



Microfinance Index of Market Outreach and Saturation

Peru

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Special thanks to Triple Jump for assisting with our work in Peru.

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The MIMOSA score for Peru is six – the highest saturation level in the MIMOSA methodology. Indeed, measured strictly by penetration (25.6%), Peru is the third most credit-penetrated country covered by the MIMOSA index. At the same time, Peru is among the most developed microfinance markets, and its capacity (13.6%) is likewise in the upper range of its HDI peer group. More importantly, its top-ranked financial system infrastructure (according to EIU Microscope) plays a critical role in insuring ongoing market sustainability, even at this high level of saturation.

The country's **regulatory system**, has shown that it can act when necessary to deal with institutional governance issues, stepping in to head-off institutional failure, and maintaining a high level of market awareness and engagement to be able to react when needed with mitigating measures.

Overindebtedness prevention is a major focus the regulator and receives the highest possible score from the Microscope report. The strong capacity of the credit bureaus and required reporting provides the lenders and regulator with access to highly detailed and timely data on both individual borrowers as well as broader market level information. Similarly, collections methodologies are governed by strict limits on appropriate actions. However, the credit bureaus come with notable unintended consequences and potential social costs (see Special Discussion section).

Besides strong regulation, Peru is distinguished by a high level of **transparency and data availability**. The banking superintendent makes a host of data easily available online, including at detailed geographic levels. And when even more detail is needed, the private credit bureaus can provide yet more information (for a price). For lenders looking to develop growth strategies and manage risk, this depth of available data is a major boost. Meanwhile,

Category	Rating	Indicator	Value
Saturation	6	Loan penetration over capacity	+11.9%
	neutral	Credit card penetration	11.3%
Regulation	●	Overall quality of regulation	90/100
	●	Prevention of overindebtedness	3/3
	●	Appropriate collections	2/2
	●	Quality of credit bureau & credit reporting	100/100
Competition / overheating	●	Level of competition (HHI)	950/10,000
	●	% Borrowers with 3+ loans	23.6%
	●	Loan portfolio CAGR in value past 3 years	13.7%
	●	Loan portfolio growth in value expected next 12 months	0%*
Maturity of microfinance institutions	●	% clients at MFIs <10y or >20y old	55% > 20 y
	●	Experienced crisis in past 15 years	No
Transparency / Data availability	●	Composite transparency score	4/4
	●	% MFIs with ratings in past 2 years	100%
Other risks	●	FX exposure	6.5%
	●	Interest rate level	40.6%

Sources: for credit cards, source is Equifax, which is consistent with the 10.0% figure reported by Findex; Microscope 2015 for regulation; both Barometer forecast and portfolio growth on MIX Market for YTD Q3 2015 (MIX Market) were negative; we thus forecast no growth.

investors can benefit from legally-mandated and frequent credit ratings of MFIs and other formal credit institutions.

Given their critical role in the financial sector infrastructure, the credit bureau data available to us comes with an important caveat. The 2014 Doing Business Report for Peru has credit bureau coverage at 100% of the adult population – a massive increase from 41.5% the year before. While there are other middle income countries with 100% coverage (Uruguay, Argentina), their historical trend shows a gradual increase before peaking at 100%. It's possible that one of the credit bureaus in Peru revamped its business model resulting in this sudden jump, but the reporting to the Doing Business team is protected by confidentiality, and thus far we have been unable to validate this figure from any of the credit bureaus in the country. Until then, we are taking a more conservative approach and are estimating the coverage level based on previous trend. The difference in capacity (13.6%, instead of 16.5% with the higher coverage level) is large enough to shift the saturation score to 6, instead of the 5 generated by using unadjusted credit bureau figures. The change is likewise propagated across the different regions as well.

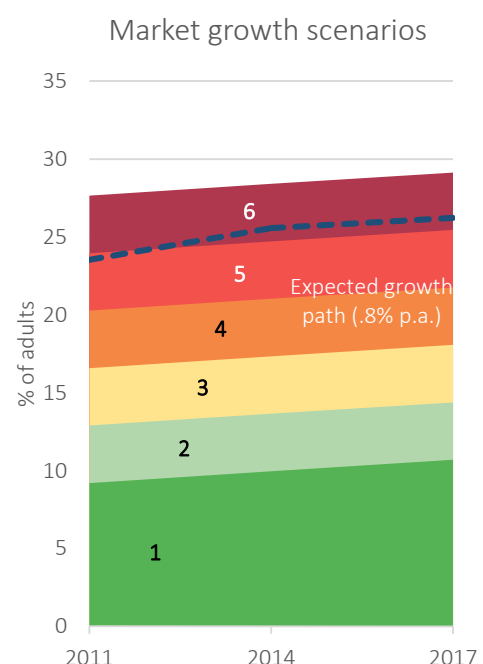
The sector in Peru is relatively mature, with 55% of clients served by institutions that are at least 20 years old or more (for MFI portfolios of merged institutions, we rely on the founding date of the MFI, rather than the acquiring bank). This puts Peru somewhat shy of the 65% threshold to be counted as a mitigating factor, as is the case in neighboring Bolivia.

The risk of foreign exchange exposure for borrowers is low, with just 6.5% of loans denominated in foreign currency. MFI interest rates are unremarkable, averaging 40.6% APR, thus posing no outsized risks.

The highly **competitive credit market** in Peru poses an ongoing challenge. Among the eight pilot countries covered by MIMOSA in 2015, Peru featured the highest level of competition – even after accounting for the Edyficar-MiBanco merger. This high competition has led to a high level of multiple borrowing, with 23.6% of borrowers holding concurrent loans from 3 or more institutions. This is a level that exceeds even that seen in Andhra Pradesh on the eve of the crisis, albeit Andhra Pradesh had no credit bureau then and the lenders had little awareness of client external debts.

	2011	2014	2017*
HDI	0.727	0.737	0.762
Population density per km ²	23.2	24.0	25.1
Credit Bureau Score	119.3	141.9	152.0
Loan capacity	12.9	13.6	14.4
Borrowers per adult	23.5	25.6	26.2
Microfinance loans per adult	17.6	19.0	19.5
MIMOSA Score	5	6	6
Credit card users per adult	8.6	10.0	n/a
MIMOSA CC penetration score	neutral	neutral	n/a
GDP per capita (current \$)	5,685	6,458	6,579
GDP 3yr CAGR (constant LCU)	5.3%	4.7%	4.8%

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



One of the strongest metrics of competition in Peru is the depth of marketing on the ground. In our field surveys, the vast majority of market vendors (68%) had received at least 3 loan offers during the past month, while an extraordinary 15% reported receiving at least 8 offers. By comparison, among the 2015 pilot markets, the second most competitive market was Cambodia, where 30% of market vendors reported at least 3 offers, while the highest figure mentioned in the entire survey was 6 offers.

Growth levels in Peru show mixed signals. On one hand, growth in the past three years (2011-14) has been moderate, with portfolio volumes growing at 13.7% CAGR, while number of borrowers increased at a much more modest 4.6%. The Dec 2014 MIX Barometer survey showed MFIs planning growth at a remarkable 16.7% in new loans. Yet the reliability of these expectations is undermined by prior over-optimism. For every quarter in 2014, the 16 Peruvian MFIs reporting to Barometer (representing 45% of borrowers in MIX) had vastly overestimated their growth, forecasting average quarterly growth of 7.4%, while delivering an average of 0.3%. The MFIs appear to be challenged by client behavior in the currently saturated market, continuing to apply past growth expectations to a context that appears unable to support them. In light of this, we use the YTD growth for new loans thru Sep 2015 as reported to MIX Market¹ as the expected growth path: 0.8%. If such growth were to remain thru 2017, saturation would remain essentially unchanged.

Unlike forecasts for new loan growth, portfolio volume forecasts show far more consistency, with MFI expectations reasonably tracking actual figures in the MIX Barometer report. The expectation for 2015 growth was reported at -5.4% in Barometer, while YTD Q3 2015 actual growth on MIX Market was -3.2%. This modest decline in portfolio volumes may or may not continue, but absent a more recent forecast, we estimate portfolio growth for 2016 as 0%, which is sufficient to serve as a mitigant for market saturation.

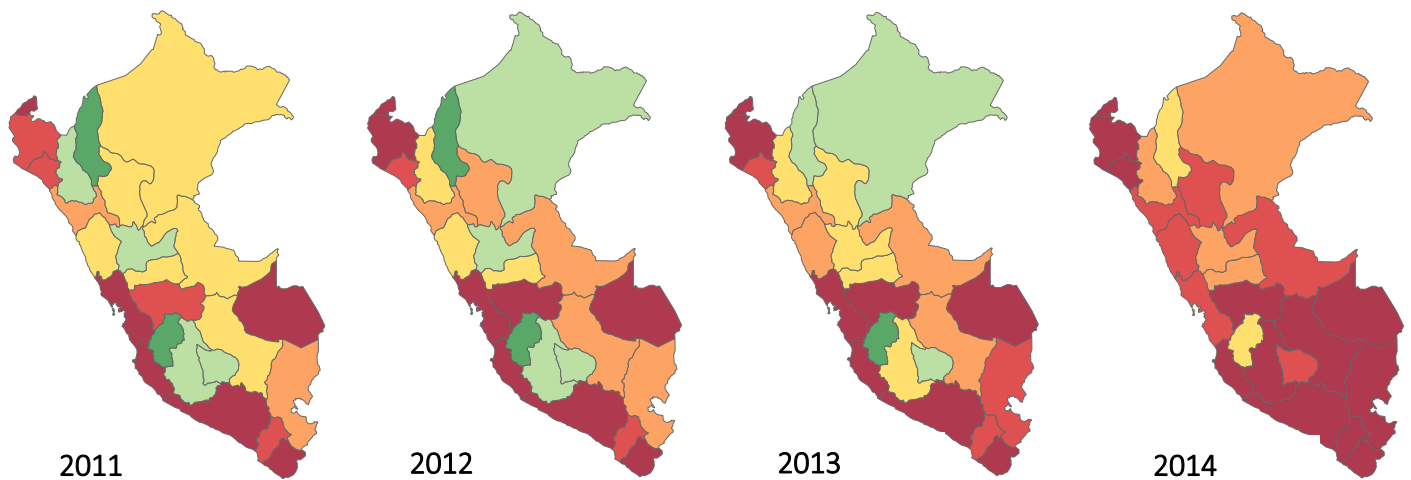
¹ In Peru MIX Market is a sufficiently representative source for MFI data.

MIMOSA Scores by Region

Regionally, Peru shows extensive variation in both levels of capacity and penetration. The most developed areas are Lima and its immediate surrounding areas along the coasts. Meanwhile, the region along the southern coast is the most saturated with the three provinces from Arequipa through Tacna at or approaching penetration of 40%. Indeed, the southern coast has been historically the most penetrated area in the country, with Arequipa being the most saturated province in 2011, after Lima. Since then, Lima has undergone a substantial reversal, with penetration declining from a high of 32.9% in 2013 to 26.4% in 2014.

Column no:	1	2	3	4	5	6	7
Region	Population (000s)	HDI	Population density (per km ²)	MIMOSA Score	Borrowing capacity (%)	Borrowers per adult (%)	Penetration over capacity
National	30,814	0.737	24	6	13.6	25.6	11.9
Lima	9,689	0.798	278	5	16.4	26.4	9.9
La Libertad	1,837	0.723	72	5	13.7	24.1	10.4
Piura	1,829	0.695	51	6	13.0	27.8	14.8
Cajamarca	1,525	0.673	46	4	12.6	17.0	4.4
Puno	1,402	0.647	19	6	11.9	24.8	12.9
Junín	1,341	0.692	30	6	12.8	28.7	15.9
Cusco	1,309	0.711	18	6	13.1	26.8	13.7
Arequipa	1,273	0.768	20	6	14.2	38.3	24.1
Lambayeque	1,250	0.706	88	6	13.5	26.7	13.2
Áncash	1,142	0.724	32	5	13.5	21.1	7.7
Loreto	1,029	0.681	3	4	12.4	16.6	4.1
Callao	996	0.794	1,200	3 4	22.2	22.3	0.1
Huánuco	854	0.649	23	4	12.0	17.2	5.2
San Martín	830	0.670	16	5	12.3	22.7	10.3
Ica	779	0.789	37	6	14.7	34.3	19.6
Ayacucho	681	0.656	16	6	12.1	26.6	14.6
Huancavelica	491	0.614	22	3	11.3	13.8	2.5
Ucayali	490	0.694	5	5	12.7	21.5	8.8
Apurímac	457	0.641	22	5	11.8	20.6	8.8
Amazonas	421	0.663	11	3	12.2	15.0	2.9
Tacna	338	0.759	21	6	14.1	39.0	24.9
Pasco	302	0.716	12	4	13.2	20.3	7.1
Tumbes	235	0.737	50	6	13.8	30.9	17.1
Moquegua	179	0.815	11	6	15.1	40.0	24.9
Madre De Dios	134	0.745	2	6	13.7	28.9	15.3

Sources: 1) Instituto Nacional de Estadística e Informática (INEI) 2) INEI, UNDP, MIMOSA; 3) INEI ; 4-5) MIMOSA; 6) Equifax, MIMOSA



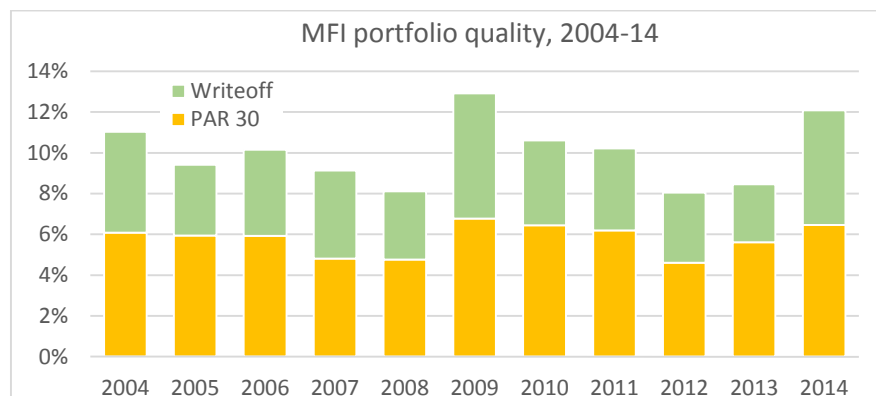
It appears that this reversal may be linked to rising defaults, with Lima registering the second lowest (51%) share of loans with repayment status marked as “normal” in our Equifax dataset. In 2014, Lima itself is only slightly more penetrated (26.4% vs. 25.6%) than the national average.

The municipality of Callao (just outside Lima) is a purely urban area and hence has higher capacity due to its high population density. However, given that the MIMOSA model becomes less precise at very high population density levels (with a tendency towards overestimating capacity), we score it in the range of 3-4, with the higher level closer to what would be produced with a model that excludes population density.

Although prior to 2014 a substantial number of regions were at or below capacity, in 2014 only two regions – the poor, mountainous and thinly-populated Huancavelica and the similarly thinly populated northeast region of Amazonas – show normal saturation levels. However, in light of the country’s strong financial infrastructure and other strong mitigants, it can be reasonably argued that the sustainable capacity level in Peru may extend to regions scoring in the lower tiers of saturation, such as those with scores of 4 and even lower range of 5.

Special discussion: managing a slow-motion crisis in Peru

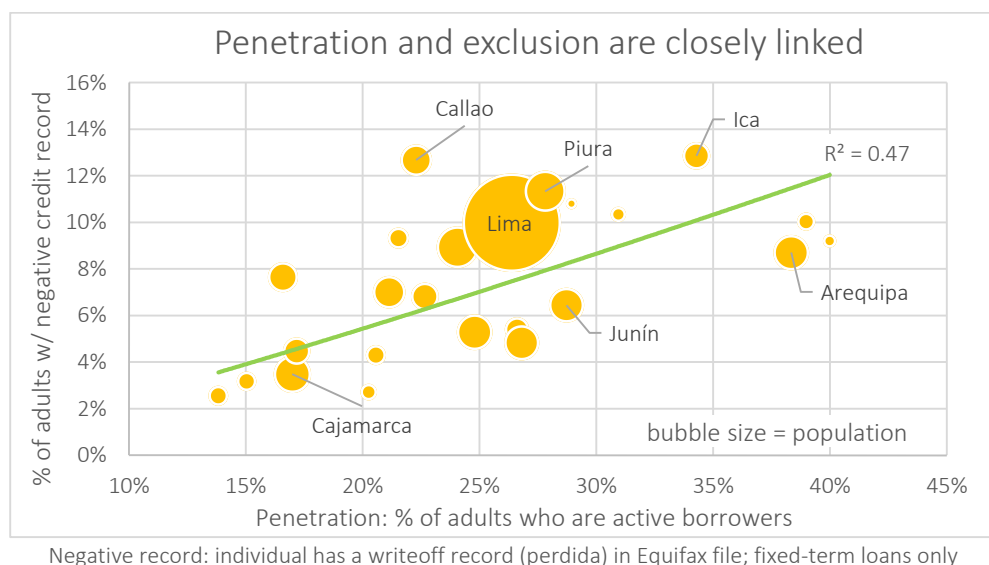
For the past decade, microfinance providers in Peru have maintained a relative high, albeit stable delinquency level, with PAR 30 alternating between 5-6% and write-offs running at 3-6%. The figures in 2014 are at the top of the range, but they are not outside this long-run level. Yet this stability has come at a price.



MIX Market, figures are country averages, weighted by MFI's number of active borrowers.

Borrowers who default not only face substantial hardship. The negative mark on their credit record pushes them out of the financial system, at least as far as borrowing is concerned. While it's not full exclusion and not permanent (record of non-payment is wiped after five years), it does mean largely going back to informal lenders, store loans, and in all cases, much higher interest rates. The number of people who have thus become re-excluded is large and growing. According to data from Equifax, there are 1.9 million adults with a "writeoff" mark on their record, representing 8.4% of adults – a figure that exceeds the credit outreach of many countries.

The connection between penetration and the resulting exclusion of defaulters is inescapable – higher penetration means higher share of adults who become excluded through default. This is also consistent with the findings of the MIMOSA field survey of 180 market vendors, who reported that the most common result of loan default is loss of further ability to borrow (many explicitly mentioned that defaulters are reported to the credit bureau).



This awareness of the consequences of missing payments may also be the reason why Peru's penetration data is so difficult to pin down. The 2014 Global Findex survey found only 11.2% of adults acknowledging having borrowed from a financial institution in the prior 12 months. Meanwhile, data from the Peru's banking superintendency (SBS), shows 28.9% of the country's adults having an active loan as of year-end 2014. Using data from Equifax and excluding individuals who borrow only from credit cards (not covered by this Findex question), we arrive at 25.6% active borrowers – some 2.5 times higher than the Findex figure.

The most likely explanation for this large gap is that in Peru, many survey respondents simply chose not to mention that they had borrowed. This is not surprising – when borrowing is fraught with concern about the consequences, volunteering such information to an unknown surveyor is not necessarily common. Easier to just say no.

The path taken by Peru – combining a highly competitive financial sector with strong market infrastructure and regulation – is often positioned as the premier model for financial inclusion. Peru has been the global leader in merging a microfinance sector with the country's commercial banks. With the recent acquisition of MiBanco by Edyficar, which itself was previously acquired by the country's largest bank, Banco de Credito del Peru, the country's microfinance sector is now fully dominated by local commercial banks.

The competition fostered by these large, multi-layered financial institutions can and does facilitate innovation and further financial sector development. And nothing in our analysis suggests that Peru faces the risk of a full-blown repayment crisis in the foreseeable future. However, in addition to being a model for financial inclusion, perhaps Peru also demonstrates the limits of allowing largely unfettered competition and exceptionally high levels of credit penetration, while relying on a strong rules-based system to manage the attendant risk.

The system works. But the question is whether the resulting re-exclusion of millions who cannot repay their loans is a price worth paying.

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%	$> 60\%$