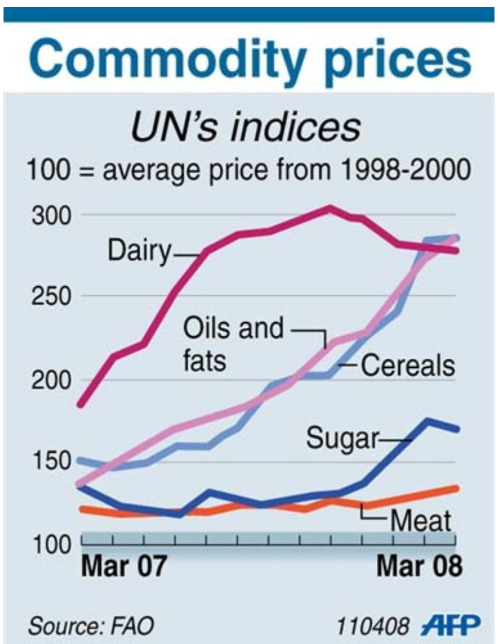
FROM THE AMERICAN PEOPLE

microNOTE #54

Coping with the Price Spike?

Effects of Food and Fuel Inflation on MFIs and Borrowers



BACKGROUND & PURPOSE

The past two years has seen a precipitous increase in commodity and fuel prices driven by increasing demand from emerging economies and biofuel production. While food and fuel inflation has reverberated throughout world economies, it is the poor and their associated microfinance lenders who are least likely to have the tools and products to cope with this phenomenon.

USAID commissioned a discussion paper to investigate the effects of food and fuel inflation on microfinance institutions (MFIs) and their borrowers. The study undertakes a case study approach and focuses on three inflation-prone countries: Bangladesh, Haiti, and Nicaragua. A total of eight MFIs were surveyed and 96 individuals including borrowers, loan officers and MFI senior management were interviewed. This paper is not intended to be exhaustive and comprehensive. Its aim is to illustrate broadly the impact of food and fuel inflation on the microfinance industry.

The study has drawn on previously published research, government statistics, field interviews and an analysis of loan portfolio data, as provided by the MFIs, in order to quantify the price changes, their effect on MFIs and borrowers and the actions the MFIs and borrowers are taking to mitigate the effect. In order to gauge the effects of food and fuel inflation, the study selected the following three main proxies:

1. **Rates of Delinquency:** Given that MFIs' clients spend a significantly larger proportion of their income on food than other economic demographics, it stands to reason that precipitous increases in food prices would result in a deterioration of the rate at which borrowers pay back their loans. Delinquency is measured using the Portfolio-At-Risk (PAR) 30 day and 60 day metrics (percentage of the portfolio where payments are delinquent at after 30 or 60 days).

2. **Restructuring**: A common MFI approach to delinquent loans is to restructure the terms of the loan either by extending the maturity date and/or lowering the interest rate. The deep statistical analysis necessary to quantify the frequency of restructuring was outside the scope of this study so the research team relied on the testimony of senior MFI managers to approximate this effect.

3. **Borrower Concentration and Shifting Loan Type and Size:** In order to mitigate rising delinquencies, MFIs would be expected to minimize exposure to loans, which are susceptible to food / fuel related impairment. An example would be to reduce underwriting consumer loans or lower amounts lent in favor of agricultural based lending which would be a net beneficiary of rising food prices.

Inflation

Inflation, defined as a rise in the general level of prices of goods and services over time, has different classes and consequences. In the long run inflation is generally believed to be a monetary phenomenon while in the short and medium term it is influenced by the relative elasticity of wages, prices and interest rates. Inflation's effects on lending institutions can be dramatic and has been responsible for the systematic collapse of entire lending industries throughout the emerging markets. High inflation devalues the underlying collateral underpinning loans thereby making these loans less secure. At the same time, inflation lowers the real interest rates earned by the financial institutions. Among MFIs the latter effect is the more salient since most of their loans are uncollateralized. Yet the inflation effect most detrimental to MFIs has been on the influence of rising food prices, and to a lesser extent fuel prices have had on borrower's ability to service their debt.

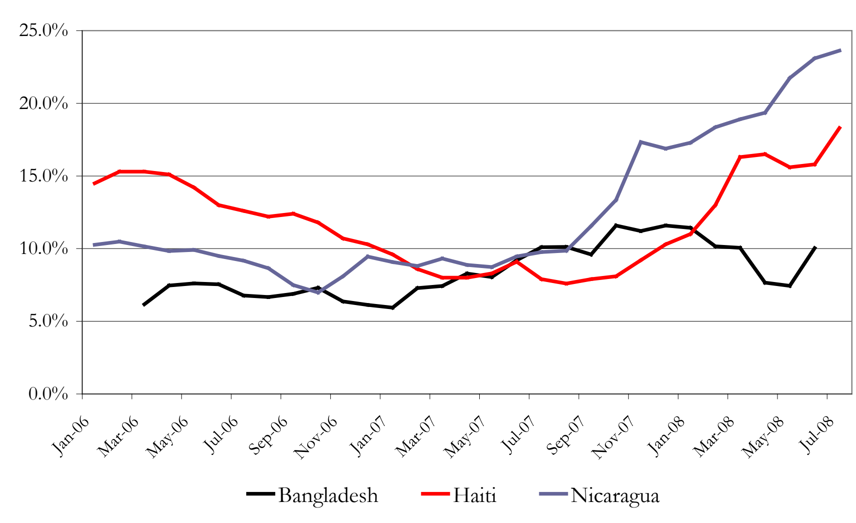
Inflation in recent years, driven by food and fuel prices or *cost push* has increased drastically. A recent World Bank report noted that food staple prices have increased by over 100% in nominal dollar terms since 2005[i]. Oil has also played an important role in the increase of general prices. Since 2001, the price of oil has risen from USD 20 a barrel to over USD 140 in July 08, almost 35% above the earlier record high in real terms in 1979, then the highest level over the last century.

From 2007 to 2008, the price of oil grew almost 133%, which has dramatically pushed up prices for many other goods and services.

Although the increase in price is an issue of worldwide implications, the consequences are amplified for low and middle-income economies.

By early 2008, median inflation in developing countries had risen from 3.9% to 7.7%, with a third of these countries experiencing inflation above 10%[ii]. In the past, individuals in these countries spent about 35% and 10% of their income on food and fuel related expenses respectively; but because of higher prices, food expenses have increased to 50% of income, thus significantly reducing a borrower's ability to cover other needs. This phenomenon generates a social problem that not only increases poverty, but also widens the poor-rich gap as shown by a higher Gini coefficient[iii]. Recent studies show that more than 42% of the world's population face double digit inflation, and around 105m people could become poor because of in-

Inflation Rate for Target Countries



creased food prices[iv]. Even as global activity slows, consumer prices are rising at an annual pace of nearly 5.5%, compared with less than 4% in recent years. Headline inflation spiked in late 2007 and early 2008, reflecting the impact of rising energy and food prices.

Conceptual Framework

Inflation affects both MFI institutions and its borrowers. MFI borrowers typically belong to the low income earning class of most developing countries. These borrowers, in general, make wages in local currency and in an inflationary environment; salaries are adjusted at a slower pace. This effectively increases the poverty of borrowers, reducing their ability to save and minimizing their ability or willingness to service existing financial obligations.

An MFI loan typically is issued to assist a borrower to produce and generate income; however, inflation changes the nature of loans. In an inflationary environment, a borrower's basic expenses increase. This change in expense allocation minimizes the productivity and impact of MFI loans. The reallocation of a borrower's budget reduces their income available to meet financial obligations, including MFI loans thereby leading to delinquencies and defaults. Furthermore micro-enterprises operate on tight budgets, making them very sensitive to changes in prices of basic goods. Drastic changes in food and fuel prices decrease their productivity and competitiveness.

From the MFI perspective, increasing food and fuel prices have resulted in increased operational costs, higher credit and default risk from their corresponding borrowers, and problems associated to devaluation effects. Most MFI loans are fixed rate and not indexed to inflation. In an inflationary environment, MFIs will receive payment at lower real interest rates, which implies a lower return on invested capital over time. More immediately, of course, inflation increases delinquencies and loan losses across the MFI's portfolio.

As such, MFIs earn less operating income, increase loss reserves and write off more bad loans. These factors when combined with the general macroeconomic uncertainty associated with higher inflation reduce the ability of MFIs to find additional sources of financing.

The systemic nature of inflation compounds the risk associated with the recent phenomenon of over-indebtedness fueled by multiple MFIs lending to the same borrower (a situation made possible by the dearth of credit reporting in emerging market jurisdictions). If all MFIs curtail lending to certain high risk segments it is theoretically possible to ignite a contagion as borrowers who take bigger and bigger loans simply to service previous debt are no longer able to refinance.

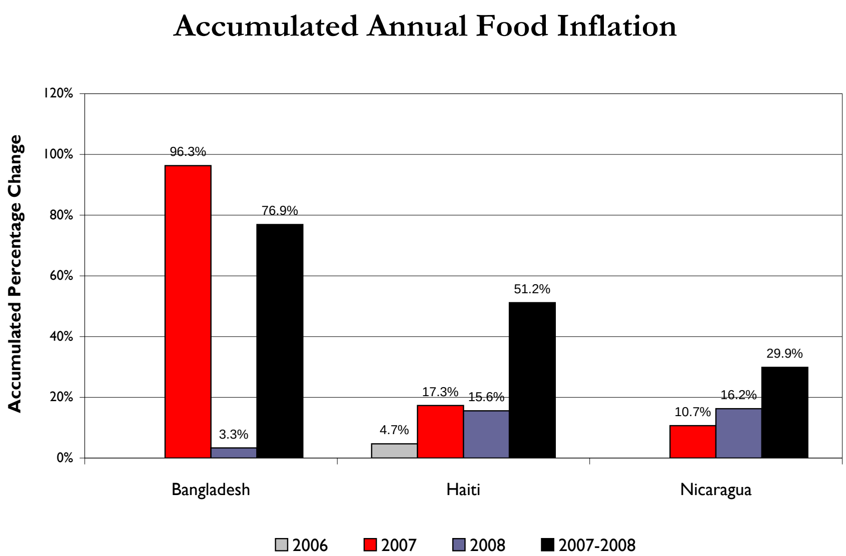
Overview of Findings

This report will highlight how food and fuel inflation has affected MFIs and its borrowers. One of the senior managers who participated in the study best summarized the situation: "In many ways, it is a perfect storm for MFIs. Not only are our clients faced with rapidly increasing costs, which ultimately limit their ability to service our loans, but our borrowers must simultaneously cope with a slowing economic environment, which limits their incomes." Two visible findings from this study are that costs have increased in all the countries at a far greater rate than borrower income and this has in turn increased loan delinquencies.

The majority of the MFIs are unprepared for the full effects that inflation will have on the institution. Portfolios have continued to grow, albeit at a significantly lower rate than in prior years; however, borrowers are finding it more difficult to meet loan payments and delinquencies are increasing. In response, some MFIs have reallocated portfolios to target borrowers that are more profitable. Whether conditions will continue to deteriorate in the future remains uncertain and senior management lacks the tools with which to quantify further deterioration to their balance sheet. Many of the numbers supporting the study were reported by the MFIs and have not been audited.

Headline Inflation Rising

Inflation has steadily increased in Bangladesh, Haiti, and Nicaragua from 2006-2008. For example, Haiti's June 2008 inflation rate increased from 15.8% to 18.3% in July 2008. Latest findings show that June/July 2008 inflation rates are among the highest any of the countries have registered in the last three years. Inflation has more than doubled in Nicaragua, and in-



creased by more than a third in Bangladesh.

Inflation[v] has been largely driven by increasing food prices. Some of the countries have had very large increases in food prices. For example, 2007 food inflation in Bangladesh increased by 96.3%. Interviews with MFI borrowers in the target countries confirm that consumers are spending increasingly more on staple food products (e.g. rice, beans and corn) from 2007-2008—borrowers noted that prices have often increased by almost 50.0%. Additionally, food price increases have shown no sign of abatement for the future.

The price of fuel has also contributed to increased inflation[vi]. Nicaragua has been especially affected by this ongoing phenomenon, where the price of fuel has increased by 81.5% from 2007 to 2008. Interviews with MFI borrowers in the target countries confirm the price for common fuels (ie. Propane, gasoline and wood) have increased from 2007-2008, in many cases rising by more than 50.0%.

MFIs Survey Results

MFIs are beginning to feel the impact of increased prices both on an institutional and borrower level. For the majority of the countries, portfolio growth has remained positive, but growth rates have fallen from previous highs. MFIs in Bangladesh, Haiti, and Nicaragua have recorded average monthly portfolio growth rates of 9.0%, 12.0%, and 9.0% from 2006 to 2008.

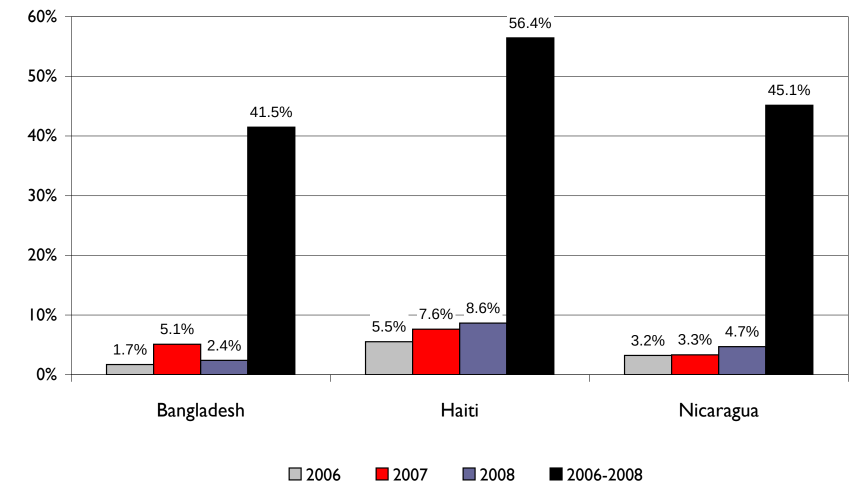
However, worrying trends begin to emerge in the light of PAR 30. PAR 30, a risk indicator, has increased substantially from 2006 to 2008. As a total, Haiti's PAR 30 increased by 56.4% to 8.7% during the period. This indicates that the amount of the portfolio in delinquency has increased greatly.

Interviews with senior managers of the MFIs indicate that one of the main reasons for these delinquencies has been the increase in prices—specifically for food, fuel and raw goods. Senior managers also indicated there has been a small increase in the number of restructurings due to inflation.

Although all of the MFIs are aware of the problem of food and fuel inflation, the majority of institutions have not conducted any studies to understand the problem or initiated any programs to assist borrowers. Only one MFI, Fonkoze of Haiti, has taken proactive steps to assist borrowers.

In response to the effects of rising prices on borrowers, the MFIs have begun changing lending habits. For example, MFIs now allocate a greater proportion of the portfolio to agricultural related loans and a lesser portion to loans for consumption. The reason behind this is that as food prices increase, agricultural producers hypothetically increase revenues, and consumption loans become more of a risk as they are not attached to an income earning business. Furthermore, some of the MFIs were considering adapting their existing products to match the reduced payment capacity of borrowers, which essentially amounts to a wholesale restructuring of their portfolios analogous to how mortgage lenders in the US are dealing with the subprime crises. The MFIs have had a minor increase in both its operating and financing expenses, which are challenging the efficiency of the organizations. Senior managers also indicated that natural disasters, security issues and government intervention in the industry often compounded the problem of rising prices, particularly in Nicaragua.

Change in Portfolio at Risk 30 days



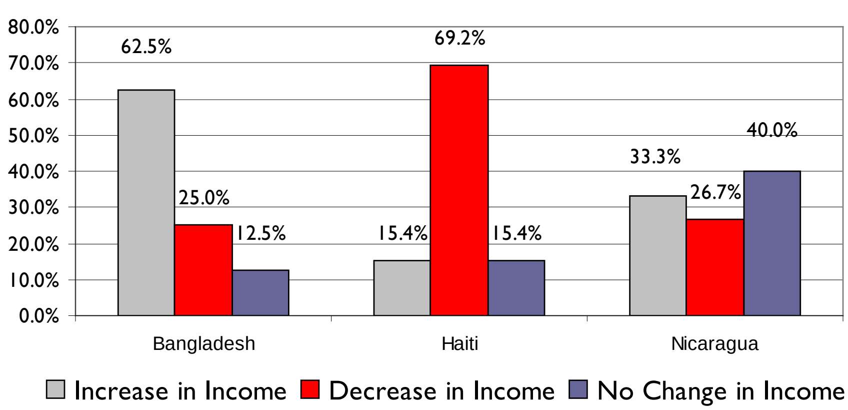
There was a sense of urgency among many of the senior managers, who indicated the full affect of price inflation had yet to be registered. Many MFIs lack understanding of the problem, and were unsure of the proper course to take in order to help borrowers. All the senior managers requested additional support from governments, international organizations and institutional investors.

Discussions with loan officers also yield insights into the lives of borrowers. Increasingly, borrowers are either liquidating savings or taking on additional debt in response to high food and fuel prices. They are delaying or forgoing medical care, or pulling children out of schools. Malnutrition is also becoming a more urgent issue amongst some borrowers, particularly in Haiti.

Borrowers Survey Results

The income for borrowers has changed depending upon the country[vii]. Borrowers in Haiti have experienced the greatest decline in income, while borrowers in Nicaragua have seen their incomes remain the same. Only in Bangladesh did borrowers experience an overall increase in income.

Change in Income 2007-2008



According to borrowers, the average price of food has increased by 81.0% from 2007-2008. The severity of the issue is more pronounced in Haiti, where the actual food purchasing order is changing—raising concerns about malnutrition. In this case, meat, a more expensive item, took a lesser priority in the purchase order compared to cheaper alternative products (corn/wheat). The average price of fuel products has increased by 42.4% and the price of other expenses (e.g. electricity and health) has increased by 30.5%.

Savings participation varies by country. For example, Nicaragua had the lowest savings participation at 20.0%, while Bangladesh and Haiti had rates of 100.0% and 85.0% respectively. There is a particular concern for Nicaraguan bor rowers, who have very low saving participation but also have a high indebtedness level. In response to rising prices, borrowers are using cheaper raw products. For example, food producers are using lesser quality and less expensive ingredients. Additionally, borrowers are also diversifying their sources of income by selling food products.

Conclusions

The risk of inflation has the potential of unraveling years of progress that MFIs have made in developing countries. The information gathered here indicates that both MFIs and borrowers are being squeezed by increasing food and fuel prices. By focusing on the general effects of inflation on three separate countries, in three different global regions, incorporating 6.7 million borrowers and representing

USD 787 million in portfolio size, this report confirms that inflation is negatively affecting MFIs and borrowers; however its full extent and repercussions is yet to be fully understood.

MFIs are experiencing a dramatic increase in delinquencies which beyond the current deleterious effects on operating income and balance sheets may lead to mass restructurings and write offs if left unchecked. Yet despite these dangers, the continued growth in MFI portfolios has had the effect of allowing certain MFIs to "grow" out of their problems and not fully focus on portfolio risk (thereby compounding these same risks). Yet even MFIs inclined to focus on risk have few crude tools to accurately do so.

MFI borrowers are confronted with the hard reality that prices for basic expenses have increased drastically, but incomes have largely remained the same. Food and fuel inflation is at the root cause of increased borrower delinquency but unfortunately this phenomenon is much more than a potential financial crisis.

The sustainability of MFIs will depend on the implementation of strategies that hedge against adverse domestic economic changes and macro global trends. In order to deal with economic shocks which go beyond inflation, MFIs need to preemptively adopt robust risk management techniques, tools and protocols in order to maintain constant liquidity, healthy balance sheets and thereby always be able to serve their impoverished clientele who rely on them much more than a typical financial institutions' clients.

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[i] "Global Development Finance: The Role of International Banking" World Bank, 2008, pp. 19

[ii] Morgan Stanley Report, June 2008

[iii] Gini Coefficient: a measure of statistical dispersion most prominently used as a measure of inequality of income distribution or inequality of wealth distribution. It is defined as a ratio with values between 0 and 1: A low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution.

[iv] G8 Hokkaido-Toyako Summit "Double Jeopardy: Responding to High Food and Fuel Prices," World Bank, 2 July 2008, pp. 5

[v] Bangladesh: Data represents a basket of the five staple food products; http://www.tcb.gov.bd; Haiti: Central Bank data; http://www.brh.net/; Nicaragua: Data represents a basket of 53 products. It should be noted that the Nicaraguan central bank changed the way food inflation was tracked starting in September 2007; therefore data before the switch is incomparable; http://www.bcn.gob.ni/estadisticas/indicadores/2-13.htm;

[vi] Ibid