InSight

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Microfinance Institutions and Foreign Exchange Risk: The Experience of ACCION's Latin American Affiliates

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I. Introduction

Much has been made of the threat of foreign exchange rate risk to microfinance institutions. Whether from donors, public investments or commercial financing–an increasing number of microfinance institutions are funding their portfolios using foreign currency debt. Some observers have suggested that many microfinance institutions are now acquiring resources in foreign currency, without understanding or effectively managing the risks.[1]

The objective of this paper is to explore the following questions: How great a threat does exposure to foreign exchange rate risk represent to microfinance institutions (MFIs)? What motivates MFIs to acquire liabilities in a foreign currency? Do MFIs understand the exchange rate risks involved, and if so, how do they manage them? In this *InSight* ACCION International presents the results of a survey of its Latin America affiliates on these questions. The survey found that the majority of ACCION affiliates do not have exposure to foreign exchange rate risk, because they do not have foreign currency debt. Those institutions with foreign exchange risk were employing effective mechanisms to manage that risk.

II. What is Foreign Exchange Rate Risk?

Foreign exchange rate risk is the potential gain or loss that results from an exchange rate change:

There are three major categories of change in foreign exchange rates:

- **Depreciation** is a gradual decline in the value of a currency in comparison with another currency.
- **Devaluation** is the sharp fall in the value of a currency in comparison with another currency.
- **Appreciation** is a gradual increase in the value of a currency in comparison with another currency.

For example, a microfinance institution that has not managed its exchange rate risk would lose money through currency depreciation when the local currency falls in value relative to the currency in which debts are held. That is, if a microfinance institution has borrowed in US dollars while lending in local pesos, it suffers a loss if the value of the peso falls against the dollar. It will have to use more pesos to service the dollar-based debt.

[1] CGAP Portfolio, "Are MFIs Hedging Their Bets? Issue 1, April 2005

III. The Exposure of ACCION's Latin American Affiliates to Foreign Exchange Rate Risk

In the spring of 2005, ACCION International surveyed each of its twenty Latin American affiliates about their borrowing in foreign currencies.[2] At the time of the survey, the microfinance institutions fell into three categories, as shown in Table 1.

- **MFIs with Foreign Currency Liabilities:** Six microfinance institutions had borrowed in foreign currencies. They primarily held these liabilities in US dollars, with a few institutions holding debt in Euros or Swiss Francs.
- **MFIs in Dollarized Economies:** Four microfinance institutions operated in fully dollarized economies where no local currency is in use. These institutions do not face foreign exchange risk from liabilities in dollars, although some, like Banco Solidario in Ecuador, hold debt in Euros.
- **MFIs without Foreign Currency Liabilities:** Ten microfinance institutions of the affiliates did not hold any debt denominated in a foreign currency at the time of the survey.

Table 1: Institution Type and Foreign Currency Liability Structure

Institution Type	**MFIs with Foreign Currency Liabilities**	**MFIs in Dollarized Economies**	**MFIs with No Foreign Currency Liabilities**
Microfinance Subsidiaries or Programs of Large Commercial Banks	-CrediAmigo/Banco do Nordeste (Brazil)	-CREDIFE (Ecuador)	- Real Microcrédito (Brazil) -Sogesol (Haiti)
Specialized Microfinance Banks & Finance Companies	-BancoSol (Bolivia) -El Comercio (Paraguay) -Compartamos (Mexico) -Mibanco (Peru)	-Banco Solidario (Ecuador) -Apoyo Integral (El Salvador)	-BanGente (Venezuela) -FINAMERICA (Colombia) -FINSOL (Honduras)
NGOs	-FAMA (Nicaragua)	-Fundación Ecuatoriana de Desarrollo (Ecuador)	-ADMIC (Mexico) -Cooperativa Emprender (Colombia) -Fundación Maria Santo Domingo (Colombia) -Fundación Paraguaya (Paraguay) -Génesis (Guatemala)

Table 1 suggests that the NGOs surveyed are less likely to obtain foreign currency liabilities than microfinance subsidiaries, programs associated with large commercial banks, specialized microfinance banks, or finance companies. This is to be expected as certain types of microfinance programs associated with large commercial banks do not obtain their own liabilities, instead relying on financing from the parent bank. The types of financing used by MFIs are discussed further in section V.

[2] The microfinance institutions did not necessarily respond to every question asked in the survey.

It is also important to distinguish between regulation and decisions made by management. National regulations in some countries, such as Colombia and Venezuela, prohibit certain types of financial institutions from acquiring foreign currency denominated loans. The issues of how MFIs decide to acquire foreign currency debt and how the level of dollarization affects this decision are discussed later in this *InSight*.

IV. The Decision to Acquire Foreign Currency Debt

What influences microfinance institutions to acquire debt denominated in a foreign currency? The survey explored the reasons for which microfinance institutions decided to acquire or to avoid such debt. The results are disaggregated for MFIs with and without foreign currency liabilities.

Why Foreign Currency Debt is Attractive to MFIs With Foreign Currency Liabilities
Interest Rates:
The six MFIs acquiring financial resources in a foreign currency cited attractive interest rates as the most common reason for acquiring liabilities in a foreign currency. Table 2 compares the average nominal interest rate charged to the institution on foreign currency liabilities to the average nominal interest rate charged on local loans.

Table 2: Comparison of Costs of Capital: Average Interest Rates on Foreign Currency Liabilities, Local Currency Liabilities, and Borrower Deposits

Microfinance Institutions	Country	Average Interest Charged on Foreign Currency Liabilities (percent per annum)	Percent Change in Exchange Rate (Local Currency/ US$) (2003-2005)[3]	Average Interest Rate Charged on Local Currency Liabilities (per cent per annum)[4]
BancoSol	Bolivia	6.08	1.68	13.15
CrediAmigo, Banco do Nordeste	Brazil	N/A	-11.56	N/A
El Comercio Financiera	Paraguay	4.00	-4.20	10.36
FAMA	Nicaragua	6.90	6.82	8.25
Compartamos	Mexico	8.03	0.56	8.81
Mibanco	Peru	5.97	-1.81	7.93

Source: Internal ACCION International Network Survey, December 2004

[3] Percent change in annual average local currency exchange rates against the US dollar from 2003 to 2005.
[4] This rate represents the average annual effective (including all fees and commissions) interest rate on the microfinance institution pays on its liabilities to other local financial institutions from which it has borrowed funds.

In all cases, the institutions are charged lower interest rates for their foreign currency liabilities. However, the average interest rate charged on foreign currency liabilities does not include the potential cost of depreciation or devaluation, which is high in countries such as Paraguay, where El Comercio Financiera is located. For this reason, Table 2 includes a column on changes in exchange rates in the last three years as a proxy for future exchange rate risk. Negative numbers represent gains in the value of the local currency (appreciation) with respect to the U.S. dollar, because the amount of local currency needed to purchase dollars has declined. Positive numbers reflect declines in the value of the local currency with respect to the US dollar. Obviously, this column represents historical devaluation, which may not be indicative of exchange rate risk in the future, but it is one of the simplest proxies for future devaluation.

Other loan conditions:
Besides the interest rate, the MFIs surveyed generally considered the favorability of the term of the loan, frequency of payments, grace period, and form of disbursement in their decision-making processes.

Prestige:
Some MFIs also mentioned the "prestige factor" of receiving debt in a foreign currency, that is, the importance that this debt confers on the institution in the eyes of the external market and investors. For some institutions, the prestige comes from receiving international funding, which is generally available only in hard currencies such as the US dollar or Euro.

Other financing options:
When deciding to acquire foreign currency debt, four of the six MFIs considered domestic and international options at the same time, while two MFIs analyzed all domestic options before considering foreign debt.

Costs:
The institutions also noted other costs incurred when acquiring foreign currency liabilities as an important factor in their decision. These costs include:

- Commissions
- Interest rates
- Wire transfer fees
- Provisioning requirements mandated by law for each foreign currency loan
- Legal fees

V. The Decision to Avoid Foreign Currency Debt

Why do some microfinance institutions choose to avoid foreign currency debt? Most of the MFIs that did not acquire liabilities in a foreign currency cited the availability of good sources of local funds, as described in Table 3.

Table 3. Why MFIs Do Not Acquire Foreign Currency Liabilities

	Number of MFIs
Good sources of local funds	5
Fear of currency volatility	1
Waiting for a more opportune moment	1
No response	3

Other financing options:
What financing options do microfinance institutions without foreign currency liabilities use?

Financing from a Parent Bank
Programs of large commercial banks such as Real Microcrédito (service company of ABN AMRO), CREDIFE (service company of Banco del Pichincha), and Sogesol (service company of Sogebank) rely on financing from the parent bank, and thus do not have their own liabilities on their books.[5] The survey described in this study did not cover the asset and liability structure of the parent banks of the microfinance institutions.

Microfinance institution BanGente does maintain its loan portfolio on its books. However, the majority of its financing comes from a loan from its parent bank (Banco del Caribe) with the remainder from savings deposits. Again, the exchange rate risk for BanGente would be dependent on the asset and liability structure of Banco del Caribe.

Commercial Loans
One institution, Fundación Paraguaya, accesses commercial capital with the assistance of a guarantee fund, the ACCION Latin America Bridge Fund. This guarantee fund helps microfinance institutions avoid foreign exchange rate risk by enabling them to access credit in local currency from commercial banks operating in their country. However, the desire to avoid foreign exchange risk is often a secondary consideration for microfinance institutions that choose to use loan guarantees.[6]

Genésis Empresarial (Guatemala) primarily relies on commercial bank loans to fund its portfolio, with some use of international concessional loans.[7]

Savings Mobilization and Donor Funding
FINAMERICA (Colombia) and FINSOL (Honduras) are regulated institutions that fund their portfolios through a mixture of term deposits mobilized from clients and resources from local government or multilateral agencies.[8] ADMIC, FMSD and Cooperativa Emprender fund their portfolios using resources (such as grants and lines of credit) from a mix of institutions, such as local governments, foreign governments and multilateral agencies like the Inter-American Development Bank.[9]

In general, the MFIs with foreign currency liabilities demonstrated their comprehension of these risks and a strong ability to manage these risks.

VI. Risk Mitigation for MFIs Borrowing in a Foreign Currency

How well do MFIs understand the risks inherent in borrowing in foreign currencies? In general, the MFIs with foreign currency liabilities demonstrated their comprehension of these risks and a strong ability to manage these risks.

[5] See ACCION *InSight* #6 "The Service Company Model" for more details.
[6] See ACCION InSight #15. "Bridging the Finance Gap: ACCION's Experience With Guarantee Funds for Microfinance Institutions" for more details.
[7] Curran, Lynne. "Financing Microfinance Loan Portfolios." Small Enterprise Development Journal. Vol. 16 No. 1 March 2005
[8] Ibid
[9] Internal ACCION International Network Survey, December 2004

For MFIs with foreign currency liabilities, there are two ways foreign exchange rate risk can affect them:

1) Asset and Liability Mismatch.
If a microfinance institution's foreign currency assets (e.g. loans to borrowers) are greater than its foreign currency liabilities (e.g. international borrowings), a decline in local currency value benefits the microfinance institution, as long as default rates do not increase. However, the reverse scenario is detrimental to the microfinance institution.

2) Borrower inability to manage foreign exchange risk.
If the microentrepreneur borrows from the MFI in the foreign currency or through a loan indexed to a foreign currency, then they, rather than the MFI, bear the foreign exchange risk. However, passing the exchange rate risk to the borrower does not eliminate the risk from the microfinance institution, because the MFI remains exposed to credit risk with the borrower. Some microentrepreneur borrowers can weather negative foreign exchange movements. Others cannot, especially if the devaluation of the local currency is large. The question becomes to what extent microfinance clients understand, mitigate and are able to carry the foreign exchange risk.

The question becomes to what extent microfinance clients understand, mitigate and are able to carry the foreign exchange rate risk.

Clients may be attracted by the generally lower nominal interest rate of dollar denominated loans, believing that in the case of an extreme devaluation, so many will be unable to pay that the microfinance institution will need to renegotiate or the government will intervene. This moral hazard could leave MFIs exposed in the event of a sharp devaluation.

Methods to Mitigate Foreign Exchange Rate Risk at the Institution Level

Each of the MFIs with foreign currency liabilities described methods they use to mitigate exposure to foreign exchange rate risk at the institutional level. These methods include:

- **Match liabilities denominated in a foreign-currency to assets denominated in that same currency.** For the MFIs with foreign currency liabilities, the most common method to manage foreign exchange risk was to monitor the match between foreign currency assets and liabilities, attempting to maintain it at a neutral level where foreign currency assets equal foreign currency liabilities (zero "gap"). Matching non-loan portfolio financial assets to liabilities, such as deposits and investments, to liabilities further reduces the risk that may occur if a borrower defaults as a result of a fluctuation in a foreign currency.

  However, it is not always possible for MFIs to obtain a zero gap. Even if a microfinance institution's foreign exchange assets equal foreign exchange liabilities, exchange rate risk may exist due to maturity gaps. For example, if local currency liability terms do not match foreign currency liability terms, substantial amounts of currency may be received in advance of any offsetting payments.[10] If the gap is zero, the exchange rate risk remains

[10] Comptroller of the Currency Administrator of National Banks. Foreign Exchange Comptroller's Manual (Section 813) Narrative and Procedures March 1990.

only in that the borrower may default is risk if clients default as a result of currency fluctuations that affect them adversely.

The data in the table 4 show the level of match between assets and liabilities. For BancoSol, El Comercio and Mibanco, all of which have ratios close to 1.0, foreign currency liabilities and assets are balanced, although some gap exists for El Comercio. In some countries, such as Peru, the superintendency of banks regulates the match between foreign currency assets and liabilities, requiring that there exist a gap between them of no more than one percent. In Bolivia, Paraguay and Peru, many of the foreign currency liabilities come from domestic sources. Mibanco and BancoSol, for example, have many local deposits denominated in dollars, including deposits from microenterprise customers. They operate in partially dollarized economies as discussed below.

Table 4: Institutional Exposure of MFIs with Foreign Currency Liabilities (as of Dec. 31, 2004, in $000)

MFIs with Foreign Currency Liabilities	Country of Operation	Foreign Currency Assets ($) (A)	Foreign Currency Assets/Total Assets (%)	Foreign Currency Liabilities ($)	Foreign Currency Liabilities/Total Liabilities (%)	Ratio of Foreign Currency Assets to Liabilities
BancoSol	Bolivia	118,443	86	108,674	91	1.09
CrediAmigo Banco do Nordeste	Brazil	N/A		NA	NA	-
El Comercio Financiera	Paraguay	4,494	33	3,827	35	1.17
FAMA	Nicaragua	846	5	8	80	106
Compartamos	Mexico	544	0.4	9,645	11	0.06
Mibanco	Peru	53,244	33	54,240	43	0.98

For FAMA and Compartamos, there exists a substantial gap. However, for both of these institutions, foreign currency borrowings are a relatively unimportant source of liabilities.

- **Use hedging instruments, such as forward or future contracts.** Hedging is defined as the use of two offsetting trading strategies to minimize losses. It involves arranging some form of insurance to minimize or eliminate losses from adverse movements in foreign exchange rates. Forwards and futures are two strategies of hedging that specifically involve making advance purchases of currency at a fixed price for future delivery to protect against the uncertainty in exchange rate movements. Other hedging strategies include placing the proceeds of foreign currency liabilities in a CD and using that CD as collateral for a local currency loan.

  It is not possible to use hedging instruments in all countries. Hedging is generally available only in countries with fairly developed financial markets. Both Compartamos in Mexico and CrediAmigo Banco do Nordeste in Brazil manage their exposure to foreign exchange rate risk using hedging instruments.

- **Index contracts to the foreign currency.** Nicaraguan law requires all contracts to be indexed to a foreign currency (typically the dollar). Therefore when the official exchange rate changes in Nicaragua, FAMA maintains the value of debts in relation to the foreign currency by adjusting the amount owed in local currency. This transfers much of the foreign exchange risk from the microfinance institution to the borrower. However, in the event of a sharp devaluation, the microentrepreneur may owe more in local currency than he or she had originally borrowed, but presumably with the same cash flow as before the devaluation. This would increase the risk that the borrower would default.
- **Maintain cash reserves in foreign currency**. Some of the institutions surveyed maintain liquid reserves in a foreign currency (typically dollars held in the United States at low interest rates). These reserves provide a cash cushion that can be used by the microfinance institution in the event of devaluation in the country, which can sometimes result in a run on dollar deposits in banks. However, this reserve reduces the amount of funds available to finance the institution's loan portfolio.

VII. The Role of Dollarization in Mitigating Foreign Exchange Rate Risk

Types of Dollarization

Official dollarization occurs when a country replaces its local currency with a foreign currency, most commonly the US dollar. Microfinance institutions operating in dollarized economies have no exposure to foreign exchange rate risk if they acquire debt in dollars. However, they would still be exposed to foreign exchange rate risk if they acquire debt in another currency such as the euro.

Considerable debate exists as to how the degree of dollarization affects foreign exchange rate risk for microfinance institutions.

Partial dollarization occurs when both local currency and a foreign currency are in use in the domestic economy. Households, companies and the public sector may operate in both local and foreign currencies in such economies. One type of partial dollarization is financial dollarization, in which a country's residents hold financial assets or liabilities in a foreign currency, but use local currency for everyday transactions.[11] Considerable debate exists as to how the degree of dollarization affects foreign exchange rate risk for microfinance institutions.

Advantages and Drawbacks of Partial Dollarization

Partial dollarization can mitigate foreign exchange rate risk. In highly dollarized economies, such as Bolivia, a microfinance institution may use dollars it has borrowed to onlend to its clients or collect deposits in dollars. This helps the microfinance institution match its dollar denominated assets to liabilities due to lenders.[12] In highly dollarized economies, microentrepreneurs are more likely to trade in foreign currencies and less susceptible to declines in the value of local currencies.

[11] De Nicolo, Gianni. Patrick Honohan and Alain Ize. "Dollarization of the Banking System: Good or Bad?" IMF Working Paper July 2003

[12] Cavazos, Rocio. "Foreign Exchange Risk Management in Microfinance." Women's World Banking Occasional Paper

The risk remains that sudden major economic shifts change the balance between local currency and foreign currency in the economy at large, although more routine or slower-acting changes can be accommodated. Some have suggested that financial instability could be higher in economies with financial dollarization, as the scope for mismatch between foreign currency liabilities and foreign currency assets is greater. [13] For example, if deposits are mostly made in dollars, but dollar liquidity is low, banks may not be able to manage a run on dollar deposits in the event of a crisis.

Financial Dollarization and Microfinance Institutions

Many of the MFIs with liabilities in foreign currency operate in highly dollarized or partially dollarized financial systems. Table 5 shows the level of financial dollarization in the countries of MFIs with foreign currency liabilities.

Table 5: Level of Dollarization of MFIs with Foreign Currency Liabilities

MFIs with Foreign Currency Liabilities	Country of Operation	Level of Dollarization in the Country (percent)[14]
BancoSol	Bolivia	93
CrediAmigo Banco do Nordeste	Brazil	N/A[15]
El Comercio Financiera	Paraguay	64
FAMA	Nicaragua	69
Financiera Compartamos	Mexico	11
Mibanco	Peru	64

Source: Gruben and McLeod (2004)

Bolivia, although not fully dollarized, receives 93 percent of total deposits made in foreign currency, mitigating most of the foreign exchange risk for BancoSol. FAMA in Nicaragua, El Comercio Financiera in Paraguay, and Mibanco in Peru, also operate in highly dollarized economies.

However, ultimately, the effect of dollarization depends on how exposed microentrepreneurs are to the dollarized economy. Little information exists as to the penetration of financial dollarization in the informal nonfinancial sector. Comparing the performance of loans to microentrepreneurs in a local currency and loans in a foreign currency following a major foreign currency fluctuation would be one way to gain information on the extent to which microentrepreneurs' cash flows are dollarized.

[13] De Nicolo, Gianni. Patrick Honohan and Alain Ize. "Dollarization of the Banking System: Good or Bad?" IMF Working Paper July 2003

[14] Gruben, William C. and Darryl McLeod. "Currency Competition and Inflation Convergence." Center for Latin American Economics. Federal Reserve Bank of Dallas. Working Paper 0204. This column shows foreign currency deposits as a percent share of total deposits. Data represents averages for 1999-2001 or closest years for which data is available.

[15] Degree of dollarization figures are not available for Brazil, as dollar deposits were not permitted at the time of the Gruben/McLeod study.

VIII. Conclusion

The survey results described in this *InSight* demonstrate that many ACCION affiliates in Latin America do not have exposure to foreign exchange rate risk because they have access to attractive local sources of funds. Those who have significant exchange rate risk exposure generally operate in highly or partially dollarized economies, and mitigate risk either by balancing foreign currency assets and liabilities or through hedging.

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