transacting with their clients. It is also an indication that, such small loan products are demanded by their

21   clients. At the other hand, Feroze, *et al.,* (2011); Berhanu, (2005), had contradictory observation who

22   argued that, loan size of microfinance institutions does not influence microfinance financial performance.

23

24   The aim of this study was therefore to test how credit collection policy influence portfolio at risk of

25   microfinance institutions. The hypothesis tested in this relationship are stated below: -

26   *H1. 1: There is no significant relationship between microfinance institution interest rates charged and*

27   *portfolio microfinance performance.*

28   *H1. 2: There is no significant relationship between microfinance institutions loan size offered and*

29   *portfolio microfinance performance.*

30   *H1. 3: There is no significant relationship between microfinance institutions grace period of loans and*

31   *portfolio microfinance performance.*

1 *H1. 4: There is no significant relationship between microfinance institutions loan duration and portfolio*

2 *microfinance performance.*

3

4 **3.0 Research Methods**

5

6 This study was a cross-sectional research design which used a large number of subjects that were not

7 geographically bound. The use of a cross sectional design enabled undertaking of both quantitative and

8 qualitative data. A comprehensive sampling frame of non-member-based microfinance institutions was

9 generated by combining data set from the Bank of Tanzania (Microfinance section) (2010); the Ministry

10 of Industry and Trade via the licensing department (2014); Tanzania Association of Microfinance

11 Institution (TAMFI) (2015) and the SELF scheme (2015). The database provided information regarding

12 the registration, operation and their outreach services. A total of 219 microfinance institutions of non-

13 member-based microfinance institutions in Kinondoni, Ilala and Temeke districts in Dar es Salaam

14 region, Morogoro urban district in Morogoro region and Dodoma urban district in Dodoma region were

15 involved. Both primary and secondary data were collected.

16

17 **3.1 Model Specification**

18

19 The study employed multiple linear regression model as analytical model technique. The multiple

20 regression examined the relationship between a single outcome measure and several predictor variables.

21 The dependent variables in this study was portfolio at risk of MFIs. On the other hand, independent

22 variables involved in this study were: - interest rates, grace period of loans, loan sizes and loan duration.

23 The analytical model used for credit collection policy on portfolio at risk of microfinance institutions is

24 shown as follows: -

25 The dependent variable was measured as;

26 Portfolio at risk (PAR) 90 days =

27 Outstanding principal balance of all loans past due more than 90 days

28 Outstanding principal balance of all loans

29 The linear regression model was of the following form:

30 $Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

1   Where: Y = Predicted dependent variable (Portfolio at risk),

2   β_o = Constant,

3     $\beta_1 - \beta_6$ = regression coefficients,

4     $X_1 - X_4$ = Value of the predictor variables –interest rates, grace period of loans, loan sizes and loan

5   duration.

6   ε = Error term

7

8   **3.2 Control variables**

9

10 This study has considered four control variables in analyzing the relationship between the hypothesized

11 independent and dependent variables. The purpose was to minimize the contribution of the variables of

12 interest after controlling for the other re-known factors. The control variables were MFIs age, MFIs size,

13 Owner/manager education qualifications and Owner/manager experiences.

14

15   **4.0 Results and Discussion**

16

17   **4.1 Descriptive statistics of dependent, independent and control variables in sampled MFIs**

18

19 Table 1 presents the mean portfolio at risk of the surveyed microfinance institutions 8.9898 percent. The

20 minimum average portfolio at risk was reported 3.67 and maximum was 21.00 percent. These results

21 suggest that, on average microfinance institutions differ from one institution to another in loan portfolio

22 management. This could be due to varying credit risk management strategies applied by respective

23 microfinance institutions. The Table also shows variable average loan duration of MFI with a mean value

24 of 245.242 days. The minimum and maximum loan duration are 90.0 and 1080.0 days respectively. This

25 distribution indicates that borrowers in studied microfinance institutions takes about nine months to

26 complete their loan installments. This further imply that, clients are in favor of loan products of less than

27 one year. This helps the firms to actively manage their loan portfolios through effective monitoring and

28 reduce problem loans.

1   The interest rates variable in the table indicates a minimum and maximum of 15.00 and 45.50 percent. In

2   addition, the mean interest rates charged by microfinance institutions during the study period was 26.39

3   percent. The dispersion of the interest rates is 7.61423 percent. The results suggest that across the study

4   areas, microfinance institutions charge high interest rates to their clients. There is possibility for

5   microfinance borrowers to fail to carry the loan to maturity, leading to increased portfolio at risk of the

6   lending institutes in the study areas. Furthermore, Table 1 below displays variable grace period of loans

7   of microfinance institutions with a mean of 3.1553 days. The study again shows a minimum of 0.00 days

8   and maximum of 30.00 days. The variation in the provision of grace period during the period of study

9   was 6.4852 days. This implies that few microfinance institutions in study areas provides grace period of

10   loans to their clients. This follows observed small mean value of the variable and the fact that, the study

11   records zero minimum days from the microfinance institutions under study. The variable loan size

12   exhibits a minimum and maximum of 250,000Ths and 10,000,000 Tsh respectively. Furthermore, the

13   table also reports a mean loan size of 3,041,108.3 Ths during the period under study. It also indicates a

14   variation of 2,719,066.8 Tsh across microfinance institutions in study areas. The distribution generally

15   denotes that, MFIs provides loan sizes that serves wide range of client needs. The mean loan size

16   observed indicates further that, clients may access such loans to cater their business. That encourages

17   efficient repayments and sustainable portfolio performance.

18

19   Moreover, descriptive statistics in Table 1 below, presents MFIs age to have a mean value of 6.28 years.

20   The study again shows a minimum and maximum MFIs age reported 3.00 and 15.00 years respectively.

21   The age distribution indicates that, MFIs involved in the survey had ample experience in microfinance

22   operation and therefore suitable for the nature of this study. The Owner/manager experiences falls within

23   a range of 2.00 years (minimum) and 18.00 years (maximum). The mean experience of MFI managers

24   across the study areas was 6.00 years. The dispersion of owner/manager experiences is 3.29 years. These

25   statistics implies that microfinance manager have reliable experience to lead the firm into sustainable

26   business operation for achieving its social and financial objectives. Furthermore, the variable MFI sizes

27   has recorded a mean of Tsh 276,014,051.74. It also reveals minimum and maximum total assets of MFIs

28   to be Tsh 70,000,000.00 and Tsh 615,000,000.00 respectively. The variation in the amount of assets

29   among microfinance institutions during the period of study was Tsh 184,098,247.16. The mean total

30   assets of MFIs imply that, selected MFIs in this study are well rooted financially to provide credit

31   services to the needy clients sustainably.

32

1   **Table 1: Distribution of dependent, independent and control variables in sampled MFIs**

Variables	Mean	Std. Dev	Min	Max	N
Dependent variable					
Portfolio at risk (PaR 90) %	8.9898	2.98651	3.67	21	219
Independent variables					
Loan duration	245.242	185.41061	90.00	1080.00	219
Interest rates charged	26.3904	7.61423	15.00	45.50	219
Grace period of loans	3.1553	6.48524	0.00	30.00	219
Loan size	3041108.3	2719066.8	250000	10000000.00	219
Control Variables					
MFIs age	6.28	2.189	3	15	219
MFIs size (TAS)	276014051.7	184098247.2	70000000	615000000	219
Manager experiences	6	3.294	2	18	219

2

3   **4.2 Distribution of education level of Owner-managers in sampled MFIs**

4

5   The descriptive statistics in Table 2 below presents education qualification of Owner-managers of MFIs

6   for the period. It shows that 23 (10.5%) of microfinance institutions had managers with secondary level

7   of education. Moreover, 101 (46.1%) of managers among studied MFIs had post-secondary non-

8   university education. On the other hand, 95 (43.4%) of MFIs were managed by University graduates. The

9   distribution suggests that most MFIs are managed by CEO with Post-secondary non-university education,

10   followed University graduates. This further imply that, prevailing threats to portfolio performance of

11   MFIs may be associated with CEOs inability to effectively manage their MFIs. Resulting to

12   unsustainable financial performance and inadequate outreach to low-income clients.

13

14

1 **Table 2: Distribution of owner-managers' education qualification in sampled MFIs**

Education level of Owner-managers	Microfinance institutions	
	Number	**%**
Secondary education	23	10.5
Post-secondary non-University	101	46.1
University	95	43.4
Total	219	100.0

2

3 **4.3 Correlations Analysis**

4

5 Table 3 below provides correlation matrix of the variables related to credit collection policy on portfolio

6 at risk of microfinance institutions. The Pearson correlation results presented, indicates variable grace

7 period of loans and loan size are negatively and significantly related to portfolio at risk of MFIs. In

8 addition, variable interest rate is significant and positively related to portfolio at risk. The variable loan

9 duration denotes insignificant relationship to dependent variable. On the other hand, the correlation table

10 aids to verify for the collinearity between variables employed in a study. The 'rule of thumb' considers

11 the existence of collinearity between predictor variables at a correlation value of 0.5 and above. Basing

12 on this observation, the correlation analysis presented confirms to have no multicollinearity problems that

13 exist between the variables in this study (Hair, 2010).

14

15

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1 **Table 3: Correlation matrix of credit collection policy variables on PAR (n =219)**

Variables	1	2	3	4	5	6	7	8	9	10
1.Portfolio at risk	1									
2.Loan duration	-.090	1								
3.Interest rates	.168*	.056	1							
4.Grace period	-.140*	.082	.033	1						
5.Loan size	-.171*	.115	-.058	-.078	1					
6.Manager exper	.088	.023	.045	-.007	-.015	1				
7.MFI age	-.063	.012	-.046	-.080	-.036	.026	1			
8.MFIs size	.157*	-.001	.013	-.043	.012	.048	-.133*	1		
9.Manager sec edtn	-.019	.085	-.096	.040	-.003	.024	-.033	.073	1	
10.Manager univ	.021	.137*	.087	-.068	.106	-.090	-.127	.077	-.246**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

2 **4.4 Econometric Results**

3

4 This study aimed to determine the effect of credit collection policy on portfolio at risk of microfinance

5 institutions in Tanzania. The multiple linear regression model was used in order to examine the combined

6 effect of credit management practices on portfolio at risk. The level of significance (p-values) was used

7 to test the influence of each variable on portfolio at risk of microfinance institutions. An overall model fit

8 was used to test the combined effect of all variables on the portfolio at risk of microfinance institutions.

9 The overall model was significant at $F(9, 209) = 16.275$; $p = .002 < 0.05$. This means that, in general the

1 concepts selected for this study did indeed explain a significant proportion of the variance in portfolio at

2 risk of microfinance institution. Similarly, the study found that the estimated result of multiple regression

3 analysis is also at a quite satisfactory level. The adjusted R^2 is 0.384 and observed R^2 value is 0.412,

4 respectively. This means that independent variables can explain about 41.2% of the portfolio at risk of

5 microfinance institution.

6

7 **Table 4: Model results for credit collection policy variables on portfolio at risk of MFIs**

Variables	Coefficients	Standard Error	T Value	P Value
(Constant)	5.254	7.836	.670	.503
Log loan duration	-.974	.858	-1.135	.258
Interest rates	.061	.026	2.350	.020
Grace period	-.068	.030	-2.239	.026
Log loan size	-1.487	.570	-2.611	.010
Manager experience	.072	.059	1.209	.228
MFI age	-.086	.091	-.948	.344
Log MFI size	1.661	.775	2.143	.033
Manager sec education	.069	.438	.158	.874
Manager univ education	.504	.641	.786	.433

R- Square 0.412; Adjusted R- Square 0.384; F- Statistic 16.275

Prob. (F-stat) .002; Number of obs 219; Significant at 5%

8 *PAR 90 days = β_o - β_1(LOD) + β_2(INTR) - β_3(GRP) - β_4(LS) + β_5Controls + ε..............*

9 *Where:*

10 *PAR = Portfolio at risk more than 90 days of MFIs*

11 *LD = Loan duration, INTR = Interest rates, GRP = Grace period of loans, LS = Loan size*

12 *Controls = control variables (MFI size, MFI age, Manager experience and manager education.*

13

1   From Table 4 above, the variable interest rate was positively related and statistically significant at level
2   of 5% (p = 0.020). As such it contradicts the hypothesis that no relationship exists between microfinance
3   institutions interest rates charged and portfolio performance. This means that, interest rates charged by
4   MFIs is a determinant of portfolio at risk of microfinance institution. That is any unit increase of the rate
5   of interest charged to microfinance borrowers results in increased portfolio at risk of the lending
6   institution by 0.061. The cost of the loan is likely to be not manageable by the borrowers leading to
7   higher default rate and increase risk of loan portfolio of microfinance institution. In order for the
8   microfinance institutions experience lower portfolio at risk. They have to charge low interest rates to their
9   clients to enable manage regular loan repayments. These findings are in line with Wenner *et al*. (2007;
10 Swain and Varghese (2013) and Papias & Ganesan (2009) who shared that, high interest rates charged by
11 most microfinance institutions on credit facilities contributed to loan default and low-quality portfolio
12 performance of the company. Despite of strong appraisal and assessment strategies, high interest rates to
13 borrowers results to default payments and high portfolio at risk of the MFIs. In addition, Mwangi (2016)
14 added that, when lending rates rise, financial institutions attract its borrowers to invest into riskier
15 projects for higher return on investment. In so doing, if such projects are going to fail, even the
16 creditworthy borrowers are likely to shy off from borrowing. Ultimately, portfolio at risk of the
17 microfinance institution rises which threatens long term operation of the company.

18 The variable loan size in the regression table above is negatively related and statistically significant at
19 level of 5% (p = 0.01). These findings imply that, if other variables are held constant, any unit increase of
20 loan size to microfinance borrowers result in decrease risk of portfolio of microfinance institution by
21 1.487. This further means that, microfinance institutions which provide reasonably big loan sizes to their
22 borrowers, makes them more committed to their respective lending institutes. In addition, enables widen
23 their investments and become negatively associated to repayment problems. Pische (1991); Crabb &
24 Keller (2006) and Adongo and Stork (2006) argued that, efficient loan size that fits capability of the
25 borrower to repay stimulate client's enterprise performance. Portfolio at risk of microfinance institution is
26 reduced if borrowers appreciate for the loan amount offered and honor their obligation of repayments.
27 That, improves portfolio at risk and strengthen financial performance of the microfinance institution. On
28 the other hand, microfinance institutions that provides bigger loan size to their clients implies that, one
29 has proven experience in managing his business and proven committed in servicing given loan
30 effectively.

31

1   Moreover, the findings of the variable grace period records negatively related and statistically significant
2   at level of 5% (p = 0.026). This means the variable is determinant of portfolio at risk of microfinance
3   institutions. The findings further imply that a unit increase of grace period of loans leads to 0.068-unit
4   reduction in loan portfolio at risk of microfinance institutions. The findings are against the hypothesis
5   which stipulated that grace period is not related to portfolio performance of microfinance institutions. In
6   this regard, provision of grace period to borrowers makes them utilize funds effectively into planned
7   investment projects. Abreham (2002) added that, the provision of grace period to microfinance borrowers
8   influence positively repayment performance and therefore reduction of risk embedded in the
9   microfinance loan portfolio. In addition, Ngahu & Wagoki (2014) added that, microfinance institutions
10 which provides a grace-period to their clients enhance borrowers' entrepreneurship capability. More
11 importantly, enable them reorganize accordingly to undertake their obligation of regular loan repayments.

12

13 **4.5 Conclusion and Recommendations**

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15 This paper has presented the results of a study on the effects of credit collection policy on portfolio at risk
16 of microfinance institutions in Tanzania. The study used a sample from three regions namely Dar es
17 Salaam, Morogoro and Dodoma. Using multiple linear regression model analysis, results revealed that,
18 loan size to borrowers, grace period of loans and interest rates charged to borrowers determines portfolio
19 at risk of microfinance institutions. These findings further show that, loan size to borrowers and grace
20 period of loans decreases portfolio at risk of microfinance institutions. This means that, high loan
21 repayment from microfinance borrowers are associated with grace period and large loan sizes. Moreover,
22 results show that, the variable interest rates charged to borrowers is evidenced to increase portfolio at risk
23 of the microfinance institutions. Therefore, in the light of these findings, it is recommended that
24 microfinance institutions need to reconsider the rate of interest charged to their clients. This would enable
25 borrowers manage repayments and ensure sustainable portfolio of microfinance institution. Similarly, it is
26 recommended that borrowers be given sufficient grace period to enable manage cost of loan offered.
27 Also, microfinance institutions need to design loan products that suit customers to enable carry the loan
28 to maturity and enhance quality of microfinance loan portfolio.
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