



Microfinance Index of Market Outreach and Saturation

Bolivia

December 2015

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The MIMOSA score for Bolivia is 5, placing it among the 10 most saturated countries in the world in 2014. Given that Bolivia is one of the oldest microfinance markets in existence, harking back to the 1980s, this level is not surprising. And considering the strong market supports in place, it is not especially worrying. However, recent developments in the country's microfinance landscape give us cause for concern, which we address in the Special Discussion below.

The overall penetration level in Bolivia (19.9%) is at the upper range among countries at similar level of development, while its estimated credit capacity (11.1%) is held steady by the competing forces of a strong credit bureau and a very low population density.

The relative maturity of the Bolivian sector is an important mitigating factor: more than 70% of borrowers are served by mature institutions that have over 20 years of experience, and many had first-hand experience during the credit crisis in 1999-2001 that resulted from the rapid growth of consumer lending¹.

The sector also benefits from solid regulations: 60% of borrowers are served by institutions under regulatory supervision of the banking regulator ASFI, while 24% are served by Instituciones Financieras de Desarrollo (IFD) that are members of FINRURAL and "en proceso de adecuación". Based on our field survey, it is apparent that all meaningful institutional lending is regulated and included in the country's financial infrastructure, which is characterized by a high level of transparency, including credit bureau operating since 2004, current ratings for all regulated FIs, and detailed data publicly available on borrowing patterns, including concentration by region and levels of multiple borrowing.

The regulation adequately covers consumer protection, and the surveys we conducted in the markets confirmed that most clients are aware of the role of the credit bureau and of the consequences of non-repayment (difficulty

Category	Rating	Indicator	Value
Saturation	5	Loan penetration over capacity	+8.7%
	Neutral	Credit card penetration	4.6%
Regulation	●	Overall quality of regulation	58/100
	●	Prevention of over-indebtedness	3/3
	●	Appropriate collections	2/2
	●	Quality of credit bureau & credit reporting	100/100
Competition / overheating	●	Level of competition (HHI)	1,254/10,000
	●	% Borrowers with 3+ loans	12.3%
	●	Loan portfolio CAGR in value past 3 years	22.4%
	●	Loan portfolio growth in value expected next 12 months	11.5%
Maturity of microfinance institutions	●	% clients at MFIs <10y or >20y old	70% > 20 y
	●	Experienced crisis in past 15 years	1999-2001
Transparency	●	Composite transparency score	4/4
	●	% MFIs with current ratings	100%
Other risks	●	FX exposure	7.7%
	●	Interest rate level	30.2%

¹ See: Elizabeth Rhyne, Crisis in Bolivian Microfinance, ACCION, Jan 2001

to access future loans); very few reported having heard of instances of hard collection practices. The surveys did not reveal specifically aggressive marketing techniques.

Despite strong prudential regulation and good norms in the area of client protection, several instances of political intervention in the financial sector explain the relatively low overall score obtained by the regulatory environment on the Microscope scale (58/100).

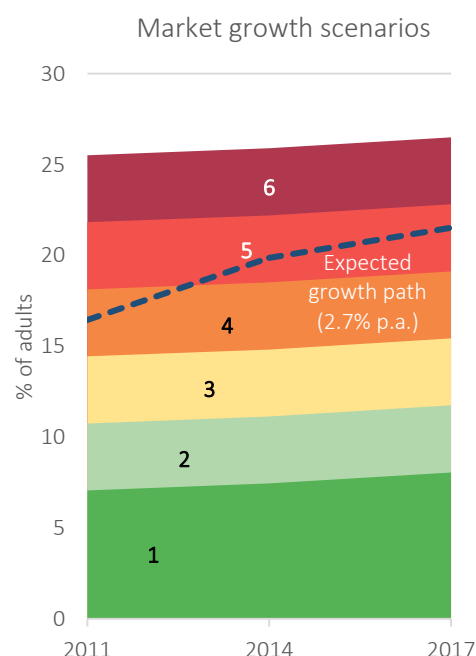
Recent sector growth in Bolivia has been relatively fast-paced, with the number of borrowers growing by ~8-10% per year during 2009-2013. But given that saturation is already high and growth in the adult population is slowing (2.7% in 2009, 1.8% in 2013), growth in outreach must also slow to remain sustainable. Indeed, since 2014, the growth in number of loans has essentially stopped (+0.4% in 2014, -0.1% as of Sept. 2015²). This slower growth rate is consistent with the outlook of the MFIs themselves, which projected 2.7% annual growth in the March 2015 MixMarket Barometer report. Maintaining this projected pace through 2017 would lead to a stable MIMOSA score of 5. However, one concern is that this growth in penetration was accompanied by a 14% increase in the average amount lent from June-14 to June-15³ – during which time the economy is only projected to grow by 2% for 2015.⁴

The slowing growth rates have been accompanied by shifts in market share. The affiliates of FINRURAL registered an overall decrease in their outreach, while some large players like BancoSol and Banco Union continued to grow at a steady pace, leading to a slight consolidation of Bolivia's highly competitive market (HHI of 1,254).

This level of competition is also reflected in the relatively high proportion of borrowers that have loans with at least 3 entities (12.3%). A change in the scope of the data received by Infocred does not allow to compare this figure with previous years (see note 3). However, slow growth is likely to keep this figure steady, though combined with the increase in loan amounts, this level of multiple borrowing can still pose a risk. We will pay close attention to Infocred's cross-indebtedness data in the near future.

	2011	2014	2017*
HDI	0.661	0.667	0.682
Population density per km ²	9.7	10.2	10.2
Credit Bureau Score	87.6	98.0	111.2
Borrowers capacity	10.8	11.1	11.7
Borrowers per adult	16.5	19.9	21.5
Microfinance loans per adult	15.1	16.5	17.9
MIMOSA Score	4	5	5
Credit card users per adult	3.0	4.6	-
MIMOSA CC penetration score	Neutral	Neutral	-
GDP per capita (current \$)	2,269	3,061	3,392
GDP, 3yr CAGR (constant LCU)	4.2%	5.8%	4.2%

* forecasts: IMF for GDP, UNDP for population; MIMOSA for others



² Source : ASFI (Numero de Prestatarios por Sistema) and FINRURAL (Informe Financiero). Note that the number of loans reported to Infocred increased due to a change in the scope (addition of BCP in 2014, which represent less than 30,000 borrowers, reporting of all mortgage loans while only non-performing mortgages were reported before, etc). We use Infocred for our measurement of penetration and multiple borrowings, but comments on the trends are all based on the ASFI and FINRURAL numbers that come from a stable panel.

³ Source: Infocred Sept.15 bulletin; increase of average loan size between June 2014 and June 2015.

⁴ Source: IMF World Economic Outlook, April 2015

MIMOSA Scores by Region

Most regions in Bolivia show only small differences in borrowing capacity, ranging from roughly 10.5 to 11.5% of the adult population. At the lower end of the scale, the mining region of Potosí, featuring has the lowest HDI (due largely to a life expectancy that is 5 years shorter than average) has a capacity of 10.2%. Meanwhile, Tarija, which is situated at the border with Argentina and features per capita GDP that is more than three times the national average, has a capacity of 12.5%.

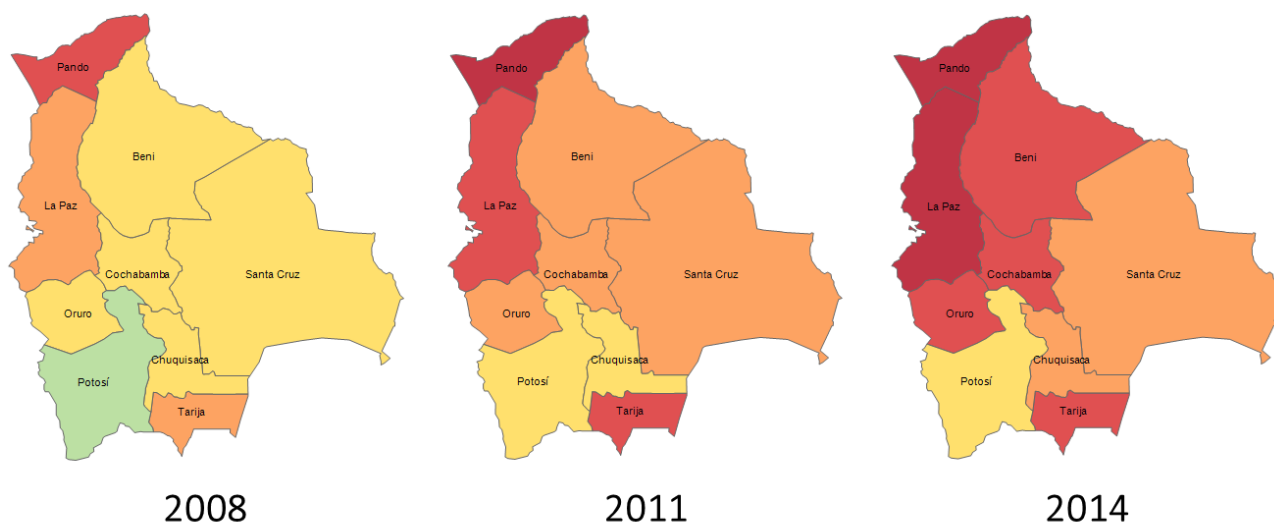
Unlike capacity, differences in levels of penetration are far greater, ranging from 13.5% to 28.5%. This results in a large range of scores, from 3 for Potosí, to 6 for La Paz and Pando. Three large regions (La Paz, Santa Cruz and Cochabamba) concentrate ~75% of the total population and show quite different patterns in terms of saturation.

- La Paz was the first region to reach a significant level of saturation, with a MIMOSA score of 5 already in 2010, and a score of 6 since 2013, when its penetration rate surpassed 20%. With the current penetration of 24.5%, there is a significant risk of over-indebtedness, confirmed by a level of cross-indebtedness that exceeded the national average in 2013 by 1.5 points, and receiving high levels of concern of all surveyed players.
- With a penetration of 17.4%, the region of Santa Cruz scores a 4. It currently has the penetration that La Paz had in 2010/2011, and in 2013 still showed levels of cross-indebtedness that were 3.5pt lower than average. However, several players mentioned urban areas of Santa Cruz as being saturated.
- Cochabamba, Tarija, Oruro and Beni all have the same score as the country average – 5. Cochabamba was however mentioned as a specific source of concern in our survey of microfinance players, probably due to a more intense competition in that area that hosts the headquarters of 3 MFIs.⁵
- Despite a lower score of 4, the region of Sucre (Chuquisaca) shows a percentage of cross-indebtedness that is higher than the one reached in La Paz, probably due to the fact that the region still has a large proportion of rural population (47%) leading MFIs to focus on a narrower segment of the clientele.

Column no:	1	2	3	4	5	6	7
Region	Population (000s)	HDI	Population density (per km2)	MIMOSA Score	Borrowing capacity (%)	Borrowers per adult (%)	Penetration over capacity
National	11,216	0.667	10	5	11.1	19.9	8.7
La Paz	3,003	0.666	22	6	11.2	24.7	13.5
Santa Cruz	3,098	0.680	8	4	11.4	17.4	6.1
Cochabamba	2,012	0.651	36	5	11.0	18.8	7.8
Potosí	808	0.625	7	3	10.3	13.5	3.2
Chuquisaca	691	0.647	13	4	10.8	15.6	4.8
Tarija	572	0.739	15	5	12.5	23.2	10.7
Beni	476	0.644	2	5	10.6	19.6	8.9
Oruro	464	0.631	9	5	10.4	20.1	9.7
Pando	93	0.669	1	6	11.1	28.3	17.2

Sources: 1. INE, 2. UNDP (national) and INE (regional), 3. INE, ; 4-5, 7: MIMOSA calculations, 6. ASFI and FINRURAL

⁵ Of the 20 MFIs members of ASOFIN or FINRURAL, 15 are headquartered in La Paz, 2 in Santa Cruz and 3 in Cochabamba



Special discussion: Will Bolivia become another case of unintended effects of interest rate caps and lending quotas?

In 2013 and 2014, the government passed a law on Financial Services and related decrees⁶ that set interest rate caps for loans to the productive sector and to loans for social housing, as well as minimum lending quotas to these two market segments. Within 5 years, the productive sector and housing loans will have to make up to 60% of regulated institutions' credit portfolios (from 35-40% in 2013). Interest rates are capped at 5.5% to 6.5% for social housing loans, depending on their size, and at 6% to 11.5% for loans to the productive sector. The 11.5% cap applies to productive loans to microenterprises and compares with the average interest rate of 20.1% on microfinance loans offered by MFIs on the day the decree was signed. Regulated institutions had only days to adopt the ceilings, while IFDs have five years to implement the new interest rate caps.

In a market that is already reaching the limits of its capacity, experimenting with major lending directives is risky. Certainly, markets don't require government mandates to fall into over-exuberance. But mandates can further heighten this risk. The Priority Sector lending requirements in India were a major contributor to the huge influx of bank credit that fueled the runaway growth of the microfinance sector leading up to the Andhra Pradesh crisis of 2010. Tax policy favoring mortgages certainly had a role in the runaway housing in the US that led to the 2008 global financial crisis.

With the new caps and lending mandates, Bolivia is venturing into risky waters. The large gap between current interest rates and the new caps all but assures that the current trend in increasing loan sizes will continue. Meanwhile, mandates to lend to specific sectors are even more likely to inflate bubbles. What is the credit absorption capacity of the Bolivia's productive enterprises? Opening the credit spigot is one way to find out... As

⁶ Law No. 393, "Law of Financial Services", 2013; "Decreto Supremo No. 1842", 2013, "Decreto Supremo No. 2055", 2014. *Gaceta oficial*.

for housing, could it be that the lack of affordable housing in the country is due to obstacles other than insufficient credit? And if those obstacles remain in place, what might be the effects of sudden influx of credit?

Housing is indeed a special case. When they function well, credit and housing markets can create an incredibly valuable symbiosis with major benefits to the economy, employment, and quality of life. But their power to create is equaled by their power to destroy.

Housing bubbles can result in the most devastating financial crises with long-lasting economic and social harm. An influx of housing credit, especially when it's cheap, can make housing simultaneously more expensive and more affordable – property prices go up, while cheap credit keeps them still affordable. The result can create a particularly dangerous perception of growing wealth among large numbers of people. And those who see themselves left out of the booming real estate market become eager to get in, relying on cheap credit to do so. For the lenders, the loans can appear to be remarkably low risk – if squeezed, borrowers can rely on fast-rising home values to access more credit, and in the worst case, they can simply sell. And because housing touches so many people and for most families entails their largest single asset and expense, a bubble in retail housing can grow to enormous levels.

When such a bubble bursts – as it inevitably does – it not only results in massive damage to the financial sector, but it can push the economy into a deep recession, destroying household wealth, huge numbers of jobs, and the incomes of vast numbers of households.

Those are the risks that Bolivia is undertaking in its new experiment with directed lending quotas. The quotas aren't playing around the edges. The lending targets for these two sectors – 60% of portfolio to be allocated to the productive sector and social housing – are set to increase current lending levels in those areas by 50-100%. This will entail major shifts in the credit markets. No one can really predict the results.

In Bolivia, the near-term forecast may be moderate, but longer-term risks are high. We will monitor Bolivia for the early warning signs.

User Guide

This is an abbreviated guide. For explanation of the methodology behind the penetration and capacity values, please consult the MIMOSA whitepaper.

The MIMOSA index consists of several measures. The primary score evaluates the degree to which the level of penetration exceeds estimated market capacity. The score levels and their interpretation is shown in the below table.

MIMOSA Score	Penetration over/ under capacity		
	Percentage points	Standard Deviations	Market status
6	>11.1%	3+	Saturated
5	7.4-11.1%	2 to 3	
4	3.7-7.4%	1 to 2	
3	0-3.7%	0 to 1	Normal
2	-3.7 - 0%	-1 to 0	
1	< -3.7%	< -1	Underserved

In addition to the score, we include the component metrics underlying the capacity and penetration calculations:

Human Development Index (HDI): developed by UNDP to assess the level of development, comprising GNI per capita, life expectancy, and education metrics. The scale ranges from 0-1.

Population density per km²: standard measure retrieved from country statistical bureaus.

Credit Bureau Score: derived from the Getting Credit measures in the World Bank Doing Business report. We include the level of coverage, and amount of information (both repayment history and debt outstanding) provided. The scale ranges from 0-400.

Borrowing Capacity: % of adults expected to be active borrowers, based on the MIMOSA model.

Borrowers per adult: derived from multiple sources, including the World Bank Findex survey, central bank reports, credit bureaus, and MIMOSA field surveys.

Microfinance borrowers (% of loans): number of active loans of microfinance institutions. Usually defined either by institutional registration with the regulator or membership in the microfinance association. Multiple loans held with the same institution are counted once.

Credit card borrowers (% of adults): number of adults with an outstanding credit card balance. Figure from Global Findex.

Credit card score: level of penetration vs. capacity. Graded on a three-point scale, indicating a market whose credit card demand is under-served, appropriately served, or over-saturated.

GDP 3-year CAGR (current \$): three year cumulative growth rate of GDP. Figure from IMF WEO.

GDP per capita (constant LCU): figure from IMF WEO.

In addition, we include a list of indicators that serve as additional risks or mitigants that in aggregate may increase or reduce the country's ability to manage increased levels of penetration:

Category	Indicator	Indicator	Mitigant 	Neutral 	Risk 
Regulation	Overall quality of regulation	Overall microscope score (0-100)	≥ 75	50-75	< 50
	Consumer protection (OID)	Microscope score 4.2.1	3	2	0 or 1
	Consumer protection (Collections)	Microscope score 11.3.2	2	1	0
	Credit bureau, credit reporting	Microscope score 10	≥ 75	50-75	< 50
Competition / overheating	Level of competition	Herfindahl-Hirschman Index	$HHI > 3,000$	$1,500 < HHI < 3,000$	$HHI < 1,500$
	Multiple borrowing	% borrowers with 3+ loans	$< 5\%$	5-15%	$> 15\%$
	Prior growth	Loan portfolio 3-year CAGR	$< 2x$ GDP growth	2-3x GDP growth	$\geq 3x$ GDP growth
	Future growth	Loan portfolio 12-mth growth expectations	$< 2x$ GDP growth forecast	2-3x GDP growth forecast	$\geq 3x$ GDP growth forecast
Maturity of microfinance institutions	Age of FIs	% clients of MFIs $> 20y$ or $< 10y$ old	$> 65\%$ of the borrowers are clients of MFIs > 20 years old	Other	$> 65\%$ of the borrowers clients of MFIs < 10 years old
	Prior crisis experience	Date of previous crisis	Market experienced crisis in past 15 years	no crisis experience	
Transparency	Composite score	See Transparency worksheet	≥ 3		< 1.5
	Ratings	% leading MFIs rated in past 2 years	≥ 75	50-75	< 50
Other risks	FX exposure	% of loans in foreign currency	< 10	10-25	≥ 25
	Interest rate level	Average Full APR, weighed by number of borrowers	$< 30\%$	30-60%	$> 60\%$