



NATIONAL BANK OF CAMBODIA

Riel. Stability. Development.

Interest Rate Understanding and Possible Distortions of Interest Rate Cap in Case of Cambodia

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The views expressed in this presentation are those of the author and do not necessarily represent the views of the NBC.

Content

- I. Research Motivation
- II. Overview of the Development of MFI Sector
- III. Survey on Interest Rate Understanding and the Use of Borrowing Fund
- IV. Interest Rate Determinants
- V. Possible Distortions of Interest Rate Cap
- VI. Conclusion



I. Research Motivation



- MFI sector is accused, without any evidence, of overwhelmingly charging high interest rate
- It is said that MFIs have caused the poor even poorer
- People in rural areas, esp. the poor, do not have adequate knowledge to be aware of interest rate options offered by banks and financial institutions
- A current controversial discussion on interest rate cap
 - without understanding where we are
 - without learning the past experiences of others'
 - without being aware of the possible worse case scenario



5 Questions to be answered by the study:

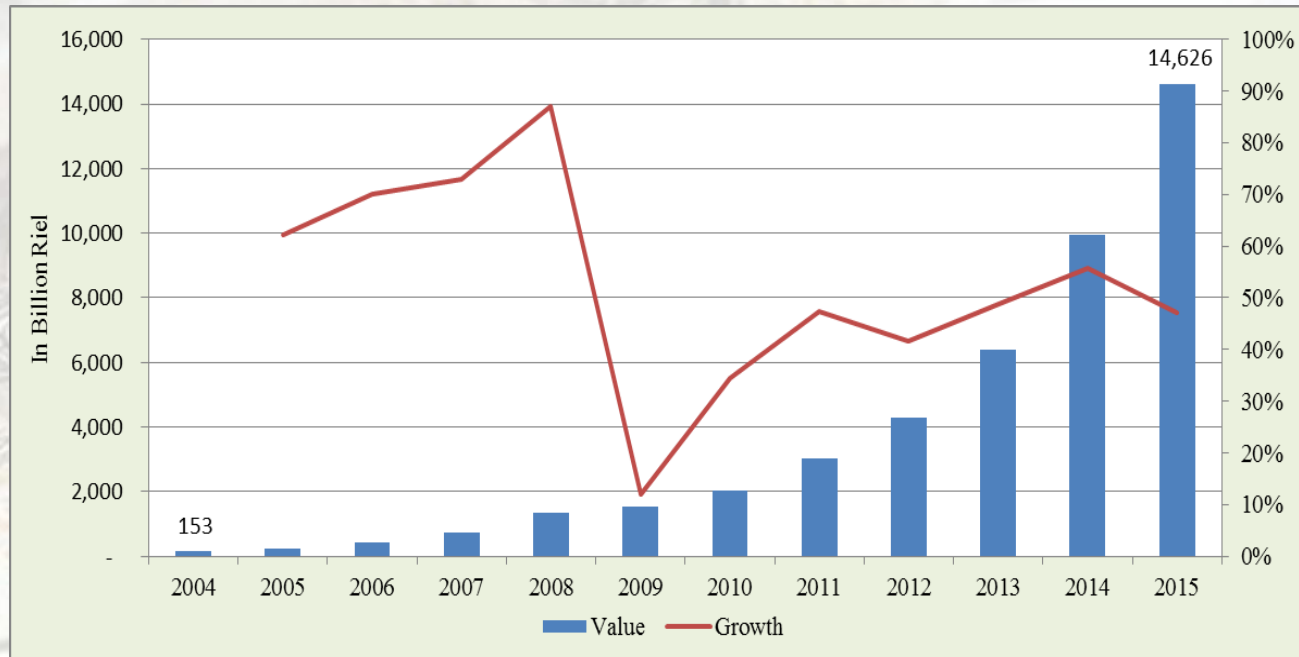
1. How much do customers understand interest rate charged by MFIs? Any Exploitation?
2. What are factors that drive micro lending interest rate in Cambodia?
3. Is interest rate charged by Cambodian MFIs excessively high, compared to the rest of the world?
4. Does interest rate cap matter? And what are possible consequences or distortions in the market?
5. What measures should be taken to lower interest rate in the long run?



II. Overview of the Development of MFI Sector



1. Total Asset of Microfinance Sector

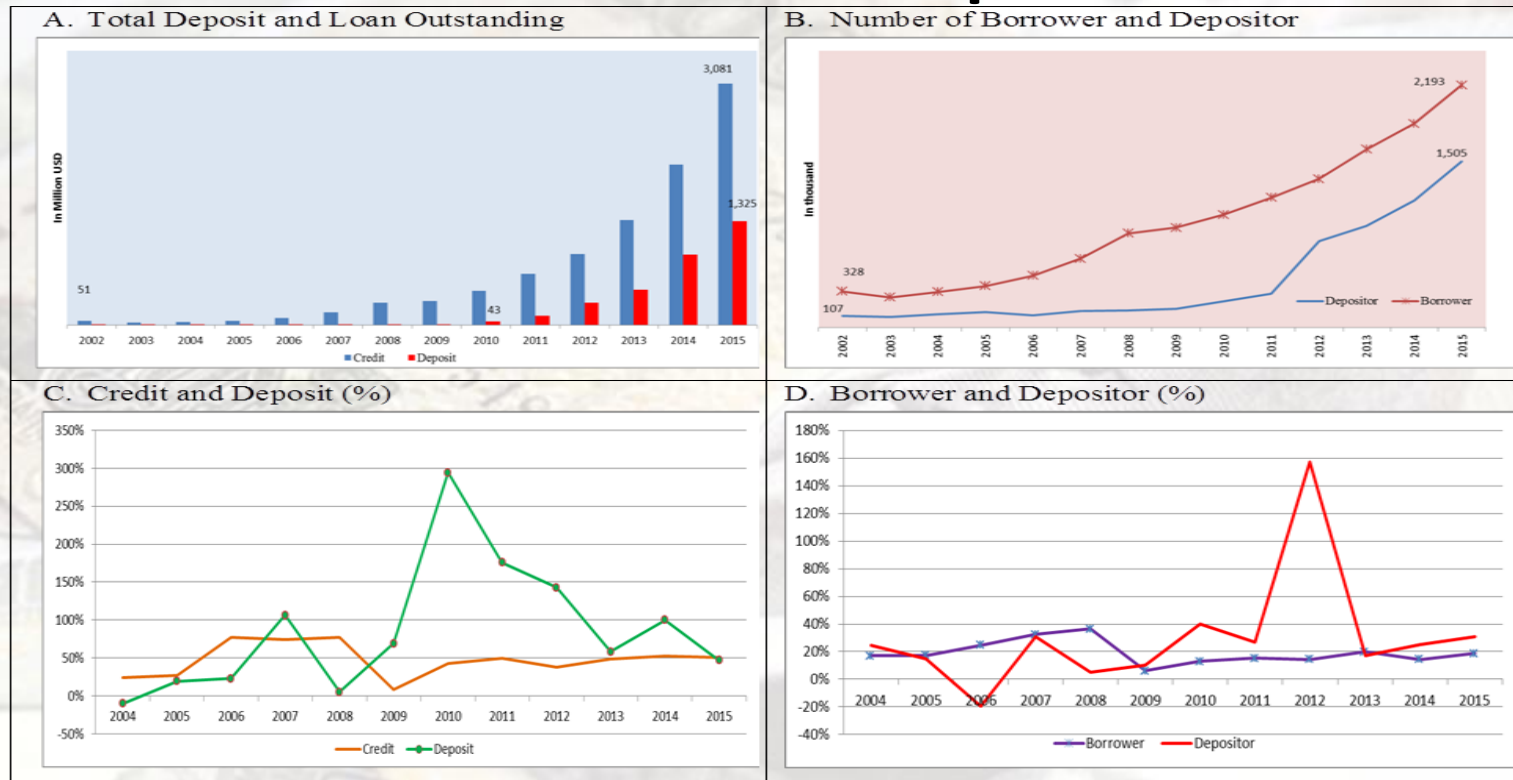


Source: National Bank of Cambodia, Supervision Department

- After banking restructure, 2004-2008, total asset in banking system saw a high increase, but small base
- Sharply dropped in 2009 due to the crisis while it gradually increased in average 46% per annum afterward



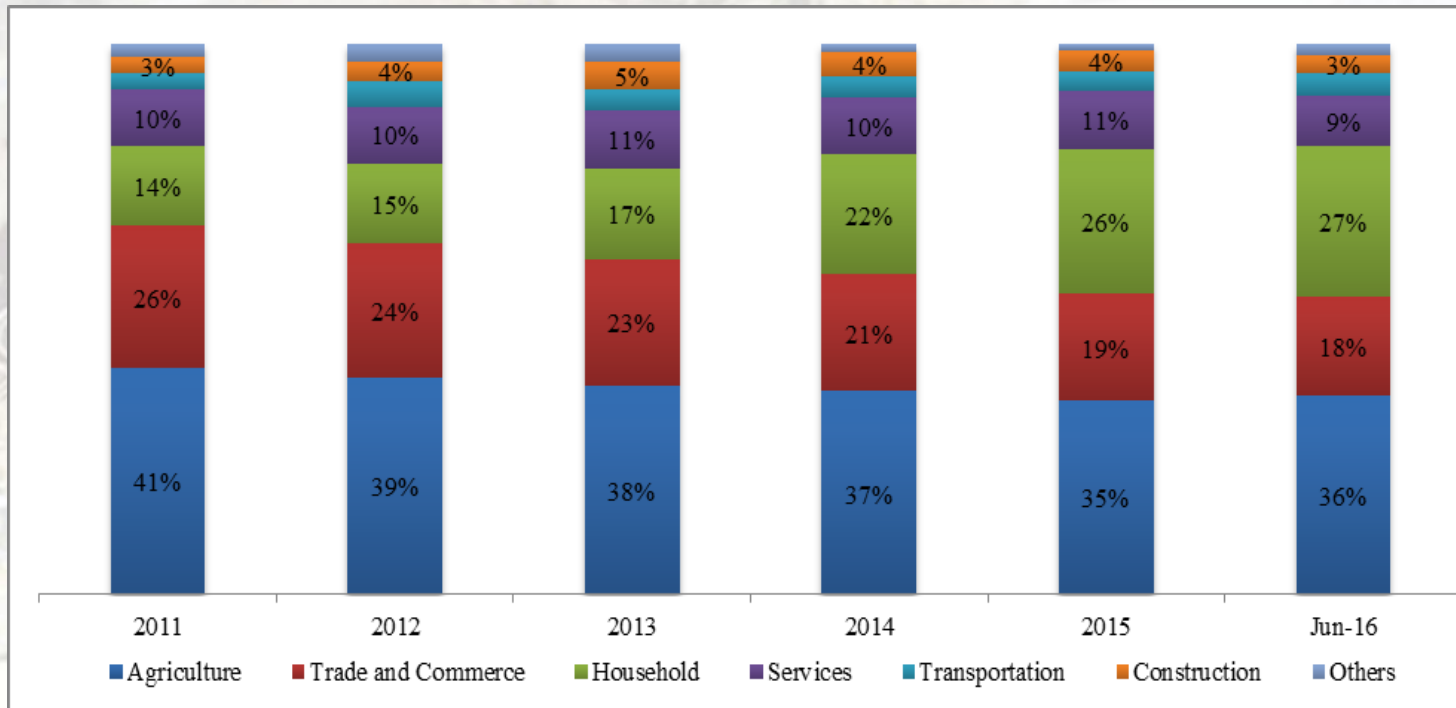
2. Total Deposit and Loan Outstanding, and Number of Borrower and Depositor



- In 2007, NBC allowed MFI (7) to take deposit
- External source of fund shrank during crisis
- MDI turned to focus on domestic fund mobilization
- Jumped in deposit and loan in 2010
- 2013-2015, significant amount of loan was provided due to high demand from HH
 - Around 850,000 new borrowers accessed to official finance service



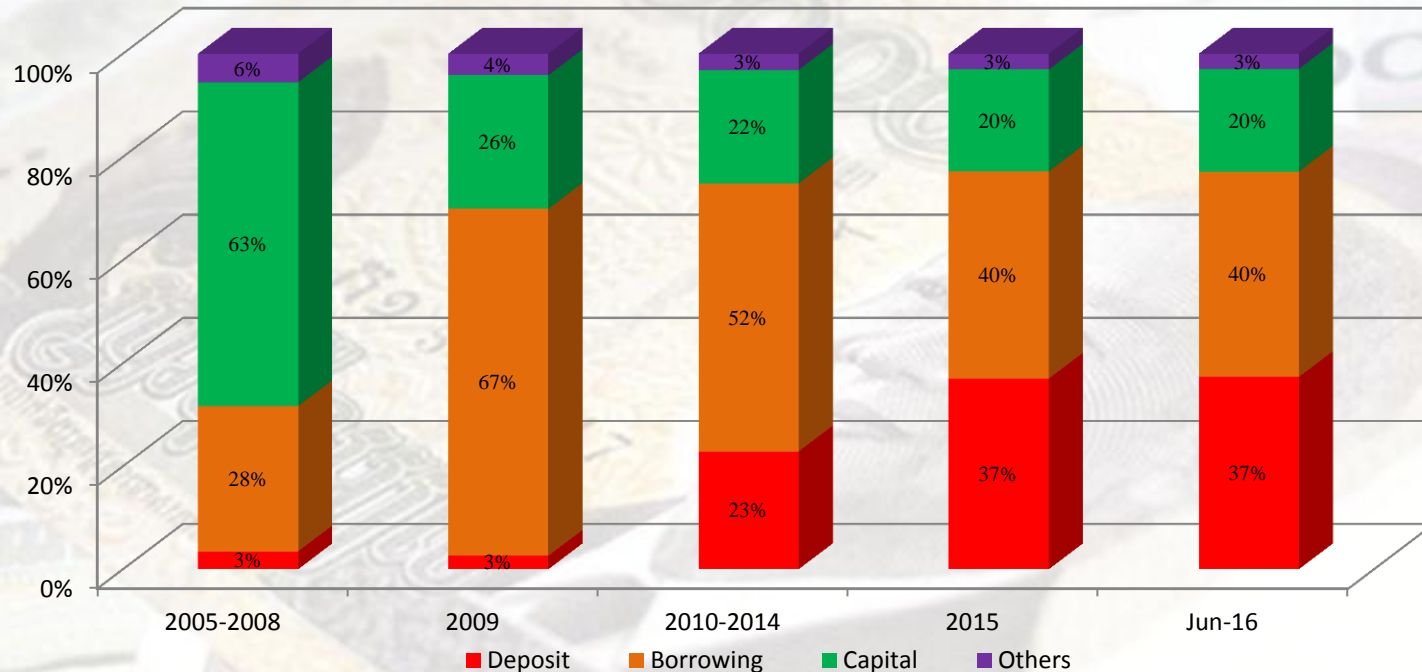
3. Loan Portfolio of Microfinance by Sector



- Shares of loan portfolio saw a slight decrease for loan to Agriculture and Trade and Commerce while loan for HH tended to gradually increase.
- The portfolio for Service sector was broadly stable.



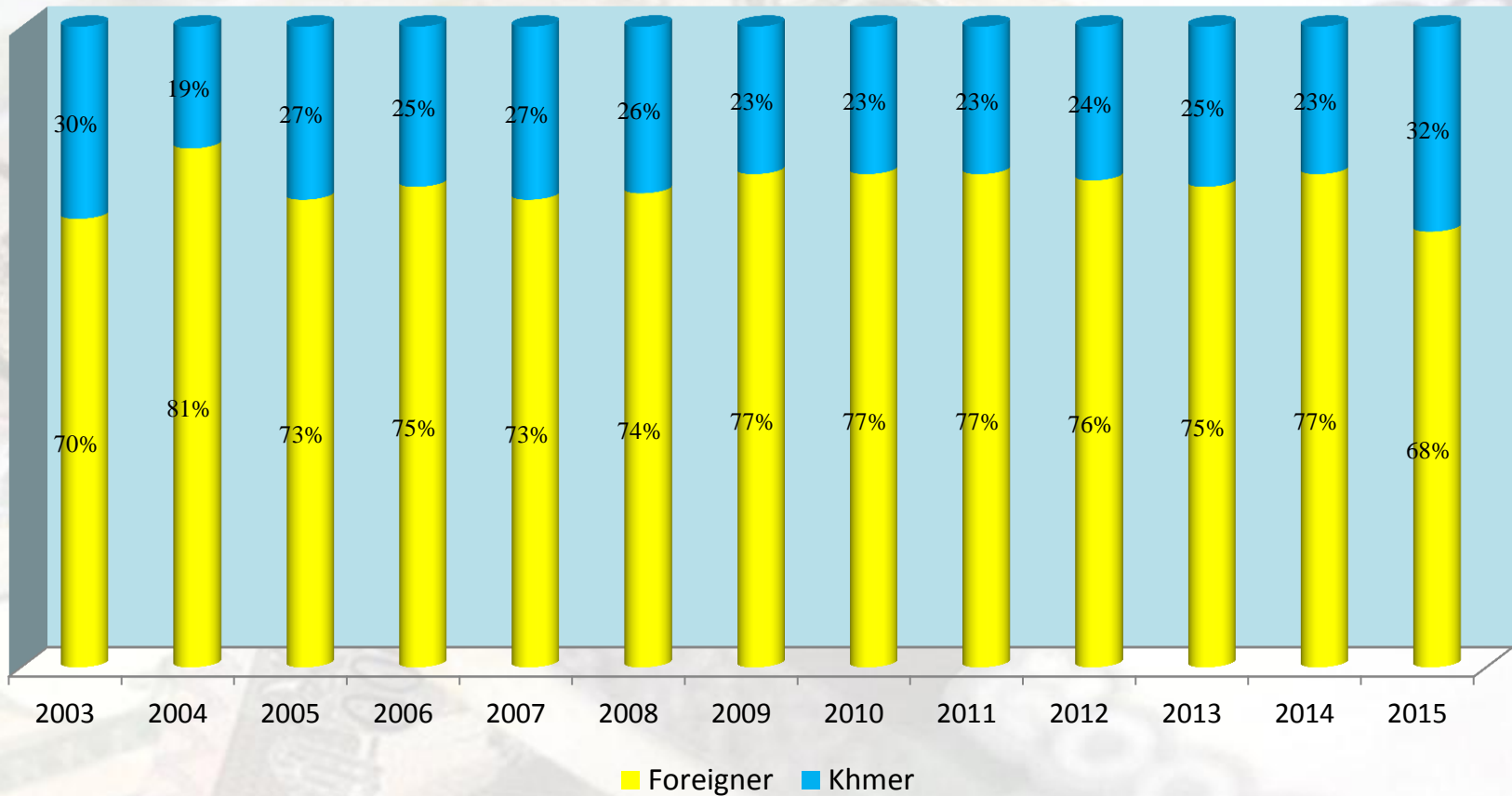
4. Proportion of Microfinance Sector's Source of Fund



- Before the crisis, capital and borrowing were the main source of funding
- During the crisis 2009, borrowing dominated
- Afterward, domestic deposit started to play vital role in providing fund to support the sector growth



5. Shares of Paid Up Capital



- Propositions of capital of MFI sector remain broadly stable
- Foreigner dominates with an average of 75% from 2003-2014
- Cambodian share increased in 2015

III. Survey on Interest Rate Understanding and the Use of Borrowing Fund



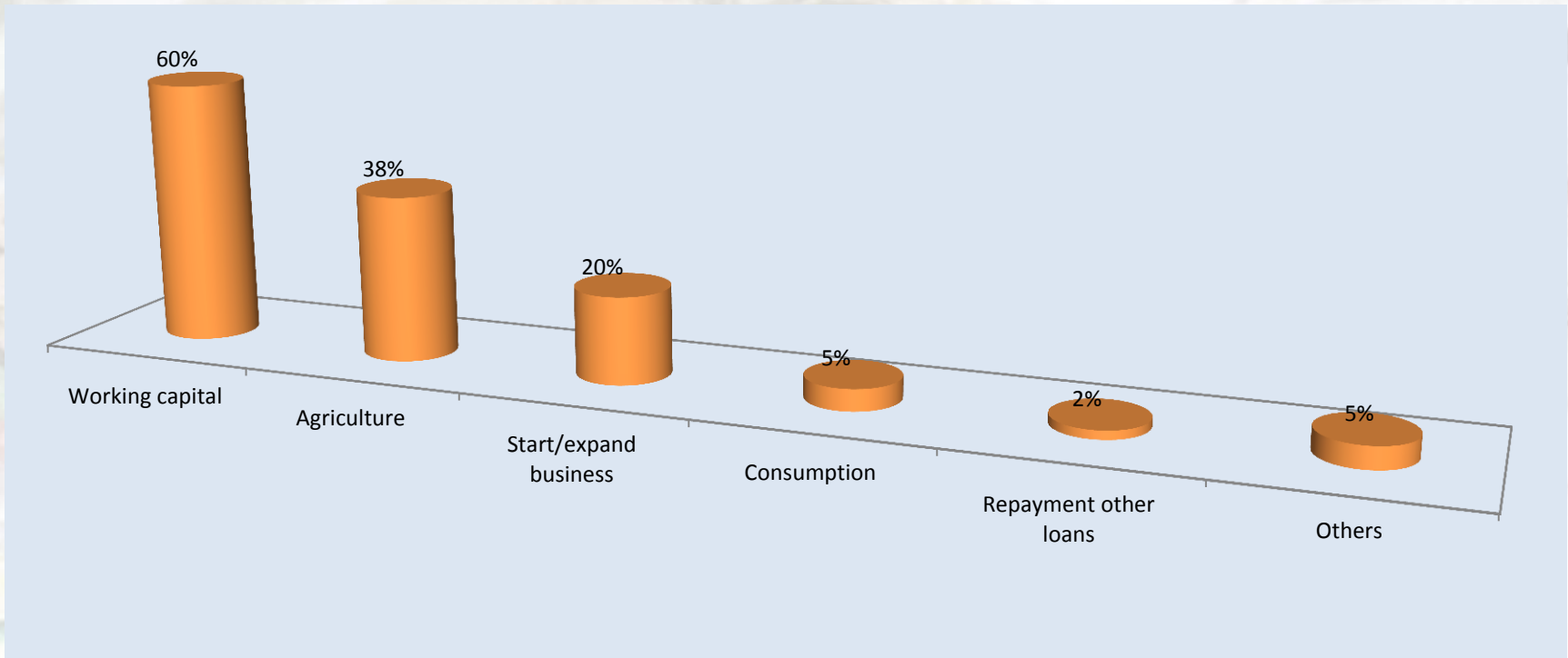
1. Sample size and Distributions

Province/city	District	No. Interveiwers	No. Interviewees
Phnom Penh	Chamkar Mon	1	5
	7 Makara	1	5
Kandal	Lvea Aem	1	10
Siem Reap	Kralanh	2	15
	Puok	2	15
Kampong Thom	Baray	2	15
	Stoung	2	15
KamPong Chham	Chhamkar Leu	1	10
	Stueng Trang	1	10
Total	9	13	100

- Employed 13 interviewers
- Sample size: 100 people
- 4 provinces and Phnom Penh
- Questionnaire was designed by accommodated 9 simple question
- It is quite a small study; yet, it would be possible to give interesting insight on interest rate literacy of the general public
 - Rural, downtown and in the main cities



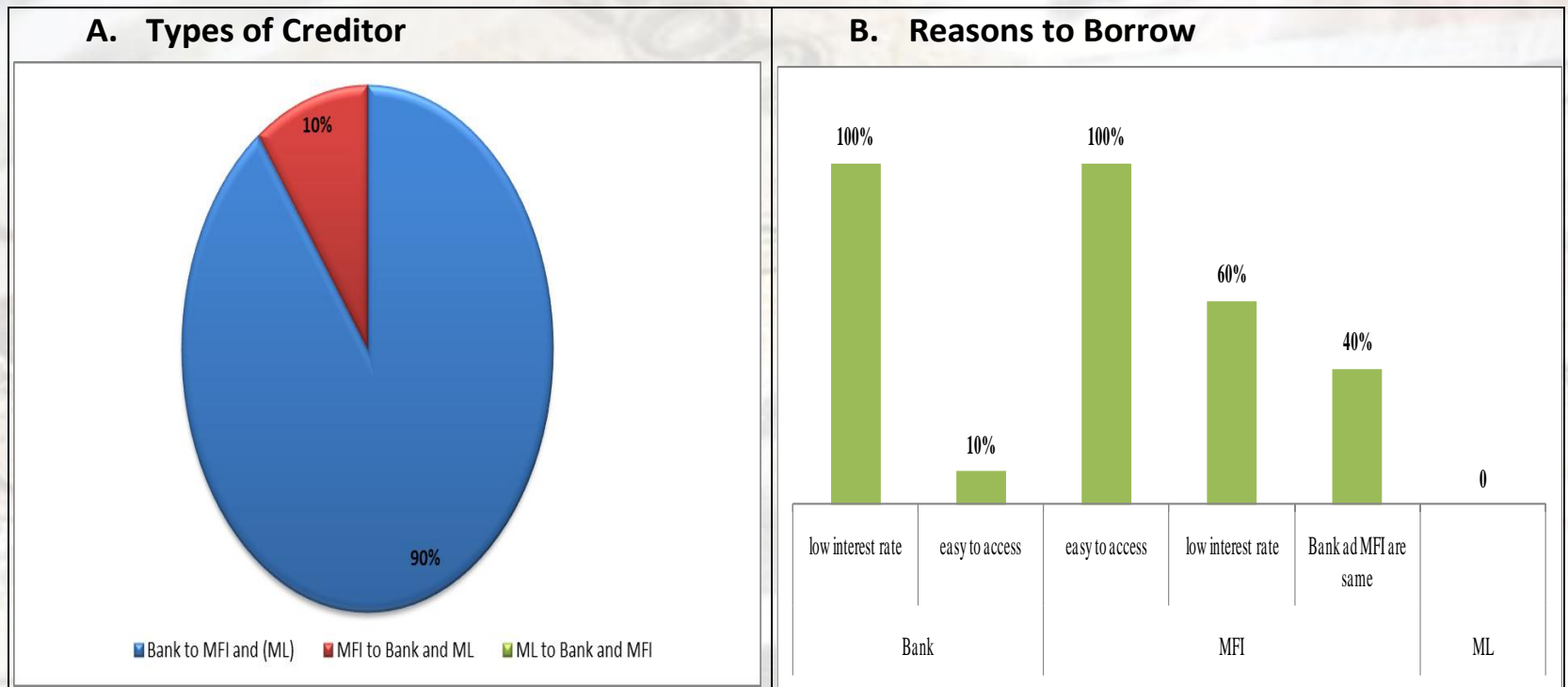
2. Purposes of Borrowing



- Working capital dominates followed by Agriculture and Start up business



3. Preferences and Reasons to of the Clients

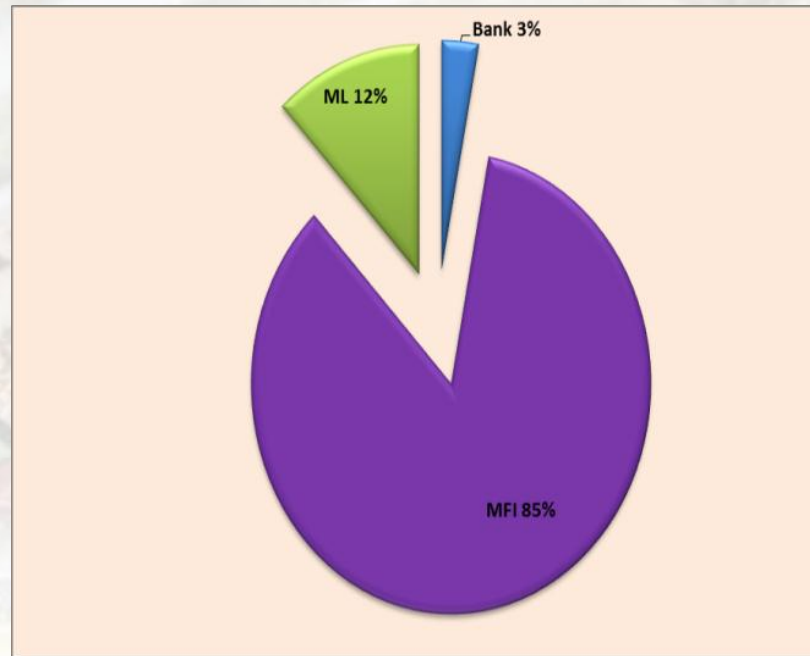


- Banks shared 90%, MFI 10% and MLs 0%
- It infers that everyone knows banks offer lower rate compared to MFIs and MLs
- one main reason to borrow from banks: lower interest rate
- Two reasons to borrow from MFIs: easy to access, low interest rate
- No one wishes to borrow from MLs

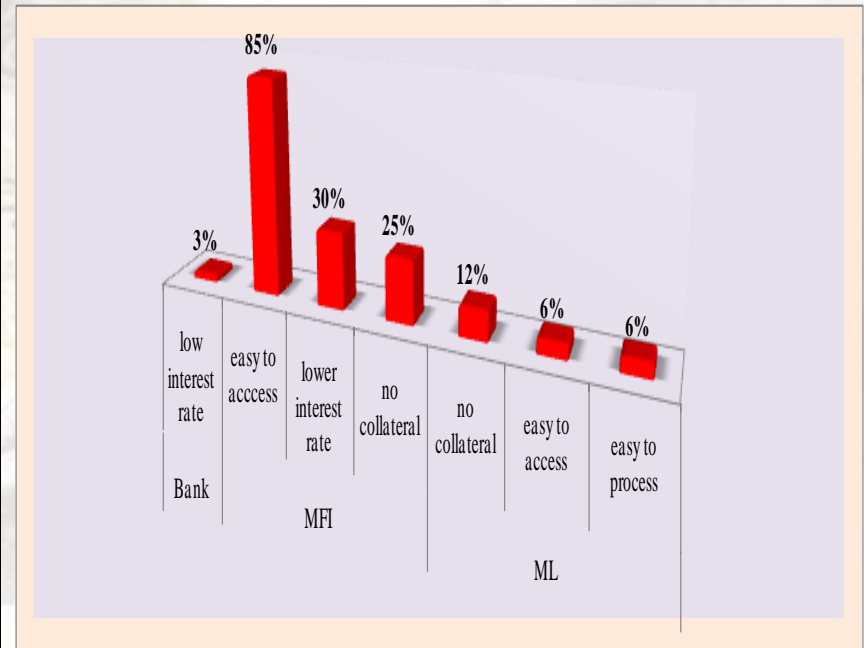


4. Actual Borrowing and Reasons

A. Types of Creditor



B. Reasons to Borrow



- 85% borrowed from MFI, MLs 12% and Banks only 3%
- Reasons to borrow MFIs: Easy to access (100%), low interest rate (35%), no collateral (29%)
- reasons to borrow from MLs: No collateral (100%), easy access (50%) and easy to process (50%)
- only one reason to borrow from bank: low interest rate
- though borrowers have collateral, Banks do not provide microloan => borrowers for MFIs



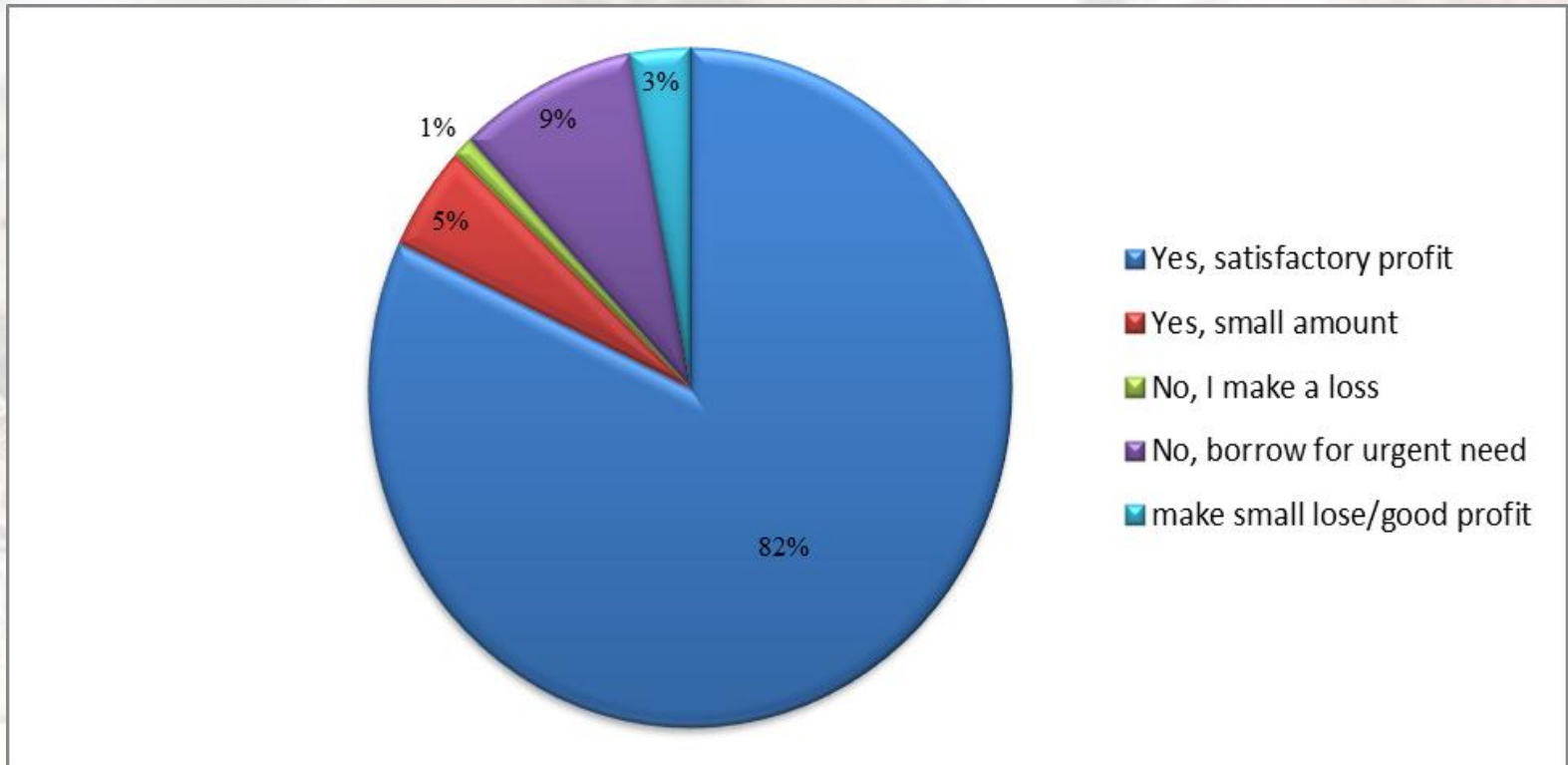
5. Loan Sizes



- >\$100 to \$500 consists of 92% of total borrower
- \$1.000->\$2.000 was borrowed by 3% borrows from banks



6. *Payment and Business Return*



- Overall, majors of borrowers always make good profit
- 3 persons made uncertain profits, depending on price of crops and production harvested.
- Borrowing fund are being used productively
- People appreciate and satisfy the access to finance provided by MFIs



7. Conclusion of the Survey result

1. Everyone knows well who offers cheaper.
2. Almost all of borrowers highly satisfy with the business return after repaying loan
3. Borrowing fund are used productively
4. The expansion of MFIs' outreach facilitate the public to access official financial services; and provide alternative choice to MLs
5. Accessibility and collateral are two main factors to determine borrowing choices.

=> Borrowers tend to understand the interest rate they get to borrow. But do they really understand?



- We cannot answer by this small survey. We need a big one, but next time.
- However, 3 simple examples show how interest rate could be easily understated:
 1. Constant Installment Payment
 2. Up Front Interest Charge and
 3. Frequency of Interest Paid.



A. Constant Installment Payment

Month	Principal outstanding at the beginning	Principal repaid per month	Interest paid in each installment	Total amount paid in each installment	Principal Outstanding at the end	Interest rate as % of principal outstanding
1	1200	100	36	136	1100	36%
2	1100	100	36	136	1000	39%
3	1000	100	36	136	900	43%
4	900	100	36	136	800	48%
5	800	100	36	136	700	54%
6	700	100	36	136	600	62%
7	600	100	36	136	500	72%
8	500	100	36	136	400	86%
9	400	100	36	136	300	108%
10	300	100	36	136	200	144%
11	200	100	36	136	100	216%
12	100	100	36	136	0	432%

- The effective interest rates charged ranked from 39% to 432%.
- Client actually pays interest rate on average 112% per annum or 9% per month.



B. Up Front Interest Paid

- Effective interest rate $(R) = P * r * t / (P * (1 - r * t) * t) = r / (1 - r * t)$, where r is stated rate (APR), t : maturity
- $\Rightarrow R = 0.36 / (1 - 0.36 * 1) = 56.25\%$
- Customers pay around 4.7% per month



C. Compounded Interest Paid

Frequency	Principal outstanding (1)	FV of loan outstanding (2)	Interest paid (3)=(2)-(1)	Interest rate as % of principal outstanding (4)=(3)/(1)
Annually	1200	1632	432	36%
Bi-annually	1200	1670.9	470.9	39.20%
Quarterly	1200	1693.9	493.9	41.20%
Monthly	1200	1710.9	510.9	42.60%
Weekly	1200	1717.9	517.9	43.20%

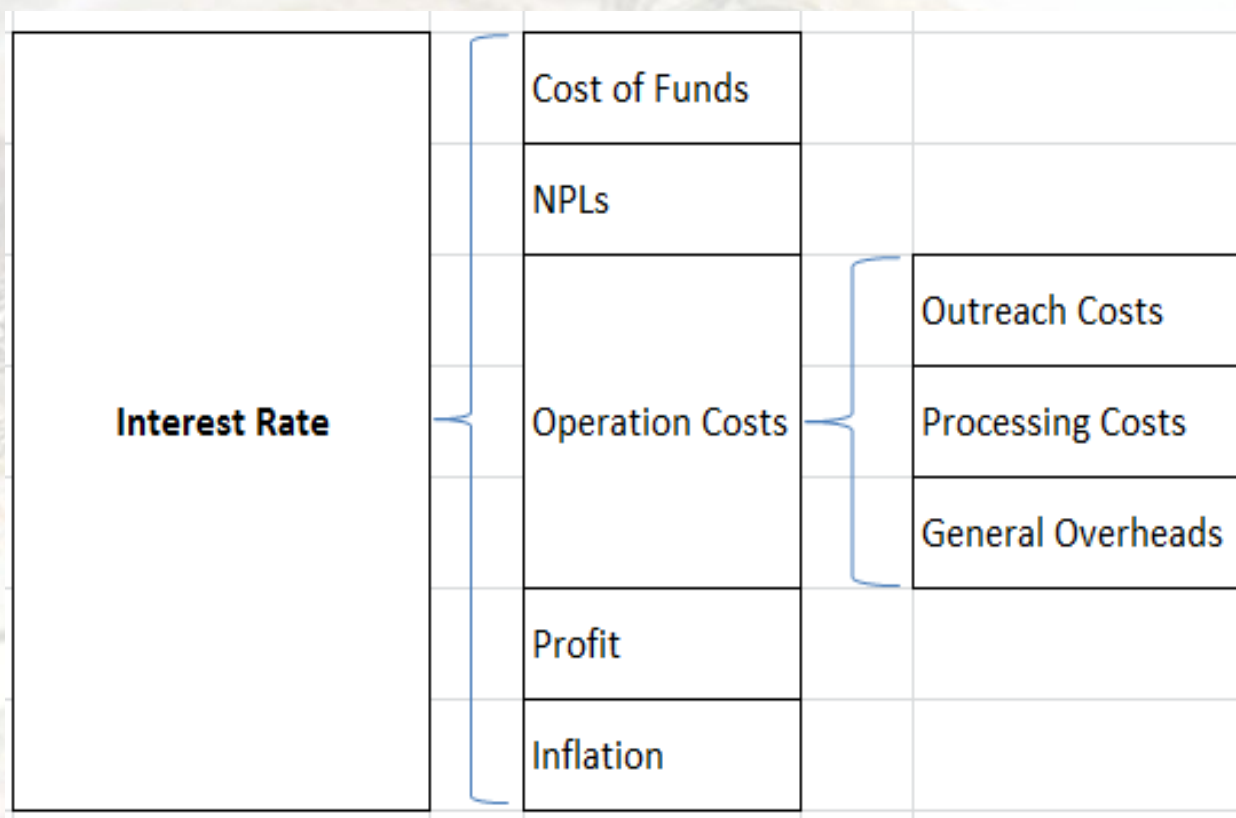
- Interest Rate is easily manipulated or understated in accordance with methods of payment.
- Public awareness is needed
- Transparency in interest rate should be enhanced



IV. Interest Rate Determinants



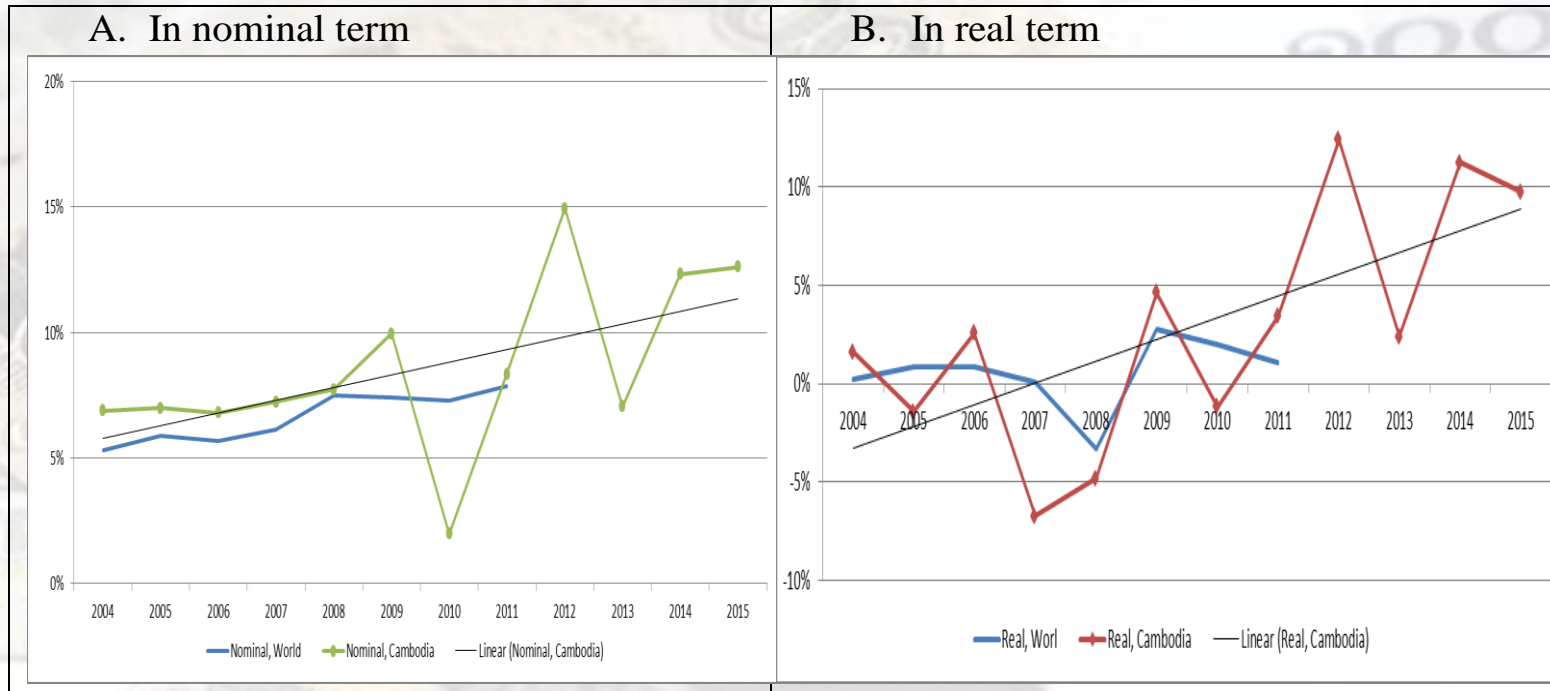
Breakdown of Interest Rate



- Designed based on the survey on Bank's and MFI's interest rate movement and determination conducted in mid 2015
- Inflation will not be focused on



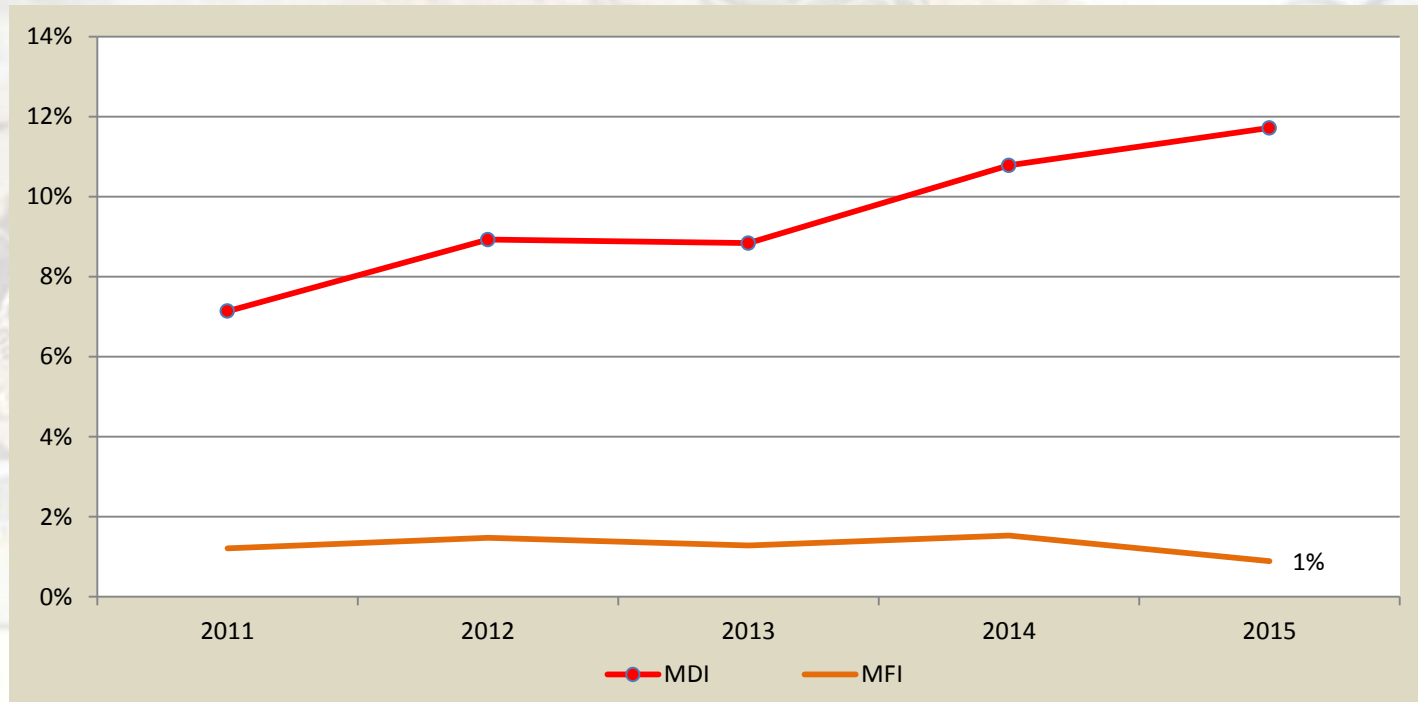
1. Cost of Funds



- Higher cost of fund compared to the world
- It keeps rising
 - availability of external source of fund
 - high competition (among MFIs and Banks)
- Real cost of fund also increases



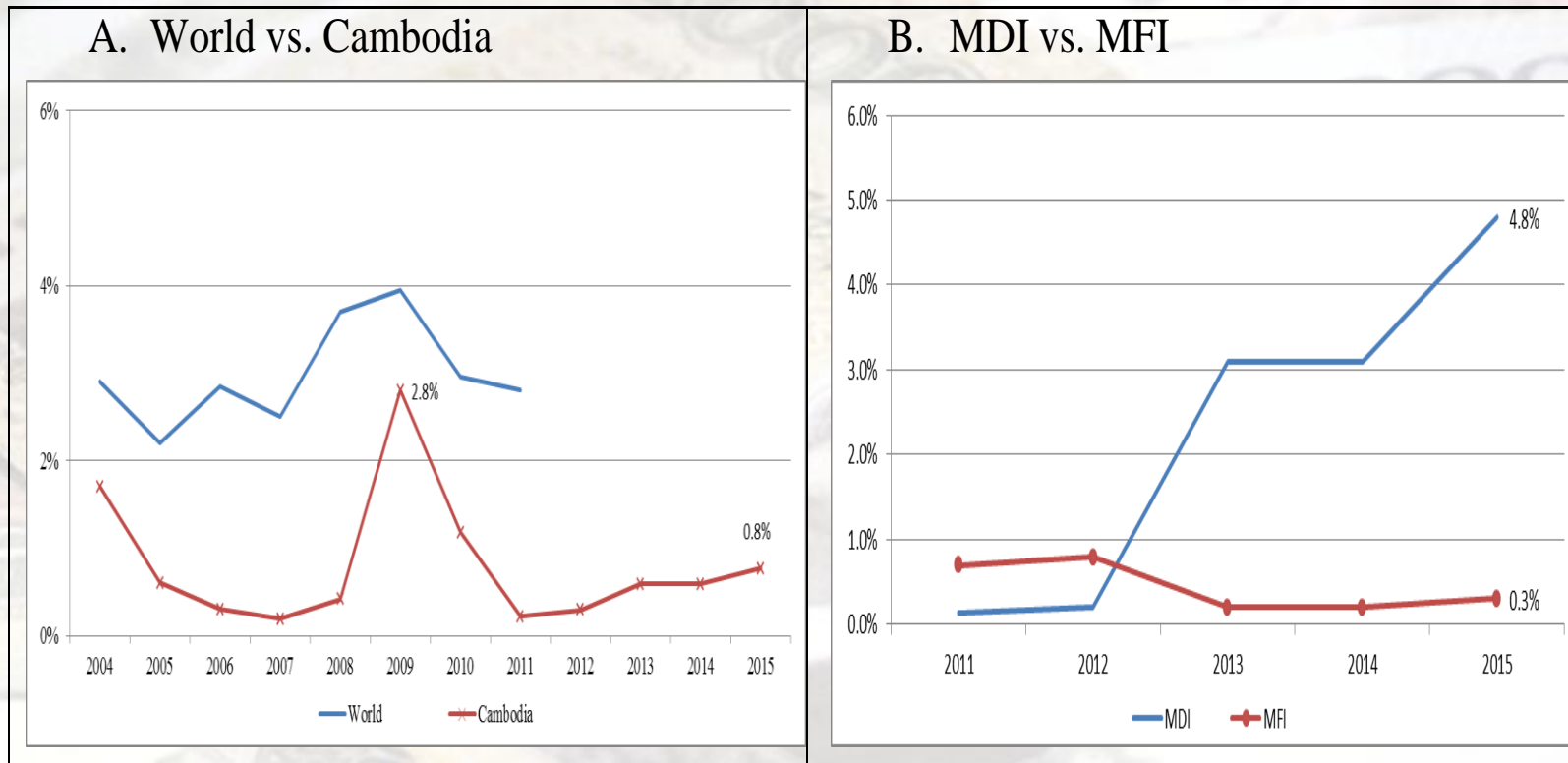
Cost of Fund of MDIs and MFIs



- MDIs cost of fund keeps increasing
 - Commercializing
 - Depositing as source of fund
- MFIs cost fund is broadly stable, around 1%
 - Deposit taking is not allow
 - Depend heavily on capital to provide credit



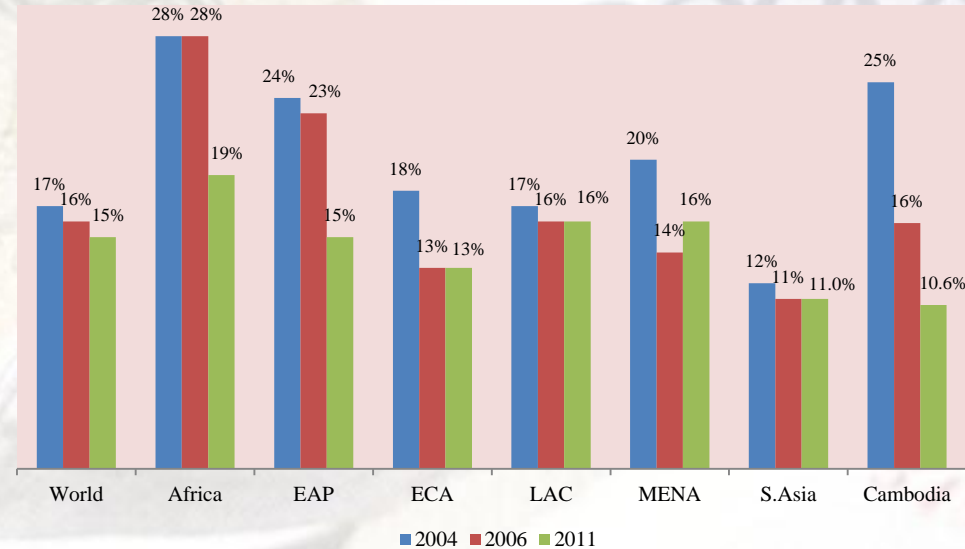
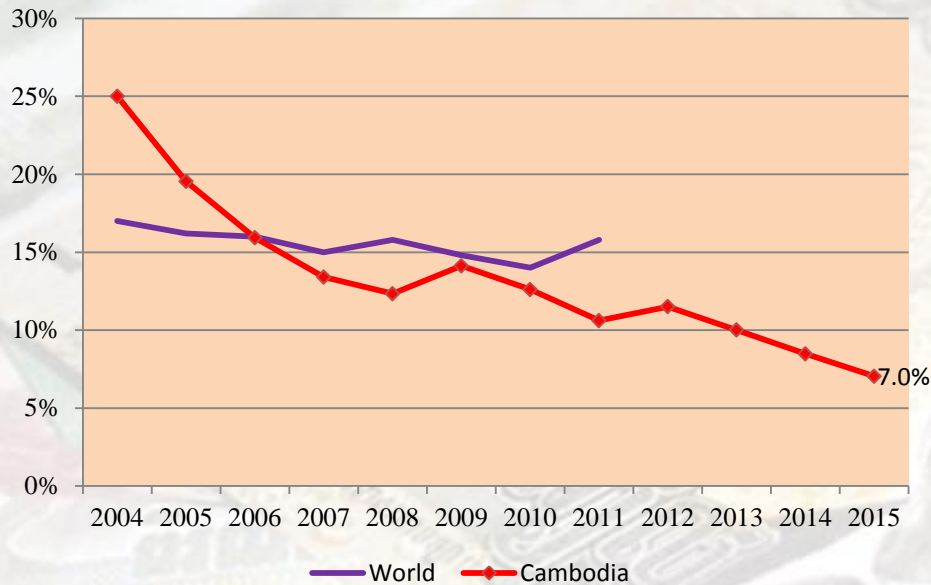
2. Non-performing Loans



- Relatively low compared to the rest of the world
- MFIs experienced sharp increase of NPLs (outliers)
 - Newly opened MFI (Lack of experience, staff and management quality)
 - Expect to do better (learning by doing, regulation compliant)
- MDIs manage their loan portfolio very well, reflecting higher investment return



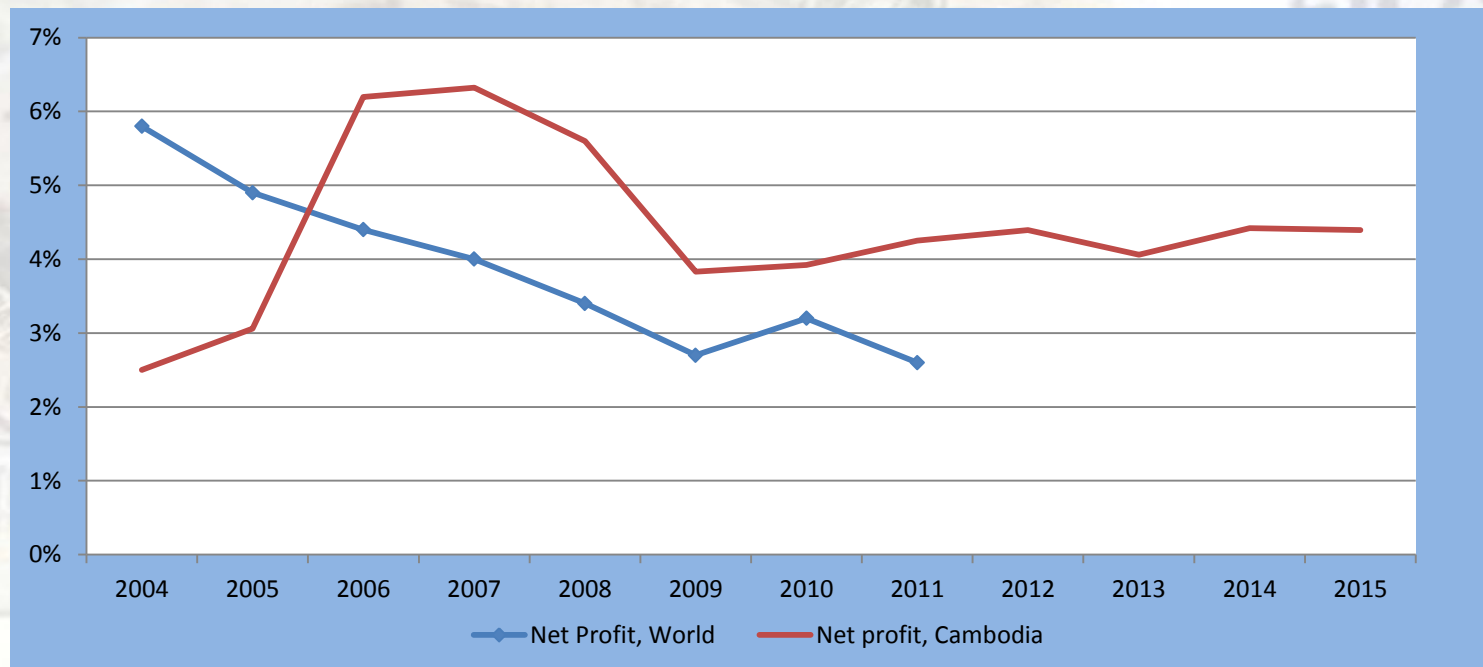
3. Operating Costs



- Very efficiency compared to the rest of the world
- In 2004, Cambodia was second worst
- Saw a significant drop in 2006
 - Commercialization started 2005
 - Regulation put in place
- In 2011, she became the most effective
 - Competition
 - Effective supervision



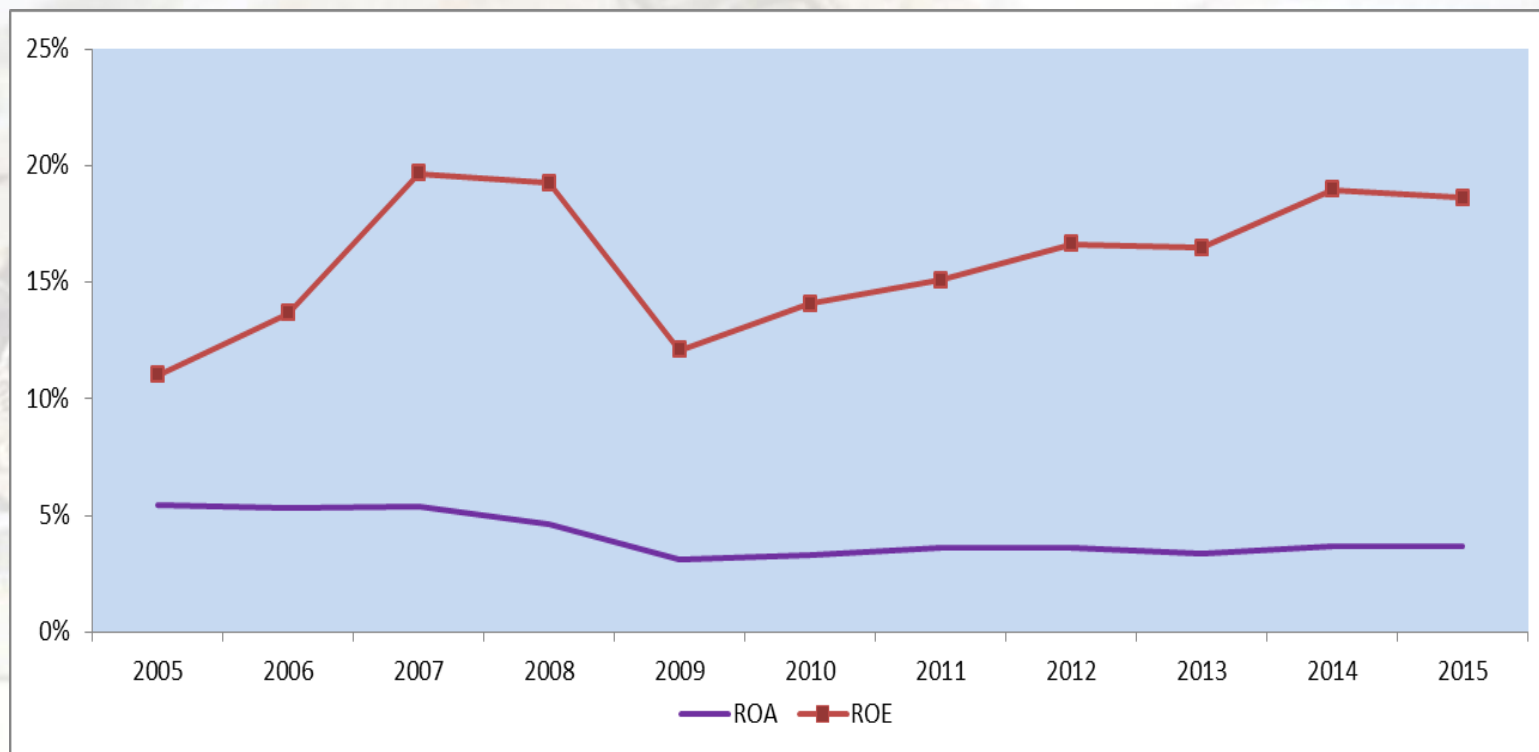
4. Net Profit as Percentage of Loan



- Net profit sharply increased in 2005, once commercialization took place
- Cambodia's MFI sector outperformed those of the world, in average.
- After the crisis, the profit was broadly stable around 4% of total loan portfolio



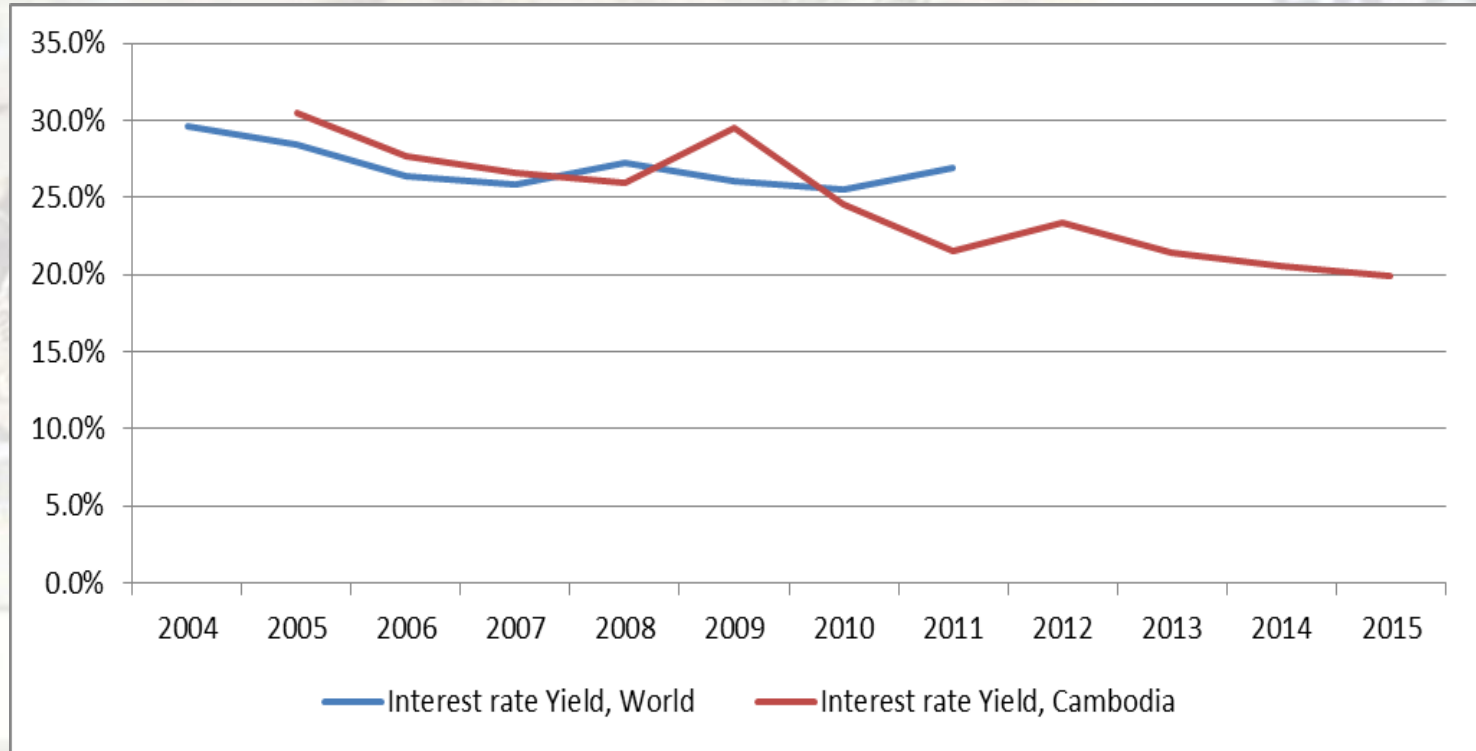
Return on Investment of Cambodia's MFIs



- ROA was widely stable, around 4% after the crisis
- While ROE indicated an increasing trend
 - Higher leverage (saving mobilization, MDI)



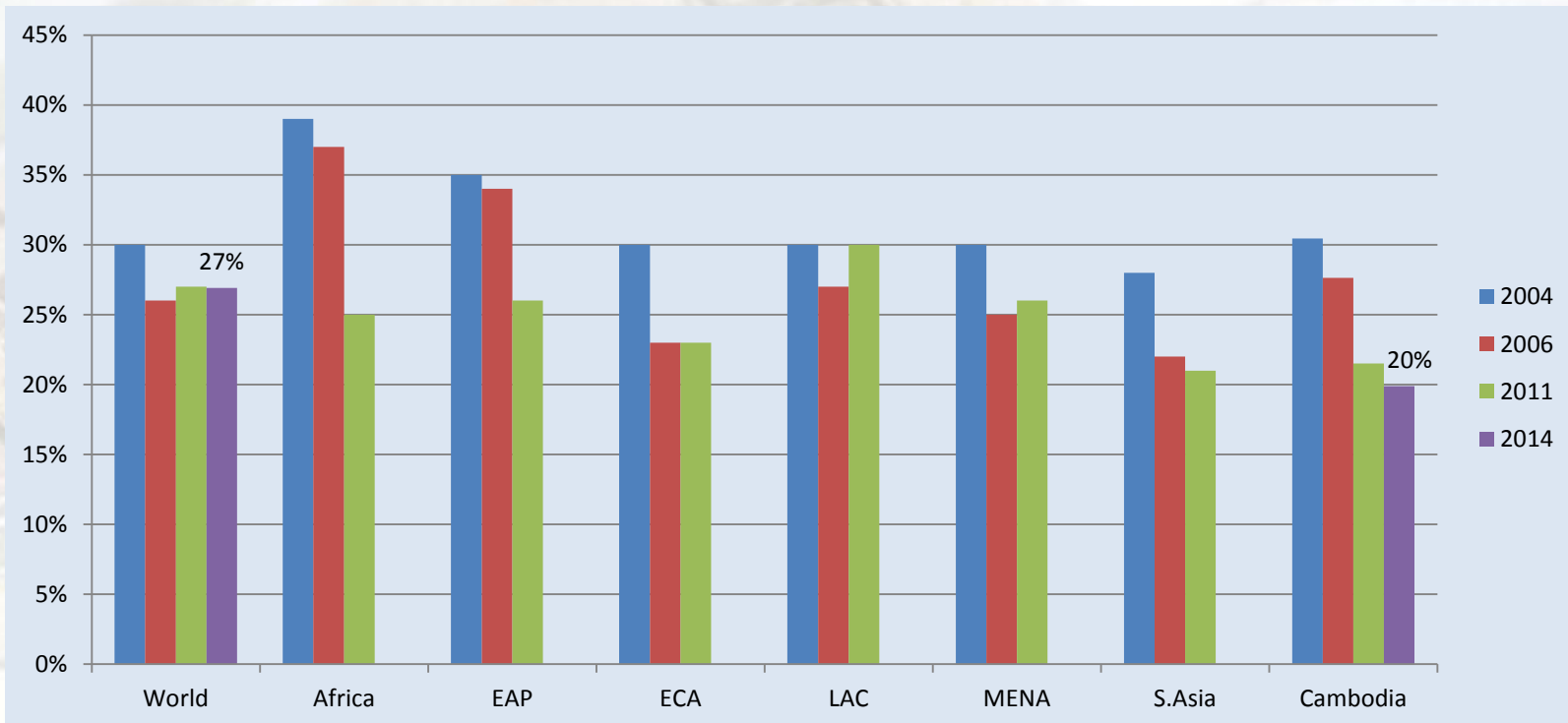
5. Interest Rate



- Interest rate keep decreasing



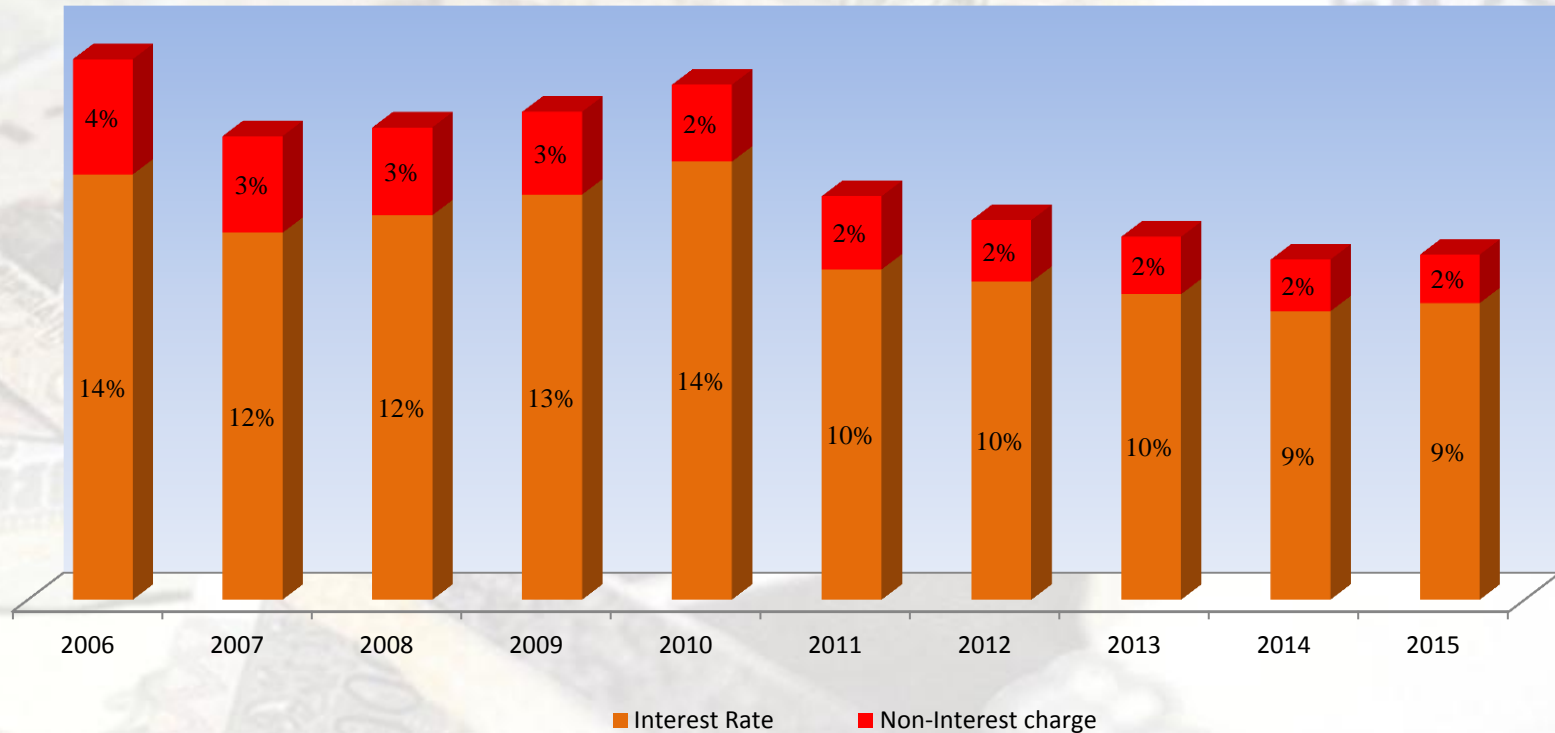
Levels of Interest Rate by Regions



- Cambodia experienced a remarkable decreasing in lending interest rate
- Cost of micro credit is cheaper in Cambodia



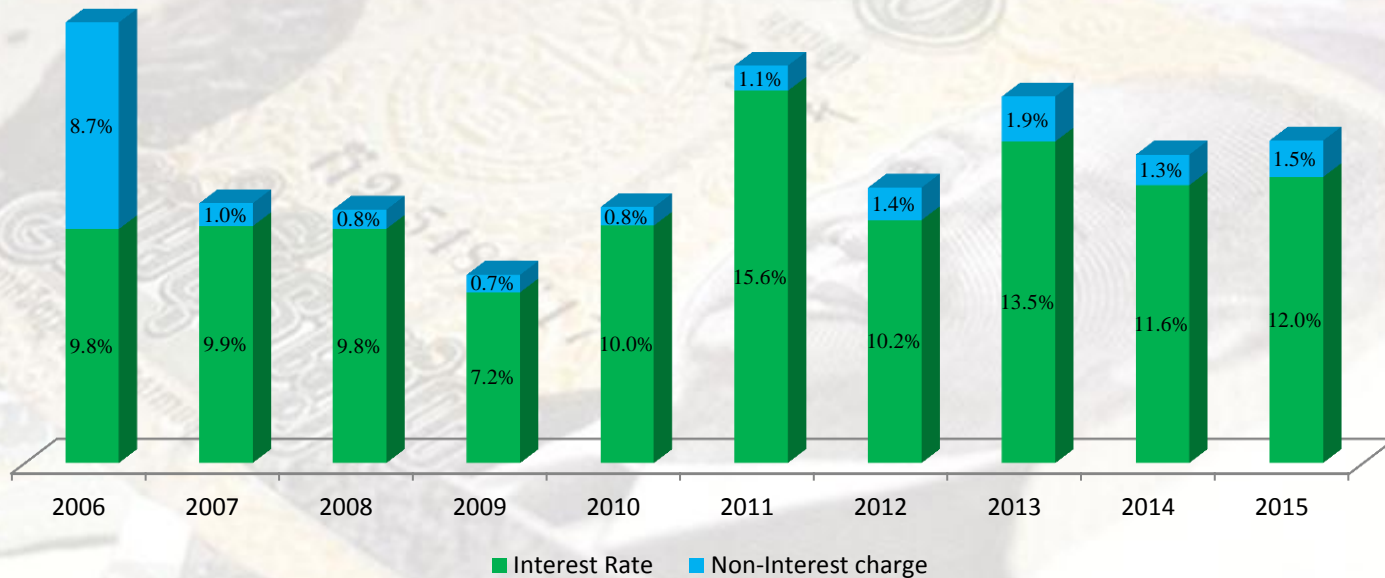
Average Effective Interest Rate of commercial Banks



- Weighted interest rate of banks was 9%
- Fee and other commission charged 2%
- Total cost to borrowers: 11%



Weighted Effective Interest Rate of Specialized Banks



- Effective interest rate of Specialized bank was 13.5%
- Fee and other commission charged 2%
- Total cost to borrowers: 11%



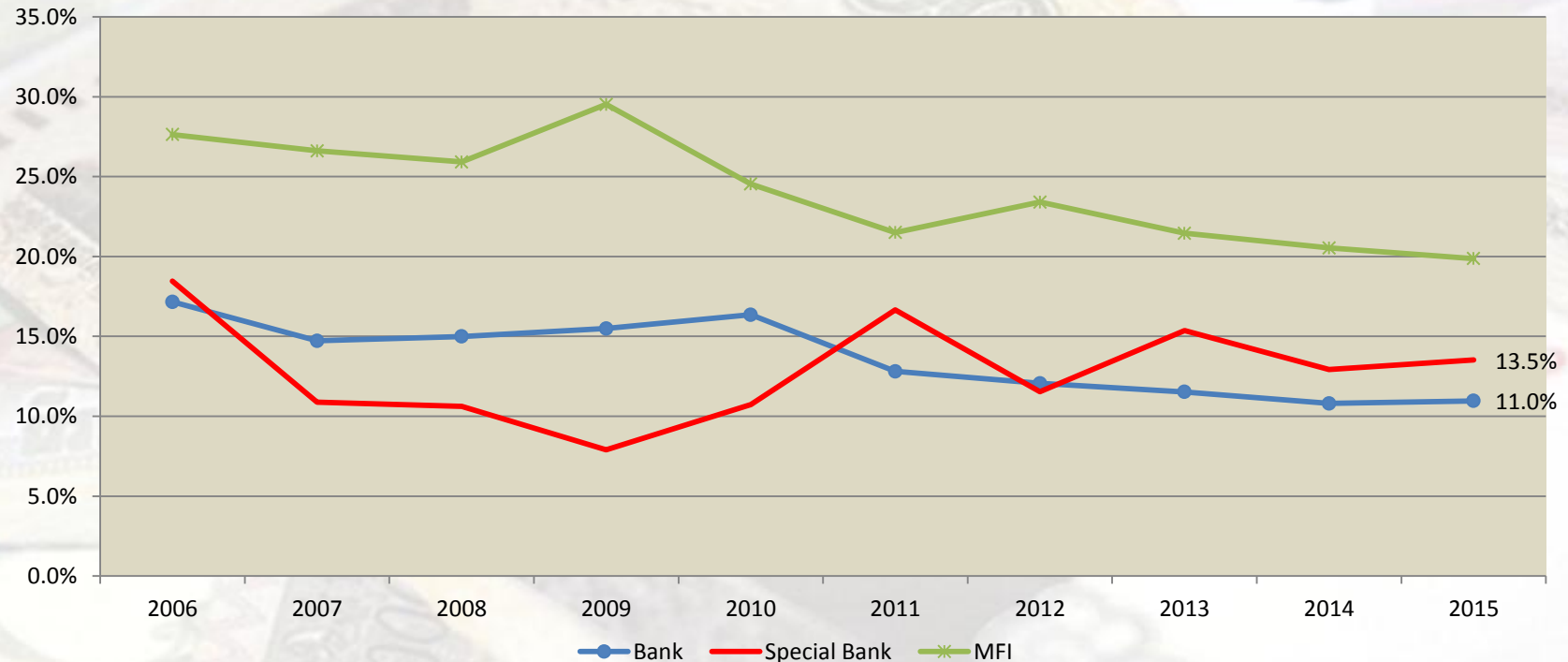
Average Effective Interest Rate of MFIs



- The trend is decreasing
 - High competition (many more player)
 - Efficiency improvement
- MFIs tend to be more transparent in terms of total cost charged from their clients



Average Weighted Rate of Borrowing Banking and Financial Institution



- Overall, Interest rates of banking and financial institutions were decreasing
- **Do we need interest rate caps for microfinance sector? ??**



V. Interest Rate Caps and Its Possible Consequences



1. Countries with interest Rate Caps, by Region

SSA	EAP	ECA	LAC	MENA	SA	Western Europe	Others
Eritrea	China	Armenia	Argentina	Algeria	Bangladesh	Belgium	Australia
Ethiopia	Japan	Estonia	Bolivia	Egypt	India	France	Bahamas
Ghana	Lao PDR	Kyrgyz Rep	Brazil	Libya	Pakistan	Germany	Canada
Guinea	Myanmar	Poland	Chile	Malta	Greece	Portugal	United States
Mauritania	Philippines	Slovak Rep	Colombia	Syrian Arab Rep	Ireland	Spain	
Namibia	Thailand	Slovenia	Ecuador	Tunisia	Italy	Switzerland	
Nigeria	Vietnam	Turkey	Guatemala		Netherlands	United Kingdom	
South Africa			Honduras				
Sudan			Nicaragua				
Zambia			Paraguay				
WAEMU			Rep. Dominican				
CEMAC			Uruguay				
			Venezuela, RB				

Sub-Saharan Africa (SSA); Latin America and the Caribbean (LAC); East Asia and the Pacific (EAP); Europe and Central Asia (ECA); Middle East and North Africa (MENA); South Asia (SA)

- Interest rate cap is not a new phenomenon
- 61 out of 152 World Bank's members exist interest rate caps



2. *Purposes of interest rate caps*

- Spain: to protect consumers
- Portugal: to guard the weakest parties
- Belgium, France, the Kyrgyz Republic, Poland, the Slovak Republic, and the United Kingdom: to shield consumers from predatory lending and excessive interest rates
- Greece: to stop the abuses arising from too much freedom
- Estonia: to control over-indebtedness
- Netherlands: to decrease the risk-taking behavior of credit providers
- Thailand: to make finance affordable for low-income borrowers
- Zambia: to mitigate the perceived risk of over indebtedness and the high cost of credit, as well as to enhance access to the underserved
- **In short, it is used 1)- to protect consumers from excessive interest rates, 2)- to increase access to finance, and 3)- to make loans more affordable**



3. Empirical Experiences

- One caps were introduced:
 1. Armenia and South Africa: reduced the transparency of the total cost of credit (credit life insurance and other services)
 2. WAEMU: caused MFI to withdraw from poor and more remote areas and Increased the average loan size
 3. Japan: supply of credit contracted, acceptance of loan applications fell, and illegal lending rose
 4. Poland: reduced both access to credit and welfare
 5. France: decreased the diversity of products
 6. Germany: many low-income and high-risk borrowers excluded from credit
 7. 18 countries in Latin America: negative association with financial depth
 8. Nicaragua: Reduce lending and leaved rural areas
 9. Bolivia: decreased in the licensing of new lending institutions
 10. New York: Increased both illegal lending and the average size of the loans

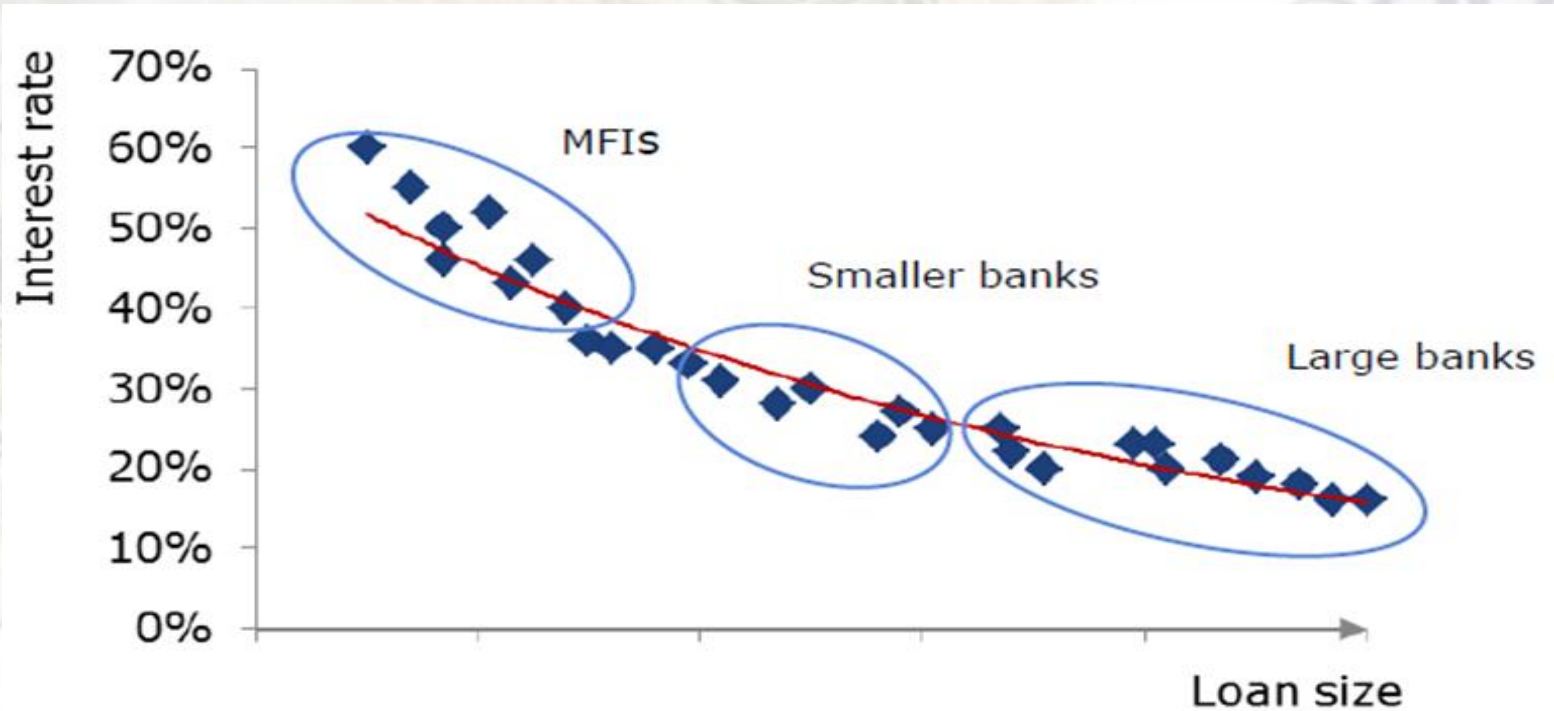


- Summary of the Impacts of the Caps:
 - Increased non interest cost to borrowers
 - Leaved high operating cost areas
 - Increased sizes of loan
 - Distorted product innovation
 - Increased illegal lending



4. Possible Consequences of the Cab on Cambodia

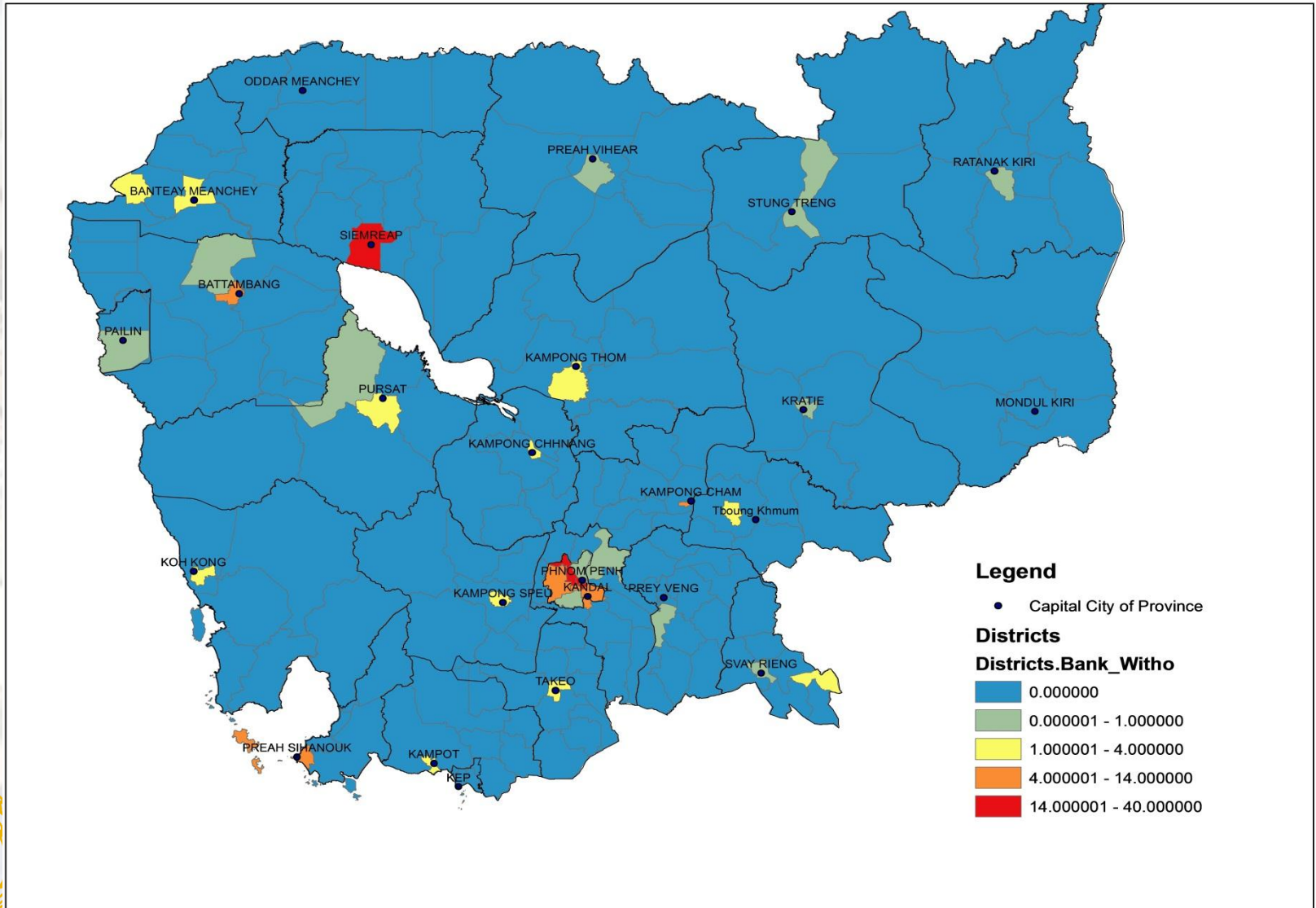
Demand of Loan



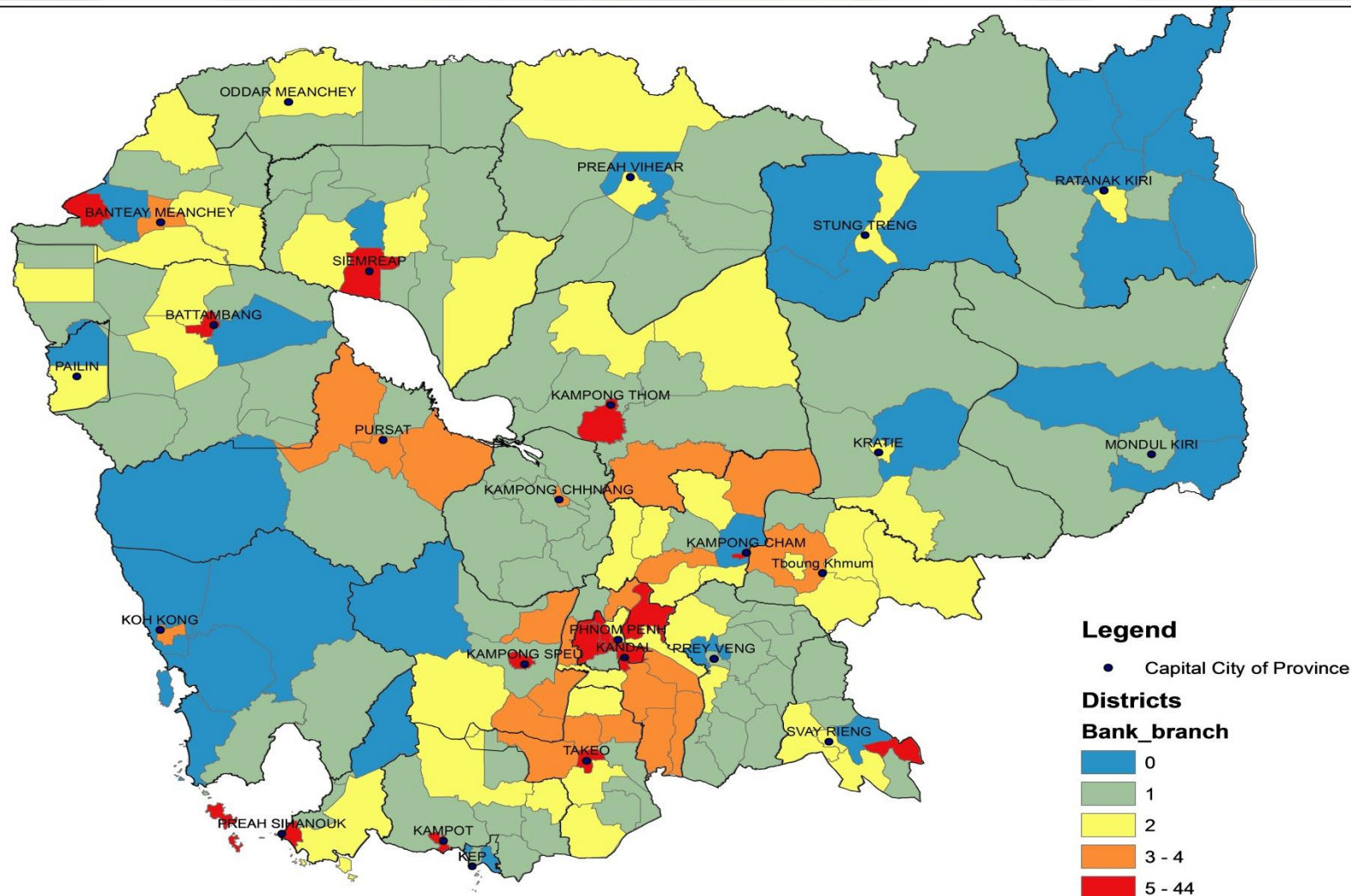
- MFIs: borrower 2.2 million and depositor 1.5 million (2015)
- Banks: 512,582 and depositor 2,650, 188
- Proportion of borrowers: Bank 19%, MFIs 81%
- Banks wont target microcredit, in general



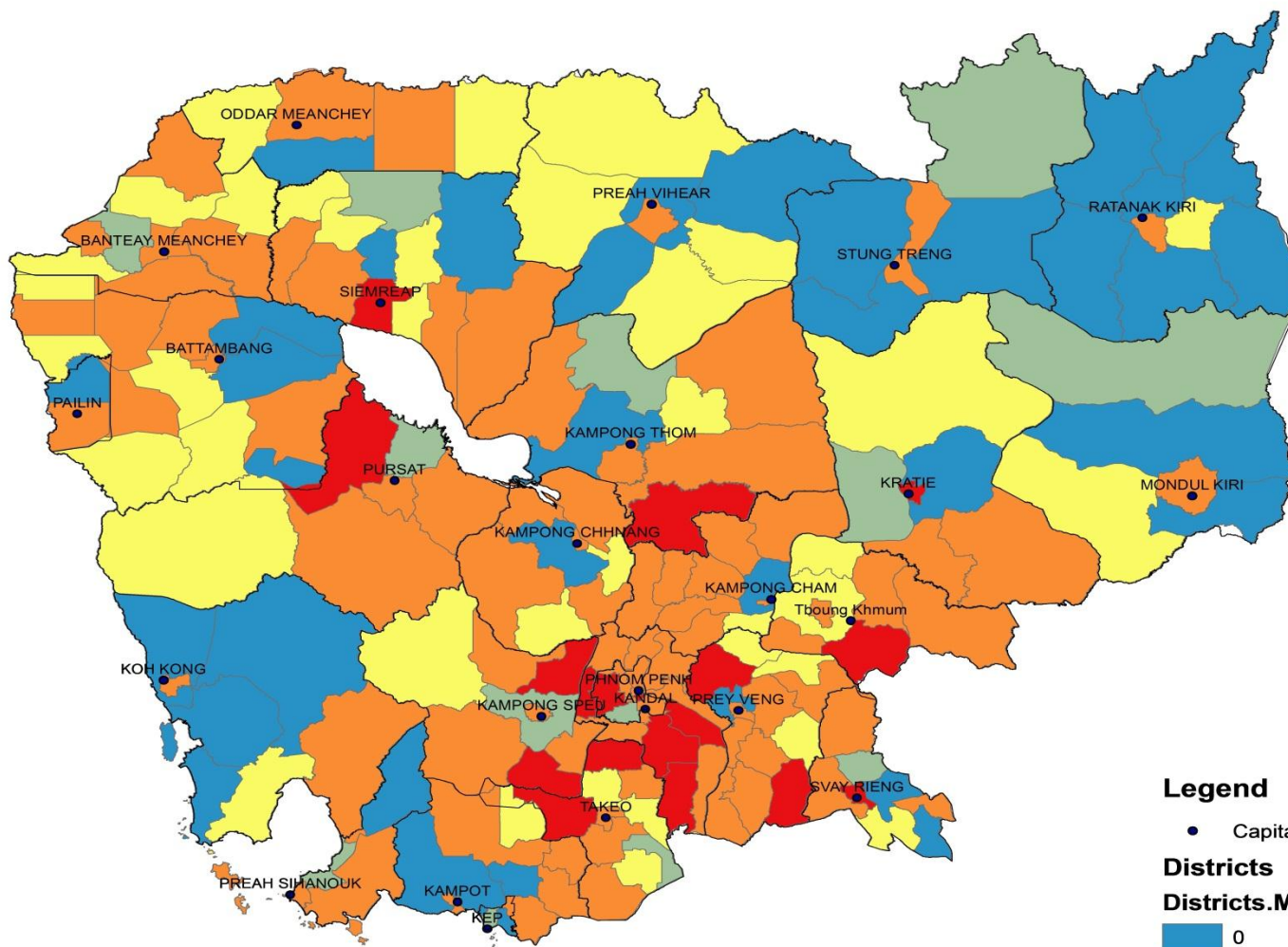
Branches of Commercial Bank



Branches of Bank with ACLEDA



Branches of MFIs



Legend

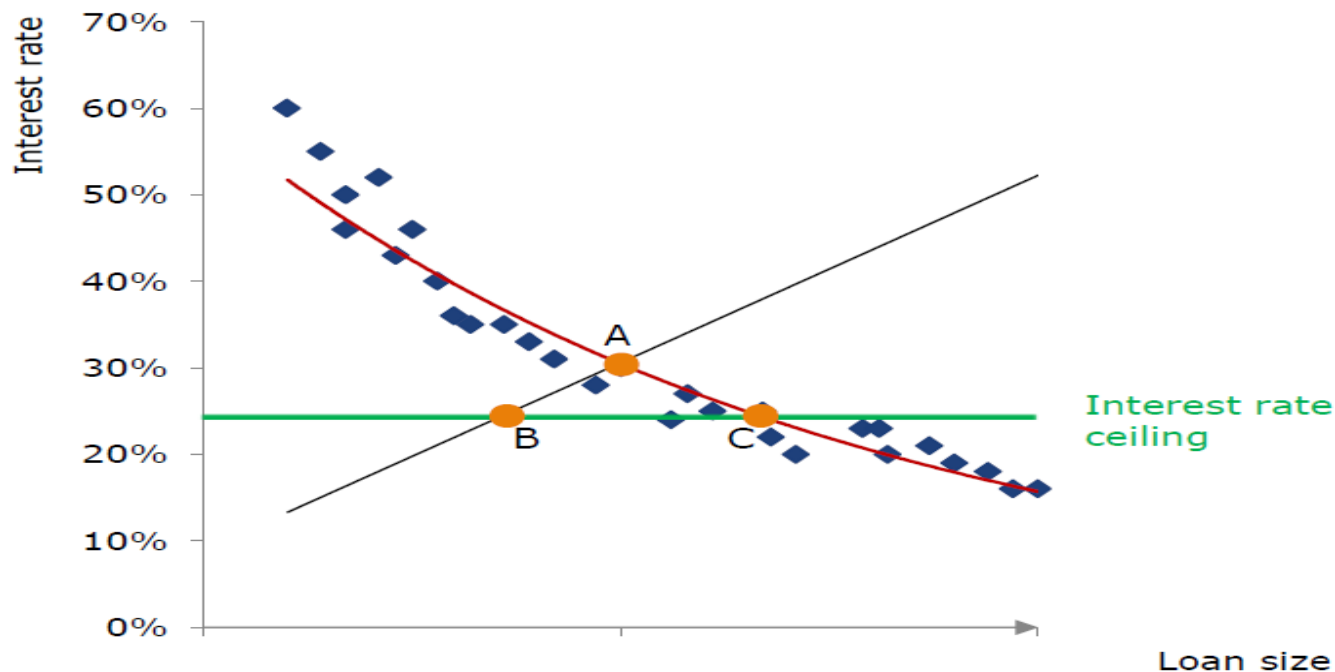
● Capital City of Province

Districts

Districts.MDIs

- 0
- 1
- 2 - 3
- 4 - 7
- 8 - 13

Imposition of an interest rate ceiling



- A is an equilibrium before the cap
- C is the equilibrium after the cap
- If Banks refused to provide credit to the poor, B will be the consequence
 - Exclude microcredit borrowers



VI. Conclusion



- World Bank: Interest rate cap is still popular, **but a Blunt Instrument**
- Measures should be considered:
 1. promote competition in the sector,
 2. introduce and develop financial consumer protection
 3. promote financial literacy
 4. improve credit information
 5. encourage microcredit product innovation=> Reduced interest rate, protect customers and promote access to find
- **The NBC has continuously been implementing such tasks**
- **Many more initiatives are to come**
- **Just everything has its time.**



Thank You!!

