Sri Lanka
Microfinance Project

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01

Microfinance overview

Microfinance overview and Microfinance and Sri Lanka

02

Data Approach and Variables

Overview on Data Approach and MFI Suppliers

03

Growth and Assets of MFIs

Visual graph of Growth of MFIs and Assets from 2008-2010

04

In Depth Analysis 2008-2010

Descriptive Statistics, visual graphs

05

Female Borrowers Analysis

Looking at revenue, visual graphs, risk at 30 days

06

Conclusion

Insights, recap, questions

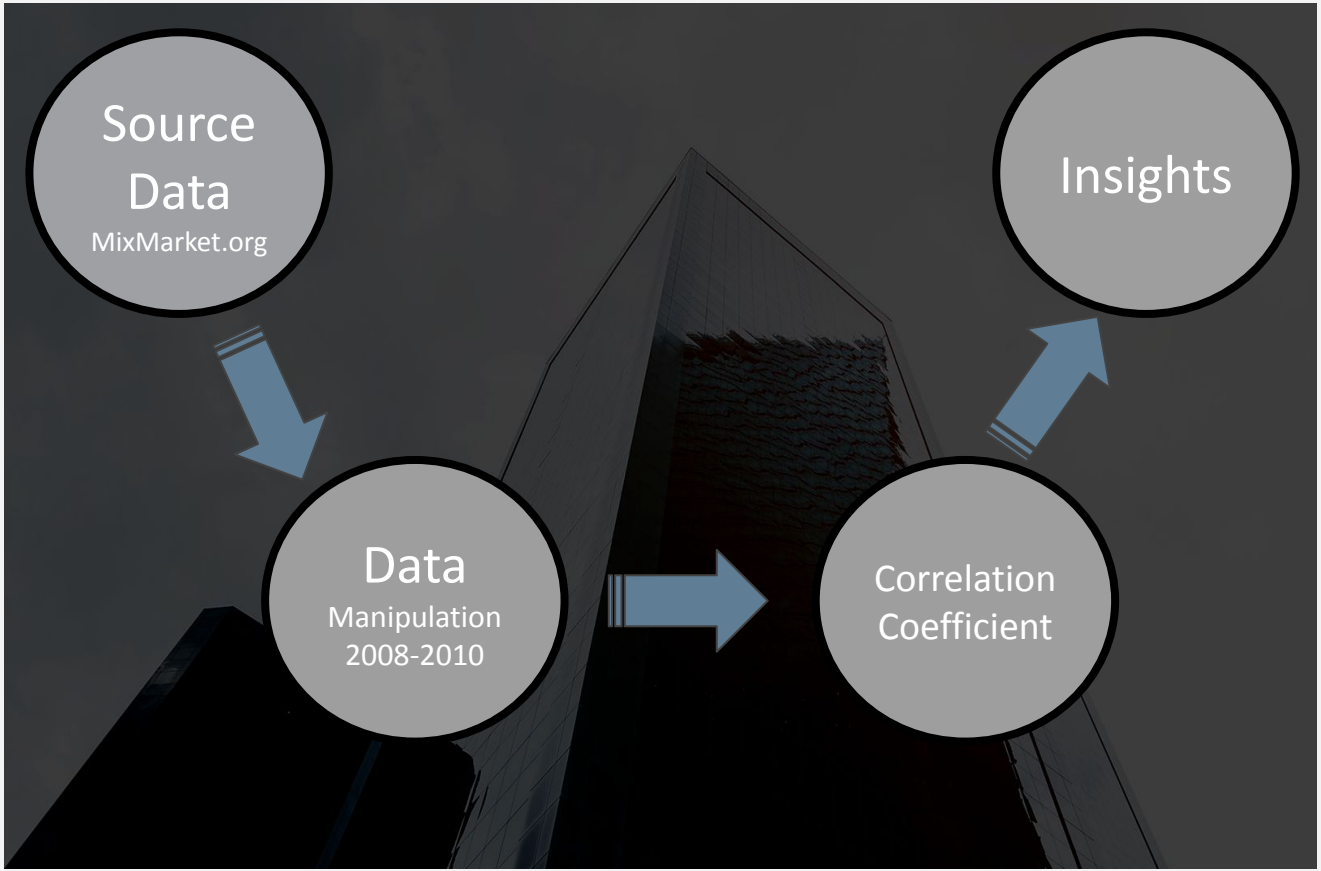
Microfinance Overview

- Microfinance is a way to provide capital to low-income business owners who may be excluded from traditional credit and lending options.
- Microfinancing is a type of lending that targets businesses without access to traditional lending resources.
- Microloans can be up to $50,000, though the average loan is $13,000. The business can spend the money on various needs. (depending on the geographical area)
- To qualify for microfinancing, you may need a business plan, adequate credit, and a personal guarantee or collateral.
- The end goal of microfinance is to have its users outgrow these smaller loans and become ready for a traditional bank loan.

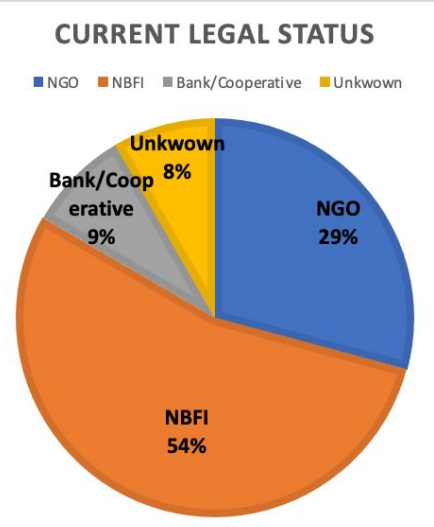
MFI & Sri Lanka

- ★ Sri Lanka is an island state situated off the south-eastern tip of India. Relatively small country compared to its Asian neighbors and covers a surface area of just over 65 000 sq.km.
- ★ Population of Sri Lanka is around 19.8 million of which 85% is rural.
- ★ Population density is about 300 per sq.km and population growth is contained to about 0.8% per annum.
- ★ Sri Lanka is a multi-ethnic, multi-religious society.
- ★ A majority of Sri Lankans are Sinhalese by ethnicity and Buddhist by religion, with large Tamil (generally Hindu), Muslim and Christian communities.
- ★ A civil war between the Tamil separatists, the Liberation Tigers of Tamil Eelam (LTTE), and the Sri Lankan government has disrupted the country for the last 25 years.

Data Approach



MFIs

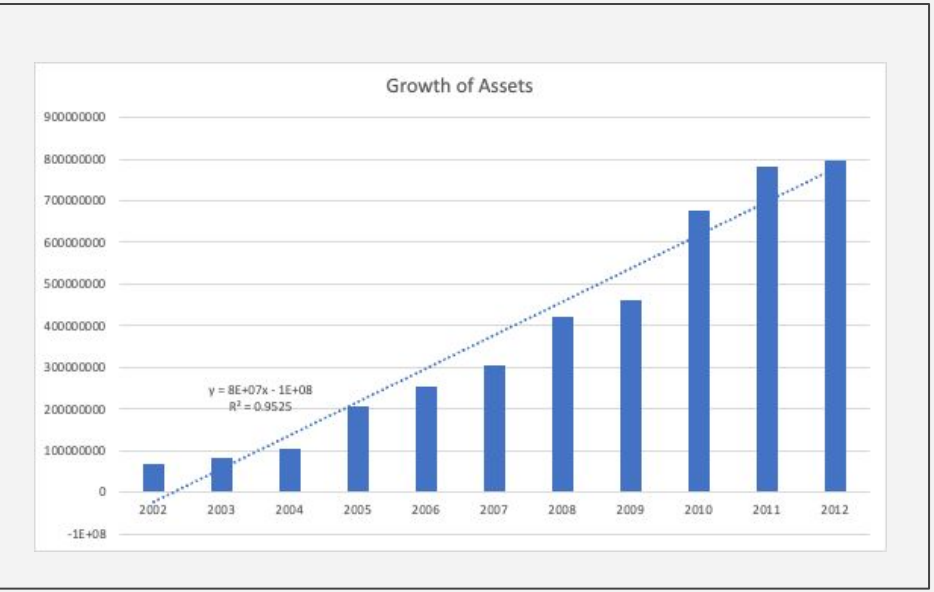


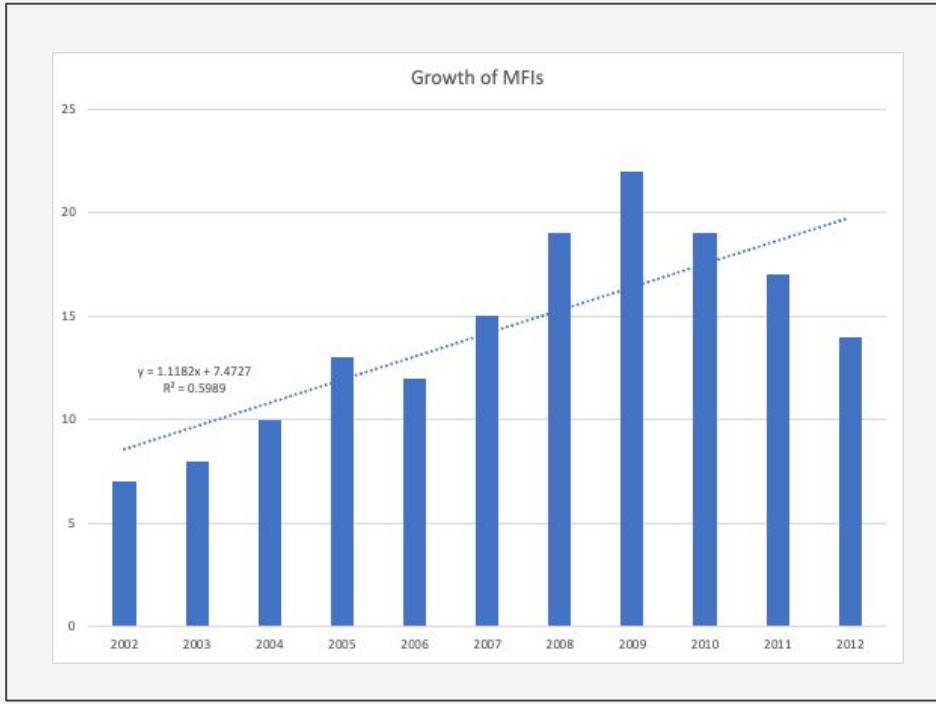
- ACCDC
- Agro Micro
- Arthacharya
- BDCB
- Berendina Microfinance
- BRAC - LKA
- ECLOF - SL
- Lak Jaya
- Regional Development Bank
- RRDB
- Ruhuna
- MAMCGL
- Palm Foundation
- YMCA Batticaloa
- CF Lanka
- Sabaragamuwa
- Sareeram
- SDBL
- SEEDS
- SEWA Finance
- Silvereen
- VisionFund Lanka
- WDB
- WDFH

24 MFI Suppliers 1998-2014

Growth of MFIs

Throughout the years from our sample data, we can see a pivot in the amount of MFIs given between the years of 2008-2010.

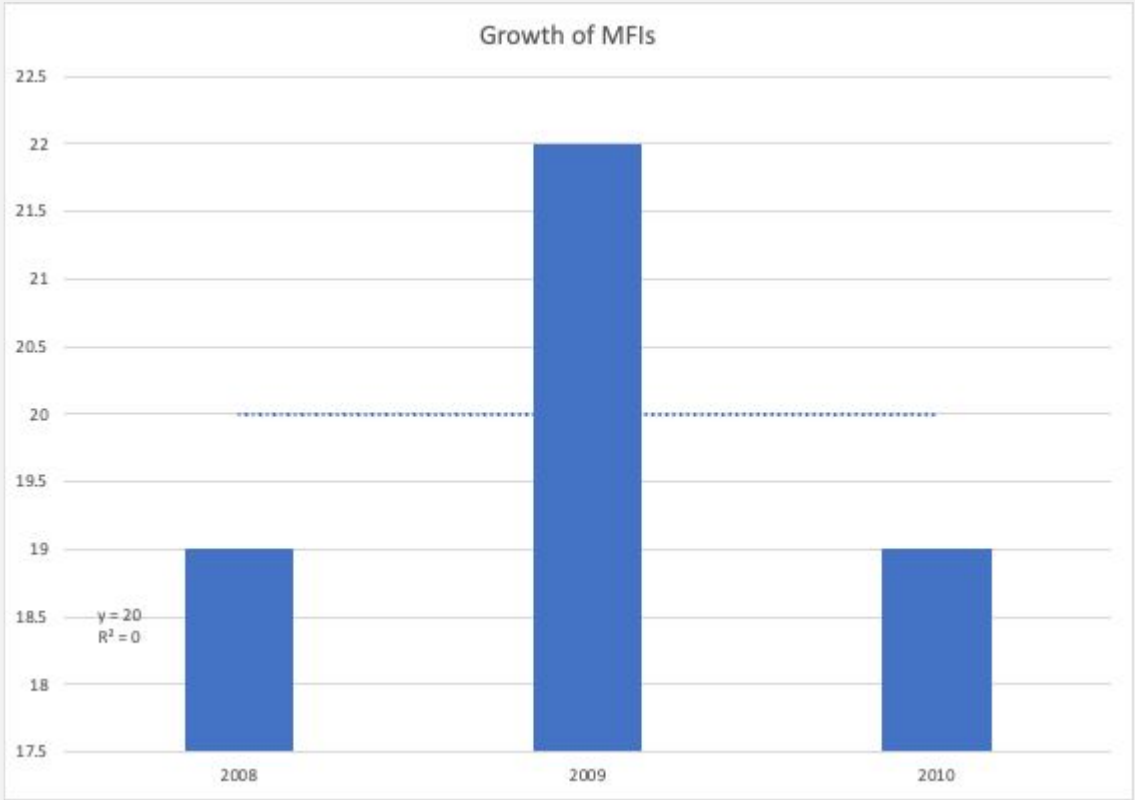




Growth of MFIs 2008-2010

Between the years of 2008-2010 we can see a consolidation in the amount of MFIs given.

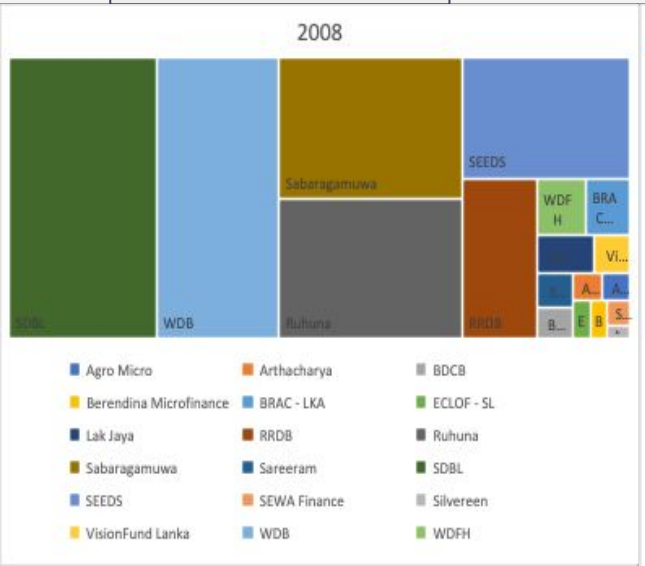
What is the cause and effect of this consolidation?



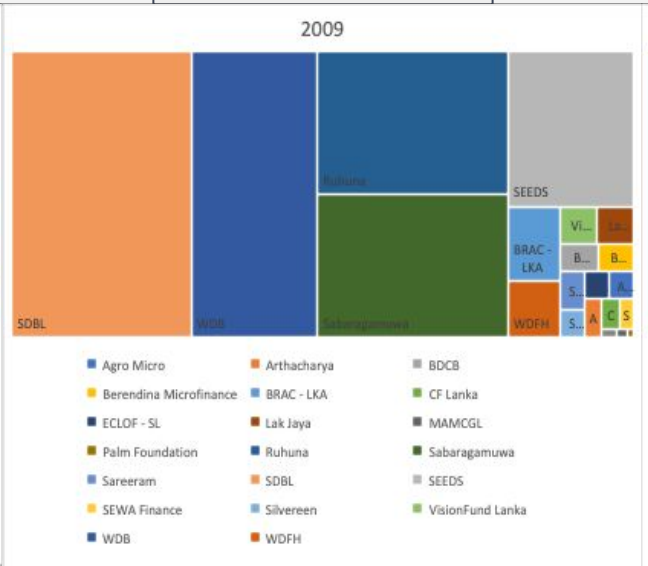
2008-2010 Assets

In our sampled years we see a healthy growth in the aggregate mean assets. In the years 2008 and 2009 we see a similar division of assets between MFI providers. However, in 2010 Regional Development Bank began submitting data and proved to have accumulated a majority of the Sri Lanka MFI market.

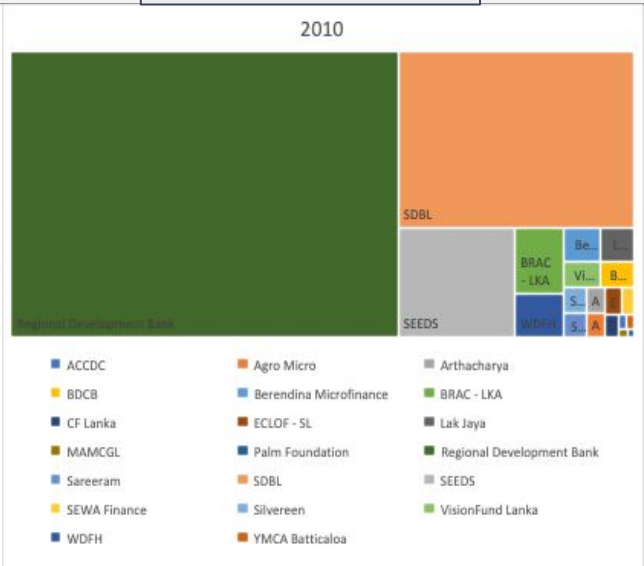
Total assets: $419,893,285



Total assets: $460,515,650



Total assets: $675,795,415



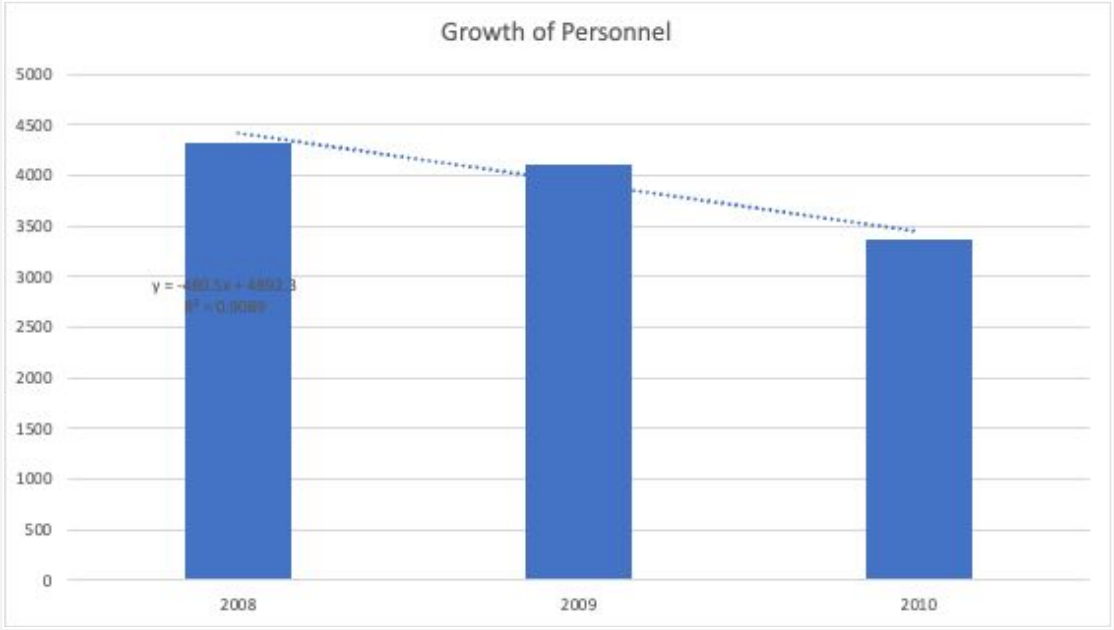
Descriptive Statistics - Personnel

2008 Personnel		*2009 Personnel*		*2010 Personnel*	
Mean	254	Mean	196	Mean	305
Median	140	Median	86	Median	90
Mode	35	Mode	#N/A	Mode	65
Standard Deviation	261	Standard Deviation	256	Standard Deviation	494
Range	1014	Range	969	Range	1975
Minimum	18	Minimum	0	Minimum	7
Maximum	1032	Maximum	969	Maximum	1982
Count	17	Count	21	Count	19

Personnel

From 2008-2010 we can see an aggregated decrease in the growth of personnel working with the MFI firms in our tested sample.

What are the effects of a decline in personnel on assets?



Descriptive Statistics - Assets

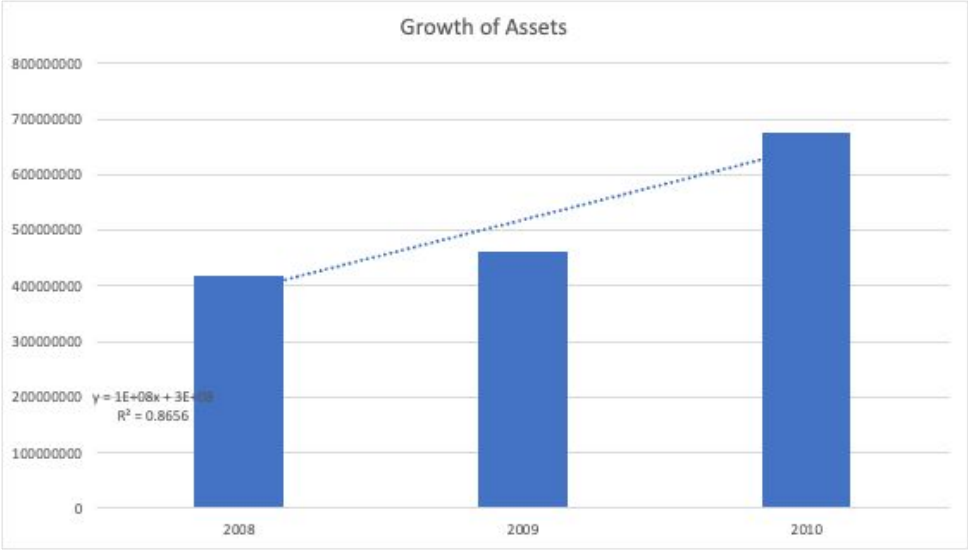
2008 Assets	
Mean	23327404.72
Standard Error	7679215.19
Median	4301927.5
Standard Deviation	32580150.81
Sample Variance	1.06E+15
Range	99342707
Minimum	774308
Maximum	100117015
Sum	419893285
Count	18

2009 Assets	
Mean	21929316.67
Standard Error	8315868.21
Median	2592565
Standard Deviation	38108095.55
Sample Variance	1.45223E+15
Range	132741618
Minimum	102867
Maximum	132844485
Sum	460515650
Count	21

2010 Assets	
Mean	33789770.75
Standard Error	21847256.99
Median	2135070
Standard Deviation	97703903.49
Sample Variance	9.54605E+15
Range	420032245
Minimum	190067
Maximum	420222312
Sum	675795415
Count	20

Growth in Assets

From 2008-2010, we can see a general growth in assets across our tested samples. This, along with the decrease in personnel growth, began a test to see if there is a correlation between these variables.



Personnel & Assets

2008	2009	2010
0.63	0.70	0.90

Based on the analysis of the correlation coefficient from the personnel growth and asset growth variables, a correlation between the decrease in personnel and growth of assets over time can be inferred. From the sampled year, the correlation between personnel and assets increases.

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

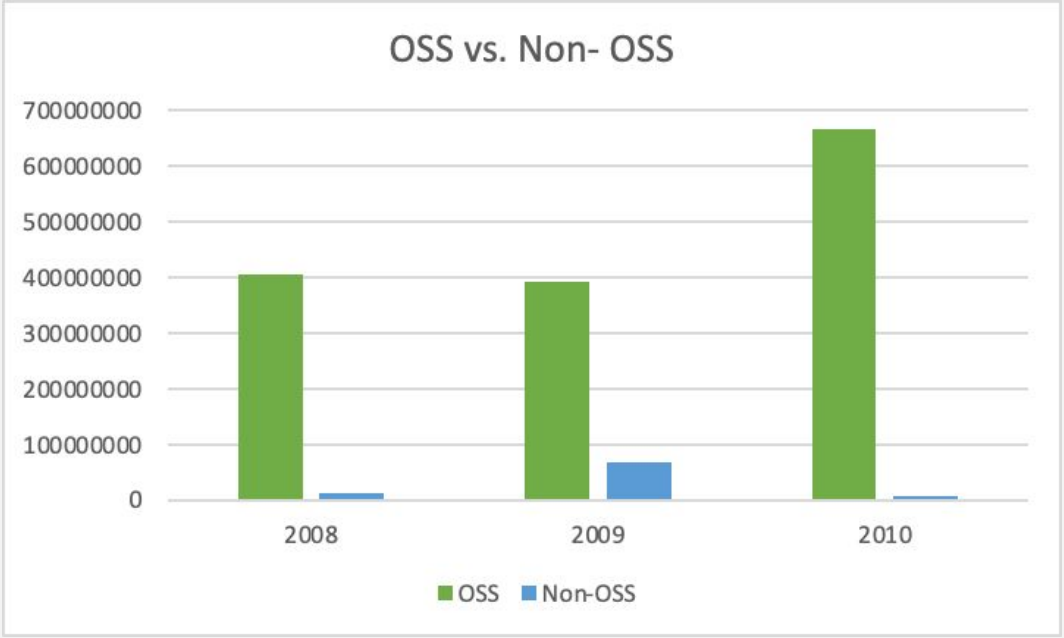
OSS vs. Non-OSS

We can see that OSS is predominant within the 3 years.

The interesting data is about the non-OSS in 2009, where the revenue from non-OSS increased sensibly and the year after decreased almost to zero.

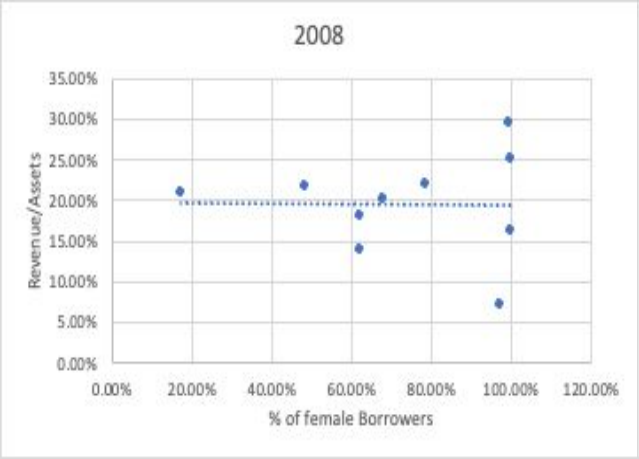
Based on the data we analysed, we can say that 2009 was an interesting year.

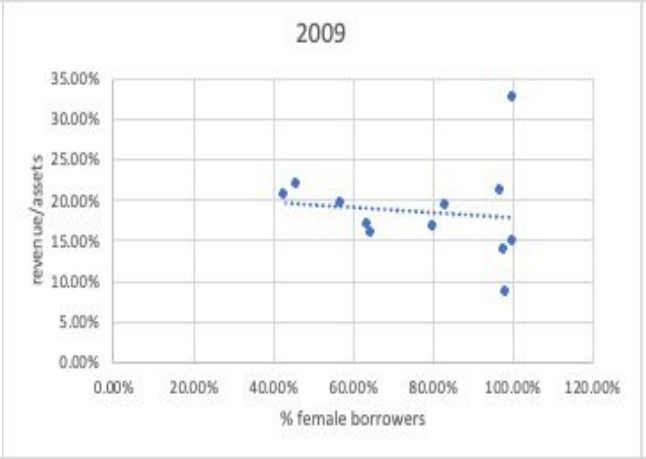
In 2010, the revenue from OSS increased drastically.

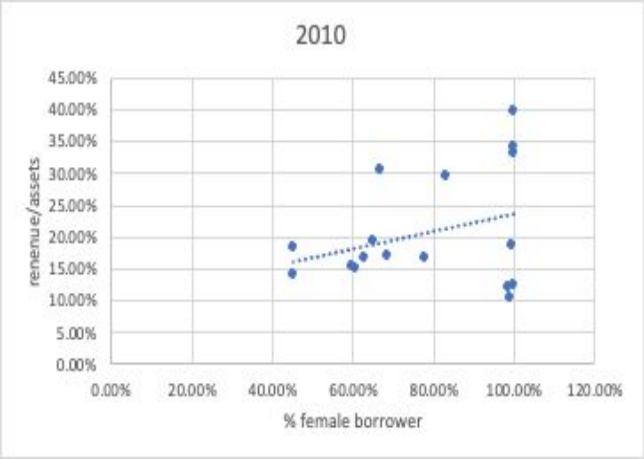


Female Borrowers

Female Borrowers & Revenue







The only positive correlations we have between female borrowers and revenue is in 2010 but we can see how the correlation in 2009 is sensibly more negative than 2008

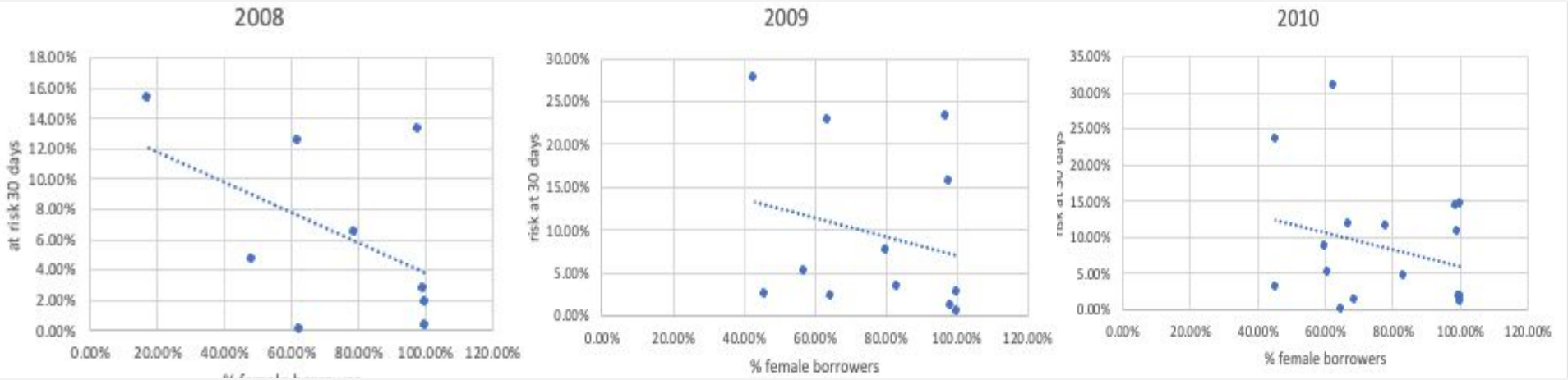
Female Borrowers & Revenue Correlation

2008	2009	2010
-0.01	-0.11	0.31

Based on the analysis of the correlation coefficient, we are not able to draw a distinct connection between the percentage of female borrowers and revenue.

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Female Borrowers & Risk at 30 days



From our tested sample and looking at the scatterplots and regression lines, we can see a consistent negative correlation between female borrowers and risk at 30 days.

Female Borrowers & Risk at 30 days

2008	2009	2010
-0.48	-0.24	-0.27

This assumption can be verified through the analysis of the correlation coefficient reflecting a negative relationship between female borrowers and risk at 30 days.

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Insights

Personnel and Assets

There is a significant correlation between assets and amount of personnel as a possible consolidation of the MFI market with the introduction of Regional Development Bank.

Percentage of Female Borrowers and Revenue

There not a notable correlation between the percentage of female borrowers and revenue having a negative correlation throughout 2008 and 2009 only to be positive in 2010.

OSS vs non OSS

We observed a growth in Non-OSS in 2009 Based on the data we analysed, we can say that 2010 shifted the perception of non OSS MFIs.

Percentage of Female Borrowers and Risk

A negative correlation between the percentage of female borrowers and the risk after 30 days could show that MFIs with a higher female percentage have a lower risk.

THANK YOU

Team 3