Risk Management and Performance of Microfinance Industry

Abstract

Purpose: The purpose of this study was to understand the significance of the relationship between risk management and sustainability of the microfinance industry. Furthermore, how does effective risk management could be used towards sustainable growth in microfinance. The findings of the study revealed that there is a positive relationship between risk management and sustainability of microfinance industry.

Design /methodology/approach: The study was conducted in three administrative districts in Sri Lanka, using 376 MF female borrowers, who represent from different businesses. The cluster sampling technique was selected for the survey. Primary data was collected using personally administered questionnaires and the sample frame was selected from two leading MFIs that consented to participate in the research. The conceptual frame work was developed based on the two variables risk management and sustainability of the microfinance industry. Simple liner regression analysis was taken to determine the significance of the relationship.

Findings: The study was able to find a positive relationship between effective risk management and industry sustainability. It was observed that that effective implementation of risk management process in the industry would certainly essential for long-term sustainability of microfinance institutions (MFIs). The findings showed that there were several strategic management measures that could have been put in place by key stakeholders in the industry.

Research, Practical & Social implications: The study found that although there has been potential growth in the industry vulnerability is very highly compared to other industries. Instead of the growth potential, MF is fighting for survival and sustainability. Mission drift, commercialization, and a lack of understanding among stakeholders, negatively impact the sustainability of the microfinance industry. It is significant to keep pace with the inculcating risk management culture among key stakeholders in the industry. Microfinance Institutes, Female Borrowers, Regulators. If not combined with the development of social capital, the financial programs have the possibility of creating a divided, dependent and unsustainable community.

Implications/Originality/Value: To the best of the authors' knowledge, no study has been conducted on uncovering and exploring the significance of the relationship of two key variables in microfinance industry. Most of the previous studies discussed these factors in isolation not as a collective wisdom to find a solution. This article is an industry contribution for inculcate risk

management culture among stakeholders in microfinance and enhance different approaches to promote financial literacy levels of female borrowers who are key to sustainability in the industry.

Keywords: Microfinance (MF) Microfinance Institutes (MFIs), Risk Management (RM), Sustainability

1.0 Introduction

Over the years, MF industry has been evolved through numerous range of models for providing products and service to the underprivileged segment of community that meet financial requirement to a certain extent. Microfinance, once hailed as a miracle cure for poverty, has become a lending system run amok and institutions that could help fix it are feeding the frenzy. (Source: Bloomberg) Basically, Microfinance concept progressed as an instrument to back poor community to improve financial capabilities and social wellbeing. Predominantly, Microfinance concept was commenced as a poverty alleviation tool and non-profit making operation. It has demonstrated to be an effective tool to reduce poverty level in the society and gateway to underprivileged segment to get into financial system. According to Consultative Group to Assist the Poorest (CGAP,2006) Microfinance sector has been identified as key partner in eradicating poverty and enhance social well-being. It says “the microfinance services help people fight poverty on their own terms, in a sustainable way”. Microfinance sector is huge in the world and contributes immensely to economic growth. It was reported that around the world, there are 140million borrowers with total loan portfolio of USD 140Billion, with compounded annual growth rate of (CAGR) of 11.5%. Global Microfinance Market to Reach $304.3 Billion by 2026 of the borrowers are female and 60% of the borrowers reside in South Asia. (Microfinance barometer,2019) Hence, it is imperative, Sri Lanka to put the industry in correct path. It was observed that major stakeholders in the industry MFIs and borrowers do not have any understanding of risk management. It is observed that given current dynamic and challenging business environment, MFIs are exposed to various risks which need to be addressed very professional and effective way. This is what this article is trying to present.

The current microfinance movement sounds for importance of risk management and urgent need to reshape the process to achieve sustainability. Risk management encompasses the identification, analysis, and response to risk factors that form part of the life of a business. (CFI, 2022). Industry stakeholders paid little attention on the gravity and importance of risk management in MF. MFIs provide more attention for recoveries and return on investment. Mission drift and commercialization impacted weak approach in risk management and focus on sustainability. As per Mario La Torre (2006), particular nature of microfinance, the complexity of modern financial structures, the variety of beneficiaries and institutions involved require a more structured approach of risk management. The main issue is that most of the MFIs fail to evaluate basics 5 Cs (Capacity, Capital, Collateral, Conditions and Character) in credit evaluation. Apart from credit risk MFIs encounter numerous other risks such as liquidity, operational, compliance, legal, volatile economic and market conditions, emerging regulatory controls, climatic changes, natural disasters, social environment. In this context, MFIs would not be in a position to evade these risks but essential to assess such risk and manage those very effectively. If not ultimate result will be ended up with a total failure. If MFIs and MF clients are discipline enough to focus credit and operational risk, most of the other risk would be easily tackled. In this study more emphasis was given on credit and operational risk aspect. The most important fact is participation and commitment of all stakeholders. They should embrace effective risk culture and adopt effective risk management process in the organization and their business entirety. Then only MF industry would sustain. Risk management become very vital for all financial institutions after numerous financial crisis. It is acceptable fact that "high risk high return and low risk low return". Microfinance operates in highly volatile and risky environment. Therefore, MFIs compel to charge high interest to cover their risk. But it should not be done chaotically, expense of shareholders' funds, forgetting underline concept of microfinance. In this scenario, introduction and implementation of sound risk management would certainly support medium and long term sustainability of the industry. As presented in Figure 1, risk management conceptually covers five key components in risk. Risk identification is vital to the entire process and remaining four components flow with the effective implementation. Most of the time, MFIs fails to identify risk factors, business model, cash-flows, amount of the loan etc. This was cleared surfaced during the survey as most of the respondent mentioned that MF officials do not pay attention to business requirement and more interested to provide what they wanted and profit motivation. Hence, disconnect is being started from relationship with the client. Christen & Drake (2002) first to address the topic of commercialization" in microfinance, a commercial approach constitutes of three main principles, which are profitability, competition and regulation. Various studies fund that microfinance industry is moving towards commercialization and change in the mission.

Figure 1: Risk management framework

Source: HNB Finance. Annual Report, 2021

Sound risk management is vital to maintain asset quality, profitability, business growth and ultimately achieve sustainable long term growth. This shows risk management is core component of MFIs and MF clients. Therefore, it is paramount to understand and implement risk management culture to ensure that it preserves reliably high criteria, to nurture management's attentiveness and to enhance shareholder value and optimize decent risk and return. Best practice Risk Strategy and Appetite is expected to be comprehensive enough to address stakeholders' concerns and provide a firm and coherent foundation for bank wide and business line risk tolerances, limits and controls. Such a statement should broadly outline benchmarks for solvency, creditworthiness, earning and liquidity and qualitative factors such as reputational and business risk.

2.0 LITERATURE REVIEW

Predominantly, Poor segment of the society had been completely or partially excluded from the formal financial system and financial inclusion. There was a huge vacuum in formal financial sector to support poor which subsequently changed with the introduction of “Grameen” bank by Professor Muhammad Yunus in 1976. He was able to refined the conventional model of microfinance approach by breaking the cycle of poverty and enhance the efficacy of microcredit. Microfinance concept fundamentally carries mix of formal and informal characteristics to provide financial services to the poor to uplift from the poverty. MF industry growth was very attractive past three decades. It shows that industry has not only tried to ease poverty across the world but also shown sights of sustaining themselves from profit earned in the process. As per Asian Development Bank (2000), microfinance also provides financial services such as lending, deposit taking, insurance, payment services. But main difference with other financial institutes, they focus more on social well-being and poverty eradication. ADB further stated that larger number of women depend on microfinance sector in the informal sector for survival and sector is concentrated mostly in low-income, low-productivity activities, especially in minor trades and services. Brau and Woller (2004) mentioned that MFIs are doing well by doing good which resulted them to make space in global stage. There were few research articles and literature fund with relevant to key variables in conceptual framework. Therefore, this study would definitely contribute to discuss more on risk and sustainability in different tangent. Sustainability consists with three broad arears which are under key three areas, Economic, Social and Environmental(ESE) that must all be addressed and synchronized to warrant the long term viability of low income community. It is very important to understand the factors which are facilitating sustainable entrepreneurship and obstacles relating to the management, financials, technical and marketing aspects of managing the business. (Ferdousi F,2015). During the survey, the question was raised when did you start your business, what were the main obstacles/challenges you faced? About 85 per cent statements related to various obstacles and challenges were given by the respondents. It was observed that not only financial hindrances but also female borrowers lack many business skills, financial literacy, technical skills and knowledge regarding market, other external information required for the sustainable development of their businesses. This shows the importance of risk management. It could influence and support these areas.

Microsave (2009), Risk has been defined as "an uncertainty of outcome that affects the objectives' that is a two-sided coin, on one side it has threat, and on the other it has opportunity". Risk is vital part in any business or individual, therefore microfinance is no exception. Nonetheless this does not say that key stakeholders in MF industry should circumvent risk taking. Instead, MFIs should implement proper risk framework, policies and optimizing the risk-reward (Microsave, 2009). Microfinance plays a vital role in economic development and social well-being. Significance of microfinance basically supports to protect from money lenders, provide opportunity to the poor to participate in economic activity, encourage banking activities, build mutual trust and confidence between MFIs and the rural poor people, convenience to the unbanked poor. (Chandra, R, 2021). These could be achieved through successful handing of risk in the industry. Progress in microfinance business should be tied with substantial improvements in asset quality, efficient liquidity management, cost containment measures. Risk management does not say organization to be negative, it can also necessitate of merely patter into diverse opportunities that would facilitate the business to look into risk resilient areas and approaches. (SME Risk management: Sustainability 2020). It is general perception that in spite of achieving core objective of the microfinance concept and integral determination to "do good for financially underprivileged community" it is critical to confess that MFIs putting clients into trouble which are form of create over –indebtedness, exorbitant interest, over dependency on credit instead savings, aggressive collection mechanism, profit motive, mission drift, commercialization and lack of noticeable commitment on poverty reduction (Karim 2011, Garikipati et al. 2017). Risk management could play a vital part in addressing these factors, but currently MFIs and borrowers give least priority for risk management. Risk and Return are the ultimate components of engaging in business. Hence, it is paramount to change thinking on doing business with more emphasis on proactive and effective approach to make long-term sustainability of MFIs. (National Bank of Ethiopia –Risk Management Guidelines (2010). According to Microfinance Insights (2009) "few years ago, all were talking about competition and 'crowding out' in the microfinance sector, now we're talking more about resilience and survival of the fittest. This endorse the importance of introduction of effective risk management and maintain the sustainability. John Elkington (1994) introduced a new accounting framework called the triple bottom line – Profit, People and Planet (TBL) to measure sustainability and appealed that businesses should think differently and measure performance based on the three bottom lines of sustainability. During last two decades, Microfinance has showed a high penetration level and enhance financial and operational efficiency. Nevertheless, market penetration has been negatively affected most of MFI performance as per empirically shown by Gonzalez (2010) which evident that delinquency and default rates on MFIs' loans if market penetration rates reach values of above 10%. Another aspect is growing completion among MFIs also created more and more problems. Several studies find multiple lending in the presence of competition and a correlation of multiple lending to repayment delays as a proxy of over-indebtedness. The Vogelgesang (2003) paper finds that in Bolivia multiple borrowing increased from 13% in 1996 to 24% in 2000. This clearly shows weak risk management process has majorly impacted sustainably of industry. This position would have avoided or reduced if MFIs and borrowers accepted the importance of risk management.

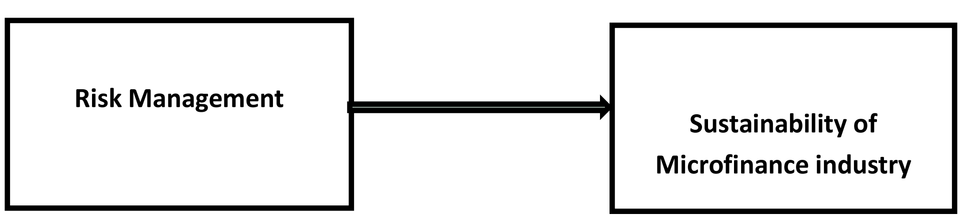
Economic performance by way of cost and income, social responsibility during the operation of the business, environmental responsibility throughout the operation of the business. If we take Microfinance industry which covers all three. It is distinct characteristics while compare to other financial products. Laurence H Meyer Governor US Feral Reserve (2000) stated that "sound or adequate risk management system is ever changing, as new technology accommodates innovation and better information and as market efficiency grows" and also mentioned that "to remain competitive, institutions must adapt and constantly improve their process. That fact becomes clearer every day". MFIs should not focus to sustain in the business by generating return from interest income and aggressive recoveries. Reason to carry out this study to see what is really happening to microfinance industry. It was evident that within a fairly short time, conceivably just a decade, microfinance has gone from being hero to zero in underline concept of poverty eradication tool. It was stated that it was acclaimed as the "silver bullet" to solve the problems of development and poverty reduction, to being derided as the pro-genitor of financial instability and enhanced vulnerability among the poorest people who can ill afford to take this additional burden. Indeed, it is now even described as 'aposter child of exploitation of the vulnerable' Priyadarshee and Ghalib, (2011). It was further stated in 'too many clients of too many MFIs have taken on too much debt' (Centre for the Study of Financial Innovation, 2012) and the sector is displaying the problems that are widespread in other parts of the financial sector: wrong incentives, poor corporate governance and lax or inadequate risk management. Certainly, it has moved very far from the original motivations of poverty alleviation that drove the early manifestations of the model.(Financial Innovation ,2012).Larson Dave (2001) mentioned that "experience has shown that the core principles and practices of microfinance are the same as those found in other environments", and came out with five basics "principles of financially viable lending" which are demand-driven product development, operational efficiency, strong repayment discipline, sound financial performance, achieving scale.

Financial sustainability is key to success and achieve long term sustainability. There are key variables in financial sustainability in MFIs. (Sara E, K 2011). “Those are profit status, efficiency, outreach, deposits, loan losses, interest rates, transparency. In all these factors, strong repayment, operational efficiency, loan losses are common factors for sustainability. If so Risk management should play a vital part in achieving these key dimensions. These factors are associated and effectively managing risk is very critical part to reach long term sustainability. Furthermore, loan losses and high non-performing loan (NPLs), deteriorating asset quality have been impacted the outreach of microfinance and build a sustainable growth in the industry. One of the key reasons is weak risk management and lack of financial literacy. MFIs could play a key role in bridging this gap and offer credit products and loans to the low-income and the MSME segment in the country”. Saravanamuttu, K. (2011)

“In current volatile market condition, it more important to put more weight on maintain asset quality. Microfinance and SMEs in the economy are usually the first to feel the impact of a decline economic growth and market liquidity and consequently become desperate to meet short-term financing needs to sustain or grow their businesses”. (Deloitte,2020). NPLs adversely impact asset quality and profitability which will have spiral effect on reduction in interest income, increase in impairment costs, increase cost of funding, reputational issues, unrecoverable principal, lower credit ratings and liquidity issues in large withdrawals. According to fact finding in this study, it was observed that empirical evidence on the link between NPLs and efficiency is missing in the microfinance literature. Stephen, Z, A, B, Roy, M, (2021) found Profit equation has direct link to loan losses which is presented as Yield minus cost of funds, operating cost and loan losses. According to Li and Zou (2014), there is positive relationship between return on equity and Credit risk management. Further study by Ndoka and Islami (2016) fund that 1 unit of NPL increase would reduce Return on Asset (ROA) by 0.286 units and Return on Equity by 0.0185 units. This clearly shows that how important to maintain quality asset base to achieve ultimate financial and non-financial objectives. Credit risk management plays a vital part in addressing NPL, ROE, ROA. This study mainly focused on credit and operational risk aspects and how it could impact the sustainable growth in the industry. There are basic principles of lending and time to time it has been evolved and developed to sophisticated models. Bust underline basic principles are still valid. Irrespective of the form of financing needed, financial institution will be interested in both business and personal financials. Basically credit evaluation is directed by the “5 Cs:” character, capacity, condition, capital and collateral. These five components cover almost 80 per cent of the credit evaluation process and support the lender to understand the borrower and the business in order to determine credit worthiness. Subsequently

5C concept has been gradually expanded to CAMEL (capital, asset quality, management quality, earnings and liquidity). This evaluation process further developed PEARLS (protection, earnings, asset quality, rates of return and cost, liquidity and signs of growth) PEARLS results in objective measurements, whereas the CAMEL approach involves some degree of subjective judgment by analysts or examiners particularly on management quality and capability. Hennie van G., Joselito, G, Bikki, R (1998). There are numerous factors influence microfinance industry. It was observed that each MFI adopts different risk assessment approaches, lending products and model which basically depends on the objectives of the shareholders and not on the need of the customers. Moreover, diverting underline basic microfinance concept. In same way MF clients also approach MFIs depends on several factors, such as range of products and services, interest rates, diversity, easy access, professionalism, CSR activities, fairness. MFIs tend to target female clients instead of male as their performance, attitude towards repayment, growth of various surveys and researches. As per survey United Nations Capital Development Fund(UNCDF) of 29 MFIs revealed that approximately 60 percent of these institutions' clients were women. Six of the 29 focused entirely on women. Among the remaining 23 mixed-sex programs, 52 percent of clients were women. Although we talk about various factors influence MF industry and desirability move forward, there is always gap between understanding the importance of risk and sustainability of the business. It is common for MFIs and MF borrowers. Therefore, Risk management play a vital part in bother MFIs and borrowers side. It is imperative to avoid and need to maintain proper control and discipline. Figure 2 Conceptual framework was developed to see the significance of two variables. Risk management as Independent variable and Dependent variable as Sustainability of the MF industry. In previous studies, hardly seen study to find the relationship in these two variables which is one of novelties in this study. Survey results proved that there is significant positive relationship between these two variables.

Figure 2: Conceptual framework



Independent variable *Dependent variable*

The study found that Uganda is one of the leading countries which thrived economy through microfinance. (Bond,2011), Both Clients and MFIs in the country have recorded substantial growth in financial sustainability and growth with a clientele base. Even though grow evolution, resilience, and contribution to the financial eco-system, MFIs in Uganda continue to struggle with a deteriorating asset quality. (Bananuka et al., 2019) which was attributed due to several factors; capital structure, cost of capital, credit risk management, and the quality of MFIs' clientele. Jacques Attali, President of PlaNet Finance (2019) stated that "along with the 3 other pillars of development – democracy, education and infrastructures – microfinance is increasingly considered a key instrument in implementing effective and sustainable strategies in the fight against unemployment. This clearly states that industry should be stable to support community. Hence, all stakeholders should understand the importance of risk management, place it in forefront.

3.0 Methodology

The target population of this study was female microfinance borrowers in Sri Lanka. The sample frame was designed by obtaining microfinance female borrowers data from prominent two MFI operating in Sri Lanka, to approach different segments of microfinance female clients to understand of their business, financial literacy, managing financials, repayments, cash flows and finally see the understanding of the risk management perspective from burrows' point of view. Uniqueness of this survey is that data was captured through self-administered questionnaires from female borrowers. Generally, and mostly these type of studies were done by carrying out survey through MFIs staff and management team, not the borrowers. As a result, clear insight had not been surfaced in previous studies. Hence, the data was collected using a sample 376 MF female borrowers who were selected from three administrative districts out of twenty-five districts in Sri Lanka. Selected three districts represents major provinces in Sri Lanka by which study tried to extract more representation, diversified demographic diversification and geographical coverage. As per Lanka Microfinance Practitioners' Association(LMPA) women borrowers in Sri Lanka is close to 2.8 million out of which approximately 75% are female clients. Hence, study was done targeting female clients to make it more representation and achieve key hallmarks of scientific research. (Sekaran, U, Bougie, R. 2013). Furthermore, Secondary data was captured from CBSL annual report, Data of Census and statistics Department, Leading MFIs data. The data was collected using personally administered questionnaires. The data was analyzed using graphical method and statistical method and simple regression analysis has been used in this study to determine the relationship between two variables and demographic data was analyzed using SPSS 21.

4.0 Results and Analysis

The target survey sample of the study is rural female microfinance borrowers. The study concentrated on key demographic dimensions which was taking into the consideration the nature and characteristic of the target sample. The demographic variables influence women decision making ability. Thus, it is very vital to study those data very carefully. Using SPSS software, the descriptive analysis was conducted to examine demographic characteristics of the sample of 376 female borrowers prior to correlation analysis to test significant relationship between the variables risk management and sustainability of the MF industry. In order to satisfy with the sample adequacy Kaiser-Meyer-Olkin (KMO) test was done which indicated 0.941 and it has marvelous level of sample adequacy in the data set. Another important factors are to test validity and reliability of the data collection instrument. Cronbrache's alpha showed .959 which is in acceptable range. Cronbraches's alpha above 0.70 is acceptable and 0.80 or greater is preferred (Cortina, J. M. 1993). Convergent and Discriminant are also acceptable range. Average Variance Extracted (AVE) showed more than 0.5, results show it stands at 0.662. Discriminant validity 0.8167

Table 1: Kaiser-Meyer-Olkin(KMO)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.941
Bartlett's Test of Sphericity	Approx. Chi-Square	10229.737
	df	595

Sig.	.000

Religion, Material status, Number of dependents, Education level, Income levels. Personally administered questionnaires were run to get the important pattern in reference to a certain word in the form of text search query and to visualize words in context based on demographic attributes, matrix coding. These were analyzed using graphic presentation techniques, bar charts and the pie charts. Survey results show that supervision and review of the risk management in MF are extensively dominated by staff in MFIs and less primacy to borrowers. Their understanding also very minimal on risk management. Nevertheless, they have shown interest to learn and keenness to enhance knowledge and practical implication relating to risk management. The demographic profiles of the respondents are examined in observing the sample characteristics shown in Table 2

Table 2: Demographic data

Variable	%
Gender N-376	
Female	100%
Age (Years)	
<26	3.2%
26-35	33.8%
36-45	29.8%
46-55	27.1%
>56	6.1%
Religion	
Buddhist	60.4%
Christian	31.2%
Tamil	5.05%
Muslim	1.86%
Others	1.49%
Marital Status	
Unmarried	39.5%
Married	52.6%
Single	7.9%
Employment	

Self-Employed	32.18%
Agriculture and farming	15.18%
Manufacturing	47.8%
Service	4.ar84%
Dependents	
No dependents	1%
< 2	13.5%
>3	85.5%
Education Level	
Primary Level	4%
Ordinary Level (G.C.E O/L)	67%
Secondary Level (G.C.E A/L)	18.4%
Graduate/ Diploma	10.6%
Income Level	
<10,000	23.1%
10,001-20,000	36.2%
20,001-30,000	23.1%
30,001-40,000	17.6%

Source: Filed survey (2022)

The respondent age group plays a key role in the industry growth. Results show that 3.2 per cent is below 26 years which means most of the youth female are not much interested in involve in microfinance and peruse other avenues before moving to sector. Nevertheless, almost 63.6 per cent covers age groups 26 to 45 years which is a very positive sign. This means female would like to enter into microfinance sector with some education background and reach up to certain maturity level. In sustainability point of view, results would obviously be encouraging and easy to enhance financial literacy and educate on importance of risk management. Religion is the key component of the culture and it has a vital part in influencing entrepreneurship and empowering women. Cultural barriers, lifestyle, habits, believes would impact the extent of such freedom. It is very important to find the number of dependents in a family which directly impacts the financial inclusion, involvement in the business, family support, savings and end use of funds. It was found that 85.5 per cent having three and more dependents in the family and there are 13.5 per cent of families with less than 2 dependents in the family. This shows that majority of the income is being used for consumption bases instead of business growth. This is very obvious that borrower would use funds to meet commitment such as food, education, wedding expenses. Therefore, diversification and misappropriation of loan fund would be imminent. Hence, it is vital that risk evaluation should be carried out not only based on financial and business perspective, should consider the number of dependents in the family as well.

Financial literacy and education levels of the borrows play a big part in business performance and sustainability. Previous studies have proven that there is positive relationship between financial literacy and business performance. (Kamari R.S.P.D 2021). It influences the business decision and attitude towards servicing the loans. It is very important fact that almost 85 per cent of respondent are having Advance level and ordinary level education which is an encouraging sign. It was discovered 4.0 per cent of respondent studied only up to grade five. It is commonly believed that the attitudes of entrepreneurs and education level significantly influence on risk management practices any businesses. Lower financial literacy among the microfinance clients would have an adverse impact directly on microcredit management. It was observed majority respondents do not make much emphasis and lack of focus towards risk aspects of the business and most of the time they tend to counter day to day affaires. Ultimate objective of the businesses to create value by optimizing decisions on borrowings, working capital, savings, cash flows, pricing, capital investments etc. Financial literacy and education levels will also protect rural female borrowers from aggressive money lenders who may exploit the borrower's lack of financial knowledge.

With regard to involvement in different business segments, it was found that 48 per cent of the respondents are involved in the manufacturing sector and 32 per cent of female borrowers are into self-employment. Furthermore, 15 per cent involve in agriculture and livestock sectors. Service sectors is around 4 per cent. As most of the respondents are in manufacturing and provide employment to villagers, failure in the business would impact the community in big way. Although risk management covers wide area in risk such as Credit, Liquidity, Market, Compliance, Operational risk, this study mainly focused on credit and operational risk aspect which covers approximately 60 per cent of risk area in financial institutes. It was noted that credit risk management influences the accomplishment underline core concept of microfinance and the survival of the industry (Kanake, 2014). "According to credit risk management, the primary cause ofthe failure of microfinance institutions was poor portfolio management" (Mbah & Wasum, 2019). Credit risk management can significantly affect the sustainability of the microfinance industry as per both previous researches and existing research.

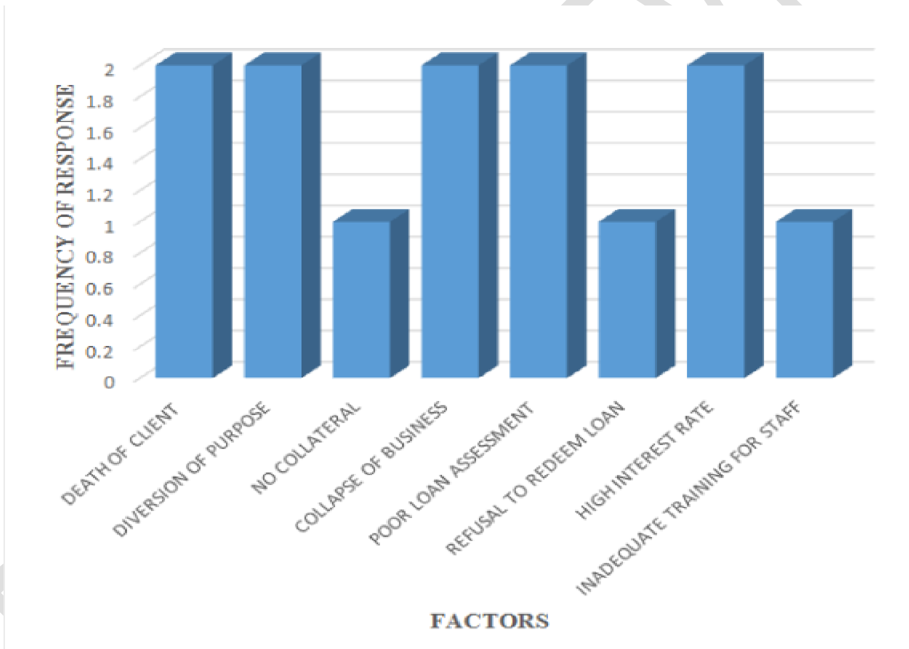
The study applied simple regression model. Regression model, basically, specifies the relation of dependent variable (Y) to a function combination of independent variables (X) and unknown parameters (β). Simple regression attempt to present the relationship of two variable where one dependent variable is hypothesized to affect one dependent variable. In this study conceptual framework has been constructed to see the relationship of Risk Management and the suitability of the microfinance Industry in Sri Lanka. Survey was able to gather data from target population how do they perceive and understand risk management as a layman person and what support it would get to sustain in the business. Novelty of the research is that most of similar research were done taking the feedback responses from MFIs company officials but in this study gathered information from end user women microfinance clients. Simple linear equation represents a straight line which shows the relationship between effective risk management and sustainability of microfinance industry. Regression analysis was conducted to empirically determine whether effective risk management significant determinant of sustainable growth in MF industry in Sri Lanka. Table 3 shows the results.

Table 3: Simple Linear Regression Analysis

R-Square	Adjusted R-Square	F-Statistic	Significance
0.521	0.520	403.729	0.000
Variable	**B**	**t-Statistic**	**Significance**
Risk Management	0.748	20.085	0.000

Linear regression analysis shows summary of the relationship between risk management and sustainability of the microfinance industry. Test results shows R-square value is 0.521and adjusted R-Square is 0.520. This shows that 52 per cent will be the variability with the dependent variable of sustainability microfinance. The findings show that there are significant positive relationships between risk management and sustainability of the industry with $p \leq 0.05$ and $p \leq 0.01$. Fair enough to determine the importance of effective implementation of risk management to MF industry which could use as one of the main tools to driver the industry minimizing the damages. Risk management. The model was adequate because significance level of F-Statistics (0.000) is less than 0.05 level of significance. This shows that risk management has a significant influence on sustainability of microfinance industry in Sri Lanka because significance level of t-Statistics (0.000) is less than 0.05 level of significance. According to the estimated regression equation, when increasing the risk management by 1-unit sustainability of microfinance industry in Sri Lanka will increase by 0.748 units. This means risk management has a strong impact on the sustainability of the microfinance industry in Sri Lanka. The figure indicates that a positive relationship exists. Therefore, an increase in the effectiveness of strategic risk management strategies positively affects sustainable growth in MF industry. The above results supported all the hypotheses those assumed to be deciding sustainability of the industry would mainly have supported by effective implementation risk management in the MFIs and inculcate effective risk management culture among borrowers.

Survey and secondary data revealed that NPLs are major issue for MFIs and have implications on their operations and survival. During the discussions and interviews conducted with the management of the leading MFIs, it was found that there are numerous factors contribute to non-performing situation, such as diversion of purpose of loan, collapse of business, death of clients, high interest rates, poor loan assessment. Picture 1 shows the results. The MFIs should make conscious efforts to pursue the implementation of the existing safeguards as it will help address the NPL situation. In this context implementation of effective risk management is very vital, not only in MFIs, it should inculcate among borrowers as well.



Pic 1 : Factors causing NPLs

Source: Analysis of NPLs in MFIs-Ghana (2019)

As per microfinance barometer report (2019), in 2018 there were 139million borrowers benefited from industry, compared to 89million in 2009. This clearly shows that in spite of various issues over two decades, MFIs have improved their efficiency and penetration levels in par with other sectors. Figure 3 shows the key performance indicators reported in 2019. Nevertheless, it was observed that there was notable deterioration in asset quality and portfolio at risk (PAR) over 30 days have been stretched to 60 days and above, which is an alarming situation. Deterioration in quality of the portfolio and increase NPLs will directly impact to portfolio yield, operating expenses, return of equity. Hence, it is very obvious that risk management is very essential part to achieve key performance indicators.

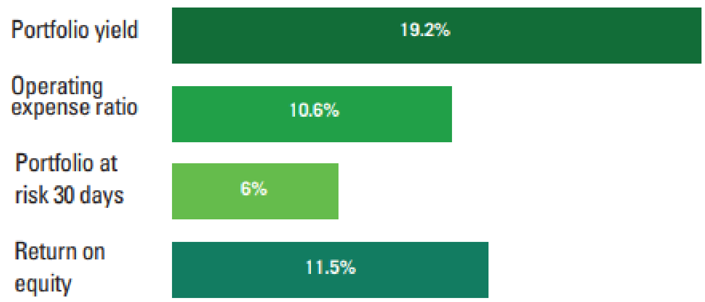


Figure 3: MFIs average performances

Source: Microfinance barometer, (2019

This study also tried to identify key areas pre-loan and post loan evaluation factors on non-performing loans in micro-lending. It was observed from the information collected from responses for questionnaires and discussion had with target sample. There is significant gap between MFIs thinking and borrowers' perception. The study found the importance of proper consideration of the ability of the borrower and purpose of the loan in prior loan evaluation to reduce non-performing loans in micro lending.

Table 4: Factors causing NPLs

Concept	Variables	Sub dimensions
Pre-Loan evaluation Factors	Character of client	age, education level, number of dependents, marital status
	Ability of client	asset base/ownership of the customer and his family, the experience of the field, financial literacy, existing debt level, record keeping ability
	Margin of loan	interest rate, loan charges
	Purpose of loan	Working capital, capital investment only, both working capital and capital investment, new project, existing business
	Amount of Loan	amount of loan, security/collateral offered
	Repayment of loan	repayment period, payment pattern
Post Loan evaluation Factors	Marketing Management	competition, demand, quality of goods, outreach for the potential market
	Operation Management	low performance due to natural deserter, due to life cycle events such as marriage, death, etc., the resignation of key workers, high staff turnover, no succession plan, poor knowledge of management functions

	Financial Management	profit margin, over finance or under finance by the bank, debt level, outside borrowing of the customer, maturity mismatch with the loan purpose, bad debt, savings, earnings, cash flow

Source: Author developed and complied (2022)

5.0 Discussion

The article provides evidence about lack of understanding of risk management and importance of integrating MFIs in traditional financial markets and highlights the usefulness of risk management elements that should be considered by MFIs as a result of this background. MFIs should improve their existing processes for managing their risks and make them more comprehensive and robust It is commonly acceptable fact that the concept of microfinance is an extremely powerful tool which has the power to influence to reduce global poverty. Problem arises whether microfinance really dose it. Sri Lanka is experiencing hug gap in growth potential of the industry and its sustainability. Microfinance is a holistic approach that has been used in different countries to alleviate the plight rural community. In order to avoid the existence of misery in financial sector as experienced by conventional banks in some countries in the past, risk management in MFIs need to be considered now. Ultimate objective of implementing effective risk frame work to safeguard the industry and contribute to reduced vulnerability in the industry. It is highly evident that quality of the MFIs has been deteriorated significantly recent past due to entry of larger number of players to the industry, intense competition, commercialization, mission drift, lack of regulatory control and lack of understanding among key stakeholders in the industry.

In this context, it is vital to have comprehensive credit risk management in MFIs which should support to identify of existing and potential risks inherent in lending activities. This process should be implemented with clearly defined policies setting for the MFI's parameters under which credit risk is to be controlled, clearly defined delegated authority levels, periodic reviews, Pre and post disbursement follow –ups, monitoring, ensure adequate portfolio diversification. It is important to maintain up-to-date information on borrowers and other MIS which are available for ongoing risk assessment by management, auditors and regulators. When MFIs expand faster than their capacity, internal controls weaken and

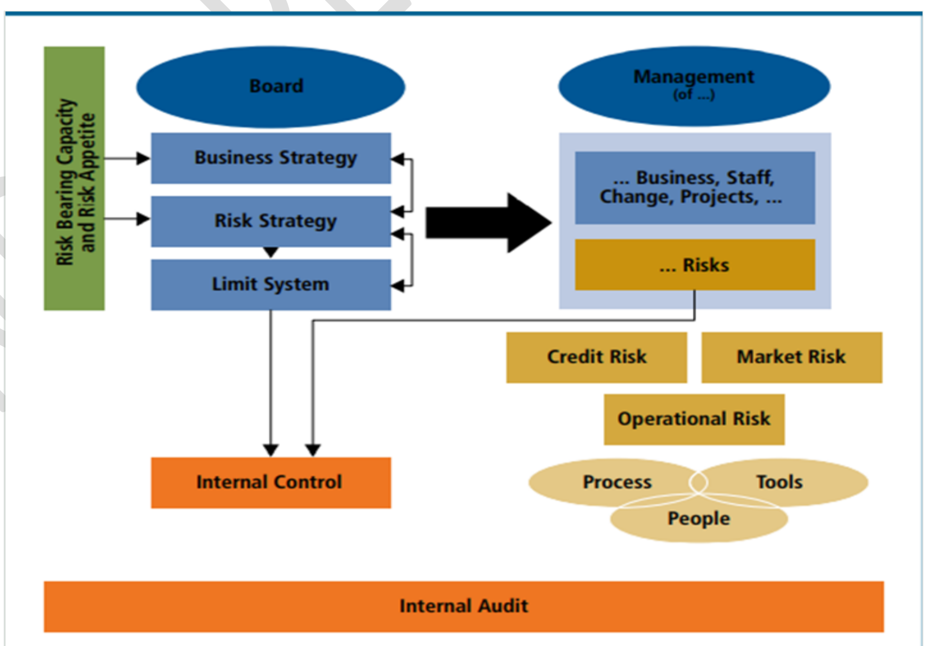
methodological principles are diluted. (IFS, 2014) . This not only nurtures the possibility of availing low quality and marginal advances but also opens the doors to potential fraudulent practices by both staff and clients. MFIs that focus too strongly on growth and capturing market share can become financially vulnerable through currency and cash flow mismatches, weak balance sheet planning, excessive leverage, etc. This holds especially true for MFIs that enter into a steep growth curve without having established and internalized proper risk management principles related to their financial risk infrastructure. most importantly, these failures arose from two principal drivers that have been highlighted for many years in literature that analyzes traditional financial institutions: poor corporate governance and risk management structures. (K, David ,2014). It is common phenomena that implementation of effective risk management is complex and difficult task to MF industry which would hinder the growth and development of social well-being. But risk management is very impotent nowadays in a world where economic events and financial system are linked and going hand on hand. That is why Global financial regulators such as Basel Committee, Global financial institutes have stressed risk management as an essential tool of long term success. Thus, MF industry would not be able to operate in isolation which will definitely face consequences and end up with disaster. Major problem is that MFIs are more focused on increase shareholder value by less focus on sustainability of the business and growth of their clients. If you fail in develop proper risk culture in the organization, it would be a disaster for all stakeholders. Risk could happen in many ways, and nobody could predict and wait till disaster strikes and in today's agile business scenario, one never knows when it may happen. In current context, there has been huge changes in macro, micro environment factors, market dynamics, risk factors. Therefore, instead of dependent on past performances of financials, behavior of borrowers', MF industry should understand the importance of the futuristic view of the behaviors and more emphasis put on organization to identify and manage future risks as the best predictor of long-term success. Taking into the consideration the vulnerability and dynamic environment factors, global financial regulators has emphasized the futuristic approach and gradually move out from incurred credit loss (ICL) to expected credit losses (ECL) model. As a proactive and prudential approach MFIs should also explore possibility of complying these guidelines and approach to manage their portfolio. At least put some foundation to those guidelines. Effective risk management has several benefits: It is prudent to identify early warning signals prior to incur potential problem: Hence, efficient and professionally developed process to assessing, identifying early warning signals, evaluating and measuring risk identifies would support to avoid drain organization management time and resources. Giving solution, mitigate risk would be easy if MFIs identify risk in advance. If so, time could be used to grow business and secure market position. There are unique differences in MFI and other conventional banks' lending and risk profile. These factors have impacted streamlining the MF industry and go in par with conventional banks, mainly recurrent cash flow issues in family circle mostly on education , weddings ,vulnerable target customer segment: MFI products and services are targeted to the poor and low income earners in the society, most clients of MFI do not have physical assets (house, land, automobile, plant and machinery) and financial assets to offer as collateral for loans, lack of monitoring system by regulators, questionable and weak ownership structure, lack of entrepreneurship skills and poor management skills of entrepreneurs, access to market and lack of awareness regarding the importance of marketing tool, Inability to market product and maintain product quality, poor physical Infrastructure, high interest rates. Furthermore, it was observed that MFIs give least priority for risk management aspect. Their only concern loan disbursement and recovery. Identify correct target group for lending, evaluation, NPLs, effective treasury management are very important aspect to survive in MFIs market. If MFIs also think as a private money lender, industry would be in a disastrous situation in long run. As other financial institutions, MFIs should also adopt the same risk management process and framework which would help them to sustain in the industry.

It is observed that in general MSME (Micro, Small and Medium) Entrepreneurs are lack of financials literacy. This is one of the major issues for sustainability of the industry. While developing the business, client would tend to diversify unrelated and risky business ventures, not only that private consumption and financial discipline would gradually go to deteriorate. It is observed that lack of financial literacy is one of the major issues towards sustainability of the industry. As a business partner or partner in progress MFIs should focus on how to develop financial education to the clients. Investment in these would certainly pave the way to reduce risk in several areas. Although we talk about the change, instill financial literacy are not an easy task to transform the inherent lose system to effective risk culture. It is a gradual process to influence the financial literacy and education towards supporting MFI clients. If MFIs could do so following could be achieved in long run. Exertion to transform behavior, attitude and understanding of financial matters. Fundamentally, financial attitude demonstrates a client's willingness to understand and judgments about financial issues, application, management and the use of financial services. MFIs and borrows should work closely to enhance financial literacy level which would probably instill financial attitudes, financial discipline in clients. This would support to strengthen the financial position of the business and households' financial management.

Educate the importance of understanding basic risk management concept and strategies to mitigate risk factors. They should understand and assess the risks in managing home front financial affairs, basically income and expenditure, health, education, consumption   and their businesses. Borrower should apprehend the importance of management loan and equity funds, utilize those towards income generating avenues to repay the loan and make reasonable return from the business activity. They should not use those funds for consumption which does not generate any return. The borrower should spend prudently the excess and save for emergencies and build their assets, and also look at other options that they use a mix of financial services including insurance to protect themselves against risks, gradual buildup of assets. If borrower undergo a proper financials education, they would be in a position to understand how to invest their business return, savings for financial assets, mainly property, jewelry, equipment, animals, savings. This decision should be based in line with the retain profits, cash flows. Need to understand short-, medium- and long-term investments. Most of the clients use to invest their working capital for long term assets and subsequently get stuck. These all mainly because of lack of financial knowledge.

A reduction in over-indebtedness. As a result of financials education, client would be able to manage their loan portfolio more professional and effective manner. This would support them to understand and manage their financial cost, deployment of funds for income generating activity, settle high-cost borrowings etc. MF clients would gradually move from borrowing from informal financial sector to formal sectors, but it will depend on how well MFIs understand and cater to microfinance clients' requirements. Client would assess the high cost and multi borrowings and reduce high gearing levels which will certainly support them to reduce overdues, late payments. Support to manage their own financials, meeting Banks's and personal commitments on timely manner. In addition, it will help them to educate to keep liquid assets if any case necessity to sell assets in times of eases the hardship rather than borrowing more and more. Finally end up with bankruptcy and defaulter. Hence, taking into given context, it is evident that Risk management process could not practice in isolation, both MFIs and Borrowers should understand the gravity, why risk and how it should be managing. All should carry the responsibility in order to maintain the sustainability of the industry. As Microfinance sector contributes significant portion towards GDP in a country, MFIs require to take appropriate risk management system which needs to be integrated into existing corporate governance system. Figure 4 shows the Basel committee recommended risk management system.

Figure 4: Risk Management System



Source: BASEL for MFIs (2014)

These recommended systems and processors are being done for MFIs and industry benefit and achieve sustainability. As such, each MFI needs to find its own tailored solution, depending on its business strategy, history, culture, and structure - just as traditional FIs do. Most importantly, the solution must be appropriate for the MFI. This appropriateness should be looked at from two angles: On one side, the risk management system must be proportionate with the risks the MFI faces, and on the other side, it should be in line with best market practice. (Basel for MFIs ,2014)

Key initiatives to improve risk management in MF industry.

- Review existing credit evaluation and approval process. Design and effectively implement Risk Management Policy
- Review sectorial exposures and develop a risk appetite framework.
- Portfolio management team. Watch list client, None Performing clients, Post disbursement review of facilities as an independent group.
- Establish effective MIS which should support to make better management decisions.
- Implement transparent and effective process to learn from mistakes (Risk Event Management), to continually improve business processes.
- Implement robust credit approval process and delegating authority.
- Staff rotations and spot audit by independent department. Mainly to avoid frauds and lending to ghost accounts.
- Organize period session, trainings to enhance financial literacy of the borrowers and business support.
- Introduce Key performance (KPIs) indicators to borrowers: Financial and Non-Financial
- Conduct Stress Testing and Scenario Analysis- This will provide understand magnitude of the shocks to the capital in case of different scenarios.
- Periodic review of existing product develop / Risk Assessment/Digitization/ Improve operational efficiency
- Introduction of Credit Risk Rating Models/ Ranking of borrowers with historical repayment behaviors.
- Conduct periodic training programms to borrowers to develop their business and financial literacy skills.
- Establish trade desk: Build link between Supplier /Buyers find opportunities in the market.
- Review staff incentive schemes and monitor the quality of assets and sustainability of the business which are canvassed by the staff
- Develop Self Help Group Concept (SHG) to Cluster Lending Groups (CLG). It has more bond and ownership instead of individual borrowers

- Setting up self-regulatory bodies (SLB)for policy advocacy and setting up guidelines for safe business practices (Intellecap 2013)
- Regular review of portfolio and make portfolio ceilings and other measures to prevent overlanding.
- An Early Warning System (EWS) should be established using indicators, which can help the MFI identify critical situations ahead of time

6.0 CONCLUSION

The article provides the evidenced that there is a significant relationship between risk management and sustainability in the industry. It found that there is a strong relationship with these two variables which is very impressive for growth of the industry and enhance well-being of the society. With the intense growth in the industry, MFIs should now take a big breath and step away from solely looking at MFI or NGO solutions for competitive intelligence on how to manage risk. Instead, they should take a close look at the very useful processes and strategies which have been developed by FI expertise over time. Financial literacy and understanding of the importance of risk management in MF clients need substantial improvement. It is important to mention that substances of the article symbolize the tip of the iceberg in the industry which need to be addressed sooner than later. The current market opportunities and growth strategies should be aligning with effective risk management policy and framework. There is much to be discussed, analyzed, recognized, documented to set the future course for the microfinance sector sustainability globally and, to maximize its potential to change the lives of the country's low-income population. MFIs can certainly be financial intermediaries with best practice professional risk management and this in turn will help them strengthen growth potential, resilience to potential market shocks, knowing they are not insulated from future financial crises. Doing so creates and raises trust both in the MFI and the microfinance sector as a whole. Fundamentally, it will enable MFIs to more successfully and widely provide access to finance for those who most need it.

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