



Microfinance Index of Market Outreach and Saturation

Azerbaijan

April 2016

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The MIMOSA score for Azerbaijan is 4 – moderately saturated. Credit card penetration for 2014 (unavailable for 2015) was above normal. This saturation level is accompanied by multiple additional risks across the board that raise questions regarding the country’s ability to sustain even moderate levels of saturation. These additional risks have played an important role in exacerbating the effects of the major currency crisis that began in February 2015 and continues to affect the country today (see Special Discussion below).

Regulation in Azerbaijan is uneven. On the one hand, the country enjoys a well-organized credit registry under the aegis of the Central Bank. All major institutions are required to report to the registry and use it for credit decisions. However, in other respects, regulation is problematic. The 2014 Microscope report on Azerbaijan finds that even if “multiple efforts have been made to tackle overindebtedness, its supervision is not comprehensive,” nor are there clear rules to guide appropriate collection practices. However, Microscope emphasizes that overindebtedness has become a major concern for the Central Bank, especially in consumer lending since 2013-2014. The Microscope profile for Azerbaijan was not updated in 2015.

What is clear is that, although the credit registry exists and is functioning, it is greatly underutilized. While reporting to the registry is mandatory, and MFIs can query individual borrower information, the aggregate data it collects is not shared in any form, preventing MFIs and others to conduct analysis on multiple borrowing trends. Of the 7 MIMOSA pilots conducted thus far, the Azerbaijan Credit Registry was the only credit bureau to refuse to provide any meaningful information. The impact of this lack of

Category	Rating	Indicator	Value
Saturation	4	Loan penetration over capacity	+ 4.7%
	High	Credit card penetration	8.1%
Regulation*	●	Overall quality of regulation	38/100
	●	Prevention of overindebtedness	1/3
	●	Appropriate collections	0/2
	●	Quality of credit bureau & credit reporting	83/100
Competition / overheating	●	Level of competition (HHI)	957/10,000
	?	% Borrowers with 3+ loans	n/a
	●/●	MF Loan portfolio 3yr CAGR (2014) / 1yr (2015) growth in value (USD)**	23.7% / -37.6%
	●	MF Loan portfolio growth in value expected next 12 months (USD)	-12.5%
Maturity of microfinance institutions	●	% clients at MFIs >20y old	24.2%
	●	Experienced crisis in past 15 years	No
Transparency	●	Composite transparency score	3/8
	●	% MFIs with ratings in past 2 years	50%
Other risks	●	% of loan portfolio in foreign currency	>50%
	●	Interest rate level	36.7%

* Microscope 2014 data (Azerbaijan not included in 2015 version)

** Growth calculated based on panel of AMFA members reporting for 2011, 2014 and 2015

transparency is especially evident during the period of high stress resulting from the currency crisis, where analysis of relationships between foreign-currency loans and repayment performance would be extremely valuable, yet cannot be done other than at the level of individual MFIs. Similarly, lending data from banks is limited to such an extent that simply calculating the number of outstanding loans made by banks is impossible, requiring significant estimates derived from other sources. In this report, penetration data relies on figures from Findex and AMFA to estimate bank penetration, further using geographic distribution of bank branches to estimate concentrations in different regions.

The notable positive exception to market transparency is the work of AMFA, which provides clear and transparent reports on request and has further facilitated a detailed survey of its members to assess regional lending patterns. We estimate that AMFA members account for 54% of total credit penetration in the country.

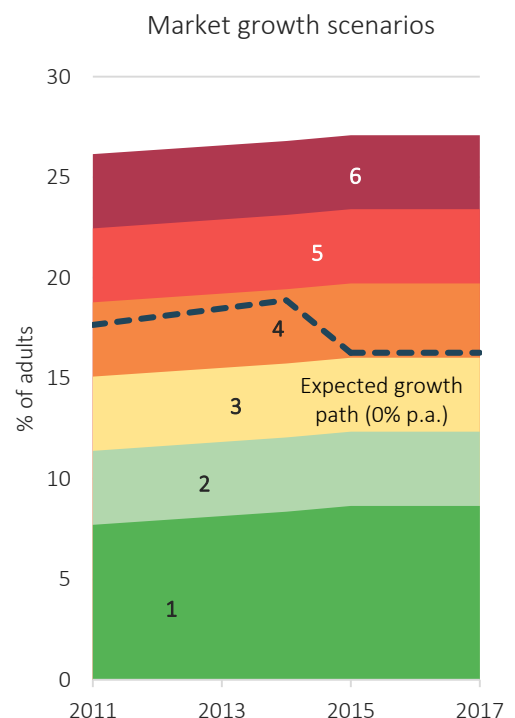
Azerbaijan is a highly competitive market, 2nd only to Peru in our 7-country pilot study. Moreover, both MFIs and banks compete in overlapping segments. This is further reflected in field surveys of market vendors, who mention borrowing from both banks and MFIs, and who on average receive 1.7 loan offers per month – a level similar to Cambodia – another highly competitive market. And 11% of respondents report receiving loan offers every week.

Azerbaijan has been a concern for overindebtedness and market overheating for some time, inspiring an overindebtedness study funded by EFSE and conducted by MFC in 2011-12. The study found only mild levels of multiple-borrowing, with just 1% of borrowers holding three or more loans. However, there is no information available to assess how much this figure has changed in the intervening years.

	2011	2014	2015	2017
HDI	0.743	0.747	0.751	0.751
Population density per km ²	105.2	110.8	112.2	112.2
Credit Bureau Score	26.0	47.9	56.0	56.0
Loan capacity	11.4	12.0	12.3	12.3
Borrowers per adult	17.7	18.9	16.3	16.3
Microfinance loans per adult	8.1	11.1	10.5	10.5
MIMOSA Score	4	4	4	4
Credit card users per adult	2.3	8.1	n/a	n/a
MIMOSA CC penetration score	neutral	high	n/a	n/a
GDP per capita (current \$)	7,106	7,936	6,794	7,413
GDP 3yr CAGR (current \$)	11.8%	4.6%	-2.3%	-1.5%
GDP 3yr CAGR (current LCU)	10.4%	4.3%	6.3%	8.6%

* forecasts: IMF for GDP, MIMOSA for others

* microfinance loans defined as ALL loans made by AMFA members



Growth-wise, the market expanded at a rapid pace during 2011-14. AMFA members registered 23.7% CAGR in loan portfolio volume (USD) and 16.8% in number of loans outstanding.¹ Meanwhile, bank lending volume to households grew by 32.7% CAGR (USD), no data available on growth in number of loans). These growth figures stand in sharp contrast to much more mild 3.9% CAGR in loan penetration found by the Findex survey during the same period. The two most realistic interpretations of these figures imply growth driven by multiple borrowing or inaccuracies in the Findex survey. Without more detailed data, **current estimates of penetration are uncertain**. This is unfortunate, since this question could be answered precisely with a simple report from the Credit Registry. In any case, all growth figures are well in excess of 4.6% CAGR in GDP (in current USD) during the same period.

Assuming the Findex figures are accurate, penetration appears to have largely followed the trend in the country's growing credit capacity during 2011-14, meaning that Azerbaijan's MIMOSA score has remained in the upper range of 4 between 2011-2014. However, beginning with a major currency devaluation in February 2015, the market has been on a large decline, with active borrowers declining by -13.7% among AMFA members. While no similar data is available for banks, one can infer a substantial decline in number of borrowers from the number of monthly Credit Registry queries by banks, which have dropped by 31% from the pre-devaluation period.² According to the MIX 2016 Barometer report, the MFIs expect the decline to continue, reporting a weighted -16.0% growth forecast for number of borrowers and -12.5% for portfolio amount through Dec 2016. However, due to very high uncertainty, we keep our forecast for both penetration and capacity flat through 2017, which would (just barely) maintain a MIMOSA score of 4.

The leading MFIs in Azerbaijan have moderate levels of experience, with about 1/4th of the clients served by MFIs that are at least 20 years old. That mitigates risk somewhat. Moreover, although the country has not experienced a full-blown repayment crisis, it has been through rough patches during the 2008-09 financial crisis, and the present situation is yet another reminder to the MFIs that risk is ever-present.

However, the practice of lending in foreign currency – prevalent among all major MFIs and ranging from 21% (FINCA, Dec 2014) to 71% (Access Bank, Dec 2015) of the outstanding portfolio – is a major risk and has greatly exacerbated the impact of the 2015 currency crisis on both the clients and MFIs (see Special Discussion, below).

Currently, three MFIs in the country are SMART Certified, which assures that they follow basic procedures to avoid overlending. Nevertheless, without getting a full handle on foreign currency lending, better data transparency and stronger regulation, Azerbaijan's ability to sustain high saturation levels will remain limited.

¹ For AMFA, growth figures based on panel data, i.e. includes only institutions that reported to AMFA in 2011, 2014, and 2015. All growth figures based on USD, however, due to lending in multiple currencies and large devaluation in 2015, growth figures in 2015 can be misleading, with local-currency portfolio appearing to shrink, even if there has been no change in nominal terms.

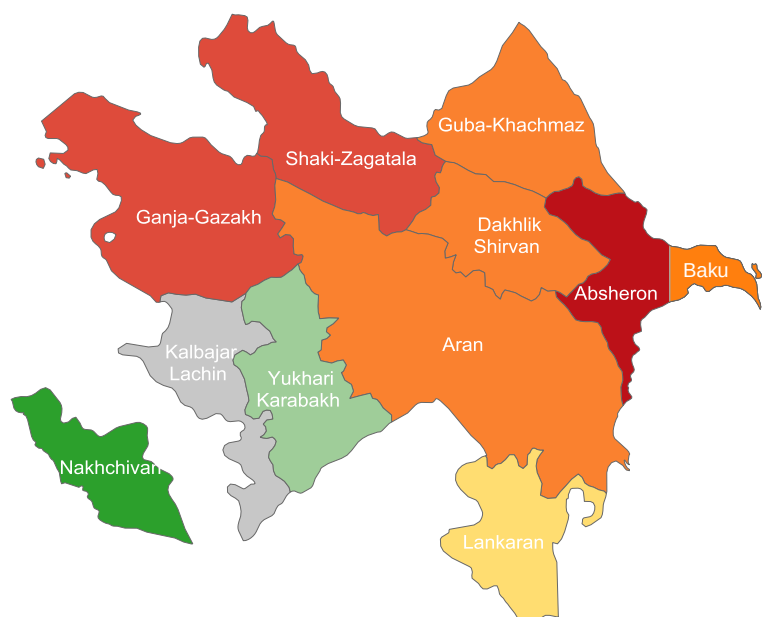
² Comparing average of 3 months prior to Feb-2015 devaluation and the 10 months following it

MIMOSA Scores by Region

The distribution of lending across Azerbaijan is not uniform. Notably, the region of Lankaran is significantly less penetrated than others, as are the politically sensitive regions of Yukhari Karabakh and Nakhchivan. On the other side of the spectrum, Absheron appears to have substantially higher penetration than nearly all other areas, resulting in a Mimosa score of 6. Though the city of Baku edges out nearby Absheron in penetration, its higher capacity results in a lower saturation score of 4-5. Note that the uncertainty in this case is due to the fact that the Mimosa model has a lower predictive accuracy for cities, because of their very high population density.

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	9,717	0.751	112	4	12.3	16.3	3.9
Baku city	2,233	0.792	1043	4/5	19.0	24.5	5.5
Aran	1,961	0.726	93	4	11.7	16.0	4.3
Ganja-Gazakh	1,257	0.727	102	5	11.8	22.2	10.3
Lankaran	905	0.715	149	3	11.9	14.3	2.4
Yukhari Karabakh	662	0.662	90	2	10.5	8.1	-2.4
Shaki-Zagatala	608	0.717	69	5	11.4	19.5	8.1
Absheron	559	0.738	150	6	12.3	24.7	12.4
Guba-Khachmaz	532	0.722	77	4	11.6	17.5	5.9
Nakhchivan	445	0.761	81	1	12.3	7.9	-4.5
Dakhlik Shirvan	308	0.721	50	4	11.4	16.2	4.8
Kalbajar-Lachin	247	n/a	38	n/a	n/a	0.0	n/a

Sources: 1) AZ-Stat 2) AZ-Stat, UNDP, MIMOSA; 3) AZ-Stat ; 4-5) MIMOSA; 6) AMFA, AZ Central Bank, MIMOSA



Special discussion: Azerbaijan's currency crisis

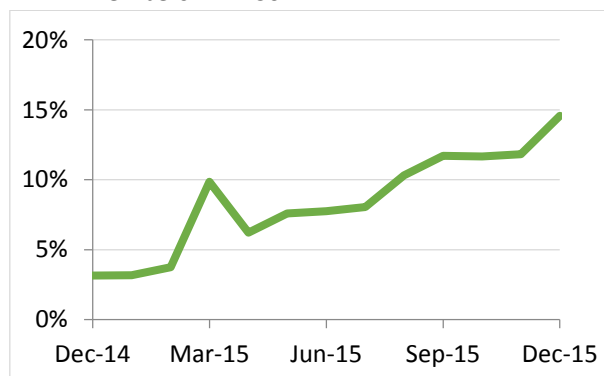
Anyone even vaguely familiar with Azerbaijan today will be aware that the country is currently undergoing a massive currency crisis. Since February 2015, the manat (AZN) has lost over half its value. This is on par with the Mexican peso crisis of 1994 and with the Asian financial crisis of 1998. The knock-on effects of this sudden shift are serious, including a likelihood of significant economic slowdown, if not outright recession. Moreover, the rapidity of the devaluation, taking place without warning on two separate occasions – Feb 2015 and Dec 2015 – has further weakened people's trust in the manat and in the competence of the Central Bank.

The impact on the MFI's has been great, with delinquencies rising to very serious levels. It is clearly a repayment crisis, though this is not a direct outcome of saturation per se. Even in an unsaturated market without any added risks, the scale of this type of macroeconomic shock can be expected to cause difficulties for clients to repay their loans and large losses to financial institutions. However, several features in the Azerbaijan sector have exacerbated the situation.

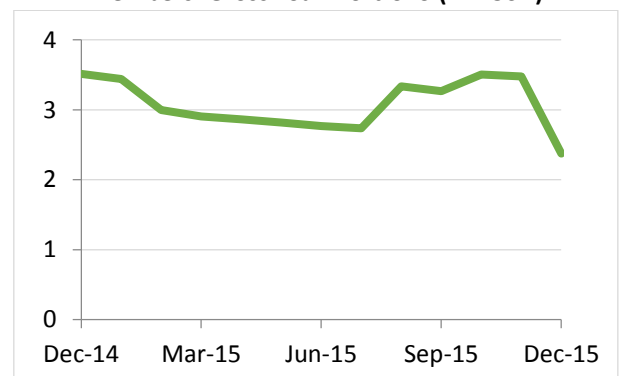
First, the high prevalence of foreign currency lending has had a direct impact on delinquency figures. In January 2014, just prior to the devaluation, 26% of the total financial sector's loan book was in the form of foreign currency loans. For MFIs, this figure was likely higher – probably in the range of 50% or more. When devaluation struck in February, clients holding such loans were hit with a large payment shock, and delinquencies spiked the following month. The MFIs responded quickly by rescheduling many of these loans and the spike quickly came down. However, the long-term delinquency trend has kept rising, with PAR30 hitting 14.6% in Dec 2015. The second devaluation in December 2015 is likely to generate another delinquency spike.

Concurrently, MFIs have greatly pulled back on new lending and contracted their portfolios, which has further reinforced growing PAR, with the share of delinquent loans growing as performing loans are repaid. This is a typical – and appropriate – crisis response by institutions seeking to protect their capital and reign in losses. However, the cycle has likely not finished playing out.

AMFA Members: PAR 30



AMFA Members: Gross Loan Portfolio (Bln USD)



Aside from the financial institutions themselves and the broader macroeconomic pressures, the crisis has also been exacerbated by an inconsistent and largely ineffective response of the Central Bank. The double-dip devaluation – in Feb 2015 and Dec 2015 – has been hugely disruptive. The second

devaluation in particular has greatly eroded public trust in the currency and undermined the credibility of the Central Bank.

In this context of great uncertainty, the authorities have taken several steps that further undermined the ability of the microfinance sector to respond effectively. Pressuring MFIs to reduce interest rates during the depth of the crisis as the authorities in Azerbaijan have done is not constructive, and has pushed MFIs to further reduce lending to poorer customers. Public discussions of potentially forcing the MFIs to absorb the full cost of the devaluation by fixing repayments at the old exchange rate have introduced further uncertainty. While it was the MFIs' decision to engage in such lending in the first place, the Central Bank could have taken measures to discourage it before the crisis. Punitive measures after the fact may be politically expedient, but they do so at the cost of destabilizing an already fragile market.

The resulting situation has put MFIs in a vise. Given the enormous currency risk, hedging is essentially unaffordable, and foreign investors are limited to lending in dollars. Local deposits provide at least some opportunity to raise local currency funds, but the spread between interest rates offered on local vs. foreign currency deposits (currently running at around 10%), raises the cost of local currency lending by the same amount. The interest rate caps are thus doubly counterproductive, since they are making it more difficult for MFIs to lend in local currency. One simple response would be to lift the caps on local currency lending, though even that won't solve the problem entirely. Given the level of mistrust in the manat, financial institutions will likely struggle to raise local currency funds, even at high interest rates.

Finally, throughout this period of instability, the country's Credit Registry – an organ of the Central Bank – could have stepped up and made available reports to help guide the sector towards taking the most effective steps to addressing the crisis. How do delinquencies differ between individuals holding single vs. multiple loans? Or local vs. foreign-currency loans? And which regions are most impacted? Or perhaps most simply, how many individuals are there holding multiple loans, foreign currency loans, or both? These are all questions that can be answered by greater reporting and transparency from the Credit Registry. And yet, the Registry refuses to make such reports available. It is the only country out of six other MIMOSA pilots to refuse to share any meaningful information – yet it is the one country where such information is most urgently needed.

Azerbaijan and its financial sector, including microfinance, will continue to face great challenges in the coming months, as the full impact of the devaluation and its underlying cause – the massive fall in the price of oil – continues to spread. A more effective response by the regulator and the microfinance sector, including finding ways to escape the debilitating addiction to foreign currency lending, would help stabilize the situation and place it on a path of long-term sustainability.

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%	$> 60\%$