

Recent Developments in Microfinance Foreign Exchange Risk Management

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Microfinance foreign exchange risk management capacity is evolving rapidly; this is leading to increased cross-border local currency financing. Foreign exchange risk management is crucial because local currencies in microfinance markets continue to be volatile vis-à-vis the US dollar. The first section of this paper looks at how local currencies have fared against the US dollar in 25 microfinance markets from 1997-2007.

In late 2007 and thus far in 2008, several exciting microfinance foreign exchange risk management initiatives are taking place. These initiatives assist microfinance investment funds (MIVs) in hedging foreign exchange risk in order to provide local currency loans to MFIs, further described in the second section of this paper. The third section describes some remaining challenges in microfinance foreign exchange risk management.

CURRENCY VOLATILITY CONTINUES IN MICROFINANCE MARKETS

Table 1 shows the currencies of 25 microfinance markets from 1997-2007, and how each fared against the US dollar. Shaded figures denote years in which the local currency depreciated against the US dollar; any year in which a local currency appreciated against the US dollar is not shaded. From 1997 through 2002, the majority of these currencies depreciated against the US dollar year after year. From 2003 to 2007, depending on the year, some currencies appreciated, while others depreciated against the US dollar. Most recently, more of these currencies are appreciating. However, a prior year currency appreciation in no way ensures that trend will continue into the next year.

Key findings

- No country or region is immune to currency depreciation. All of the countries and regions included in Table 1 experienced currency depreciation.
- The largest single year depreciation against the US dollar among the currencies was the Russian ruble, which depreciated 71% in 1998. Other currencies that had the greatest currency depreciation against the US dollar in a single

year among these markets include Benin, Brazil, Dominican Republic, Indonesia, Nicaragua, and South Africa, with currency depreciation ranging from 5% to 49% per annum.

- In each of the years shown in Table 1, at least six of the currencies depreciated against the US dollar. From 1997-2007, on average, 17 of the 25 currencies depreciated against the US dollar in a given year.
- A review of each of the 25 currencies' annual depreciation reveals that they depreciated an average of seven out of the eleven years from 1997-2007. The number of years a single currency among these depreciated ranged from four out of ten years in the case of Bosnia, to all of the past eleven years in Nicaragua.
- A majority of the 25 currencies appreciated against the US dollar in 2003, and also in 2006 and 2007. Although an appreciating local currency can be favorable to an MFI with dollar loan liabilities owed to international lenders, this table shows the wide variability and uncertainty of how currencies fluctuate and move over time.

Despite a number of appreciating local currencies in recent years, currencies remain fundamentally volatile. Microfinance institutions (MFIs) are not primarily in the business of currency speculation. It is in their interest to keep unhedged foreign exchange risk off their balance sheets. Fortunately, there is both growing access to various types of

local funding, and an increasing number of international MIVs able and willing to offer local currency loans to MFIs. The next section describes some of the latest initiatives that have occurred since those described in *From Dollar to Dinar: The Rise of Local Currency Lending and Hedging in Microfinance*.

Table 1. Rate of Local Currency Depreciation and Appreciation against the US Dollar In Microfinance Markets: 1997-2007

Country	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	%	%	%	%	%	%	%	%	%	%	%
Bangladesh	(6.6)	(6.3)	(4.9)	(5.6)	(5.3)	(1.6)	(1.5)	(3.2)	(8.3)	(4.1)	0.7
Benin	(12.5)	6.5	(13.9)	(7.4)	(5.3)	19.0	20.4	7.8	(14.9)	13.6	11.8
Bolivia	(3.4)	(5.0)	(5.8)	(6.3)	(6.3)	(8.9)	(4.3)	(2.7)	0.1	0.8	4.7
Bosnia	N/A	7.1	(14.1)	(7.4)	(5.3)	19.0	20.4	7.9	(13.4)	11.6	11.7
Brazil	(6.9)	(7.7)	(32.4)	(8.5)	(15.7)	(34.3)	22.3	8.8	13.4	9.5	20.7
Cambodia	(21.4)	(8.4)	0.0	(3.5)	0.3	(0.9)	(1.4)	(1.1)	(2.1)	1.4	1.5
Chile	(3.4)	(7.2)	(10.6)	(7.4)	(12.7)	(7.9)	18.8	(0.1)	16.7	(3.8)	7.8
Colombia	(22.3)	(14.2)	(19.5)	(14.3)	(5.0)	(19.7)	3.0	15.3	5.6	2.6	12.0
Dominican Republic	(2.1)	(9.0)	(1.6)	(3.8)	(2.8)	(19.1)	(43.1)	19.7	(10.8)	3.2	(1.6)
India	(8.5)	(7.5)	(23)	(7.0)	(3.0)	0.3	5.3	4.6	(3.3)	1.9	12.3
Indonesia	(48.8)	(42.1)	13.3	(26.2)	(7.7)	16.3	5.6	(8.9)	(5.5)	9.0	(4.2)
Kenya	(12.2)	1.2	(15.1)	(6.5)	(0.7)	2.0	1.2	(1.6)	6.9	4.3	10.7
Mexico	(2.9)	(18.1)	3.7	(0.6)	4.7	(11.3)	(8.2)	(0.3)	4.5	(0.9)	0.1
Mongolia	(14.7)	(9.8)	(15.9)	(2.2)	(0.5)	(2.0)	(3.7)	(3.4)	(1.0)	4.8	(0.4)
Morocco	(9.4)	5.0	(8.2)	(5.0)	(8.1)	13.7	16.2	6.5	(11.1)	9.4	9.6
Nicaragua	(10.8)	(10.6)	(9.2)	(5.7)	(5.6)	(5.7)	(5.7)	(4.8)	(4.8)	(4.7)	(4.8)
Pakistan	(8.9)	(4.0)	(11.4)	(10.8)	(4.7)	4.0	2.3	(3.2)	(1.2)	(1.8)	(0.5)
Paraguay	(10.6)	(16.9)	(14.7)	(5.6)	(24.7)	(34.1)	16.2	(2.2)	2.1	17.9	6.5
Peru	(4.8)	(13.6)	(10.0)	(0.5)	2.4	(2.0)	1.5	5.5	(4.3)	7.3	6.7
Philippines	(34.2)	2.3	(3.1)	(19.4)	(2.7)	(3.2)	(4.5)	(1.2)	6.0	8.0	18.7
Russia	(6.7)	(71.1)	(23.5)	(4.1)	(6.6)	(5.2)	7.9	6.1	(3.6)	9.3	7.3
Sri Lanka	(7.5)	(10.3)	(5.4)	(12.6)	(11.4)	(3.7)	(0.0)	(7.5)	2.4	(5.2)	(0.9)
South Africa	(3.8)	(16.9)	(4.8)	(18.7)	(37.6)	40.4	30.1	17.9	(11.0)	(9.3)	2.3
Uganda	(9.7)	(16.3)	(9.5)	(14.8)	2.3	(6.8)	(4.3)	8.5	(1.8)	4.3	2.6
Vietnam	(9.3)	(11.5)	(1.0)	(3.3)	(3.8)	(2.1)	(1.6)	(0.8)	(0.9)	(0.9)	0.1

Summary per year:											
# of countries with LC depreciation	24	20	22	25	21	17	11	14	16	8	6
# of countries with LC appreciation	-	5	2	-	4	8	14	11	9	17	19
# of countries with no change in value	-	-	1	-	-	-	-	-	-	-	-
Total	24	25	25	25	25	25	25	25	25	25	25

Negative numbers (shaded in parentheses) denote a local currency depreciation against the US dollar.

Positive numbers (unshaded) denote appreciation vis-à-vis the US dollar.

Source: Analysis of International Monetary Fund *International Financial Statistics* exchange rate data

NEW HEDGING AND LOCAL LENDING CAPACITY COMING ON STREAM

TCX, the newly created special purpose fund providing currency and exchange rate risk management products and services described in *From Dollar to Dinar*, has begun hedging microfinance transactions. Two new funds, MFX Solutions and MICROFIX, are now being formed to provide wider microfinance access to the hedging capacity of TCX. Minlam is a new fund lending solely in local currency using a hedge fund strategy. Cygma has formed to provide advisory services for microfinance foreign exchange risk management, and hopes to launch a hedging facility in 2009. The combined impact of these new products and services will allow an increasing number of microfinance investment funds to provide local currency loans to MFIs, so that MFIs may borrow internationally in local currency. Each of these initiatives is described in the sections below.

TCX

The concept and rationale for TCX is discussed in the accompanying paper *From Dollar to Dinar* (see page 17). The following information is an update since TCX's launch in September 2007. As of third quarter 2008, TCX is capitalized at US\$ 490 million from twenty investors, of whom some invest primarily or partially in microfinance, such as ASN-Novib Fund, European Fund for Reconstruction and Development (EBRD), European Fund For Southeast Europe (EFSE), FMO, KfW, Oikocredit, and Oxfam Novib Fund.

TCX's first currency swap transaction was executed in January 2008. It has found strong demand for its currency hedging capability due to the volume of lending for which there is no commercially available foreign exchange risk hedge, or the deal or anticipated deal flow is too small for a commercial financial institution to undertake. TCX can work in virtually all currencies of countries in which microfinance is practiced. Its limit across all currencies is the lesser of 25% of capital or 10% of its portfolio. It can hedge in any country in which there is some form of local market benchmark and sufficient liquidity. Since its launch, TCX has been able to respond to about 95% of requests made, involving 43 different currencies. TCX has not yet traded out any of the risk on its

own books, and is still building up its own diversified portfolio exposure. It currently provides the following hedging products on a non-deliverable basis: foreign exchange swaps and forwards, cross currency and interest rate swaps, and forward rate agreements. TCX pricing is based on product benchmarks, or proxy benchmarks if needed. It cannot hedge fixed rate products at interest rate maturities exceeding 1/2 times (50%) longer than the longest observable liquid benchmark in that currency; it has no tenor maturity limits. TCX does not apply a spread to its products, thus minimizing hedging costs to its shareholders. It requires all partners to certify that they are using TCX products for hedging and not for currency speculation. All counterparties in a hedge must be investment grade or equivalent in terms of their capital structure. The Dutch government has assumed TCX's first loss tranche.

A challenge specific to hedging microfinance loans is that many of the loans have long tenors (three to seven years) at fixed rates, whereas due to limited benchmarks in many markets, available hedges are shorter, and thus require frequent interest rate resets. TCX can currently leverage currency hedges from three to six times the amount of investment. Microfinance currency hedging transactions have access to higher leverage due to support from the Dutch government to promote microfinance usage of TCX's capabilities. Additional support from the Dutch government is enabling TCX to assist in the creation of MICROFIX and MFX Solutions, each of which will provide microfinance windows to TCX for a greater number of microfinance investors. A number of TCX's microfinance transactions closed to date have been cases in which it assumed the currency risk of existing local currency loans already on shareholders' books. This has allowed shareholders to shed the currency exchange risk that they had been assuming, freeing up capacity to undertake further lending. TCX has also worked with shareholders to convert existing hard currency debt into local currency via currency swaps. One of TCX's largest recent microfinance transactions has been FMO's US\$ 53 million equivalent syndicated mezzanine facility to Kenya's Equity Bank, denominated in local currency.

MFX Solutions

MFX Solutions, based in Washington DC, is a new fund that has been designed to give MFIs and MIVs the knowledge and tools they need to manage their currency risk. MFX Solutions will offer currency swaps and forward contracts to microfinance lenders or borrowers in currencies, tenors, and at prices not currently available to them. It will do so by becoming an investor in TCX (see *Dollar to Dinar* and information on TCX above) which will provide MFX Solutions with a window to access TCX currency hedging. At this time, TCX is the only viable foreign exchange risk hedging option in higher risk markets in which there are no commercial hedging possibilities.

The premise of MFX Solutions is that international microfinance investors will increase their lending in local currency to underserved microfinance borrowing markets if they are able to invest on the basis of, "Where do you want to lend if there is no currency risk?" Created by and for the microfinance industry, MFX Solutions has been supported thus far by 16 investors, including microfinance networks, investors, and raters. Investors include ACCION International, Calmeadow Foundation, and the Calvert Foundation. MFX Solutions plans to legally incorporate and complete its first closing with US\$ 7 million in capital investment in the second half of 2008. It hopes to raise further capital up to an estimated US\$ 20 million, to provide greater volume of currency hedging access. It is being structured as an investment grade, for-profit US limited liability holding company owning a US operating company.

MFX Solutions will invest its full initial capital in TCX to maximize available volume of exchange risk hedging access. According to MFX Solutions, it will have capacity to access TCX's hedging capability with leverage ranging from six times to a maximum of twelve times investment. In addition, MFX Solutions is securing a guarantee facility from the Overseas Private Investment Corporation (OPIC) that it will utilize in lieu of posting collateral on each hedging transaction. Eventually, MFX Solutions plans to offer its investors access to currency hedging products outside of TCX as well. It intends to develop standardized International Swaps and Derivatives Association (ISDA) documentation that may be used by all investors in

MFX Solutions, and that aligns with TCX documentation.

MFX Solutions will also have a grant-funded educational component to its operations to address knowledge gaps by MFIs and MIVs about currency risk, and to improve currency risk management. This may include products such as online tools, curricula, and training, provided as a public good.

Citi-WWB Training on FX Risk Management

For MFIs, there is more training being provided to promote better understanding of foreign exchange risk. Global bank Citi and microfinance network Women's World Banking have jointly developed and taught a course on financial risk management, including foreign exchange risk. To date, the course has been offered 13 times, and has trained 268 participants from 120 MFIs in 39 countries spanning 5 continents.

MICROFIX

MICROFIX is a foreign exchange risk hedging fund being launched by PlaNis (Planet Finance Investment Services), a division of Planet Finance. It has been designed primarily to access the currency hedging capability of TCX (described above).

To date, MICROFIX expects to issue its information memorandum in the fourth quarter 2008, and is actively fundraising towards an initial capital goal of US\$ 30 - 40 million for its first closing, slated for late 2008 or early 2009. Hedging transactions would commence following the closing. Most of MICROFIX's raised capital is to be invested in TCX. MICROFIX hopes to eventually raise US\$ 70 million, of which an estimated \$ 60 million would be invested in TCX. MICROFIX is targeting investors such as MIVs, networks, and large MFIs that would not invest directly in TCX, whose minimum capital investment is US\$ 5 million. Minimum capital investment in MICROFIX is US\$ 250,000. During its first years, MICROFIX's hedging capability will be limited to its investors.

MICROFIX anticipates that most of its hedging capability will be accessed through TCX, which offers specialized hedging of currencies and tenors unavailable from the commercial banking sector. MICROFIX will utilize PlaNis's capability to assess MFI credit risk, combined with TCX's capacity to address market risk. MICROFIX will consider hedging currencies both via TCX, as well as commercial sources such as banks. Each investor's currency hedging capacity will be based on its level of equity in Microfix, ranging from 3 times its investment (on a mark to market basis), up to a maximum of 10 times notional (leveraged) investment. The extent of leverage available to each MICROFIX investor will vary, depending on how many of MICROFIX's investors are conducting hedging transactions at the same time, and thus MICROFIX's aggregate usage of TCX capacity at a given time.

MICROFIX is receiving technical assistance from Banque BNP Paribas, FMO, and TCX.

Cygma

Cygma provides foreign exchange risk hedging solutions for emerging and frontier markets focused primarily on microfinance and small/medium enterprise. Launched in January 2008 and incorporated in June 2008, Cygma is wholly owned by its parent company, Chatham Financial, an interest rate and foreign exchange risk management advisory company.

Cygma offers advisory services, hedging products (slated for 2009), and education. Advisory services are currently available to microfinance investment funds, investment vehicles, microfinance institutions, and networks. Services include portfolio and foreign exchange risk exposure analysis, and assistance in the structuring, negotiation, and execution of external currency hedges, including counterparty relationships and ISDA documentation. Cygma also provides ongoing assessment and monitoring of debt and equity portfolios for clients with unhedged currency exchange risk on their books. The company is not charging for its advisory services in 2008, as a way to gain market intelligence and better discern customer needs. Beginning in 2009, Cygma will charge an annual retainer for its advisory services. As this publication went to press, Cygma was actively fundraising to create a counterparty

hedging facility called Cygma Fund. Cygma plans to raise US\$ 50 million to capitalize this facility. It hopes to launch the facility in early 2009, with potential to leverage its hedging capacity up to levels of ten to one. For clients for whom there is no available dealer bank or market-based foreign exchange risk hedge, Cygma Fund could provide non-deliverable forwards and cross currency swaps. In these transactions, Cygma Fund would serve as counterparty.

Cygma's third focus area is education. This includes dissemination of company newsletters on specific aspects of microfinance foreign exchange risk, and training on topics such as asset-liability management and foreign exchange risk management. These services are charged on a pay per use basis.

Minlam Asset Management, LLC

Launched in October 2007, Minlam Asset Management, LLC is the first microfinance hedge fund. Based in New York, Minlam has over US\$ 50 million in assets under management from institutional investors, including fund-of-funds, endowments, and family offices. Minlam lends local currency capital to microfinance institutions across a diversified set of emerging markets. The fund actively manages its unhedged currency risk, using a global strategy based on fundamental views on country and currency performance, as well as investment analysis and assessment of MFI credit risk. Minlam manages currency and country exposures through diversification and use of currency forwards and credit default swaps.

There may be some innovative transactions between the actors described above, as they consider trading foreign exchange risk exposures amongst themselves as another tool to manage their respective currency exposure through portfolio diversification. These interactions could serve to further catalyze some of the markets in which these actors are active.

MICROFINANCE FOREIGN EXCHANGE RISK HEDGING STILL FACES CHALLENGES

Despite great progress and the number of new local currency lending initiatives, some fundamental challenges remain in MIVs' quest to hedge cross-border local currency loans to MFIs. Specifically:

- *Competitive positioning.* MIVs are finding that MFIs increasingly require local currency loans. MIVs not able to offer local currency loans, or not offering the currencies and tenors MFIs seek, are at a competitive disadvantage.
- *Limitations of commercial hedges.* Aside from the special purpose funds and initiatives described in this paper, commercial hedges represent another potential solution to foreign exchange risk. Many currencies, however, do not have available commercial exchange risk hedges or adequate tenors, due to thin foreign exchange markets for many emerging market currencies. Even where such hedges exist, there are some challenges specific to commercial foreign exchange risk hedging products:
 - When there is an available market-based exchange risk hedge from a commercial financial institution, it may require a certain

minimum transaction size as well as a certain volume of deal flow that an MIV may or may not be able to offer.

- In a commercial transaction, the final currency hedging price may not be fixed until the day of the transaction, or only a few days in advance at most. Since the interest rate on the MIV's loan to the MFI is determined by the rate the MIV must earn plus the cost of the currency hedge, the hedge price will affect the final interest rate on the loan. This can be challenging for an MFI attempting to plan ahead by knowing the exact interest rate it can expect to pay on an MIV's loan.
- *Currency hedge deliverability.* Some MIVs prefer deliverable currency hedges as logistically easier for the fund and for the MFI, but not all currency hedging facilities offer deliverability. In some cases, only the largest international banks can offer deliverable hedges.

Despite these challenges, cross-border local currency loans can be a component of an MFI's overall funding strategy and diversified funding base. The microfinance sector continues to rapidly develop ways to deliver international local currency lending.

References:

- Cavazos, R., Julie Abrams and Ann Miles, *Foreign Exchange Risk Management in Microfinance*, Women's World Banking, Financial Product and Services Occasional Paper, 2004
- Abrams, Julie and Louise Schneider-Moretto, *From Dollar to Dinar: The Rise of Local Currency Lending and Hedging in Microfinance*, Women's World Banking, 2007

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