CGAP

OCCASIONAL PAPER

All Eyes on Asset Quality: Microfinance Global Valuation Survey 2010

This report is the result of a partnership between CGAP and J.P. Morgan. CGAP is solely responsible for the printing and the distribution of this Occasional Paper. CGAP is not affiliated with J.P. Morgan. Our objective is to provide benchmarks for valuation of microfinance equity, both private and publicly listed, drawing on two data sets: a sample of 200 private equity transactions between 2005 and 2009 (compared to 144 transactions in last year's edition of the report), which represents the largest such data set gathered to date, and data on eight publicly traded low-income financial institutions (LIFIs).[1]

The past year held many challenges for microfinance: not since the Asian crisis of the late 1990s has the sector faced a more difficult economic environment. Yet despite these conditions, most microfinance institutions (MFIs) proved to be up to the challenge.

Beginning in January 2009, MFI portfolio delinquency levels began to deteriorate rapidly, with loans past due over 30 days (portfolio at risk [PAR30]) jumping from a median of 2.2 percent to 4.7 percent during the first five months of 2009, while profitability dropped from a median return on equity (ROE) of nearly 18 percent at year-end 2008 to 6 percent by May 2009.[2] However, since June 2009 delinquency has moderated and profitability levels have come back to stabilize at 4 percent for PAR30 and 10 percent for ROE, respectively. Most MFIs continue to maintain solid reserve and capitalization levels, with equity ratios unchanged from the 18–20 percent range established over the past two years.

The effects of the downturn were also far from uniform. While Central America, Eastern Europe, and Central Asia were particularly hard hit, large areas in South America and South Asia have witnessed little or no impact. At the same time, a few countries (Nicaragua, Bosnia and Herzegovina, and Morocco) have experienced severe delinquency crises but for reasons not directly related to the global downturn.

Against this backdrop, and to our surprise, microfinance equity valuations globally have continued to rise. MFIs in the private equity market traded at a median of 2.1x book value—a 62 percent increase since 2007 that reflects sustained demand for microfinance equity. The sector also continued to attract a larger pool of capital, with Blue Orchard, Microvest, and Developing World Markets all establishing new microfinance equity funds in 2009, while public investors significantly increased their commitments to microfinance.

India in particular has been showing unusually high valuations, with large MFIs trading at nearly 6x their book value, or nearly 3x the global median. While the recent impressive growth of Indian MFIs is expected to continue, in our view their current and future earnings expectations do not justify such high multiples.

Globally, the microfinance private equity market is still young and lacking in performance benchmarks. However, our statistical analysis of private transactions shows that age, income growth, and asset quality are significant drivers of valuations.

Publicly traded LIFIs, regarded as the listed vehicles most comparable to MFIs, have outperformed emerging market banks—as measured by the MSCI Emerging Markets Banks Index—by 79 percent since September 2008. As of December 2009, they

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1 Because there are few publicly listed MFIs, we consider a group of eight listed financial institutions targeting lower-income individuals and note that their business models are very diverse.

2 Numbers based on the Sym50. Refer to the section on data sources that begins on p.5 for more details on this data set.

had already rebounded to precrisis levels and are back at their historical peak. Our sample of eight LIFIs did not experience a significant deterioration in the asset quality of their microcredit portfolios and are continuing to expand in their respective markets. However, LIFIs still trade at a discount of 13–23 percent compared to emerging market banks.

Outlook for 2010

While the effects of high delinquency will continue to be felt, most MFIs around the world will likely continue to expand their client reach, though at a slower rate and with improved risk management. Equity valuation will continue to attract the interest of both public and commercial investors, while local banks are likely to step up their strategic acquisition of MFIs. In addition, the potential initial public offering (IPO) in 2010 of SKS—the largest MFI in India—should be a key milestone and set the stage for future IPOs in the sector. Despite current market uncertainties, we believe the medium-term outlook for equity investments in microfinance will remain positive.

Table 1: Private Transactions

	Historical P/E		Historical P/BV	
Year	Unweighted Average	Median	Unweighted Average	Median
2005	9.1	7.9	1.6	1.7
2006	8.6	7.4	1.5	1.3
2007	9.9	7.2	2.0	1.3
2008	10.0	7.9	2.5	2.0
2009	12.9	13.0	2.7	2.1

Source: CGAP. P/E = price-to-earnings ratio; P/BV = price-to-book-value ratio.

Table 2: Valuation Summary: Comparing Our Index with Traditional Banks

	P/E		P/BV		ROE		EPS CAGR
	010E	11E	010E	11E	010E	11E	09–11E
LIFI Index	**12.4**	**9.9**	**2.6**	**2.2**	**21%**	**24%**	**29%**
Africa	10.9	8.3	1.8	1.7	15%	18%	0%
Developed Asia Pacific	22.4	19.2	3.5	3.0	15%	16%	20%
Emerging Asia Pacific	13.4	10.9	3.1	2.3	21%	23%	25%
Developed Europe	12.0	8.5	0.5	0.5	9%	11%	27%
Emerging Europe	10.7	6.5	1.7	1.5	17%	22%	72%
Latin America	14.2	10.2	2.7	2.0	20%	20%	17%
Market Cap. Weighted Averages for Banks Covered by J.P. Morgan	**16.2**	**13.2**	**3.0**	**2.4**	**18%**	**20%**	**28%**

Source: Bloomberg, company data, J.P. Morgan estimates. ADTV = average daily trading volume for the past three months. Prices as of 23 February, 2010.

Notes for the LIFI Index: We used Bloomberg consensus estimates and J.P. Morgan estimates for the individual stocks composing the LIFI Index. The LIFI Index is a market capitalization-weighted index, with the weight of BRI reduced to a fourth because its microfinance portfolio represents only about 25% of its total loan book. Refer to Table 11 for more details.

Notes for Global Emerging Markets Banks: We show market capitalization-weighted averages of banks covered by J.P. Morgan analysts, representing a sample of more than 150 banks across global markets.

P/E = price-to-earnings ratio; P/BV = price-to-book-value ratio; ROE = return on equity; EPS CAGR = earnings per share compound annual growth rate.

Introduction

The upheaval that hit mainstream financial markets and the reverberations that continue to be felt across the globe from the resulting economic crisis impacted MFIs and their clients. The early stages of the downturn saw MFIs experience significant liquidity shortages, but as the capital markets recovered, concerns turned from funding to asset quality.

Rising delinquencies were paralleled by an equally strong decline in profitability, and although a minority of MFIs found themselves in serious distress, most have settled at levels that are high by historical standards but not alarming from the perspective of losses.

Amid the turmoil, the still-nascent microfinance equity market continues to be active, with 42 transactions reported between September 2008 and September 2009. The vast majority of equity transactions are still in the form of private placements, with only two pure microfinance IPOs to date (Compartamos Banco and Equity Bank) and another expected in India in 2010 (SKS).

Microfinance has been attracting interest from a growing pool of investors over the last few years, with both development finance institutions (DFIs) and private investors boosting their commitment to the asset class despite the absence of reliable market benchmarks on microfinance equity performance.

Responding to this knowledge gap, this Occasional Paper aims to shed new light on equity valuation trends in microfinance, which must necessarily begin with a detailed examination of how MFIs have coped during the recent economic crisis. Accordingly, the first part of the paper is devoted to MFI asset quality and its impact on microfinance profitability.

Table 3: Our Sample Represents the Largest Available Data Set to Date

Year	Transactions (#)	Transactions (US$mn)
2005	28	105.9
2006	37	19.9
2007	37	60.3
2008	64	146.8
2009	30	185.9
NA	4	3.3
Total	200	—

Source: CGAP. NA: dates not available.

Next, we examine trends in valuation benchmarks for microfinance private equity transactions and analyze the key drivers behind these valuations. This section also delves into the recent growth in transaction volume and valuation multiples in India, which had a particularly active market in 2009.

Finally, we seek to place the microfinance equity market within the context of the broader equity market, using comparisons with publicly listed LIFIs in developing countries.

Table 4: Eight Institutions in the LIFI Index

First Cash Financial	US/Mexico
Compartamos	Mexico
Financiera Independencia	Mexico
Banco Panamericano	Brazil
IPF	Mexico/Eastern Europe
BRI	Indonesia
Danamon	Indonesia
African Bank	South Africa

Source: J.P. Morgan. We indicate the region in which the institution has the largest presence.

Box 1: Methodology and Sources

Our analysis is based on two original samples: (1) a private transaction data set encompassing 200 equity acquisitions involving 86 MFIs and (2) a sample of eight LIFIs.

LIFIs are publicly traded commercial institutions that provide financial services to customers who overlap significantly with those of MFIs—the low-income population in emerging markets. However, in many cases LIFIs do not necessarily have an explicit social agenda, and their loan portfolios tend to feature more consumer loans than microenterprise ones. For the sample of LIFIs used here, J.P. Morgan analysts identified eight LIFIs with a broad microfinance focus. Although these institutions present a different risk and return profile, they nevertheless provide interesting valuation comparables for traditional MFIs.

Data on private equity transactions were collected by CGAP in a strictly confidential survey conducted in summer 2009. Four DFIs, 13 microfinance investment vehicles (MIVs), and 14 MFIs provided data on their transactions from 2005 to September 2009 (for a list of contributors see Appendix III).

Our sample covers 200 transactions that occurred between January 2005 and September 2009 with an aggregate value close to US$520 million, including 42 transactions collected after the Lehman bankruptcy on 15 September 2008. This is the most comprehensive data set on private equity placements in microfinance to date.

CGAP followed strict procedures to ensure full confidentiality of the data reported. These included confidentiality agreements with all survey participants and restricted access policies to the database. Only four CGAP staff members, authorized by CGAP's CEO, had access to the underlying data. CGAP was responsible for quality control of the data and preliminary analysis. Only aggregated benchmarks based on at least five data points were shared with J.P. Morgan. These aggregated data are available on CGAP's Web site, www.cgap.org. J.P. Morgan had no access to the underlying database.

Box 2: Microfinance Equity Market

MFIs have built an impressive track record in asset quality, and their financial performance has been documented by Microfinance Information Exchange (MIX)—the reference database for microfinance performance—since 1995. As of year-end 2008, there were 357 banks and nonbank financial institutions (NBFIs) reporting to MIX with an aggregate equity base of roughly US$6.2 billion. Eighty-five percent of equity investments are concentrated in the largest 100 MFIs. Eastern Europe and Latin America account for almost two-thirds of microfinance equity. In 2008, the global MFI equity base increased more than US$1.6 billion.[a]

On the funding side, DFIs such as IFC, KfW, and EBRD have stepped up their commitment to the sector as a response to the economic crisis. Their microfinance equity portfolios were valued at US$761 million as of December 2008. The second group of investors consists of 21 specialized microfinance funds with an equity focus or holding companies of microfinance banks.[b] These funds grew rapidly in 2008 despite the global crisis. Their equity investments in MFIs have jumped from US$670 million to US$1.1 billion in 2008.[c]

Leading pension funds, such as TIAA CREF in the United States and ABP and PGGM in Europe, are making asset allocations in specialized microfinance equity funds as part of their socially responsible investment (SRI) strategies. Their commitments to the sector, estimated at US$700 million, are growing rapidly. Finally, large private equity firms, such as Sequoia and Legatum, have made equity investments in select microfinance markets such as India (The Economic Times 2007). We estimate that the total amount invested by these private institutions is in excess of US$400 million.

[a] MIX panel data for 2007 and 2008.

[b] CGAP MIV survey 2009; the number includes MIVs with an equity portfolio greater than US$10 million, as well as US$600 million from Procredit holding.

[c] Based on CGAP MIV survey 2008 and CGAP estimates for growth projection in 2008.

Asset Quality Concerns

The microfinance sector earned its reputation as a countercyclical industry in the wake of the Asian financial crisis of the late 1990s, displaying relative resilience during the tumult of that period and in the years following. This reputation was burnished by a series of studies that included a review of the performance of Bank Rakyat Indonesia during the height of the Asian crisis (Patten et al. 2001) and econometric analyses of MFI performance during the six to eight years that followed (Krauss and Walter 2008 and Gonzalez 2007). Events of the last 12 months have led some to question this reputation as MFI asset quality and profit performance deteriorated amid the global economic slump.

Though a majority of MFIs felt the impact of the global economic slump, it did not affect all of them equally. Most MFIs saw their delinquencies rise sharply in the first half of 2009, with a parallel slide in profitability. However, there were significant deviations from this general trend: some MFIs with pre-existing vulnerabilities, such as uncontrolled growth, poor credit methodology, and weak internal controls, found themselves dealing with crisis-level situations and heavy losses. At the same time, MFIs in a number of microfinance markets, including India and Bolivia, showed no significant signs of deterioration.

The rise in delinquency is notable for both its breadth and pace, having taken place during the first five months of the year. Data since June 2009

Box 3: Data Sources on Asset Quality

The lack of available data poses a challenge when analyzing asset quality. If we use the Lehman bankruptcy as the symbolic beginning of the financial crisis (15 September 2008), its impact was not yet reflected in the widely used industry database maintained by MIX, which compiles only end-of-year data, which are subject to a reporting time lag. Thus, although MIX provides a comprehensive data set of 1,500 institutions, only December 2008 data, which do not reflect current market conditions, were available for our analysis.

As a result, we rely extensively on data provided by Swiss microfinance investment intermediary Symbiotics, which collects detailed monthly reports of 50 MFIs (Sym50). This data set has significant differences with MIX, yet we believe their similarities are sufficient to rely on the more current reporting of Sym50 as a predictor for year-end 2009 numbers that will become available from MIX later this year.

One important difference is the definition of PAR30: while MIX combines both past due and restructured loans in the numerator, Sym50 includes only the former. The two numbers are thus only partially comparable, though restructured loans are significantly lower and thus only moderately affect the comparisons.

Sym50 also has a notably different geographic distribution from MIX, with a heavy focus on South America, Eastern Europe, and Central Asia but with no MFI data from South Asia and Africa. Nevertheless, though it may reflect only a subset of the broader microfinance market, we believe Sym50 is fairly representative of the types of MFIs that normally receive investments from commercial sources, since these regions feature well-established microfinance markets with low barriers to foreign investment. Moreover, Sym50 is heavily weighted toward equity investment targets—banks and NBFIs—that comprise 75 percent of this data set.

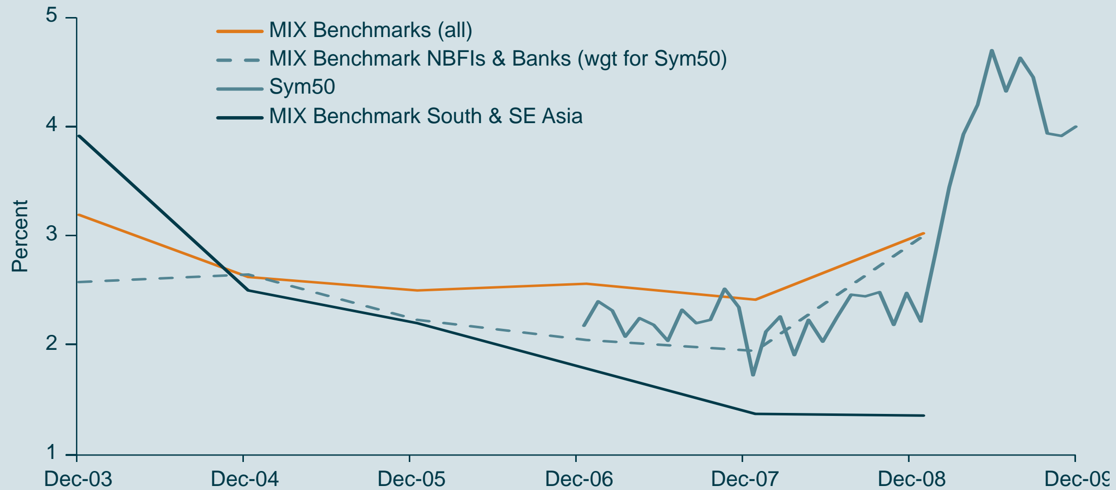
It seems reasonable to assume that when year-end 2009 numbers are compiled for the broader benchmarks, the asset deterioration in the focus regions predicted by Sym50 will be reflected in MIX year-end figures. Figure B3.1 shows a comparison of Sym50, with different segments of MIX benchmarks, some reweighted to reflect the former's geographic distribution. Although the two data sets share a strong similarity in PAR trends and absolute levels, MIX benchmarks for NBFIs and banks, when adjusted for the geographic weightings described above, align especially closely to Sym50.

However, South and Southeast Asia have consistently shown delinquency rates below the global benchmarks since year-end 2006, and we expect this divergence to be evident in 2009 MIX data as well.

(Box continues on next page)

Box 3 (continued)

Figure B3.1: Median PAR30* of Sym50 Aligns with MIX Benchmarks



Source: Sym50, data through November 2009; MIX benchmarks, data through December 2008.
*The definitions of PAR30 differ between Sym50 and MIX, as described below.

Asset Quality Measures

Asset quality measures provide a view of loan portfolio quality and dictate loss provisioning levels at financial institutions. The definitions below reflect different aspects of asset quality.

Portfolio at Risk. PAR is the value of all loans outstanding that have one or more payments of interest or principal past due by more than a specified number of days (e.g., PAR30 = loans past due > 30 days). The reported amount includes the balance of unpaid principal, expressed as a percentage of gross loan portfolio, that is, including all current, delinquent, and renegotiated loans, but excluding write-offs. This is the definition used in Sym50. Note that the MIX definition of PAR adds to the numerator the unpaid principal of loans that have been restructured or rescheduled.

Restructured/Rescheduled/Reprogrammed Loans. Loans for which the payment schedule, the interest rate, and/or the outstanding principal amounts has or have been renegotiated with the borrower.

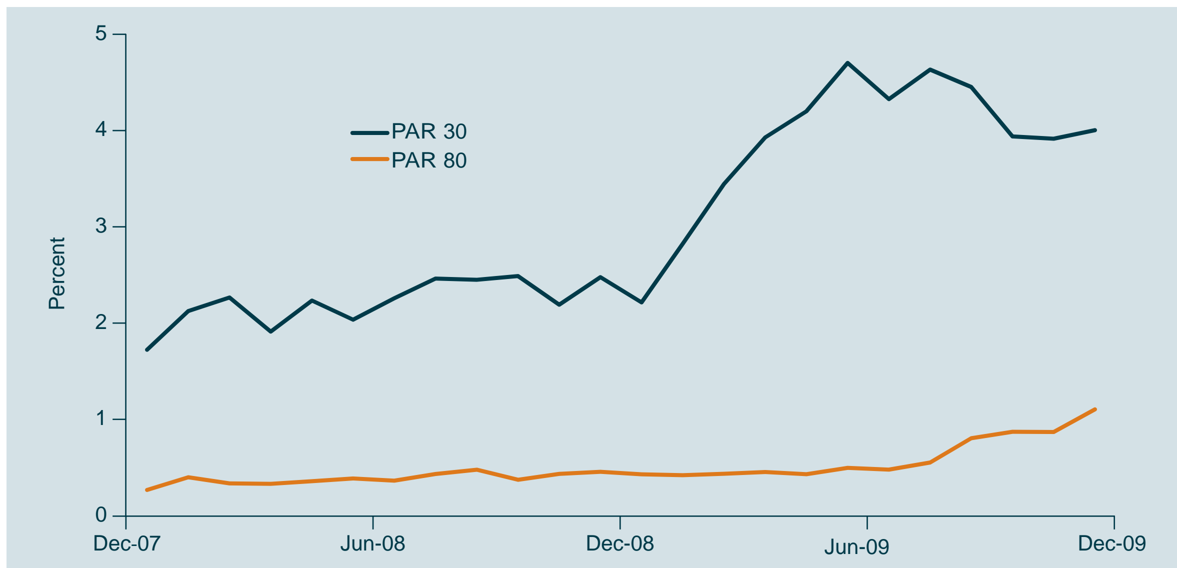
Write-Offs. Write-offs are loans that are deemed unrecoverable and written off the balance sheet. From an accounting standpoint, a write-off reduces the loan book on the assets side and loan-loss reserves on the liabilities side. If reserves are not sufficient to cover for the loss in loans, equity is impaired. Write-offs can be expressed in absolute terms and as a percentage of outstanding gross loans.

suggest that the rapid decline in asset quality has largely stabilized. Absent a relapse and a further downturn in asset quality, we believe the sector as a whole will emerge from the storm generally intact. Partly as a result of conservative loss reserve practices before the crisis, most MFIs appear to have sufficient provisions to absorb write-offs, which we expect to continue to increase through early 2010, but then moderate and possibly reverse in the second half of the year.

Unprecedented Drop in Asset Quality in 2009

At the onset of the crisis, most of the concern about MFIs related to the continued availability of funding, but MFIs quickly eased their growth rates, which, along with the public commitment of a number of leading investors to maintain their support for the sector, helped avoid many potential liquidity problems. As a result, the concerns of

Figure 1: Steep Asset Quality Decline in First Half 2009 (median PAR)



Source: Sym50, data through November 2009.

many investors and practitioners turned from funding to the deteriorating asset quality seen in a number of MFIs.

Rapid declines in asset quality

Starting in January 2009, delinquency levels began a rapid climb, with half of the component MFIs of Sym50 reporting PAR30 of 4.7 percent or higher in May 2009, up from 2.2 percent at the beginning of the year (Figure 1). Even adjusting for some slight seasonal variation, this was an increase of over two percentage points—a doubling of PAR30 within just five months. The start of a similar increase is becoming apparent in PAR180—a lagging indicator that is more indicative of ultimate losses. This delinquency trend in the Sym50 has been confirmed by informal conversations with other commercial MIVs and is reflected in other sources—the 2009 Banana Skins survey of industry participants put credit risk as the number one concern (Lascelles 2009).

Although similar crises have hit individual countries in the past, such as Bolivia in the late 1990s, this is the first time the world has seen such a large simultaneous drop in the asset quality of a large sample of globally distributed MFIs. Moreover, besides the pace of deterioration, we should note that the actual level of delinquency is also historically high for the sector. According to MIX benchmarks, the highest sectorwide PAR30 achieved in the last five years on record was 3.2 percent in 2003, while for the focus regions represented by Sym50—Eastern Europe and Central Asia—the rate has been far lower, having remained at or below 1.2 percent until 2008.

Such levels of delinquency directly impact profitability, especially for those MFIs that are used to seeing far lower numbers.[3] That said, while current delinquency levels for any given MFI are a source of concern, the more pertinent issue is that, at the country-level, the situation

3 An increase in PAR30 does not necessarily signal an MFI's demise. Based on preliminary analysis of MIX data from 2003 to 2008, a random MFI of over US$1 million in assets had a 1–5% chance of failing during a three-year period. An MFI that reported PAR30 >5% had a 6–10% chance of failure, while one with PAR30 >10% would fail 10–15% of the time.

witnessed in the first semester of 2009 is unknown territory for most young microfinance markets.[4]

Deterioration is not uniform

Looked at more closely, the Sym50 index appears to reflect two different yet complementary stories. On the one hand, there is significant broad-based decline in MFI portfolio performance from January to June 2009. However, there is also significant country-level variation at both ends of the spectrum (Figure 2).

While most MFIs have experienced significant asset deterioration, MFIs in countries such as Bolivia, Egypt, Kosovo, and most of India are demonstrating little change in asset quality and profitability. The differences are apparent at the regional level as well, with South America relatively stable while Eastern Europe and Central Asia have seen extensive asset quality declines.

The situation is particularly difficult in three countries—Nicaragua, Morocco, and Bosnia and Herzegovina—where most MFIs have been dealing with large-scale borrower delinquencies. While there may be a couple of possible explanations for this, our initial hypothesis is that in these countries the economic crisis hit a sector that had already been weakened by factors such as unhealthy competition, overstretched MFI capacity, and loss of credit discipline. In these cases, the economic downturn was not the causative factor, though it was a critical aggravating variable, turning already ailing markets into full-blown crises.[5]

Such MFI- and country-level differences are also evident in how MFIs have been using restructured loans. The levels of divergence between median and average figures in Figure 3 suggest that while short-term delinquency (expressed through PAR30) is relatively evenly distributed around the median, reprogrammed loans are heavily weighted toward a minority of particularly distressed MFIs, with the rest reporting only minimal levels of reprogramming. This supports the hypothesis that most MFIs are dealing with elevated but still controllable delinquency levels. At the same time, a minority of MFIs are in distress and are taking remedial action, including extensive loan rescheduling, to get out of their predicament. Indeed, while increased rescheduling can sometimes signal MFIs attempting to artificially reduce PAR, the technique has proven to be an important instrument for distressed MFIs during previous crises.[6]

Is the worst over?

Recent trends in portfolio performance point to a possible bottoming out of the downturn. Since May 2009, when the global PAR30 delinquency rate peaked at 4.7 percent, asset quality has actually moderated slightly, having settled at around 4 percent through the three months starting in September (Figure 1). The lagging indicator PAR180 is still climbing and is likely to peak in early 2010. The situation has stabilized at historically high rates of delinquency, with an inevitable impact on profitability.

Rapid, But Limited, Decline in Profitability

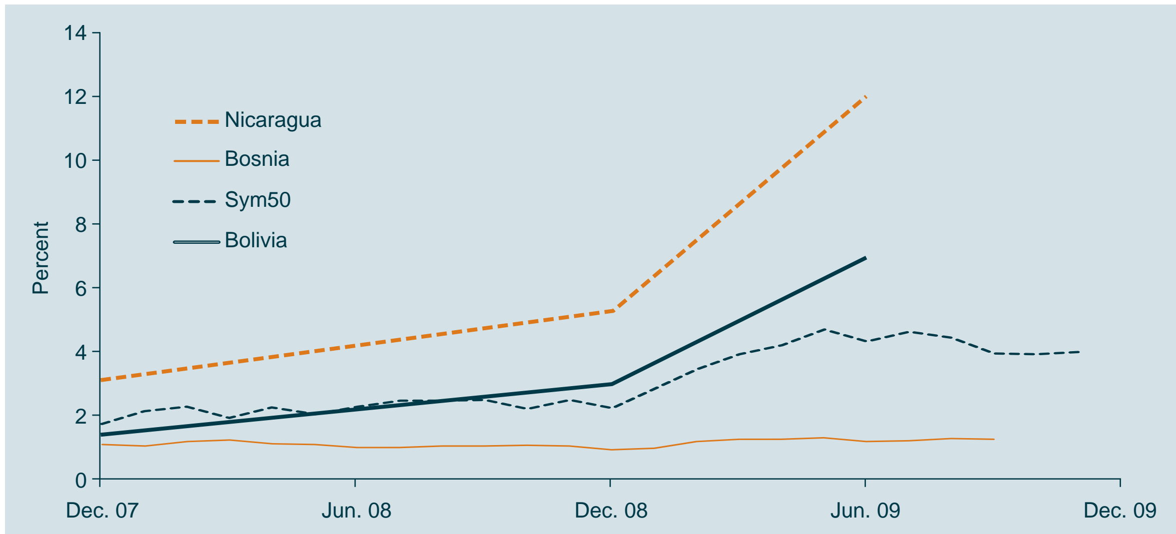
If there is a surprise on the returns side, it is that profitability has not been affected more. In fact, Figure 4 shows profitability, already in slow decline since early 2007, becoming particularly rapid in December 2008. While the early part of this decline

4 This applies to most markets, though according to MIX benchmarks for African and Central American/Caribbean NBFI MFIs, these levels are common and would not be considered elevated.

5 See Chen, Rasmussen, and Reille (2010).

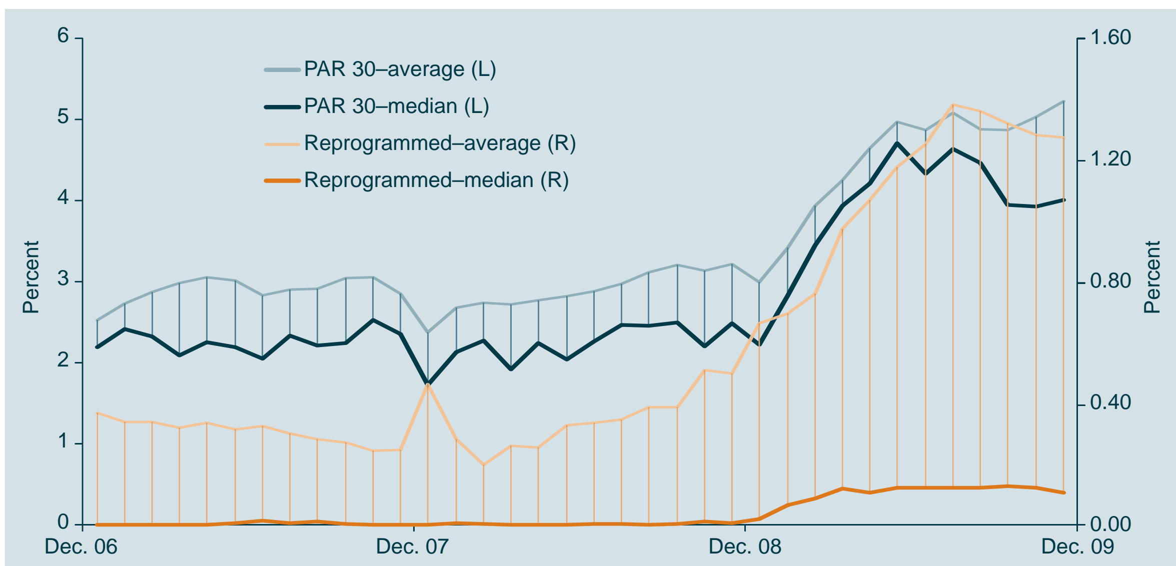
6 At the height of the Bolivian crisis in 1999, BancoSol reported 7% PAR30 while additionally rescheduling some 7% of its portfolio. The tactic was potentially risky as it could have undermined its borrowers' repayment incentive (Rhyne 2001).

Figure 2: Deterioration Is Not Uniform (median PAR30)



Source: Sym50, data through November 2009, ASOFIN (Bolivia), CGAP for Bosnia and Nicaragua.

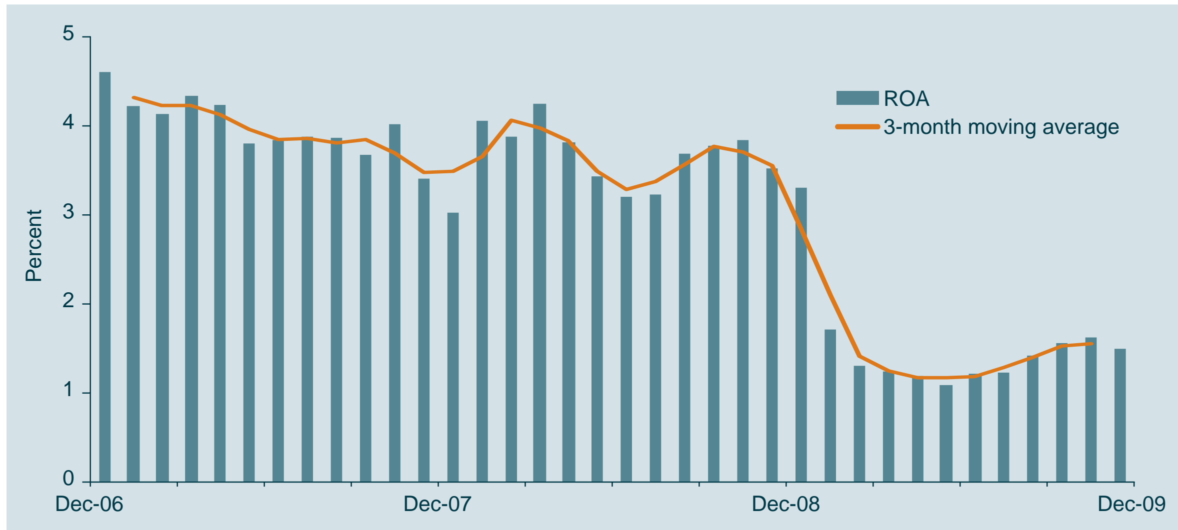
Figure 3: Distribution of Delinquent Loans Has Not Changed, whereas Reprogramming Rates Have Increased among Distressed MFIs



Source: Sym50, data through November 2009.

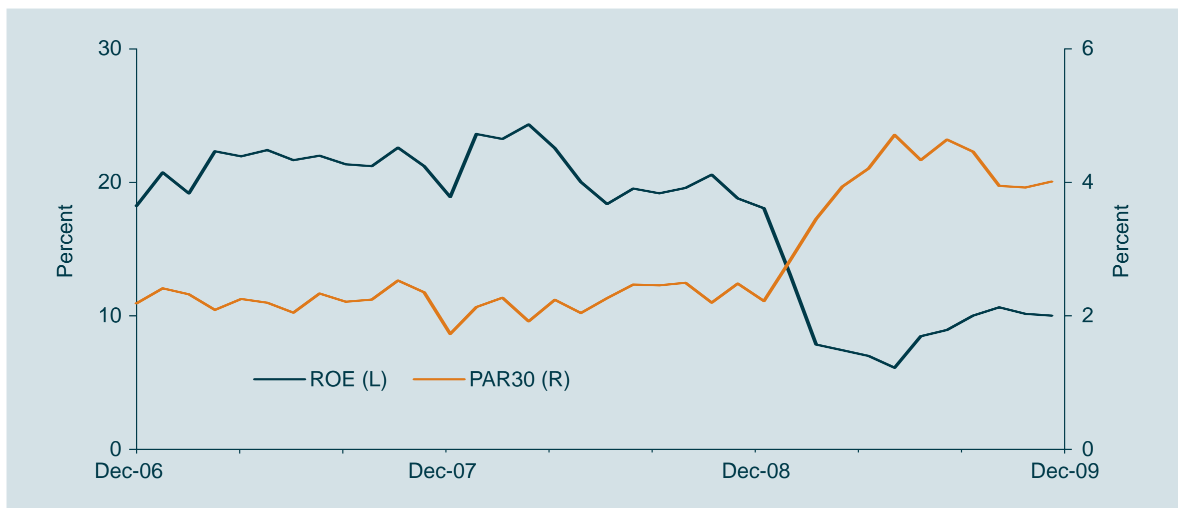
in 2008 may have been precipitated by other causes, such as higher funding costs or foreign exchange losses (Littlefield and Kneiding 2009), the steep drop seen early in 2009 closely parallels the rapid rise in delinquencies (Figure 5) and the consequent increased loss provisioning taken by the MFIs. This pattern is consistent for both return on assets (ROA) and ROE.

Figure 4: Rapid Decline in Median Profitability (ROA) in First Half of 2009



Source: Sym50, data through November 2009.

Figure 5: Drop in Median Profitability (ROE) Mirrors Increase in PAR



Source: Sym50, data through November 2009.

Since hitting bottom in mid-2009, profitability has rebounded slightly, with ROE settling at around 10 percent—about half the level recorded over the two preceding years. However, in the short term, the high delinquency rate will likely keep profitability depressed until asset quality returns to historical levels.

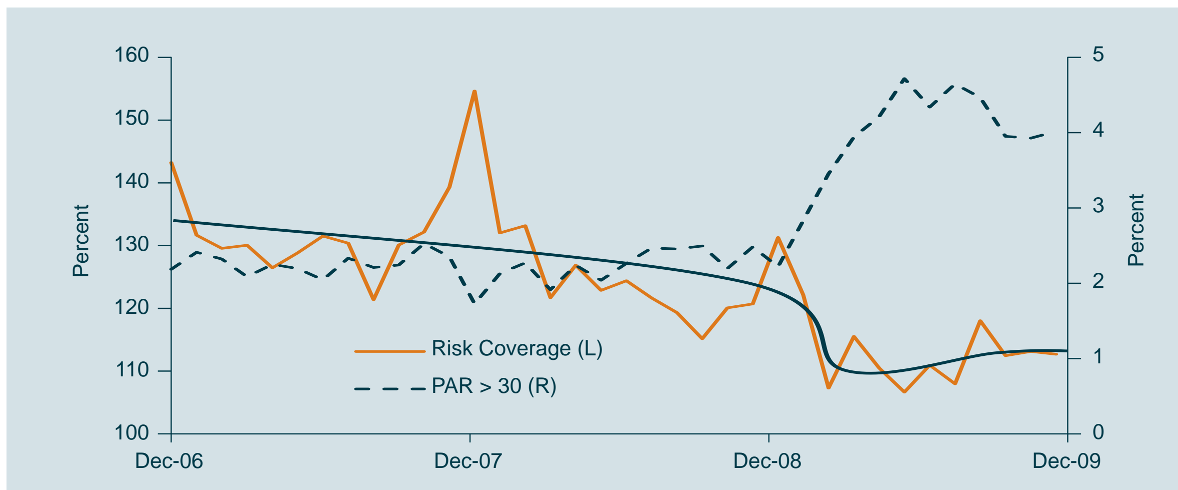
MFI Capital Is Still Relatively Safe

When the crisis hit, most MFIs were able to maintain their capital base largely because of the relatively high loss reserves they had maintained prior to 2009. But reserves are diminishing significantly: as with ROA, the median coverage ratio of PAR30

had already been in decline prior to the crisis, having fallen by 11 percent between January 2007 and November 2008 (Figure 6). But the pace quickened in 2009: even after controlling for the December cyclical bump, some 15 percent of loss reserves were exhausted during the first two months of the year—exactly when the rapid rise in delinquency was taking place and profitability was falling fastest. Thus, prior policies in management of loan-loss reserves helped cushion the drop in profitability in 2009.

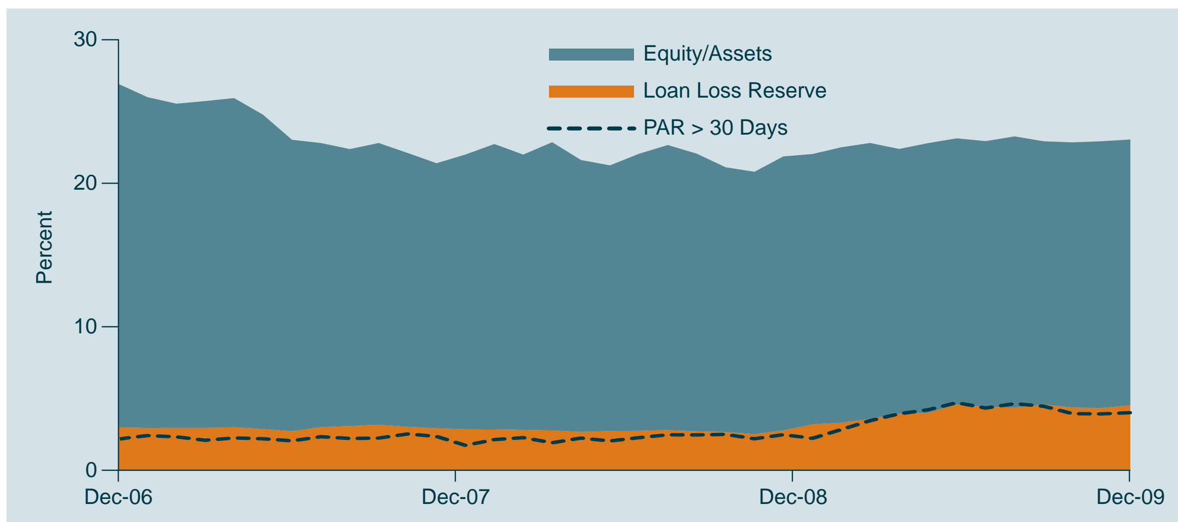
Since then, loss reserves have rebounded in line with the moderation in PAR, but still at significantly lower levels from before, settling at around 110 percent of PAR30. Despite this softening, with the current levels of delinquency, existing loss reserves should be fully sufficient for most MFIs to cover eventual losses without having to impair their equity (Figure 7).[7] Moreover, solvency is generally not a concern as most MFIs remain very well capitalized, with median equity levels not having

Figure 6: Median Reserves Have Declined ...



Source: Sym50, data through November 2009.

Figure 7: ... But Median Reserve and Equity Buffers Are Intact



Source: Sym50, data through November 2009.

7 An unpublished study by Adrian Gonzalez (MIX 2009) suggests that about 25% of loans delinquent over 30 days end up as write-offs the following year.

deviated from the nearly static range of 18–20 percent of total assets established in mid-2007.

However, while these capitalization levels should give confidence, they would not necessarily apply to all MFIs. Some countries are also generally more exposed than others, with India, for example, having a particularly low equity cushion and high financial leverage.

While a second dip in delinquency levels is still possible and MFIs with already high PAR remain vulnerable, we see a number of positive developments. Affected MFIs have been quick to react to the crisis, slowing their growth and tightening their credit policies. To improve risk management and prevent over-indebtedness, credit bureaus are in the process of being established in Morocco and Bosnia and Herzegovina, while plans for others are being quickly developed in countries such as India.

Meanwhile, despite the difficult backdrop, commercial and public investors have demonstrated their continuing commitment to the sector, providing fresh equity and much needed technical assistance packages to MFIs as well as organizing the restructuring of particularly distressed ones, such as Banex in Nicaragua and Normicro in Azerbaijan.

The current focus of MFIs on resolving their asset quality issues along with the commitment on the part of investors to tackle problems instead of cutting losses and pulling out makes us optimistic about the sector's medium-term outlook. The watershed events of the past year may have caught the sector unawares, but it has proved to be largely up to the challenge.

Valuation of Private Equity Transactions—MFIs

It is natural to expect the significant deterioration in both asset quality and profitability at MFIs to be reflected in the valuation of MFI equity and transactions. Remarkably, this is not the case, and indeed in some markets, most notably India, there are signs of equity valuations outstripping fundamental benchmarks.

Accordingly, this section looks at equity valuations of MFI shares traded on the private market in light of three questions: What are the trends in microfinance valuation in the private market in the context of the global crisis? What are the significant valuation drivers for investors and MFIs? Are MFI valuations in India showing signs of "irrational exuberance"? Our analysis is based on a sample of 200 private equity transactions that occurred between 2005 and 2009, including 42 transactions after September 2008.

We conducted a statistical analysis of the data set and explored the influence of eight variables on the valuation of MFIs. Although the data set is limited in size and might not be representative of each country situation, our analysis provides insights on market benchmarks and valuation drivers in the private market. A detailed overview of this analysis is presented in Appendix II.

Valuations Continued Rising in 2009 Despite Adverse Economic Conditions

Our 2009 report predicted lower valuations for private transactions for the year, moving toward 1x historical book value. We were concerned about the impact of the global crisis on MFIs and expected equity write-downs on the back of rising past due loans and foreign exchange losses. This deterioration did in fact occur: both asset quality and profitability saw large declines across the board in 2009, though some markets suffered more than others, as highlighted in the first part of this paper. But, to our surprise, valuations continue to rise.

Historical and forward book multiples continued their upward trend in 2009 (see tables 6 and 7).

Table 5: Number and Value of Transactions, by Year

	2005	2006	2007	2008	2009	NR	Total
Transactions (#)	28	37	37	64	30	4	200
Transactions (US$mn)	105.9	19.9	60.3	146.8	185.9	3.3	—

Source: CGAP. 2009 includes the purchase of Edyficar by Banco del Credito de Peru for US$96mn, announced on 7 September 2009.
NR = Not reported.

Table 6: Upward Trend in Valuations Confirmed in 2009

	Historical P/E		Historical P/BV	
	Unweighted Average	Median	Unweighted Average	Median
2005	9.1	7.9	1.6	1.7
2006	8.6	7.4	1.5	1.3
2007	9.9	7.2	2.0	1.3
2008	10.0	7.9	2.5	2.0
2009	12.9	13.0	2.7	2.1

Source: CGAP. P/E = price-to-earnings ratio; P/BV = price-to-book-value ratio.

Table 7: Breakdown, by Region: Historical Price-to-Book-Value in Asia Increases by 50% in 2009

	Median Historical P/E					Median Historical P/BV				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Africa	5.6	6.2	17.1	13.2	NA	0.9	1.2	1.6	1.8	NA
Asia	NA	NA	NA	6.9	NA	1.7	2.0	5.1	2.9	5.0
ECA	9.3	8.6	13.8	9.4	14.5	1.8	1.3	1.0	2.1	2.2
LAC	NA	6.7	5.6	7.8	NA	1.4	1.2	1.1	1.2	1.3

Source: CGAP. NA = fewer than five transactions. P/E = price-to-earnings ratio; P/BV = price-to-book-value ratio; ECA = Eastern Europe and Central Asia; LAC = Latin America and Caribbean.

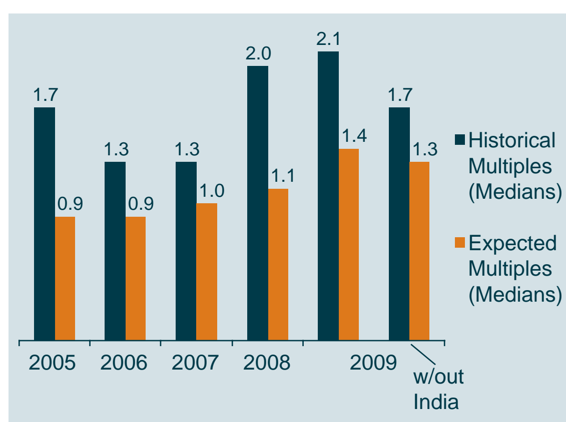
Price-to-earnings multiples increased significantly and reached their peak of 13x in 2009. Median price-to-book multiples increased to 2.1x in 2009 versus 2.0x in 2008.

Multiples are increasing across all regions

The regional breakdown of valuations (Table 7) shows that in 2009 investors paid significantly more across all regions compared to the 2005–2008 period. With valuations at 5x book value, Asia[8] commands the highest multiples, followed by Eastern Europe and Central Asia and by Latin America and the Caribbean. The upward trend in Eastern Europe and Central Asia is surprising given the severity of the economic crisis in this region, but it is important to acknowledge that transactions reported in our sample represent high-quality MFIs that have shown impressive resilience to the economic downturn. Not enough transactions were reported in the Africa region to produce reliable benchmarks for 2009.

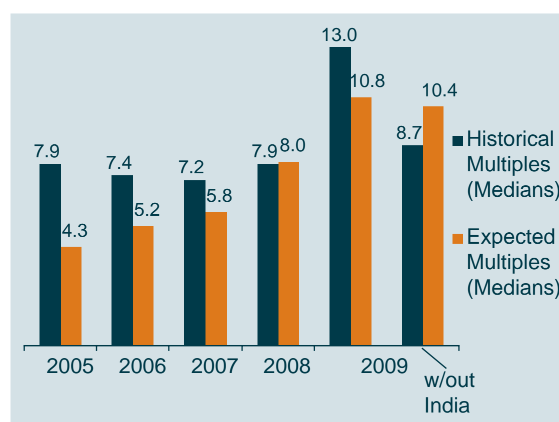
Forward multiples remained significantly below historical multiples in 2009, reflecting a positive outlook on MFI earnings prospects (figures 8 and 9). In our view, investors still expect high earnings growth in 2010 notwithstanding the difficult market environment.

Figure 8: Price-to-Book Multiples Increasing



Source: CGAP.

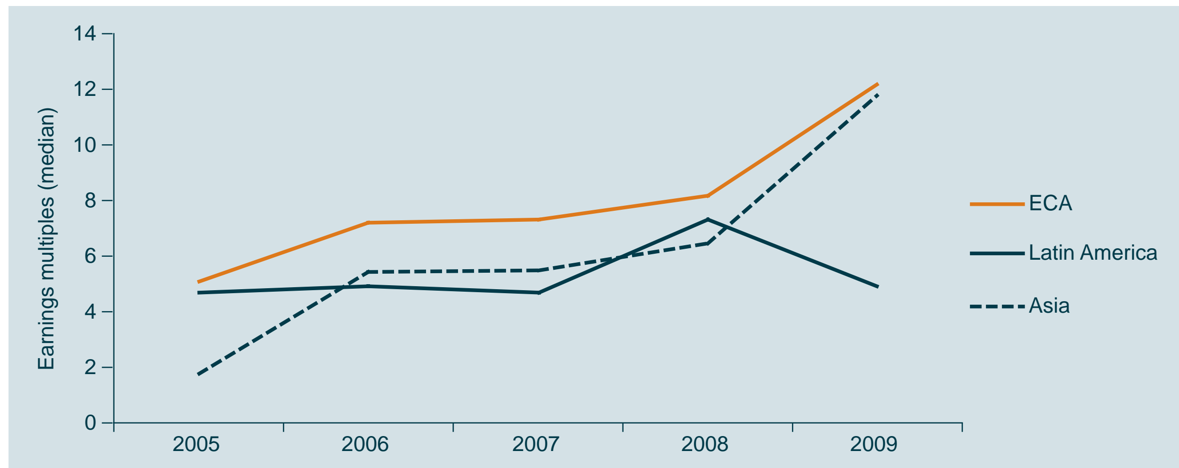
Figure 9: Price-to-Earnings Multiples Increasing



Source: CGAP.

8 Valuations in Asia have an upward bias, due almost exclusively to transactions in India, which account for more than 80% of all Asian transactions in our 2009 sample.

Figure 10: Expected Price-to-Earnings Multiples (Median): Asia on the Fast Track



Source: CGAP.

In fact, except for Latin America in 2009, none of the regions has experienced a noteworthy year-on-year drop in expected price-to-earnings multiples since the inception of this survey (Figure 10). While multiples in Latin America have been oscillating around a median value of 5, Asia has outpaced all other regions with a compound annual growth rate of 60 percent, taking it from the lowest median valuation in 2005 to a head-on-head competition with Eastern Europe and Central Asia for the top of the valuation table by 2009.[9] These variations among regions and across the years are characteristics of a young asset class lacking market reference and investor consensus on valuation.

Investors Increased Their Allocation to Microfinance in 2009 and Focused on MFIs with Good Asset Quality

The microfinance private equity market remained active despite the virtual shutdown of capital markets following the fall of Lehman Brothers: 42 equity transactions, with a total value of US$205 million, have been reported to CGAP.

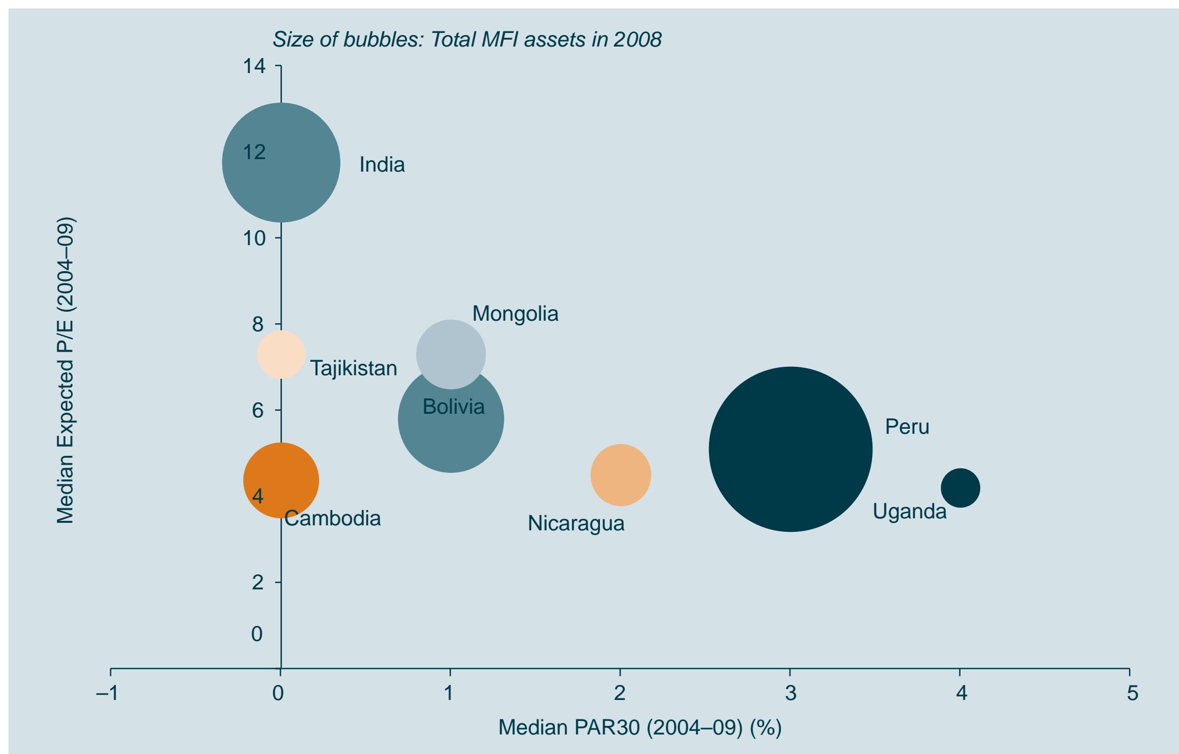
Despite the global meltdown, foreign investors continued to step up their investment in microfinance. Specialized microfinance funds increased their equity portfolio by 54 percent, up to US$1.1 trillion in 2008. Several new funds, including the Blue Orchard Fund and the Developing World Markets Equity Fund, were launched in the first quarter of 2009.

In addition, local banks took advantage of the crisis to make some strategic MFI acquisitions. Several flagship transactions have been reported publicly, including the purchase of Edyficar by Banco de Crédito del Perú, Banco Solidario by Bank Uno in Ecuador, Opportunity Bank Montenegro by Austrian Erste Steiermaerkische Bank, and Finsol by Financiera Independencia in Mexico. Thus, the combined new capital of banks and commercial investors flowing into a narrow equity market of more than 400 institutions as well as few sales from existing investors boosted MFI pricing upward.

Another reason for the continued rise in microfinance valuations is the relatively strong asset quality indicators for MFIs receiving equity

9 Africa had to be dropped from this graph because the yearly number of transactions was too low to be presented.

Figure 11: Lower Asset Quality Negatively Affects Expected Price-to-Earnings



Source: CGAP.

capital. The average MFI PAR30 2008 for the 2009 transactions reported to CGAP is 2.6 percent versus a MIX average of 3.1 percent.[10] Good asset quality appears to be a precondition for attracting equity investments.

Indeed, most transactions reported to CGAP after September 2008 occurred in resilient markets with good portfolio quality, such as India. Our data set shows no transactions in the three worst hit markets—Nicaragua, Bosnia and Herzegovina, and Morocco—and very few transactions involving distressed MFIs.

Our analysis indicates that higher delinquency (expressed as PAR30) exacted a hefty discount on valuation multiples. Our regression model (see Appendix II) shows a significant negative correlation between PAR30 and expected price-to-earnings multiples, controlling for a variety of factors, including geographic location, profitability, and transaction value.

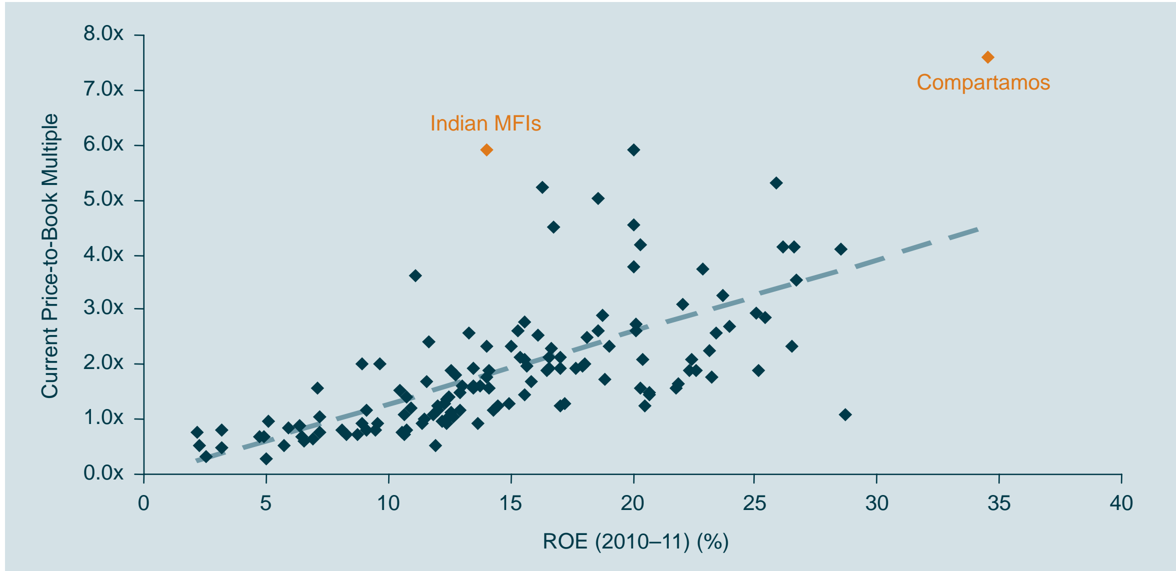
Asset Quality, Net Income Growth, and Age of the MFI Drive Valuations

Profitability does not seem to drive valuations

In mature private equity markets, book value multiples are positively correlated to return on equity. Figure 12 presents the current price-to-book-value multiples of 150 banks across the world covered by J.P. Morgan against the expected average ROE for 2009–2010. ROE appears to drive price-to-book-value multiples, with a strong correlation coefficient of 70 percent.

10 MIX 2008 MFI benchmarks.

Figure 12: Regression of Return on Equity and Price-to-Book Multiples for 150 Banks across Global Markets



Source: J.P. Morgan estimates, Bloomberg. Prices as of 23 February, 2010. We used current price-to-book-value multiples and average return on equity for 2010 and 2011, as forecast by J.P. Morgan analysts. We note that correlation reaches 69%, with a y-intercept at –0.1 and a slope of 13.2.

Table 8: Matrix of Equivalence

Theoretical ROE	P/BV
0%	–0.1x
5%	0.6x
10%	1.2x
14%	1.8x
15%	1.9x
20%	2.6x
25%	3.2x
30%	3.9x
35%	4.5x
40%	5.2x
45%	5.9x
50%	6.5x
55%	7.2x
60%	7.9x

Source: J.P. Morgan estimates, using the relation between return on equity (ROE) and price-to-book-value (P/BV) multiples, as described in Figure 12. We highlight the lines corresponding to an ROE of 14% and a P/BV multiple of 5.9x, as those are the figures corresponding to the Indian microfinance market.

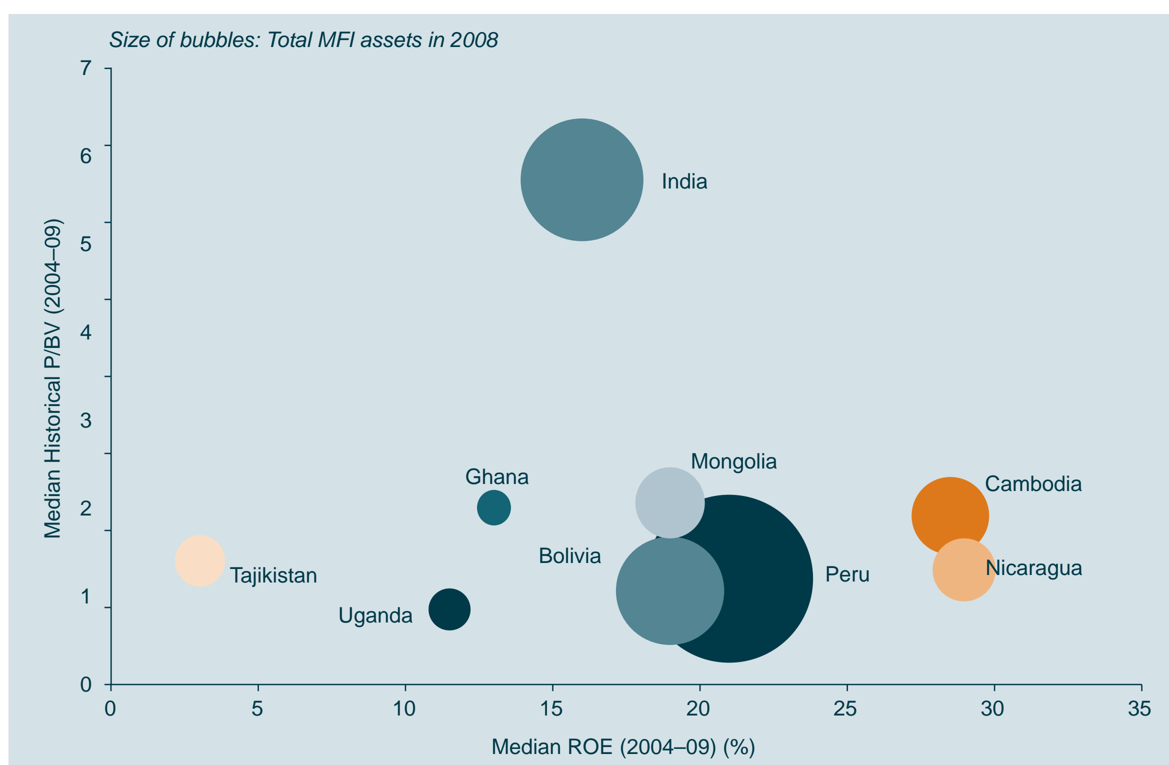
However, this relationship does not hold true in our sample of MFIs. Plotting price-to-book-value and profitability as done in Table 9 and Figure 13 shows no relationship between these two measures, indicating again a lack of consensus on MFI valuations (see Appendix II for details on the regression model).

Table 9: No Significant Correlation between Price-to-Book Value (P/BV) and Profitability (ROE)

	Unweighted Average		Median	
	P/BV	ROE (%)	P/BV	ROE (%)
Bolivia	1.1	21.1	1.1	19.3
Cambodia	2.1	26.7	1.9	28.5
Ghana	2.3	8.3	2.0	13.2
India	5.4	14.2	5.9	16.1
Mongolia	1.9	19.6	2.1	18.7
Nicaragua	1.7	26.2	1.3	29.1
Peru	1.3	20.5	1.2	21.0
Tajikistan	1.4	–3.2	1.4	3.3
Uganda	1.5	12.1	0.9	11.5
Africa	1.9	1.5	1.6	8.1
Asia	3.4	9.1	2.5	15.9
ECA	1.9	15.6	1.8	19.1
LAC	1.5	21.6	1.3	20.0

Source: CGAP.

Figure 13: No Significant Correlation between Price-to-Book Value (P/BV) and Profitability (ROE)



Source: CGAP. Median numbers are shown in this chart. There is no relationship between ROE and P/BV in the case of MFIs, suggesting an immature market. In mature markets, the P/BV multiple paid for a financial institution depends on the profitability of the institution as measured by its ROE.

MFIs in Eastern Europe and Africa are trading at the same level of 1.9x price-to-book-value while the average ROE for Africa MFIs is 1.5 percent and 15.6 percent for Eastern Europe MFIs. Investors do not appear to put too much weight on current ROE but are looking at other factors, such as growth in earnings and market size.

Net income growth is a key driver of valuation

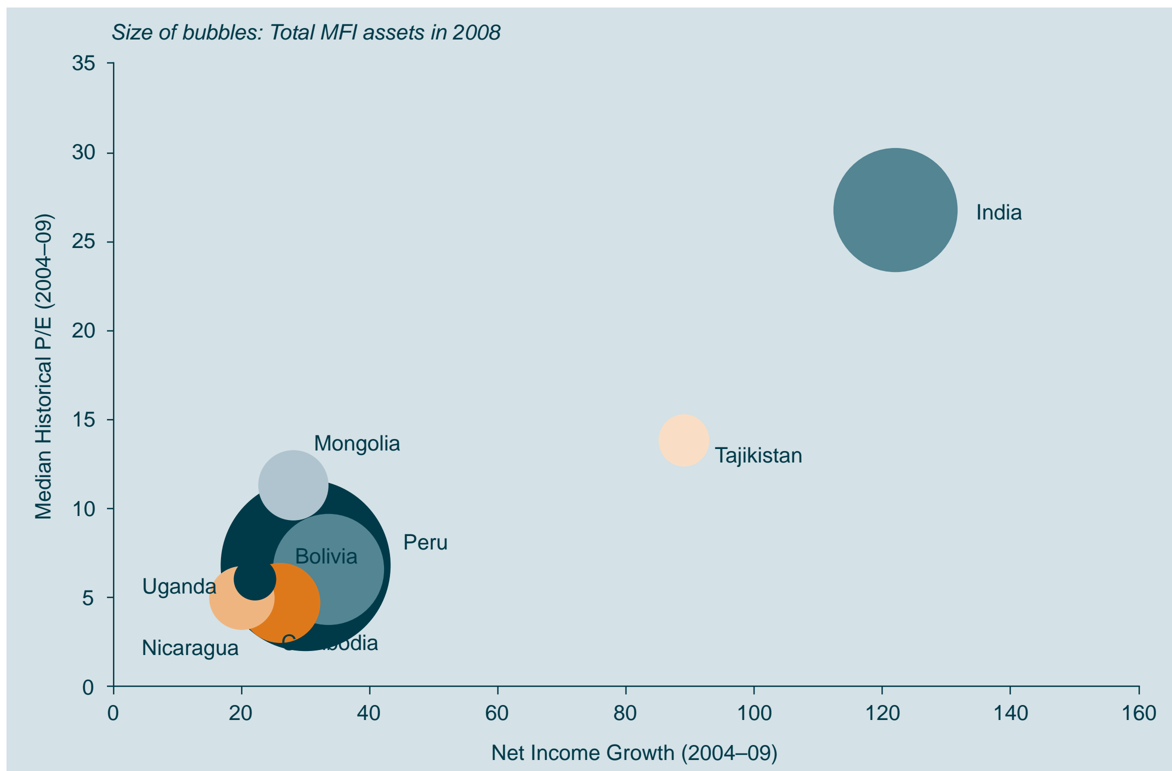
Price-to-earnings multiples are positively correlated with income growth as demonstrated in Table 10 and Figure 14. Investors assign a clear premium to earnings growth prospects. However, this analysis does not take into account the effect of equity dilution on valuation.

Table 10: Growth Prospects Exert Significant Influence on Pricing

	Unweighted Average		Median	
	P/E	Income Growth (%)	P/E	Income Growth (%)
Bolivia	6.3	28.3	6.6	33.5
Cambodia	6.8	41.9	4.7	26.4
India	23.5	82.3	26.7	121.9
Mongolia	11.4	42.7	11.3	28.0
Nicaragua	6.7	19.5	5.0	20.3
Peru	9.1	73.1	6.8	30.1
Tajikistan	17.9	96.8	13.8	89.0
Uganda	8.1	–6.1	6.0	22.0
Africa	11.7	17.9	11.6	22.3
Asia	9.2	55.8	4.8	52.5
ECA	11.8	47.2	10.5	31.0
LAC	8.3	54.2	6.9	25.5

Source: CGAP. P/E = price-to-earnings ratio.

Figure 14: Growth Prospects Exert Significant Influence on Pricing



Source: CGAP. Median numbers are shown in this chart. P/E = price-to earnings ratio.

Premium for younger MFIs

Investors pay higher multiples for younger MFIs. Our regression analysis (see Appendix II) shows that this trend is broad-based and stable across earnings and book multiples. It is important to note that this analysis is already controlling for size of the institution, which is highly positively correlated to valuations. Investors appear to place a premium on an institution's growth potential. Younger MFIs tend to grow faster than their more established counterparts. Moreover, new and more commercially oriented MFIs tend to have professional management and more aggressive growth models.

To summarize, asset quality, net income growth, and age of the MFIs are the main drivers of price as demonstrated by our statistical analysis. However, we recognize that other drivers of valuation should be taken into account by investors, such as the size of the transaction, the country where the MFI is located, its legal status, current profitability, cost structure, financial leverage, and funding base.

The Case of India: High Valuations in a Dynamic Market

India has been a major market for private equity transactions this year, accounting for over 30 percent of the transactions in our sample. Even more surprisingly, microfinance appears to be the dominant target for private equity in India, with MFIs having comprised 40 percent of all private equity transactions in the country during the past two years (Bhadra 2009). Perhaps this should not be unexpected, given the high growth rates of Indian MFIs and the still very large market potential.

India has great potential for microfinance

India presents the single largest microfinance market in the world, with over 600 million people living below $1.50 a day, while the combined MFI and self-help group (SHG) market serves only an estimated 67 million borrowers today (Srinivasan 2009).[11] Thus India's still unmet demand for microfinance remains the highest in the world.

Moreover, Indian MFIs are some of the best performers of the sector. From 2003 to 2008, they have enjoyed the world's highest growth rate in both assets and net income (over 100 percent per year on each metric over the last five years). They have maintained excellent asset quality (2008 median PAR30 at 0.36 percent versus 2.98 percent globally for NBFIs) and a low-cost model, with a median efficiency ratio of 11 percent compared to 19.8 percent for NBFIs globally.[12] Large Indian NBFIs also have excellent management teams and sound systems, according to CRISIL Ratings (2009). The Indian market is significantly concentrated, and this trend is growing: the top five MFIs already account for 61 percent of total clients and are leveraging their scale and capital market access to grow at 2.5 times the rate of the next 10 MFIs (M-CRIL 2009).

But current valuation levels are cause for concern

In 2009, Indian MFIs have been sold on the private equity market at a median of 5.9x book value versus 2.1x globally. In our view, such high valuations of Indian MFIs are difficult to justify:

1. **Current profitability is a moderate 14 percent and relies on high leverage.** Our analysis of the relationship between price-to-book and ROE suggests that, to justify the current valuations, the average ROE of Indian MFIs should stand around 45 percent (Table 8). However, microfinance NBFIs in India are generating a median ROE of only 14.4 percent,[13,14] with the largest five institutions

11 Note that the 67 million clients reported include significant double-counting of multiple borrowers, so the number of potential clients with no access to microfinance is even higher than these number imply.

12 MIX benchmarks 2008 adjusted data (http://mixmarket.org/mfi/benchmarks).

13 MIX benchmarks 2008 unadjusted data.

14 A high level of ROE would in fact allow the bank to grow its book value per share at a high pace, which would naturally decrease the price-to-book-value multiple over time. This is the case of Compartamos, which enjoyed a very high average ROE of 43% in 2009. Its current price-to-book multiple of 6.7x is therefore prone to decrease as the bank grows its book value by 32% over the next three years, according to J.P. Morgan estimates.

showing substantially higher numbers. Moreover, this ROE is already significantly inflated by increased leverage—the top 50 Indian MFIs have a leverage ratio (debt-to-equity) of 7.2x (CRISIL Ratings 2009), in contrast to the global MIX average of 3.3x for NBFIs.

2. **Investors should not pay for growth per se.** There still is a huge underserved market in India, and MFIs have grown dramatically over the last few years to service it. However, growth in market share or in the number of clients does not necessarily translate into growth in earnings or solid profitability, as measured by ROE.
3. **Low delinquency levels may not be sustainable.** Indian MFIs have maintained excellent portfolio quality so far, but we question whether the low level of loan losses is sustainable. In particular, we are concerned by the signs of overheating in some Indian states, such as Andhra Pradesh and Karnataka, as well as the decline in credit origination standards reported by CRISIL. However, partly in recognition of these issues, leading Indian MFIs have recently begun concerted efforts to develop industry standards, such as setting combined maximum debt limits for multiple borrowers and developing a credit bureau to facilitate information sharing (Microcapital Monitor 2009). If implemented effectively, these measures should significantly reduce the risk of credit bubbles in Indian microfinance.
4. **Microfinance penetration is high in select regions.** MFIs are heavily concentrated in the southern states, with relatively little presence in other regions. We expect overall profitability to decline in the near term as MFIs expand into less penetrated areas, given the relatively higher operating cost such expansion incurs. At the same time, we believe margins will begin to shrink in the more competitive markets in the south.
5. **Overvaluation is driven by excess capital flows, in our view.** India garnered 35 percent of microfinance private equity investments in 2008 and 25 percent in 2009.[15] A significant share of these flows comes from investors whose objective is to realize profits by floating or otherwise exiting their investments in a relatively short time frame. In many cases in the past (such as during the dot com bubble in the 1990s), this type of capital has produced overvaluation of equity prices in the short term and disappointment in the long term.

Although our analysis suggests a market dominated by high-valuation transactions, we recognize that our data set is limited and may not be representative of all MFI equity deals in India.[16] A number of domestic microfinance investors, such as SIDBI, are active in the equity market, and we believe they are investing at lower valuations. Moreover, there are still attractive social investment opportunities in India in small and medium-size MFIs in underserved regions, although their capital absorption capacity is limited due the growing market dominance of the larger players.

Developments in India should be watched by all microfinance investors. Given India's market presence, its potential impact could be felt across the entire microfinance sector.

15 CGAP equity valuation database.

16 Of the 21 Indian transactions in our data set, only four deals were valued below 4x book value, whereas seven were over 6x book value, and six were so high (above 10x book value) as to be deemed outliers for the purposes of our analysis.

Valuation of Public Transactions—Low-Income Finance Institutions

The private market for MFI equity transactions having shown remarkable resilience in the face of deteriorating asset quality and profitability, one needs also to examine the broader context of the publicly listed market for guidance on future trends. As the pool of listed MFIs is extremely limited, this means comparing to other, similar, institutions.

In this section we look at valuation trends for LIFIs in the public markets. LIFIs may not necessarily share the double-bottom-line business model of most MFIs, but they operate in the same markets, providing financial services (consumer and microenterprise loans, payments, and insurance) to lower income segments of the population. As such, they offer interesting comparables to MFIs. We have identified eight such institutions.

In this section we examine answers to the following questions about asset quality and stock price performance of LIFIs in the context of the global crisis:

- How did LIFIs' asset quality evolve in the recent past and is their capital well covered?
- How did the LIFI Index, first introduced in last year's report, perform in the context of the financial crisis?
- How did the LIFI Index compare with mainstream banks?

Asset Quality Deteriorated During the Crisis

We used two distinct data sets: (1) data for the banking systems of Indonesia and Mexico, which are two of the largest microfinance markets, and (2) two emblematic LIFIs, namely Mexico's Compartamos and Bank Rakyat Indonesia (BRI).

Nonperforming loan (NPL) ratios have increased since the beginning of the crisis but remain below historical levels

Asset quality deteriorated across product lines both in Mexico and Indonesia. The Mexican Central Bank reported that the NPL ratio of Mexican banks increased to 3.0 percent at the end of September 2009 from 2.1 percent in June 2008 and appears to have stabilized around that level.[17] Similarly, the NPL ratio at Compartamos, defined as loans past due over 90 days to total loans, increased to 2.3 percent in September 2009 from 1.4 percent in June 2008.

In the case of Indonesian banks, the Central Bank of Indonesia reported an increase of 80 basis points in the NPL ratio[18] between September 2008 and the peak in loan delinquencies in May 2009, when the NPL ratio reached 4.9 percent. The NPL ratio has decreased since then and reached 4.3 percent in September 2009. At BRI, the NPL ratio, defined as loans that are overdue by 91 days or more, increased to 3.9 percent in September 2009 from 3.4 percent in June 2008.

The increase in NPLs for regulated banks in these two countries is mild and far short of the fears analysts expressed when the crisis started to unfold. And the publicly listed MFIs, Compartamos and BRI, were only moderately affected by the crisis. The group lending loan portfolio of Compartamos resisted particularly well: its NPL ratio increased only from 0.4 percent in September 2007 to 0.7 percent in September 2009.[19] Similarly, the BRI microcredit portfolio exhibits the same resilience seen in previous crises, with its NPL ratio increasing from 1.2 percent at the end of 2007 to only 1.7 percent in September 2009.

17 The Mexican Central Bank compiles data for Mexican banks and reports the data quarterly. As a result, it does not incorporate data for NBFIs (such as Financiera Independencia) and NGOs. The Central Bank of Mexico defines NPLs as loans past due over 90 days.

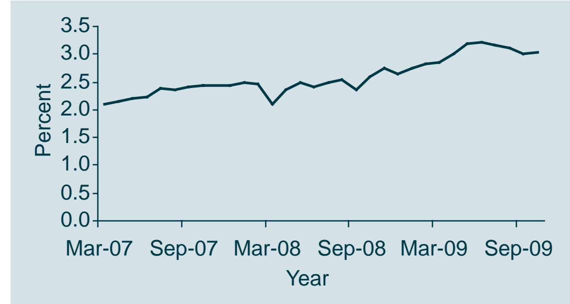
18 The Central Bank of Indonesia defines NPLs as loans that are past due 91 days or more.

19 Group lending represented 74% of the bank's total loan portfolio as of September 2009. The rest of the portfolio consisted of additional loans, individual loans, and home renovation loans.

Figure 15: Compartamos NPL Ratio Increased from 1.4% in June 2008 (before the crisis) to 2.3% in September 2009

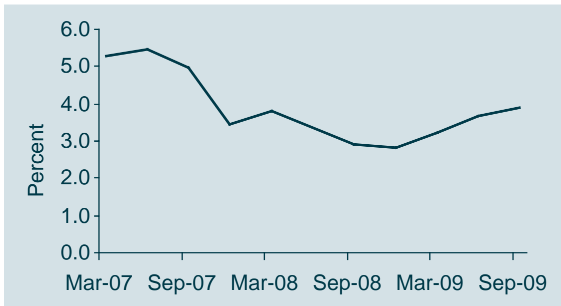
Source: Company data. NPL ratio defined as loans past due 91 days or more. Data up to September 2009.

Figure 16: The NPL Ratio at Mexican Banks Increased from 2.1% in June 2008 to 3.0% in September 2009



Source: Banco de Mexico, data up to October 2009.

Figure 17: BRI NPL Ratio Increased from 3.4% in June 2008 (before the crisis) to 3.9% in September 2009



Source: Company data. NPL ratio defined as loans past due 91 days or more. Data up to September 2009.

Figure 18: The NPL Ratio at Indonesian Banks Increased from 4.1% in June 2008 to 4.3% in September 2009

Source: Central Bank of Indonesia, CEIC. NPL ratio defined as loans past due 91 days or more. Data up to September 2009.

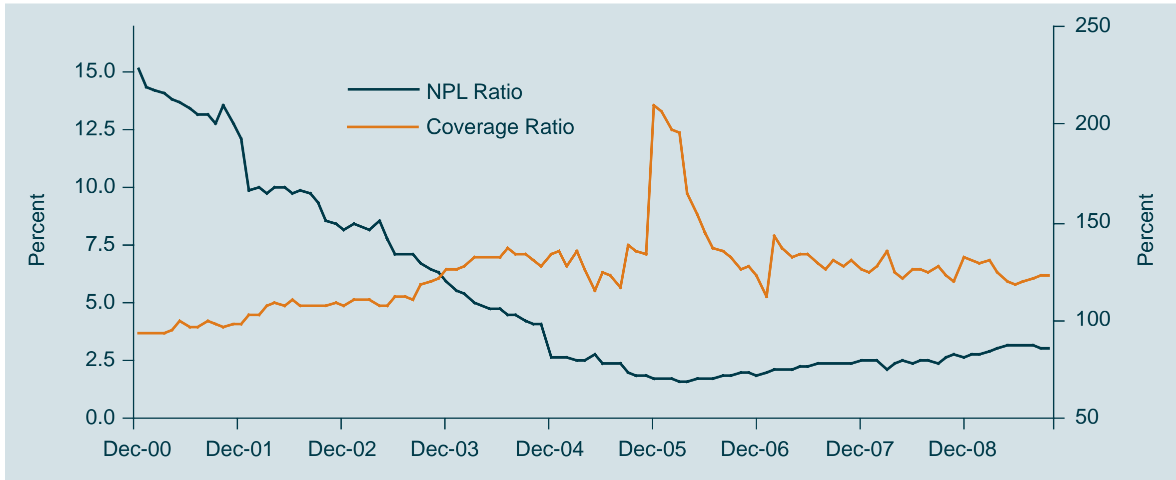
The Strength of Bank Capital Varies by Country

Despite the recent spike in NPLs, the delinquency rates of the two banking systems analyzed in this section (Mexico and Indonesia) remained at historically low levels. This is different from the results for MFIs in the first part of this paper, for which delinquency rates had reached historical highs.

The NPL ratio of Compartamos at 2.3 percent in September 2009 remains below the banking system average of 3.0 percent in Mexico. Moreover, this ratio of 3.0 percent for Mexican banks is well below levels seen at the beginning of the decade (when NPLs reached 15 percent), as shown in Figure 20. Similarly, the NPL ratio of Indonesian banks decreased during the decade from 18.8 percent at the end of 2000 to 4.3 percent in September 2009.

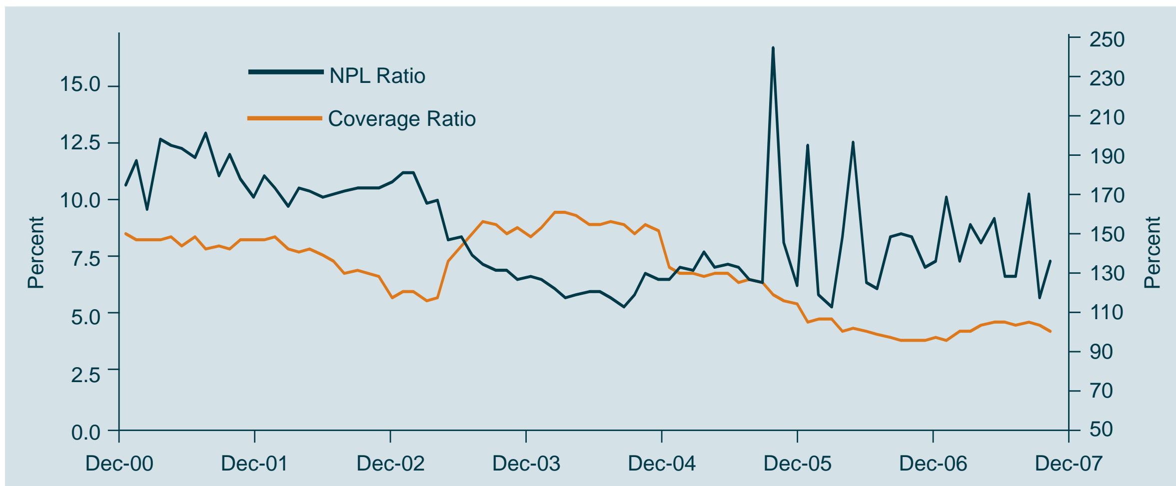
To assess the soundness of the two banking systems, we analyze their coverage ratios of past due loans (defined as loan-loss reserves to past due loans). The average coverage ratio for Mexico

Figure 19: Mexico: NPLs Went Down and Coverage Ratio Remains above 120%



Source: Banco de Mexico, data up to October 2009.

Figure 20: Indonesia: NPL Went Down and Coverage Ratio Reached 135% as of September 2009



Source: CEIC, data up to September 2009.

and Indonesia stood, respectively, at 131 percent and 144 percent in September 2009, relatively high levels by international standards. BRI and Compartamos also enjoyed comfortable coverage ratios of more than 150 percent at the end of September 2009, significantly above the average coverage ratio of MFIs, as analyzed in the first part of this paper, which stood at around 115 percent at the end of 2009.

Despite Stresses in Asset Quality, Valuations of LIFIs Increased and Outperformed Mainstream Banks'

Definition of the LIFI Index

The LIFI Index groups eight publicly listed institutions, including banks and NBFIs, that provide financial services to the lower income demographic. It is a market cap-weighted index, covering various geographies and business models. The index includes institutions based on four criteria: (1) the LIFI offers mostly financial services and targets the lower income segments of the population; (2) it is publicly listed on an exchange; (3) financial information is easily available; and (4) its stock has good daily liquidity.

The index includes banks that are not exclusively offering working capital loans to microentrepreneurs, broadening the scope to include consumer loans. The selected LIFIs are BRI, Danamon, Compartamos, Financiera Independencia, African Bank, IPF, First Cash Financial, and Panamericano. We note that two LIFIs, First Cash and Panamericano, have been added to this year's edition of the index, in order to expand its scope.

First Cash Financial is the second largest pawn shop operator in Mexico and the third largest in the United States. It is a hybrid, short-term, fully collateralized consumer lender and a deep discount retailer of forfeited collateral. The bank had US$279 million in total assets as of September 2009. It is listed on Nasdaq and sees trading volume averaging US$4.0 million daily.

Table 11: Eight Institutions in the LIFI Index

First Cash Financial	US/Mexico
Compartamos	Mexico
Financiera Independencia	Mexico
Banco Panamericano	Brazil
IPF	Mexico/Eastern Europe
BRI	Indonesia
Danamon	Indonesia
African Bank	South Africa

Source: J.P. Morgan. We indicate the region where the institution has the largest presence.

Banco Panamericano is a regulated bank in Brazil that offers consumer lending. The bank had US$5.9 billion in total assets as of September 2009 and US$4.5 billion in total loans. Its loan portfolio breaks down into 55 percent auto loans, 24 percent credit cards, and 13 percent payroll-deducted loans. The average loan size is US$4,000. The company is listed on the Sao Paulo Stock Exchange (Bovespa) and has an average daily trading volume of US$2.8 million.

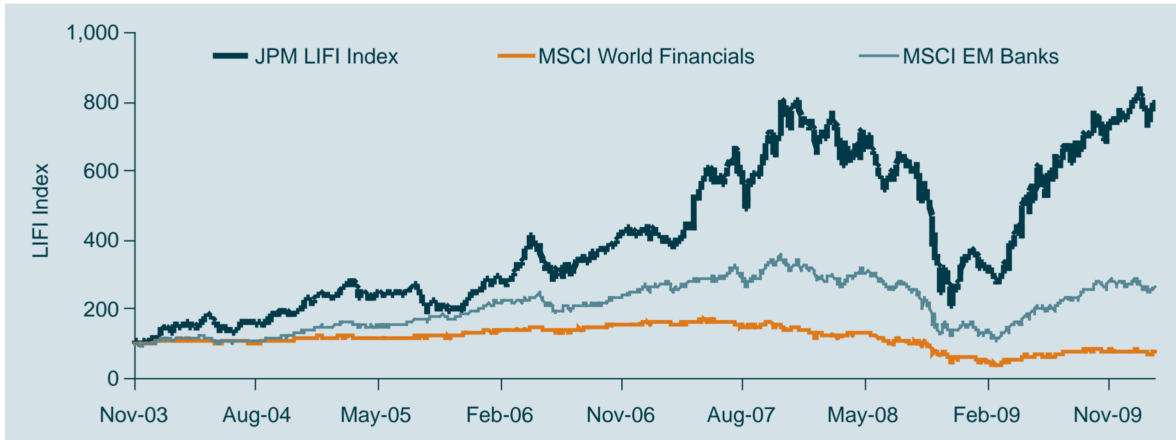
The LIFI Index outperformed mainstream banks and is trading 1 percent below its peak in 2007

A review of the historical performance of the index shows strong performance against emerging market banks and mainstream banks in global markets.

In Figure 21, we back-tested the index since November 2003 with the first set of four LIFIs (African Bank, BRI, Danamon, and First Cash Financial). The index incorporates more LIFIs as they become listed: Compartamos (April 2007), IPF (July 2007), and Independencia and Panamericano (November 2007). Over the long run, the index outperforms traditional banks by 714 percent, as reflected by the MSCI Financials Index.

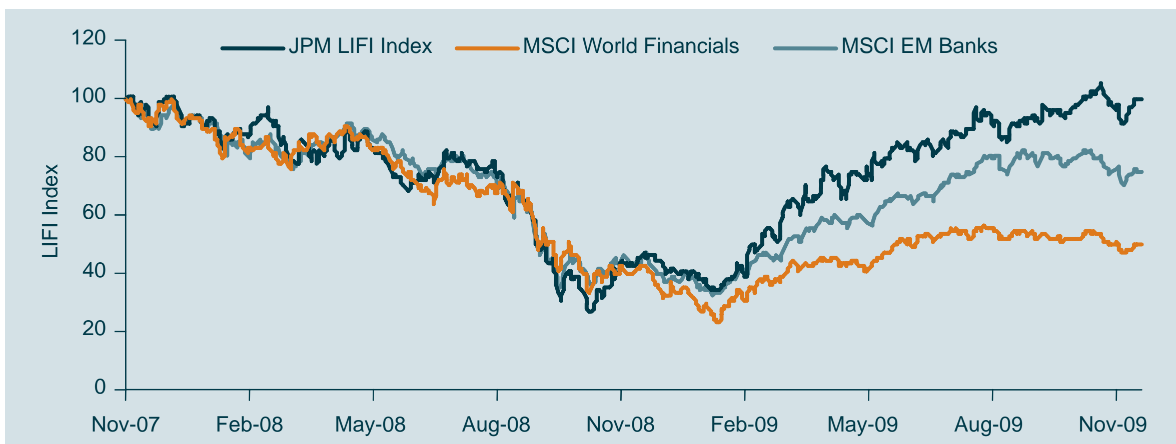
The index has a base of 100 as of 10 November 2003. Since the index peaked at 801 on 2 November 2007, it performed in line with the MSCI World Financials Index until October 2008. It has since strongly bounced back and is now trading close to its peak.

Figure 21: The LIFI Index Outperforms Banks in the Long Run



Source: Bloomberg, J.P. Morgan. Base = 100 as of 10 November 2003. The index at inception consisted of four institutions (BRI, Danamon, African Bank, and First Cash Financial) and included the other four MFIs (Compartamos, Financiera Independencia, Panamericano, and IPF) when they went public in 2007. Priced as of 23 February, 2010.

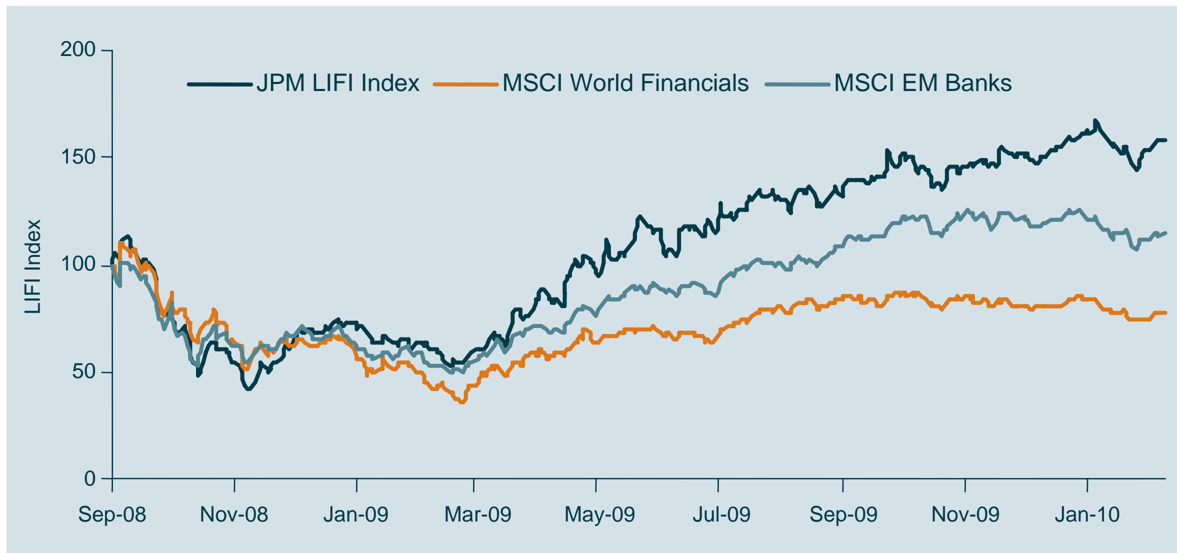
Figure 22: The LIFI Index Is Trading 1% below Its Peak in December 2007



Source: Bloomberg, J.P. Morgan. Base = 100 as of 10 November 2007. Priced as of 23 February, 2010.

Figure 23 shows the relative performance of the LIFI Index and MSCI World Financials Index since the Lehman bankruptcy in September 2008. The LIFI Index bounced significantly above its pre-September 2008 level, making up for the losses of the past 14 months. Since the beginning of the crisis, the LIFI Index outperformed the MSCI World Financials Index by 79 percent. The main contributors to the performance were Compartamos and BRI, the most liquid stocks in the index.

Figure 23: LIFI Index Outperformed Global Banks by 79% since Lehman Bankruptcy (15 September 2008)



Source: Bloomberg, J.P. Morgan. Base = 100 as of 15 September 2008. Priced as of 23 February, 2010.

Despite the Outperformance, LIFI Index Still Trades at a Discount to Mainstream Banks

The LIFI Index trades at a 13–23 percent discount to mainstream banks

The table below shows that the LIFI Index trades at a discount in terms of price-to-earnings multiple at 12.4x forward earnings, while mainstream banks trade at 16.2x forward earnings. However, earnings-per-share (EPS) growth is similar for LIFIs and for mainstream banks at roughly 28–29 percent, on average, suggesting that LIFIs are trading at a lower multiple, all other things being equal. This represents a discount of approximately 23 percent for LIFIs versus mainstream banks.

Moreover, the LIFI Index trades at a discount to mainstream banks in terms of price-to-book multiple, in spite of having a higher average ROE at 22 percent in 2010e–11e versus 19 percent for mainstream banks. LIFIs trade at a discount of 13 percent compared to mainstream banks, with a price-to-book value multiple of 2.6x, versus 3.0x for mainstream banks.

Table 12: Valuation Summary: Comparing Our Index with Traditional Banks

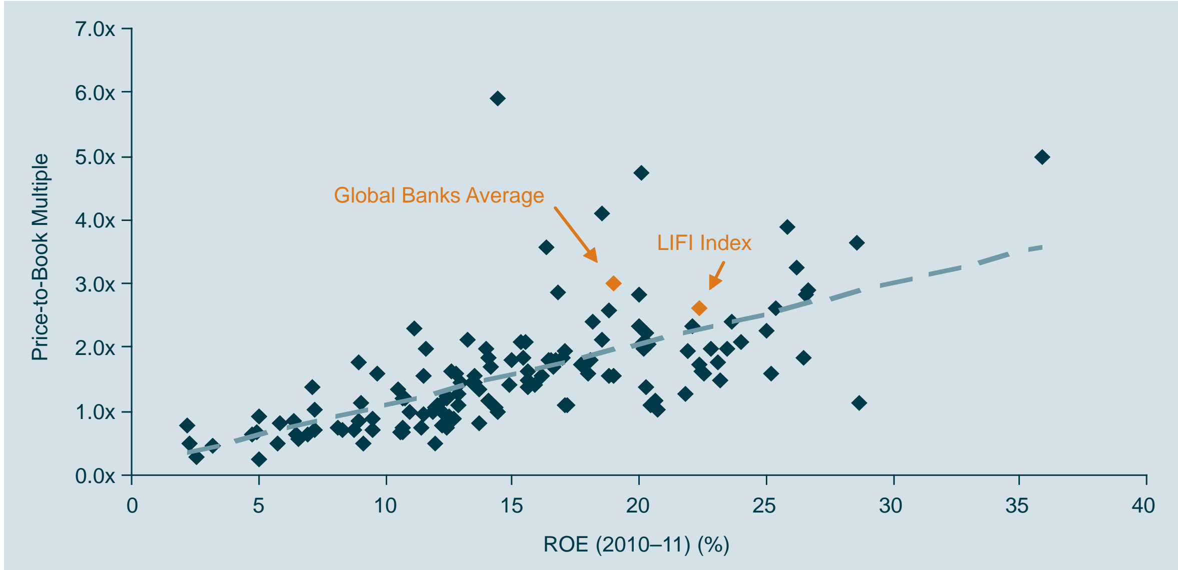
Company	Ticker	Country of Listing	Mkt. Cap (US$ MM)	ADTV (US$ MM)	Local Price	P/E		P/BV		ROE		EPS CAGR
						10E	11E	10E	11E	10E	11E	09-11E
African Bank	ABL SJ	S. Africa	3,155	12.8	2,420.0	8.5	6.2	1.5	1.4	18%	23%	32%
Banco Panamericano	BPNM4 BZ	Brazil	1,456	2.8	10.9	10.6	8.7	1.5	1.3	17%	17%	37%
BRI	BBRI IJ	Indonesia	9,858	10.9	7,450.0	10.6	8.9	2.8	2.4	28%	29%	23%
Compartamos	COMPARTO MM	Mexico	2,151	3.1	65.0	15.3	12.6	5.1	3.9	38%	34%	20%
Danamon	BDMN IJ	Indonesia	4,636	4.2	5,150.0	15.4	12.4	2.4	2.2	16%	19%	32%
First Cash Financial	FCFS US	USA/Mexico	634	4.0	21.3	13.0	10.9	2.4	2.0	19%	18%	17%
Fin. Independencia	FINDEP*	Mexico	637	0.2	11.5	14.2	9.6	3.3	2.5	26%	31%	34%
IPF	IPF LN	UK	811	1.1	204.2	9.0	7.4	1.8	1.4	18%	19%	37%
LIFI Index						**12.4**	**9.9**	**2.6**	**2.2**	**21%**	**24%**	**29%**
						10E	11E	10E	11E	10E	11E	09-11E
Africa						10.9	8.3	1.8	1.7	15%	18%	0%
Developed Asia Pacific						22.4	19.2	3.5	3.0	15%	16%	20%
Emerging Asia Pacific						13.4	10.9	3.1	2.3	21%	23%	25%
Developed Europe						12.0	8.5	0.5	0.5	9%	11%	27%
Emerging Europe						10.7	6.5	1.7	1.5	17%	22%	72%
Latin America						14.2	10.2	2.7	2.0	20%	20%	17%
Market Cap. Weighted Averages for Banks Covered by J.P. Morgan						**16.2**	**13.2**	**3.0**	**2.4**	**18%**	**20%**	**28%**

Source: Bloomberg, company data, J.P. Morgan estimates. ADTV=average daily trading volume for the past three months. Prices as of 23 February, 2010.

Notes for the LIFI Index: We use Bloomberg consensus estimates for all individual stocks mentioned in this table, except for First Cash Financial, for which we use J.P. Morgan estimates for book value per share. The LIFI Index is a market capitalization-weighted index, with the weight of BRI reduced to a fourth because its microfinance portfolio represents only about 25% of its total loan book.

Notes for Global Emerging Markets Banks: We show market capitalization-weighted averages of banks covered by J.P. Morgan analysts, representing a sample of more than 150 banks across global markets.

Figure 24: Regression of ROE and Price-to-Book Multiples for Global Mainstream Banks. Correlation Reaches an Impressive 71%



Source: J.P. Morgan estimates, Bloomberg. Prices as of 23 February, 2010. Price-to-book multiples use the current price divided by 2010-end book value per share. The axis for ROE uses the average of ROE for those institutions for 2010e and 2011e.

Figure 24 shows the correlation between ROEs and price-to-book multiples for approximately 130 banks around the world. The LIFI Index currently trades at 2.6x 2010e book value, for an average ROE in 2009–10 of 22 percent. This suggests that the current valuation of the index is fair, while the average valuation of global banks is above the trend line.

Conclusion

A little more than one year after the bankruptcy of Lehman Brothers, we are optimistic about the ability of the microfinance industry to rebound from the impact of the financial crisis.

At the outset of the crisis, late in 2008, the chief concern had been about a liquidity squeeze, with fears that MFIs would be unable to roll over their debt. In large part, the sector avoided this fate, as the credit market serving MFIs recovered quickly, and microfinance investors remained committed to the asset class. However, the crisis exposed some structural issues and operational weaknesses, and credit risk has now become the top concern of investors and MFIs (Lascelles 2009).

Some fast moving markets that had witnessed unrestrained growth in recent years, such as Nicaragua and Bosnia and Herzegovina, have been facing large-scale delinquency crises. And for the first time in the sector's 30-year history, we have witnessed a concurrent and significant decline in the asset quality of the majority of MFIs across the globe, with a parallel impact on their profitability. However, with a few significant exceptions, thus far MFIs have managed to weather this delinquency crisis reasonably well, reducing their growth, using their surplus loan-loss provisions, and keeping their capital intact.

With the downturn having apparently bottomed out in the last months of 2009, most MFIs are generally well positioned for 2010 and are likely to resume growth, though with greater awareness of risk management and more prudent growth strategies. For a few vulnerable MFIs, however, NPLs and large numbers of restructured loans will have to be written off. This may require additional equity and significant restructuring. In a few cases, distress mergers, or even liquidations, are likely.

Looking at private equity, we believe valuations will continue to be supported by a large pool of private and public investors with a long-term commitment to the asset class. In the private market, most MFI transactions will continue to be in the range of 1.5x–2.5x book value, although some distressed MFIs urgently seeking to raise equity will likely be valued at lower multiples. Asset quality and funding structure as well as management and governance are likely to remain key concerns for investors. At the same time, we believe investors will need to be more selective in their MFI investments than in the past.

Microfinance IPOs should resume in the coming months. The expected 2010 IPO of SKS—the leading MFI in India—would be a milestone, setting the stage for future IPOs in the sector. Depending on the outcome, it is quite probable that the spotlight on the Indian microcredit sector will intensify, while triggering renewed discussion around MFIs' profitability and social impact.

The current environment may cause MFI valuations to be volatile in the near term, but we believe that the medium-term outlook for equity investments in microfinance remains positive. For those with a long-term commitment to microfinance—both financial and social—we believe 2009 will come to be seen as an important transition period, with the lessons and adjustments of the year helping the microfinance industry to lay a foundation for more solid and sustainable growth.

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Appendix I: Glossary

Asset quality in this context pertains to the quality of the assets (loans) on a financial institution's balance sheet, based on the likelihood that a given loan will repay principal and interest on time. Low asset quality denotes that the institution must make provisions for eventual losses.

Development finance institutions (DFIs) are the private sector arms of government-owned bilateral agencies and multilateral institutions, such as the World Bank. DFIs have been established to provide investments and advisory services to build the private sector in developing countries. They include multilateral organizations, such as the International Finance Corporation (a subsidiary of the World Bank), and bilateral financial institutions, such as the German KfW (Kreditanstalt für Wiederaufbau).

DFIs have been early investors in microfinance. Most DFIs started financing microfinance in the late 1990s, following the grant funding of donor agencies since the 1970s. DFIs are bringing a commercial approach to the microfinance industry, providing quasi-commercial loans, equity, and guarantees to MFIs. There were 16 DFIs active in microfinance in 2008. Their total microfinance portfolio is in excess of US$4.8 billion and grew by 24 percent in 2008. Most of the DFIs' investments are in fixed income (62 percent) and are concentrated in the largest MFIs. But DFIs' equity investments are also on the rise and had reached 16 percent, according to most current data, with 57 percent of all equity investments going to Europe and Central Asia. According to CGAP's 2009 Funder Survey, the top five DFIs—KfW, EBRD, IFC, AECID, and FMO—account for 74 percent of total DFI funding.

Lower income financial institutions (LIFIs) are publicly traded commercial institutions that operate in the same markets as MFIs and provide financial services (consumer and microenterprise loans, payments, and insurance) to lower income segments of the population generally similar to those targeted by microfinance. In many cases they do not necessarily have an explicit social agenda; while they do have different risk/profitability profiles and their loan portfolios tend to feature more consumer loans than microenterprise ones, they nevertheless provide interesting comparables to MFIs.

Microfinance institutions (MFIs) provide microloans specifically for low-income borrowers who are typically self-employed or owners of tiny informal businesses rather than salaried workers. The loan size is small (on average US$3,000 in Europe and Central Asia[20] and less than US$1,000 elsewhere), and lenders rely on alternative lending techniques that generally do not rely on conventional collateral. Most of the 1,300 institutions that report to MixMarket—the industry information exchange—have microenterprise lending as a core product but are increasingly offering other types of loans, such as mortgage loans and consumer loans for salaried workers and savings accounts. MFIs exist in a variety of legal forms, from credit unions and NGOs to formal NBFIs and regulated banks. Many of them are increasingly moving away from donor subsidies to leverage commercial capital (usually debt, deposits, and equity investments). Most MFIs see themselves as having a double bottom line, aiming for both profit and social impact.

Microfinance investment vehicles (MIVs) are specialized microfinance funds or investment vehicles intermediating capital between investors and MFIs. There were 103 active MIVs in 2008 with total assets under management of US$6.6

20 "MicroBanking Bulletin average for 2007," www.mixmarket.org.

billion as of December 2008. MIVs comprise a diverse range of organizations in term of investor base, instruments, and legal setup. The largest MIV group is fixed-income regulated mutual funds with average assets of US$161 million. MIV investments have quadrupled since 2005, and this growth is set to continue. Individual investors were early backers and continue to provide one-third of the MIV capital. DFIs were also early subscribers and drove several MIV startups, such as the equity fund Profund. Today, institutional investors are providing the mainstay of MIVs' funding with a 42 percent share. MIVs are invested primarily in fixed income (75 percent) in large MFIs in Eastern Europe and Latin America. But equity investments are growing rapidly (more than 47 percent in 2008) and passed the US$1 billion milestone in 2008. According to CGAP's 2009 MIV survey, the average return for private equity funds in microfinance is 10.5 percent (average gross internal rate of return; the vintage years of the two MIVs in the sample are 1999 and 2003).

Nonbank financial institutions (NBFIs) provide services similar to those of a bank but are licensed under a separate category. The separate license may be due to lower capital requirements, to limitations on financial service offerings, or to supervision under a different state agency. In some countries this corresponds to a special category created for MFIs.

Nonperforming loans (NPLs) is a term used most often by banks to represent delinquency levels. The specific definition of NPL is usually set by the local regulatory authority governing banking institutions and therefore varies extensively among countries and regions.

Portfolio at risk (PAR) is the value of all loans outstanding that have one or more payments of interest or principal past due by more than a specified number of days (e.g., PAR30 = loans past due > 30 days). The reported amount includes the balance of unpaid principal, expressed as a percentage of gross loan portfolio, that is, including all current, delinquent, and renegotiated loans but excluding write-offs. This is the definition used in Sym50. Note that the MIX definition of PAR adds to the numerator the unpaid principal of loans that have been restructured or rescheduled.

Restructured/rescheduled/reprogrammed loans are loans for which the payment schedule, the interest rate, and/or the outstanding principal amounts has or have been renegotiated with the borrower.

Sustainable and responsible investment (SRI) is a generic term covering ethical investments, responsible investments, and sustainable investments that combine investors' financial objectives with their concerns about environmental, social, and governance (ESG) issues. SRI investors can use a broad range of investment strategies, including ethical exclusion, negative screening, positive screening, and shareholder engagements. Institutional investors, such as pension funds integrating ESG factors in their investment decisions, are part of the broad SRI markets. According to the Eurosif SRI 2008 study, the broad SRI market is estimated at €5 trillion, including €2 trillion in the United States and €2.6 trillion in Europe.

Write-offs are loans that are deemed unrecoverable and written off the balance sheet. From an accounting standpoint, a write-off reduces the loan book on the assets side and loan-loss reserves on the liabilities side. If reserves are not sufficient to cover for the loss in loans, equity is impaired. Write-offs can be expressed in absolute terms and as a percentage of outstanding gross loans.

Appendix II: Methodology and Data Sets for Private Transactions

The sample covers 200 transactions that occurred between January 2005 and September 2009, including 56 transactions collected between September 2008 and September 2009. The aggregate value of all transactions is slightly more than US$520 million.

Transaction data were collected and processed by CGAP and communicated to J.P. Morgan in the form of aggregates. This was done to preserve the confidentiality of the underlying data. The complete set of CGAP tables with aggregated data on valuation multiples is available on the CGAP Web site (www.cgap.org).

We analyze both historical multiples (historical price-to-earnings and historical price-to-book-values, also called trailing multiples), and this year extend our analysis to expected (forward) multiples.

We collected around 100 individual deals during this survey cycle, of which only 56 were included in our sample. Transactions were dropped if they were executed at nominal value so that no underlying valuation process could be assumed or if they were part of loans being converted into equity. When analyzing the multiples in our sample, the following outliers were eliminated: (1) negative multiples, (2) price-to-book multiples above 10,[21] and (3) price-to-earnings multiples above 40.

Transactions that involved multiple parties, which obviously had done the valuation jointly, are treated as one single transaction. This avoids a potential bias caused by including the same transaction information several times in the database.

The multiples we show are all post-money, that is, they are based on the number of shares and financial data of the MFI **after** transaction. This shall not imply that post-money multiples are the industry standards. In fact, a sizable number of fund managers relies on premoney multiples for their decision making. Our aim is simply to make the transaction data comparable.

When presenting this year's data set we cut it by calendar year, with 2009 comprising the first three quarters of the year. This year we are also including expected (forward) multiples to better illustrate investors' growth expectations.

This report presents aggregates only when at least five underlying observations per aggregate were available. Cases with fewer observations are marked with "NA" throughout the report.

Table 13: Transaction Size

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<$500k	8.7	7.2	1.7	1.4	73
$500k–$1m	9.4	7.4	1.7	1.4	36
$1m–$2m	7.8	4.8	1.6	1.3	31
>$2m	14.1	13.0	3.5	2.6	38

Source: CGAP.

21 This is a deviation from last year's method, which included price-to-book-values up to 20. We decided to lower the cut-off to create a more stable and reliable sample. Minor variations from the numbers in last year's report can be attributed to this rule.

Table 14: Market Capitalization

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<$5m	9.3	6.6	1.8	1.6	71
$5m–$10m	10.0	7.6	1.6	1.3	35
$10m–$20m	8.1	6.9	1.7	1.3	38
>$20m	12.9	12.2	3.4	2.3	39

Source: CGAP.

Table 15: Buyer Type

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
MIV	10.0	7.5	2.1	1.4	100
IFI	11.2	7.3	2.3	1.8	40
Other	8.9	7.9	1.9	1.8	34

Source: CGAP.

Table 16: Scale—Number of Borrowers

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
Small	11.5	9.8	1.6	1.6	41
Medium	10.9	7.6	1.7	1.4	31
Large	9.1	7.5	2.4	1.8	89

Source: CGAP. Small=<10,000 borrowers, medium=10,000–30,000 borrowers, large=>30,000 borrowers.

Table 17: Tier—Total Assets

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
Tier 1	9.7	7.8	2.6	2.1	49
Tier 2	10.2	7.9	2.0	1.5	59
Tier 3	9.9	6.6	1.7	1.5	56

Source: CGAP. Tier 1=Assets>100m US$, Tier 2=Assets 15–100m US$, Tier 3=Assets<15m US$.

Table 18: Age of the MFI

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
New	16.9	13.8	2.3	1.8	36
Young	11.2	7.6	2.1	1.7	41
Mature	9.0	7.4	2.0	1.4	84

Source: CGAP. New=0–6 years, young=6–10 years, mature=>10 years.

Table 19: Efficiency

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<10%	6.6	6.8	3.3	1.9	4
10%–20%	8.3	7.3	1.8	1.4	76
20%–30%	12.4	11.8	1.5	1.4	14
>30%	11.5	9.1	2.5	1.7	57

Source: CGAP. Operating Expense / Period Average Gross Loan Portfolio.

Table 20: Asset Quality—PAR30

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<1%	9.8	7.9	2.4	1.8	68
1%–3%	9.4	6.9	2.0	1.4	52
>3%	10.3	7.8	1.7	1.4	40

Source: CGAP. Outstanding balance of loans (principal and interests) with at least one payment > 30 days overdue / Gross Loan Portfolio.

Table 21: Financial Intermediation—Savings to Total Assets

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
No FI	9.8	7.3	2.0	1.4	68
Low FI	9.9	6.6	2.6	1.9	47
High FI	10.1	8.4	1.8	1.5	68

Source: CGAP. No FI = Voluntary Savings / Total Assets=0, medium FI = Voluntary Savings / Total Assets > 0 and <20%, high FI=Voluntary Savings / Total Assets>20%.

Table 22: Leverage—Debt to Equity

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<3	12.8	10.5	2.1	1.7	38
3–6	9.7	7.6	1.9	1.4	59
>6	9.1	7.5	2.2	1.8	67

Source: CGAP. Total Liabilities / Total Equity.

Table 23: Outreach—Average Loan Balance

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<50%	10.7	7.3	2.6	1.7	57
50%–150%	9.1	7.9	2.0	1.7	51
>150%	10.3	8.1	1.6	1.4	56

Source: CGAP. Average Loan Balance per Borrower / Gross National Income per capita.

Table 24: Outreach—Average Savings Balance

	Historical P/E		Historical P/BV		
	Unweighted Average	Median	Unweighted Average	Median	Sample
<50%	11.3	7.3	2.9	2.3	31
50%–100%	9.0	8.9	1.6	1.4	42
>100%	8.2	5.6	1.5	1.3	28

Source: CGAP. Operating Expense / Period Average Gross Loan Portfolio.

Table 25: Regression Results

	Historical P/E	Historical P/BV
Debt/Equity	no	no
Operating Expense Ratio (log)	no	no
PAR30	no	no
NI Growth	+	+
ROE	-	no
Age	-	-
Gross Loan Portfolio (log)	+	no
Transaction Size	+	+
R-squared	10.3%	19.6%

	Expected P/E	Expected P/BV
Debt/Equity	no	no
Operating Expense Ratio (log)	+	+
PAR30	-	no
NI Growth	no	no
ROE	-	no
Age	-	-
Gross Loan Portfolio (log)	+	no
Transaction Size	+	+
R-squared	8.7%	16.3%

Source: CGAP. Operating expense ratio is calculated as operating expenses divided by loans. All models are specified as (left-censored) tobit regressions and include regional dummies for Africa, Asia, and Europe and Central Asia (Latin American countries is the omitted category).
Note: "+" indicates significant positive effect, "-" indicates significant negative effect, "no" indicates no significant effect. Some variables have been linearized (indicated by "log") for a better model fit.

Appendix III: List of Contributors

CGAP is grateful for the contributions of the following organizations to its confidential private equity survey in 2009.

- Aavishkaar Goodwell
- ACCION Microfinance Bank Limited
- Advans
- Belgian Investment Company for Developing Countries SA/NV (BIO)
- Blue Orchard
- European Fund for Southeast Europe (EFSE)
- Incofin Investment Management
- India Financial Inclusion Fund (IFIF)
- Kreditanstalt fuer Wiederaufbau (KfW)
- Mecene Investment/Africap
- MicroVest II, LP
- Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (FMO)
- Norwegian Investment Fund for Developing Countries (Norfund)
- Oikocredit
- Omidyar Tufts Microfinance Fund (OTMF)
- Opportunity International
- Proparco
- Solidarité Internationale pour le Développement et l'Investissement (SIDI)
- Triodos Investment Management BV
- XacBank

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