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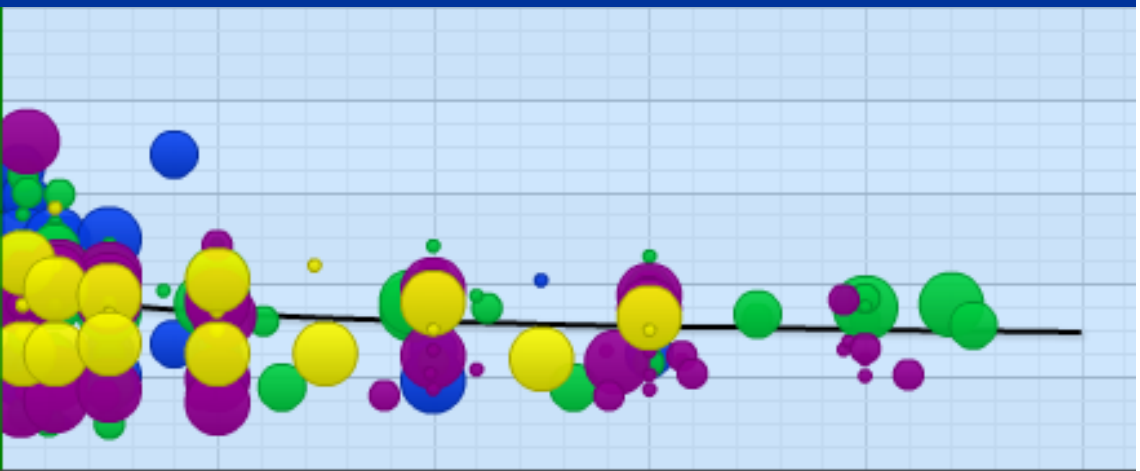
Promoting Transparent Pricing in the Microfinance Industry



Prices, Costs, Profits, and Responsible Practice

NPM Seminar

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CEO
MicroFinance Transparency
February 2013

Preface

Overview of MicroFinance Transparency's Progress: Phase I / II

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MF*Transparency* Launched at the Microcredit Summit in Bali July 2008

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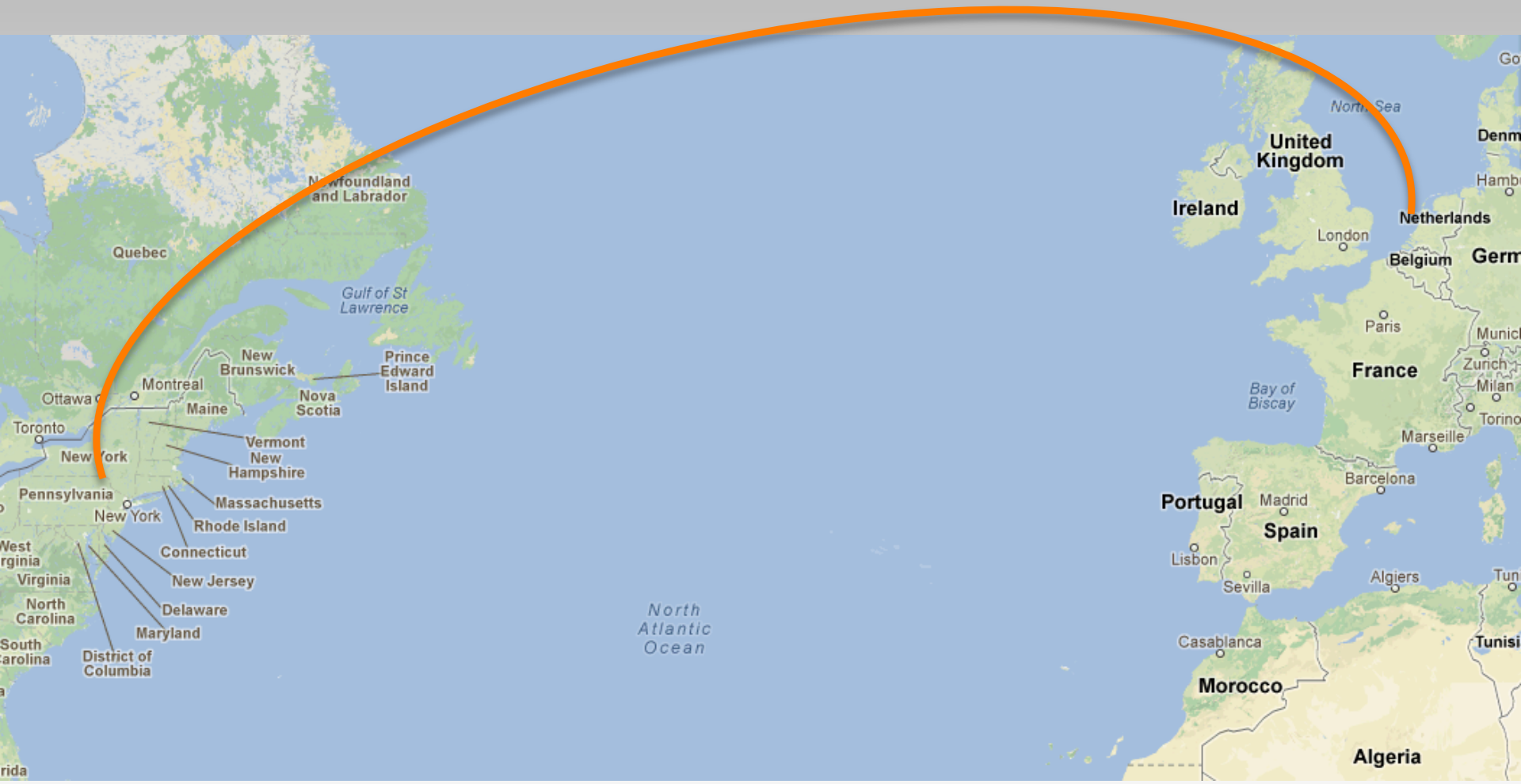
Chuck uses FF miles in October 2008



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A Successful "PHASE 1"

- **Results of Phase I**
  - More than 500 MFIs participating
  - Pricing data on over 2,000 products
  - True prices on loans going to over 50 million clients
  - True prices on over US$12 billion in outstanding portfolio
  - 17 countries published, 8 unpublished, 2 boycotted
- Pricing transparency has shifted from a "rare practice" to an "expectation for all"
- *Microfinance is the first industry of any kind in the world to practice global, voluntary disclosure of true pricing.*

Transition to "PHASE 2"

- **Data Collection, Standardization, Publication**
  - Quarterly refreshing, new countries, partnership approach
  - New data platform, downloadable data
- **Training & Capacity Building**
  - More videos & webinars planned, additional software & analysis tools in development
- **Development of Educational Materials**
  - 150 materials on the website, more planned
- **Consultation to Regulators & Policymakers**
- **Financial Support: NPM, MCF, AfD, DB**

Goal and Agenda for Today

Increase our understanding of the relations of Prices and Profits to advance on defining responsible practice for the industry and making wiser decisions.

Data	Implications	Analysis	Who
Income	The price we charge on loans	Curve	CW
Expenses	What it costs to deliver those loans	Curve	CW/EJ
Profit	Defining responsible profit levels from the BoP in an imperfect market	Being off the curve	CW/EJ /DR

Questioning Common Assumptions

- *The average price in microfinance is moderate, with only some MFIs charging very high prices*
- *Clients understand total costs, they don't understand abstract percentages*
- *Prices come down due to scale, competition, and open market forces*
- *For-profits have proven to be more efficient than NGOs*
- *Savings is an inexpensive source of finance*
- *Profit comes from efficiency*

Income (Price)

What price DO we charge?

What is a “transparent price”?

How should we DEFINE price?

Do we really have non-transparent pricing?

Here's an example of what a client faces in shopping for a loan

Which loan would you pick?

	Zero Interest Loan	Interest and Fees	And Savings	Interest Only
Loan amount:	$1,000	$1,000	$1,000	$1,000
Loan term:			10 weeks	10 weeks
Int			12% “flat”	40% decl
U			1%	0%
Secur			20%	0%
TCC		**$50**	**$33**	**$42**
APR	**49%**	**47%**	**49%**	**40%**
Transparency Index	**0**	**32**	**25**	**100**

Nominal Annual Interest Rate

Full APR

Full Transparency = 100

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The Downward Spiral

1. How did prices get so confusing and non-transparent?
2. It is a combination of:
   - Lack of transparent pricing regulation
   - Initial motivation of a small minority to mask the true price
3. The result is a downward spiral drawing in nearly all MFIs

The Downward Spiral

1. All MFIs have transparent prices

1. MFI 1:
   - Interest: 2.5% decl.

2. MFI 2:
   - Interest: 3.0% decl.

The Downward Spiral

1. All MFIs have transparent prices
2. **Some MFIs shift to flat interest**

1. MFI 1:
   - Interest: 2.5% decl.
2. MFI 2:
   - Interest: **2.0% flat**

The Downward Spiral

1. All MFIs have transparent prices
2. Some MFIs shift to flat interest
3. **All MFIs shift to non-transparent pricing**

1. MFI 1:
   - Interest: **1.75% flat**
2. MFI 2:
   - Interest: 2.0% flat

The Downward Spiral

1. All MFIs have transparent prices
2. Some MFIs shift to flat interest
3. **All MFIs shift to non-transparent pricing.. And it continues**

1. MFI 1:
   - Interest: 1.75% flat
2. MFI 2:
   - Interest: **1.6% flat, 2% upfront fee**

The Downward Spiral

1. All MFIs have transparent prices
2. Some MFIs shift to flat interest
3. All MFIs shift to non-transparent pricing
4. **Consumers struggle to choose…. Which would YOU choose?**

1. MFI 1:
   - Interest: 1.75% flat
2. MFI 2:
   - Interest: 1.6% flat, 2% upfront fee

The Downward Spiral

1. All MFIs have transparent prices
2. Some MFIs shift to flat interest
3. All MFIs shift to non-transparent pricing
4. **Consumers struggle to choose… Because the prices are far from clear**

1. MFI 1:
   - Interest: 1.75% flat
   - **APR: 37%**
2. MFI 2:
   - Interest: 1.6% flat, 2% upfront fee
   - **APR: 57%**

The Downward Spiral

1. All MFIs have transparent prices
2. Some MFIs shift to flat interest
3. All MFIs shift to non-transparent pricing
4. Consumers struggle to choose
5. **Profits are correlated to price when loans are identical**

1. MFI 1:
   - Interest: 1.75% flat
   - APR: 37%
   - **ROE: 10%**
2. MFI 2:
   - Interest: 1.6% flat, 2% upfront fee
   - APR: 57%
   - **ROE: 40%**

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The Downward Spiral

1. Prices are far from clear, and thus:
   - Consumers over-consume
   - Market competition is hindered
   - Strong temptation from high profits
   - The poor are harmed
   - Public image is tarnished
   - Governments urged to intervene
2. Transparency, and particularly pricing transparency, is a key element to correct this serious problem in the microfinance industry

How should we define a "Transparent Price"?

Total Cost of Credit (TCC)?
Annual Percentage Rate (APR)?
Effective Interest Rate (EIR)?

(And can't we just keep using portfolio yield as a proxy for price? We've been doing that for years!)

Total Cost of Credit

"Isn't Total Cost of Credit sufficient? It's what clients ask for. They don't understand abstract percentages!"

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Which would you buy?

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Which would you buy?

1 liter

3 liters

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Prices of loans are much harder….

We aren't *buying* an item, we are *renting* money, and we are renting a variable amount of money for a variable amount of time.

Which would you buy?

Example 1

	Loan 1	Loan 2
Amount	$1,000	$1,000
Term	12 months	12 months
Total Cost	$130	$119

Which would you buy?

Example 1

	Loan 1	Loan 2
Amount	$1,000	$1,000
Term	12 months	12 months
Total Cost	$130	$119
APR	**24%**	**22%** 

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Which would you buy?

Example 2

	Loan 1	Loan 2
Amount	$1,000	$1,500
Term	12 months	18 months
Total Cost	$179	$333

Which would you buy?

Example 2

	Loan 1	Loan 2
Amount	$1,000	$1,500
Term	12 months	18 months
Total Cost	$179	$333
APR	**33%**	**28%** 

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Now which?

Example 3

	Loan 1	Loan 2
Amount	$2,000	$3,000
Term	6 months	12 months
Compulsory Savings	10%	0%
Total Cost	$245	$568

Now which?

Example 3

	Loan 1	Loan 2
Amount	$2,000	$3,000
Term	6 months	12 months
Compulsory Savings	10%	0%
Total Cost	$245	$568
APR	**50%**	**35%**

"Should we use TCC with clients?"

(Total Cost of Credit)

- **No!! TCC only works for exactly identical products**
  - TCC is flawed even for products that seem very similar.
  - TCC is deceptive for comparing dissimilar products
- **Why?**
  - A client doesn't *buy* a loan.
  - A client *rents* a variable amount of money for a variable amount of time.
  - We shouldn't use a "purchase price", we need to use a "rental price"

What is the APR?

(Annual Percentage Rate)

The APR indicates the cost for you to borrow $1.00 for one year. *It is a unit rental cost.*

An APR of 30% means it would cost you 30 cents to borrow $1.00 and keep the entire $1.00 for one full year.

The APR is an essential figure for you to compare the true cost of different loans.

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"What costs should we include?"

- **Interest:** Certainly!
- What else? Everything that is a compulsory requirement for receiving the loan.
- **Fees:** Any compulsory fees must be included
  - **Training** fees? Yes, if the training is a requirement for the loan. The full-price is then for "credit-plus-training"
  - **Insurance** fees? Yes, if insurance is a requirement. The client can then compare: "Loan-only for 34% APR, loan-and-insurance for 38% APR"
  - **Compulsory Deposits** ("Savings"): Yes! We'll see later.

You can use our MFT Pricing Calculator to deepen your understanding and to calculate actual prices of loans

MFT Pricing Calculation Tool – Advanced Analysis

Calculation of Transparent Pricing

☑ Display EIR values

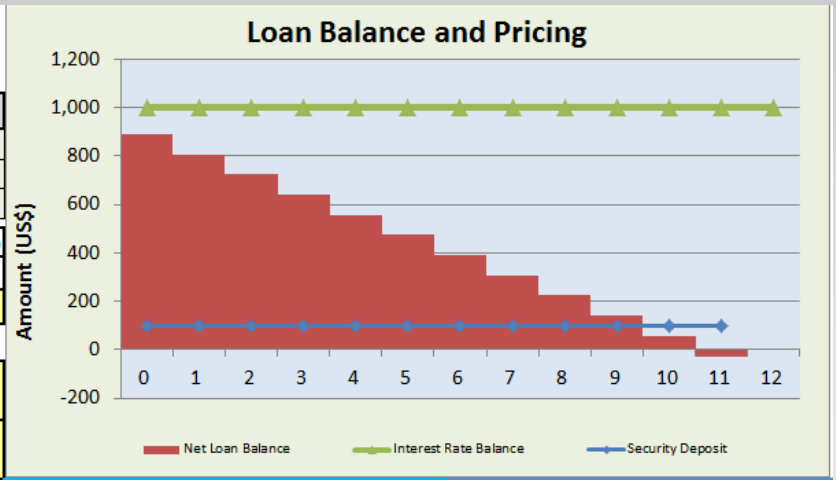
Basic Loan Conditions

Loan Amount:	$1,000		Amortization:	Equal principal payments		MPR threshold
Term & Repay Freq.	12	Months	Interest:	Multiple installments		6
	Capital	Int Pmt	Int Calc	Balloon	Days/per (t):	30
Grace or Prepay (Months)					Per/Mon (m)	1.00
					Per/Yr (n):	12.00

Loan Pricing

			Period	MPR (nom)	APR (nom)	EIR (comp)
Nominal interest Rate (%)	24.00%	Per year	i	$i * m$	$i * n$	$(1+i)^n - 1$
Nominal Annual & Method	24.00%	Initial amount, or "flat"	3.475%	3.48%	41.70%	50.57%

	Upfront	Ongoing	Increment				
Fee (%)	1.00%		2.1%	3.646%	3.65%	43.76%	53.58%
Fee (fixed amount)							
Insurance (%)			0.0%	3.646%	3.65%	43.76%	53.58%
Insurance (fixed amount)							
Value-Added Tax (%)	On Fees:		0.0%	3.646%	3.65%	43.76%	53.58%
	On Interest:						
Security Deposit (%)	10.0%		8.5%	4.358%	4.36%	52.30%	66.69%
Security Deposit (fixed)							
Interest Paid on Deposit (%)							



Total Financial Cost to the Client

Total Cost (less Sec.Dep. int):	$250	in 12 Months, or	$250	in 1 year
Avg net loan balance:	$432	which is 43% of original loan amount		
Client Breakeven Point:	1.73	Years until total loan cost equals the avg loan balance		
Negative Net Balance for:	2	Months, which is....	17%	% of loan term

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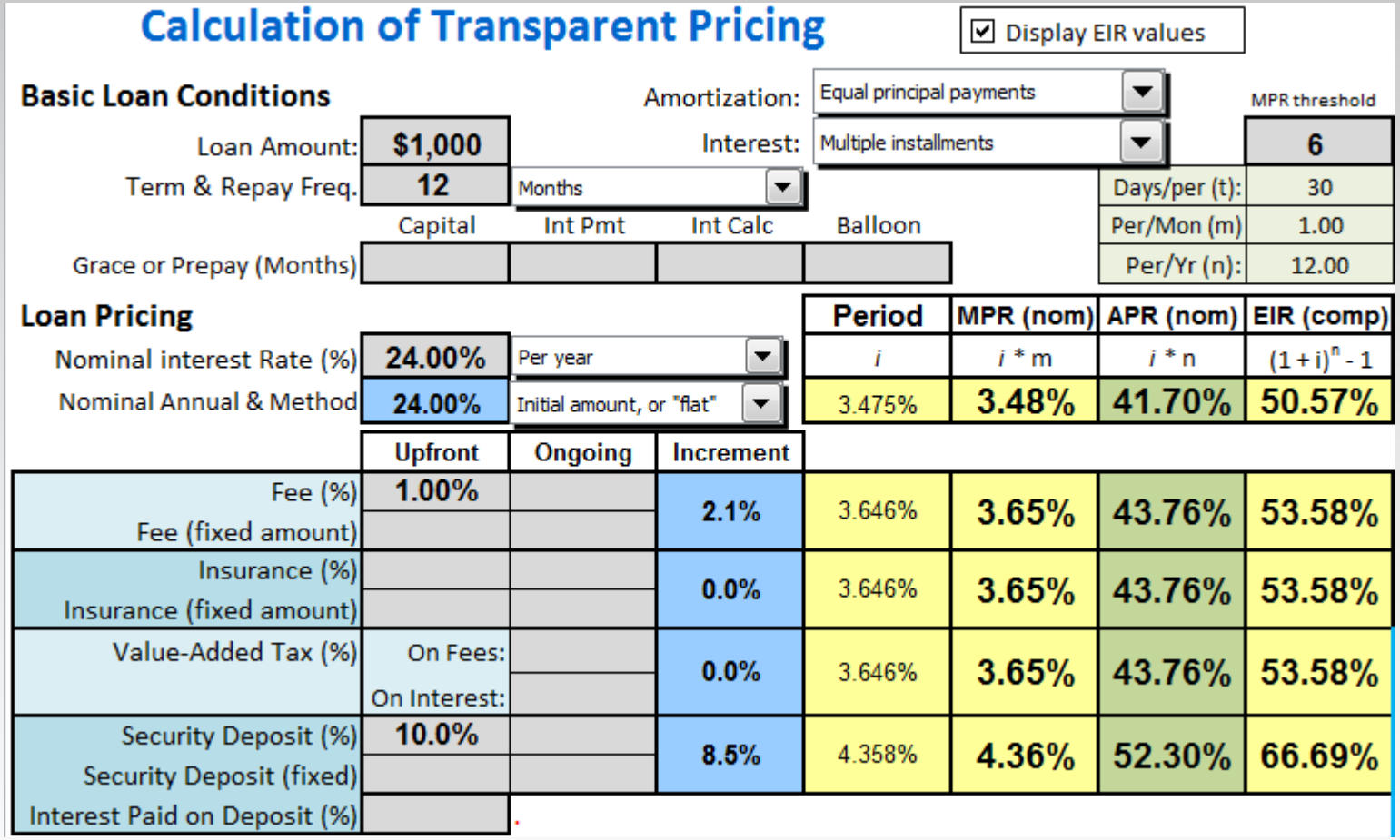
MFT Pricing Calculation Tool – Advanced Analysis



Calculation of Transparent Pricing

☑ Display EIR values

Basic Loan Conditions

Amortization: Equal principal payments

Interest: Multiple installments

Loan Amount:	$1,000				
Term & Repay Freq.	12	Months			
	Capital	Int Pmt	Int Calc	Balloon	
Grace or Prepay (Months)					

MPR threshold	
	6
Days/per (t):	30
Per/Mon (m)	1.00
Per/Yr (n):	12.00

Loan Pricing

			Period	MPR (nom)	APR (nom)	EIR (comp)
Nominal interest Rate (%)	24.00%	Per year	*i*	*i* * m	*i* * n	$(1+i)^n - 1$
Nominal Annual & Method	24.00%	Initial amount, or "flat"	3.475%	3.48%	41.70%	50.57%

	Upfront	Ongoing	Increment				
Fee (%)	1.00%		2.1%	3.646%	3.65%	43.76%	53.58%
Fee (fixed amount)							
Insurance (%)			0.0%	3.646%	3.65%	43.76%	53.58%
Insurance (fixed amount)							
Value-Added Tax (%)	On Fees:		0.0%	3.646%	3.65%	43.76%	53.58%
	On Interest:						
Security Deposit (%)	10.0%		8.5%	4.358%	4.36%	52.30%	66.69%
Security Deposit (fixed)							
Interest Paid on Deposit (%)							

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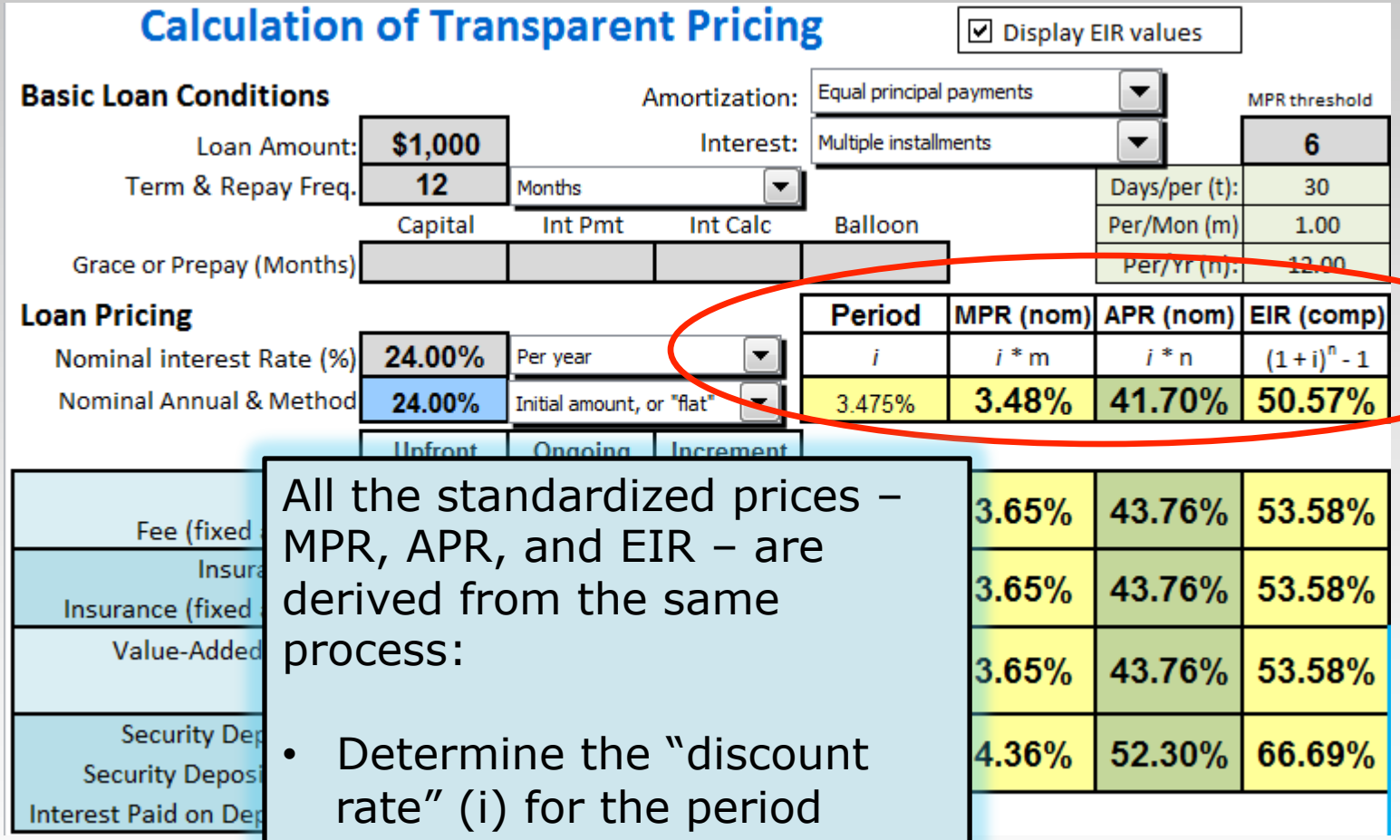
MFT Pricing Calculation Tool – Advanced Analysis



All the standardized prices – MPR, APR, and EIR – are derived from the same process:

- Determine the "discount rate" (i) for the period
- Convert to an annual (or monthly) figure

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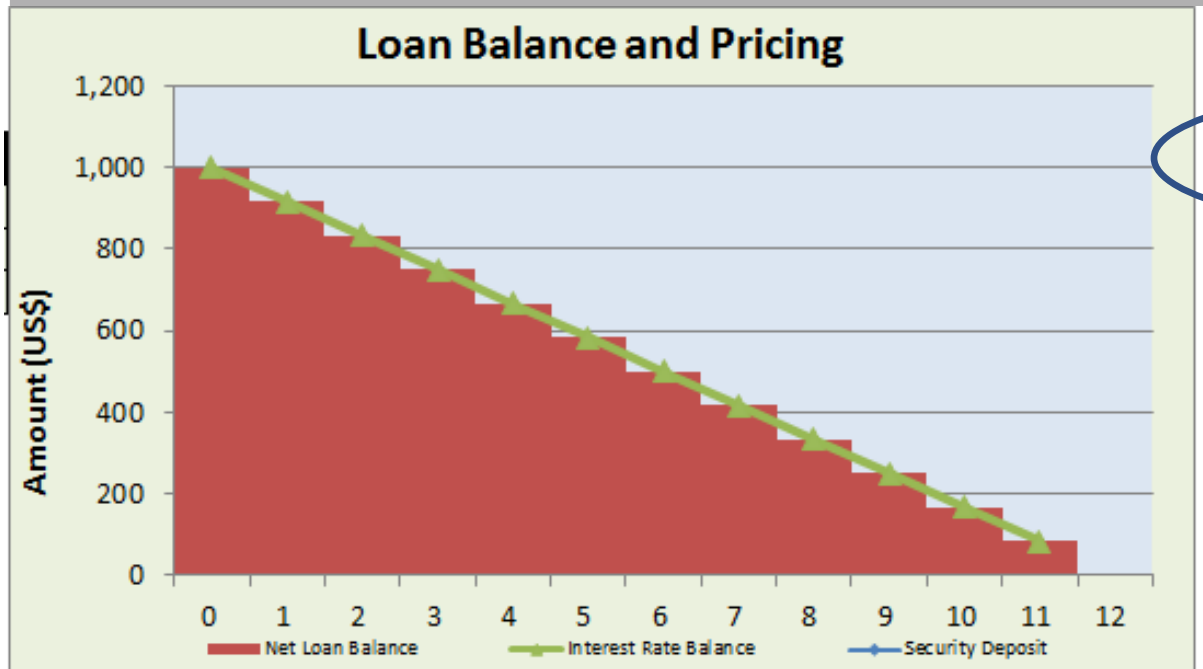
Even Interest can be complicated

1. Declining Balance
   - Do grace periods affect price?
2. Flat Interest
   - Do grace periods affect price?
3. Up-front Interest
   - Does the timing of when interest is paid affect price?

Declining Balance, no grace



	APR	
12.0% Declining	12.00%	Interest
upfront	12.00%	+ Fees
ongoing		
upfront	12.00%	+ Insurance
ongoing		
on fees	12.00%	+ Taxes
on interest		
upfront	12.00%	+ Security Deposit
ongoing		

Total Financial Cost to the Client				Transparency Index	100
Total Cost (less Sec.Dep. int):	$65	in 12 Months, or	$65	in 1 year	
Avg net loan balance:	$542	which is 54% of original loan amount			

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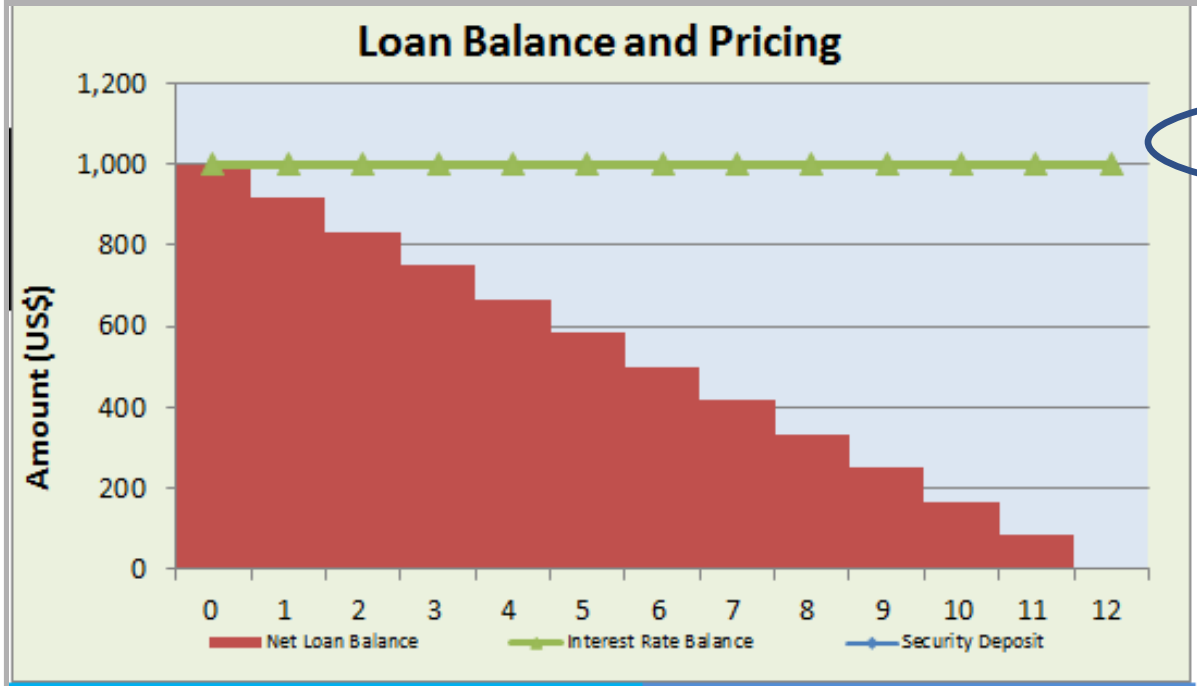
Flat Interest, no grace



Total Financial Cost to the Client			Transparency Index	56
Total Cost (less Sec.Dep. int):	$120	In 12 Months, or	$120	in 1 year
Avg net loan balance:	$542	which is 54% of original loan amount		

	APR	
12.0% Flat	21.46%	Interest
upfront ongoing	21.46%	+ Fees
upfront ongoing	21.46%	+ Insurance
on fees on interest	21.46%	+ Taxes
upfront ongoing	21.46%	+ Security Deposit

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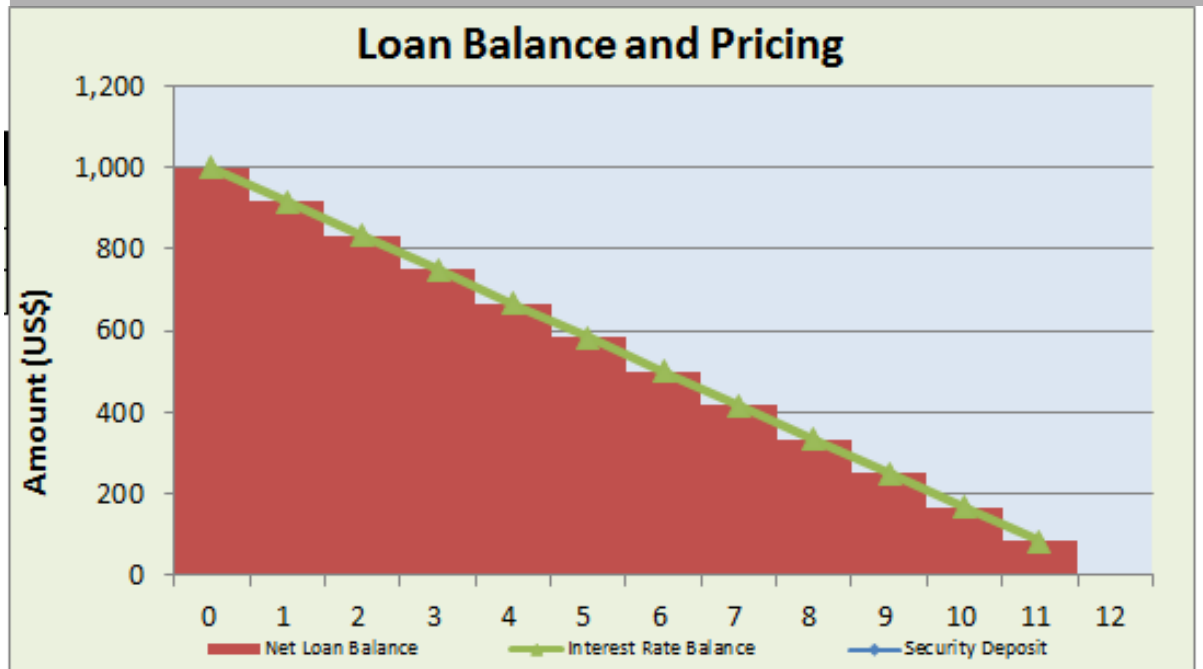
Declining Interest, no grace



	APR	
12.0% Declining	12.00%	Interest
upfront ongoing	12.00%	+ Fees
upfront ongoing	12.00%	+ Insurance
on fees on interest	12.00%	+ Taxes
upfront ongoing	12.00%	+ Security Deposit

Total Financial Cost to the Client

Total Cost (less Sec.Dep.int):	$65	in 12 Months, or	$65	in 1 year
Avg net loan balance:	$542	which is 54% of original loan amount		

Transparency Index 100

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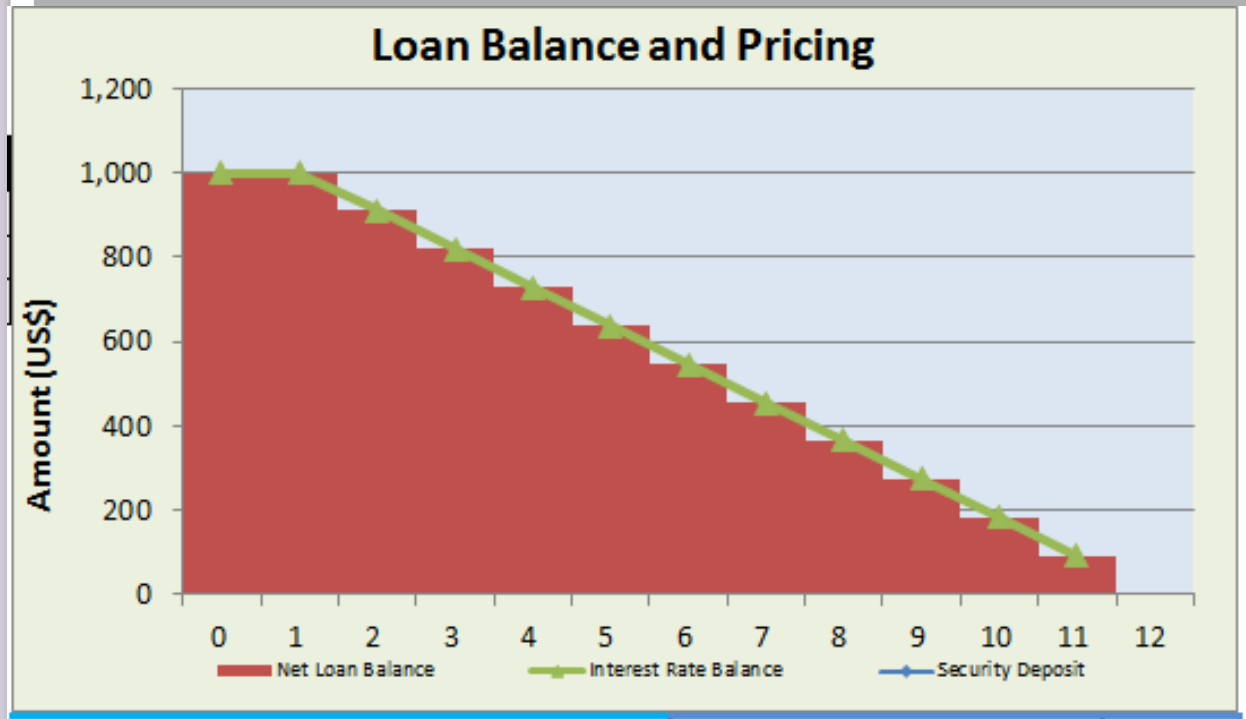
Declining Interest, 1 month grace



	APR	
12.0% Declining	12.00%	Interest
upfront ongoing	12.00%	+ Fees
upfront ongoing	12.00%	+ Insurance
on fees on interest	12.00%	+ Taxes
upfront ongoing	12.00%	+ Security Deposit

Total Financial Cost to the Client			Transparency Index	100
Total Cost (less Sec.Dep. nt):	$70	in 12 Months, or	$70	in 1 year
Avg net loan balance:	$584	which is 58% of original loan amount		

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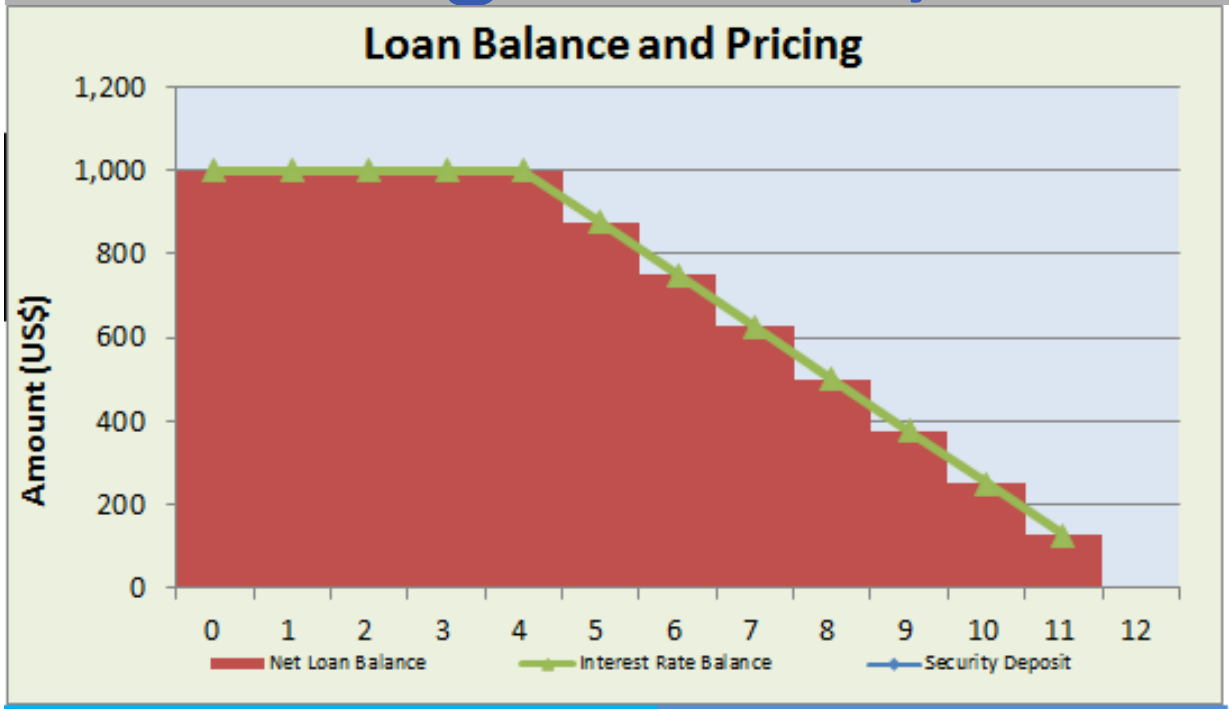
Declining Interest, 4 months grace



	APR	
12.0% Declining	12.00%	Interest
upfront ongoing	12.00%	+ Fees
upfront ongoing	12.00%	+ Insurance
on fees on interest	12.00%	+ Taxes
upfront ongoing	12.00%	+ Security Deposit

Total Financial Cost to the Client				Transparency Index	100
Total Cost (less Sec.Dep. int):	$85	in 12 Months, or	$85	in 1 year	
Avg net loan balance:	$709	which is 71% of original loan amount			

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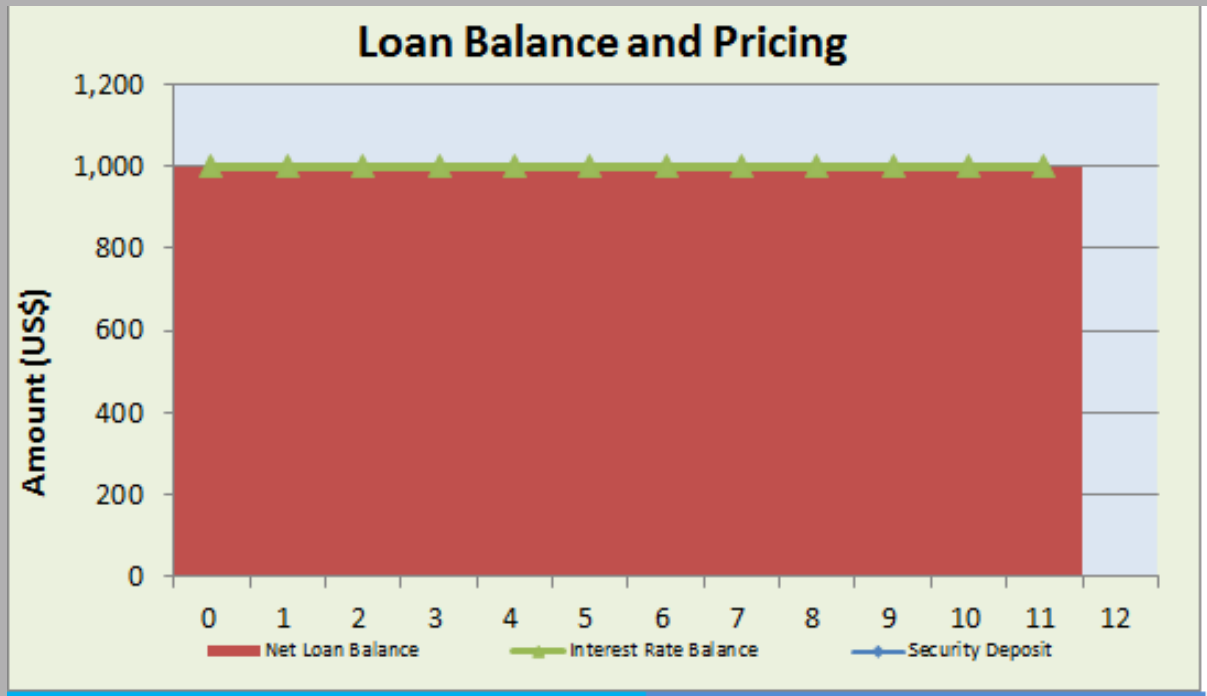
Declining Interest, 11 months grace



	APR	
12.0% Declining	12.00%	Interest
upfront ongoing	12.00%	+ Fees
upfront ongoing	12.00%	+ Insurance
on fees on interest	12.00%	+ Taxes
upfront ongoing	12.00%	+ Security Deposit

Total Financial Cost to the Client				Transparency Index	100
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year	
Avg net loan balance:	$1,000	which is 100% of original loan amount			

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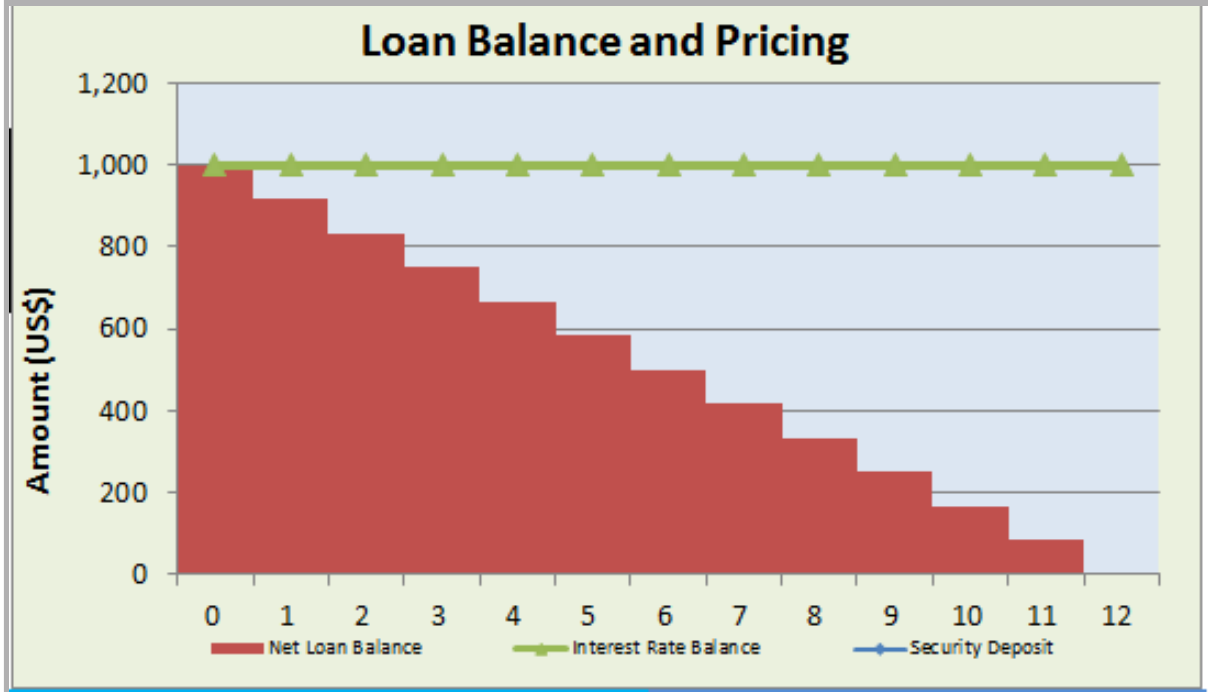
Flat Interest no grace



Total Financial Cost to the Client			Transparency Index	56
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year
Avg net loan balance:	$542	which is 54% of original loan amount		

	APR	
12.0% Flat	21.46%	Interest
upfront ongoing	21.46%	+ Fees
upfront ongoing	21.46%	+ Insurance
on fees on interest	21.46%	+ Taxes
upfront ongoing	21.46%	+ Security Deposit

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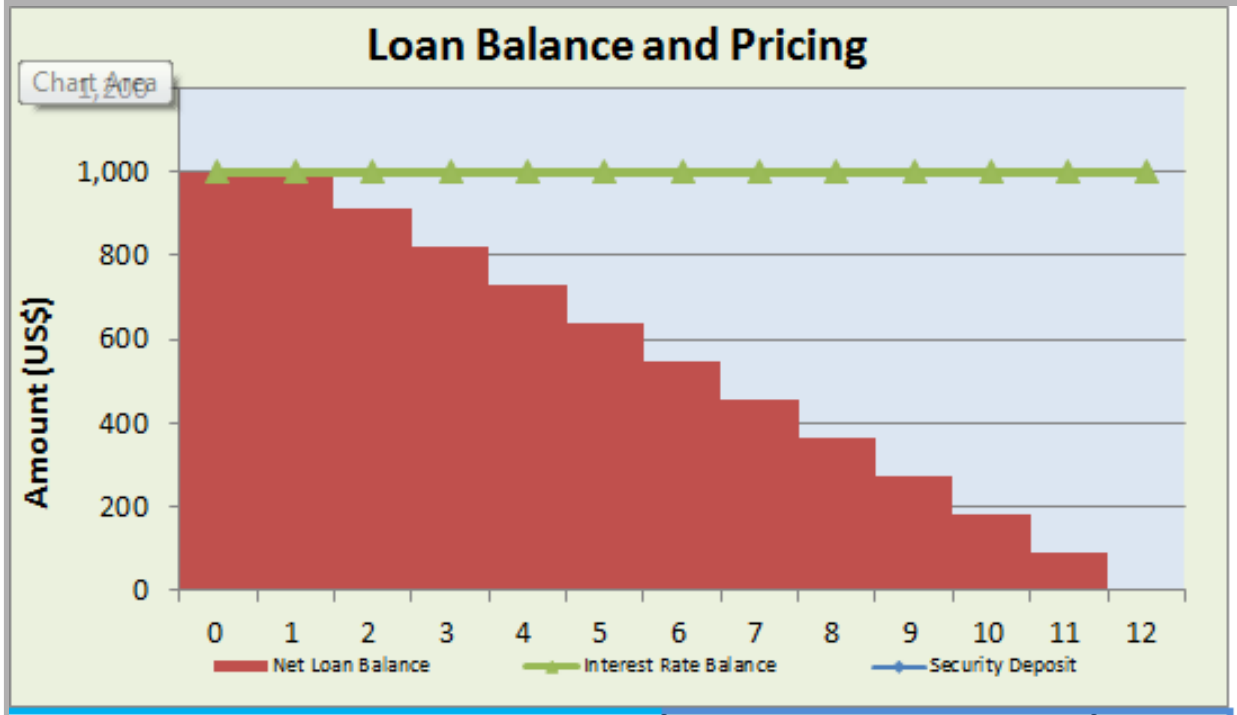
Flat Interest, 1 month grace



Total Financial Cost to the Client			Transparency Index	60
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year
Avg net loan balance:	$584	which is 58% of original loan amount		

	APR	
12.0% Flat	19.98%	Interest
upfront ongoing	19.98%	+ Fees
upfront ongoing	19.98%	+ Insurance
on fees on interest	19.98%	+ Taxes
upfront ongoing	19.98%	+ Security Deposit

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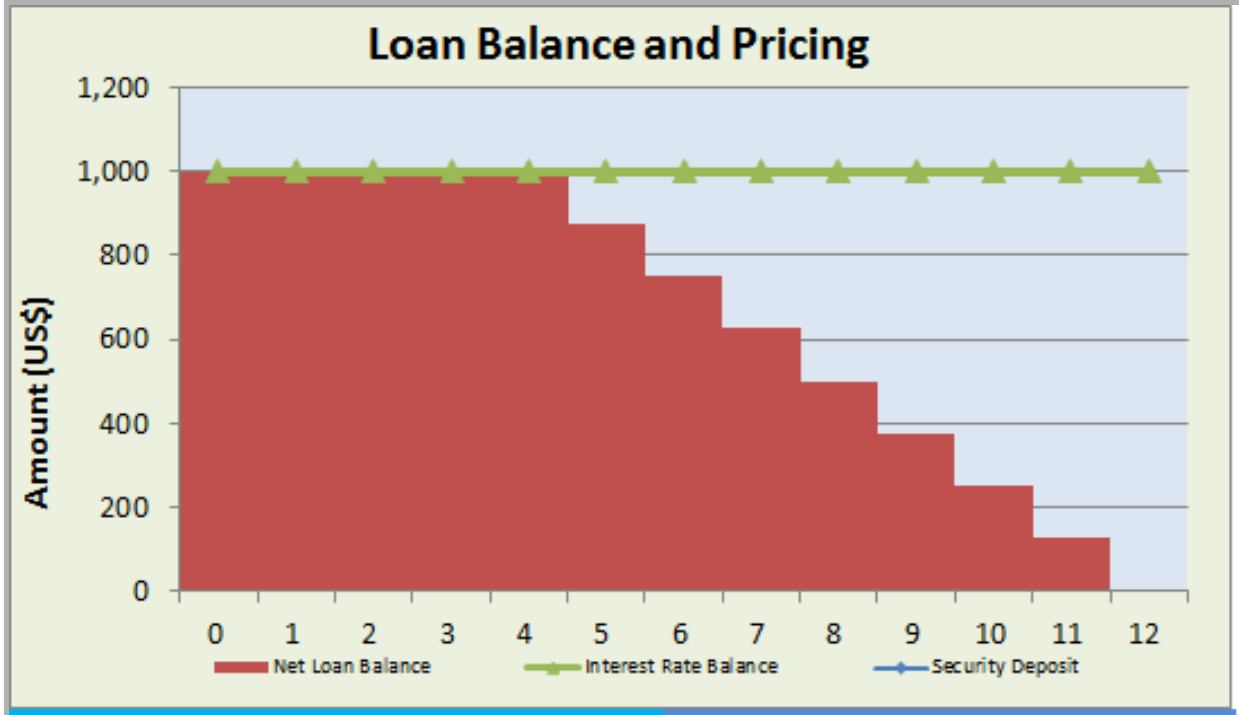
Flat Interest, 4 months grace



	APR	
12.0% Flat	16.61%	Interest
upfront ongoing	16.61%	+ Fees
upfront ongoing	16.61%	+ Insurance
on fees on interest	16.61%	+ Taxes
upfront ongoing	16.61%	+ Security Deposit

Total Financial Cost to the Client			Transparency Index	72
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year
Avg net loan balance:	$709	which is 71% of original loan amount		

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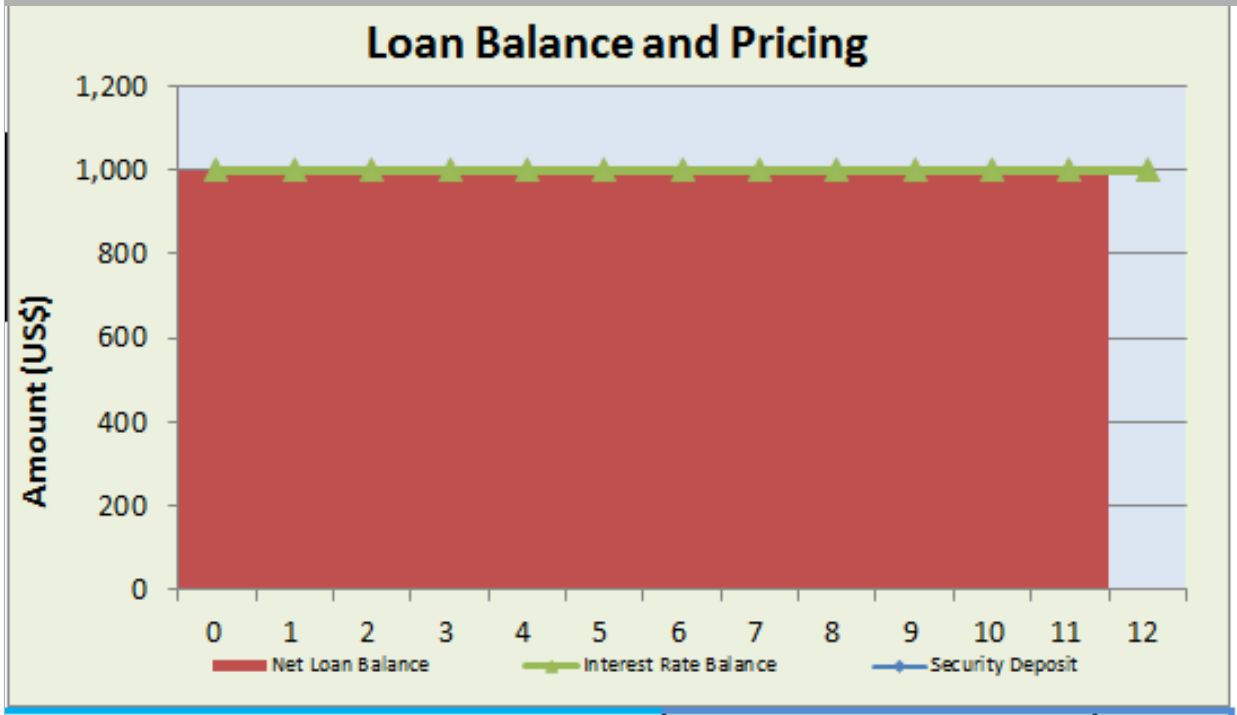
Flat Interest, 11 months grace



	APR	
12.0% Flat	12.00%	Interest
upfront	12.00%	+ Fees
ongoing		
upfront	12.00%	+ Insurance
ongoing		
on fees	12.00%	+ Taxes
on interest		
upfront	12.00%	+ Security Deposit
ongoing		

Total Financial Cost to the Client			Transparency Index	100
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year
Avg net loan balance:	$1,000	which is 100% of original loan amount		

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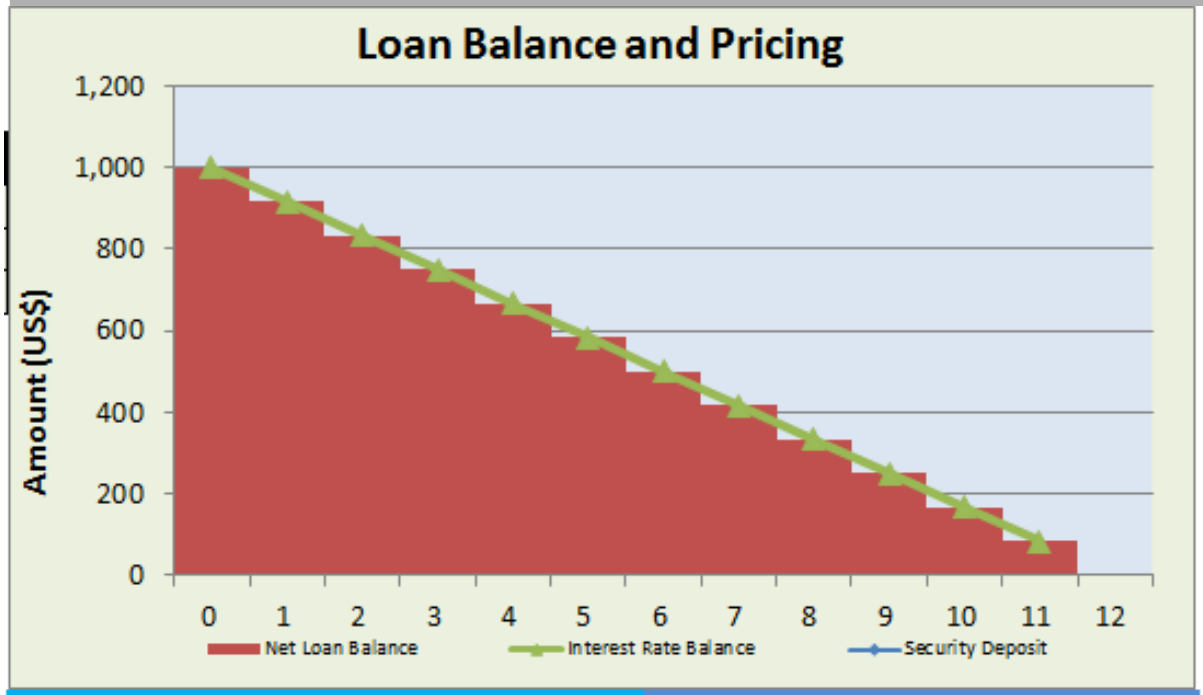
Declining Interest, paid monthly



	APR	
12.0% Declining	12.00%	Interest
upfront ongoing	12.00%	+ Fees
upfront ongoing	12.00%	+ Insurance
on fees on interest	12.00%	+ Taxes
upfront ongoing	12.00%	+ Security Deposit

Total Financial Cost to the Client			Transparency Index	100
Total Cost (less Sec.Dep.int):	$65	in 12 Months, or	$65	in 1 year
Avg net loan balance:	$542	which is 54% of original loan amount		

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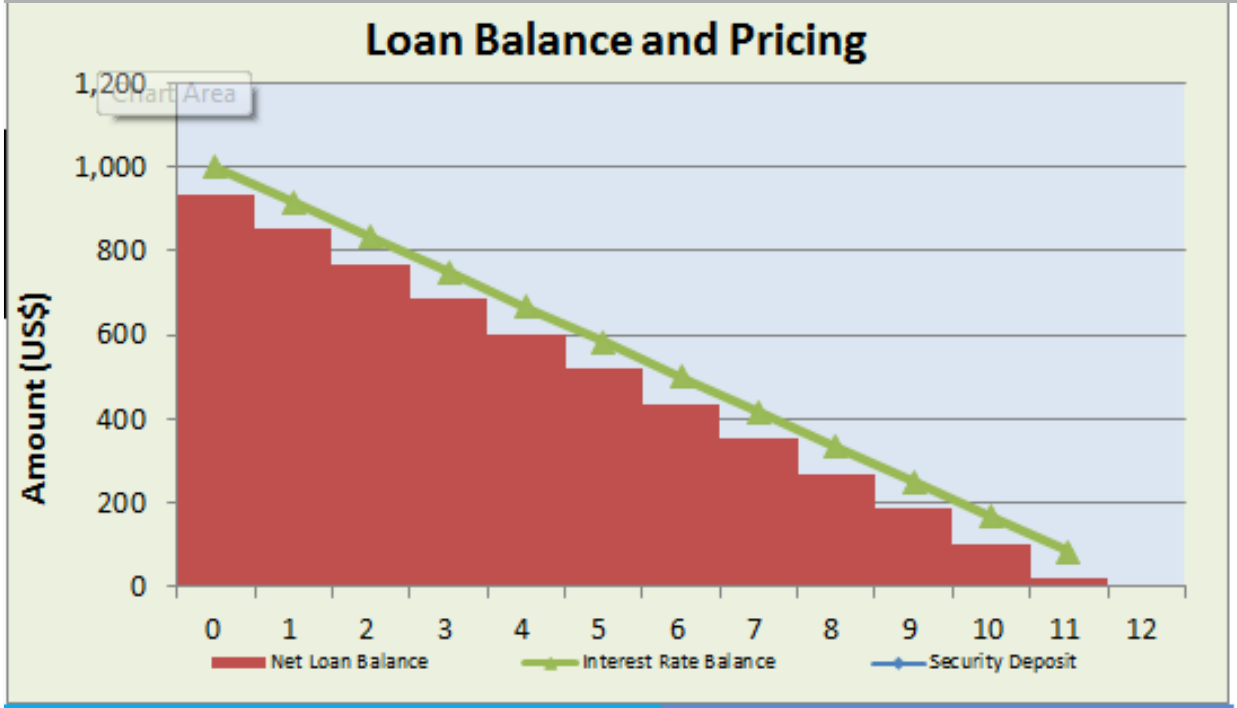
12% declining, paid up-front



	APR	
0.0% Declining	0.00%	Interest
65.0 upfront ongoing	12.59%	+ Fees
upfront ongoing	12.59%	+ Insurance
on fees on interest	12.59%	+ Taxes
upfront ongoing	12.59%	+ Security Deposit

Total Financial Cost to the Client				Transparency Index	0
Total Cost (less Sec.Dep. int):	$65	in 12 Months, or	$65	in 1 year	
Avg net loan balance:	$477	which is 48% of original loan amount			

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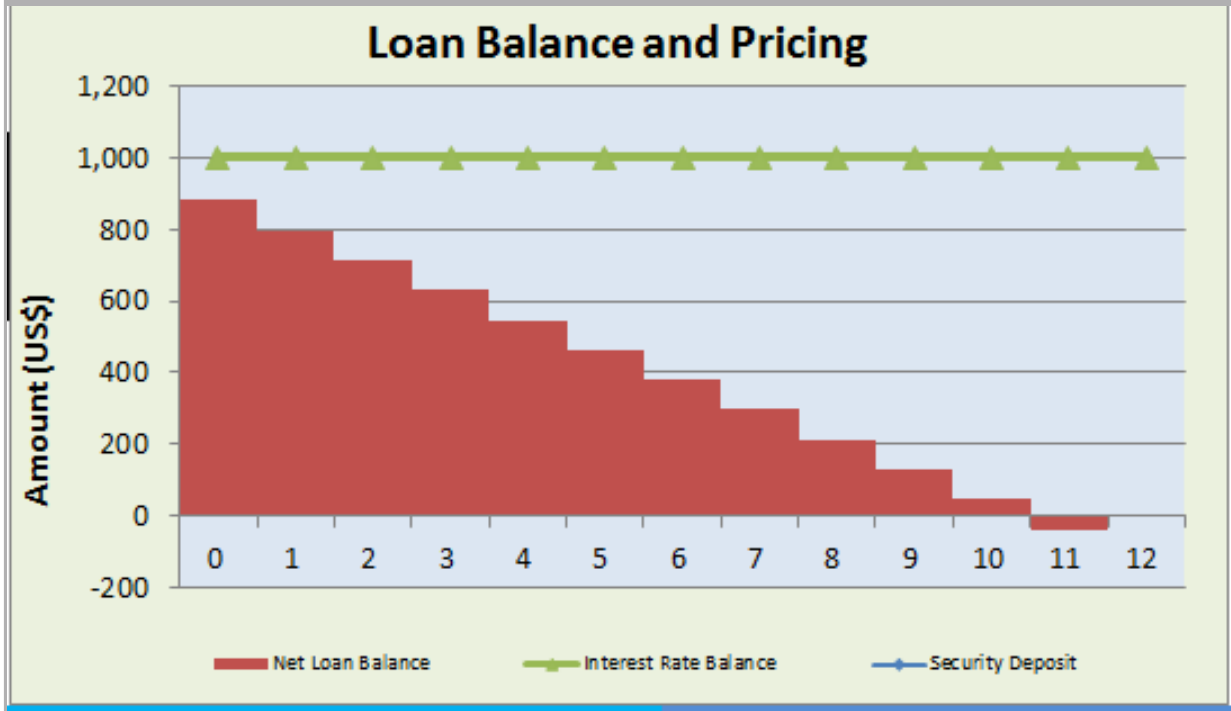
12% flat, paid up-front



	APR	
0.0% Flat	0.00%	Interest
120.0 upfront ongoing	24.28%	+ Fees
upfront ongoing	24.28%	+ Insurance
on fees on interest	24.28%	+ Taxes
upfront ongoing	24.28%	+ Security Deposit

Total Financial Cost to the Client			Transparency Index	0
Total Cost (less Sec.Dep. int):	$120	in 12 Months, or	$120	in 1 year
Avg net loan balance:	$422	which is 42% of original loan amount		

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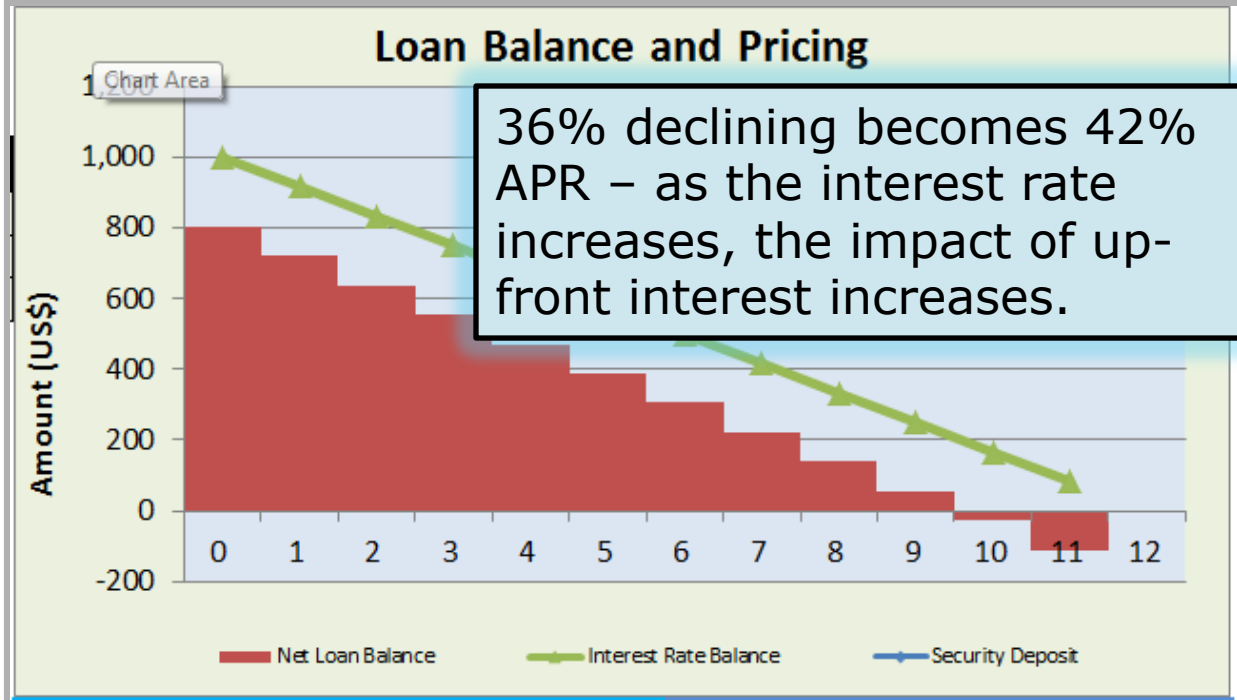
36% declining, paid up-front



36% declining becomes 42% APR – as the interest rate increases, the impact of up-front interest increases.

	APR	
0.0% Declining	0.00%	Interest
195.0 upfront ongoing	42.07%	+ Fees
upfront ongoing	42.07%	+ Insurance
on fees on interest	42.07%	+ Taxes
upfront ongoing	42.07%	+ Security Deposit

Total Financial Cost to the Client		Transparency Index		0
Total Cost (less Sec.Dep. int):	$195	in 12 Months, or	$195	in 1 year
Avg net loan balance:	$347	which is 35% of original loan amount		

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Now for another quiz….
Same loan amounts, same term
and…
same interest rate, no fees

(should be easy, right?)

Which loan would you pick?

Upfront interest can dramatically increase the cost because client has *less* money for less time

Grace periods on "flat interest" loans can significantly *reduce* the actual price, because client has *more* money for more time

L			
Loan term:	onths	12 months	months
Interest Rate:	36% .a. "flat" **Paid upfront**	36% p.a. "flat" Paid monthly	% p.a. "flat" Paid monthly
Grace period	No	**3 months grace**	No

Total Cost Credit	**$360**	**$360**	**$360**
APR	**91%**	**51%**	**61%**
Transparency Index	**39**	**71**	**59**

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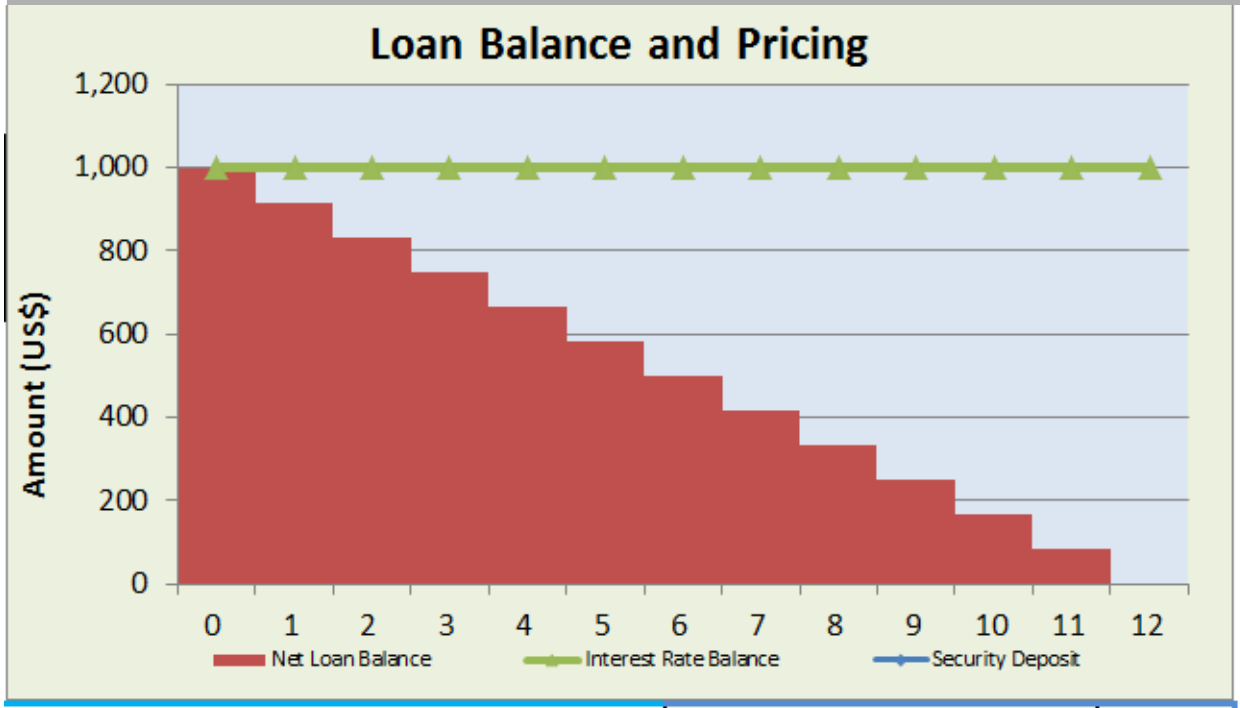
Calculating those three examples

36% flat interest, no grace



APR		
36.0% Flat	60.96%	Interest
upfront ongoing	60.96%	+ Fees
upfront ongoing	60.96%	+ Insurance
on fees on interest	60.96%	+ Taxes
upfront ongoing	60.96%	+ Security Deposit

Amount	$1,000
Term	12 Months
Int. on Savings	0.0% Annually

Total Financial Cost to the Client		Transparency Index		59
Total Cost (less Sec.Dep. int):	$360	in 12 Months, or	$360	in 1 year
Avg net loan balance:	$542	which is 54% of original loan amount		

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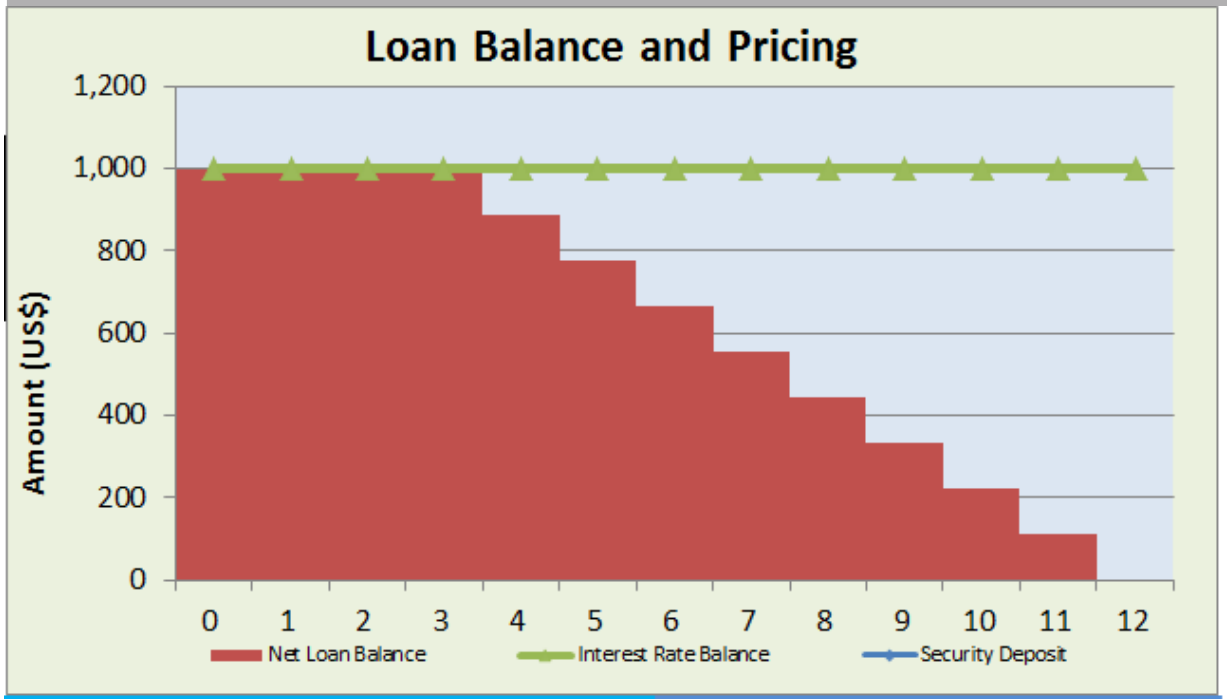
36% flat interest, 3 month grace



	APR	
36.0% Flat	50.73%	Interest
upfront ongoing	50.73%	+ Fees
upfront ongoing	50.73%	+ Insurance
on fees on interest	50.73%	+ Taxes
upfront ongoing	50.73%	+ Security Deposit

Amount	$1,000
Term	12 Months
Int. on Savings	0.0% Annually

Total Financial Cost to the Client		Transparency Index		71
Total Cost (less Sec.Dep. int):	$360	in 12 Months, or	$360	in 1 year
Avg net loan balance:	$668	which is 67% of original loan amount		

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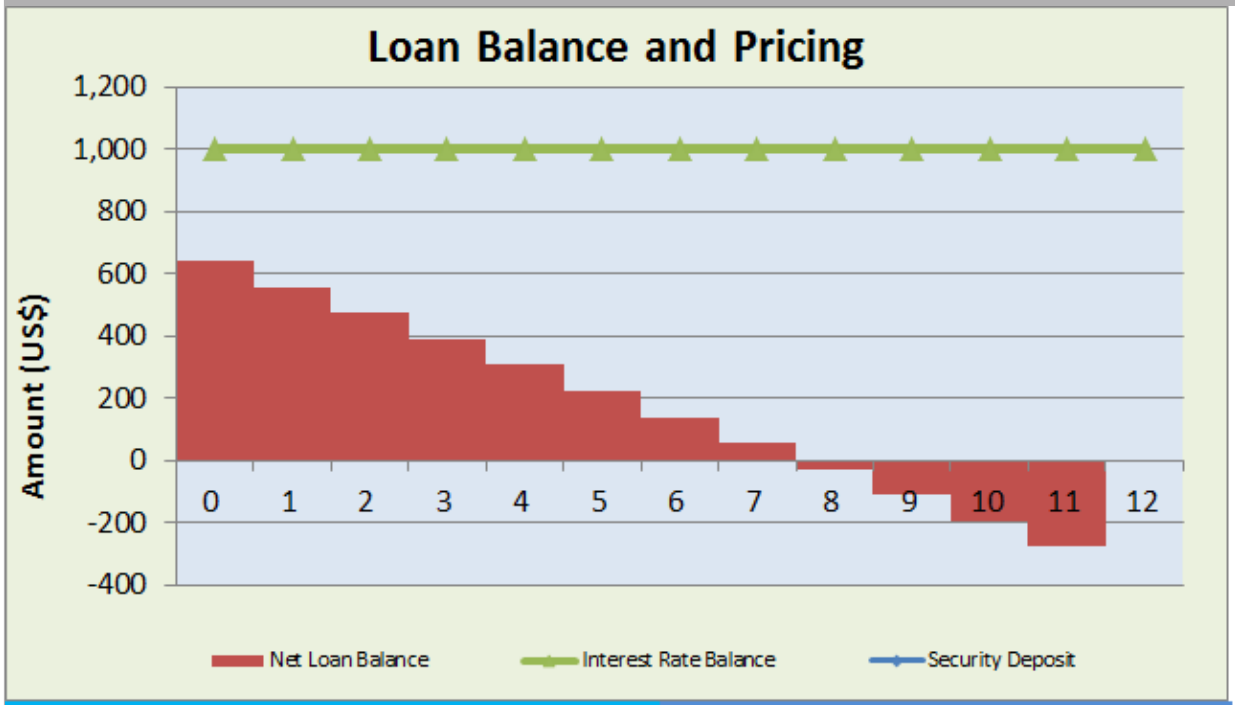
36% flat interest, paid up-front



Total Financial Cost to the Client		Transparency Index		0
Total Cost (less Sec.Dep. int):	$360	in 12 Months, or	$360	in 1 year
Avg net loan balance:	$182	which is 18% of original loan amount		

	APR	
0.0% Flat	0.00%	Interest
360.0 upfront ongoing	91.64%	+ Fees
upfront ongoing	91.64%	+ Insurance
on fees on interest	91.64%	+ Taxes
upfront ongoing	91.64%	+ Security Deposit

Amount	$1,000
Term	12 Months
Int. on Savings	0.0% Annually

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36% flat interest, paid up-front

Payment Date			Loan Cost and Cashflow			Interest		Fees	
Period #	Date	# Days	Principal Disbursed	Principal Paid	Balance	Interest Paid	Cashflow incl. Interest	Fees Paid	Cashflow incl. Fees
0	13-Jun-10		1,000.00		1,000.00		1,000.00	360.00	640.00
1	13-Jul-10	30		83.33	916.67	-	(83.33)	-	(83.33)
2	13-Aug-10	31		83.33	833.33	-	(83.33)	-	(83.33)
3	13-Sep-10	31		83.33	750.00	-	(83.33)	-	(83.33)
4	13-Oct-10	30		83.33	666.67	-	(83.33)	-	(83.33)
5	13-Nov-10	31		83.33	583.33	-	(83.33)	-	(83.33)
6	13-Dec-10	30		83.33	500.00	-	(83.33)	-	(83.33)
7	13-Jan-11	31		83.33	416.67	-	(83.33)	-	(83.33)
8	13-Feb-11	31		83.33	333.33	-	(83.33)	-	(83.33)
9	13-Mar-11	28		83.33	250.00	-	(83.33)	-	(83.33)
10	13-Apr-11	31		83.33	166.67	-	(83.33)	-	(83.33)
11	13-May-11	30		83.33	83.33	-	(83.33)	-	(83.33)
12	13-Jun-11	31		83.33	-	-	(83.33)	-	(83.33)
		365	1,000.00	1,000.00		0.00	**0.00**	360.00	**(360.00)**
	MPR						0.000%		7.637%
	APR						0.000%		91.641%

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And what about EIR instead of APR?

1. The terms APR and EIR actually have no standard definition outside of MFTransparency. They are used interchangeably.
2. All approaches use this formula to solve for "I"

$$\sum_{k=1}^{m} \frac{A_k}{(1+i)_k^q} = \sum_{j=1}^{n} \frac{P_j}{(1+i)_j^t}$$

3. "i" is then converted to an annual rate either nominally or by compounding, eg:

   APR = i x 12 EIR = (1 + i)^12th - 1

Practicing with "i" for Discounted Present Value

Estimated "i"

Try a HIGHER discount rate to get DIFF to $0

0.0%	APR (i * n)
0.0%	EIR : (1 + i) ^ n - 1

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,200.00	($200.00)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
2		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
3		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
4		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
5		$100.00	1.0000				
6		$100.00	1.0000				
7		$100.00	1.0000				
8		$100.00	1.0000				
9		$100.00	1.0000				
10		$100.00	1.0000				
11		$100.00	1.0000				
12		$100.00	1.0000				

This is the sec

Formula

$$\sum_{k=1}^{m} \frac{A_k}{(1+i)_k^q} = \sum_{j=1}^{n} \frac{P_j}{(1+i)_j^t}$$

Solve for i, and then,

APR = I * n

Use previous formula to solve for i, and then

$$EIR = (1+ i)^n - 1$$

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Practicing with "i" for Discounted Present Value

Estimated "i"

0.0%	APR (i * n)
0.0%	EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,200.00	($200.00)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
2		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
3		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
4		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
5		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
6		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
7		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
8		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
9		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
10		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
11		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)
12		$100.00	1.00000	0.00%	$0.00	$100.00	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

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Practicing with "i" for Discounted Present Value

Estimated "i"

0.0%	APR (i * n)
0.0%	EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,200.00	($200.00)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
2		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
3		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
4		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
5		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
6		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
7		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
8		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
9		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
10		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
11		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
12		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

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Practicing with "i" for Discounted Present Value

Estimated "i" [ ]

0.0%	APR (i * n)
0.0%	EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,200.00	($200.00)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
2		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
3		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
4		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
5		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
6		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
7		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
8		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
9		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
10		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
11		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)
12		$100.00	1.00000	*0.00%*	$0.00	$100.00	($100.00)

This is the secret "correct answer" --> **IRR (i) = 2.923%**

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Practicing with "i" for Discounted Present Value

Estimated "i" **1.00%**

12.0% APR (i * n)

12.7% EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,125.51	($125.51)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.01000	*1.00%*	$0.00	$99.01	($100.00)
2		$100.00	1.02010	*1.00%*	$0.00	$98.03	($100.00)
3		$100.00	1.03030	*1.00%*	$0.00	$97.06	($100.00)
4		$100.00	1.04060	*1.00%*	$0.00	$96.10	($100.00)
5		$100.00	1.05101	*1.00%*	$0.00	$95.15	($100.00)
6		$100.00	1.06152	*1.00%*	$0.00	$94.20	($100.00)
7		$100.00	1.07214	*1.00%*	$0.00	$93.27	($100.00)
8		$100.00	1.08286	*1.00%*	$0.00	$92.35	($100.00)
9		$100.00	1.09369	*1.00%*	$0.00	$91.43	($100.00)
10		$100.00	1.10462	*1.00%*	$0.00	$90.53	($100.00)
11		$100.00	1.11567	*1.00%*	$0.00	$89.63	($100.00)
12		$100.00	1.12683	*1.00%*	$0.00	$88.74	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

Practicing with "i" for Discounted Present Value

Estimated "i" **1.00%**

12.0% APR (i * n)

12.7% EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,125.51	($125.51)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.01000	*1.00%*	$0.00	$99.01	($100.00)
2		$100.00	1.02010	*1.00%*	$0.00	$98.03	($100.00)
3		$100.00	1.03030	*1.00%*	$0.00	$97.06	($100.00)
4		$100.00	1.04060	*1.00%*	$0.00	$96.10	($100.00)
5		$100.00	1.05101	*1.00%*	$0.00	$95.15	($100.00)
6		$100.00	1.06152	*1.00%*	$0.00	$94.20	($100.00)
7		$100.00	1.07214	*1.00%*	$0.00	$93.27	($100.00)
8		$100.00	1.08286	*1.00%*	$0.00	$92.35	($100.00)
9		$100.00	1.09369	*1.00%*	$0.00	$91.43	($100.00)
10		$100.00	1.10462	*1.00%*	$0.00	$90.53	($100.00)
11		$100.00	1.11567	*1.00%*	$0.00	$89.63	($100.00)
12		$100.00	1.12683	*1.00%*	$0.00	$88.74	($100.00)

This is the secret "correct answer" --> **IRR (i) = 2.923%**

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Practicing with "i" for Discounted Present Value

Estimated "i" **1.00%**

12.0% APR (i * n)

12.7% EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,125.51	($125.51)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.01000	*1.00%*	$0.00	$99.01	($100.00)
2		$100.00	1.02010	*1.00%*	$0.00	$98.03	($100.00)
3		$100.00	1.03030	*1.00%*	$0.00	$97.06	($100.00)
4		$100.00	1.04060	*1.00%*	$0.00	$96.10	($100.00)
5		$100.00	1.05101	*1.00%*	$0.00	$95.15	($100.00)
6		$100.00	1.06152	*1.00%*	$0.00	$94.20	($100.00)
7		$100.00	1.07214	*1.00%*	$0.00	$93.27	($100.00)
8		$100.00	1.08286	*1.00%*	$0.00	$92.35	($100.00)
9		$100.00	1.09369	*1.00%*	$0.00	$91.43	($100.00)
10		$100.00	1.10462	*1.00%*	$0.00	$90.53	($100.00)
11		$100.00	1.11567	*1.00%*	$0.00	$89.63	($100.00)
12		$100.00	1.12683	*1.00%*	$0.00	$88.74	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

Practicing with "i" for Discounted Present Value

Estimated "i" **3.00%**

36.0% APR (i * n)

42.6% EIR : (1 + i) ^ n - 1

Try a LOWER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$995.40	$4.60
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.03000	3.00%	$0.00	$97.09	($100.00)
2		$100.00	1.06090	3.00%	$0.00	$94.26	($100.00)
3		$100.00	1.09273	3.00%	$0.00	$91.51	($100.00)
4		$100.00	1.12551	3.00%	$0.00	$88.85	($100.00)
5		$100.00	1.15927	3.00%	$0.00	$86.26	($100.00)
6		$100.00	1.19405	3.00%	$0.00	$83.75	($100.00)
7		$100.00	1.22987	3.00%	$0.00	$81.31	($100.00)
8		$100.00	1.26677	3.00%	$0.00	$78.94	($100.00)
9		$100.00	1.30477	3.00%	$0.00	$76.64	($100.00)
10		$100.00	1.34392	3.00%	$0.00	$74.41	($100.00)
11		$100.00	1.38423	3.00%	$0.00	$72.24	($100.00)
12		$100.00	1.42576	3.00%	$0.00	$70.14	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

Practicing with "i" for Discounted Present Value

Estimated "i" **2.90%**

34.8% APR (i * n)

40.9% EIR : (1 + i) ^ n - 1

Try a HIGHER discount rate to get DIFF to $0

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,001.37	($1.37)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.02900	2.90%	$0.00	$97.18	($100.00)
2		$100.00	1.05884	2.90%	$0.00	$94.44	($100.00)
3		$100.00	1.08955	2.90%	$0.00	$91.78	($100.00)
4		$100.00	1.12114	2.90%	$0.00	$89.19	($100.00)
5		$100.00	1.15366	2.90%	$0.00	$86.68	($100.00)
6		$100.00	1.18711	2.90%	$0.00	$84.24	($100.00)
7		$100.00	1.22154	2.90%	$0.00	$81.86	($100.00)
8		$100.00	1.25696	2.90%	$0.00	$79.56	($100.00)
9		$100.00	1.29342	2.90%	$0.00	$77.31	($100.00)
10		$100.00	1.33093	2.90%	$0.00	$75.14	($100.00)
11		$100.00	1.36952	2.90%	$0.00	$73.02	($100.00)
12		$100.00	1.40924	2.90%	$0.00	$70.96	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

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Practicing with "i" for Discounted Present Value

Estimated "i" **2.92%**

That looks close enough!

35.0% APR (i * n)

41.3% EIR : (1 + i) ^ n - 1

	Nominal Values				Discounted Values		Difference
TOTALS	$1,000.00	$1,200.00		i	$1,000.00	$1,000.17	($0.17)
Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
0	$1,000.00		1.00000		$1,000.00	$0.00	$1,000.00
1		$100.00	1.02920	2.92%	$0.00	$97.16	($100.00)
2		$100.00	1.05925	2.92%	$0.00	$94.41	($100.00)
3		$100.00	1.09018	2.92%	$0.00	$91.73	($100.00)
4		$100.00	1.12202	2.92%	$0.00	$89.13	($100.00)
5		$100.00	1.15478	2.92%	$0.00	$86.60	($100.00)
6		$100.00	1.18850	2.92%	$0.00	$84.14	($100.00)
7		$100.00	1.22320	2.92%	$0.00	$81.75	($100.00)
8		$100.00	1.25892	2.92%	$0.00	$79.43	($100.00)
9		$100.00	1.29568	2.92%	$0.00	$77.18	($100.00)
10		$100.00	1.33351	2.92%	$0.00	$74.99	($100.00)
11		$100.00	1.37245	2.92%	$0.00	$72.86	($100.00)
12		$100.00	1.41253	2.92%	$0.00	$70.80	($100.00)

This is the secret "correct answer" ---> **IRR (i) = 2.923%**

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Period	Inflow	Outflow	Divisor	%	Inflow	Outflow	
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1		$100.00	1.02920	2.92%	$0.00	$97.16	($100.00)
2		$100.00	1.05925	2.92%	$0.00	$94.41	($100.00)
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This is the secret "correct answer" ---> **IRR (i) = 2.923%**

Difference between APR (nominal annualization and EIR (compound annualization)

Period "I"	APR	EIR	Difference
0.5%	6.00%	6.17%	0.17%
1.0%	12.00%	12.68%	0.68%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
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	0.00%	0.00%	0.00%

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Period "I"	APR	EIR	Difference
0.5%	6.00%	6.17%	0.17%
1.0%	12.00%	12.68%	0.68%
1.5%	18.00%	19.56%	1.56%
2.0%	24.00%	26.82%	2.82%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
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1.0%	12.00%	12.68%	0.68%
1.5%	18.00%	19.56%	1.56%
2.0%	24.00%	26.82%	2.82%
3.0%	36.00%	42.58%	6.58%
4.0%	48.00%	60.10%	12.10%
5.0%	60.00%	79.59%	19.59%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%

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1.0%	12.00%	12.68%	0.68%
1.5%	18.00%	19.56%	1.56%
2.0%	24.00%	26.82%	2.82%
3.0%	36.00%	42.58%	6.58%
4.0%	48.00%	60.10%	12.10%
5.0%	60.00%	79.59%	19.59%
6.0%	72.00%	101.22%	29.22%
7.0%	84.00%	125.22%	41.22%
8.0%	96.00%	151.82%	55.82%
9.0%	108.00%	181.27%	73.27%
10.0%	120.00%	213.84%	93.84%
	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%

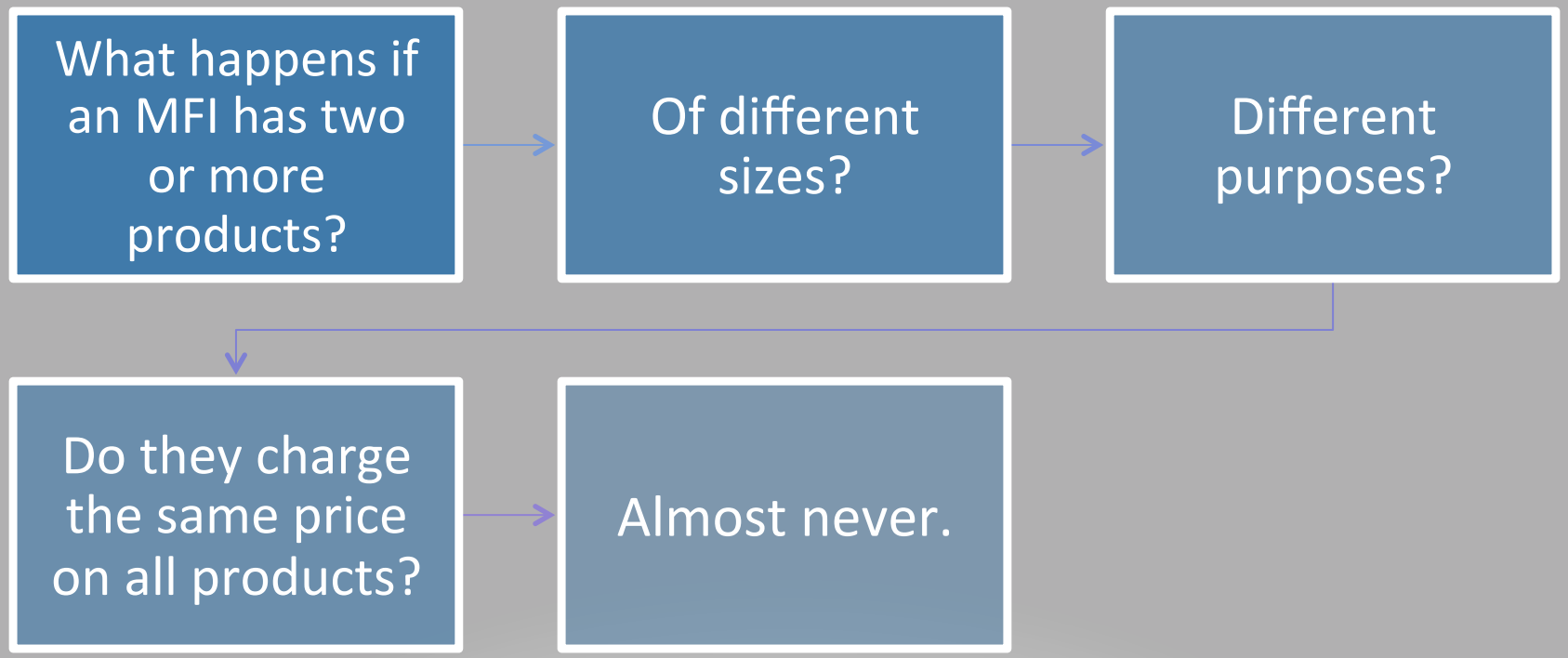
Difference between APR (nominal annualization and EIR (compound annualization)

Period "I"	APR	EIR	Difference
0.5%	6.00%	6.17%	0.17%
1.0%	12.00%	12.68%	0.68%
1.5%	18.00%	19.56%	1.56%
2.0%	24.00%	26.82%	2.82%
3.0%	36.00%	42.58%	6.58%
4.0%	48.00%	60.10%	12.10%
5.0%	60.00%	79.59%	19.59%
6.0%	72.00%	101.22%	29.22%
7.0%	84.00%	125.22%	41.22%
8.0%	96.00%	151.82%	55.82%
9.0%	108.00%	181.27%	73.27%
10.0%	120.00%	213.84%	93.84%
12.0%	144.00%	289.60%	145.60%
15.0%	180.00%	435.03%	255.03%

PORTFOLIO YIELD

Comparing MFT prices and portfolio yield

Global Portfolio Yield Isn't Enough



Average Portfolio Yield is masking the true price.

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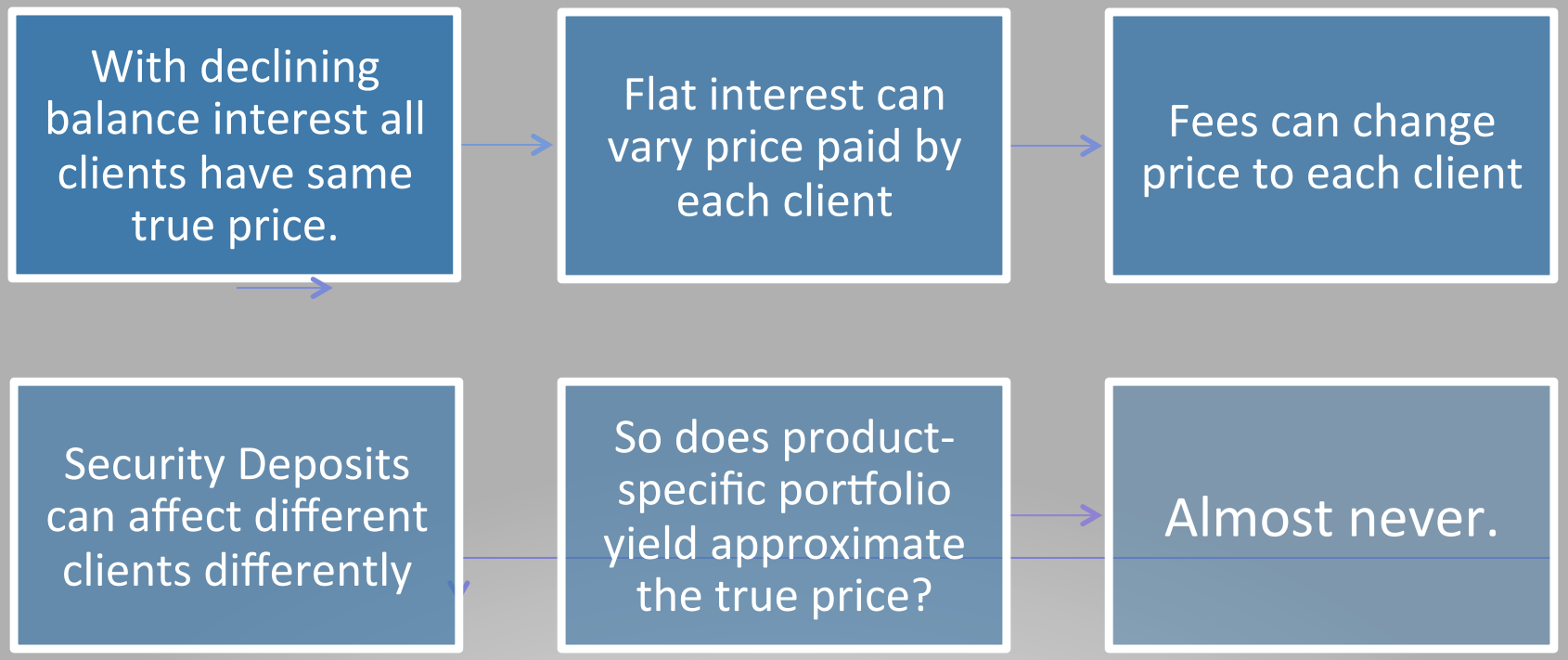
Product-Specific Portfolio Yield Generally Isn't Enough



Product-Specific Portfolio Yield masks the true price.

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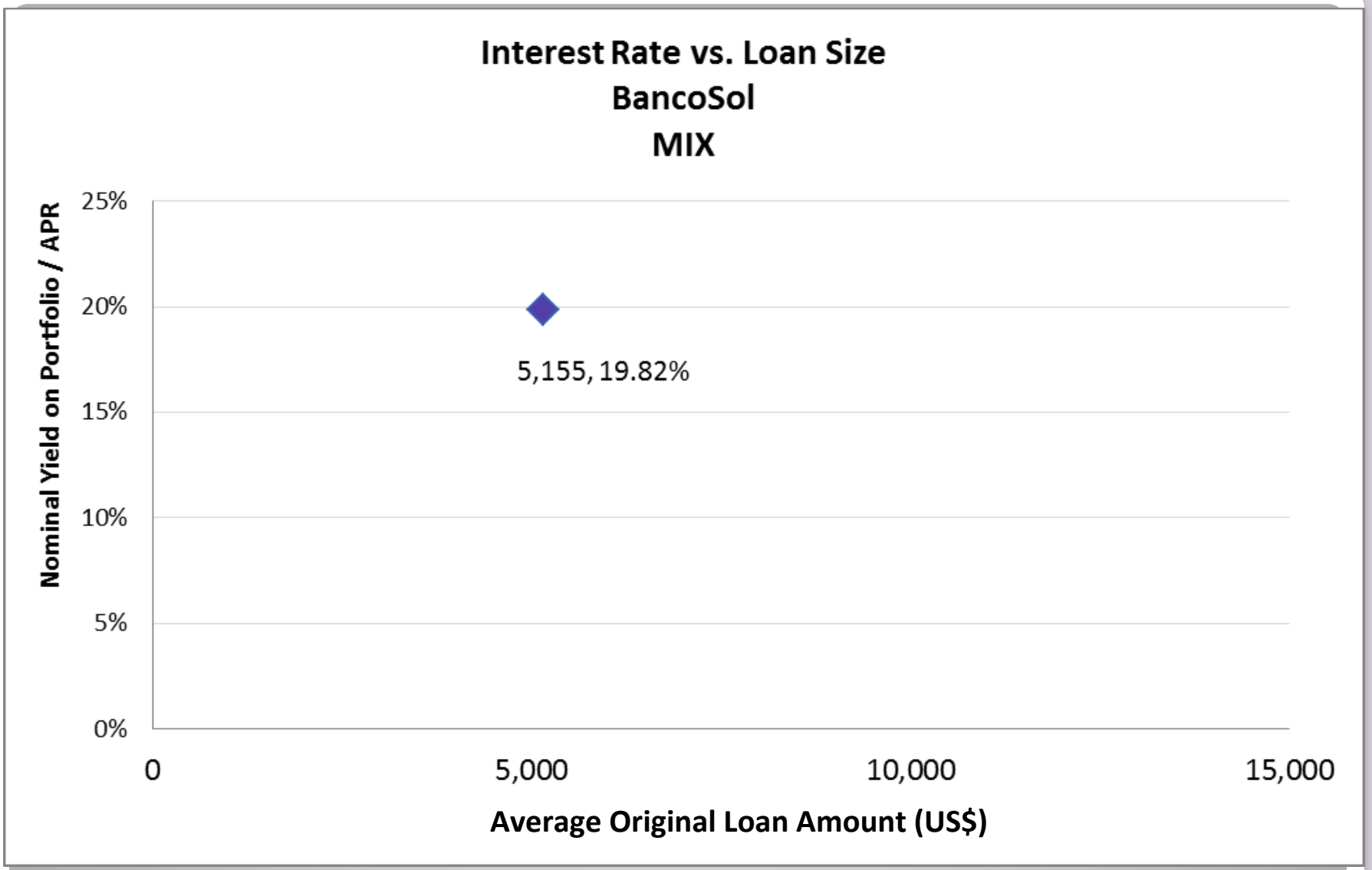
Why Portfolio Yield Isn't Enough

MIX (31-12-2009)			
MFI	Average loan balance per borrower	Yield on portfolio (nominal)	Initial Loan Size
BancoSol	2,713	19.82%	5,155



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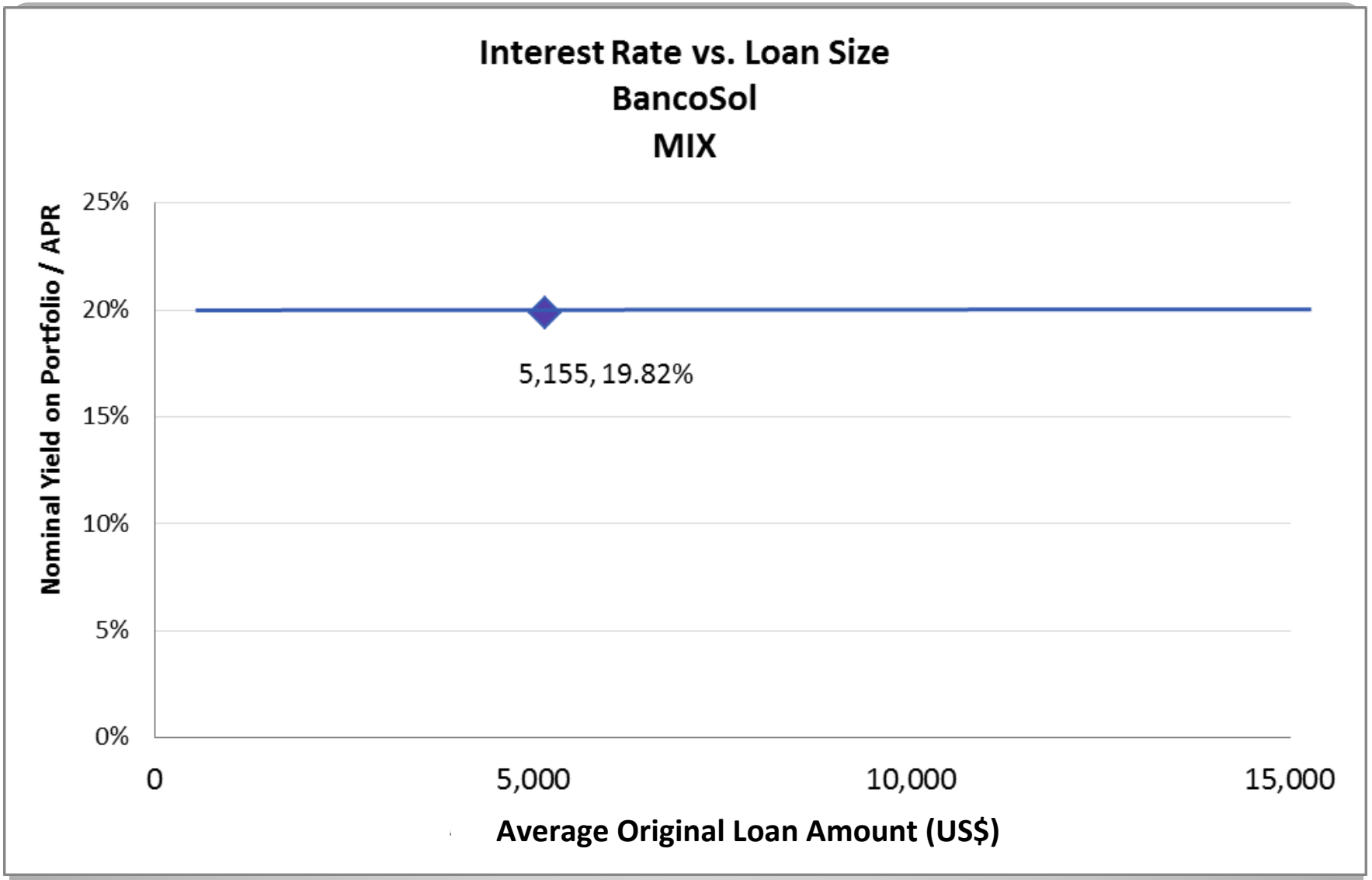

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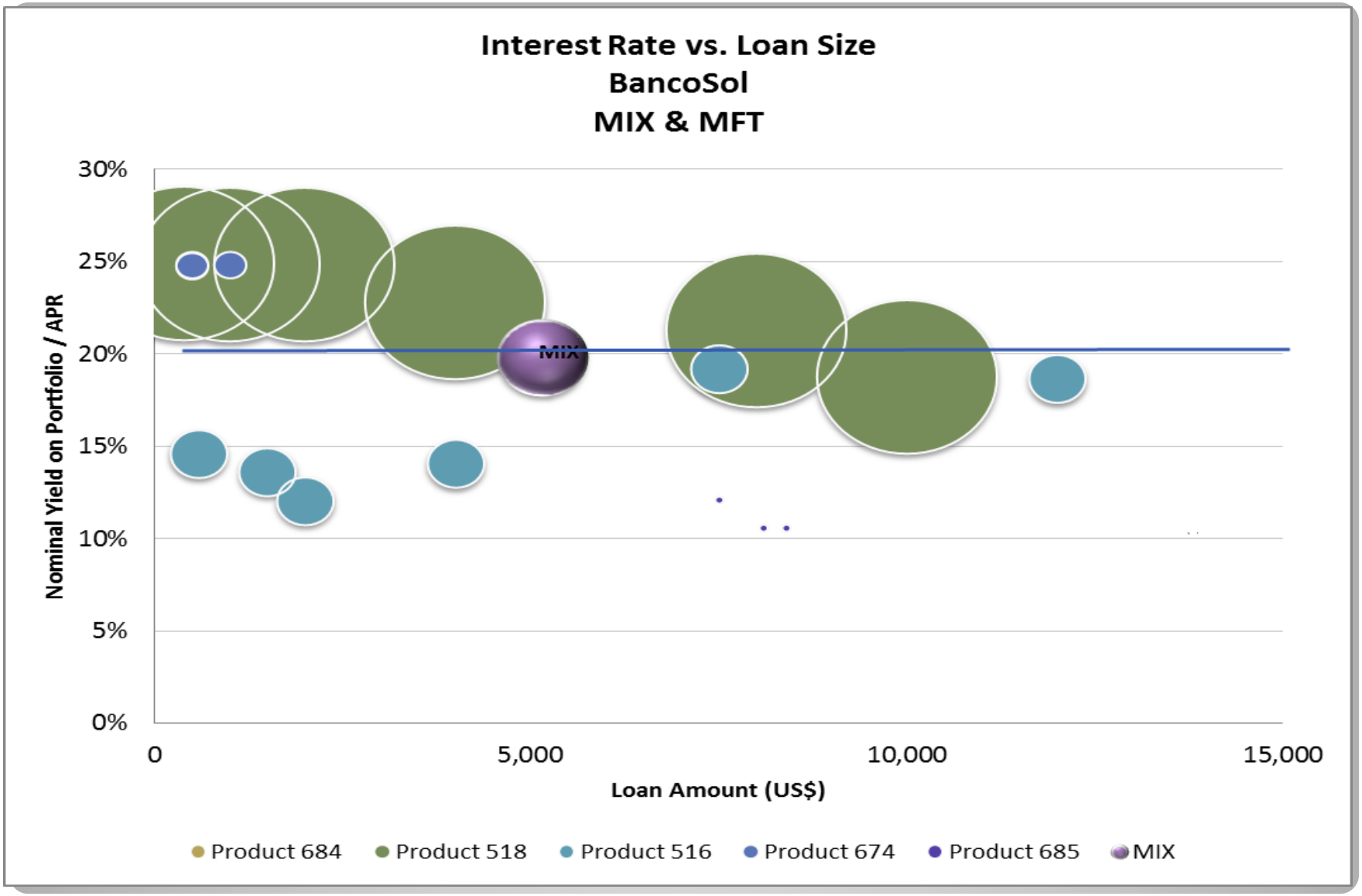

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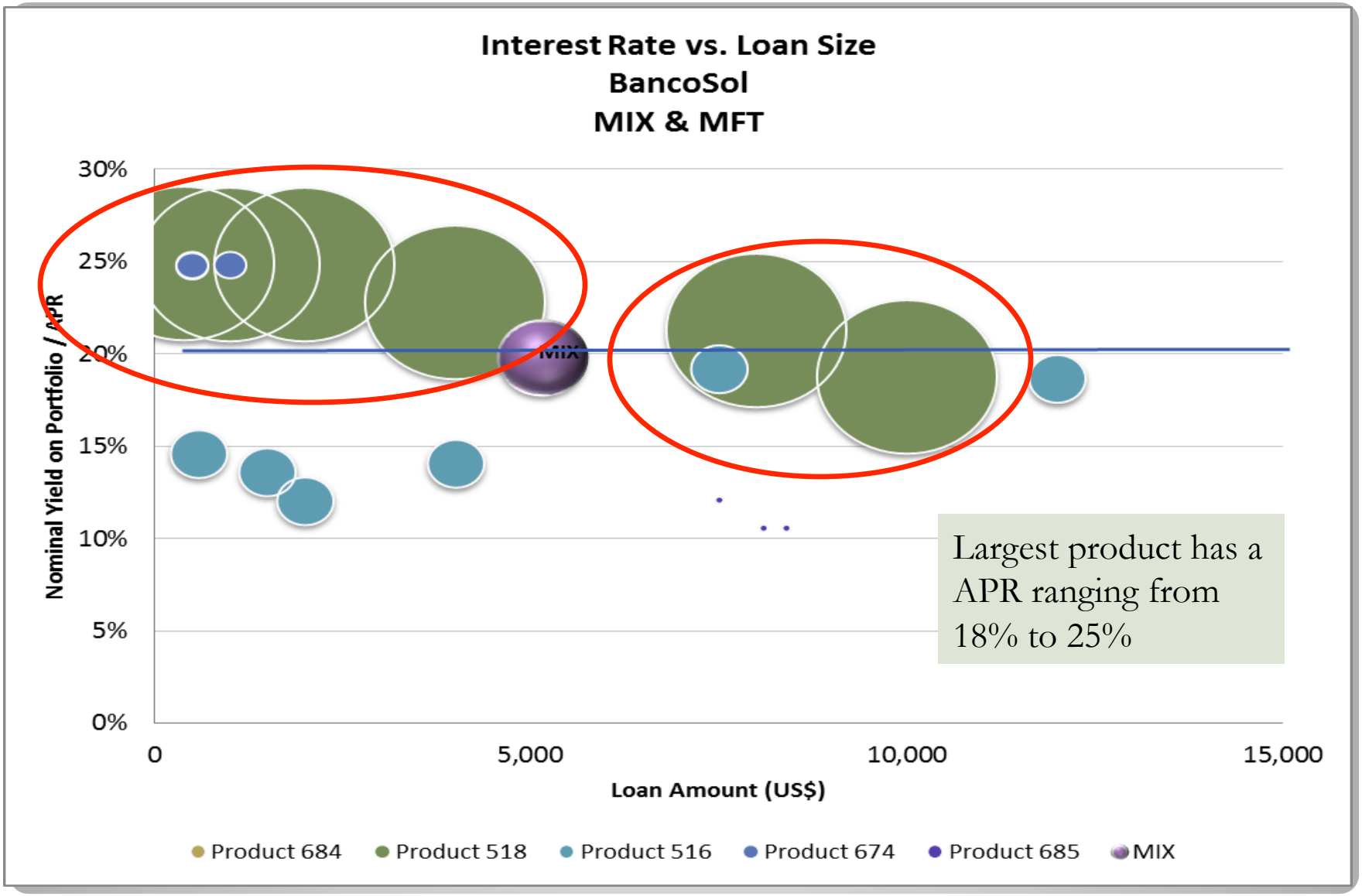

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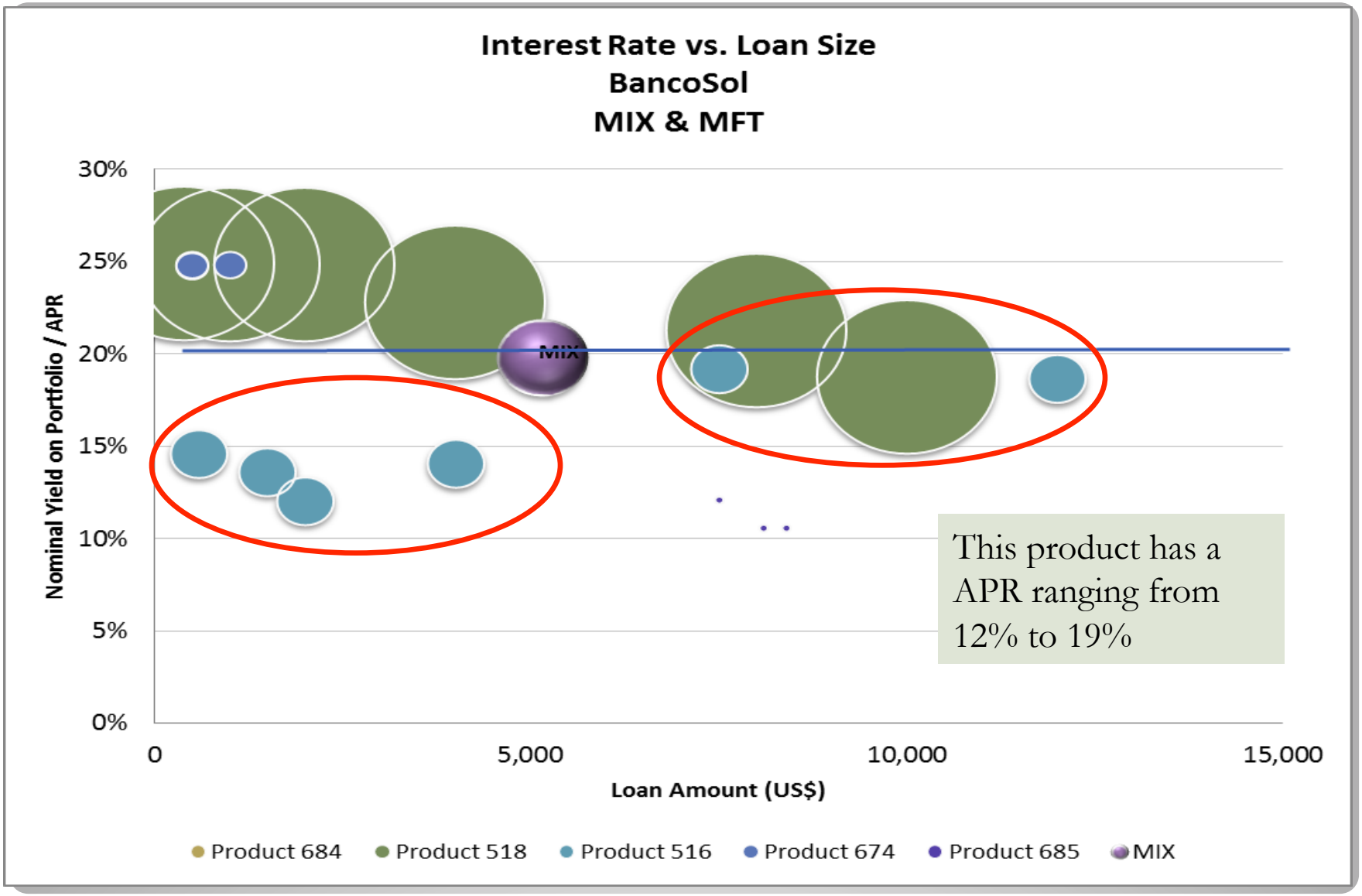

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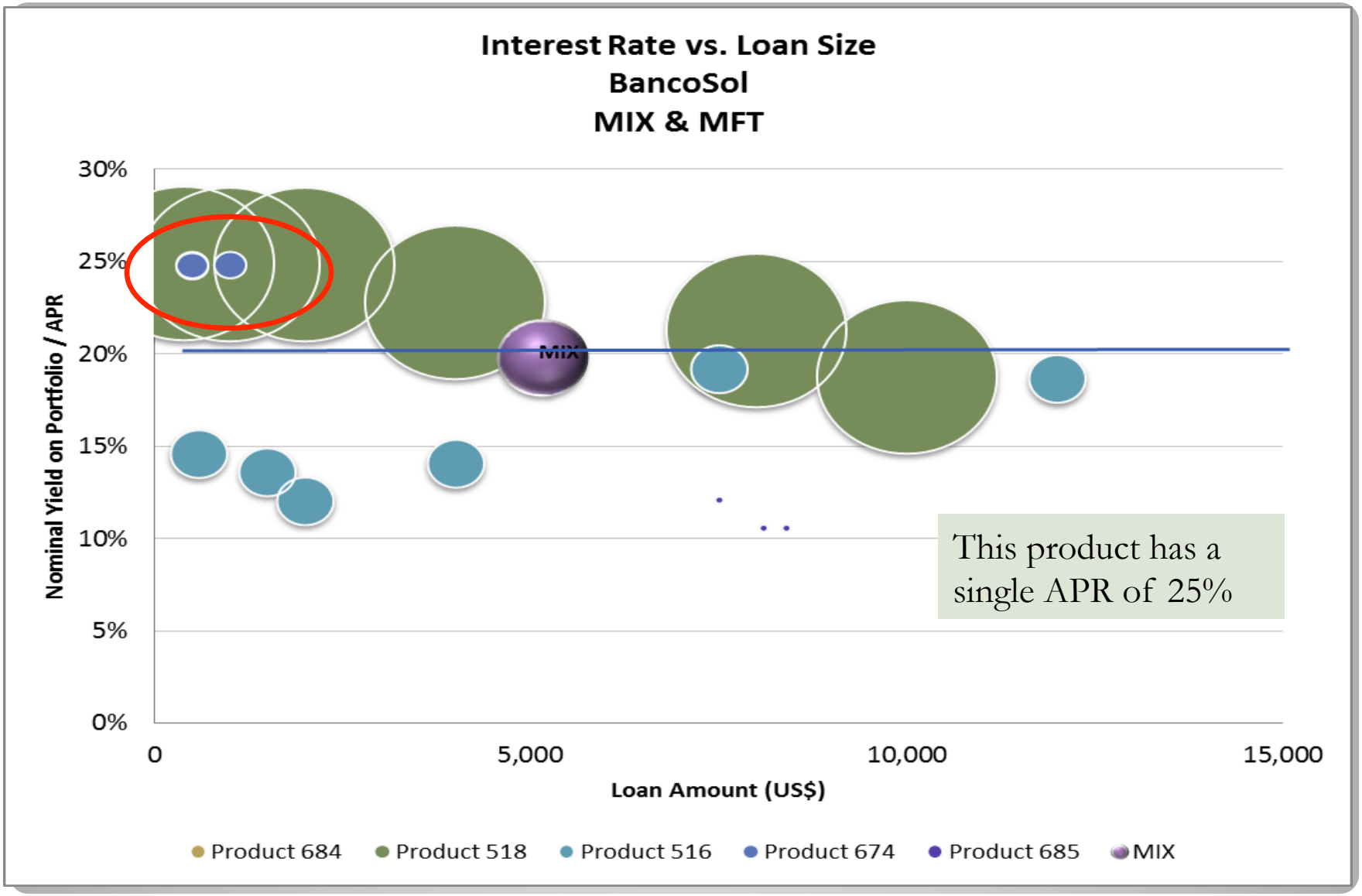

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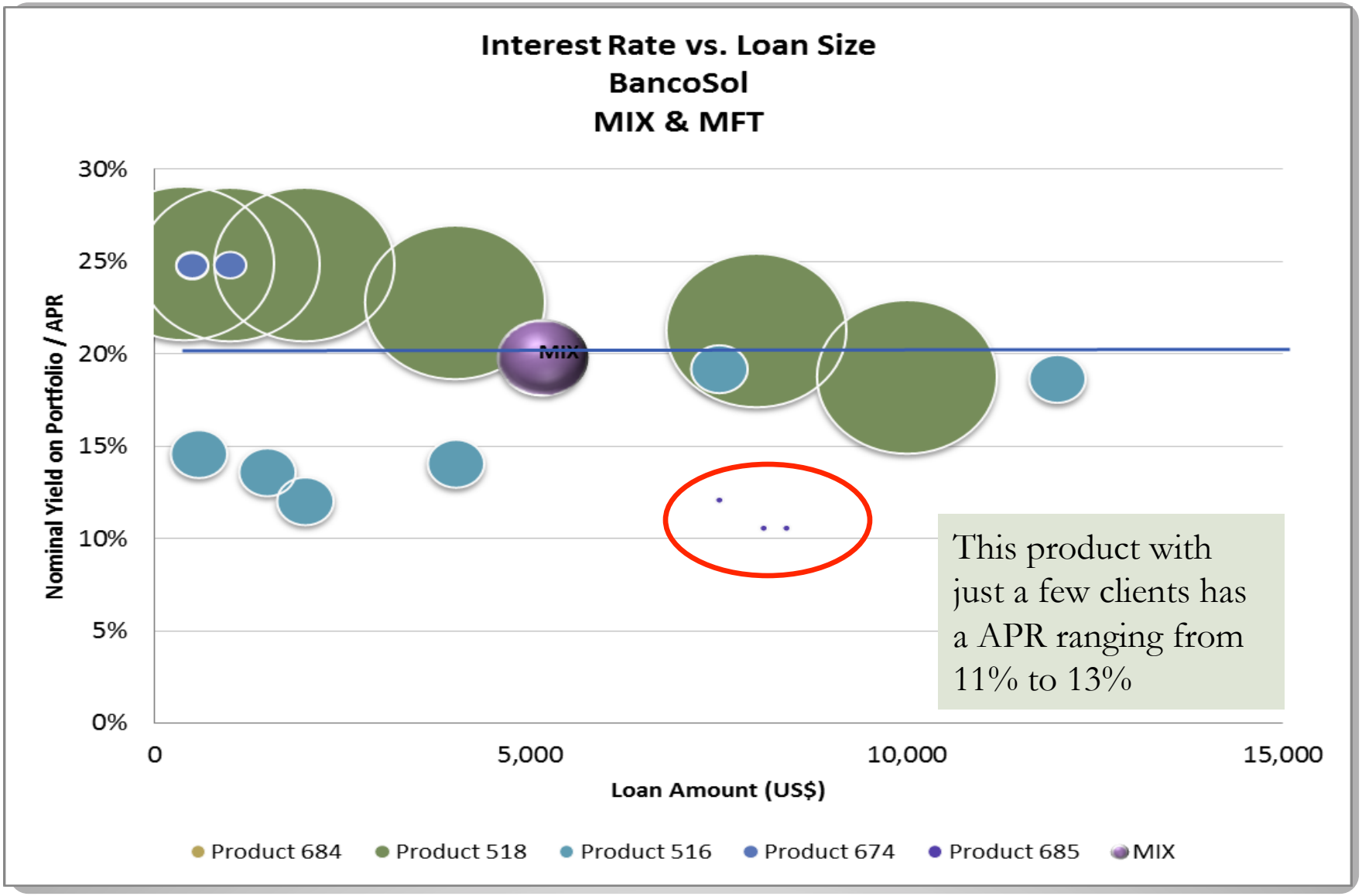

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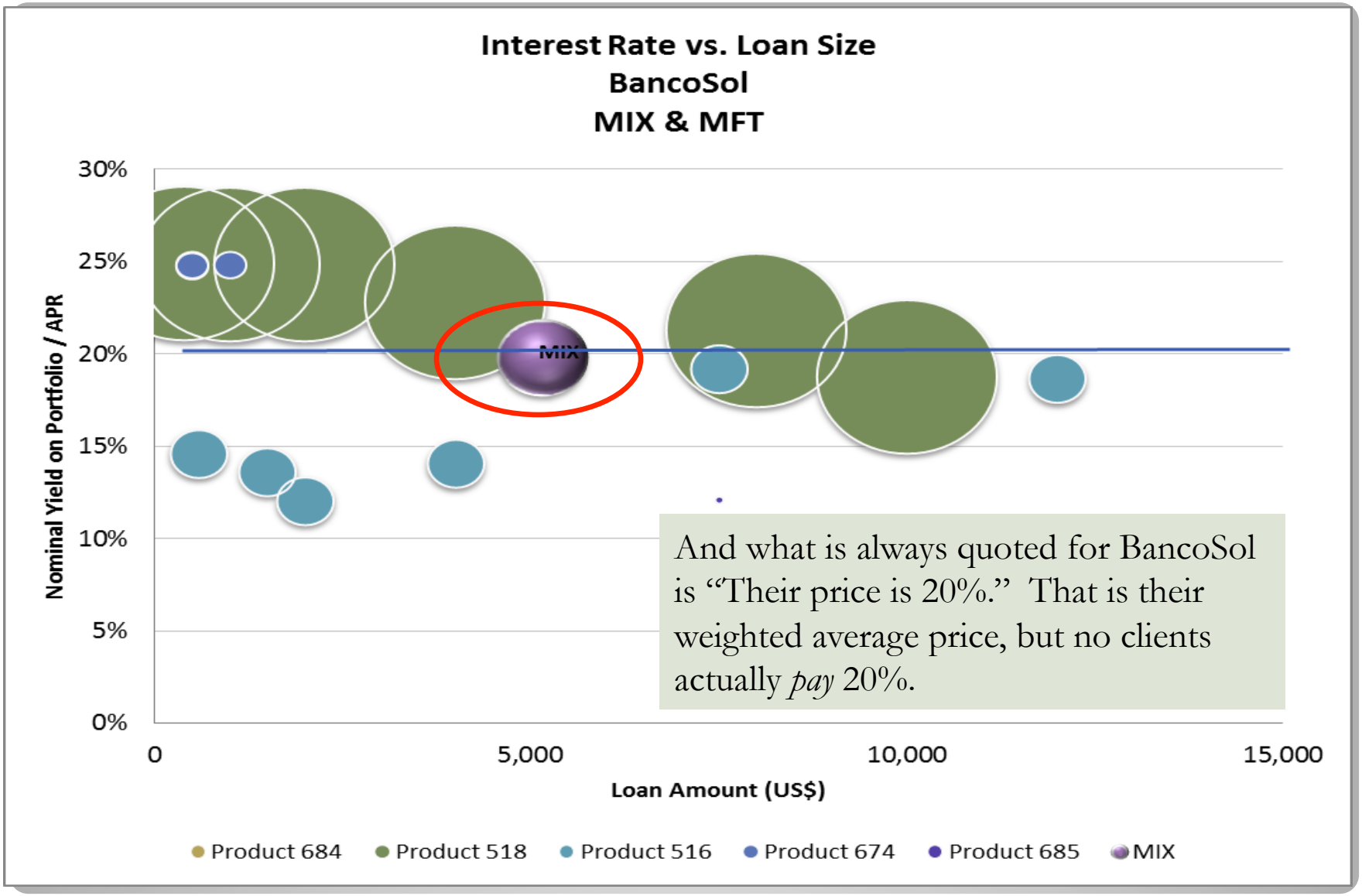

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PRICE TRANSPARENCY INDEX

Features of our new data platform and presentation of Pricing Transparency Index

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Transparent Pricing In Uganda

The *Transparent Pricing Initiative* in Uganda has published standardized pricing data from 23 institutions, representing an estimated 85% of Uganda's microloan borrowers. Launched in 2011 the *Initiative* is delivered in partnership with Planet Rating and AMFIU (Association of Microfinance Institutions in Uganda), and is funded by the MasterCard Foundation.

Microfinance in Uganda

Truth-in-Lending Legislation

Uganda Price Graph

The dataset for Uganda comprises of 59 microloan products offered by 23 microfinance service providers. A classic curve in the market average APR is seen, showing that loans of a smaller size rise dramatically in price.

BROWSE TRUTH IN LENDING

Uganda MFIs:

Select institution...

TRANSPARENCY STATISTICS

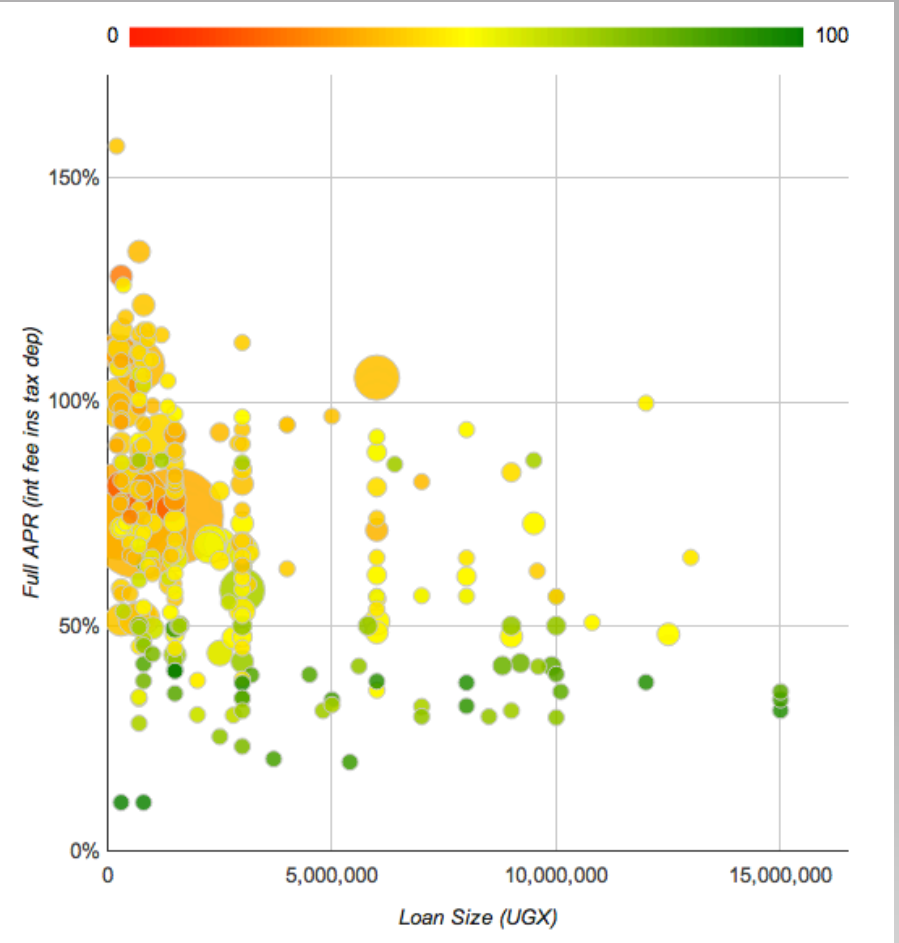
Uganda

# Institutions:	23
# Borrowers:	417,072
Portfolio (US$):	$301.0 Mil
Products:	67
Transp. Index:	46
Initiative start date:	2011-Jan
Update Frequency:	Semi-Annually

LATEST NEWS & RESOURCES

News

Uganda Prices and Transparency



- Size of bubbles indicates number of clients with loan for that product in that loan size range.
- Coloring of bubble indicates degree of pricing transparency of that loan sample.

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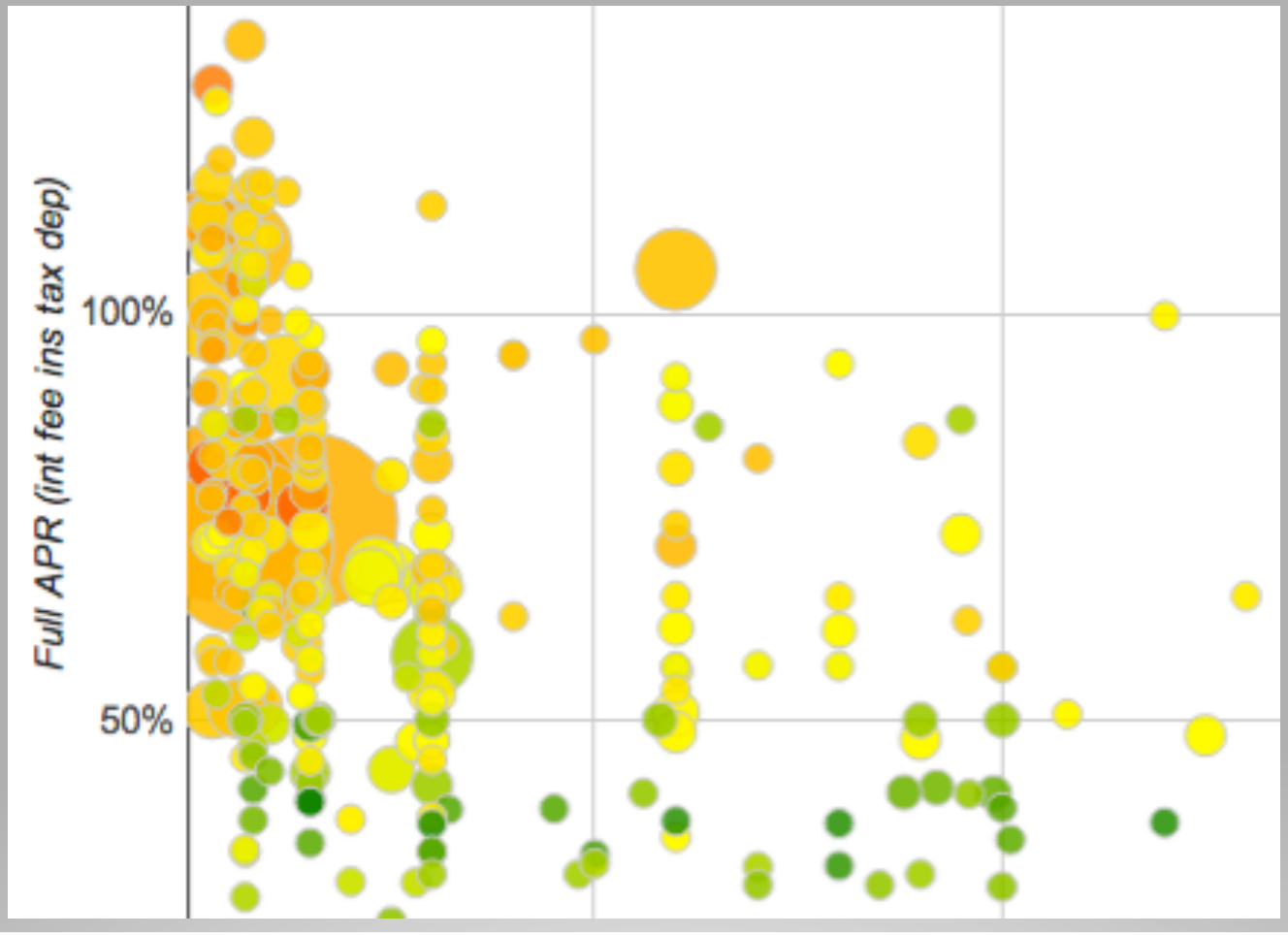
Uganda Prices and Transparency



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UGANDA INSTITUTIONS

Institution	# Borrowers	Portfolio (US$)	Products	Transp. Index	Participating Since	Age of Data
APAS	320	$128,000	2	73	2011-Jun	21 mos.
BRAC-UGA	121,959	$18,750,057	3	34	2011-Jun	2 mos.
Centenary Bank	111,035	$158,076,400	4	58	2011-Jun	21 mos.
EBO SACCO	1,500	$1,240,382	2	71	2011-Jun	2 mos.
Equity Bank	13,069	$57,252,004	0	NA	2011-Jun	2 mos.
Finance Trust	22,555	$17,520,424	5	34	2011-Jun	2 mos.
FINCA-UGA	56,766	$19,056,121	4	44	2011-Oct	2 mos.
Five Talents	5,365	$368,057	2	33	2011-Jun	2 mos.
Gatsby	1,346	$2,440,236	2	44	2011-Jun	2 mos.
Habitat Uganda	858	$265,508	1	47	2011-Jun	2 mos.
Hofokam	20,908	$4,793,200	6	52	2011-Jun	2 mos.
KACITA	156	$60,318	1	37	2011-Jun	2 mos.
Madfa SACCO	4,832	$288,674	5	45	2011-Jun	2 mos.

Product Summary – Scale, Amount ,Term

Loan Products » Scale, Amount & Term

PRODUCT NAME	# BORROWERS	PORTFOLIO (USD)	LOAN SIZE RANGE	LOAN TERM (MONTHS)	AVG GRACE PERIOD (MONTHS)	ANNUAL NOMINAL INTEREST	FULL APR	TRANSPARENCY INDEX
Agriculture Loan	2,506	USD 251,752	UGX 50,000 - 15,000,000	6 - 12	0	33.60% annual, Flat	41.2% - 93.[illegible]%	54
Individual Loan	2,951	USD 1,795,390	UGX 500,000 - 10,000,000	6 - 24	0	30.00% annual, Flat	61.2% - 79.[illegible]%	45
Salary Loan	573	USD 230,823	UGX 250,000 - 10,000,000	6 - 12	0	33.60% annual, Flat	39.2% - 45.8%	81
School Fees Loan	140	USD 128,977	UGX 700,000 - 1,500,000	6 - 8	0	33.60% annual, Flat	66.1% - 76.2%	47
Solidarity Group Loan	1,278	USD 140,132	UGX 200,000 - 500,000	4 - 12	0	36.00% annual, Flat	82.1% - 90.9%	42
Village Bank Loan	9,843	USD 628,972	UGX 50,000 - 5,000,000	4 - 12	0	36.00% annual, Flat	67% - 69.1%	53

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Product Summary –

Target Group, Methodology, Purpose, Services

Loan Products » Target Group, Methodology, Purpose & Services

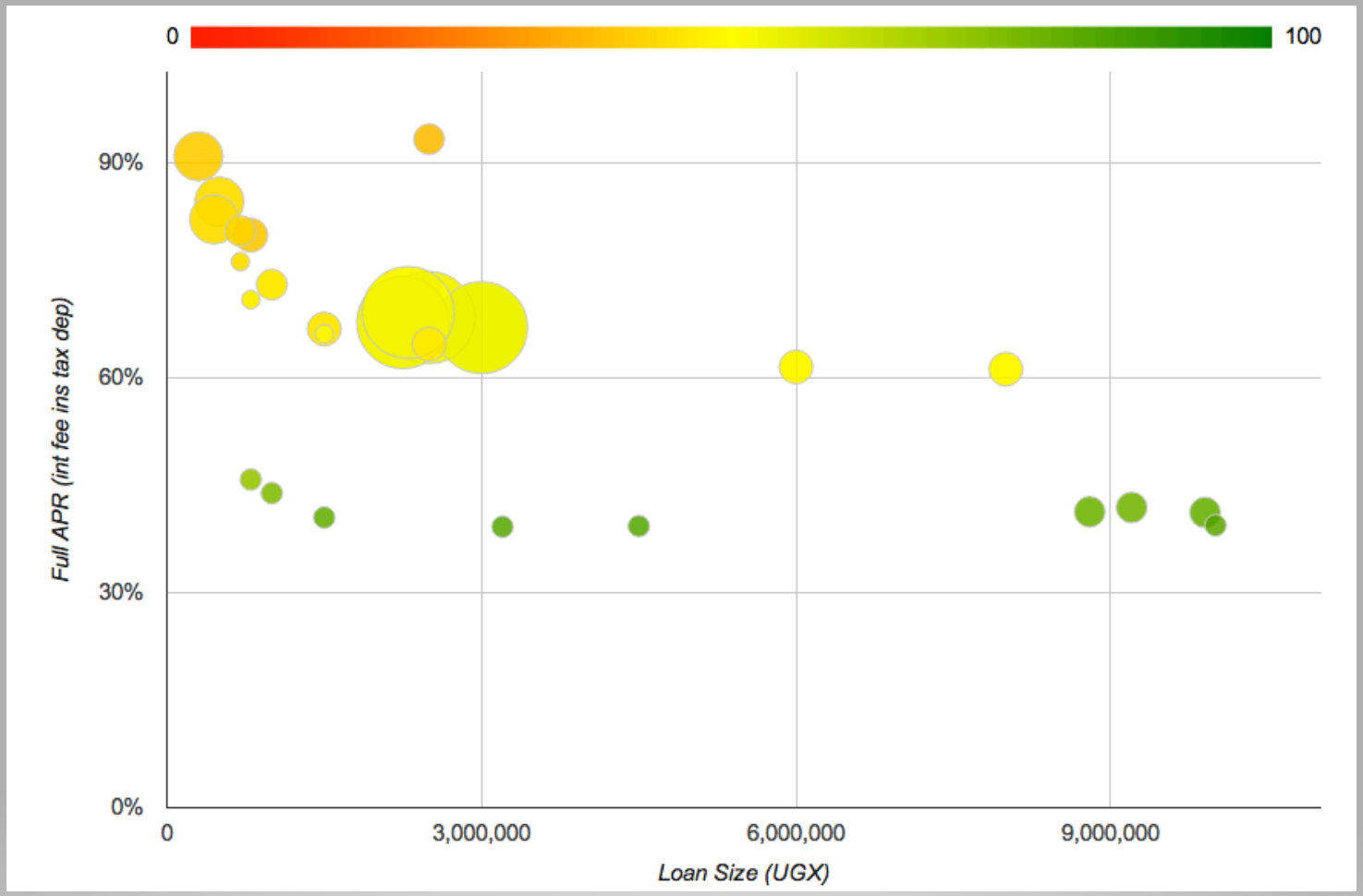
PRODUCT NAME	% FEMALE	% URBAN	LENDING METHOD	PURPOSE	ELIGIBILITY	OTHER SERVICES
Agriculture Loan	60% - 80%	20% - 40%	Individual, Village Banking	Business	Women, Men, Have business, Have home or land	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training
Individual Loan	20% - 40%	20% - 40%	Individual	Business, Education	Women, Men, Have business, Have home or land	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training
Salary Loan	20% - 40%	20% - 40%	Individual	Consumer, Education	Women, Men, Salaried worker, Specific age group	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training
School Fees Loan	20% - 40%	20% - 40%	Individual	Education	Women, Men, Have business	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training
Solidarity Group Loan	60% - 80%	40% - 60%	Solidarity Group	Business, Consumer, Education	Women, Men, Have business, Have home or land	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training
Village Bank Loan	40% - 60%	0% - 20%	Solidarity Group, Village Banking	Business, Consumer, Education	Women, Men, Have business, Have home or land	Credit Educ, Group Mtgs, Tech Asst Visits, Business Training

Product Summary - Pricing

Loan Products » Pricing Information

PRODUCT NAME	ANNUAL NOMINAL INTEREST	FEES	INSURANCE	TAXES	COMPULSORY DEPOSIT	APR (INT+FEE)	FULL APR	TRANSPARENCY INDEX
Agriculture Loan	33.60% annual, Flat	1 Fee	1 Ins	None	20.00% upfront	32.8% - 56%	41.2% - 93.3%	54
Individual Loan	30.00% annual, Flat	1 Fee	1 Ins	None	N/A	60.1% - 61.1%	61.2% - 79.9%	45
Salary Loan	33.60% annual, Flat	1 Fee	1 Ins	None	N/A	38.8% - 41%	39.2% - 45.8%	81
School Fees Loan	33.60% annual, Flat	1 Fee	1 Ins	None	N/A	61.2% - 61.6%	66.1% - 76.2%	47
Solidarity Group Loan	36.00% annual, Flat	1 Fee	1 Ins	None	20.00% upfront	64.2% - 65.3%	82.1% - 90.9%	42
Village Bank Loan	36.00% annual, Flat	1 Fee	1 Ins	None	20.00% upfront	64.4% - 64.7%	67% - 69.1%	53

Hofocam, 6 products



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Product Details

Key Statistics

Outstanding portfolio (UGX)	UGX 1,572,430,114
Portfolio (USD)	USD 628,972
# Borrowers	9,843
% Female	40% - 60%
% Urban	0% - 20%

Methodology

Individual	
Solidarity group	x
Village banking	x
Self-help group	
Other	

Description

Loans to village banks consisting of 15-40 members, who are organised in solidarity groups of 3-5 members each

Loan Purpose

Any purpose	
Income generation	x
Mortgage/housing	
Consumer loan	x
Agriculture	
Education	x
Other household finance	
Other	
Other (2)	

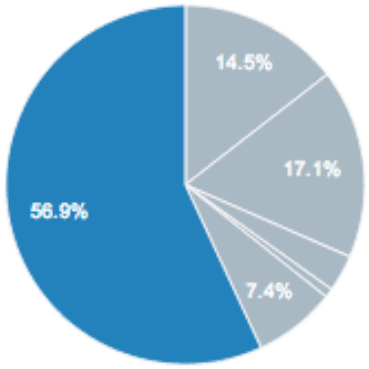
Included Services

Credit education	x
Group meetings	x
Credit insurance	
Workplace visits	x
Business training	x
Other training	
Other	
Other (2)	
No other services	

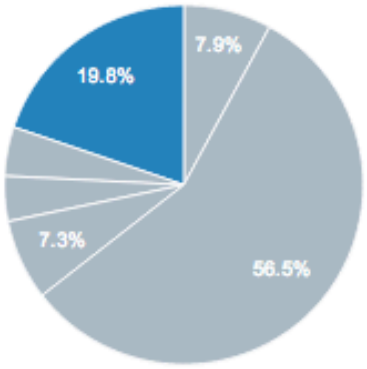
Eligibility

Men	x
Women	x
Must run a business	x
Must own a home or land	x
Must be a salaried worker	
Must be specific age group	
Other	
Other (2)	

Borrowers by Product



Portfolio Size by Product



Geographic Coverage

# Regions for this institution	1
# Regions for this product	1
Regions	Western

Loan Conditions, Single Product

Loan Conditions

Loan Amounts

Currency	UGX
Minimum loan size	UGX 50,000
Maximum loan size	UGX 5,000,000

DISTRIBUTION AT DISBURSEMENT (EST.)

Loans less than UGX 1,000,000	50%
UGX 1,000,000-5,000,000	50%
UGX 5,000,000-7,500,000	0%
UGX 7,500,000-10,000,000	0%
UGX 10,000,000-13,000,000	0%
UGX 13,000,000-15,000,000	0%
Greater than UGX 15,000,000	0%

Loan Term and Grace Period

Shortest loan term	4 months
Longest loan term	12 months
Approx average	8 months

DISTRIBUTION AT DISBURSEMENT (EST.)

Loans 3 months or less	0%
Between 4 and 6 months	0%
Between 7 and 9 months	50%
Between 10 and 12 months	50%
Between 13 and 18 months	0%
Longer than 18 months	0%

GRACE PERIOD

Grace period usage	0%
Average grace period	0 months

Repayment Frequency

Daily	
Weekly	
Every 2 weeks	x
Every 4 weeks	
Monthly	x
Every 2 months	
Quarterly	
Every 6 months	
Every 12 months	
Single end payment	
Irregular payments	

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Pricing Information

Interest

Lowest quoted nominal rate	3.00%
Highest quoted nominal rate	3.00%
Interest rate period	Monthly
Interest Rate Calculation Method	Flat
Subsidized by funder request?	No
Is rate fixed for entire loan term	Yes

Upfront Fees

	FEE 1
Description	Application Fee
% of loan amount - min	2.00%
% of loan amount - max	2.00%
OR, Fixed amount - min	0
Fixed amount - max	0
Reason for variation	N/A
Appears on Repayment Sched?	No

Ongoing Fees

THIS PRODUCT HAS NO ONGOING FEES

Upfront Insurance Fees

	INS 1
Description	Life Insurance
% of loan amount - min	0.00%

Compulsory Deposit

Required for	All
Criteria	N/A
Is deposit indicated on the repayment schedule?	No
Do borrowers control the savings in their group?	Yes

DEPOSIT BEFORE OR AT DISBURSEMENT

% loan amount deposited	20.00%
or, Fixed-amount deposited	0

DEPOSITS DURING PERIOD PAYMENTS

% loan amount deposited	10.00%
or, Fixed-amount deposited	0
Conditions on access to deposit	Final Pmt

INTEREST PAID ON DEPOSIT

Minimum interest rate paid	0.00%
Maximum interest rate paid	0.00%
Interest payment frequency	

Taxes

Are taxes charged on this product?	No

Sample Prices, Single Product

Full Pricing Data

Village Bank Loan Samples

	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4
Loan Amount	UGX 2,250,000	UGX 2,300,000	UGX 2,500,000	UGX 3,000,000
Loan Cycle (1, 2, 3, etc)	4	6	8	15
Disbursement Date	2012-08-03	2012-09-19	2012-05-05	2012-07-23
Term (Months)	6 months	4.1 months	4.1 months	6 months
Grace (Months)	1 month	1 month	1 month	0 months
Total Cost of Credit	UGX 470,000	UGX 342,000	UGX 370,000	UGX 620,000
APR (int)	57.3%	54.8%	54.6%	57.4%
APR (int fee)	64.5%	64.7%	64.4%	64.6%
APR (int fee ins)	67.7%	69.1%	68.4%	67.0%
APR (int fee ins tax)	67.7%	69.1%	68.4%	67.0%
Full APR (int fee ins tax dep)	67.7%	69.1%	68.4%	67.0%
Transparency Index	53	52	53	54

Files for Samples

1. UG-010-V02-Hofokam-P06-PriceCalc-S1-1-20120724.PDF
2. UG-010-V02-Hofokam-P06-PriceCalc-S2-1-20120724.PDF
3. UG-010-V02-Hofokam-P06-PriceCalc-S3-1-20120724.PDF
4. UG-010-V02-Hofokam-P06-PriceCalc-S4-1-20120724.PDF

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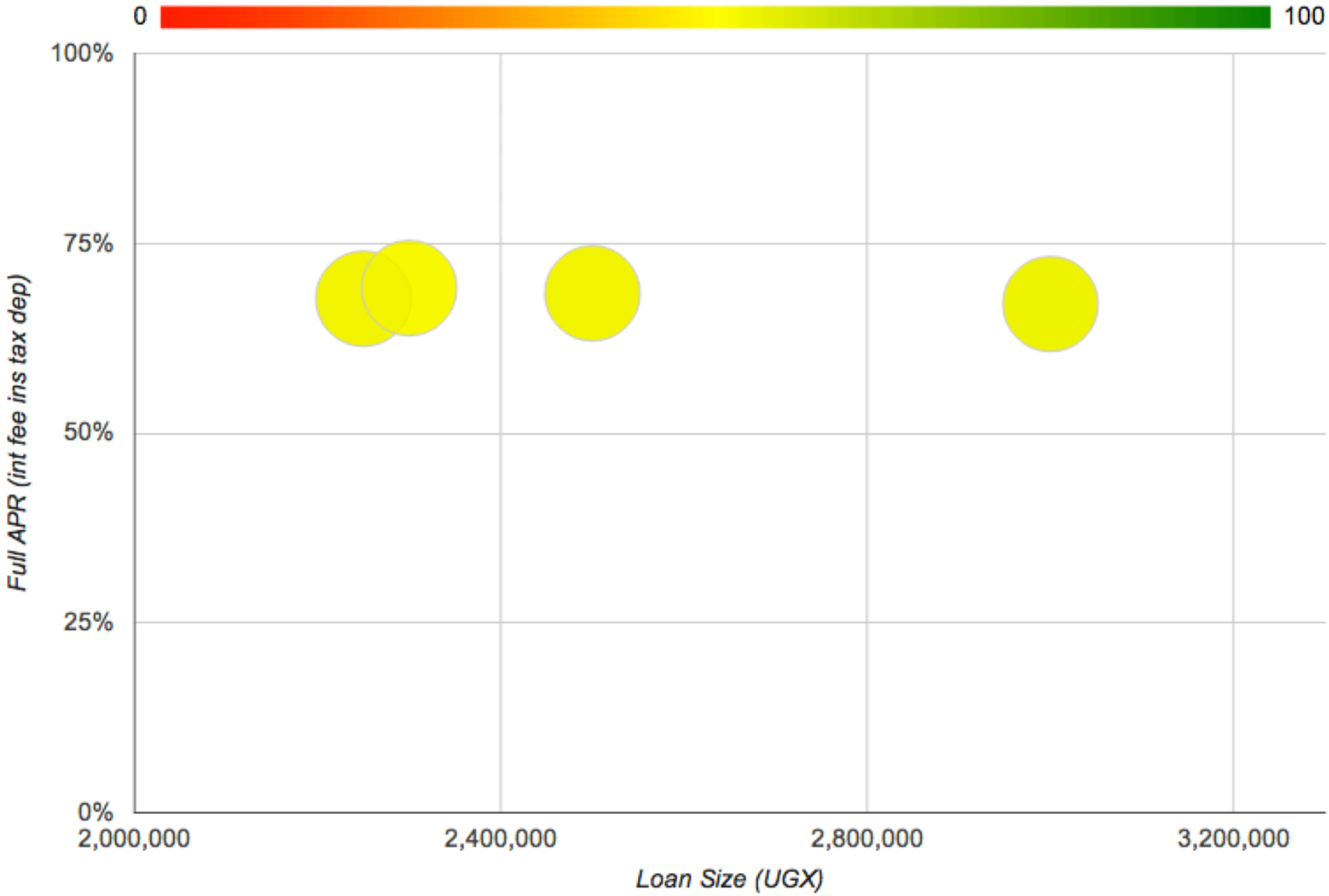
1. UG-010-V02-Hofokam-P06-PriceCalc-S1-1-20120724.PDF
2. UG-010-V02-Hofokam-P06-PriceCalc-S2-1-20120724.PDF
3. UG-010-V02-Hofokam-P06-PriceCalc-S3-1-20120724.PDF
4. UG-010-V02-Hofokam-P06-PriceCalc-S4-1-20120724.PDF

Village Bank Loan Price Graph



Individual.

HOFOKAM LTD.

Kasese

02/10/2012
17:49:48

Loan Repayment Schedule

Loan Product: 101543 - COMMERCIAL LOANS

[redacted]

Disbursement Amount: 6,000,000

Disbursement Date: 05/09/2012

Ref. No.: [redacted]

Loan period in months: 12.00

No. of Installments: 12 (Monthly)

Annual Int. Rate (%): 33.60000%

Loan Officer: [redacted]

Grace Period: 0 (Monthly)

Loan Fund: General

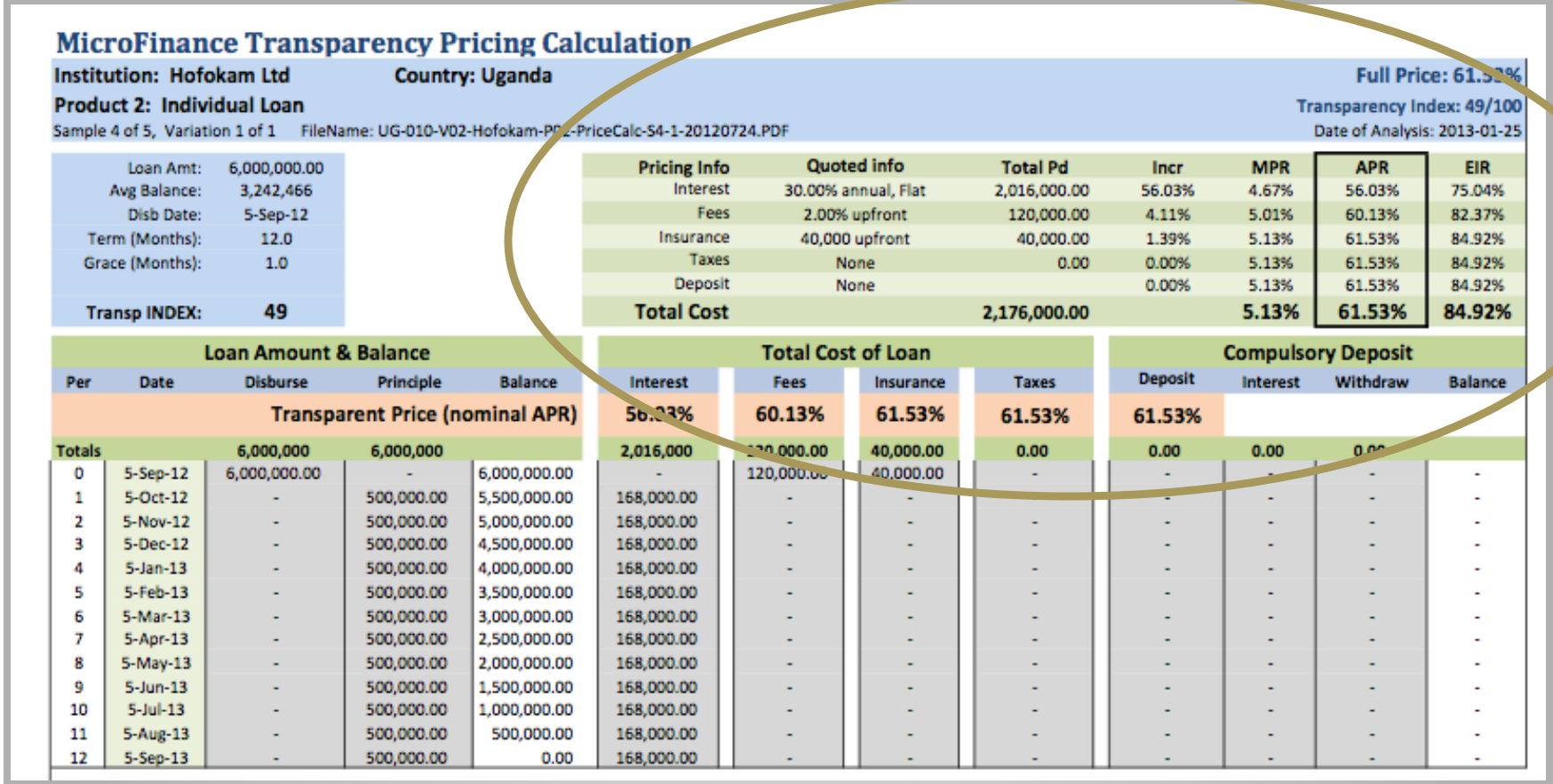
Due Date	Trx Type	Principal Due	Interest Due	Total Due	Principal Balance	Interest Balance	Total Balance
05/09/2012	Loan Disbursement	6,000,000	2,016,000	8,016,000	0	0	0
05/10/2012	Repayment Due	500,000	168,000	668,000	5,500,000	1,848,000	7,348,000
05/11/2012	Repayment Due	500,000	168,000	668,000	5,000,000	1,680,000	6,680,000
05/12/2012	Repayment Due	500,000	168,000	668,000	4,500,000	1,512,000	6,012,000
05/01/2013	Repayment Due	500,000	168,000	668,000	4,000,000	1,344,000	5,344,000
05/02/2013	Repayment Due	500,000	168,000	668,000	3,500,000	1,176,000	4,676,000
05/03/2013	Repayment Due	500,000	168,000	668,000	3,000,000	1,008,000	4,008,000
05/04/2013	Repayment Due	500,000	168,000	668,000	2,500,000	840,000	3,340,000
05/05/2013	Repayment Due	500,000	168,000	668,000	2,000,000	672,000	2,672,000
05/06/2013	Repayment Due	500,000	168,000	668,000	1,500,000	504,000	2,004,000
05/07/2013	Repayment Due	500,000	168,000	668,000	1,000,000	336,000	1,336,000
05/08/2013	Repayment Due	500,000	168,000	668,000	500,000	168,000	668,000
05/09/2013	Repayment Due	500,000	168,000	668,000	0	0	0

Mortgage/Machinery:

1. Toyota premio UAR 202Z (Value: 10,000,000)

[redacted]

PDF of MFT Price Calculation



MicroFinance Transparency Pricing Calculation

Institution: Hofokam Ltd **Country: Uganda** **Full Price: 61.53%**

Product 2: Individual Loan **Transparency Index: 49/100**

Sample 4 of 5, Variation 1 of 1 FileName: UG-010-V02-Hofokam-PD2-PriceCalc-S4-1-20120724.PDF Date of Analysis: 2013-01-25

Loan Amt:	6,000,000.00
Avg Balance:	3,242,466
Disb Date:	5-Sep-12
Term (Months):	12.0
Grace (Months):	1.0
Transp INDEX:	**49**

Pricing Info	Quoted info	Total Pd	Incr	MPR	APR	EIR
Interest	30.00% annual, Flat	2,016,000.00	56.03%	4.67%	56.03%	75.04%
Fees	2.00% upfront	120,000.00	4.11%	5.01%	60.13%	82.37%
Insurance	40,000 upfront	40,000.00	1.39%	5.13%	61.53%	84.92%
Taxes	None	0.00	0.00%	5.13%	61.53%	84.92%
Deposit	None		0.00%	5.13%	61.53%	84.92%
Total Cost		**2,176,000.00**		**5.13%**	**61.53%**	**84.92%**

Loan Amount & Balance					Total Cost of Loan				Compulsory Deposit			
Per	Date	Disburse	Principle	Balance	Interest	Fees	Insurance	Taxes	Deposit	Interest	Withdraw	Balance
			Transparent Price (nominal APR)		56.03%	60.13%	61.53%	61.53%	61.53%			
Totals		6,000,000	6,000,000		2,016,000	120,000.00	40,000.00	0.00	0.00	0.00	0.00	
0	5-Sep-12	6,000,000.00	-	6,000,000.00	-	120,000.00	40,000.00	-	-	-	-	-
1	5-Oct-12	-	500,000.00	5,500,000.00	168,000.00	-	-		-	-	-	-
2	5-Nov-12	-	500,000.00	5,000,000.00	168,000.00	-	-	-	-	-	-	-
3	5-Dec-12	-	500,000.00	4,500,000.00	168,000.00	-	-	-	-	-	-	-
4	5-Jan-13	-	500,000.00	4,000,000.00	168,000.00	-	-	-	-	-	-	-
5	5-Feb-13	-	500,000.00	3,500,000.00	168,000.00	-	-	-	-	-	-	-
6	5-Mar-13	-	500,000.00	3,000,000.00	168,000.00	-	-	-	-	-	-	-
7	5-Apr-13	-	500,000.00	2,500,000.00	168,000.00	-	-	-	-	-	-	-
8	5-May-13	-	500,000.00	2,000,000.00	168,000.00	-	-	-	-	-	-	-
9	5-Jun-13	-	500,000.00	1,500,000.00	168,000.00	-	-	-	-	-	-	-
10	5-Jul-13	-	500,000.00	1,000,000.00	168,000.00	-	-	-	-	-	-	-
11	5-Aug-13	-	500,000.00	500,000.00	168,000.00	-	-	-	-	-	-	-
12	5-Sep-13	-	500,000.00	0.00	168,000.00	-	-	-	-	-	-	-

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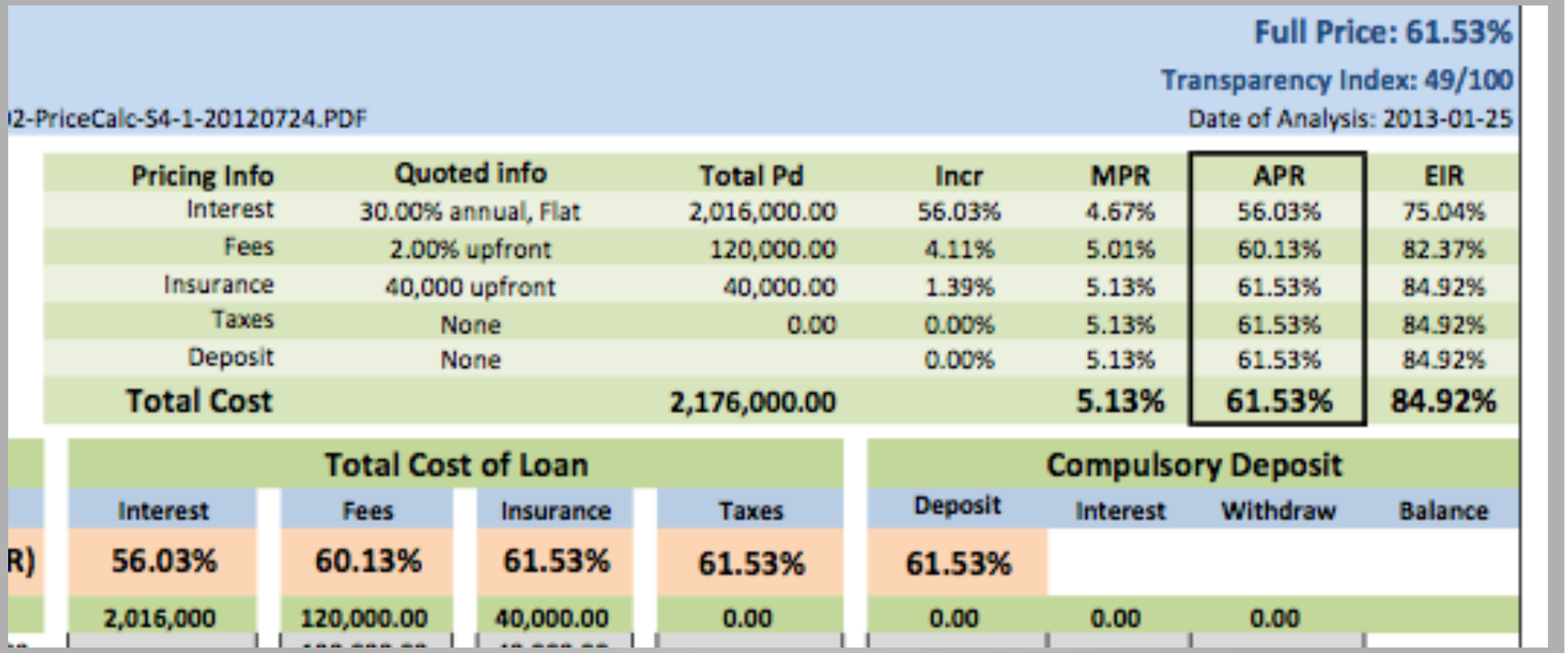
Top Section of MFT Price Calculation



Full Price: 61.53%

Transparency Index: 49/100

)2-PriceCalc-S4-1-20120724.PDF

Date of Analysis: 2013-01-25

Pricing Info	Quoted info	Total Pd	Incr	MPR	APR	EIR
Interest	30.00% annual, Flat	2,016,000.00	56.03%	4.67%	56.03%	75.04%
Fees	2.00% upfront	120,000.00	4.11%	5.01%	60.13%	82.37%
Insurance	40,000 upfront	40,000.00	1.39%	5.13%	61.53%	84.92%
Taxes	None	0.00	0.00%	5.13%	61.53%	84.92%
Deposit	None		0.00%	5.13%	61.53%	84.92%
Total Cost		**2,176,000.00**		**5.13%**	**61.53%**	**84.92%**

	Total Cost of Loan				Compulsory Deposit			
	Interest	Fees	Insurance	Taxes	Deposit	Interest	Withdraw	Balance
R)	56.03%	60.13%	61.53%	61.53%	61.53%			
	2,016,000	120,000.00	40,000.00	0.00	0.00	0.00	0.00	

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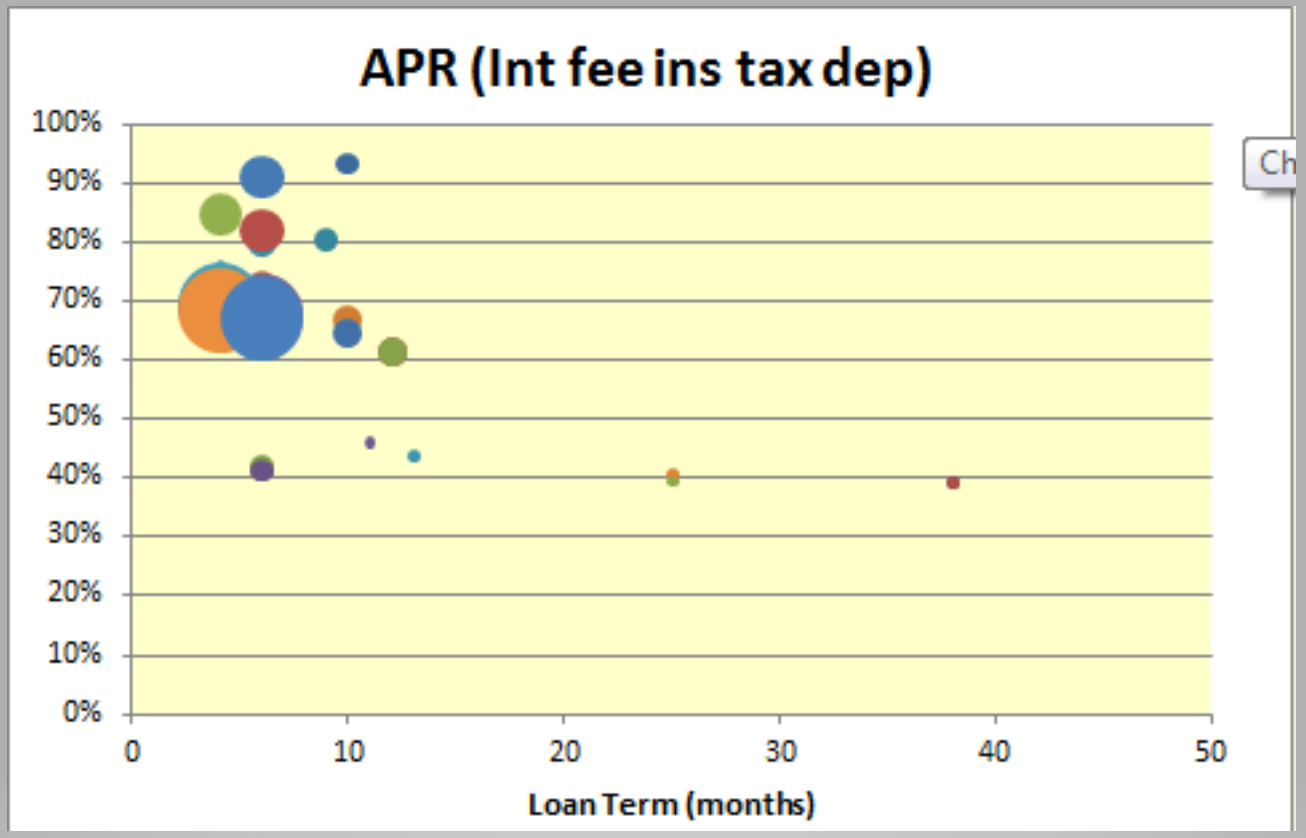
Transparency at Three Levels

- Each Sample
  - Nominal Interest Rate / Full APR x 100
  - 36% / 72% x 100 = 50
- Each Product
  - Average of the samples
  - Avg(50,45,42,53) = 48
- Institution
  - Weighted average of the Product TI's
  - (48 x 35% of clients) + 55 x 65% of clients = 53

Price by Loan TERM



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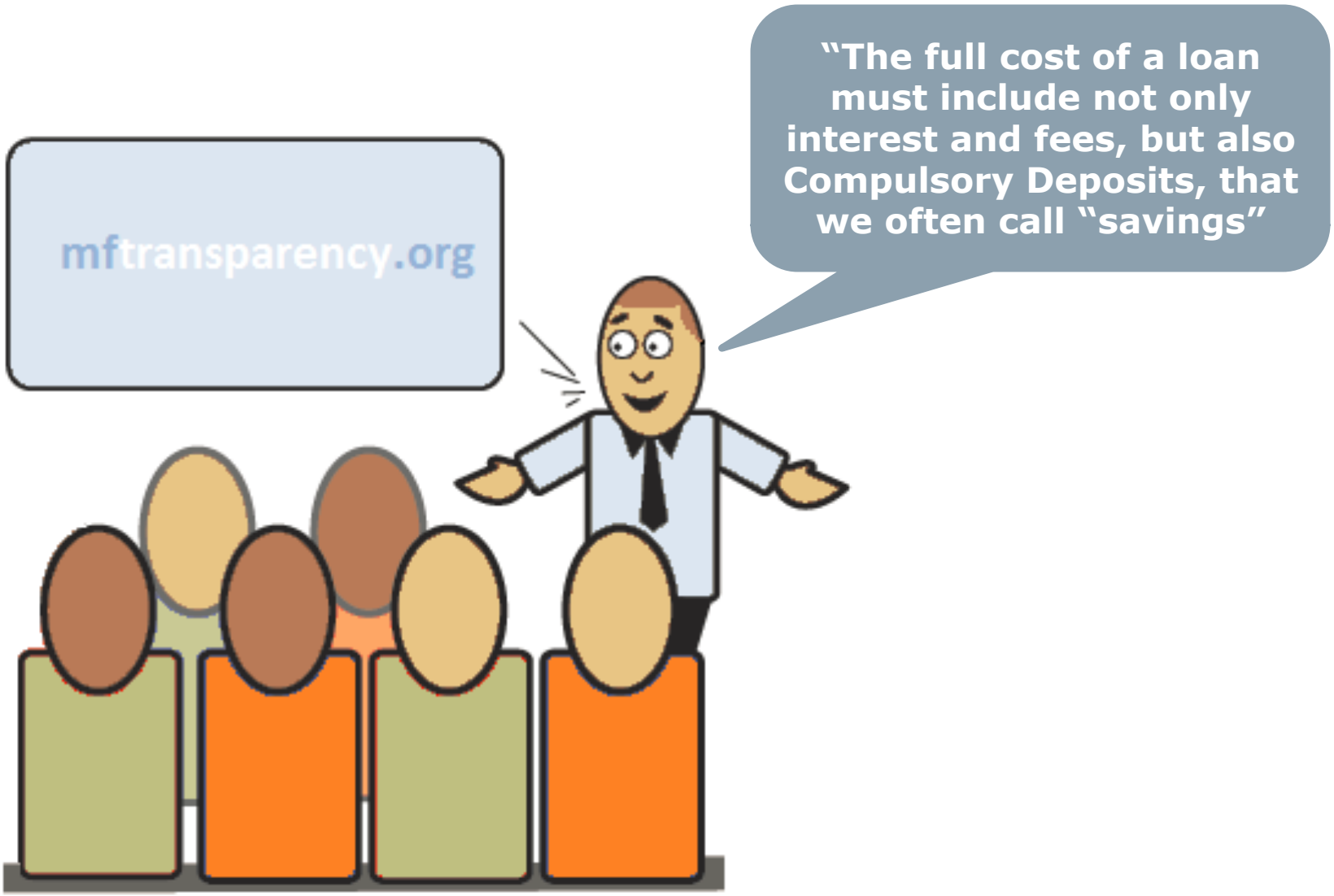
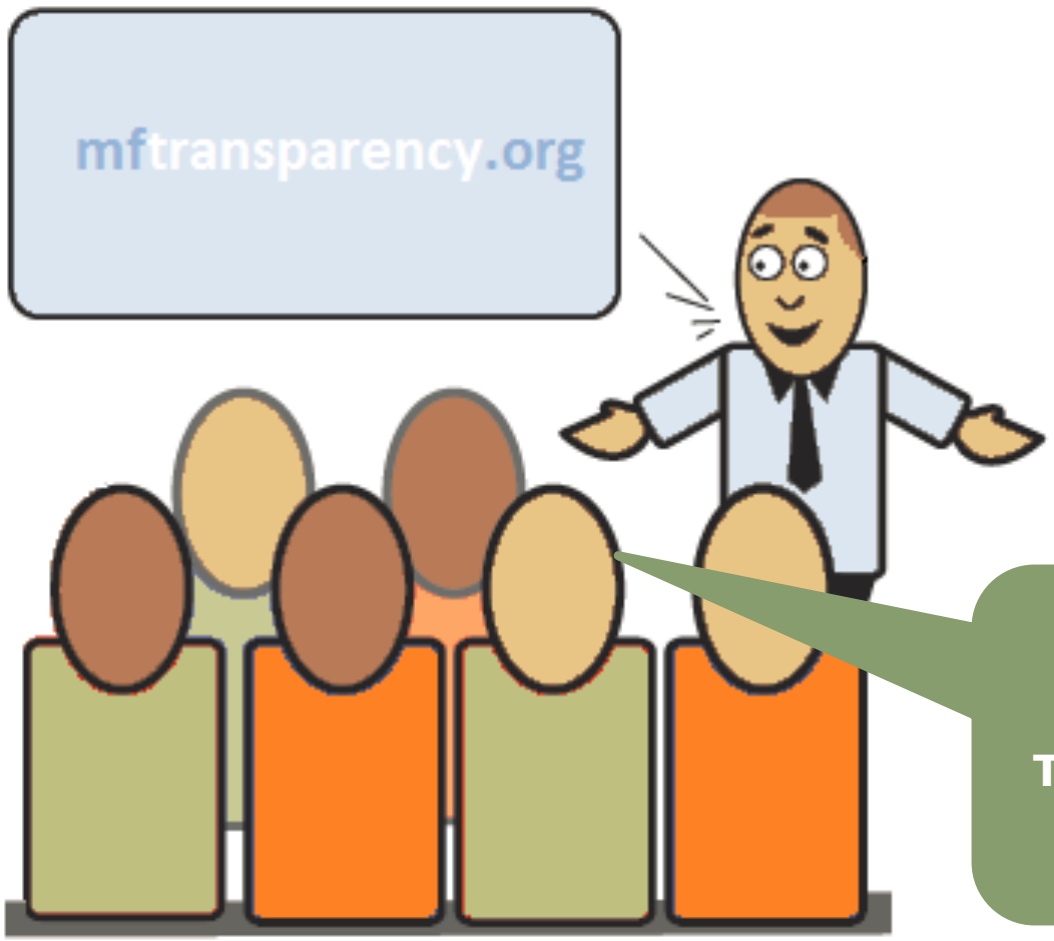
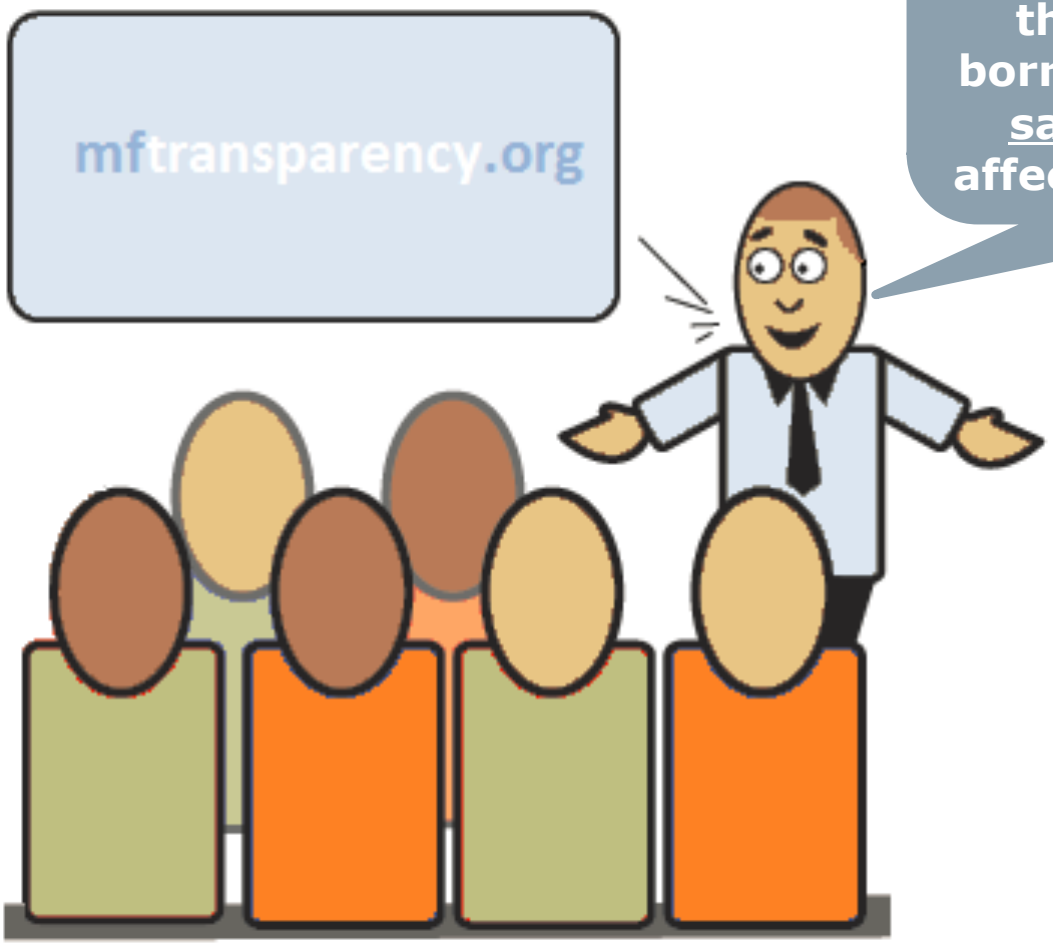
COLLATERAL DEPOSITS ("SAVINGS")

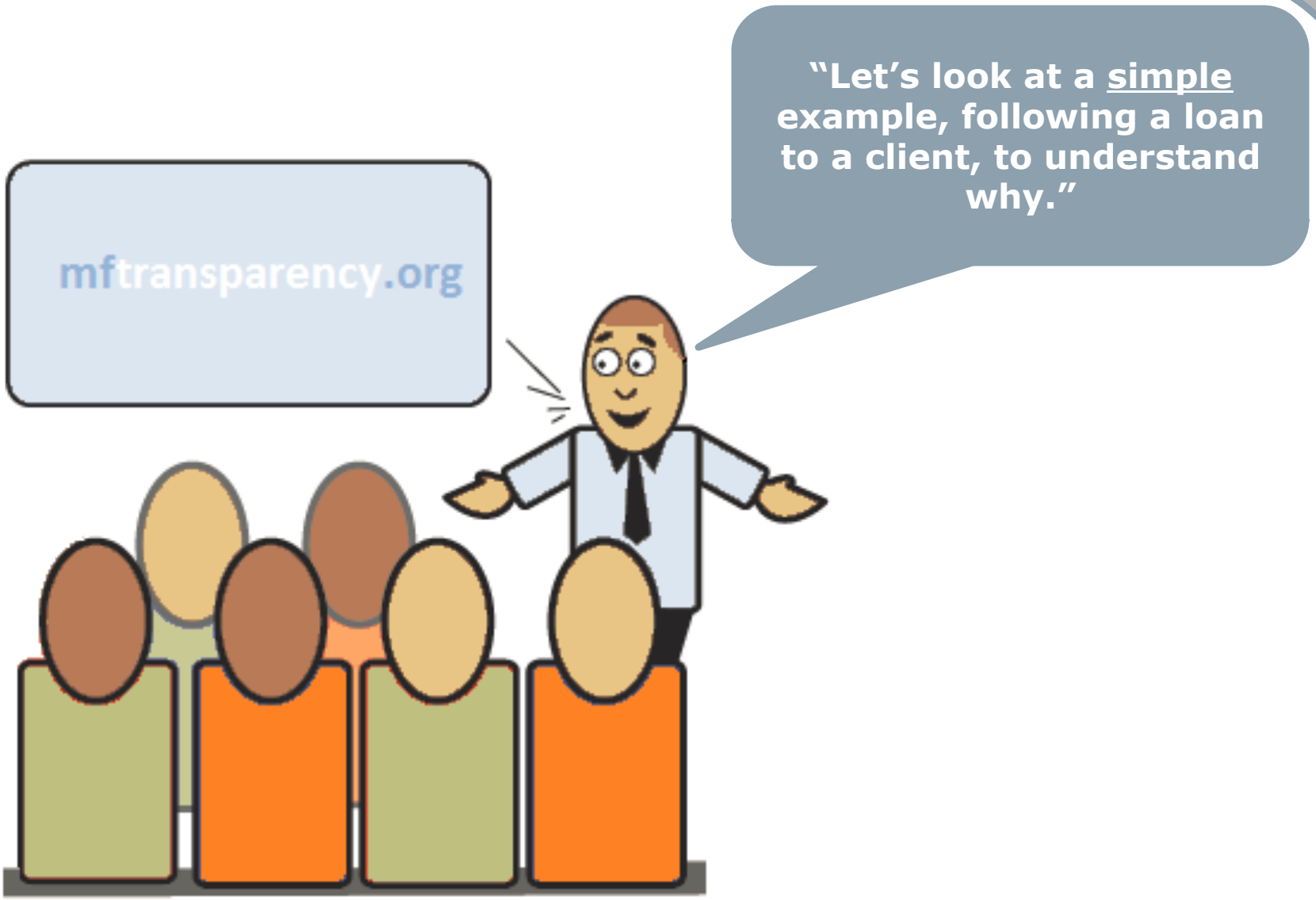
Though potentially offering some benefits to the client, compulsory deposits clearly have a financial cost to the client.


mftransparency.org
"The full cost of a loan must include not only interest and fees, but also Compulsory Deposits, that we often call "savings"



"I believe it should be what the client pays – interest and fees. The Total Cost of Credit is the real cost. Savings is a benefit, not a cost."


mftransparency.org
"Savings does have some perceived benefit – the client leaves with cash in their pocket. But when borrowing and saving at the same time, that savings affects the price of the loan"


"Let's look at a simple example, following a loan to a client, to understand why."
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"Here's a loan.... AND we help you SAVE"
(savings is a requirement of this loan)
$1000

Loan Term = 10 months
Loan Amount = $1000
Compulsory deposit = 20%
Interest Rate = 2.5% per month (flat) or $25 per month

$200

$1000

$800

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After 1 month

% interest

$5

$20

$100

% interest + principal

Part of the loan interest paid is for the part of the loan that is in "savings"

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After 6 months – Amounts are equal

% interest

$5

$20

$100

% interest + principal

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After 8 months - none of original loan left

SAVINGS

$200

BUSINESS

$0

% interest

$5

Loan payments are now coming out of her business assets, as all the loan that went to the business is repaid

$20

$100

% interest + principal

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So client may be forced to liquidate stock in order to repay the loan

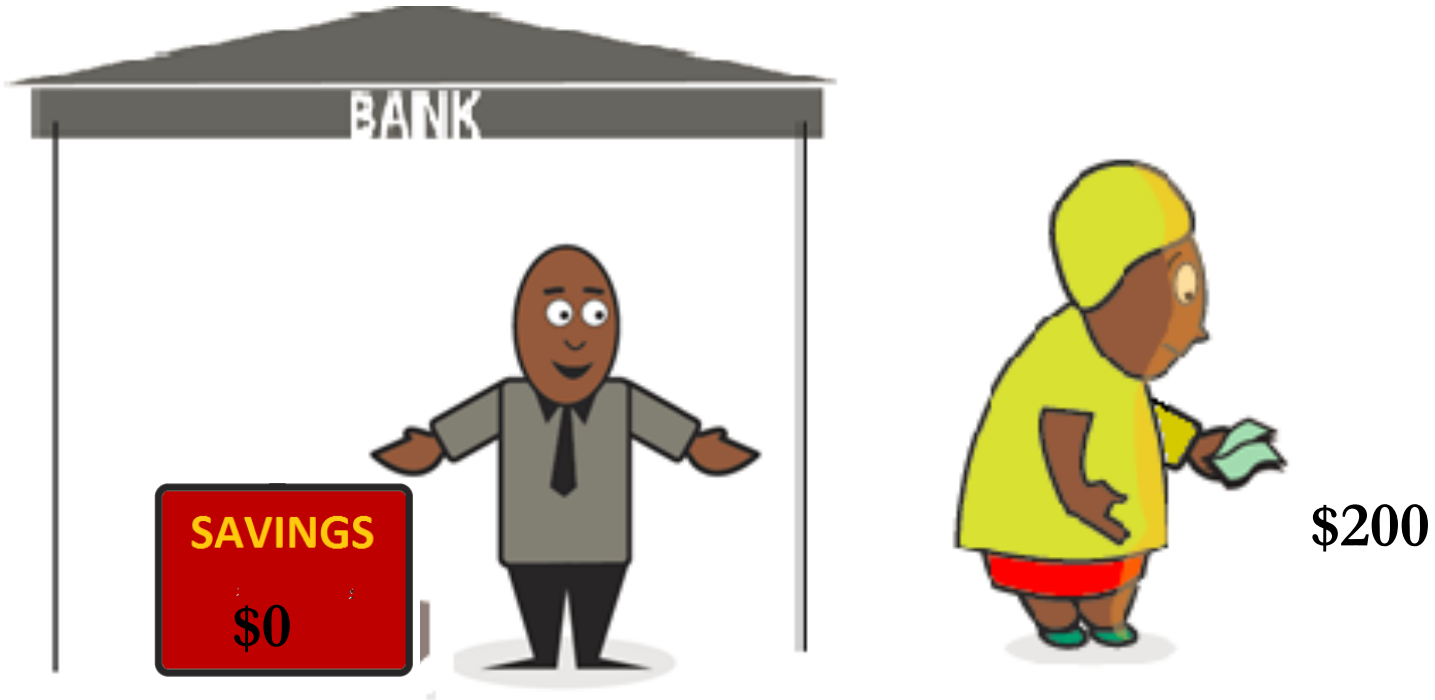
SAVINGS

$200

BUSINESS

Negative $!!

At end of loan – savings are repaid to client



But what has client actually paid?

Using TCC – Total Cost of Credit

PRINCIPAL

Loan repayments = $1000

With Savings

INTEREST

Interest paid on loan = $200

Interest paid on savings = $50

TCC = $250

Av. Loan Balance for business = $350

Without Savings

INTEREST

Interest paid on loan = $250

TCC = $250

Av. Loan Balance for business = $550

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But what has client actually paid?

Using APR – Annual Percentage Rate

PRINCIPAL

Loan repayments = $1000

With Savings

INTEREST

Interest paid on loan = $200

Interest paid on savings = $50

Total APR = 75%

Av. Loan Balance for business = $350

Without Savings

INTEREST

Interest paid on loan = $250

Total APR = 51%

Av. Loan Balance for business = $550

Summary

- The client did leave with cash after the loan was repaid.... but it DID increase the cost of the loan. The client paid interest on the "savings" as well as the "business" portion of the loan. And she did not have the benefit of ACCESS to that savings during the loan.

- Voluntary Savings is a valuable service, but:
  - When clients are in a time when they need a LOAN, they need a LOAN...
  - When clients are in a period where they want to SAVE, we should help them SAVE (voluntarily)...

- Blurring SAVING and LOAN at the same time, and charging INTEREST on the SAVINGS, increases the true cost of the loan, and does so in a hidden way.

THE PRICE CURVE

Cardinal Rule in analyzing micro-loans:

Never use averages

CGAP

BRIEF

Are Microcredit Interest Rates Excessive?

Over the past two decades, inst
in developing and transition ec
operations financially sustainabl
all their costs. They argue that c
of the services they provide. Su
continue to serve their clients w
fund exponential growth of serv
including deposits from the pub

The problem is that administrati
inevitably higher for tiny microl
for normal bank lending. For insta

Interest rate levels

- Based on the best data available, the median interest rate for sustainable (i.e., profitable) MFIs was about 26 percent in 2006. The 85 percent interest rates that drew so much attention to the Mexican MFI Compartamos are truly exceptional, rather than representative of the industry. Less than 1 percent of borrowers pay rates that high.
- MFI interest rates declined by 2.3 percentage points a year between 2003 and 2006, much faster than bank rates.

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Using the MIX Data

MFI ID	MFI name	Return o… equity	Financial revenue / assets	Yield on gross portfolio (nomina…
100363	BRAC	14.54%	22.26%	27.44%
100363	BRAC	10.71%	23.72%	28.03%
100363	BRAC	18.70%	22.31%	25.49%
100363	BRAC	23.50%	25.01%	28.21%
100363	BRAC	6.07%	23.47%	26.18%
100363	BRAC	-0.24%	22.18%	25.92%
100363	BRAC	14.62%	20.23%	26.60%
100363	BRAC	12.46%	18.67%	27.02%
100191	BRAC - AFG			
100191	BRAC - AFG	-1146.33%	11.43%	
100191	BRAC - AFG	-336.54%	15.83%	24.53%
100191	BRAC - AFG	-121.85%	18.57%	33.62%
100191	BRAC - AFG	-94.33%	20.33%	32.92%
100191	BRAC - AFG	-64.18%	20.51%	31.55%
100191	BRAC - AFG	-445.25%	19.79%	34.30%
100191	BRAC - AFG	-198.69%	19.42%	29.24%
100191	BRAC - AFG	-14.94%	23.78%	28.89%
100191	BRAC - AFG			
115595	BRAC - LBR			
115595	BRAC - LBR			
115595	BRAC - LBR	-9.02%	16.47%	49.06%

Can download stats for multiple institutions, countries, and years. Then just filter the info and generate some graphs… and avoid averages!

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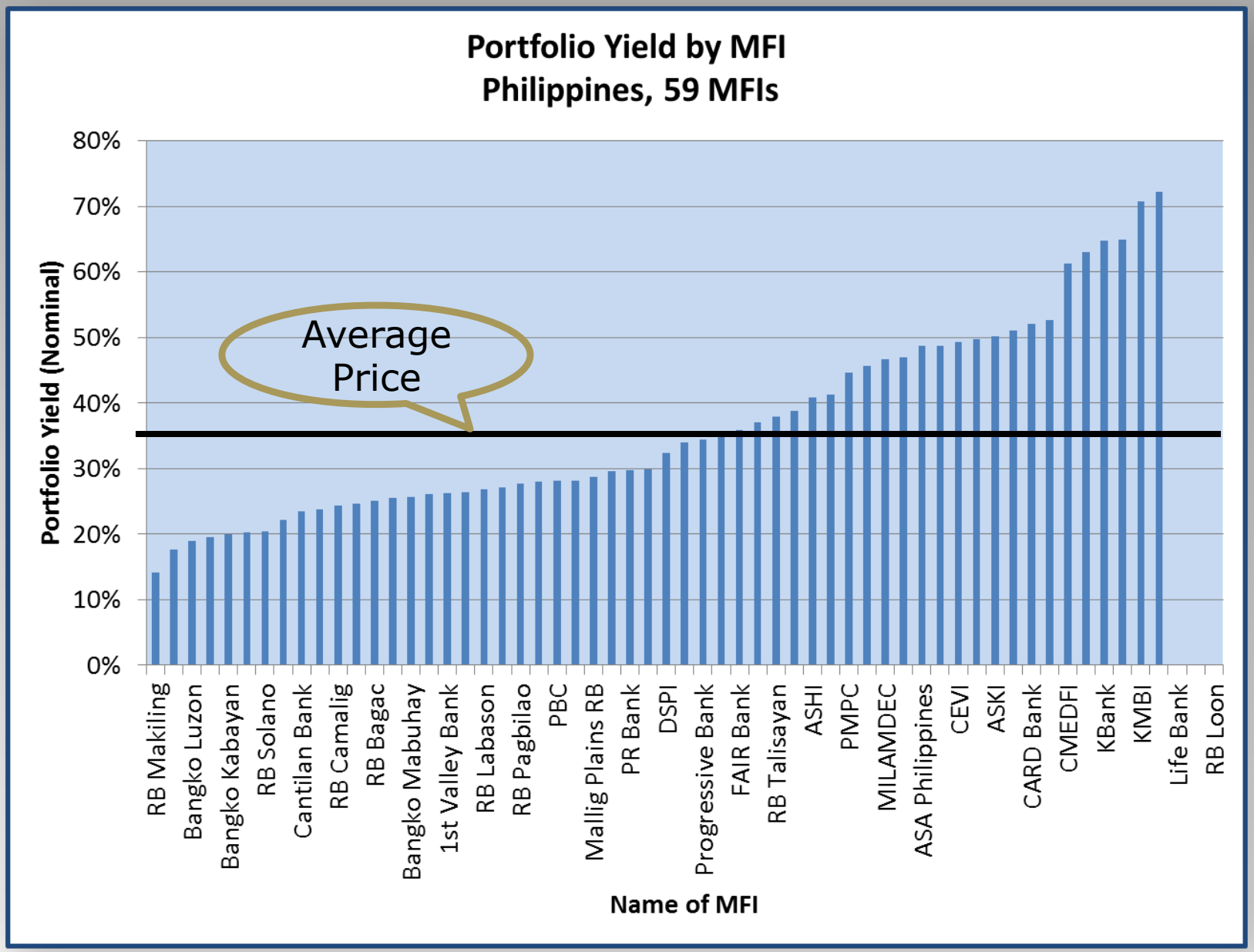

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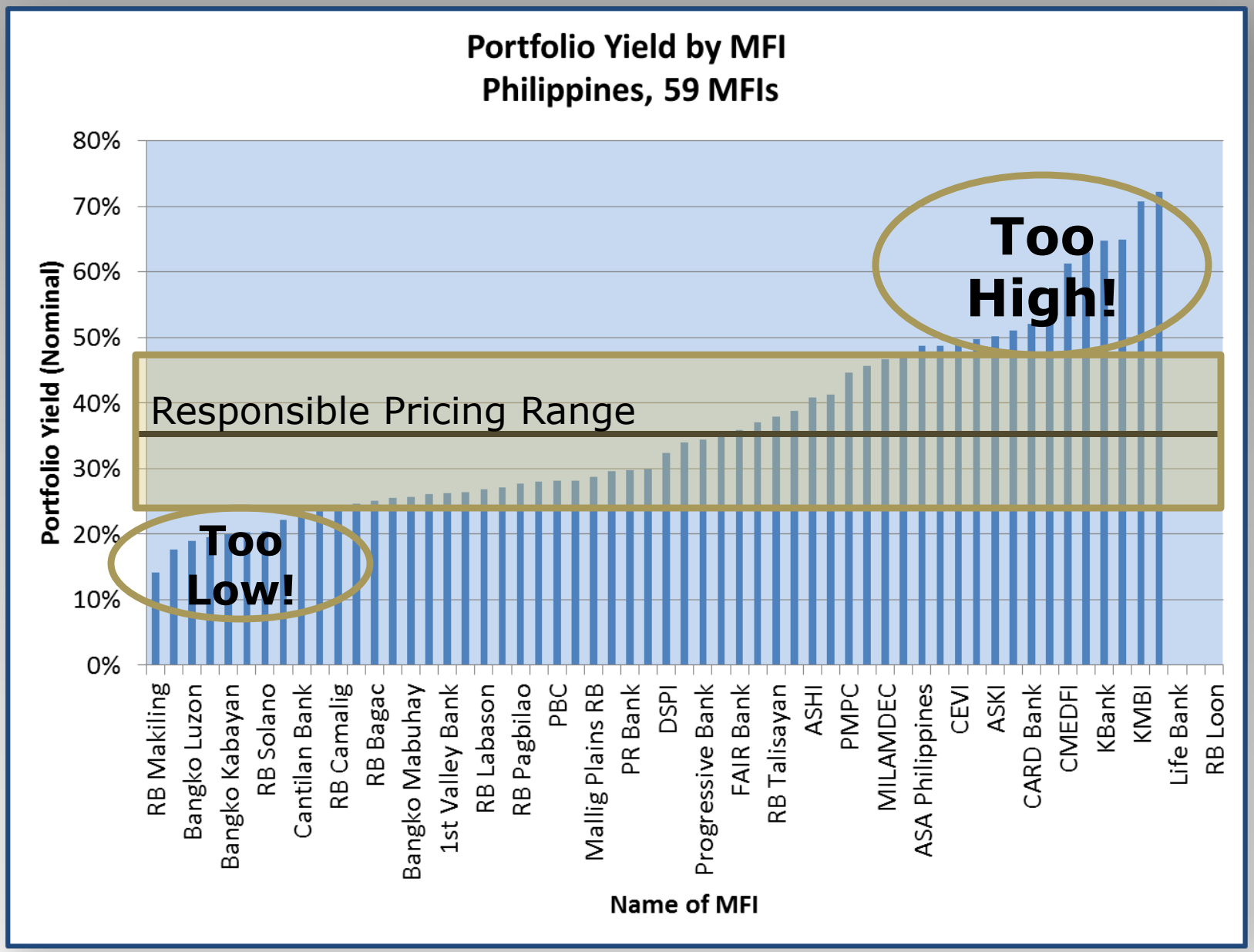

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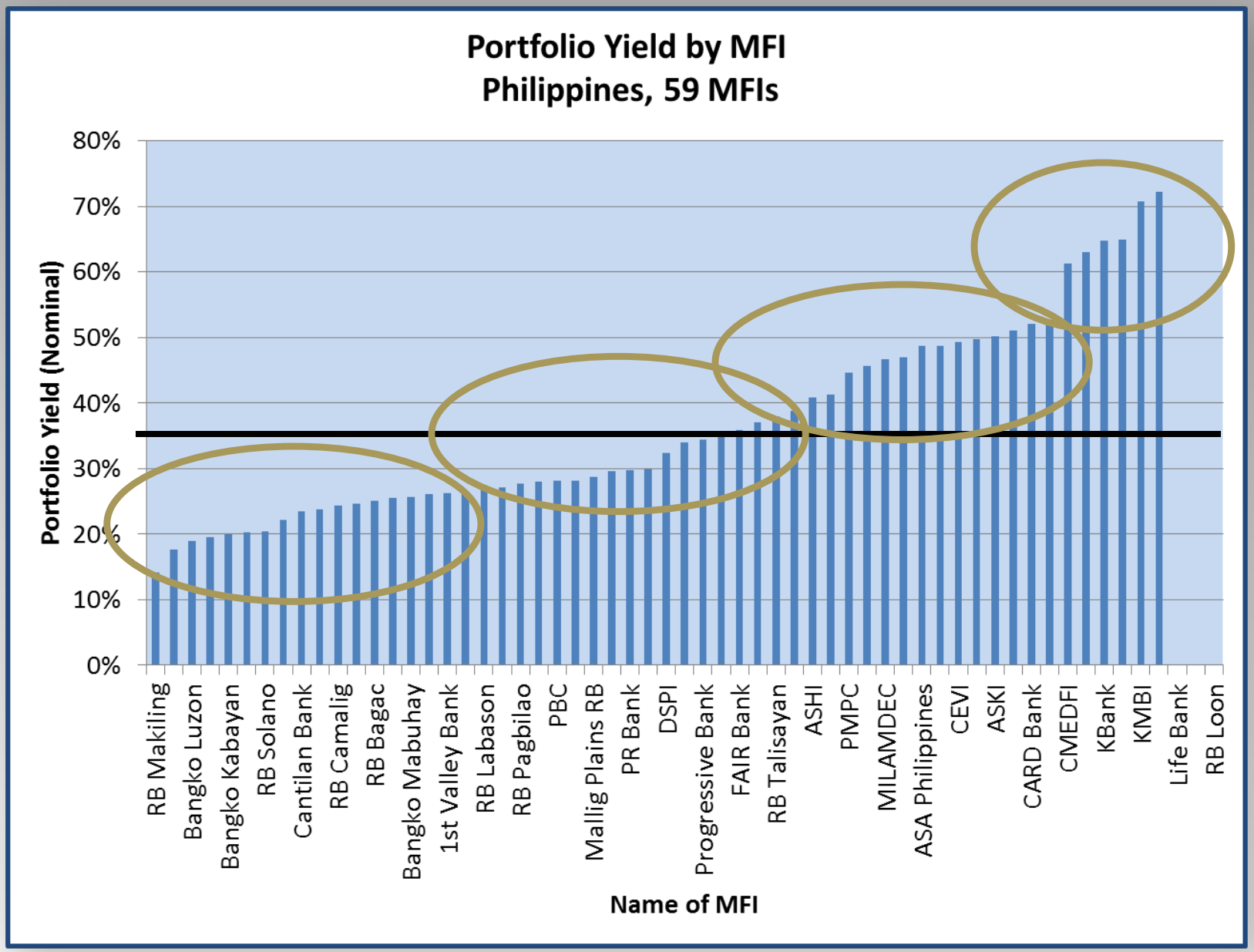

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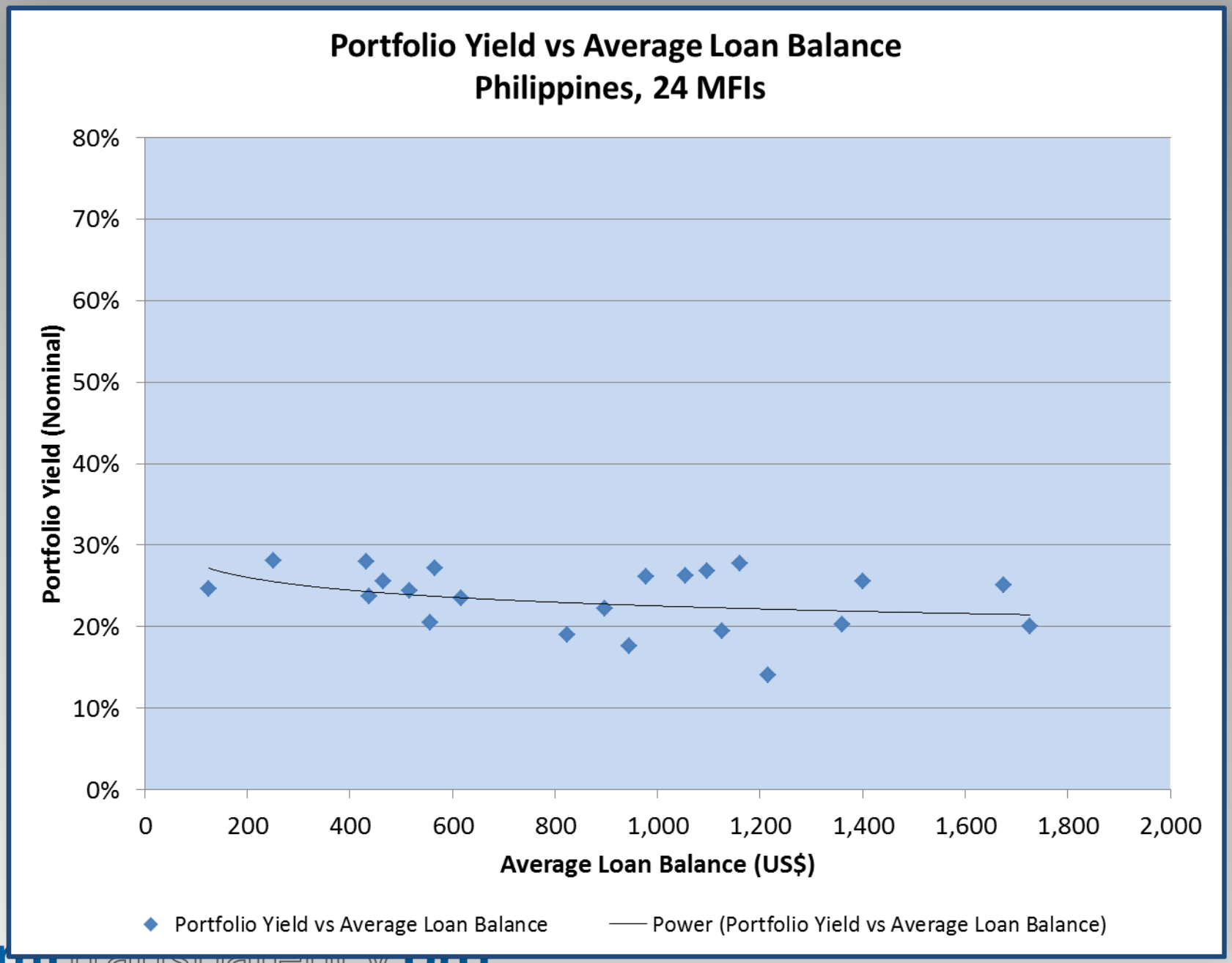
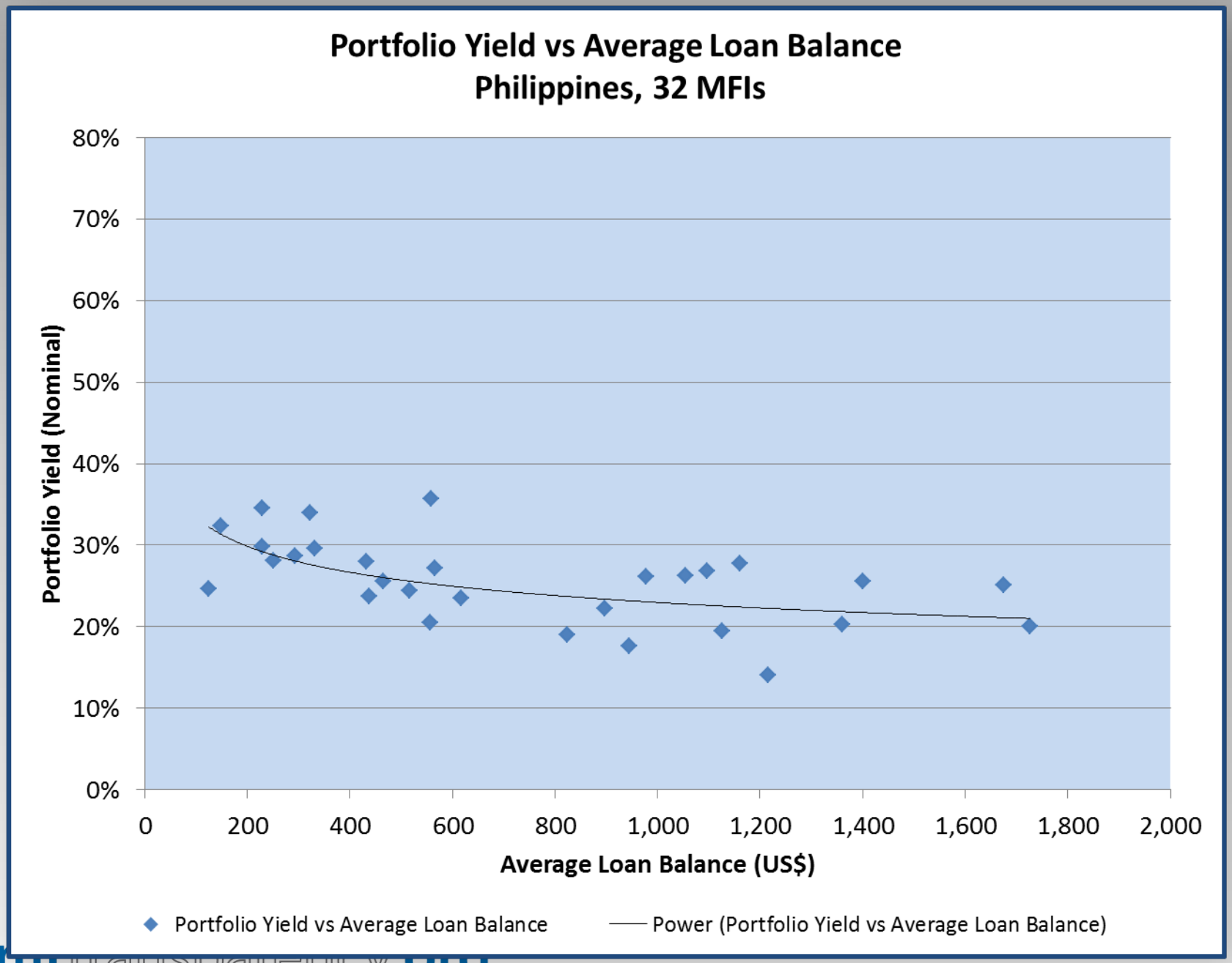
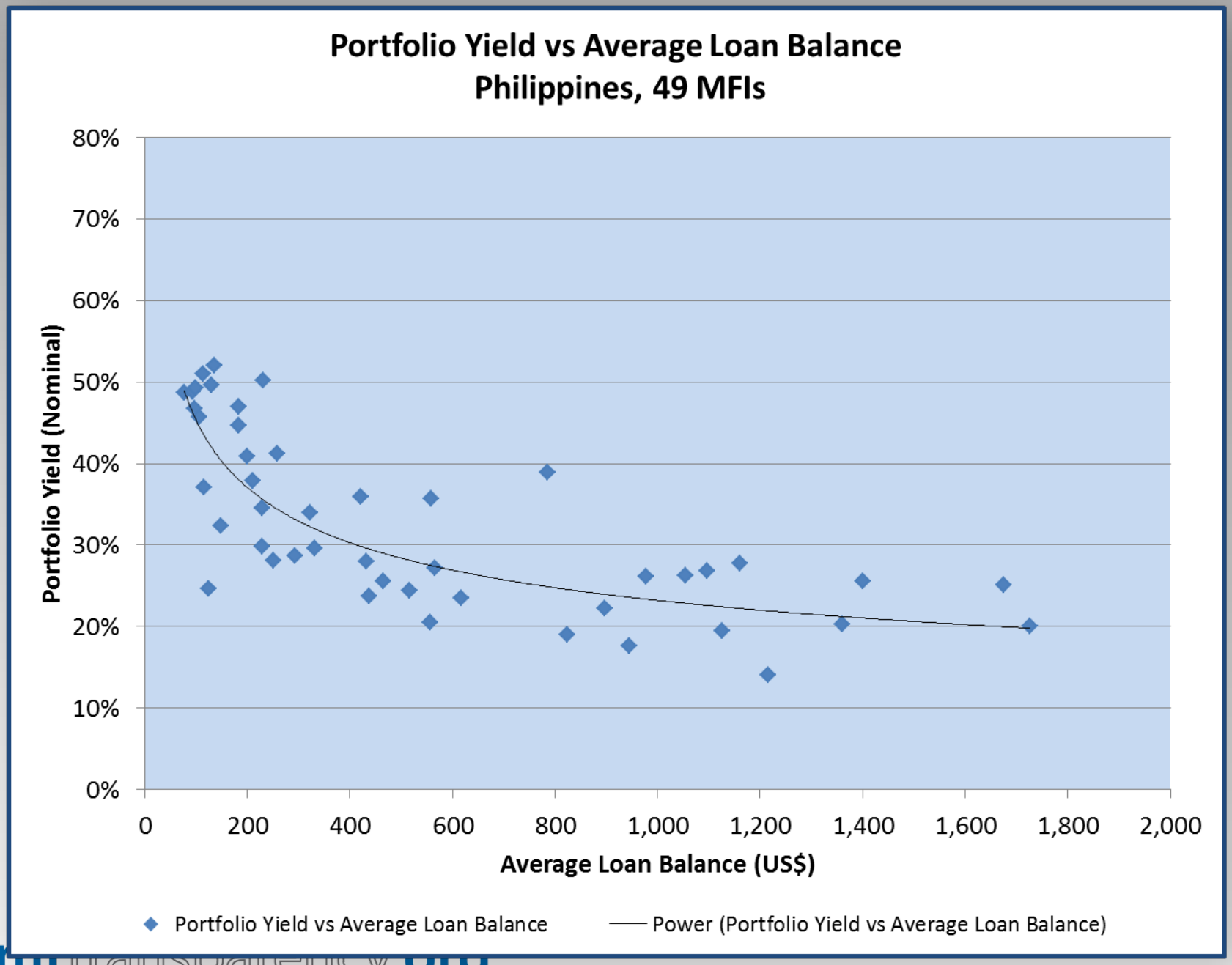
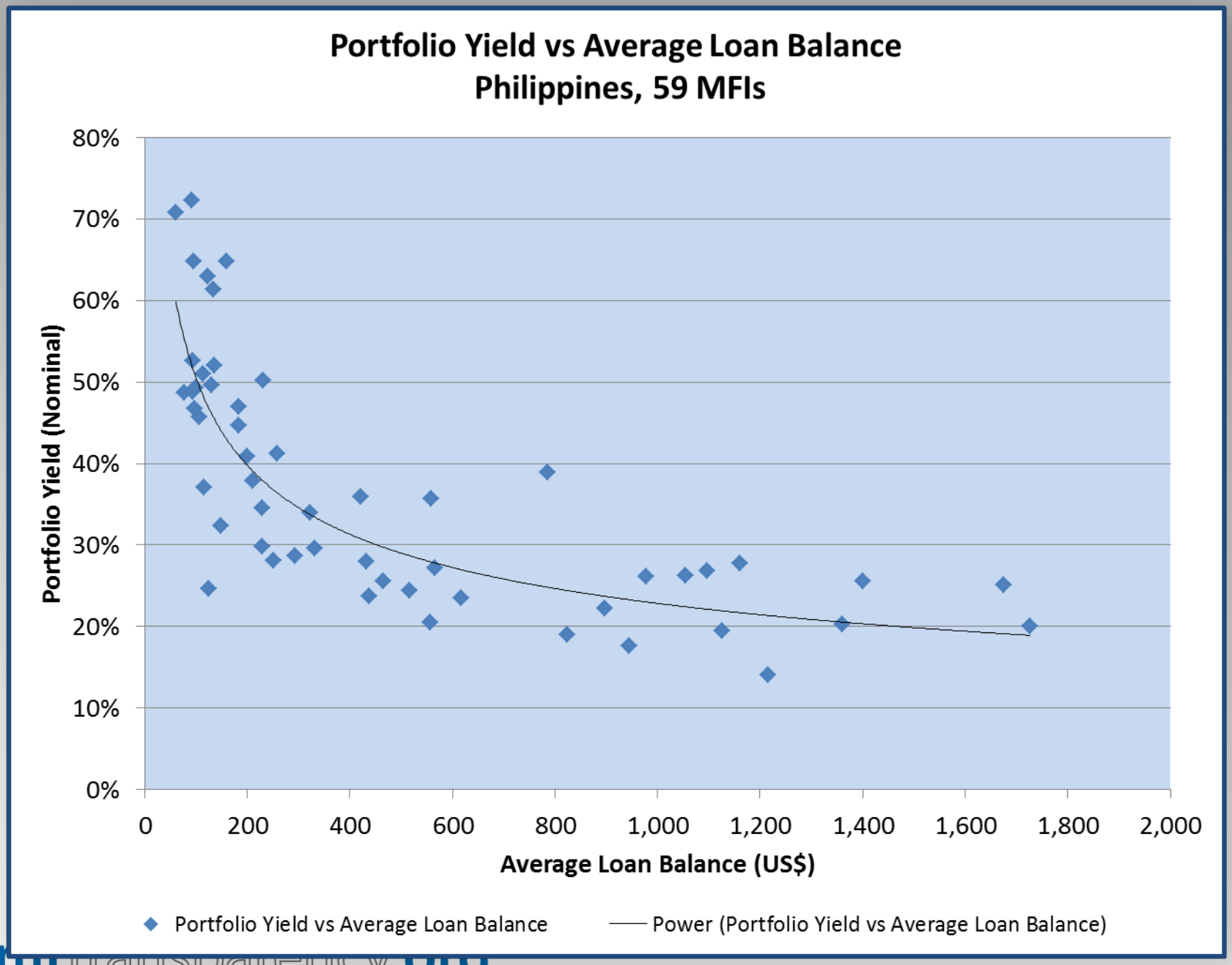
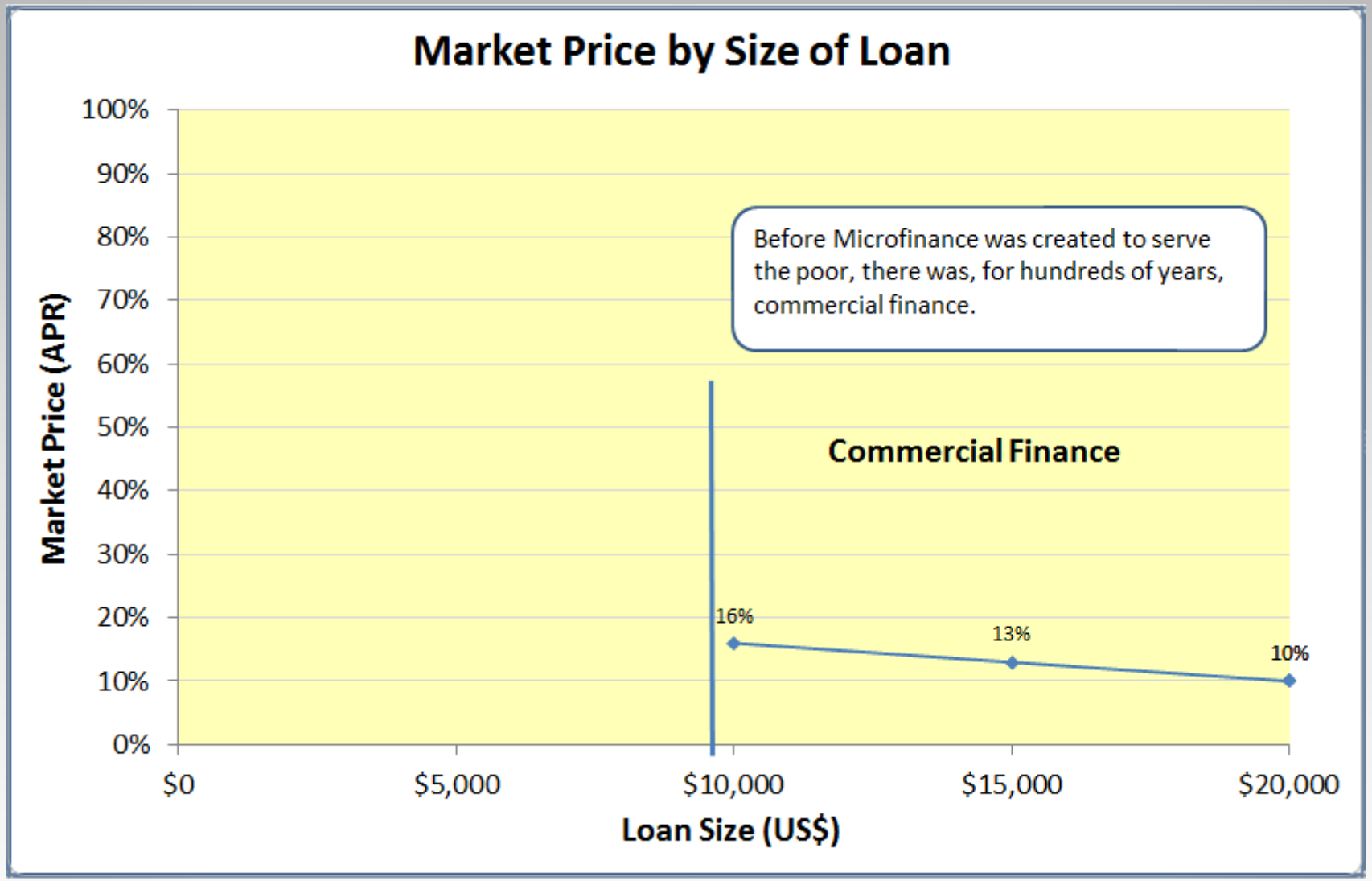



Portfolio Yield vs Average Loan Balance
Philippines, 32 MFIs
Portfolio Yield (Nominal)
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
200
400
600
800
1,000
1,200
1,400
1,600
1,800
2,000
Average Loan Balance (US$)
Portfolio Yield vs Average Loan Balance
Power (Portfolio Yield vs Average Loan Balance)





Why is there a price curve for micro-loans?



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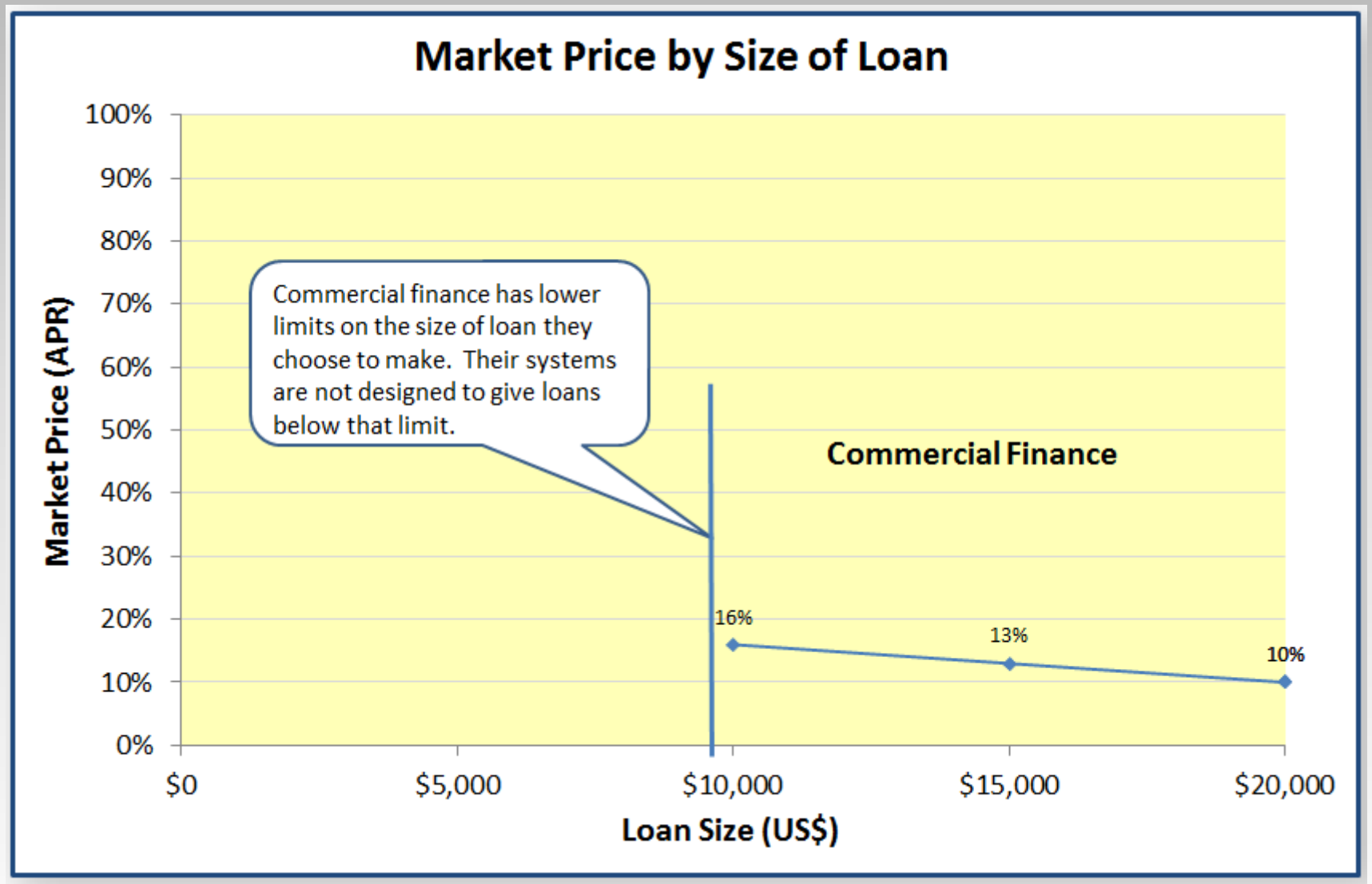

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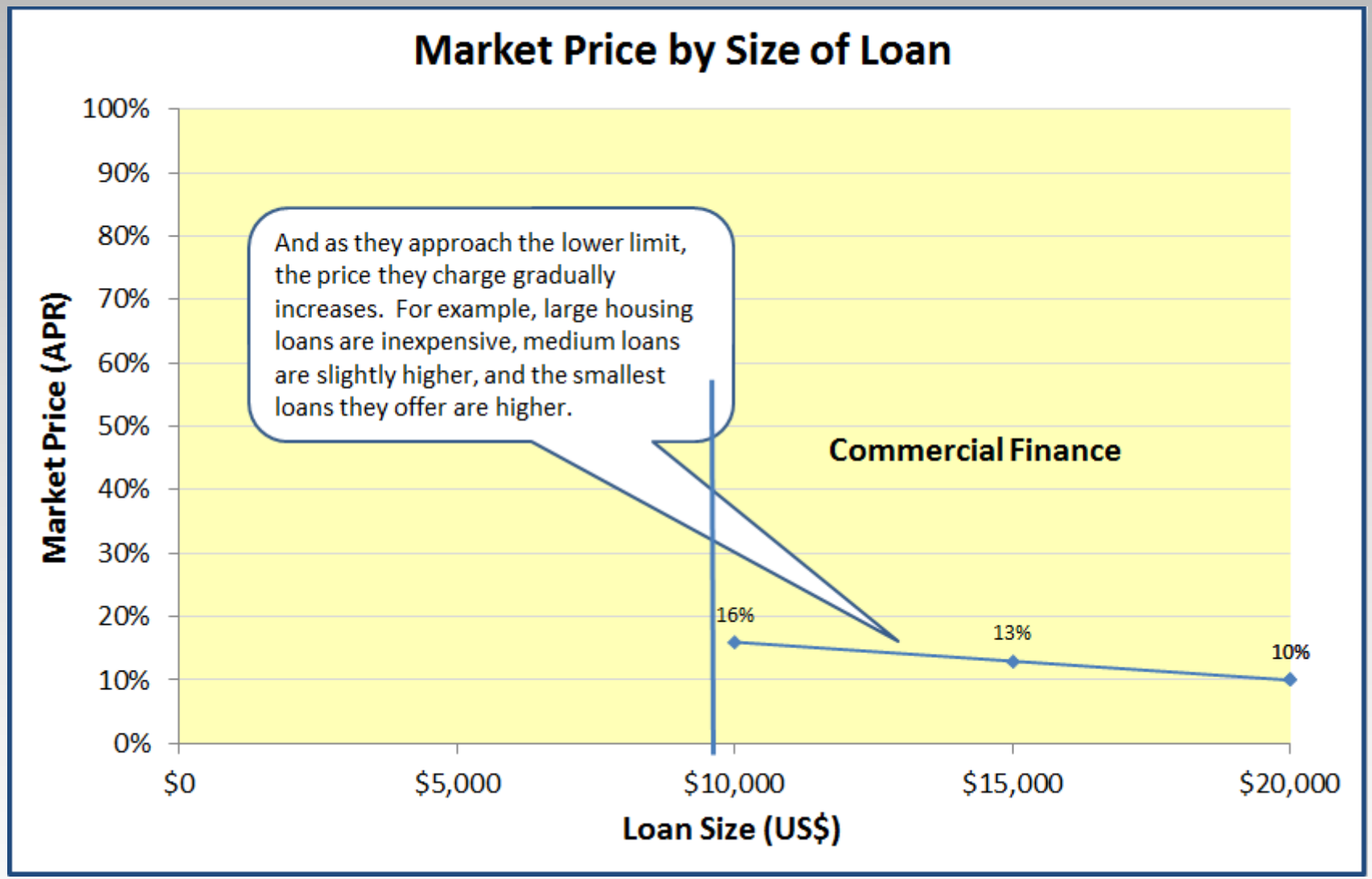

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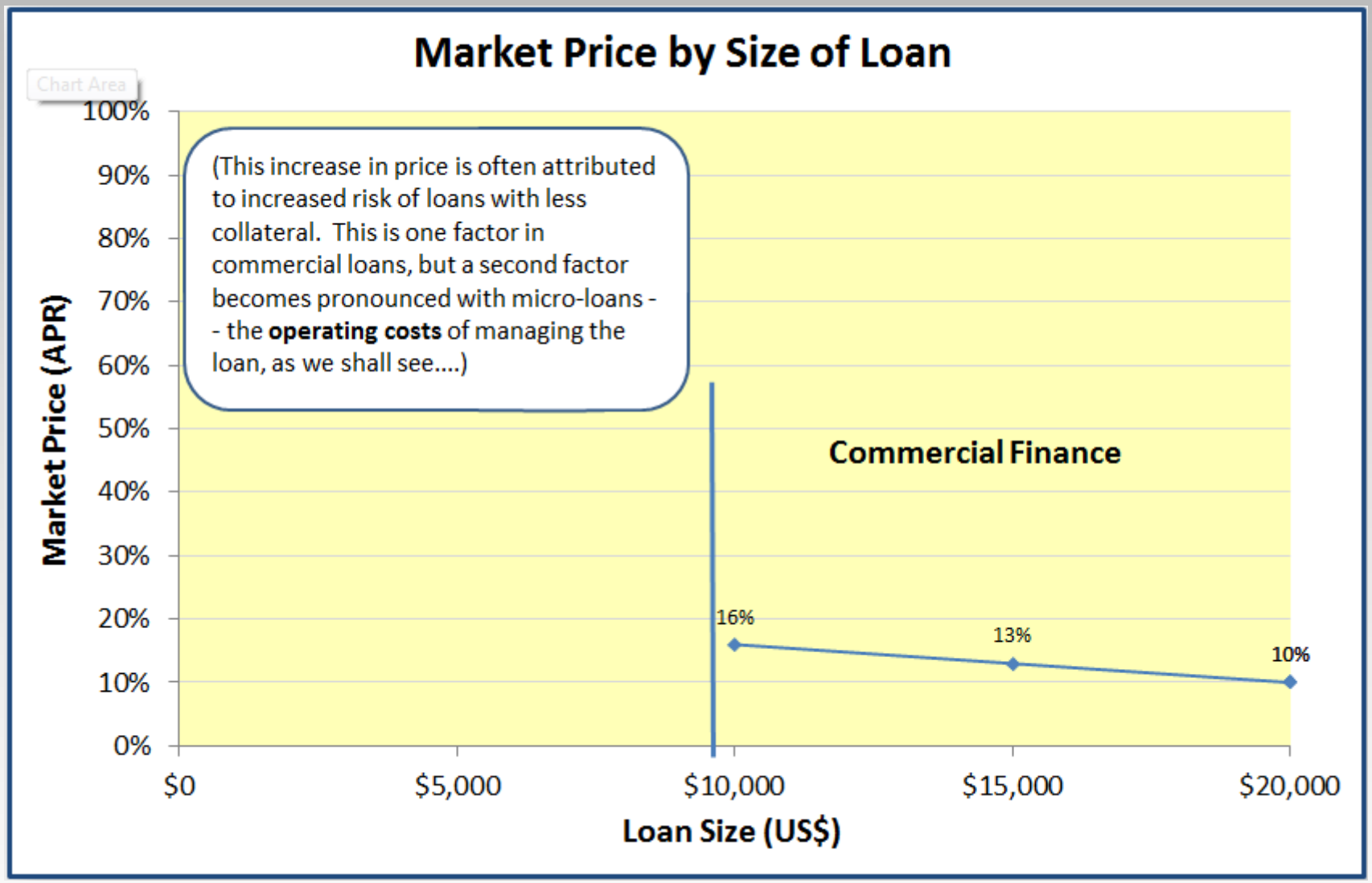

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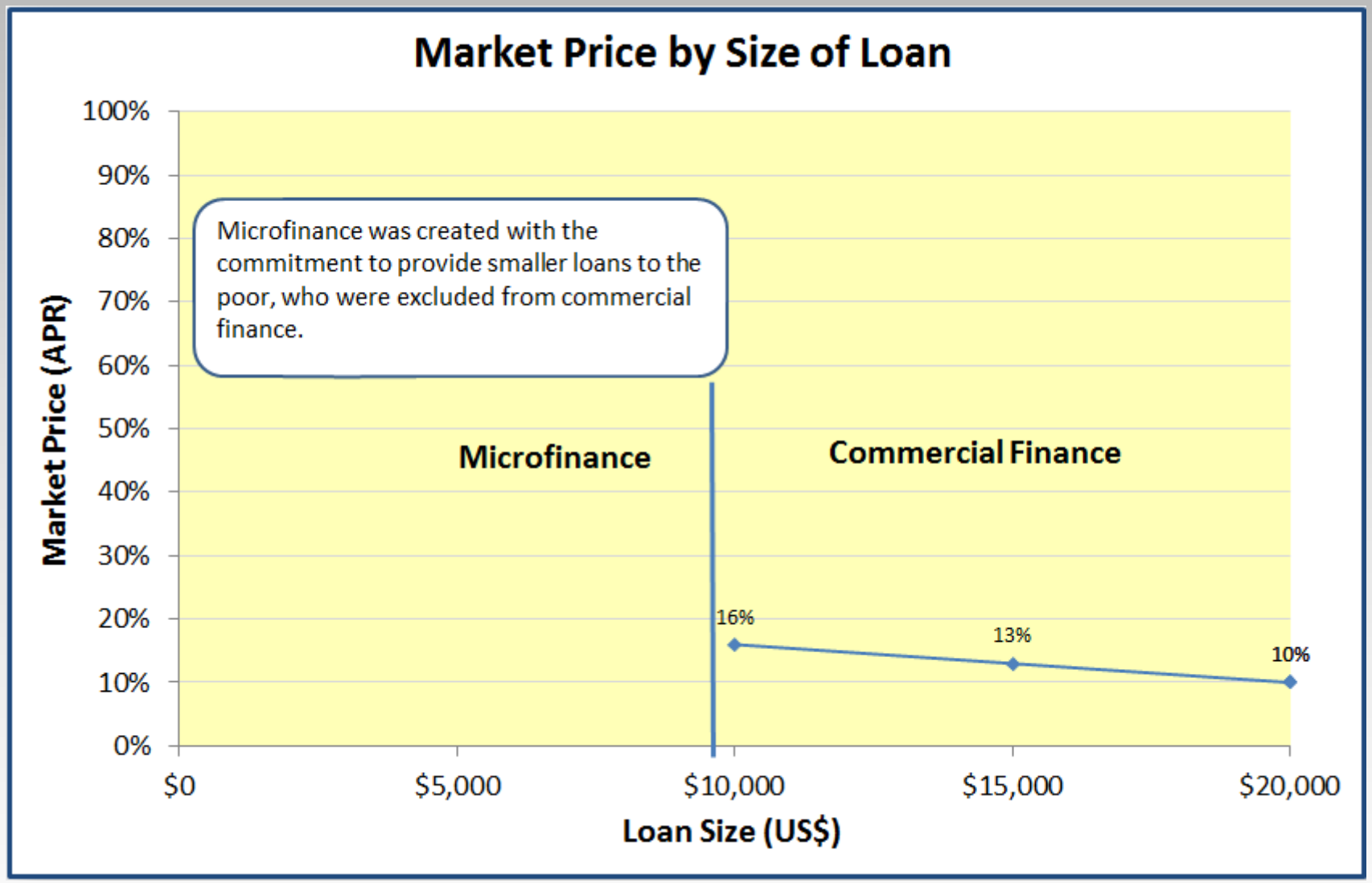

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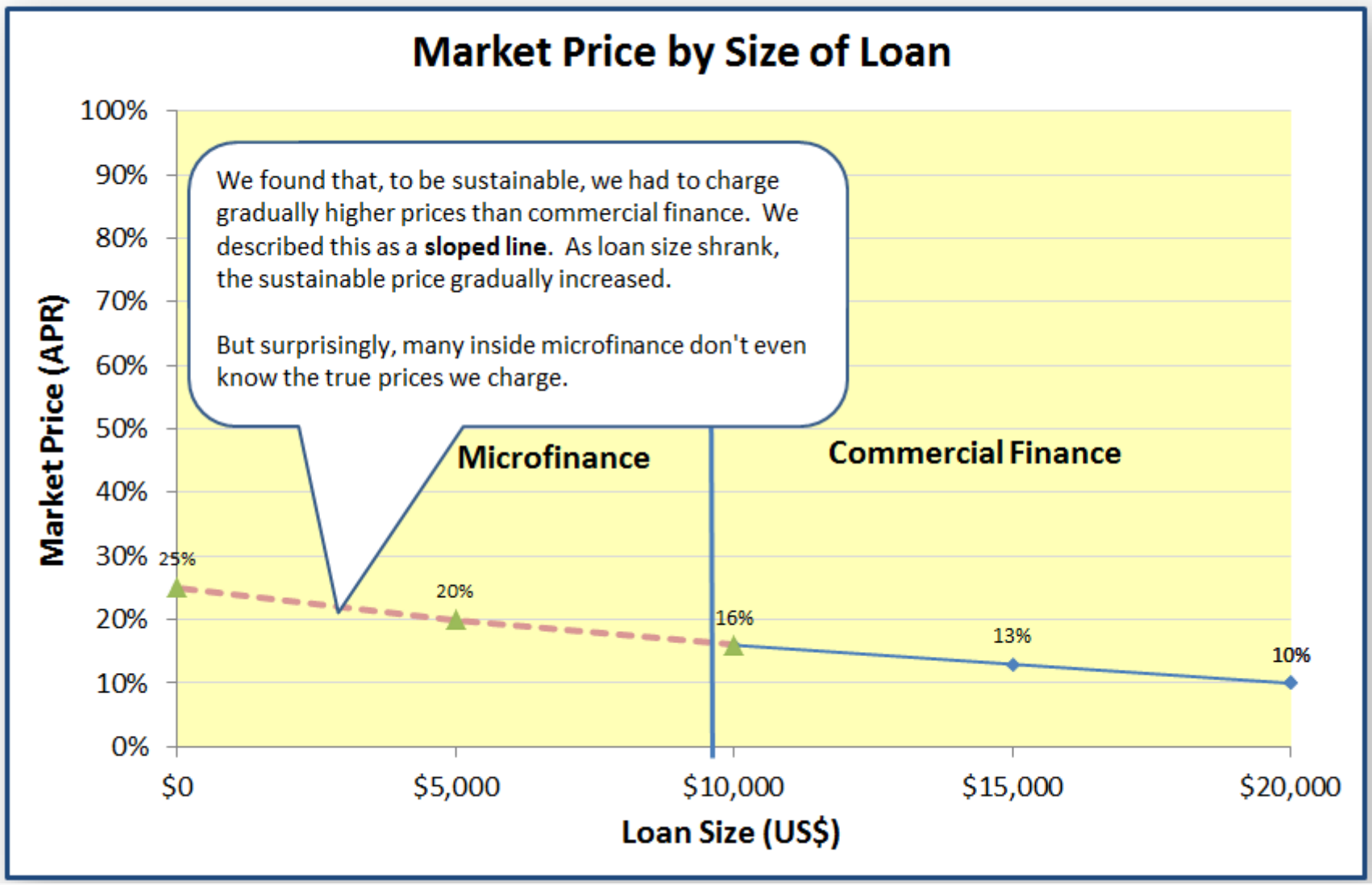

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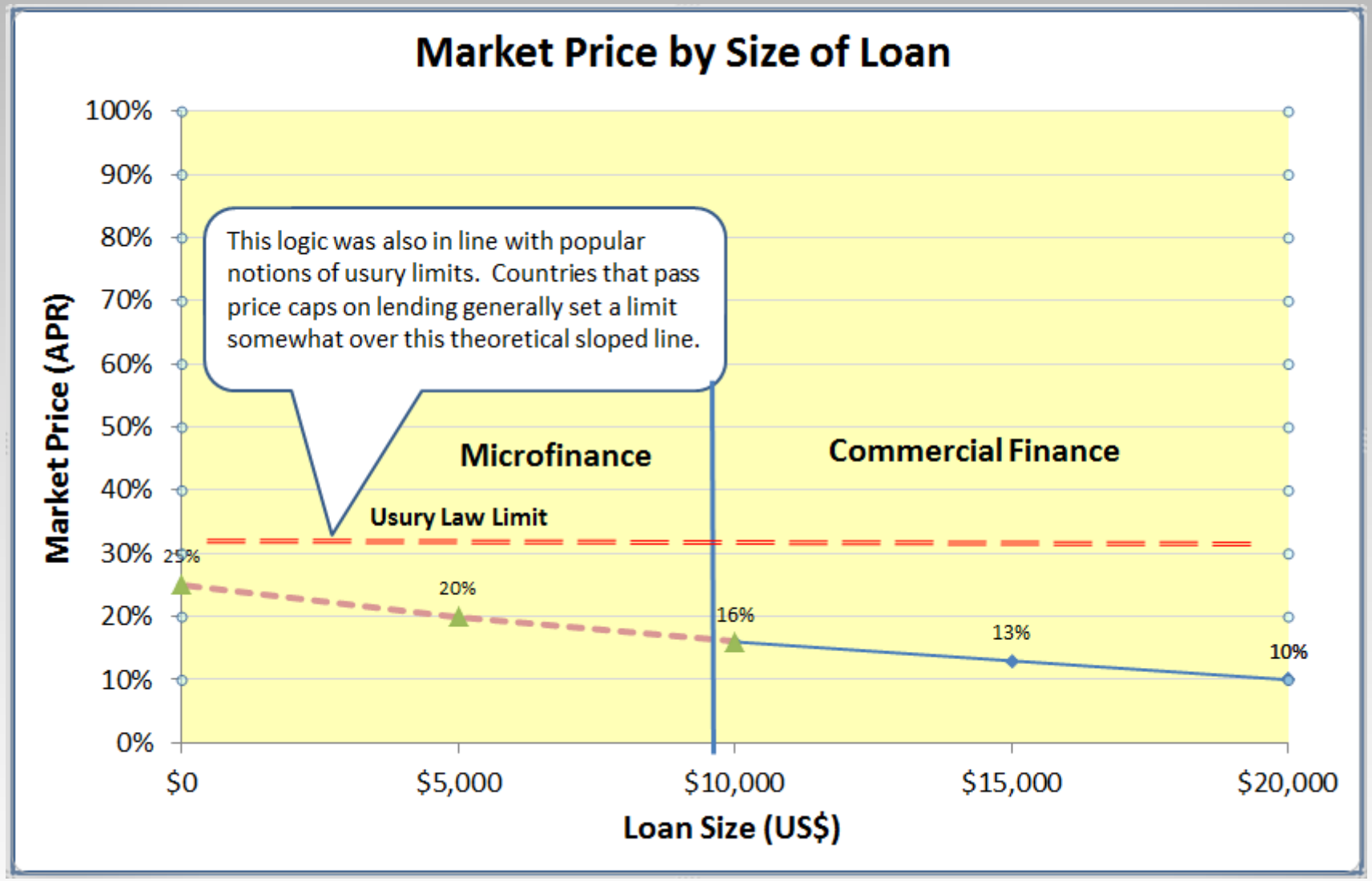

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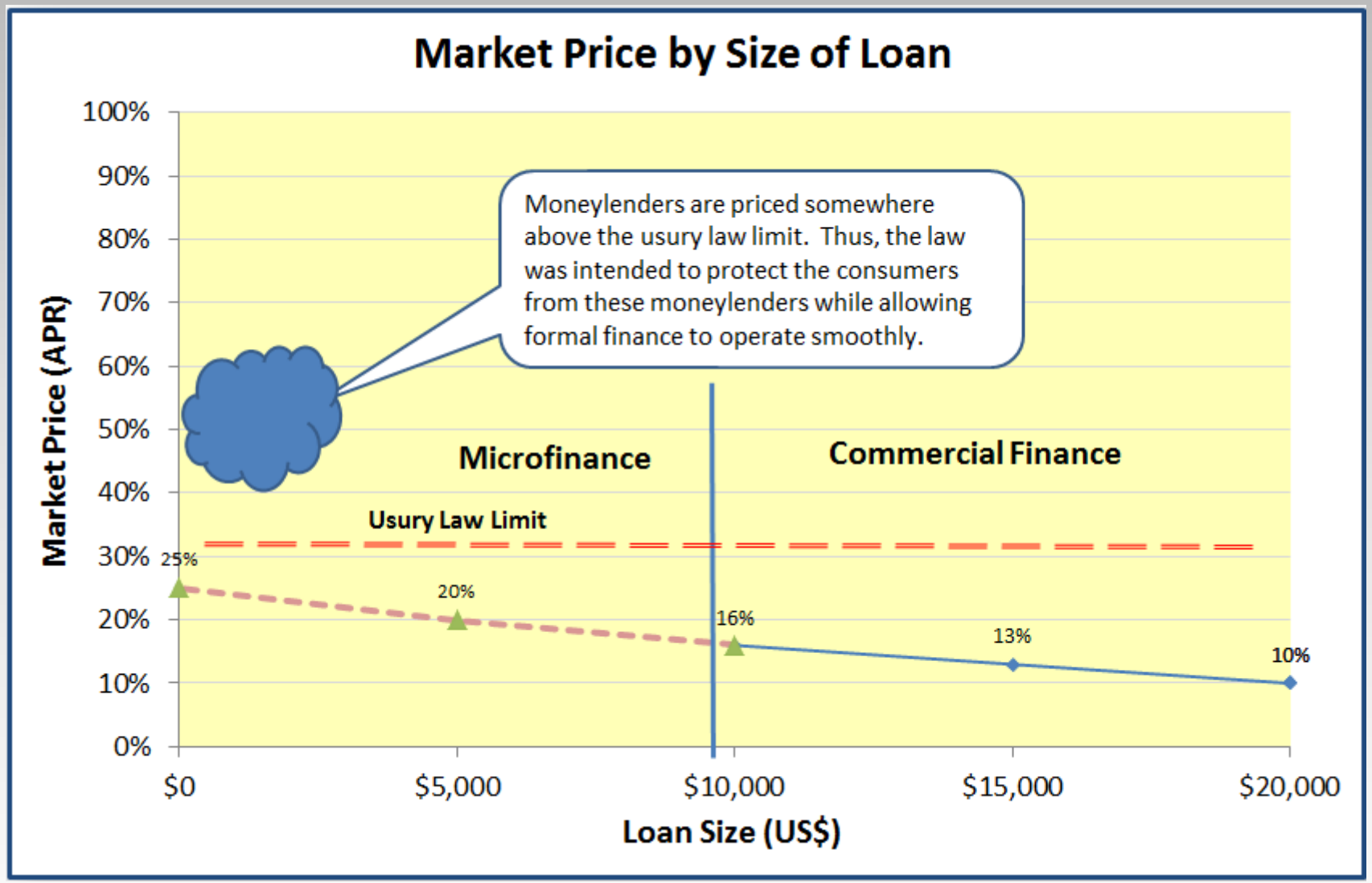

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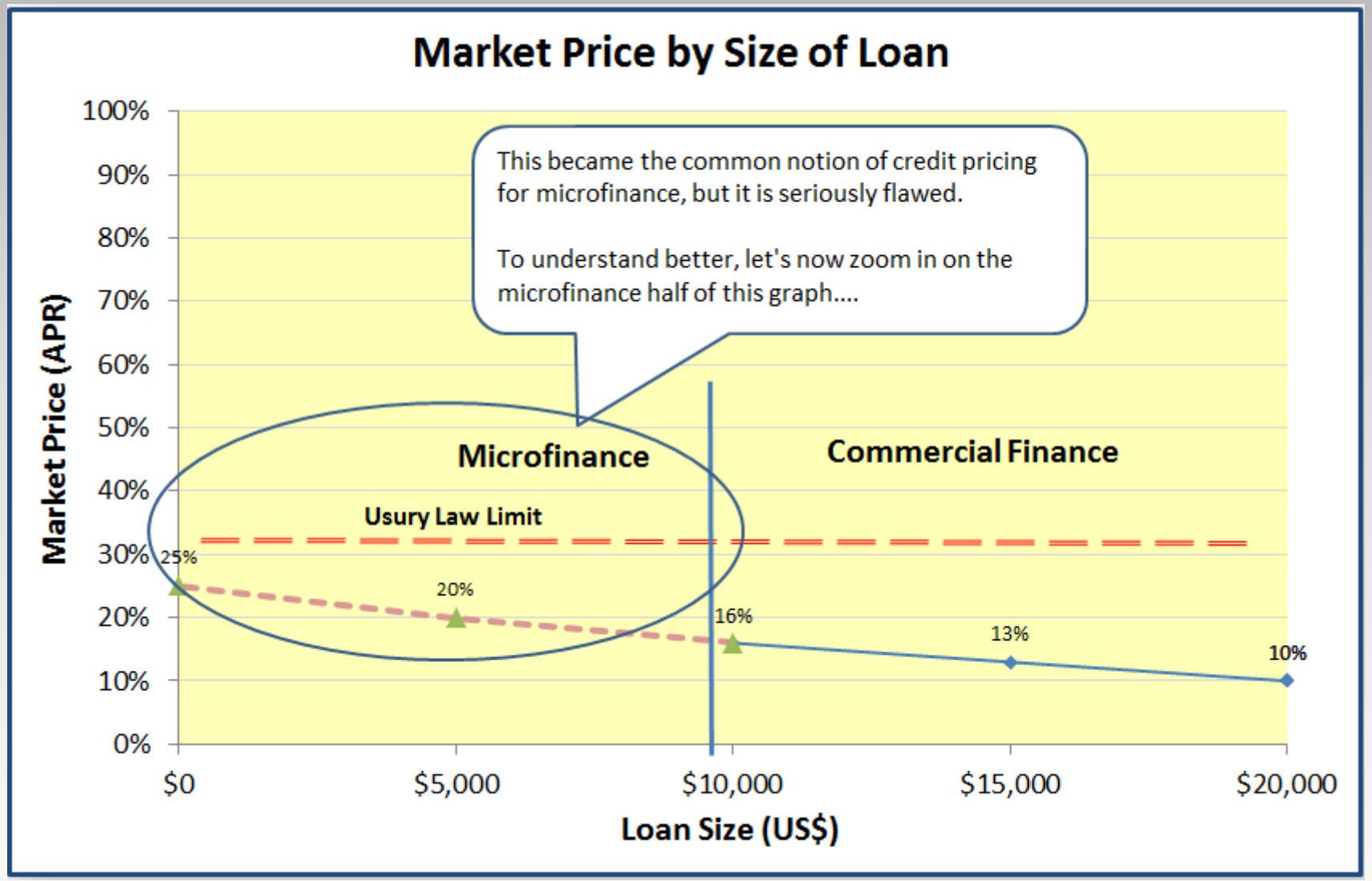

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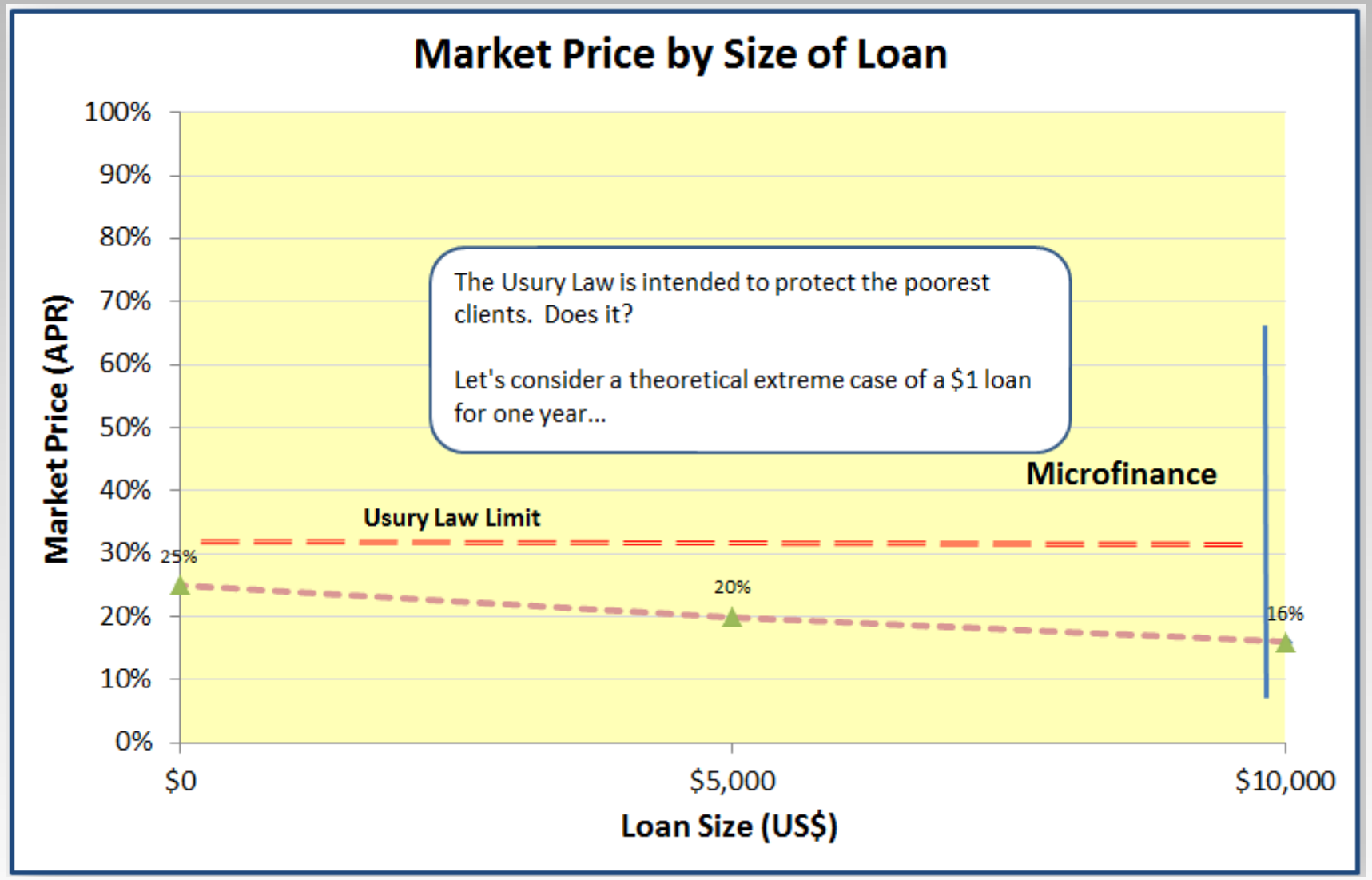

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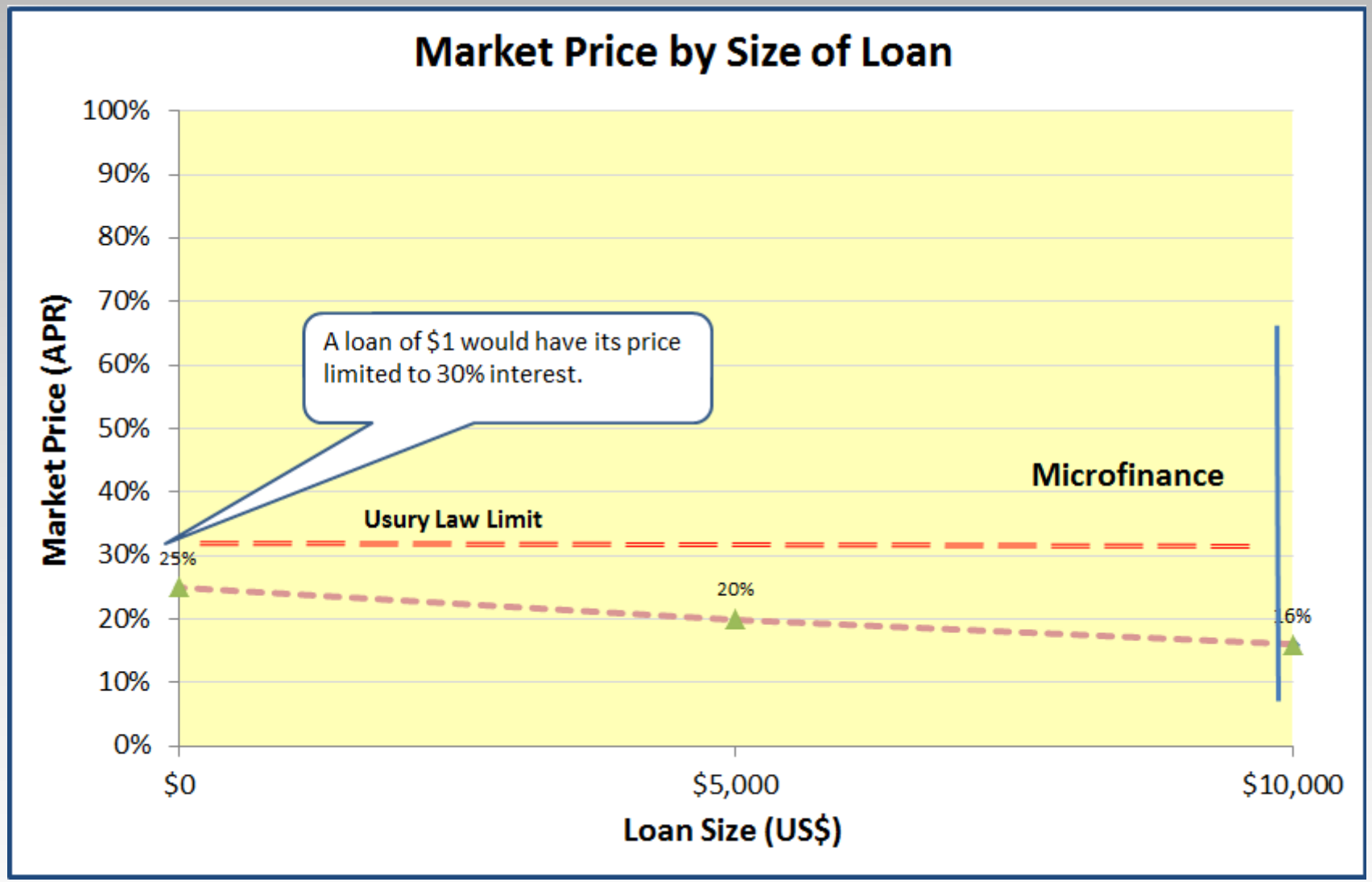

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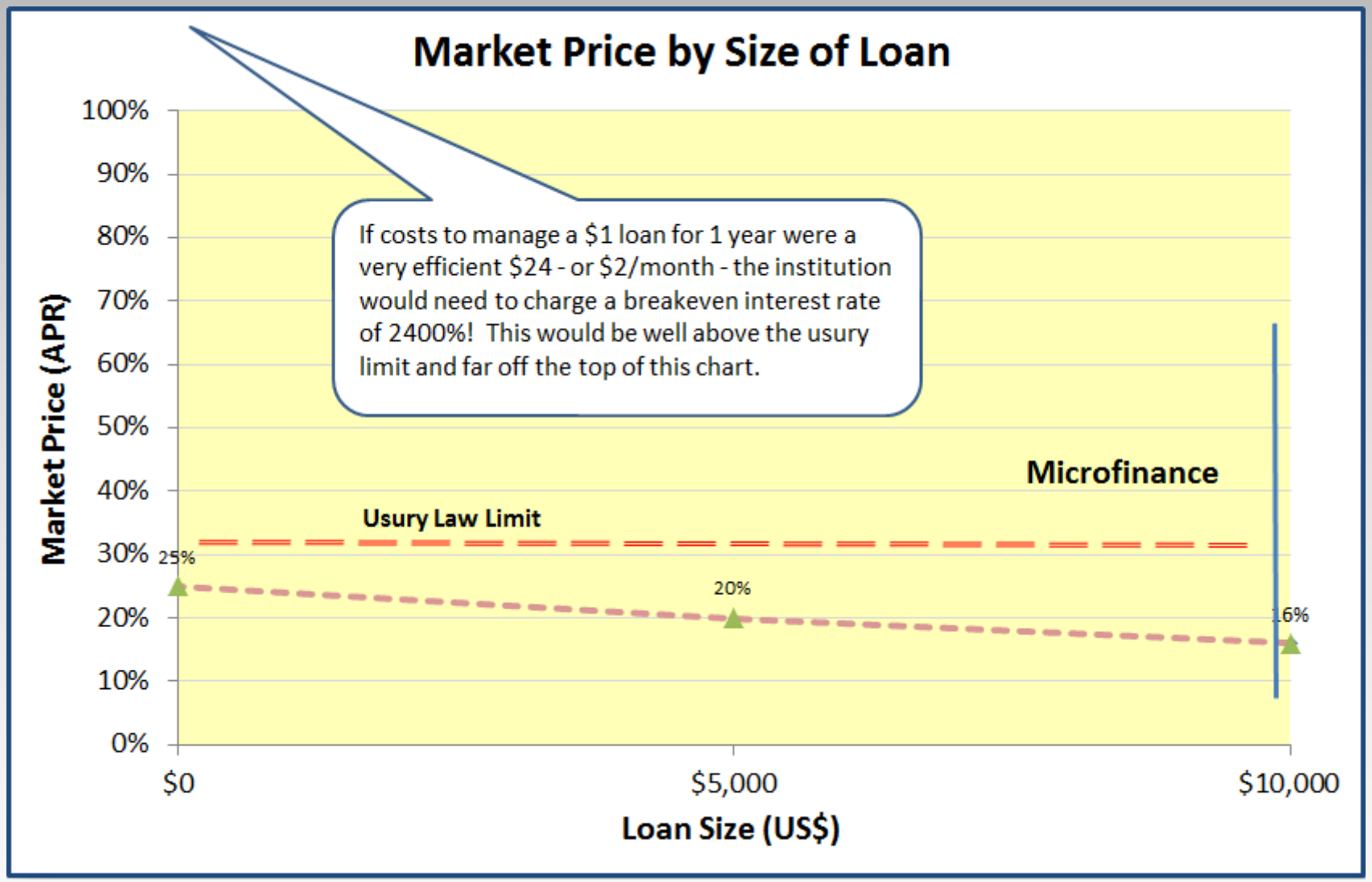

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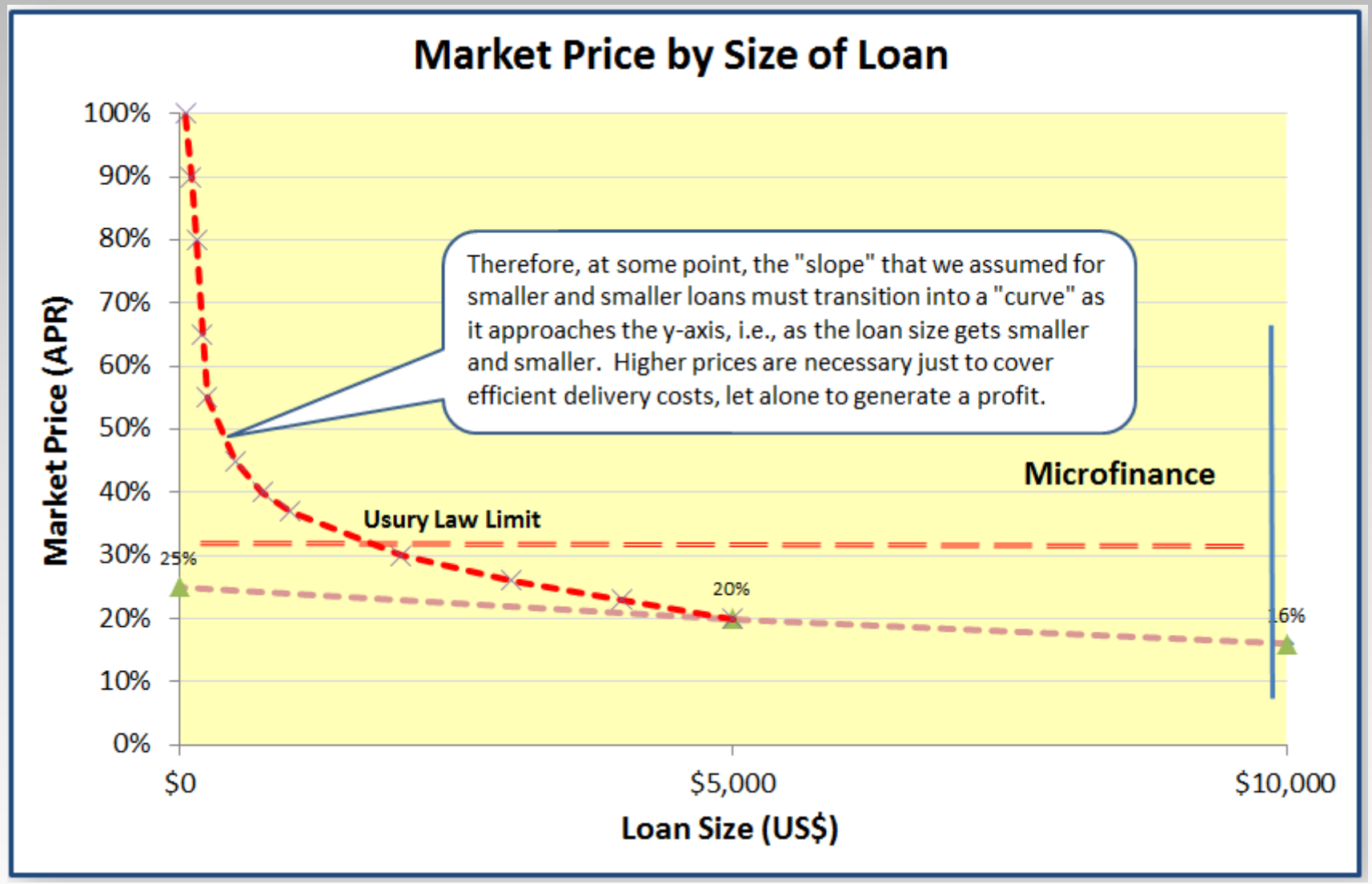

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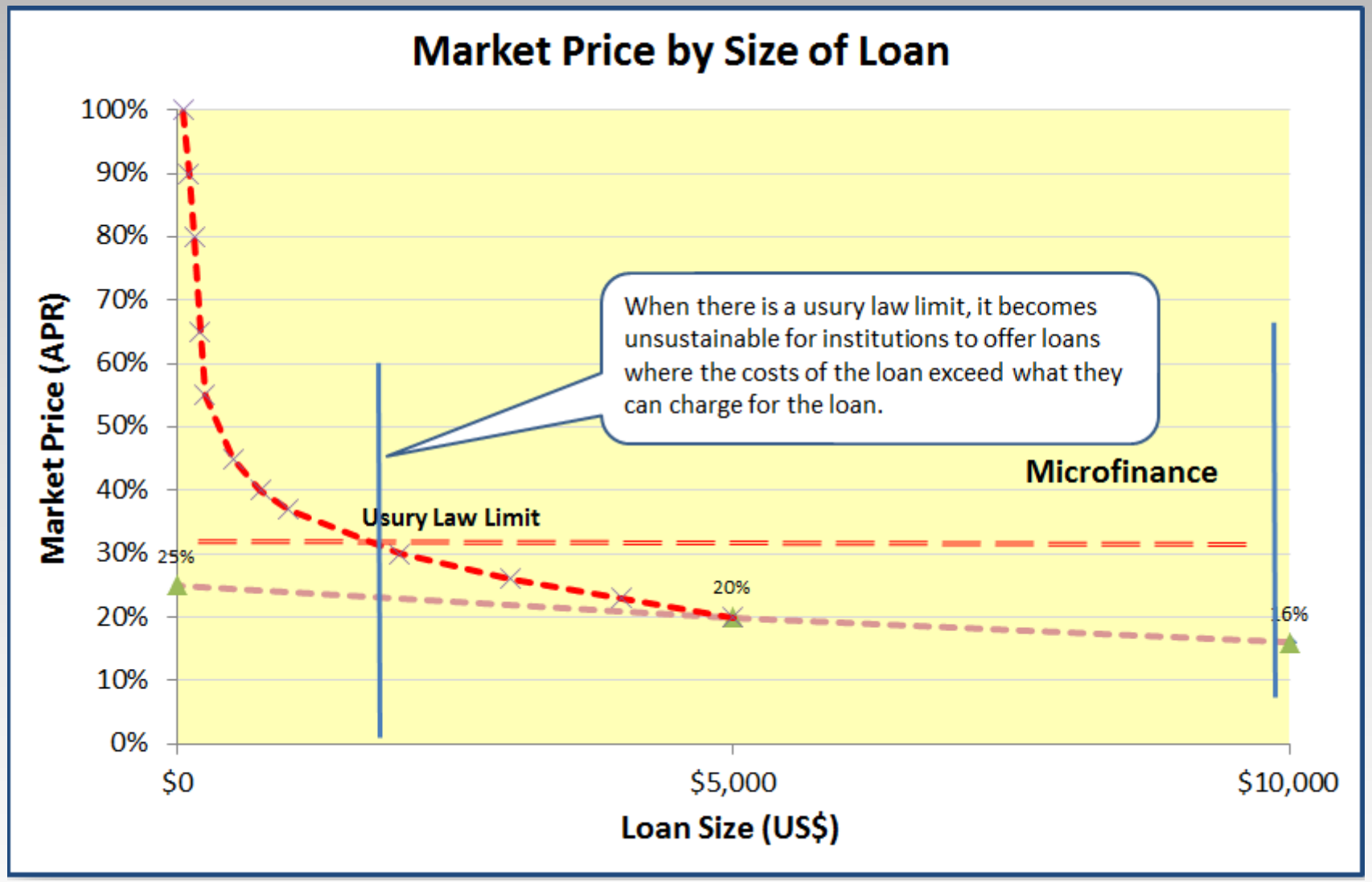
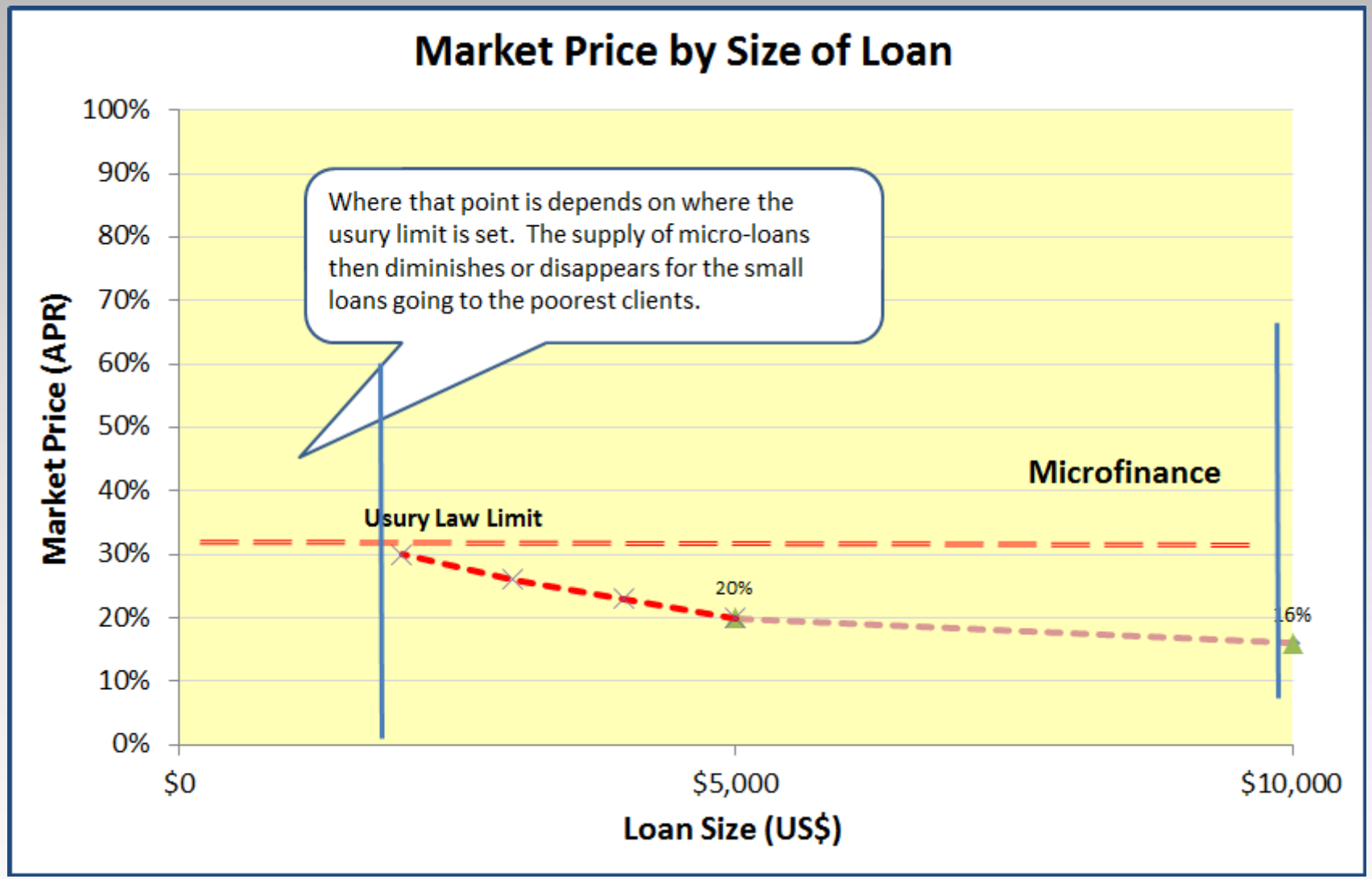

Market Price by Size of Loan
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Market Price (APR)
When there is a usury law limit, it becomes unsustainable for institutions to offer loans where the costs of the loan exceed what they can charge for the loan.
Microfinance
Usury Law Limit
25%
20%
16%
$0
$5,000
$10,000
Loan Size (US$)



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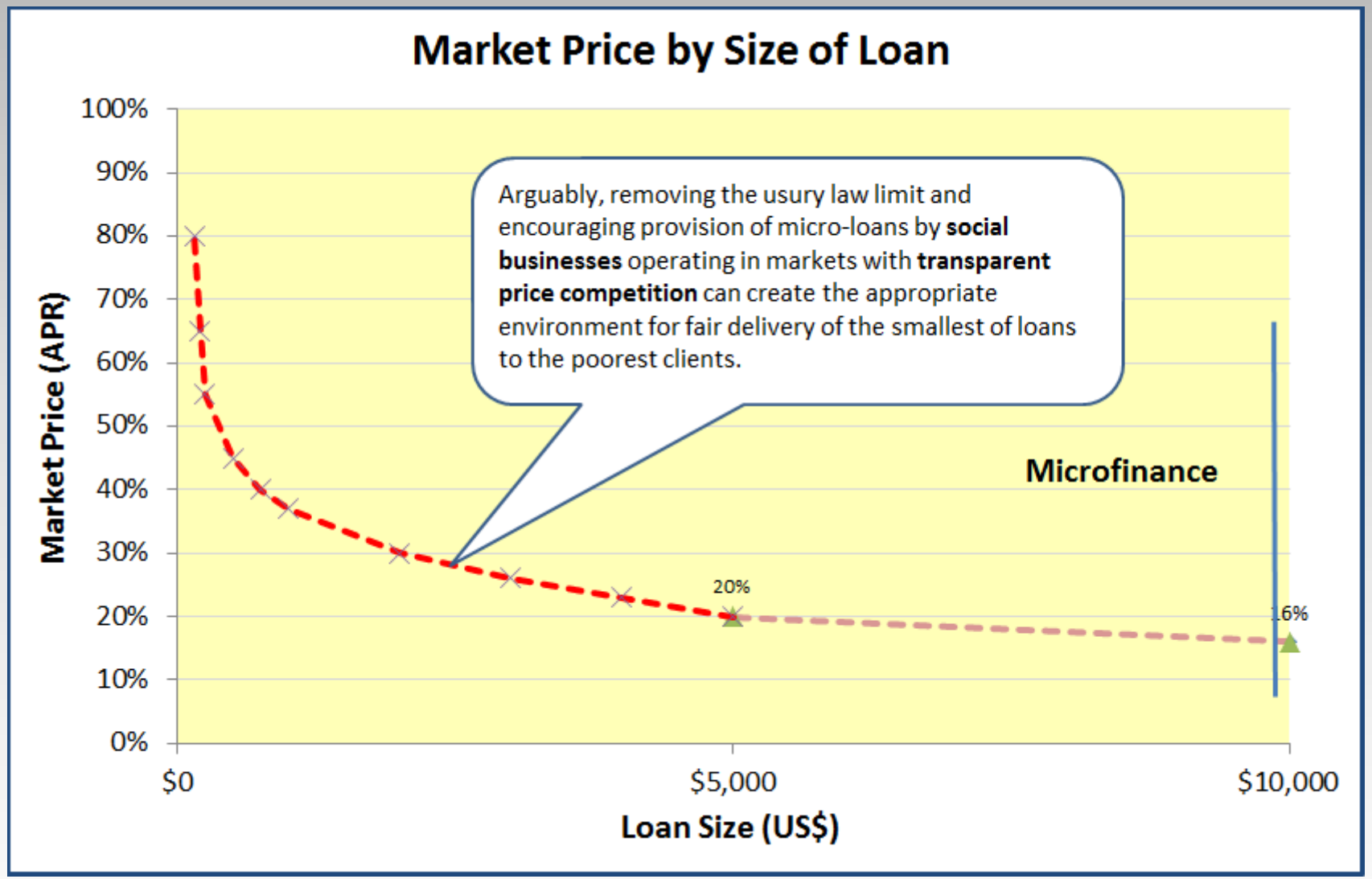

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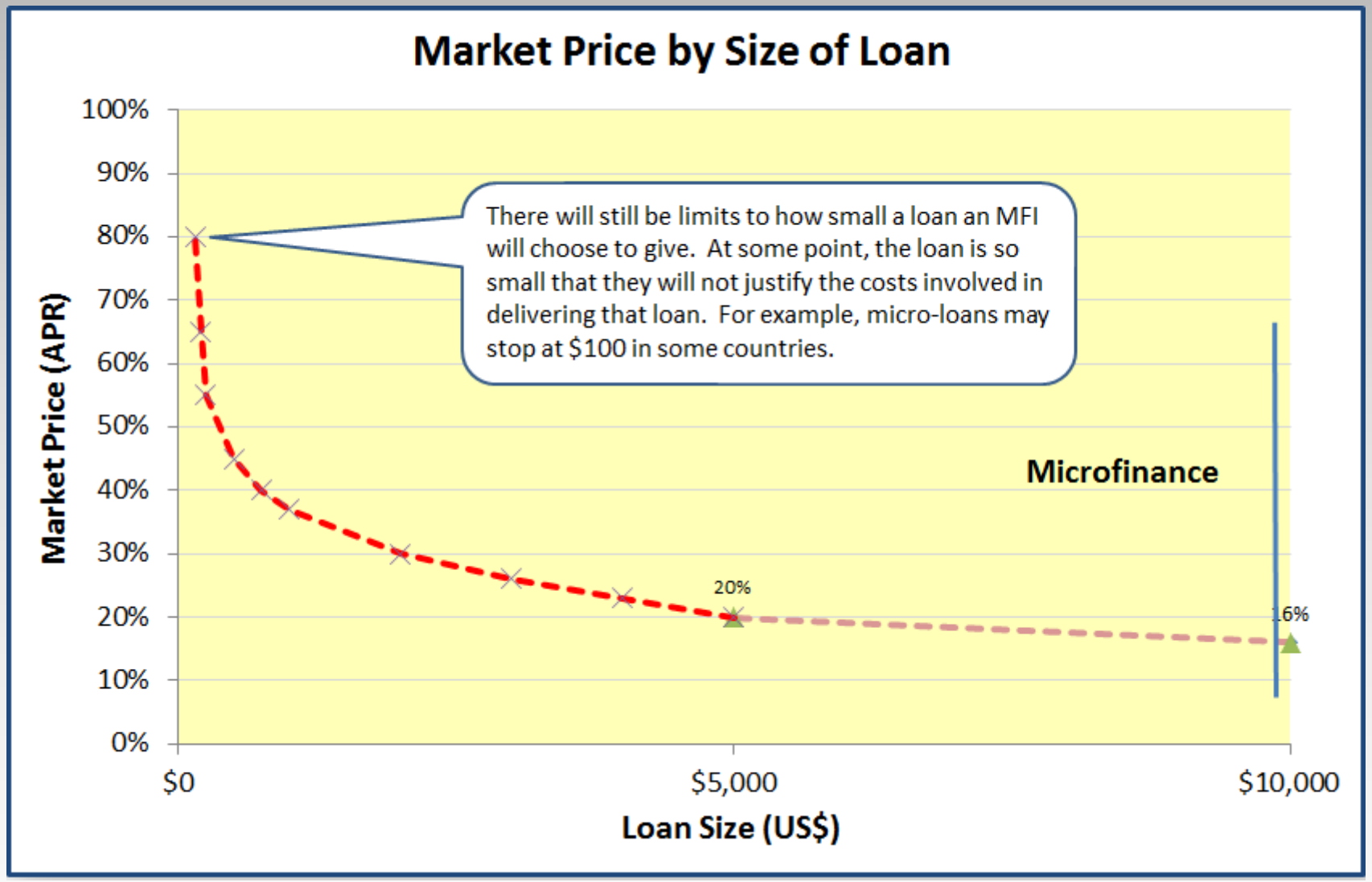

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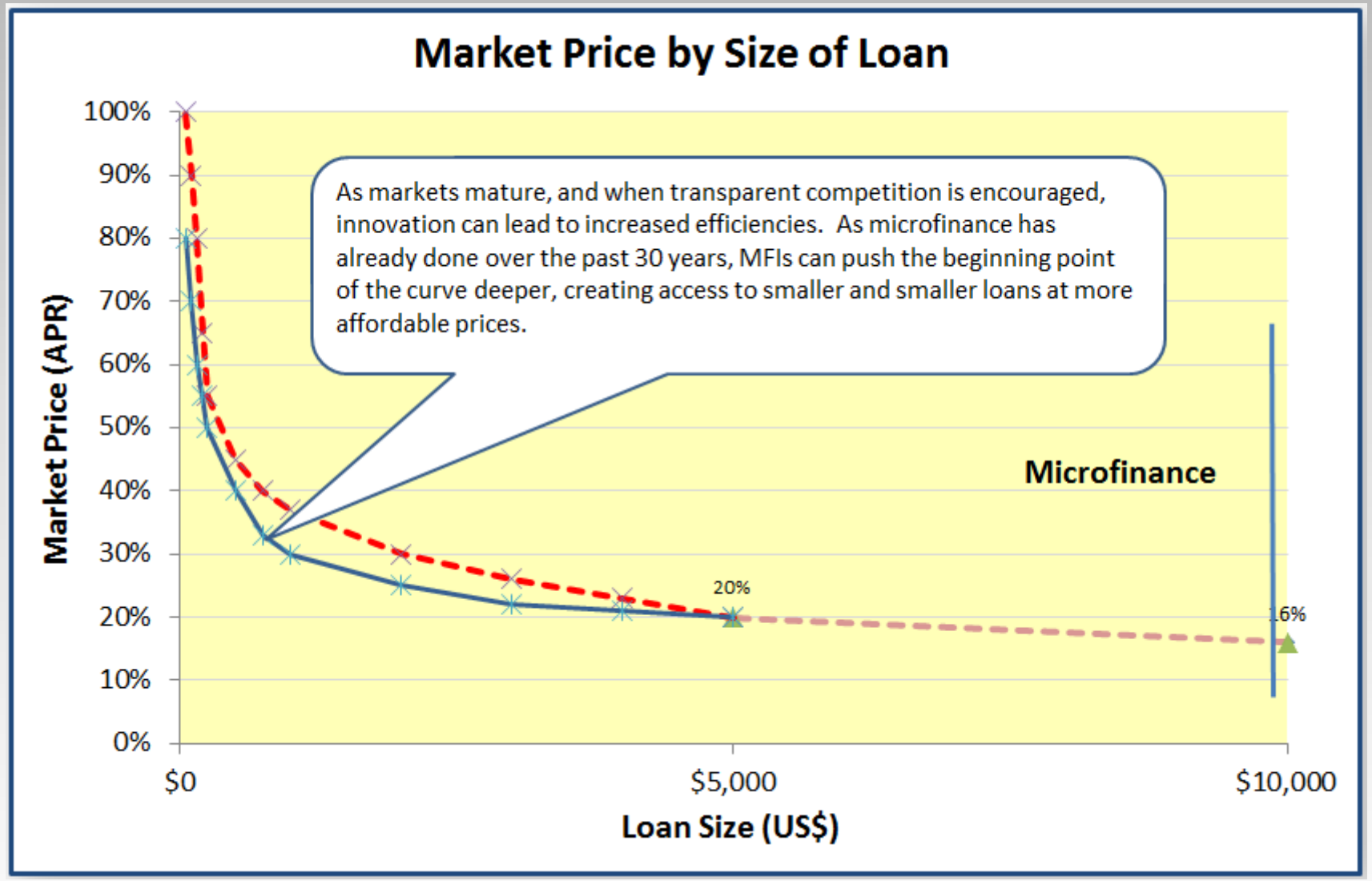

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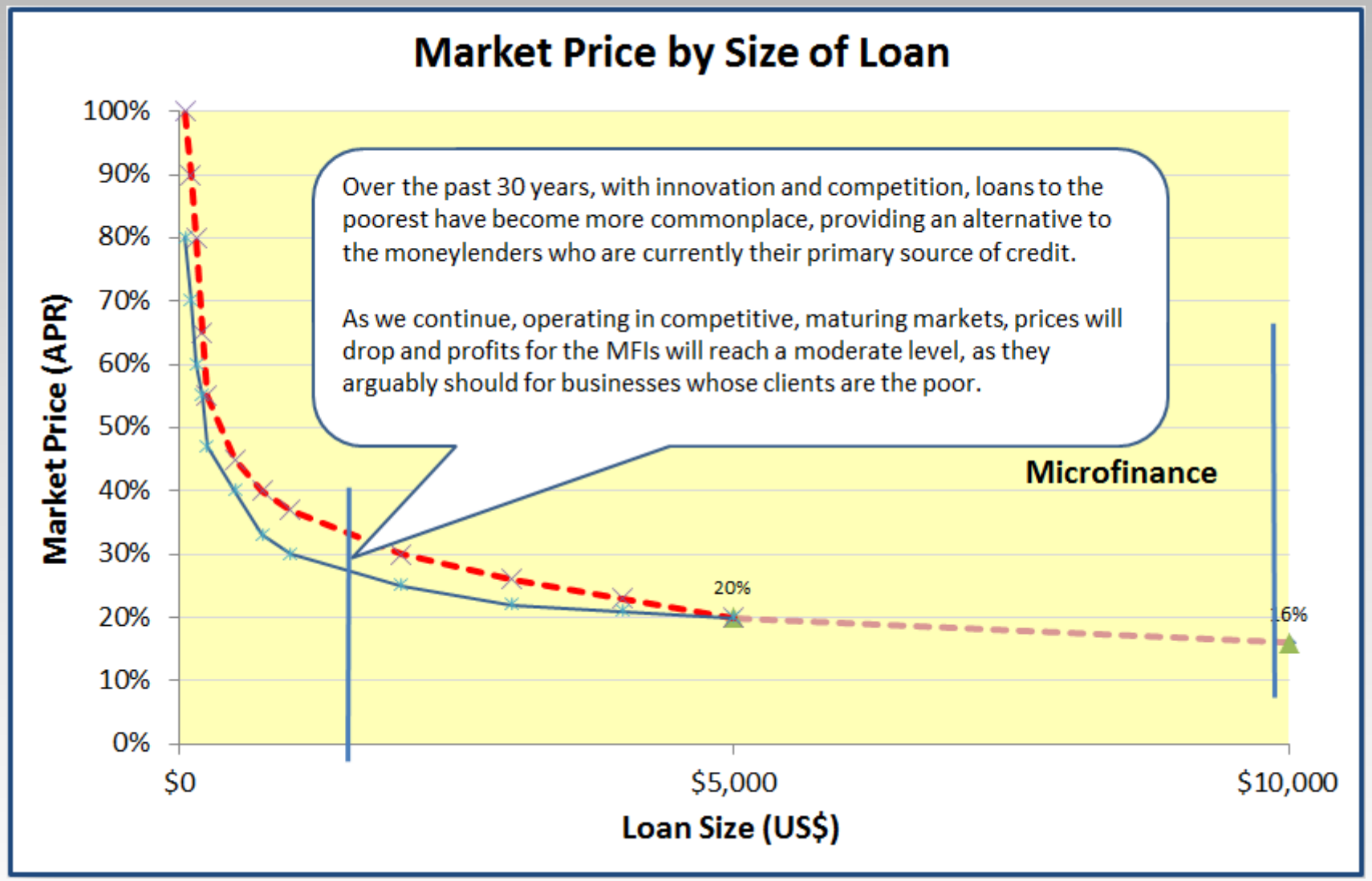

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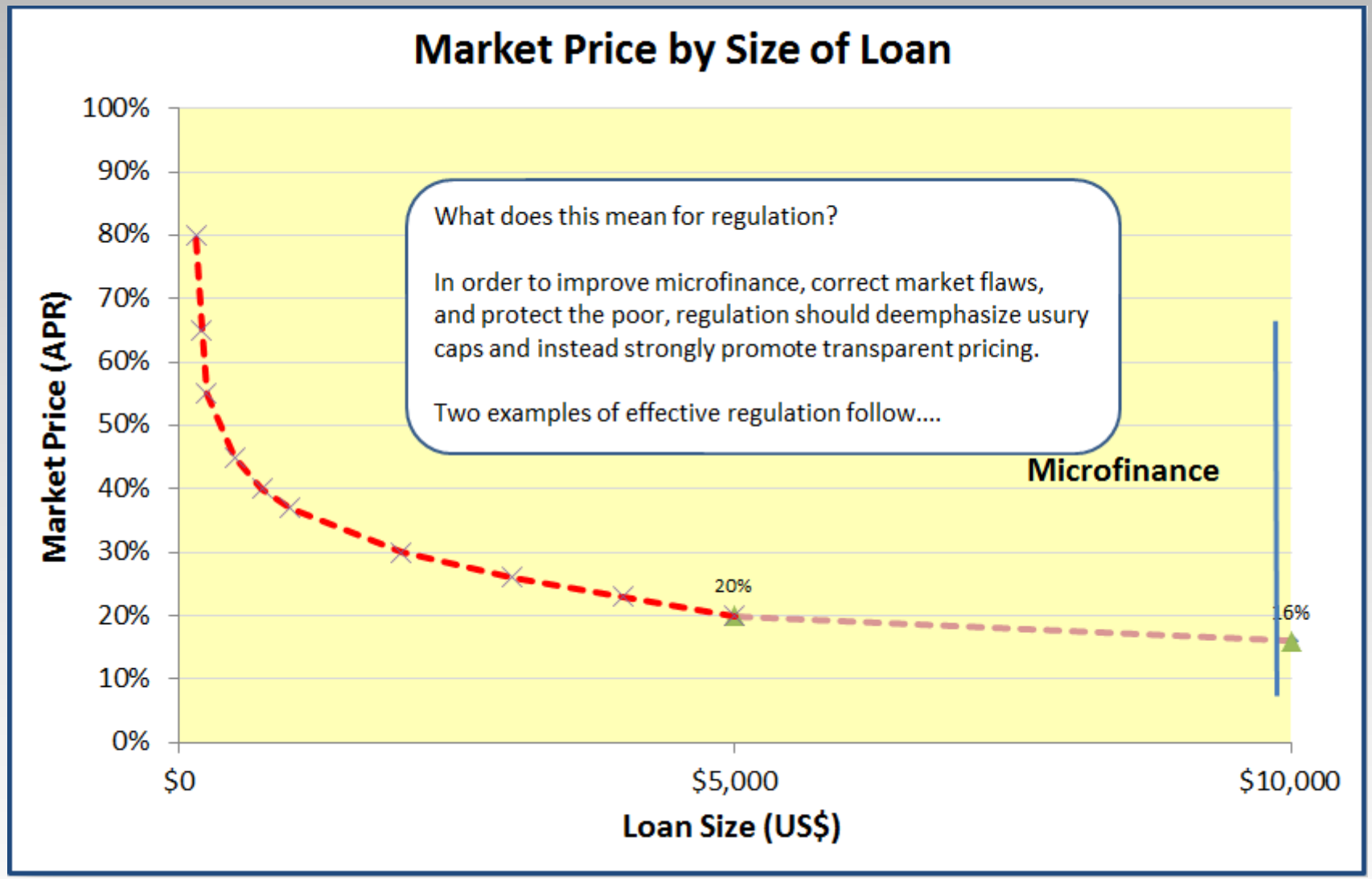

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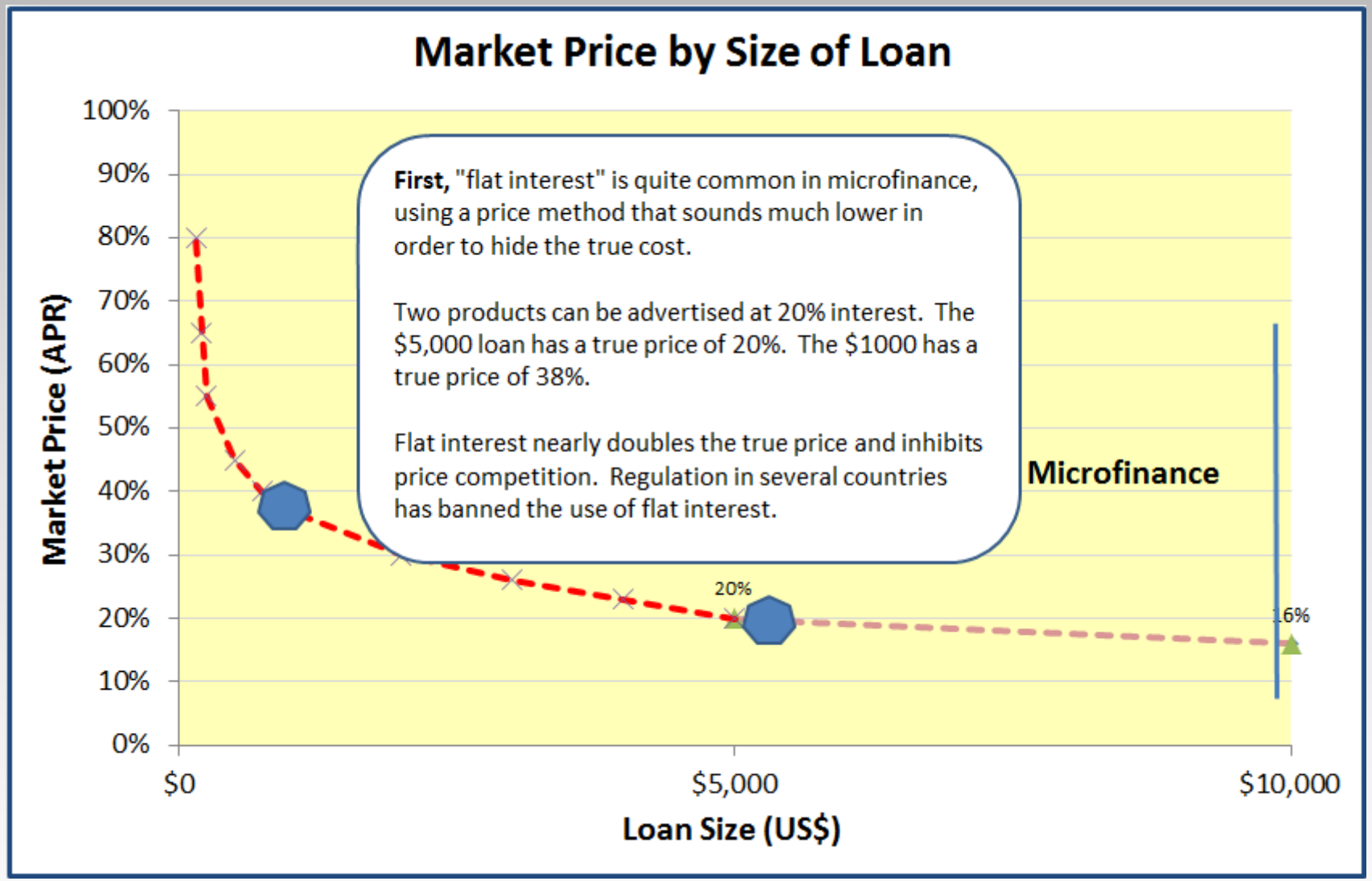

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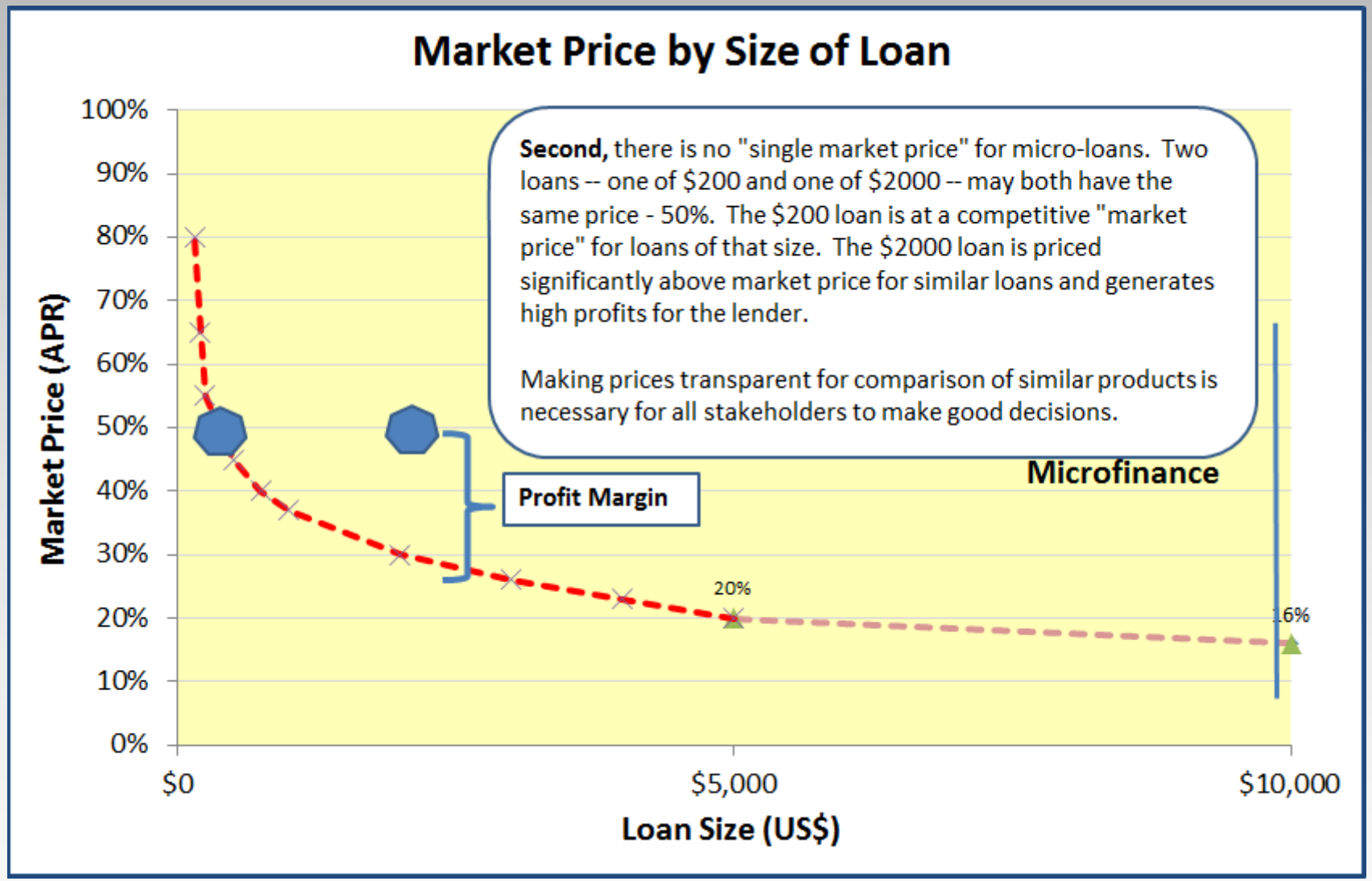

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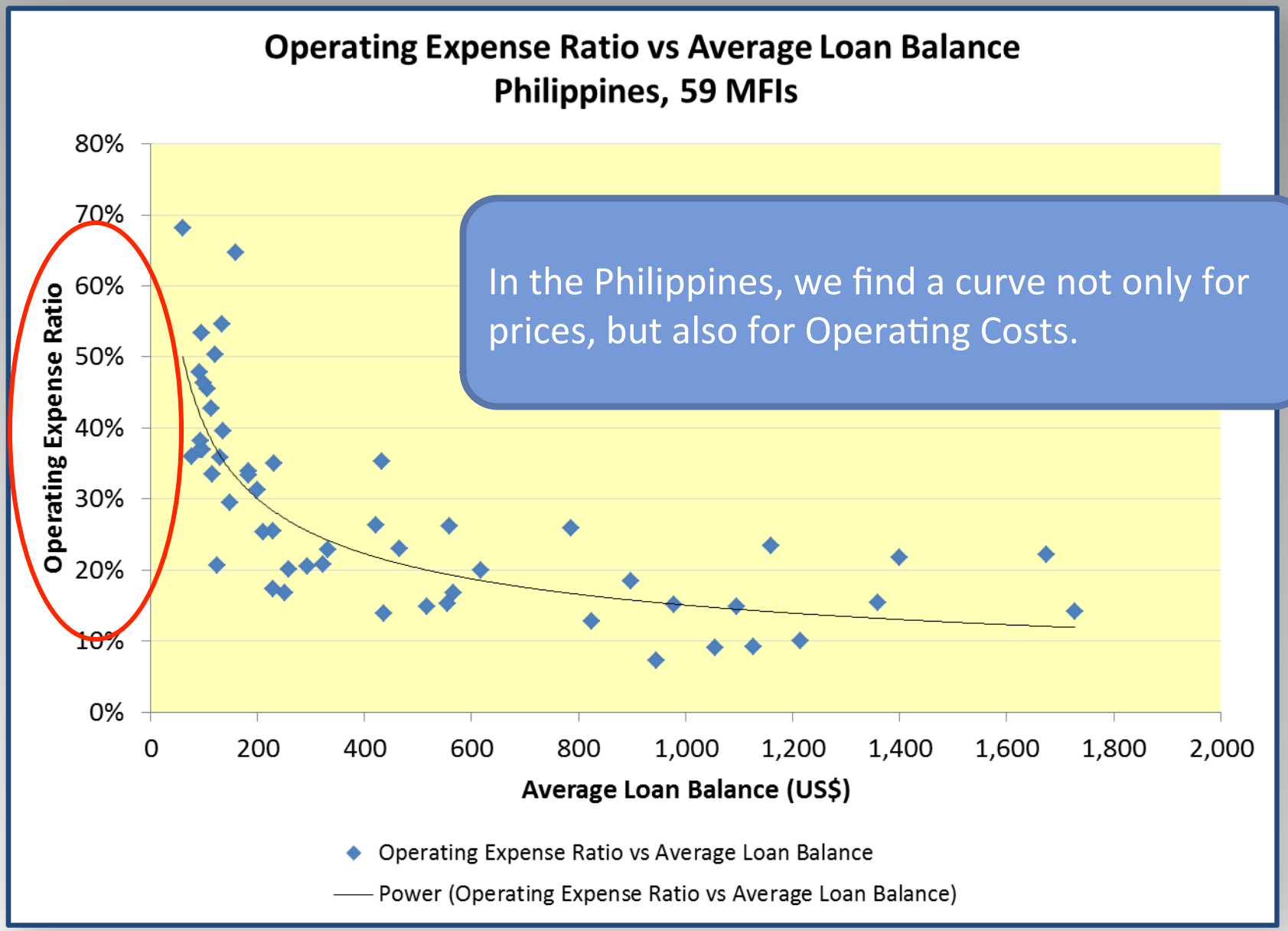
The Cost Curve - Introduction

Why is there a price curve for micro-loans?



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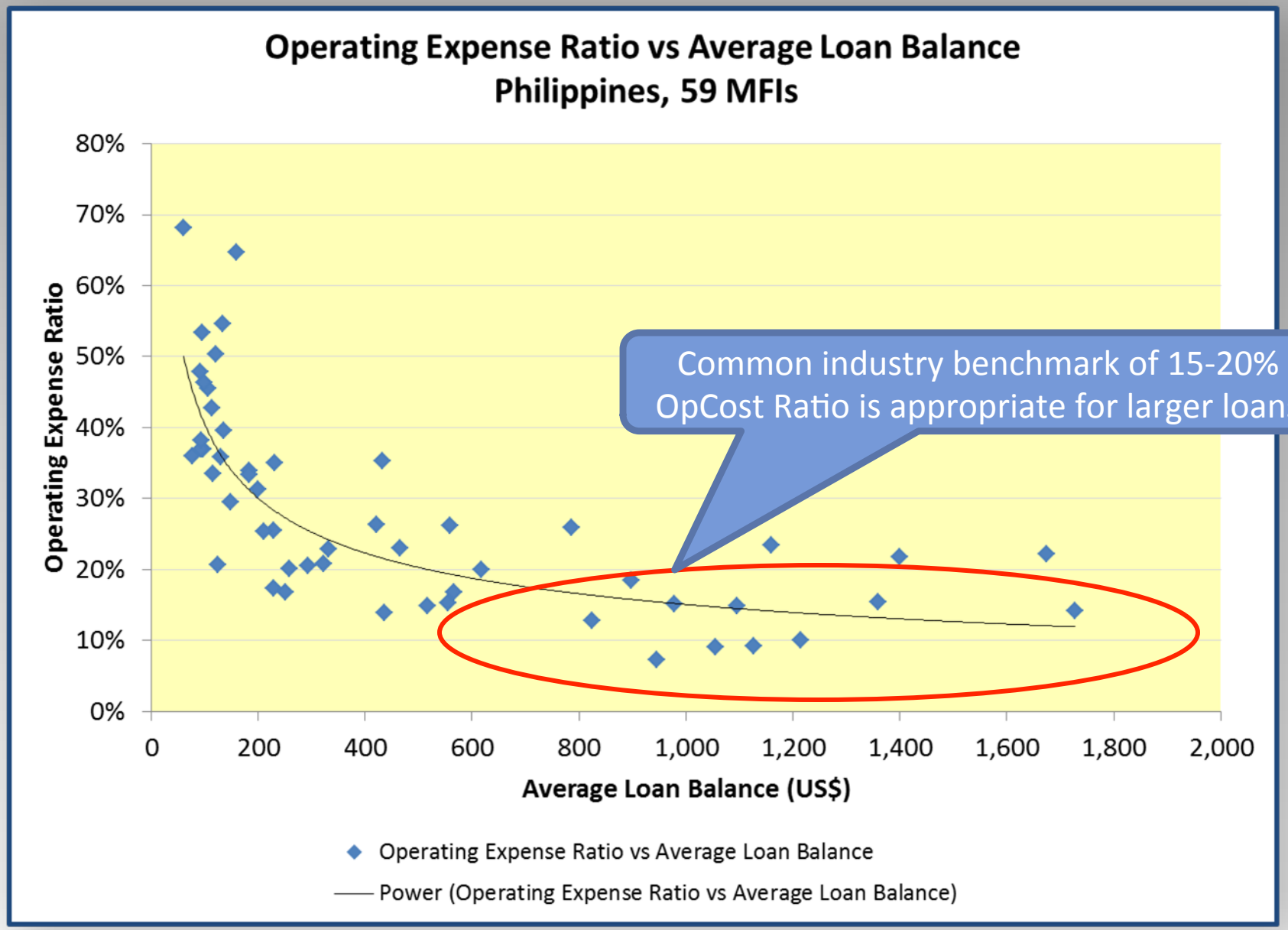

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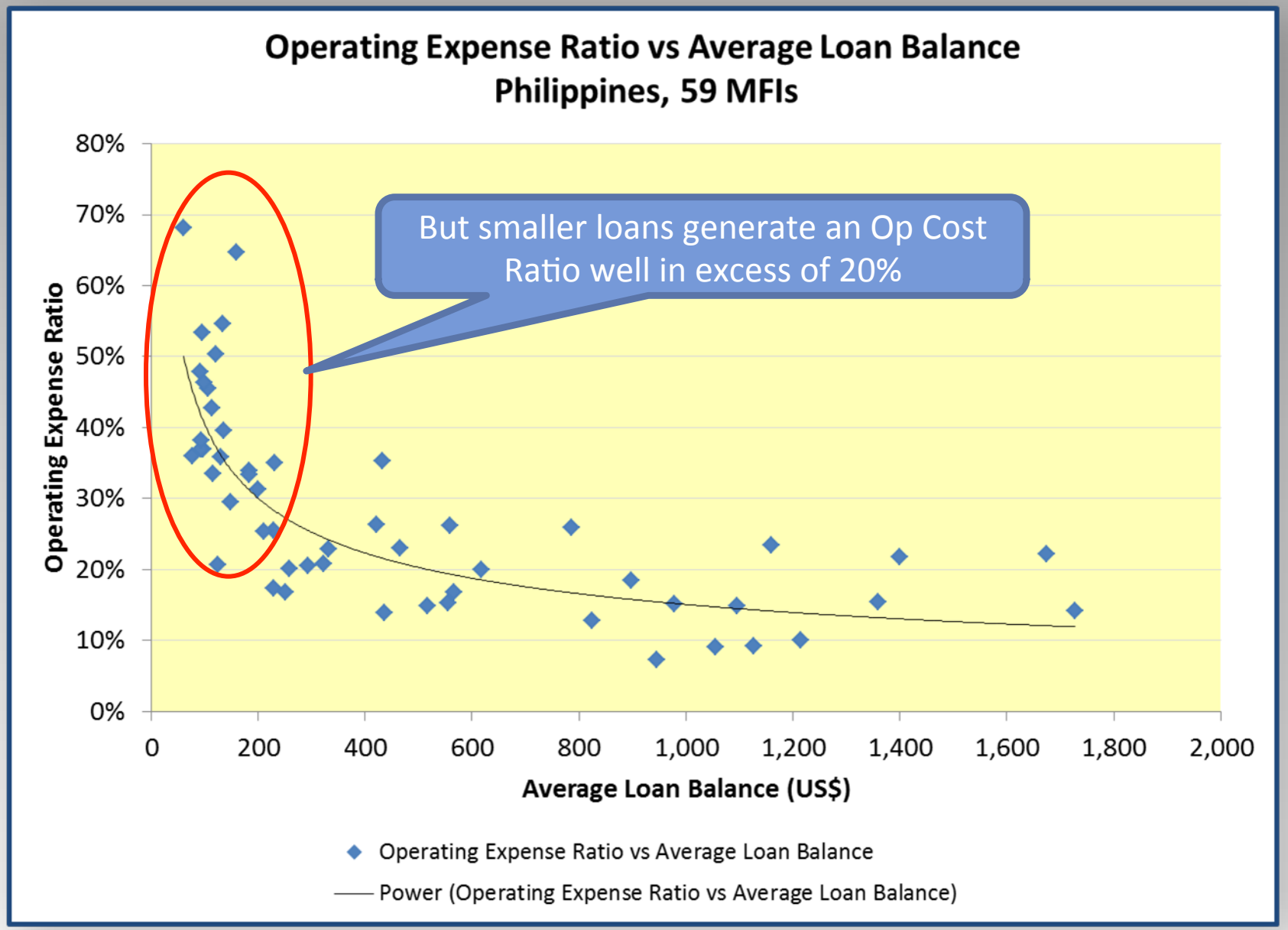

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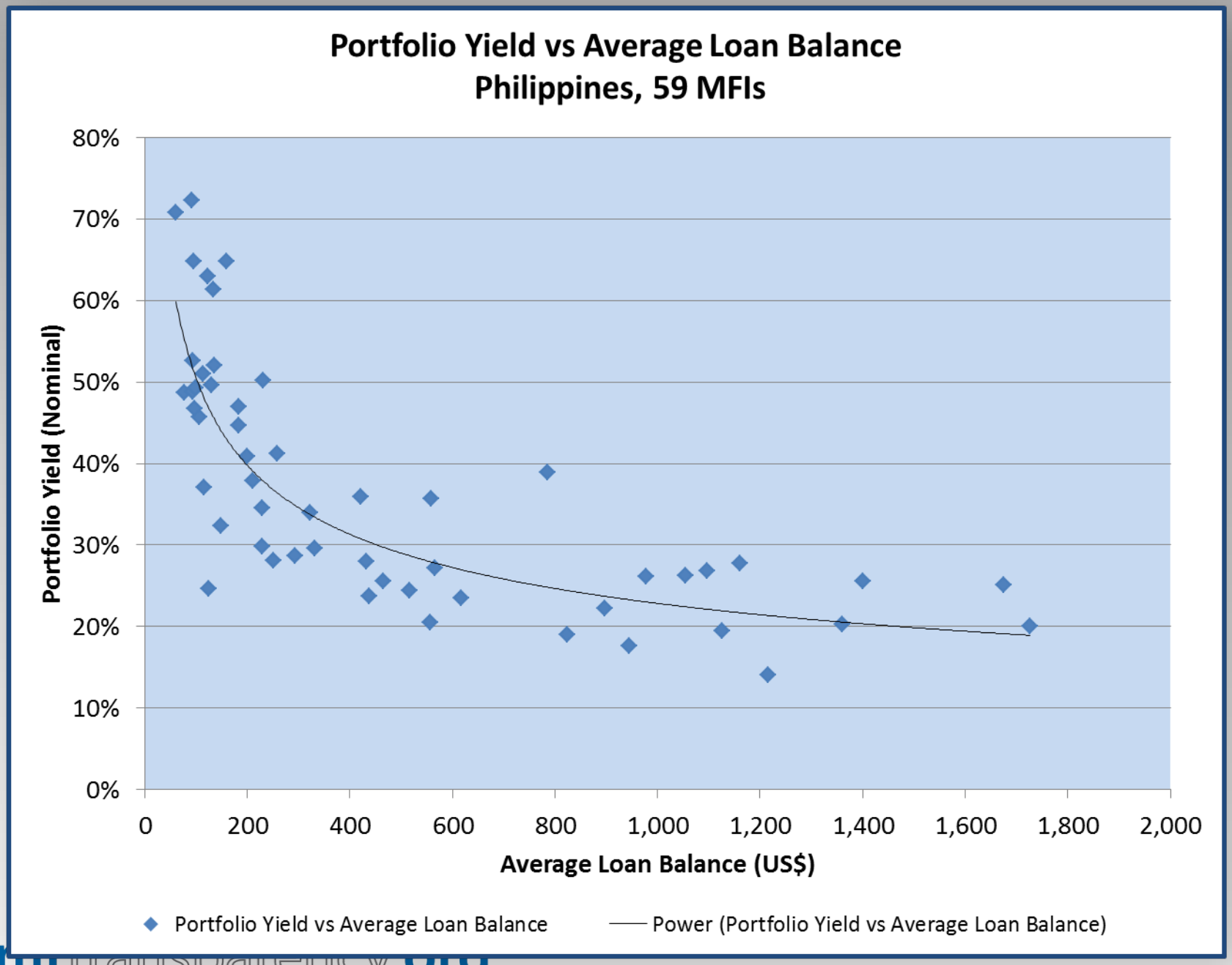

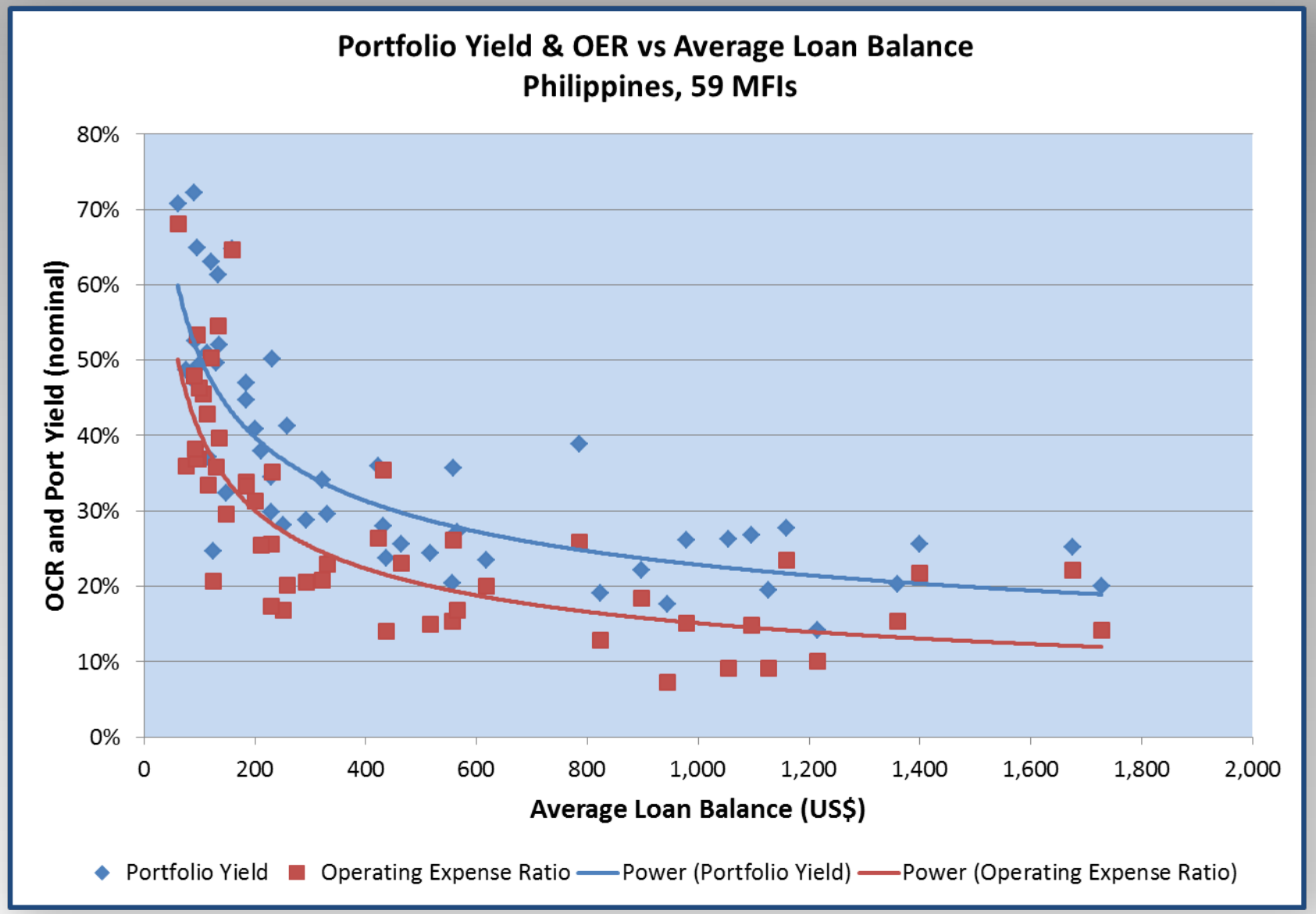

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