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A Study on Financial Risk Management Practices of Micro Finance Institutions

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Abstract

The study is set to explore the liquidity risk management practices by MFIs in Kenya. Emphasis was on the following; understanding the process of liquidity risk identification by MFIs, the extent to which MFIs are classified, monitor liquidity risks, liquidity risk exposure of MFIs and to identify the various practices that the MFIs adopt in managing the liquidity risks. The objective of the study was to examine the effects of credit risk management practices on financial performance of Microfinance Institutions. This article will explore credit, liquidity, operational, and strategic risk to better understand microfinance firms' financial risk management techniques. These methods reveal how MFIs promote financial inclusion and alleviate poverty while managing financial risk.

INTRODUCTION

Financial risk management is crucial for microfinance institutions (MFIs) because they serve low-income individuals and small businesses. Because of its nature, microfinance helps customers who may not have had easy access to banks. These consumers often operate in unpredictable economic environments and experience socioeconomic issues. Thus, MFI resilience and sustainability depend on effective risk management to protect consumers and financial stability.

Important elements of microfinance's financial risk management comprise:

1. Credit Risk Management: Because lending to clients who might not have collateral or have steady revenue streams entails inherent uncertainties, MFIs are exposed to a large amount of credit risk. Robust loan evaluation procedures, continuous borrower performance monitoring, and proactive steps to reduce defaults through mechanisms like group lending, credit scoring, and client education programmes are all necessary for credit risk management.

2. Liquidity Risk Management: To make sure they can pay their financial obligations and continue operating without interruption, MFIs must carefully manage liquidity risk given the frequently erratic nature of funding sources and cash flows. This could entail keeping sufficient reserves, spreading out the sources of money, and creating backup plans in case of liquidity crises.

3. Operational Risk Management: The stability and standing of MFIs can be jeopardised by operational risks such as fraud, technological malfunctions, and governance problems. Robust internal control implementation, technology infrastructure investments, and cultivating an organisational compliance

and transparency culture are all necessary components of effective operational risk management strategies.

4. Strategic Risk Management: MFIs work in dynamic environments that are influenced by shifting client demands, market trends, and regulatory changes. Strategic risk management entails evaluating competitive challenges, regulatory constraints, and macroeconomic trends in order to inform strategic decision-making and modify business, This study intends to contribute to the continuing discussion on enhancing the resilience models as necessary and sustainability of microfinance institutions in meeting the needs of marginalised groups and promoting inclusive economic development by looking at the financial risk management strategies of MFIs.

Microfinance institutions (MFIs) must implement financial risk management procedures due to a number of reasons related to their mission and operating environment: Client Vulnerability: MFIs generally assist small enterprises and low-income individuals who frequently do not have access to standard banking services. These clients can have little or no collateral, inconsistent income sources, and low financial knowledge. Because of this, they are more susceptible to economic shocks, so it is essential to manage risk well in order to safeguard their interests and avoid getting into excessive debt.

Growth and Sustainability: Reputable risk management techniques are critical to MFIs' long-term viability and expansion. MFIs can retain stability, draw in investment, and broaden their clientele by handling risks including credit, liquidity, and operational difficulties well. Inability to control risks can result in unstable finances, a decline in investor trust, and ultimately a shift in the goal away from helping the intended audience.

Regulatory Compliance: To safeguard customers and maintain the stability of financial markets, numerous nations have laws governing the microfinance industry. In order to comply with these standards, MFIs must put in place strong risk management frameworks to reduce a variety of risks, including overlending, low capitalisation, and operational flaws. Regulation penalties, harm to one's reputation, and loss of trust are all possible outcomes of non-compliance.

REVIEW OF LITERATURE

ADRIANO A. RAMPINI, YEAR:17 OCT 2018.

We use data on interest rate and foreign exchange risk hedging to analyse risk management in financial firms. We uncover compelling evidence that higher-capitalized institutions hedge more over time, both across and within institutions. To identify these institutions, we take advantage of nett worth shocks brought on by loan losses brought on by declines in home prices. Institutions that experience these kinds of losses significantly lessen their hedging in comparison to other similar institutions. The findings supports the idea that hedging and financing are both hampered by financial limitations. We find little evidence to support the theories that hedging behaviour is explained by regulatory capital, interest rate risk exposure changes, or risk shifting.

G. KOTRESHWAR,YEAR: 25 JAN 2006

The primary factor that influences financial behaviour is risk. The financial system would be much simpler if there was no risk. In the actual world, risk is prevalent everywhere, though. Therefore, in order for financial institutions to thrive in this extremely uncertain world, they must effectively manage risk. Risk management dynamics will surely be the foundation of banking in the future. The only banks that will last in the long run in the market are those with effective risk management systems.

One crucial element of comprehensive risk management that is necessary for a banking organisation to succeed over the long run is the efficient management of credit risk.

ALAN J. CARD, YEAR: DECEMBER 2013

Operational risk assessment methods have been used by the healthcare industry in recent years to help identify the systemic problems that result in patient safety accidents. However, while these problem-focused technologies have helped healthcare organisations better recognise risks, there hasn't been a discernible increase in patient safety as a result of them. A plausible explanation for this could be the absence of backing for the risk control approach that is solution-focused. This article presents a content study of the risk management plans, guidelines, and practices at ambulance trusts (health service organisations), mental health, and acute care hospitals in the east of England region of the British national health service. Finding organization-level guidelines to support risk control practice was the main objective.

RICHARD GRINOLD

Using a number of variables, Grin old offers a broad framework for describing many facets of risk management. The work is comparable to the widely discussed subject of performance analysis and attribution, hence it is appropriate to characterise it as "old wine in new bottles." Still, the scope is far more broad. Grin stein first offers a theoretical framework and model that characterise different components of risk management as either the consequences of risk and correlation of risk managements or as the allocation of a risk management's variance. Numerous issues can be examined using the same framework thanks to the extended framework and risk management focus. Grin art provides examples to show what the approach is capable of and to help us see when we are placing too much pressure on the model.

Objectives of the study

To research the process of choosing investments.

To analyse sample scripts' risk-return characteristics

To build a portfolio that maximises return while minimising risk.

DATA ANALYSIS

Calculation of Return of WIPRO

Return=Dividend + (Ending Price-Beginning)

Y	Beginning price (Rs)	Ending price (Rs)	Dividend (Rs)
2018-2019	2052.00	748.8	29.00
2019-2020	755.00	463.35	5.00
2020-2021	462.00	605.9	5.00
2021-2022	603.00	525.65	8.00
2022-2023	521.54	635.68	8.50

Beginning Price

Return (2019) = 29.00+(748.8-2052.00) * 100 = -55.60%

2052.00

Return (2020) = 5.00+(463.35-755.00) * 100 = -37.96%
755.00

Return (2021) = 5.00+(605.9-462.00) * 100 = 32.23%
462.00

Return (2022) = 8.00+(525.65-603.00) * 100 = -11.5%
603.00

Return (2023) = 8.50+(635.68-521.54) * 100 = 23.51%
521.54

Interpretation

After analyzing the data from the period 2018 to 2023 in WIPRO I can find that the dividends decreasing.

Calculation of Return of CIPLA

Y	Beginning price (Rs)	Ending price (Rs)	Dividend (Rs)
2018-2019	898.00	1671.05	10.00
2019-2020	1634.00	320.8	3.00
2020-2021	320.00	448	3.50
2021-2022	447.95	251.35	2.00
2022-2023	251.5	215.65	2.00

Return=Dividend+ (Ending Price-Beginning price)
Beginning Price

Return (2019) =10.00+(1675.05-898.00) * 100 = 54.23%
898.00

Return (2020) = 3.00+(320.8-1634.00) * 100 = -75.95%
1634

Return (2021) = 3.50+(448-320.00) * 100 = 41.09%
320

Return (2022) = 2.00+(251.35-447.95) * 100 = -43.44%
447.95

Return (2023) = 2.00+(215.65-251.5) * 100 = -17.65%
251.5

Interpretation

After analyzing the data from the period 2018 to 2023 in CIPLA I am able to find that the dividend is decreasing.

Calculation of Return of RANBAXY

Year	Beginning price (Rs)	Ending price(Rs)	Dividend (Rs)
2018-2019	598.45	1095.25	18.00
2019-2020	1109.00	1551.18	20.00
2020-2021	1568	362.75	17.50
2021-2022	363	391.8	8.50
2022-2023	391	425.5	8.50

Return=Dividend+ (Ending Price-Beginning price)

Beginning Price

Return (2019) = $18.00+\frac{(1095.25-598.45)}{598..45} * 100$ = 85.52%

Return (2020) = $20.00+\frac{(1551.18-1109.00)}{1109} * 100$ = 17.35%

Return (2021) = $17.50+\frac{(362.75-1568.00)}{1568.00} * 100$ = -70.24%

Return (2022) = $8.50+\frac{(391.8-363)}{363} * 100$ = 10.27%

Return (2023) = $8.50+\frac{(425.5-391.00)}{391.00} * 100$ = 10.99%

Interpretation

After analyzing the data from the period 2018 to 2023 in RANBAXY I am able to find that the dividend is decreasing.

Calculation of Return of BAJAJ AUTO

Year	Beginning price (Rs)	Ending price (Rs)	Dividend (Rs)
2018-2019	502	1166.3	17.00
2019-2020	1155.05	1161.2	25.00
2020-2021	1179.00	2001.1	25.00
2021-2022	2021.00	2619.18	40.00
2022-2023	2648.65	2627.9	40.00

Return=Dividend+ (Ending Price-Beginning p

Beginning Price

Return (2019) =$17.00+\frac{(1166.3-502)}{502} *100$ = 159.17%

Return (2020) =$25.00+\frac{(1161.2-1155.05)}{1155.05} *100$ = 2.77%

Return (2021) = $25.00+\frac{(201.1-1179.00)}{1179.00} *100$ = 76.34%

Return (2022) =$40.00+\frac{(2619.18-2021.00)}{} *100$ = 31.9%

$$\text{Return (2023)} = 40.00 + \frac{(2627.9 - 2648.65)}{2648.65} * \frac{2021.00}{100} = 0.726\%$$

Interpretation

After analyzing the data from the period 2018 to 2023 in BAJAJ AUTO I am able to find that the dividend is increasing.

Calculation of Standard Deviation of WIPRO

Year	Return(R)	R	R-R	(R-R)2
2018-2019	**-55.6**	**9.482**	**-46.15**	**2156.86992**
2019-2020	**-37.96**	**9.482**	**-28.48**	**810.996484**
2020-2021	**-32.23**	**9.482**	**41.715**	**2039.89094**
2021-2022	**-11.5**	**9.482**	**-2.020**	**4.072324**
2022-2023	**25.42**	**9.482**	**34.902**	**1520.1796**
	-47.41			**5899.97928**

$$\text{Average (R)} = \frac{\sum R}{N} = \frac{-47.41}{5} = -9.48$$

$$\text{Variance} = \sqrt{1/n\text{-}1 \sum (R\text{-}R)2}$$

$$\text{Standard Deviation} = \sqrt{\text{Variance}}$$

$$1\ (5899.97)$$

= 70.24

Interpretation:

After analyzing the data from the period 2018 to 2023 in WIPRO I am able to find that the dividend is increasing.

Calculation of Standard Deviation of CIPLA

Year	Return (R)	_R	_R-R	_(R-R)2
2018-2019	**54.23**	**7.744**	**61.974**	**3840**
2019-2020	**75.95**	**7.744**	**68.206**	**4652**

2020-2021	**41.09**	**7.744**	**48.834**	**2384**
2021-2022	**-43.44**	**7.744**	**35.696**	**1574**
2022-2023	**-17.65**	**7.744**	**-6.906**	**47.692**
	-38.72			**15197.692**

Average (R) = ∑ R = -38.72 = -7.744

N =5

Variance = 1/n-1∑ (R-R)2

Standard Deviation = $\sqrt{\text{Variance}}$

$= \sqrt{1\ (15197.692)}$ =55.22

Interpretation:

After analyzing the data from the period 2018 to 2023 in CIPLA I am able to find that the dividend is increasing.

Calculation of Standard Deviation of BAJAJ AUTO

Average R = ∑ R

N

= 240.876 = 48.205

Year	**Return (R)**	**_R**	**_R-R**	**_(R-R)2**
2018-2019	**159.17**	**48.205**	**80.965**	**6555.3**
2019-2020	**2.77**	**48.205**	**45.405**	**2061.6**
2020-2021	**76.34**	**48.205**	**28.195**	**793.3**
2021-2022	**31.9**	**48.205**	**19.275**	**264.9**
2022-2023	**0.726**	**48.205**	**47.449**	**2251.4**
	240.876			**11926.5**

5

Variance = 1 ∑ (R-R) 2

N-1

Standard Deviation = $\sqrt{\text{Variance}}$

$\sqrt{\ }$

= 1 (11926.5)

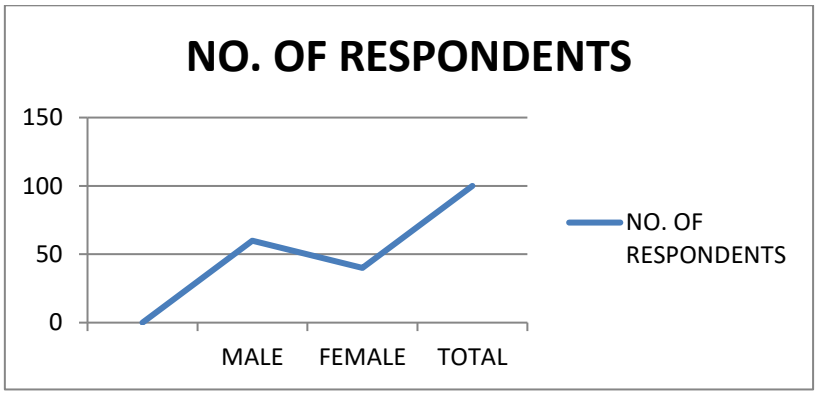
=54.6

Interpretation:

After analyzing the data from the period 2018 to 2023 in BAJAJ AUTO I am able to find that the dividend is increasing.

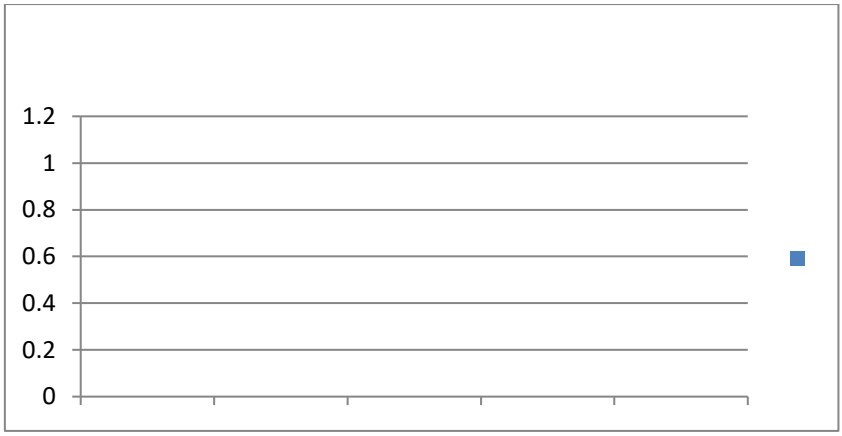
STANDARD DEVIATION

COMPANY	STANDARED DEVIATION
BAJAJ	**54.60**
RANBAXY	**55.16**
WIPRO	**70.24**
CIPLA	**55.22**



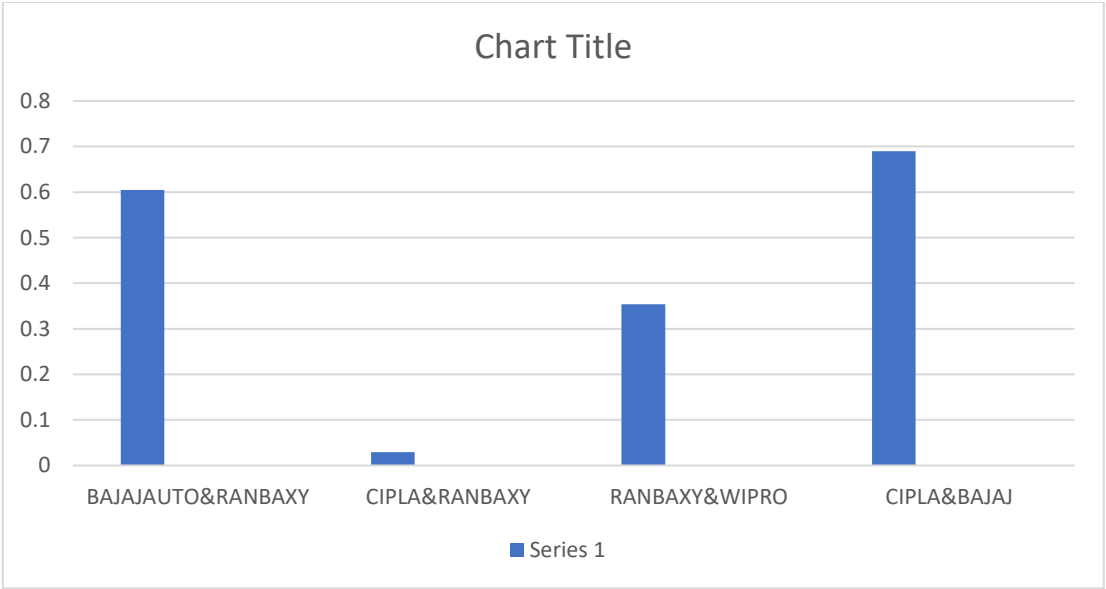
AVERAGE

COMPANY	AVERAGE
BAJAJ	**48.205**
RANBAXY	**10.20**
WIPRO	**-9.45**
CIPLA	**-7.744**



CORRELATION COEFFICIENT

COMPANY	R
BAJAJAUTO&RANBAXY	**0.605**
CIPLA&RANBAXY	**0.0295**
RANBAXY&WIPRO	**0.354**
CIPLA&BAJAJ	**0.690**



PORTFOLIO WEIGHTS

Formula:

$X_a = (St.)^2 - p_{ab}$ (std. a) (std. b) (std. a) ^{2} + (std. b) ^{2} -2 pab (std. a) (std. b)

X_b = 1 – X_a

Where X_a = WIPRO

X_a= (34.846) ^{2} – (0.586) (35.153) (34.846) (35.153) 2+ (34.846) 2 - 2 (0.586) (35.153) (34.846)

X_b = 1 – X_a

X_a = 0.4905

X_b = 0.5095

PORTFOLIO WEIGHTS

CIPLA&RANBAXY:

X_a = (Std.b) ^{2}– p_{ab} (std. a) (std. b) (std. a) $_2$ + (std. b) $_2$ -2 pab (std. a) (std. b)

X_b = 1 – X_a

Where X_a = CIPLA

X_b = RANBAX

Std.a = 55.22

Std.b = 55.16

p_{ab} = 0.0295

X_a = (55.16) ^{2} – 0.0295 (55.22) (55.16) (55.22) ^{2} + (55.16) 2 - 2 (0.0295) (55.22) (55.16)

X_b = 1 – X_a

X_a = 0.49919 X_b = 0.500

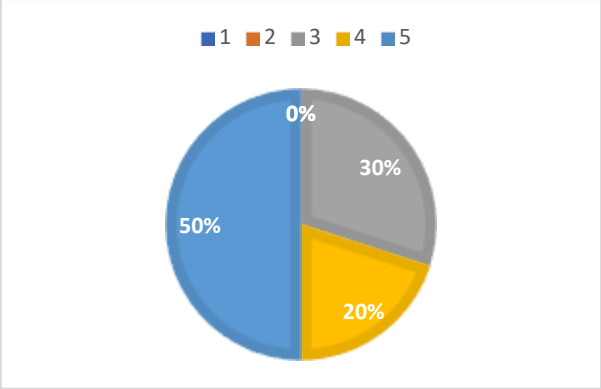
Portfolios return Rp

ICICI BANK	**117.24**
ITC&COLGATE	**26.835**
CIPLA&RANBAXI	**1.234**
M&M &BAJAJ	**152.61**

Portfolio risk

WIPRO&CIPLA	**31.17**
WIPRO&RANBAXY	**22.77**
CIPLA&RANBAXI	**49.43**

WIPRO &BAJAJ	201.22



FINDINGS

WIPRO and CIPLA have a 0.0478 investment proportion and a 0.4025 investment %, respectively. Their standard deviations are 70.47 and 22.2, respectively. Thus, investors should invest more in CIPLA than WIPRO since its standard deviation is lower and its risk is lower.

CIPLA&RANBAXY

Based on standard deviations, CIPLA and RANBAXY have 0.49919 and 0.50084 investment proportions, respectively. The standard deviation for CIPLA is 55.22 and RANBAXY is 55.16. Investing in either security has the same risk because they are practically identical.

BAJAJ AUTO RANBAXY

The combination of RANBAXY and BAJAJ AUTO yields 1.6206 and 0.6206 investment proportions, respectively, based on standard deviations of 104.206 and 54.6. Investors should prioritise BAJAJ AUTO over RANBAXY because to its lower risk and standard deviation.

CONCLUSION

Microfinance institutions (MFIs) need good financial risk management to stay stable, safeguard clients, and fulfil their social goal of poverty eradication and financial inclusion. MFIs can reduce client default and over-indebtedness by using extensive borrower evaluation and portfolio diversification measures. Proactive liquidity risk management, such as maintaining enough reserves and creating stable funding sources, improves operational continuity and resilience during financial crises. Internal controls and staff training prevent fraud, technology breakdowns, and governance difficulties. Finally, strategic risk management helps MFIs respond to changing regulatory requirements, market dynamics, and client needs, improving their long-term sustainability and effect. MFIs can overcome financial risks and meet client and stakeholder needs by incorporating these techniques into their operations.

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