

MAY 2009

SHEDDING LIGHT ON MICROFINANCE VALUATION: PAST & PRESENT

CGAP - Xavier Reille

J.P. Morgan - Frederic de Mariz

STRICTLY PRIVATE AND CONFIDENTIAL

**J.P.Morgan**

 CGAP

### Important Notice

This presentation is not a J.P. Morgan Research report. Unless otherwise indicated, the opinions, views and commentary expressed herein are those of its authors and may differ from those of J.P. Morgan, which has not reviewed, and does not assume any responsibility for the contents of, this presentation. In no event should anything herein be construed as advice or recommendations of J.P. Morgan, which disclaims any and all liability relating to this presentation and its contents.

This presentation is for discussion purposes only and is not intended to support the promotion or marketing of any microfinance institutions, transactions or other matters discussed herein. Nothing herein is an offer or solicitation to purchase or sell any security or financial instrument or participate in any trading or investment strategy.

Information in this presentation has been obtained from sources believed to be reliable, but no representation can be given as to its accuracy or completeness. J.P. Morgan has not verified, and does not undertake to correct, update or supplement, any information herein.

Forward-looking statements contained in this presentation are subject to certain inherent limitations. Forward-looking statements are statements that are not purely historical in nature and may be identified by words like "anticipate," "believe," "plan," "hope," "goal," "initiative," "expect," "future," "intend," "will," "could" and "should" and by similar expressions. Undue reliance should not be placed on forward-looking statements. Actual results could differ materially from those referred to in forward-looking statements for many reasons. Forward-looking statements are necessarily speculative in nature, and some of or all the assumptions underlying any forward-looking statements may not materialize or may vary significantly from actual results. Variations between assumptions and results may be material.

This presentation may also contain information about the historical performance of one or more microfinance institutions as well as certain relevant markets; however, such information is not a reliable indicator of future performance and may not represent all material trends. Past performance is no guarantee of future results.

\* \* \* \* \*

J.P. Morgan is the marketing name for the investment banking businesses of JPMorgan Chase & Co. and its subsidiaries worldwide. Securities, syndicated loan arranging, financial advisory and other investment banking activities are performed by a combination of J.P. Morgan Securities Inc., J.P. Morgan plc, J.P. Morgan Securities Ltd. and the appropriately licensed subsidiaries of JPMorgan Chase & Co. in Asia-Pacific, and lending, derivatives and other commercial banking activities are performed by JPMorgan Chase Bank, N.A.

# Agenda

<b>Introduction</b>	<b>2</b>
Looking at Microfinance Financials: What is different from traditional banking	4
<ul style="list-style-type: none"> <li>n Double bottom line</li> <li>n High net interest margins</li> <li>n High asset quality</li> <li>n High operating costs</li> <li>n Longer term funding</li> </ul>	
Key drivers of valuation—evidence from private equity transactions	10
<ul style="list-style-type: none"> <li>n Main findings for multiples</li> <li>n 2 key drivers with statistical significance</li> <li>n Profitability is a driver of valuation (but no statistical evidence)</li> <li>n Other key drivers</li> </ul>	
Introducing the LIFI index—looking at past performance of MFIs	15
<ul style="list-style-type: none"> <li>n Composition of the LIFI index—In search of listed benchmarks</li> <li>n The LIFI index has outperformed traditional financials</li> </ul>	
Impact of the credit crisis on MFIs	18
Conclusions	20

# Introduction

- n Equity investments in Microfinance are Growing...
- n ... but Benchmarks are Limited
- n Confidential survey with largest dataset to date in core Microfinance—144 private equity transactions since 2005
- n 10 publicly listed Low Income Finance Institutions (LIFIs)

	Transactions (No.)	Transactions (US\$)
2005	28	107,969,182
2006	37	19,905,978
2007	37	61,440,959
2008	38	103,893,011
NR	4	3,307,321
<b>Total</b>	<b>144</b>	<b>296,516,451</b>

BRI

Danamon

Equity Bank

Capitec

African Bank

Blue Financial Services

BRAC

IPF

Compartamos

Financiera Independencia

Source: CGAP. Data on private equity transactions were collected by CGAP in a strictly confidential survey conducted in the summer of 2008. Four development finance institutions (DFIs), 13 microfinance investment vehicles (MIVs), and 14 MFIs provided data on their transactions from 2005 to September 2008. The sample consists of 144 equity transactions, with 60 MFIs in 36 different countries.

# Agenda

Introduction	2
<b>Looking at Microfinance Financials: What is different from traditional banking</b>	<b>4</b>
<ul style="list-style-type: none"> <li>n Double bottom line</li> <li>n High net interest margins</li> <li>n High asset quality</li> <li>n High operating costs</li> <li>n Longer term funding</li> </ul>	
Key drivers of valuation—evidence from private equity transactions	10
<ul style="list-style-type: none"> <li>n Main findings for multiples</li> <li>n 2 key drivers with statistical significance</li> <li>n Profitability is a driver of valuation (but no statistical evidence)</li> <li>n Other key drivers</li> </ul>	
Introducing the LIFI index—looking at past performance of MFIs	15
<ul style="list-style-type: none"> <li>n Composition of the LIFI index—In search of listed benchmarks</li> <li>n The LIFI index has outperformed traditional financials</li> </ul>	
Impact of the credit crisis on MFIs	18
Conclusions	20

# Microfinance Financials vs. Traditional Banks

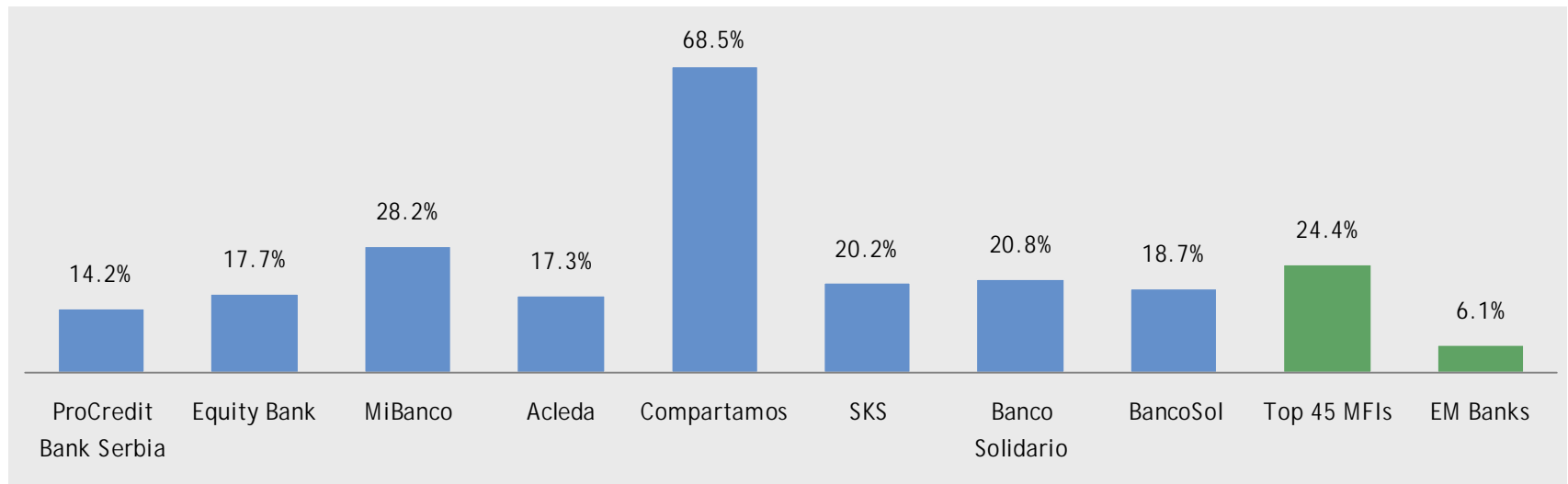
## Double bottom line

- n MFIs have both social and financial objectives
- n The social impact can be measured in different ways (low average loan, access to rural areas, financial literacy programs)
- n A double bottom line may cause higher cost structures
- n A double bottom line may allow the MFI to attract cheaper and longer term funding
- n Additionally, some MFIs also have an environmental bottom line (triple bottom line)

## Microfinance Financials vs. Traditional Banks (cont'd)

### High net interest margins

- Higher lending rates explain the higher margins
- We explain the higher rates by higher operational costs at MFIs; the profitability of clients; limited competition in a large microfinance market

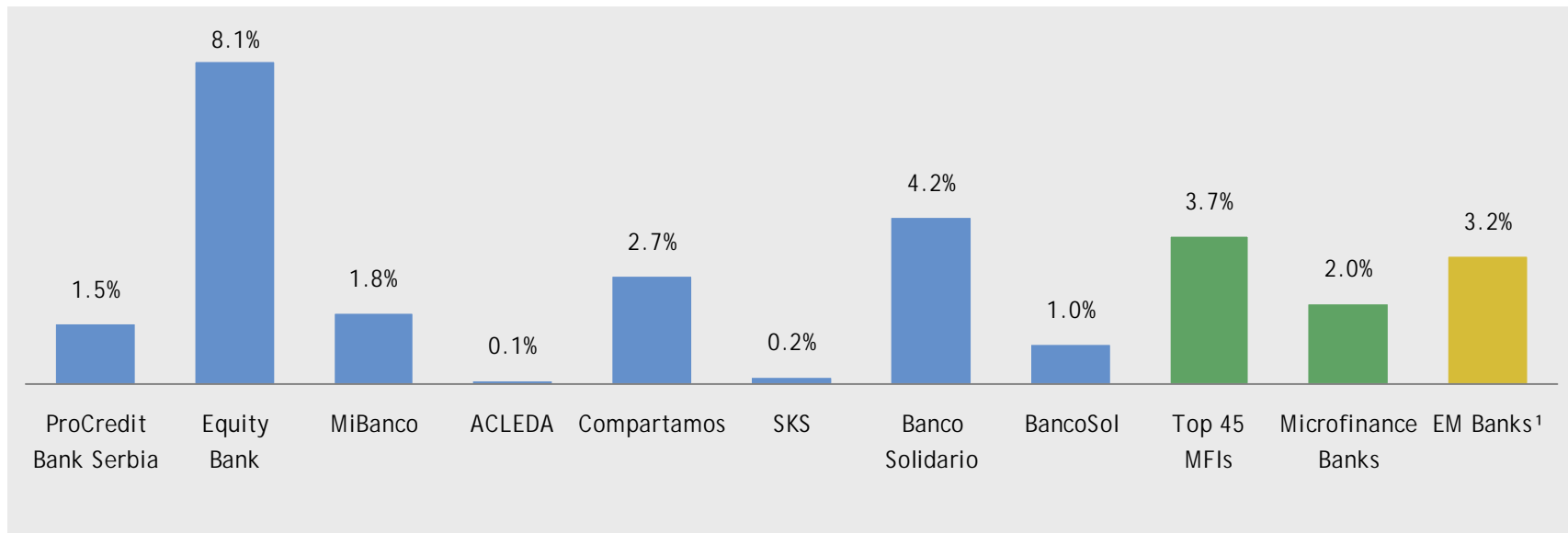


Source: Mix Market, 2007 when available. NIM is the net interest income divided by average total assets (defined as the financial revenue ratio on the MIX Web site). Under the top 45 MFIs, we show the unweighted average for all the MFIs with total assets above US\$150mm (according to MIX, as of 2007). EM Banks include a cross-section of banks covered by J.P. Morgan analysts for emerging markets (except Asia)

## Microfinance Financials vs. Traditional Banks (cont'd)

### High asset quality

- Collection methods mostly explain the higher asset quality (with frequent visits to client, and proximity of loan officers)
- Resilience of customer base is also key



Source: Mix Market. J.P. Morgan. Data as of 2007

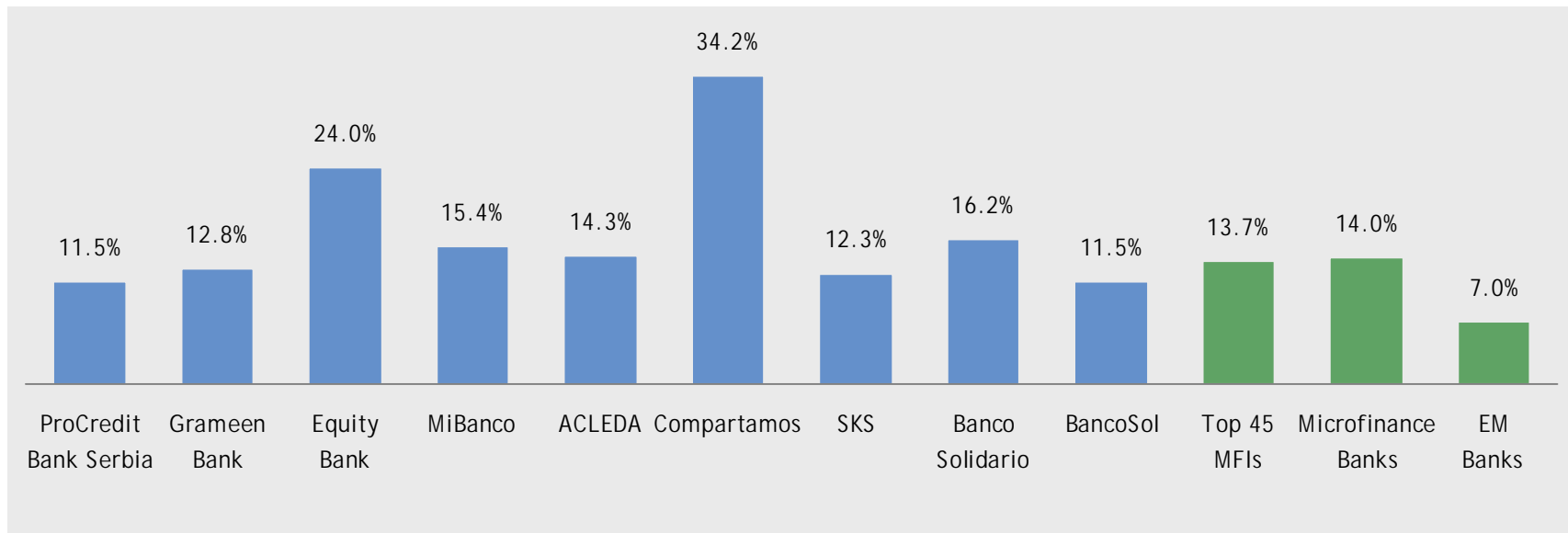
Sample of 10 largest MFIs focusing on loans to Microentrepreneurs. BRI and Grameen Bank, respectively the largest and 3rd largest MFIs in the world according to MIX, are not included in our sample, because PAR information is not available. Under the Top 45 MFIs, we show the unweighted average for all the MFIs with total assets above US\$150mm (according to MIX, as of 2007). Data for Microfinance Banks are an unweighted average for all microfinance banks, according to MIX. EM Banks include a cross-section of banks covered by J.P. Morgan analysts for emerging markets (except Asia)

<sup>1</sup> For EM Banks, we show the ratio of nonperforming loans to total loans, which typically shows the ratio of loans that are 90 days past due. Therefore the ratio for banks is not directly comparable with PAR30, but gives an indication of relative asset quality

## Microfinance Financials vs. Traditional Banks (cont'd)

### High operating costs

- n Low size of loan disbursement mostly explain the higher costs
- n Frequent interaction with clients impacts efficiency
- n Servicing rural areas also causes higher costs

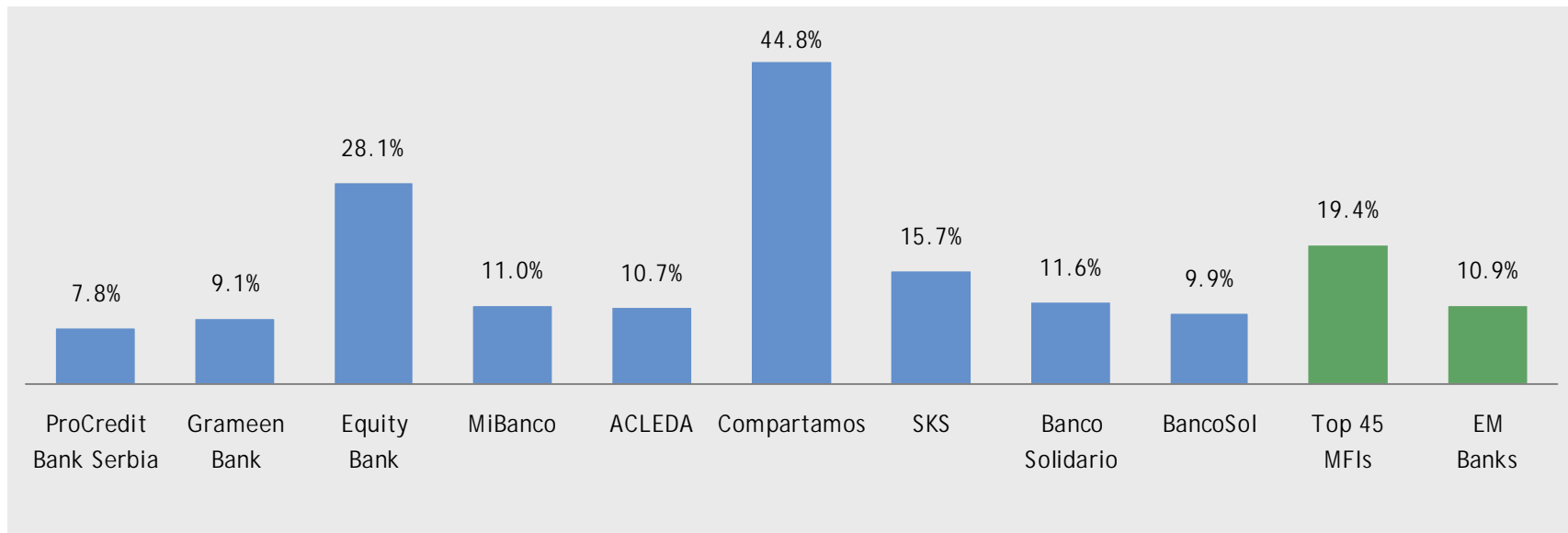


Source: MIX, J.P. Morgan. Data as of 2007. For ProCredit, the percentage indicates operating expenses to total assets. Averages for the top 45 and for EM Banks are unweighted. EM Banks include a cross-section of banks covered by J.P. Morgan analysts for emerging markets (except Asia). Data for microfinance banks are an unweighted average for all microfinance banks, according to MIX

## Microfinance Financials vs. Traditional Banks (cont'd)

### Lower leverage and longer term funding

- n Low leverage can be explained by risk aversion and difficulty to raise funds
- n Longer term funding reflects double bottom line and funding from IFIs



Source for leverage: Mix market. Leverage information for BRI is not available. Sample of 10 largest MFIs focusing on loans to microentrepreneurs. Data for BRI are not available. We also show the average for all the MFIs with total assets above US\$150mm (according to Mix, as of 2007). For this extended sample of the 45 largest MFIs, we use the broad definition of microfinance. Averages for the top 45 and for EM banks are unweighted. EM banks include a cross-section of banks covered by J.P. Morgan analysts for emerging markets (except Asia)

# Agenda

Introduction 2

Looking at Microfinance Financials: What is different from traditional banking 4

- n Double bottom line
- n High net interest margins
- n High asset quality
- n High operating costs
- n Longer term funding

**Key drivers of valuation—evidence from private equity transactions 10**

- n Main findings for multiples
- n 2 key drivers with statistical significance
- n Profitability is a driver of valuation (but no statistical evidence)
- n Other key drivers

Introducing the LIFI index—looking at past performance of MFIs 15

- n Composition of the LIFI index—In search of listed benchmarks
- n The LIFI index has outperformed traditional financials

Impact of the credit crisis on MFIs 18

Conclusions 20

# Key drivers for valuation—evidence from private equity transactions

## Main findings for multiples

Year	Historical P/E		Historical P/BV		Sample No.
	Unweighted average	Median	Unweighted average	Median	
2005	9.1	7.9	1.6	1.7	28
2006	8.6	7.4	1.5	1.3	37
2007	9.9	7.2	2.5	1.3	37
2008	10.2	7.9	2.2	1.9	38

	Median historical P/E				Median historical P/BV			
	2005	2006	2007	2008	2005	2006	2007	2008
Africa	5.6	6.2	17.1	11.8	0.9	1.2	1.6	1.7
Asia	N/A	N/A	N/A	6.0	1.7	2.0	7.0	2.4
ECA	9.3	8.6	13.8	9.3	1.8	1.3	1.0	2.0
LAC	N/A	6.7	5.6	7.8	1.4	1.2	1.1	1.2

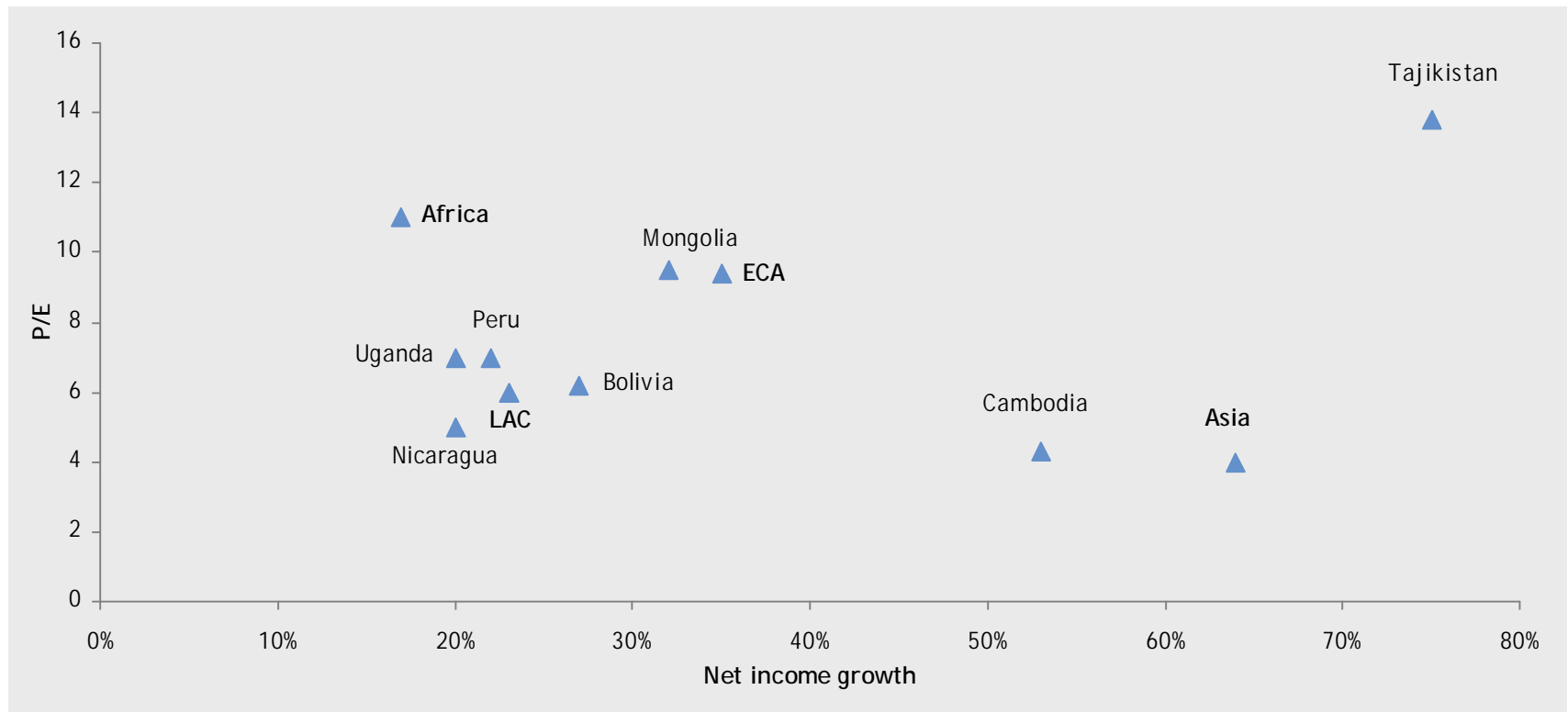
Source: CGAP. Valuations rebound in 2008 mostly due to the high multiples applied to a small number of transactions. N/A = Less than 5 transactions

# Key drivers for valuation—evidence from private equity transactions (cont'd)

SHEDDING LIGHT ON MICROFINANCE VALUATION: PAST & PRESENT

2 key drivers with statistical significance

- n Net income growth
- n Deal size



Source: CGAP. P/E multiples for India are not available, which is why the country does not appear in this chart. Net income growth corresponds to the net income growth projected at the time of the transaction by the participant to our survey. Numbers correspond to medians. LAC: Latin America and the Caribbean; ECA: Eastern Europe and Central Asia

# Key drivers for valuation—evidence from private equity transactions (cont'd)

SHEDDING LIGHT ON MICROFINANCE VALUATION: PAST & PRESENT

## Profitability is a driver of valuation - but without statistical evidence



Source: CGAP. Median numbers are shown in this chart. Numbers correspond to medians. LAC: Latin America and the Caribbean; ECA: Eastern Europe and Central Asia

# Key drivers for valuation—evidence from private equity transactions (cont'd)

## Other key drivers

- n Level of financial intermediation (savings/total assets)
- n Leverage (debt/equity)
- n Buyer type (buyer is an IFI)
- n Geography (country)
- n Legal Status (MFI is a Bank)
- n Asset quality (PaR30)
- n Efficiency (operating expenses/average loan book)

# Agenda

Introduction	2
Looking at Microfinance Financials: What is different from traditional banking	4
<ul style="list-style-type: none"> <li>n Double bottom line</li> <li>n High net interest margins</li> <li>n High asset quality</li> <li>n High operating costs</li> <li>n Longer term funding</li> </ul>	
Key drivers of valuation—evidence from private equity transactions	10
<ul style="list-style-type: none"> <li>n Main findings for multiples</li> <li>n 2 key drivers with statistical significance</li> <li>n Profitability is a driver of valuation (but no statistical evidence)</li> <li>n Other key drivers</li> </ul>	
<b>Introducing the LIFI index—looking at past performance of MFIs</b>	<b>15</b>
<ul style="list-style-type: none"> <li>n Composition of the LIFI index—In search of listed benchmarks</li> <li>n The LIFI index has outperformed traditional financials</li> </ul>	
Impact of the credit crisis on MFIs	18
Conclusions	20

# Introducing the LIFI index—In search of listed benchmarks

## Composition of the index

Company	Ticker	Country of Listing	Mkt. Cap (US\$ MM)	Avge 3M Volume (US\$ MM)	Local Price	P/BV			P/E			ROE			EPS CAGR
						08A	09E	10E	08A	09E	10E	08A	09E	10E	08A-10E
African Bank	ABL SJ	S. Africa	2,625	12.7	2,750.0	1.8	1.6	1.6	11.0	8.9	7.4	20%	19%	21%	21%
BRI	BBRI IJ	Indonesia	7,108	8.5	5,950.0	3.3	2.7	2.1	12.3	10.7	6.7	29%	28%	35%	36%
Danamon	BDMN IJ	Indonesia	2,855	4.5	3,525.0	1.7	1.9	1.7	11.6	16.6	9.7	14%	11%	19%	9%
IPF	IPF LN	UK	305	2.0	77.5	0.7	0.7	0.6	3.7	4.0	3.5	22%	17%	19%	20%
Compartamos	COMPARTO	Mexico	1,317	2.1	40.6	5.9	4.4	3.4	15.1	13.5	11.6	44%	37%	33%	14%
Independencia	FINDEP*	Mexico	300	0.1	6.3	3.4	NA	NA	7.3	7.9	6.9	33%	35%	NA	3%
<b>Low-Income Finance Index</b>						<b>2.9</b>	<b>2.4</b>	<b>2.0</b>	<b>11.9</b>	<b>11.6</b>	<b>7.8</b>				
<b>Emerging Markets Banks</b>						<b>08A</b>	<b>09E</b>	<b>10E</b>	<b>08A</b>	<b>09E</b>	<b>10E</b>	<b>08A</b>	<b>09E</b>	<b>10E</b>	<b>08A-10E</b>
Latin America						2.5	2.0	NA	NA	11.9	10.6	NA	20.3%	20.0%	3.3%
Emerging Europe						1.2	1.1	NA	NA	8.7	19.4	NA	4.5%	8.2%	-6.4%
Africa						1.4	1.4	NA	NA	8.5	7.6	NA	16.2%	16.8%	0.6%
Emerging Asia Pacific						1.2	1.1	NA	NA	12.5	9.9	NA	17.8%	18.5%	14.4%
<b>Average Emerging Markets Banks</b>						<b>1.6</b>	<b>1.4</b>	<b>NA</b>	<b>NA</b>	<b>10.4</b>	<b>11.9</b>	<b>NA</b>	<b>14.7%</b>	<b>15.9%</b>	<b>3.0%</b>

Source: Bloomberg, Company data, CGAP equity survey, J.P. Morgan estimates. ADTV = average daily trading volume. Prices as of May 12, 2009

**Notes for the low-income finance index:** We used J.P. Morgan estimates for the stocks covered by J.P. Morgan and Bloomberg consensus estimates for IPF and Independencia. The lower income finance index is a market capitalization-weighted index, with the weight of BRI reduced to a third, because its microfinance portfolio represents only about a third of its total loan book. We did not include BRAC, Equity Bank, Blue Financial Services, and Capitec because financial forecasts are not available. The index has a base of 100 as of November 10, 2003

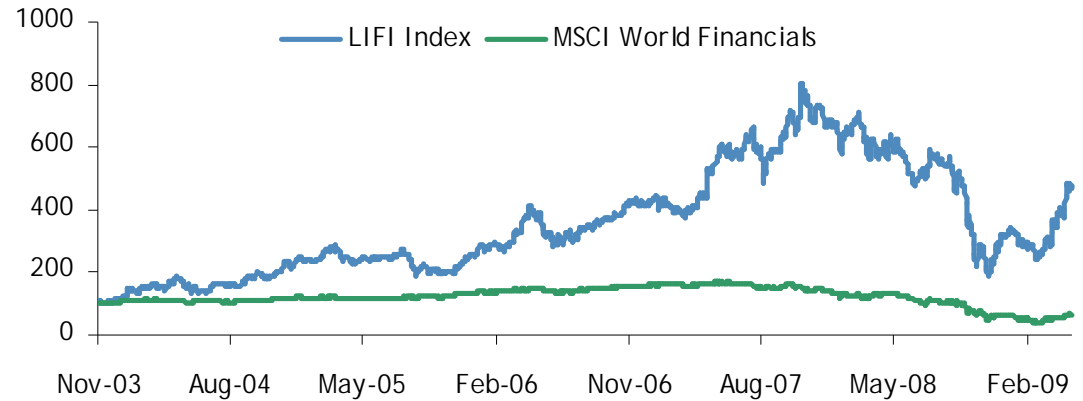
**Notes for global emerging markets banks:** We show market capitalization-weighted averages of banks covered by J.P. Morgan analysts, representing a sample of 148 banks across all emerging markets

# Introducing the LIFI index—looking at past performance of MFIs

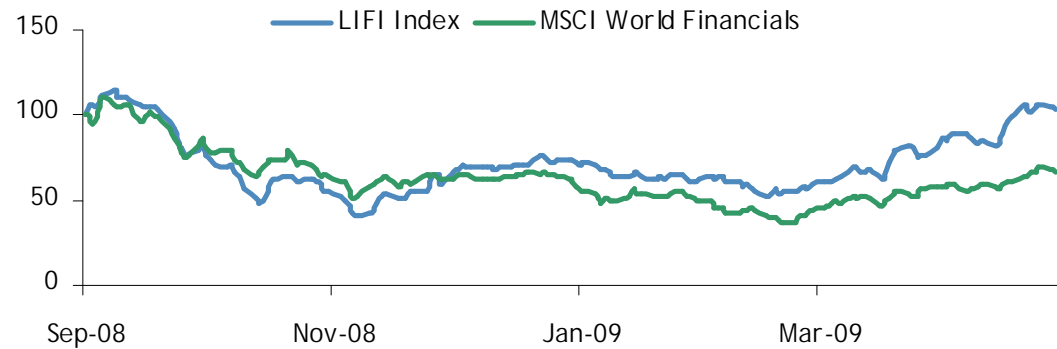
SHEDDING LIGHT ON MICROFINANCE VALUATION: PAST & PRESENT

## The LIFI index has outperformed traditional financials

Looking at the performance since 2003, the LIFI index stands at 472, vs. 65 for traditional banks



Looking at the performance since Sept-2008, the LIFI index stands at 104, vs. 66 for traditional banks



Source: Bloomberg, priced as of May 12, 2009. Past performance is no guarantee of future results.

# Agenda

Introduction	2
Looking at Microfinance Financials: What is different from traditional banking	4
<ul style="list-style-type: none"> <li>n Double bottom line</li> <li>n High net interest margins</li> <li>n High asset quality</li> <li>n High operating costs</li> <li>n Longer term funding</li> </ul>	
Key drivers of valuation—evidence from private equity transactions	10
<ul style="list-style-type: none"> <li>n Main findings for multiples</li> <li>n 2 key drivers with statistical significance</li> <li>n Profitability is a driver of valuation (but no statistical evidence)</li> <li>n Other key drivers</li> </ul>	
Introducing the LIFI index—looking at past performance of MFIs	15
<ul style="list-style-type: none"> <li>n Composition of the LIFI index—In search of listed benchmarks</li> <li>n The LIFI index has outperformed traditional financials</li> </ul>	
<b>Impact of the credit crisis on MFIs</b>	<b>18</b>
Conclusions	20

## Impact of the credit crisis on MFIs

- n The credit crisis causes an increase in funding costs
- n The economic slowdown causes a deterioration in asset quality (as measured by PaR30)
- n Dollar strength increases currency mismatch and can impact the earnings and the capital of the MFI
- n Also, a fall in remittances can impact the deposit base of the MFI and real revenues of customers

# Agenda

Introduction	2
Looking at Microfinance Financials: What is different from traditional banking	4
<ul style="list-style-type: none"> <li>n Double bottom line</li> <li>n High net interest margins</li> <li>n High asset quality</li> <li>n High operating costs</li> <li>n Longer term funding</li> </ul>	
Key drivers of valuation—evidence from private equity transactions	10
<ul style="list-style-type: none"> <li>n Main findings for multiples</li> <li>n 2 key drivers with statistical significance</li> <li>n Profitability is a driver of valuation (but no statistical evidence)</li> <li>n Other key drivers</li> </ul>	
Introducing the LIFI index—looking at past performance of MFIs	15
<ul style="list-style-type: none"> <li>n Composition of the LIFI index—In search of listed benchmarks</li> <li>n The LIFI index has outperformed traditional financials</li> </ul>	
Impact of the credit crisis on MFIs	18
Conclusions	20

# Conclusions

- n The business model employed by MFIs is original and demands a different approach to valuation
- n Key drivers for valuation in the private equity market are: i) net income growth; and ii) deal size
- n Evidence from private equity transactions suggests a range of median P/E of 7.2–7.9x and median P/BV of 1.3–1.9x. We also believe that valuations will most likely decrease in 2009, on average
- n Evidence from publicly traded low income finance suggests that microfinance has outperformed traditional banks, both since 2003 and September 2008
- n Three key consequences of the credit crisis are an increase in funding costs; a larger currency mismatch; and a deterioration in asset quality