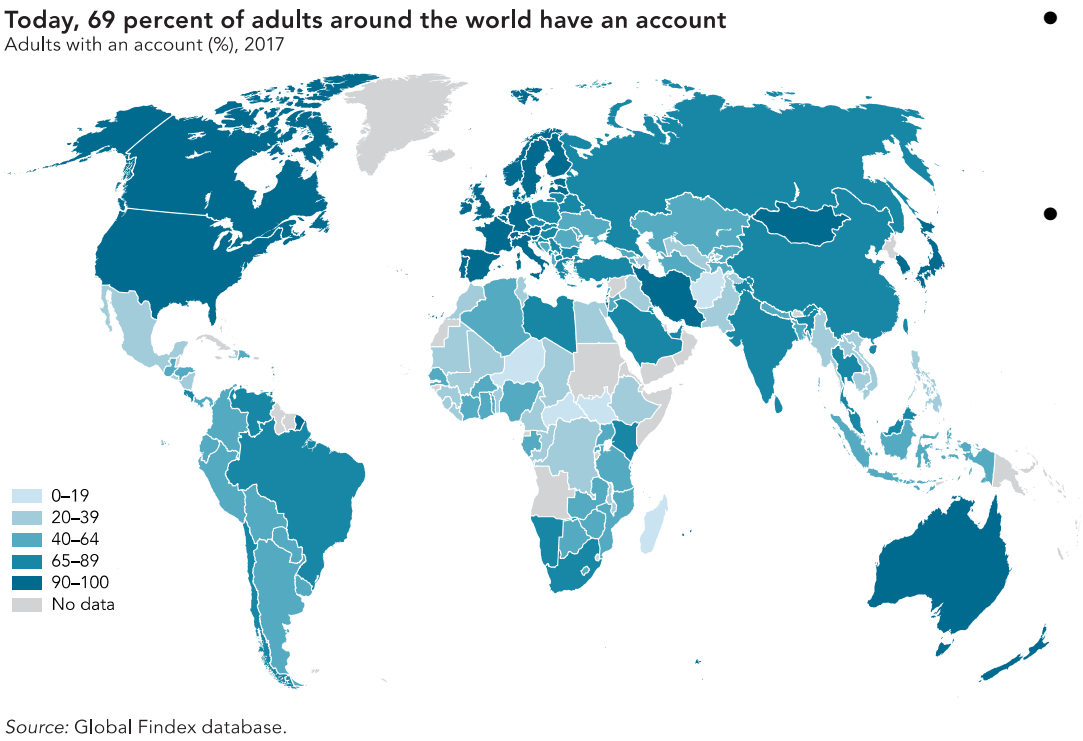
ARE COMPETITIVE FINANCIAL SERVICES WORTH REGULATING?

EVIDENCE FROM MICROFINANCE INSTITUTIONS IN SUB-SAHARAN AFRICA

Amin Karimu
Samuel Salia
Javed Hussain
Ishmael Tingbani

BACKGROUND OF THE RESEARCH



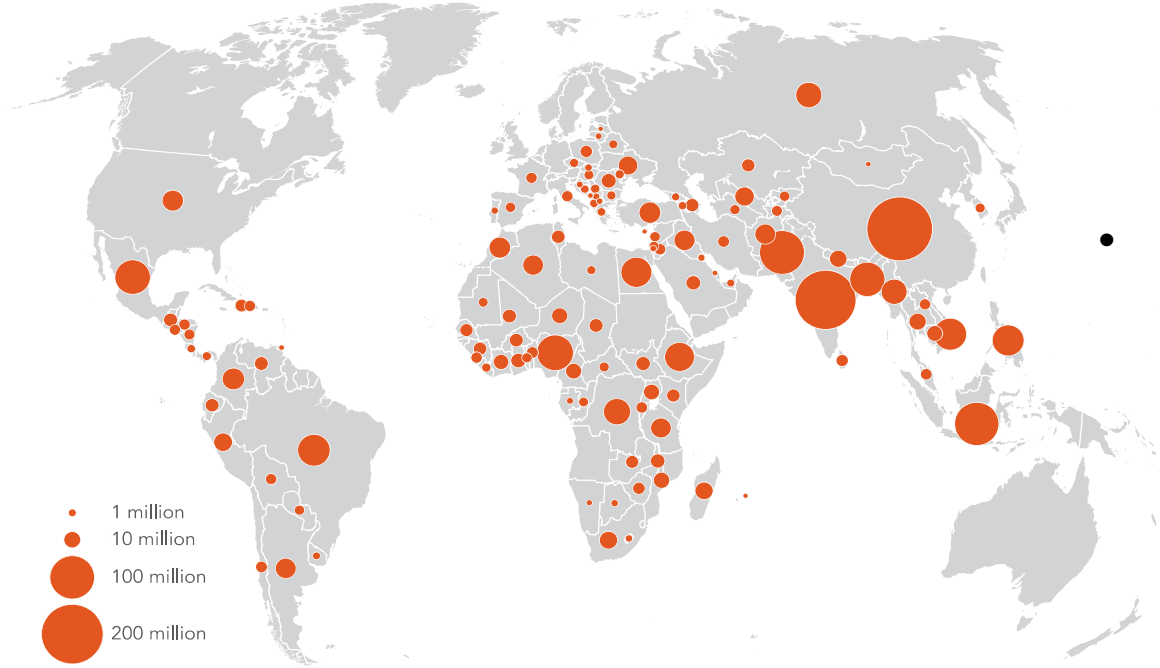
Source: Global Findex database.

- In high income countries 94% of adults has an account in formal financial institutions.
- Account ownership in developing countries is 63%.
- In most of Africa, Adult account ownership is less 65 %.

BACKGROUND OF THE RESEARCH

- In 2017 1.7 billion adult population of the World is unbanked.
- Almost half live in just seven developing economies: Bangladesh, China, India, Indonesia, Mexico, Nigeria, and Pakistan.
- Majority of these are in Africa and South East Asia.

Globally, 1.7 billion adults lack an account
Adults without an account, 2017



Source: Global Findex database.
Note: Data are not displayed for economies where the share of adults without an account is 5 percent or less.

BACKGROUND OF THE RESEARCH

- MFIs in to 2017 provided financial services to 139 million globally.
- Majority of clients were women(82%)
- Proportion of rural borrowers (62%)

BACKGROUND OF THE RESEARCH

- The **increase in competition** among MFIs due to the increase in the number of MFIs operating in the World financial market from **10 million in 1997** to **more** than **100 million in 2007** (Assefa et al. 2013).

- This **creates** some level of **competition** that may have **negative consequences** such as taking unnecessary risk in the quest to outcompete competitors for clients and markets.

BACKGROUND OF THE RESEARCH

- If **competition** is creating **more risk taking behaviour** relative to the **lower prices** and **increase in output** (outreach in the case of MFIs) effect, it is prudent that **authorities regulate** the microfinance market to **curb competition** and reduce the unnecessary **risk taking** behaviour of the MFIs

- Therefore **whether government** should **regulate** MFIs will **depend** on whether **competition** was **high** and as a consequence, creating unhealthy competitive behaviour among firms in the microfinance industry.

- **If competition** is **not creating unhealthy outcomes** and **regulation** is **imposed**, it will **create** a **less favourable** outcome **than** if **regulation** is **not imposed.**

RESEARCH QUESTIONS

- What is the nature of the relationship between credit risk, competition and regulation of MFIs?
- Does regulation and competition reinforces each other or substitute in terms of their effect on credit risk?
- What is the role of both competition and regulation on operational risk of MFIs in SSA?

METHODOLOGY

Based on the previous literature and coupled with the conceptual framework, the following reduced-form model is formulated for the empirical analysis;

$$\ln Risk_{it} = \beta_0 + \beta_1 Regulation_{it} + \beta_2 \ln Competion_{it} + \beta_3 Regulation_{it} * \ln Competition_{it} + \lambda' \mathbf{X}_{it} + \mu_t + \eta_i + \varepsilon_{it}$$

Where;

- **Risk** in this study focused on two different aspects of risk; **credit** risk and **operational** risk
- Regulation is measured as a dummy variable that takes a value of **1** if the MFI is **regulated** and **0** for **unregulated** MFI
- Competition is measured using two different competition index (Lerner index and Herfindahl-Hirschman index)

METHODOLOGY

X is a vector of controls that include;

- **business size** proxy with **gross loan portfolio**
- **financial cost** of the microfinance firm proxy with **cost per loan**
- **operational efficiency** of each microfinance firm proxy with **write off ratio**
- **financial strength** of microfinance firms proxy with **yield on gross portfolio**
- **financial revenue** proxy with **interest** and **fee income**

METHODOLOGY

- The data for the study is from the MIX Market dataset that covers the period **1995 to 2015** for **3,856** microfinance firms for SSA countries

- The **dataset** is a **panel**, but due to **differences** in the **year** of operations across different MFIs within and between countries in the dataset, we have an **unbalanced panel**

- Also due to **missing observations** for some of the variables, our final sampled **reduced** to **1,574 firms**

RESULTS

Table A1

Regression results from estimating a Least Squares Corrected Dummy Variable dynamic model for operational risk and portfolio risk

Variables	(1) Operational Risk (log)	(3) Credit risk (log)
Lag Credit risk (log)		0.460***
		(0.033)
Lag Operational risk (log)	0.080***	
	(0.016)	
Regulation	-0.009	0.853*
	(0.121)	(0.493)
Competition (Lerner index (log))	0.254**	1.879***
	(0.112)	(0.491)
Size (log)	-0.096***	-0.087
	(0.020)	(0.107)
Regulation*competition	-0.051	-1.491***
	(0.174)	(0.539)
Financial Cost (log)	0.004	-0.022
	(0.007)	(0.052)
Operational Efficiency	-0.059*	-0.130
	(0.034)	(0.254)
Financial Revenue (log)	0.006	-0.044*
	(0.004)	(0.024)
Financial strength (log)	0.011	-0.053**
	(0.007)	(0.022)
Residual (regulation residual)	0.009	-0.509**
	(0.037)	(0.224)
Time dummies	yes	yes
Observations	2,017	1,174
Number of firms	521	324

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

RESULTS

Table 1: Total effect of regulation evaluated at different percentiles of competition.

Percentile of competition (Lerner index)	1%	25%	50%	75%	95%
Total regulation effect (FE model)	1.330***	-0.344	-1.811**	-2.760**	-2.792**
	(0.30)	(0.54)	(0.89)	(1.12)	(1.13)

Robust standard errors that correct for heteroskedasticity are in parentheses, *** p<0.01, ** p<0.05, * p<0.1

FINDINGS

- The study highlights the sequencing impact of portfolio risk, market concentration and regulation of MFI's in Sub-Saharan Africa

- The result implies that regulation substantially affects credit risk positively

- In a similar evidence, the findings also suggest a significantly negative relationship between the interactive term of regulation and competition.
  - This indicates that a highly competitive MFI industry could be efficiently regulated if the policy target is to reduce credit risk exposure

FINDINGS

- Contrary to the above evidence, we did not find any significant relations between regulation and operational risk.
  - A possible explanation for this is that most of the regulation of MFIs is directed towards loans activities but less towards how the MFIs operate

- However, we find the estimated coefficient of competition on operational risk to be positive and significant, which suggests that highly competitive MFI's are very much exposed to high operational risk
  - This can be explained by the fact that increased competition tends to put a strain on the firm's procedures, systems and policies and consequently leads to high exposure to operational risk

THANK YOU FOR YOUR ATTENTION

39 rue Glesener
L-1631 Luxembourg
Tél: +352 45 68 68 1

www.ada-microfinance.org

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akarimu@ug.edu.gh

Amin Karimu