A STUDY ANALYZING THE EFFECTS OF FOOD AND FUEL INFLATION ON MICROFINANCE INSTITUTIONS AND BORROWERS

microREPORT #145

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ACRONYMS

MFI	Microfinance Institution
MFA	MF Analytics Ltd.
NGO	Nongovernmental Organization
PAR 30	Portfolio at Risk over 30 days
PAR 60	Portfolio at Risk over 60 days
ROSCA	Rotating Savings and Credit Association
USAID	United States Agency for International Development
USD	United States Dollar

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EXECUTIVE SUMMARY

Food and fuel inflation has a disproportionate effect on the world's poor, who are the focus of microfinance institution (MFI) activity. Increasing food and fuel prices, without comparable increases in wages, forces borrowers to allocate higher proportions of income to essential expenses and directly impacts their ability to service MFI loans. Consequently, the micro-business sector and its MFI creditors have faced a wide spectrum of challenges related to both the financial sustainability of companies and the general well-being of the exposed population. For MFIs, this phenomenon adds pressure to a portfolio already strained as a result of natural disasters and the ongoing credit crisis.

USAID commissioned MF Analytics (MFA) to investigate the effects of food and fuel inflation on MFIs and its borrowers in three distinct global regions: Bangladesh, Haiti and Nicaragua. Design, execution and reporting were completed within a period of one month. The study surveyed a total of 8 MFIs and interviewed 96 individuals including borrowers, loan officers and MFI senior management. The selected MFIs represent USD 787 million in gross loan portfolio and 6.7 million borrowers, with average loan sizes between USD 98 and USD 1,447.

In order to gauge the inflation effect on MFIs, MFA focused on the following proxies that best capture the expected effect on MFI clients: rates of delinquency, loan restructuring by MFIs, shifts in loan type and size and client borrowing pattern changes.

The data collected from this probative investigation revealed findings that cut across geographies, types of MFIs, types of loans, and borrower profiles. Below are some of the study's main observations.

- Senior managers expressed concern about the detrimental impact of food and fuel inflation on organizational growth and portfolio health. Some, however, have been more proactive than others in adapting by refocusing their efforts on different market segments and shifting to new ones, and taking measures to ease the burden for borrowers.
- Borrowers noted a rise in food and fuel prices across the board, while the change in income and profits showed great variability. More borrowers in Bangladesh and Haiti had savings compared to those in Nicaragua, and some in the former group tapped into these savings and also sold their assets for liquidity.
- Loan officers identified rising food and fuel costs as the top two reasons causing borrowers to default. They also noticed that borrowers were taking on more debt, pulling children out of school, and forgoing health care as responses to this phenomenon.

More research is needed in order to fully assess inflation scenarios and develop applicable tools to assist MFIs and borrowers. To better tackle challenges brought on by inflation in general, and food and fuel inflation in particular, this study recommends that MFIs invest in sophisticated portfolio analysis that can granularly identify risk, offer inflation-adjusted products, seek access to cheaper capital, and garner support from government, international, and development finance organizations. MFIs should also help its clients in the short-term by assisting with advance purchases, securing inventories, diversifying client business, and creating forums that allow clients to share experiences and brainstorm solutions. Food and fuel inflation have a disproportionate effect on MFI borrowers and pose a unique challenge for MFIs. Though no financial institution can ever fully protect itself from inflation, it is prudent to navigate inflationary environments by proactively managing assets and liabilities through a multi-pronged approach.

INTRODUCTION

USAID commissioned MF Analytics (MFA) to research and investigate the effects of food and fuel inflation on microfinance institutions (MFIs) and its borrowers in Bangladesh, Haiti and Nicaragua.

The study surveyed a total of 8 MFIs and interviews 96 individuals, including borrowers, loan officers and senior management, and was conducted from conception to design, execution, and reporting within a period of one month .

Given the sample size of the study and the allotted timeframe, the study is restricted to identifying implied causalities as suggested by responses from the various stakeholders (i.e. borrowers, loan officers and senior management) vis-a vis- inflation, MFIs, and their borrowers.

MFA drew on previously published research, government statistics, field interviews and its own analysis of loan portfolio data, as provided by the MFIs, in order to provide context to the background to the responses provided.

In order to best gauge the inflation effect on MFIs, MFA focused on the following proxies that best capture the expected effect on MFI clients:

- **Rates of Delinquency:** Because MFI borrowers spend a significantly large portion of their income on food and, to a lesser extent, fuel, the rate at which borrowers pay back their loans may be impaired.
- **Restructuring**: MFIs may be more incentivized to restructure loans versus writing them off, or taking possession of collateral.
- **Borrower Concentration and Shifting Loan Type and Size:** MFIs may focus on certain sectors of the economy to reduce exposure to inflation-related volatility and credit risk, and clients may also change borrowing patterns to cope.

The extent to which changes in delinquency rates, restructuring, and customer and product profile are attributed to food and fuel inflation will inform the corresponding extent of its impact on MFIs and their clients.

GLOBAL INFLATION

Inflation, defined as a rise in the general level of prices of goods and services over time, has different classes and consequences. Although there exists a theoretical debate on its causes, inflation is generally believed to be a monetary phenomenon that, in the short and medium term, is influenced by the relative elasticity of wages, prices and interest rates. There are three major classes of inflation: (1) demand-pull inflation, caused by an increase in expenditure; (2) cost-push inflation, caused by a reduction in available goods or services, in short a reduction in supply; and (3) built-in inflation, produced by the imbalance between prices and wages. Regardless of the causes or the type of inflation, the main implication is that prices increase over time eroding the value of money. This impairs the general well-being of the economy; decreasing competitiveness and increasing poverty.

Inflation has increased drastically in recent years, driven by food and fuel prices or *cost push*. A recent World Bank report noted that staple food prices have increased by over 100% in nominal dollar terms since 2005[1]. Higher inflation does appear to reflect overheating in several middle-income countries, as well as several smaller countries. At the regional level, inflation in the Middle East and North Africa has increased every year for the past three years, and

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

in South Asia for the past six years. Recent studies show that more than 42% of world's population faces double digit inflation, and around 105 million people could become poor because of increased food prices[2]. Even as global economic activity slows, consumer prices are rising at an annual pace of nearly 5.5%, compared with less than 4% in recent years. Much of this pressure is concentrated in emerging economies, where inflation has spiked to 7% after years of moderation.

A sharp increase in food and oil prices has rocketed global inflation. Grain prices have more than doubled from 2006. Causes for this trend include increases in energy and input prices, adverse weather conditions, increases for bio-fuel productions, and general increased demand. Macroeconomic fundamentals such as US dollar depreciation, and policy decisions related to taxation and export restrictions, have also exasperated the issue. The medium term forecast for food prices is expected to continue to rise as demand continues to outpace a restrictive short term supply.

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 2008, almost 35% above the earlier record high in 1979. From 2007 to 2008, the price of oil grew almost 133%, which has dramatically pushed up prices for many other goods and services.

IMPACT OF FOOD AND FUEL INFLATION ON THE POOR

The rising inflation pressure over the last two years has affected the way businesses perform and how individuals pursue financial endeavors. This effect is particularly significant for low and middle-income economies where financial stability is strongly linked to poverty reduction and food security.

Although the increase in price is an issue of worldwide implication, the consequences are amplified amidst the low and middle-income economies. Economies characterized by unemployment rates and poverty levels above 40% are particularly sensitive to small changes in the prices of staple food and other basic goods and services[3]. By early 2008, median inflation in developing countries had increased from 3.9% to 7.7%, with a third of these countries experiencing inflation above 10%.[4]

In the past, individuals in these countries spent about 35% and 10% of their income for food and fuel related expenses respectively. Because of high prices, food expenses have increased to 50% of income, thus significantly reducing a household's ability to cover other needs and expenses. Rising fuel prices impact poor families who rely on petroleum products for cooking, transportation and agriculture. Even if fuel does not constitute a significant percentage of a family's expense basket, the poor would be affected by the increased price of goods and services that utilize, rely on, or are derived from fuel products.

The poor tend to suffer more from the erosion of value of their assets than the well-off because they have fewer access to financial products and services that could protect their assets in an inflationary environment. In cases where governments provide food and fuel subsidies, inflation translates to budgetary pressures and constrains their ability to respond to the needs of its population.

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[2] G8 Hokkaido-Toyako Summit "Double Jeopardy: Responding to High Food and Fuel Prices," World Bank, 2 July 2008, pp. 5
[3] http://nextlogics.wordpress.com, "Macroeconomics, Inflation And Microfinance", July 16, 2008.
[4] Morgan Stanley report, June 2008

INFLATION AND MICROFINANCE

The risk of inflation has the potential of unraveling years of progress that MFIs have made in developing countries.

For MFI borrowers in particular, increasing food and fuel prices force them to allocate higher proportions of income for essential expenses. Since borrowers' incomes are limited and do not keep pace with rising prices, rising prices directly influence their ability to service MFI's loan requirements. Consequently, the micro-business sector and its MFI creditors have faced a spectrum of challenges related to the financial sustainability of MFIs and the general well-being of the exposed population.

In Bangladesh, an increasing number of MFI clients are not utilizing disbursed microloans to support planned microenterprises, but are using these loans to cover the rising cost of food.[5] In Pakistan, Kashf Foundationfound through its surveys that families spent 66% of the income on food, and their top three coping mechanisms were to eat less (78%), cut back other expenses (56%) and take a loan (42%).[6] In Mozambique and Ghana, Opportunity International reported that microfinance clients are "tapping into their savings accounts to buy food, make their loan repayments, and keep their businesses going," in the process, eating through the small safety nets they had built up.[7]

Inflation, however, is not always an unmitigated disaster for borrowers. In cases where currencies are not indexed, inflation erodes the value of the loan repayments. Some MFIs have sought to counter this by indexing their loans to the US dollar or some inflation index. As a result, the currency risk for the MFI has turned into credit risk for the borrower, such that inflation increases borrower default risk. Some borrowers who are in the agricultural sector have benefitted somewhat from the rising prices, though not to the full extent of the rise, because they tend to sell products through intermediaries.

The second order implications of rising food and fuel prices are manifold. David Apgar, BlueOrchard's risk manager, points out that that "twin crises of world food price inflation and the U.S. sub-prime mortgage meltdown are inciting anger in the developing world toward global capital markets," where subsidies diverting grain from food to ethanol production are seen by some as contributing significantly to the problem.[8] Most MFIs in the world are non-banking financial institutions (NBFIs) or similar bodies that cannot take deposits due to regulatory requirements. As a result, these MFIs have been shielded from the possibility of the capital base eroding due to deposit withdrawals, but there is still the apprehension that the interest of private equity investors may be dampened.

[5] The Financial Express, Bangladesh.
[6] Afzal, A. & Zafar, R. *When Macro Hits Micro*, The Microfinance Gateway
[7] Cheston, S. *Food Crisis Taking A Toll on Microfinance Clients*. ONE, June 06, 2008
[8] David Apgar. "Microfinance and the Global Food Crisis", *The Globalist*. May 01, 2008.

METHODOLOGY

This study gathered responses from:

- **MFI senior management.** Responses from senior management provided primary insight into the effect of food and fuel inflation on MFIs. Managers were asked if they had noticed a changed in delinquencies, and how much this change could be attributed to rising prices of food and fuel. They were also asked how they saw borrowers adapt, if the MFI had adopted any institutional measures, such as indexing loans to inflation, and if they had undertaken or were planning on undertaking any studies to explore the effect of inflation on their clients.
- **Borrowers.** Borrowers were first asked to note their observations on prices and consumption behavior regarding staple food and fuel items during the previous year, as well as other expenses over the same period. They were then asked if they had liquidated savings and other assets to deal with rising prices, if they had taken on further debt, and how they saw their overall income, expenses and profits change as a result of food and fuel inflation.
- **Loan officers.** Loan officers were asked how the profile of their portfolio and clients changed and if any of the change was related to inflation, responses of borrowers based on their sector of the economy, debt restructurings and delinquency brought on by rising prices, and other observations on borrower behavior.

MFA administered extensive surveys to the groups identified above, and collected portfolio data from MFIs. Given the sample size and the allotted timeframe of one month, the study restricted itself to identifying implied causalities as suggested by responses. The findings of this study should therefore be treated as being anecdotal in nature, and not statistically significant.

SAMPLING

Responses were collected from 96 individuals across 8 MFIs:

SURVEY SAMPLE				
Country	**MFIs**	**Senior Mgmt. Interviewed**	**Loan Officers Interviewed**	**Borrowers Interviewed**
Bangladesh	2	2	10	19
Haiti	3	3	9	26
Nicaragua	3	3	9	15
Total	**8**	**8**	**28**	**60**

A shortlist of MFIs was created based on a set of criteria, including a positive track record, significant outreach, and knowledgeable senior management. The surveyed subset was selected for field research primarily based on availability during the short window when MFA could field teams on the ground. Loan officers were chosen such that they have sufficient experience to engage in critical reflection regarding their borrowers and administered portfolio. Borrowers were chosen such that they could speak knowledgeably about the effect of food and fuel inflation on their households. A mix of first time borrowers and repeat borrowers were interviewed. Loan officers provide a valuable third-person point of view and observation about happenings at the grassroots level.

PARTICIPATING MFIS					
Country	**MFI**	**Portfolio (USD)**	**Borrowers**	**PAR 30 (%)**	**As of**
Nicaragua	Prestanic	18,701,979	12,921	4.4	Jun-08
	FAMA	38,047,527	42,918	4.8	Jun-08
	FDL	53,263,569	71,992	1.6	Dec-07
Haiti	SOGESOL	11,611,185	11,776	7.6	Jun-08
	Fonkoze	8,286,168	20,916	13.8	Jun-08
	ACME	9,696,289	20,112	5.6	Jun-08
Bangladesh	BRAC	631,032,626	6,397,635	2.3	Jun-08
	Shakti	16,610,216	145,888	1.3	Dec-07

DATA COLLECTION

MFA fielded teams in Bangladesh, Haiti and Nicaragua to administer the surveys. Each team, consisting of experienced researchers and assisted by individuals with local expertise, spent between five and ten days conducting field research.

Given the lack of a control group, and unavailability of historical behavioral data for borrowers and loan officers, respondents were asked to estimate the corresponding variables for the near past, typically a year, to obtain the baseline approximation.

All surveys were anonymous, to encourage respondents to share their opinions with candor.

CASE STUDY I: NICARAGUA

OVERVIEW

Microfinance in Nicaragua has been an important part of the country's social and economic development. Nicaragua has the largest coverage in microcredit loans among Latin American countries, weighted by population, with around 390,000 domestic clients. Nicaragua also has the highest percentage of loans for agriculture and livestock.

Since 2001, Nicaragua has performed well economically. The economy has continued to grow moderately (an annual average of 3.2%). However, Nicaragua is still the second-poorest nation in the western hemisphere. The main sectors of the national economy are agriculture and manufacturing which account for 33.0% of the GDP.

PARTICIPATING MFIS

The three MFIs who participated in the study serve more than 127,000 clients, and have a total portfolio of over US$ 110 million.

PARTICIPATING MFIS				
MFI	**Portfolio (USD)**	**Borrowers**	**PAR 30 (%)**	**As of**
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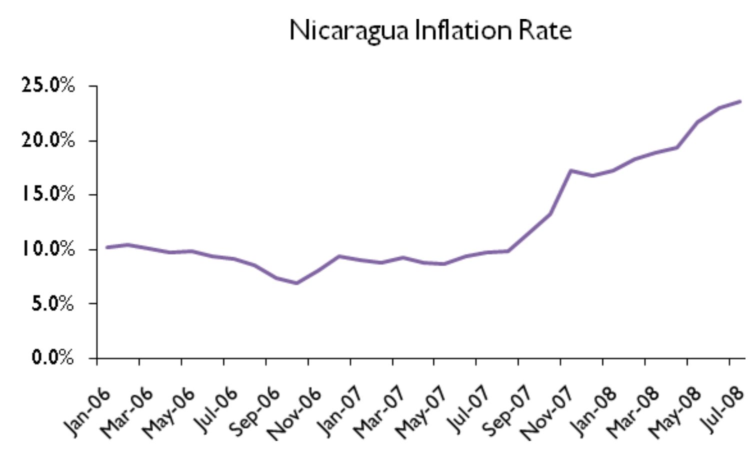
FDL, FAMA and PRESTANIC enjoyed portfolio growth rates of 22%, 30% and 47% respectively during the year ending December 07. The corresponding growth rates for the year ending December 06 are 29%, 14% and 58% respectively.[9]

A total of 3 senior managers (1 from each MFI), 9 loan officers and 15 borrowers were surveyed.

INFLATION[10]

Nicaragua has experienced a marked growth in inflation from 10.3% in January 2006 to 23.6% in July 2008.

A "Poor Person's Price Index" or PPPI for countries in Central America captures a rough estimate of the poverty impact of global food

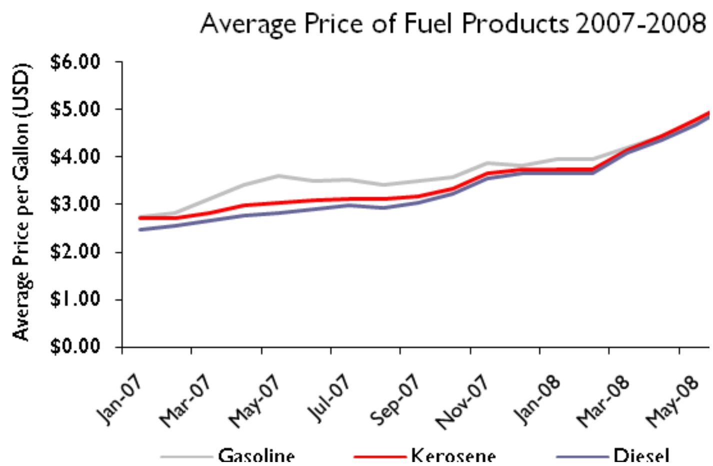


[9] Data supplied by participating MFIs, MixMarket
[10] Information sourced from Nicaragua Central Bank

commodity prices in 2007. Under this index, the estimated decline in Nicaragua's purchasing power was 2.7% with a headcount poverty rate of 46.2%, one of the highest in Latin America.

FOOD AND FUEL INFLATION[11]

According to Nicaraguan Central Bank data, the average cost of food increased 16.2% betweenJanuary and June 2008.[12] The average price of fuel products has similarly increased from 2007-2008. Fuel products have not had a drastic spike in price but have increased nonetheless at rates of 74.0% (propane), 82.0% (gasoline), 89.0% (kerosene) and 106.0% (diesel). The annualized change for all fuel products was 53.3%.



SENIOR MANAGEMENT RESPONSES

None of the MFIs have conducted any studies or are planning any studies to investigate how inflation will affect their organizations. Furthermore, none of the MFIs offer any programs that specifically fight rising food and fuel prices. Senior managers noted that in response to rising prices, the MFIs have begun reallocating more loans to specific sectors (i.e. more agricultural and less consumer) and adjusting loans to meet the payment capacity of borrowers. The main impact of inflation has been the redistribution of loan products, an increase in the number of delinquencies and an increase in individual loans.

None of the MFIs index loans for inflation, though the Cordoba steadily depreciates to the US dollar. In terms of sources of liabilities, the MFIs have a mixture of loans from the government, local/international bank, international development agencies and international financial institutions. The average US dollar interest rate for these liabilities is 8.4% per year. The majority of the loans are fixed.

One senior manager opined that borrowers will reduce their consumption of basic products, diversify sources of income and demand higher loan amounts in response to inflation. Additionally, increased migration of the population to Costa Rica was seen as a possibility.

As responses from the microfinance industry, senior managers would like to see more investigation into the problem, an increase in the financial margin for MFI loans, and for loans to be indexed to inflation. The government could also provide grants to the agricultural industry in order to spur domestic consumption. Furthermore, the government could provide incentives for individuals to begin saving, analyze the subsidy and tax system, and provide protection to the poorest people of the country.

[11] Information sourced from Nicaragua Central Bank

[12] Information before September 07 is not compatible as the Central Bank changed the way it tracked inflation data.

BORROWER RESPONSES

PROFILE

The 15 borrowers who participated in the study had loan sizes ranging from US$ 359-3,589, with an average of US$ 1,590. 40% of the respondents were female. The term of the loans ranged from six to twenty-four months and loan payments were all required on a monthly basis. 80% of respondents indicated that the purpose of the loan was for business, while 20% indicated that the purpose was for agriculture. All of the loans were for individuals and all of the borrowers were repeat MFI customers.

In terms of multiple sources of income, 40.0% of the respondents noted that they receive more than one source of income for their family. In terms of the breakdown of the types of businesses that participated, 40.0% were related to manufacturing, 33.0% service, 20.0% agricultural and 7.0% industrial.

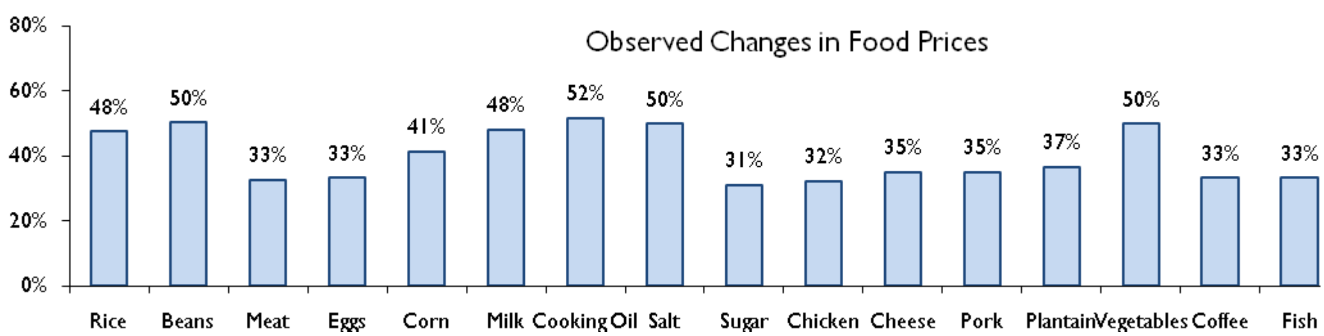
From 2007 to 2008, 40.0% of the respondents indicated that their income remained the same. 33.0% had an increase in income while 27.0% had a decrease in income. The average increase for those who had a positive change in income was 41.0%, while those who had a decrease in income had an average change of 20.0%. The frequency by which income is received remained the same for the period.

Within the study group, 13.3% of the respondents indicated that they received income from a remittance. However, none of the borrowers received income from rental sources. 40.0% of the borrowers produced food for the family, of which 66.0% produced enough food to sell and the rest produced only enough for domestic consumption. The majority of those that produced their own food were in the agricultural sector.

FOOD, FUEL AND OTHER EXPENSES

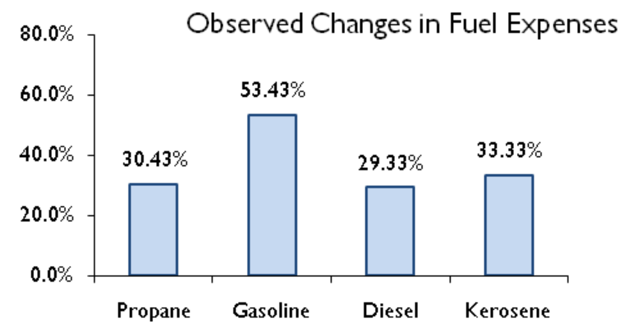
Borrowers were asked to detail their food, fuel and other expenses, including top items, frequency, amount and price.

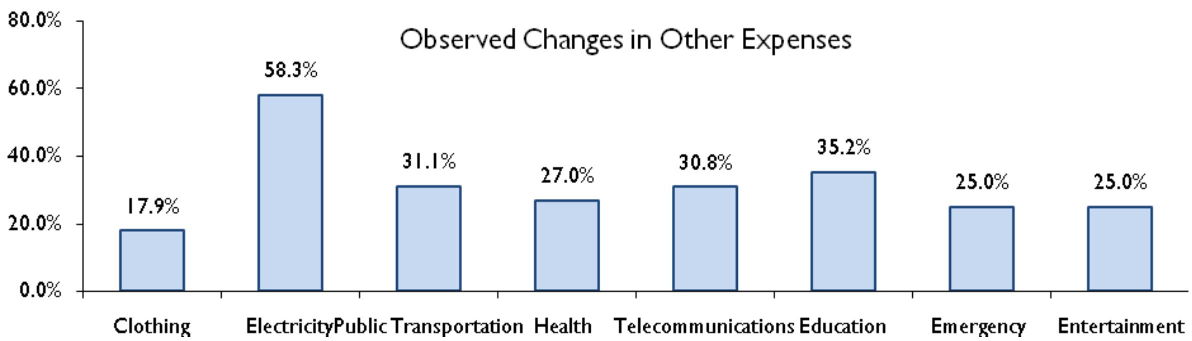
From 2007-2008, the purchasing preference, frequency of purchases, and quantity purchased remained constant. The top five food purchases for borrowers were rice, beans, cooking oil, sugar and meat. As indicated, food prices paid for by borrowers for all products increased from 2007-2008. The observed change in food prices varied depending up the food product. The increases ranged from 31.0% (Sugar) to 51.6% (Cooking Oil). The average increase for all the food products was 40.1%.



From 2007-2008, the purchasing preference, frequency of purchases and quantity purchased for fuel items remained constant. Borrowers indicated that their top fuel purchases in order of most purchased were propane, gasoline, diesel and kerosene. During the past year, the observed change in the price of these products increased. The average increase for all products was 36.6%, with a high of 53.43% for gasoline, and a low of 29.33% for diesel.

The study's respondents indicated no change in the frequency of purchases for other items. Prices for other expenses have had increases ranging from 17.0% (clothing) to 58.3% (electricity). The average increase amongst the expenses was 31.3%.





SAVINGS AND OTHER ASSETS

Borrowers were asked if they sold off any assets over the previous year, and reasons for doing so, in order to determine if sales were related to inflationary pressures. Only one respondent noted that he sold his automobile because of increased fuel prices.

20.0% of the respondents have savings, which were held either in cash or in a commercial bank. Reasons to save include provisioning for future energy needs, as well as business and emergency expenses.

DEBT

Borrowers were asked what other debt they had, if they had restructured these debts, and if so, what were the reasons.

In addition to the loan from this MFI, 2 respondents noted that they had debt owed to another MFI, and 2 more noted debt to commercial banks. Most of the debt was for business expenses; one individual purchased cattle.

However, none of the respondents restructured any of their debt within the last year.

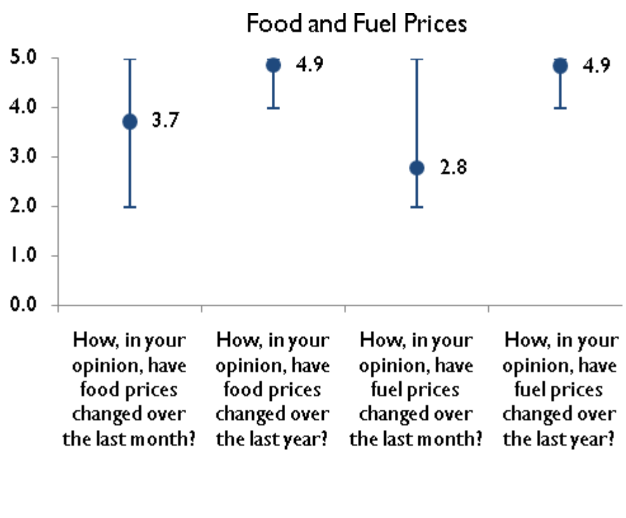
QUALITATIVE RESPONSES AND OPINIONS

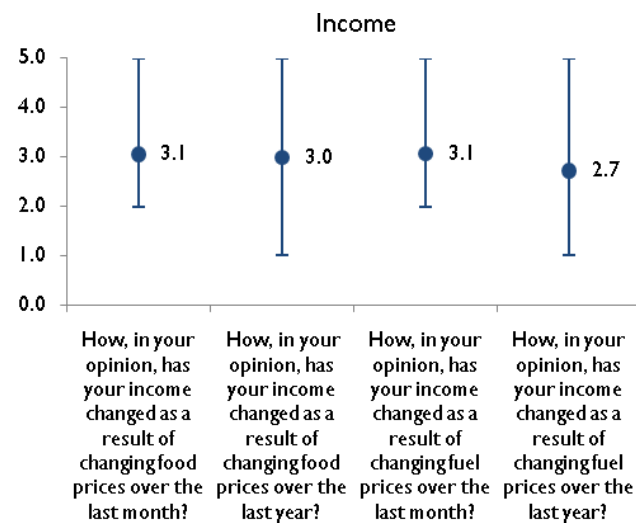
Borrowers were asked to note changes in food and fuel prices, and their income, expenses and profits. The results are summarized below. Responses are measured on a scale of 1 to 5, where:

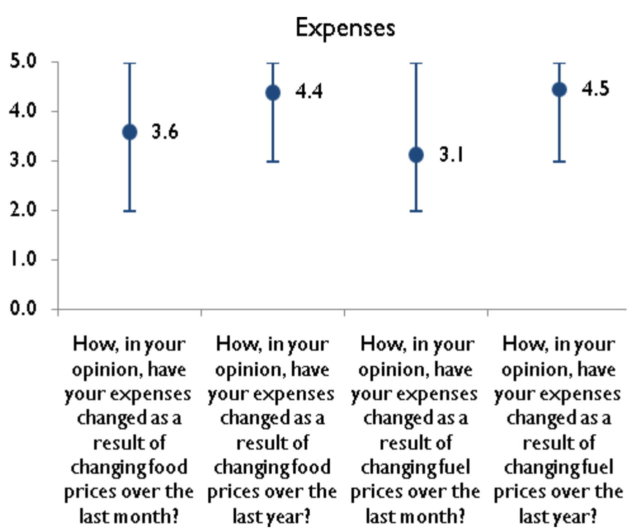
- 5 – large increase
- 4 – minor increase
- 3 – remained the same
- 2 – minor decrease
- 1 – large decrease

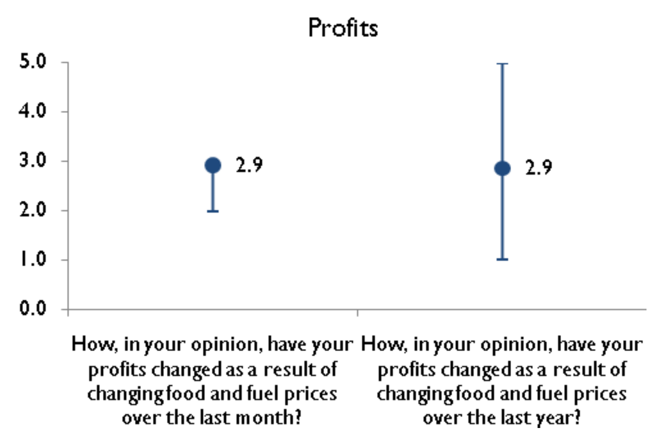
Subsequent 5-point scales used in this study will refer to this nomenclature.

Every graph shows the mean response, as well as the maximum and minimum, for the 15 respondents.









Food and fuel prices, and expenses, seem to have increased much, on average, over the course of the previous year; the effect over the previous month is less pronounced. The change in income and profits is more varied, with as much increase as there was decrease, over both the short and long term.

GOVERNMENT PROGRAMS

20.0% of the respondents indicated that they were aware of government programs to alleviate food and fuel inflation pressure. The government provides a food hand out program which borrowers expressed mixed feelings. None of the borrowers were aware of any MFI programs to assist with price pressure.

LOAN OFFICER RESPONSES

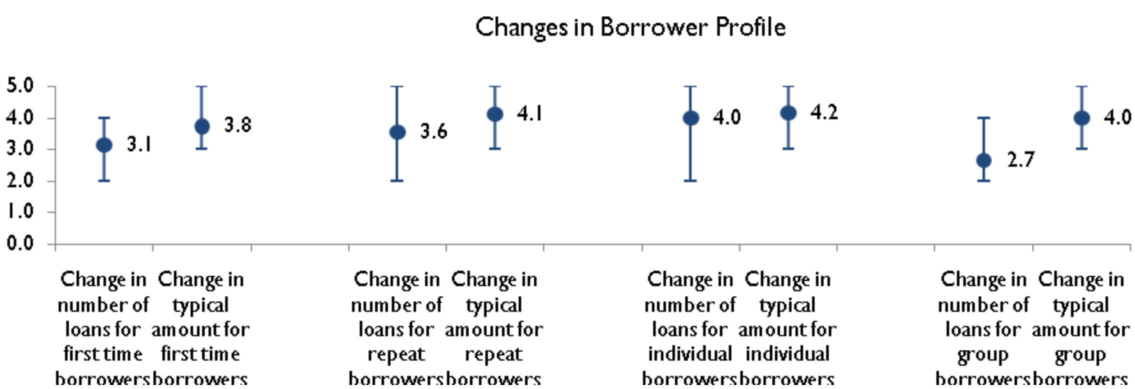
PROFILE

The 9 loan officers who participated in the questionnaire had between 333 and 880 borrowers, with loans ranging between US$ 150 to US$ 1,000. The interest rates on these loans ranged from 1.5% to 5.0% per month depending upon the type of the loan. Additionally, loans were issued to both individuals and groups, but the majority was issued to individuals.

PORTFOLIO AND BORROWER PROFILE

The loan officers administer loans for agricultural, business, consumer, debt repayment and housing purposes, and business loans represent the majority of loans issued. The sampled loan officers' borrowers work in agriculture, commerce, industry, manufacturing, services and the government.

8 out of 9 loan officers noted that there has been an increase in the number of borrowers, and 6 out of 9 noted an increase in the size of disbursed loans. A handful of these changes are attributed to increases in food and fuel costs.



As before, 5 denotes a large increase, while 1 denotes a large decrease.

Loan officers noted that, on average, there have been increases in both the number and amount of loans for first time and repeat borrowers, and those who engage in individual and group lending. There were a few exceptions in the case of number of loans for group borrowers, where that number has actually decreased, on average. Respondents pointed out that this is more a result of borrowers preferring individual borrowing than anything else.

Only 1 respondent out of 9 attributed an increase in the number and amount of loans as being related to inflation. Others noted increase in operational costs, increase in the price of raw materials, paying off debt, home improvement, and expansion of business as reasons for the general trend of more and larger loans.

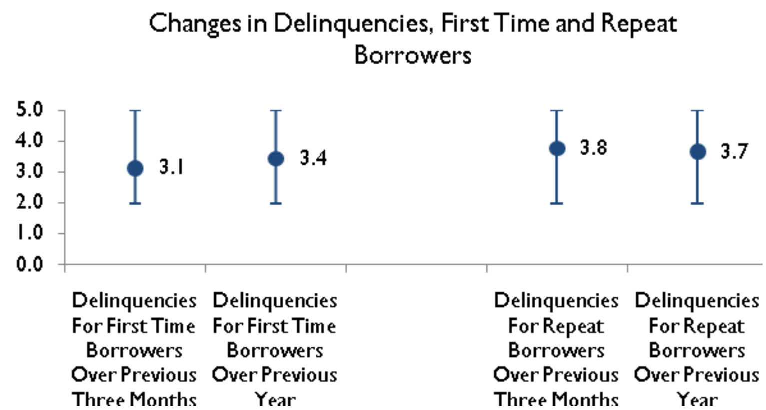
DELINQUENCIES AND RESTRUCTURING

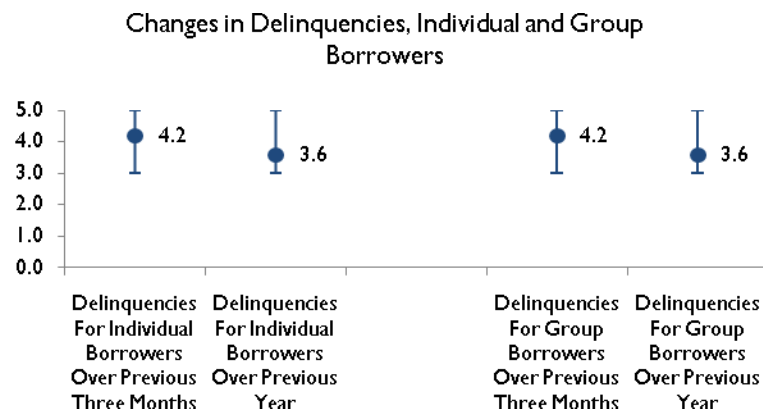
Loan officers noted that on average, delinquencies went up slightly across the board, for first time and repeat borrowers, and those borrowing as individuals or in groups.

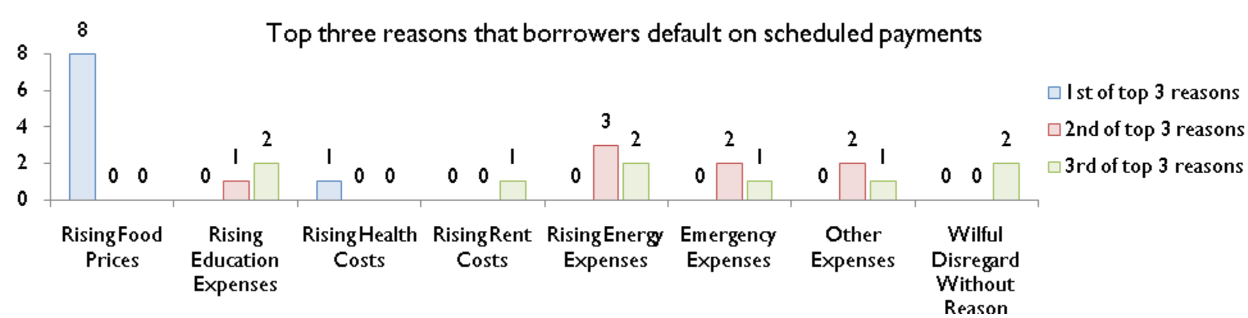
Not much differentiation is made based on the horizon across which delinquencies are considered – only in the case of both individual and group borrowers is there a slightly higher incidence of observed delinquency when a period of three months is considered, as opposed to a year.

Increase in the price of oil and food is listed as a reason for an increase in delinquencies, as are: higher costs, low sales, and over-indebtedness. One loan officer mentioned migration to Costa Rica as a reason for increased delinquency in his portfolio.

When asked to list the top three reasons that borrowers default on their scheduled payments, rising food prices was by far the largest reason, featuring 8 times in the top 3. Rising energy expenses was the second, with 5 mentions in the top 3. These were two of eight possible options.







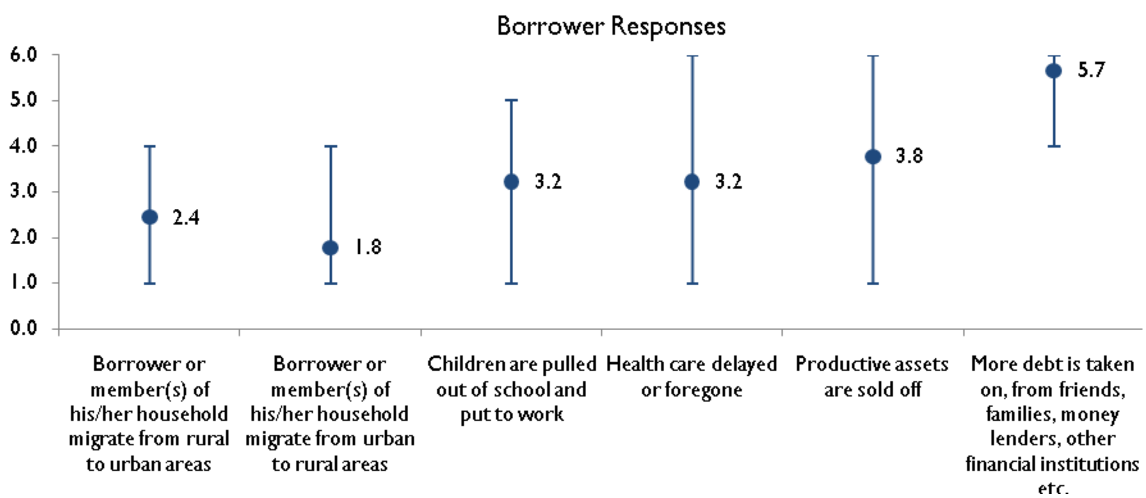
Rising food and fuel prices are clearly seen by loan officers are being responsible for borrowers defaulting on their payments.

Two of the MFIs allow loan restructuring and the main reasons for the restructuring were over indebtedness, decrease in payment capacity, and Hurricane Felix.[13]

When asked what proportion of borrowers "reallocate funds from their MFI loans to other uses related to rising food and fuel prices", 1 loan officer said "often", 4 said "frequently", 3 said "occasionally" and 1 said "never".

OBSERVED BORROWER RESPONSES

Respondents were asked to identify the types of responses they have seen borrowers take to addressrising food and fuel prices. Their responses were scaled on a 6-point scale, where 6 is "always", 5 is "often", 4 is "frequently", 3 is "occasionally", 2 is "rarely" and 1 is "never":



While taking on greater debt is not unexpected, the incidence is quite high. And, the incidence of observations of health care being delayed and children being pulled out of school and put to work is disconcerting.

[13] When a restructuring occurs, the term, the individual payment amount or the original loan amount is changed.

CASE STUDY II: HAITI

OVERVIEW

MFIs in Haiti offer a full range of financial and non-financial services to the poor, often focusing on rural areas and women. A larger problem for the MFIs and borrowers has been security issues brought about by the lack of government control. Additionally, recent natural disasters have wreaked havoc on borrowers causing destruction of personal property and crops.

PARTICIPATING MFIS

The three MFIs who participated in the study serve more than 52,000 clients, and have a total portfolio of over US$ 29 million.

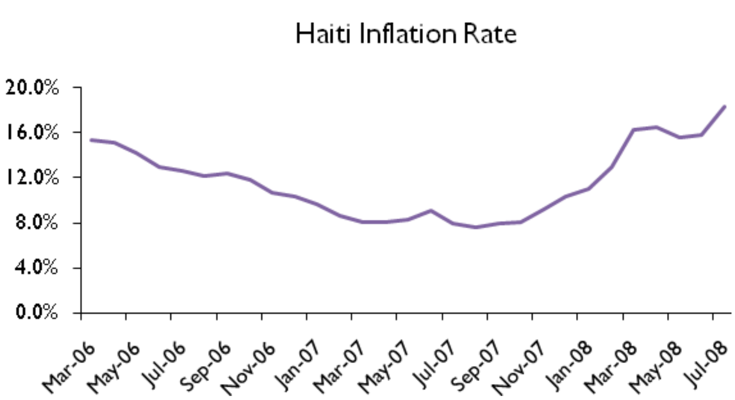
PARTICIPATING MFIS				
MFI	**Portfolio (USD)**	**Borrowers**	**PAR 30 (%)**	**As of**
Sogesol	11,611,185	11,776	7.6	Jun-08
Fonkoze	8,286,168	20,916	13.8	Jun-08
ACME	9,696,289	20,112	5.6	Jun-08

Sogesol, Fonkoze and ACME managed portfolio growth rates of 2%, -4% and 37% respectively during the year ending June 2008. The corresponding growth rates for the year ending June 2007 are 70%, 30% and 41% respectively.[14]

3 senior managers (1 from each MFI), 9 loan officers, and 26 borrowers were surveyed.

INFLATION[15]

Haiti has many of the hallmarks of a low-income developing country. About 80.0% of Haitians live in poverty, and about half are illiterate. Two-thirds of all Haitians work in the agricultural sector, which consists mainly of small-scale subsistence farming. Haiti saw a modest GDP growth rate of 3.5% in 2007 after a period of stagnation and contraction. Unemployment and underemployment run high. Only Somalia and Afghanistan have a



[14] Data supplied by participating MFIs
[15] Data sourced from Haiti Central Bank

higher per capita daily deficit in calorie intake than Haiti does.

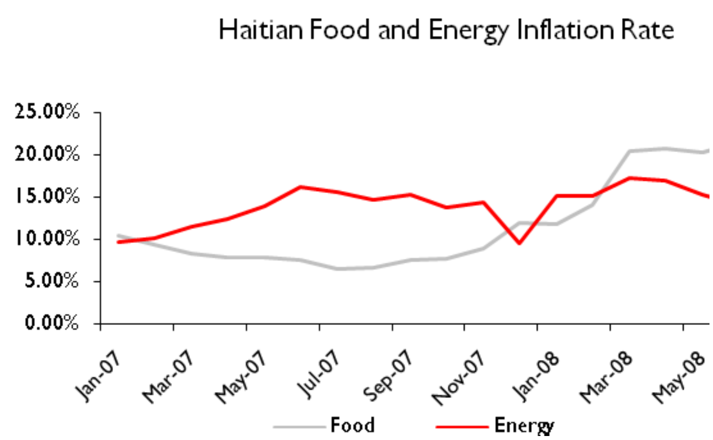
Haiti imports three-quarters of the 400,000 metric tons of rice its population consumes, as a result rocketing food prices in the international market have hit the nation very hard. High food and fuel prices and a depreciating currency have resulted in sharply rising inflation reaching 16.5% in April 2008. Today, more than 70.0% of Haitians live on less than USD 2 a day, and their diet staple rice has doubled in price in little more than a year. In April 2008, protests organized in response to high food prices turned violent leading to the deaths of at least six people and causing the fall of the government. Floods, soil erosion, misguided trade policy further made Haiti's predicament worse. Gains made in the recent past stand the risk of being undone. The World Food Program aid in the impoverished countryside over the last few years had halved malnutrition levels in the most vulnerable places, but that success is being erased by the current crisis.

According to Haitian Central Bank data, after recovering from high inflation rates in 2006, inflation has increased dramatically in 2008. In January 2007, the general inflation rate was 9.6%; however, the inflation rate increased to 15.8% as of June 2008. Furthermore, the general inflation rate soared to 18.3% in July 2008.

FOOD AND FUEL INFLATION

Increasing food and fuel prices have had a large impact on Haitian MFIs and borrowers. Inflation has increased from 10.3% in December 2007 to 15.8% in June 2008. A composite survey of five staple food products also indicated that food inflation was 4.7% in 2006; however, this rate increased to 15.6% in 2008.[16] When the rise in price of rice, corn and beans from 2006 to 2008 is considered, it amounts a 106.7% increase.

According Haitian Central Bank data, the food, beverage and tobacco inflation rate for June 2008 was 21.5%, while the inflation rate for energy, clothing and health was 14.1%, 11.9% and 12.4%, respectively.



SENIOR MANAGEMENT RESPONSES

Senior managers at the surveyed MFIs indicated that decreased sales, high prices and poor management caused the increase in PAR numbers. Two of the MFIs allowed restructuring, during which the MFIs adjust the term of the loan for borrowers. Senior managers indicated there was a slight increase in the number of restructurings caused by increasing food, fuel and health expenses. Two of the MFIs have conducted studies to understand how inflation will affect the MFI; however, only one of the MFIs, Fonkoze, has taken steps and initiated programs to prevent damage from inflation.

[16] Data represents a MFA basket of five staple food products

None of the MFIs index loans to inflation. In terms of sources of liabilities, the MFIs have a mixture of loans from domestic/international banks, international development agencies, and socially responsible investors. The majority of the loans have fixed interest rates. International liabilities include both dollar- and euro-denominated loans.

The senior managers indicated that the situation for borrowers has become increasingly desperate. All the managers highlighted that the increasingly tense political situation has created security fears amongst borrowers. Protests in April 2008 over rising food prices are an example of the problem that threatens both the MFI and borrowers. The protests led to riots and destruction of private property that increased delinquency rates among borrowers. Furthermore, in response to a slowdown in economic activity, borrowers have begun diversifying economic activity, where food sales have been initiated to supplement regular income.

Senior managers also highlighted natural disasters (hurricanes) as a cause of much of the economic tailspin. Many borrowers, who produced their own food, had their complete harvest wiped out because of recent hurricanes and contributing to an increase in food prices.

The call for help in the fight against inflation varied depending upon the MFI. MFIs whose customers were on the lower end of the economic scale were vocal in their need for institutional support; however, MFIs, which targeted higher economic strata customers, were less urgent in their requests.

BORROWER RESPONSES

PROFILE

The 26 borrowers who participated in the study had loan sizes ranging from US$ 77-7,069, with an average of US$ 1,430. 61.5% of the respondents were female. The term of the loans ranged from six to eight months and loan payments were all required on a monthly basis. All of the respondents indicated that the purpose of the loan was for business. All of the loans were for individuals and 23.0% of the borrowers were first time borrowers while the remaining were repeat MFI customers.

57.6% of the respondents noted that they receive more than one source of income. In terms of the breakdown of the types of businesses that participated: 80.7% were commercial, 11.5% were service and 7.6% were manufacturing. 70.0% of the respondents had a decrease in income, 15.0% had an increase in income while 15.0% had no change in income. The average increase for those who had a positive change in income was 16.8%, while those who had a decrease in income had an average change of 43.0%. The frequency by which income is received remained the same for the period.

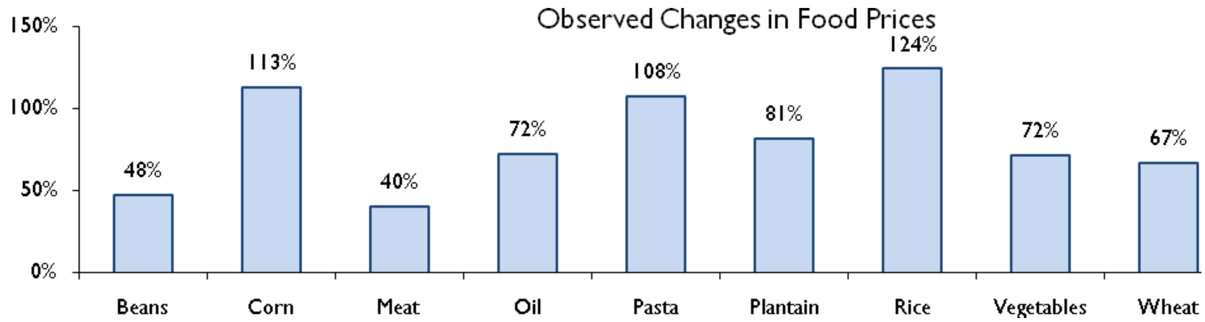
Within the study group, 19.2% of the respondents indicated that they received income from a remittance. Additionally, 19.2% of the borrowers received income from rental sources. 38.4% of the borrowers produce food for the family, and all produce enough food to sell.

FOOD, FUEL AND OTHER EXPENSES

Borrowers were asked to detail their food, fuel and other expenses, including top items, frequency, amount and price.

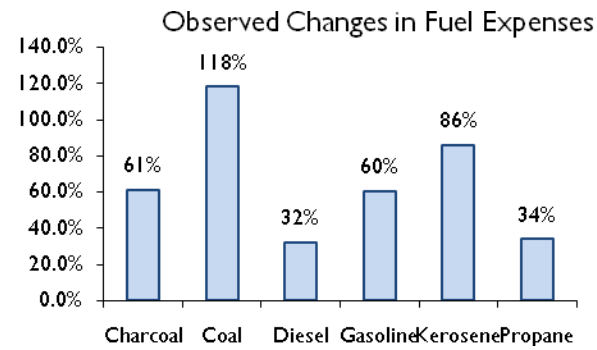
The top five food purchases for Haitian borrowers were rice, corn, meat, beans and plantains. Food prices for the staple food purchases all increased from January 2006 to August 2008. The change in food prices varied depending upon the food product. The increases ranged from 16.67% for red beans, 150.0% for corn and 153.0% for imported rice. The average increase for all three of the food products was 106.7%.

From 2007-2008, 38.4% of the respondents changed the purchasing preference of food items. The changes were all related to the purchasing preference of meat compared to another food group. In all cases, meat, a more expensive item, took a lesser priority in the purchase order compared to cheaper alternative products (e.g. vegetables/wheat). In these cases, meat typically disappeared from food purchases from 2007-2008. Observed changes ranged from 40% (Meat) to 124% (Rice).

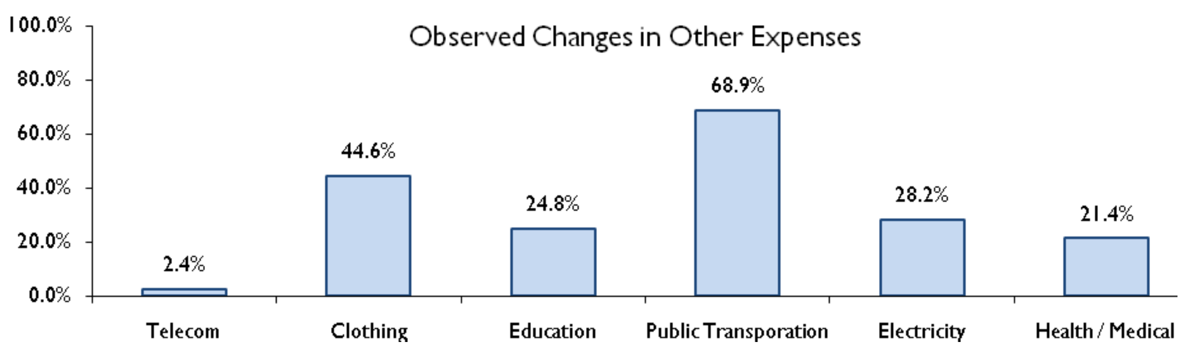


From 2007-2008, the purchasing preference for fuel products from 2007 to 2008 changed for 3.8% of the respondents. Borrowers indicated that their top fuel purchases in order of most purchased were propane, coal, gasoline, kerosene and diesel.

During the past year, the observed change in the price of these products increased. The average increase for all products was 55.3%, with the greatest increase for coal, at 118%, and the smallest for diesel, at 32%.



The study's respondents indicated no change in the frequency of purchases for other items. Prices for other expenses have had increases ranging from 2.4% (Telecommunications) to 68.9% (Public Transportation). The average increase amongst the expenses was 31.7%, with the greatest increase for public transportation, at 68.9%, and the least for telecommunication, at 2.4%.



SAVINGS AND OTHER ASSETS

Borrowers were asked if they sold off any assets over the previous year, and reasons for doing so, in order to determine if sales were related to inflationary pressures. The 26 respondents noted 50 incidences of asset acquisitions, and 12 instances of sales. Of the sales, 3 noted the reason as general higher costs of living, 1 tied it directly to rising food prices, and 2 attributed it to a mixture of needing to meet business expenses and to pay for more costly food and fuel.

Interestingly, 11 of the 26 individuals purchased a cell phone during the past year. This could very well be tied to the negligible increase of telecommunication costs, as noted in the previous section.

There is a high incidence of savings amongst the respondents – 85% save across commercial banks (69%), MFIs (12%) and cooperatives (4%). Only 2 respondents cited provisioning for food as the reason to save, and 1 respondent did so for fuel expenses. The predominant reason to save was for emergencies (44%), followed by business needs (20%).

DEBT

Borrowers were asked what other debt they had, if they had restructured any of them, and if yes, the reason(s) for doing so.

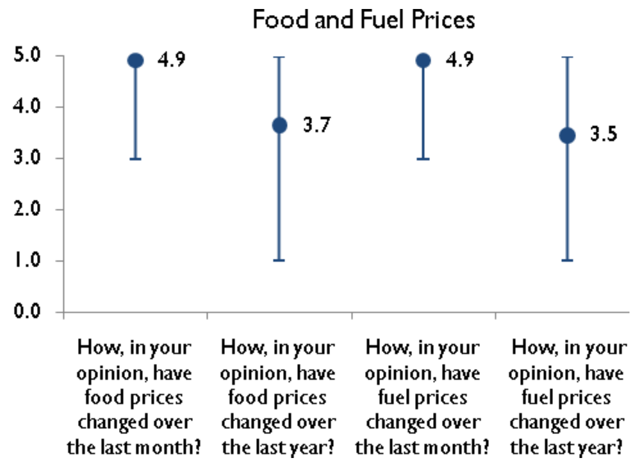
8 of the respondents have restructured their debt in some form or another, changing the duration, interest rate, frequency or payment amount of a loan. The higher cost of living was given as the predominant reason to seek such restructuring.

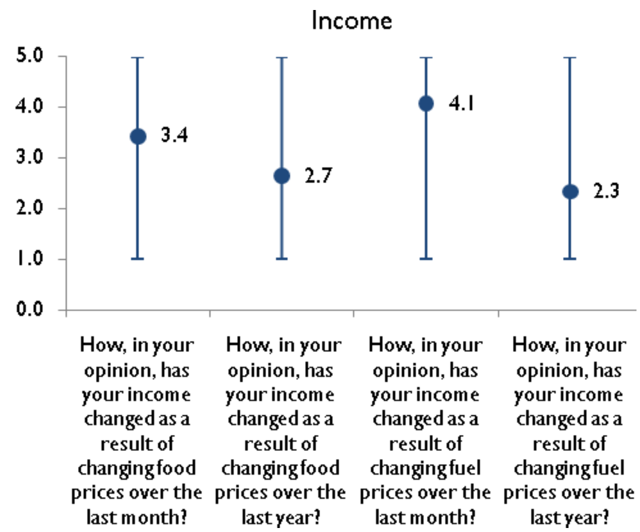
QUALITATIVE RESPONSES AND OPINIONS

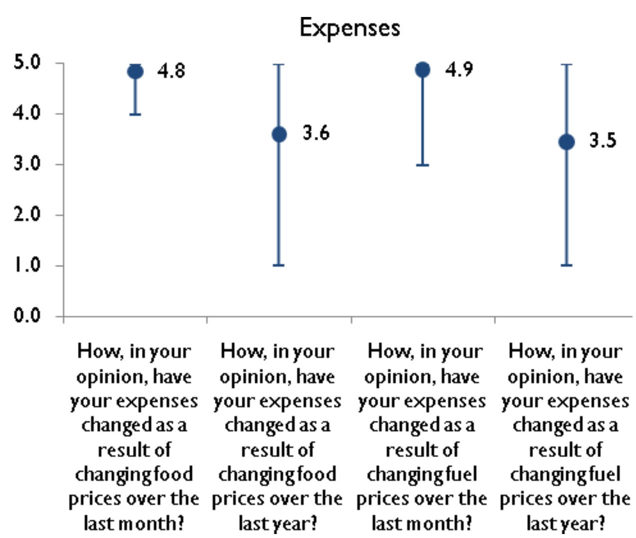
Borrowers were asked to note changes in food and fuel prices, and their income, expenses and profits. The results are summarized below. Responses are measured on a scale of 1 to 5, using the same nomenclature as noted before:

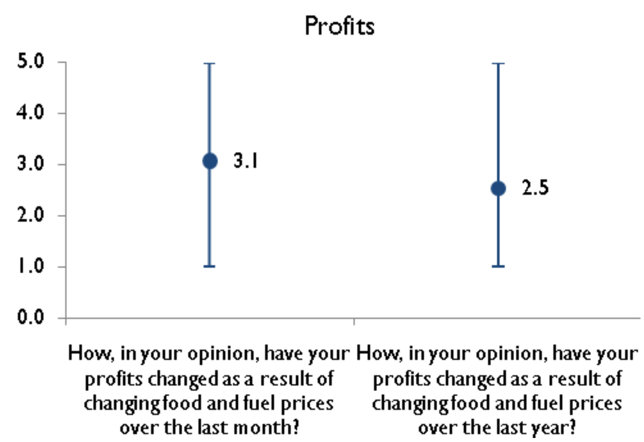
- 5 – large increase
- 4 – minor increase
- 3 – remained the same
- 2 – minor decrease
- 1 – large decrease

Every graph shows the mean response, as well as the maximum and minimum, for the 15 respondents.









On average, food and fuel prices, and expenses seem to have increased significantly over the course of the previous month; the increase over the previous year is less drastic.

Both income and profits are marked by great variability, spanning the entire range from "large increase" to "large decrease". Borrowers reported that their income over the previous month has, on average, increased slightly, whileit has, on average, decreased slightly, over the course of the year.

GOVERNMENT PROGRAMS

11.5% of the respondents indicated that they were aware of government programs to alleviate food and fuel inflation pressure. The government provides a food hand out and school-based feeding programs, which borrowers believe have a positive impact. 7.6% of the borrowers were aware of MFI programs to assist with price pressure.

LOAN OFFICER RESPONSES

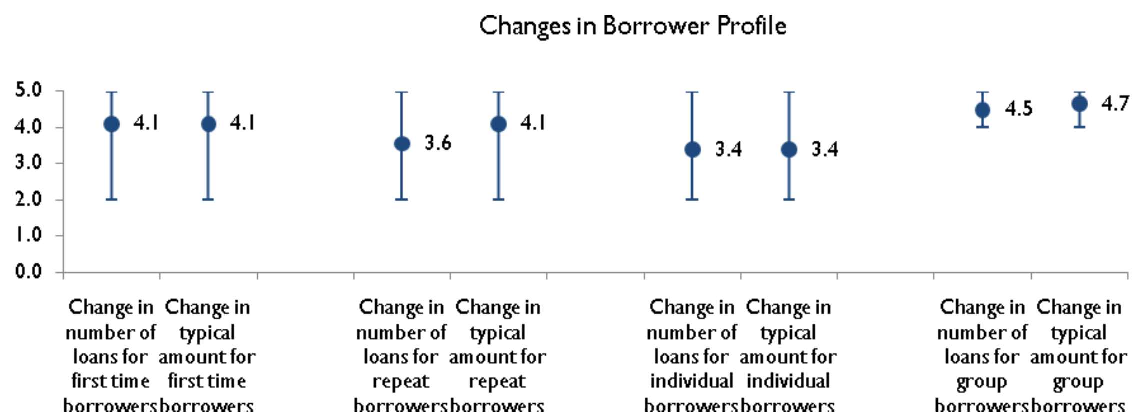
PROFILE

The 9 loan officers who participated in the questionnaire had between 120 and 274 borrowers, with an average loan size of USD 643. The interest rates on these loans ranged from 1.0% to 5.0% per month depending upon the type of the loan. Additionally, loans were issued to both individuals and groups, but the majority were issued to individuals.

PORTFOLIO AND BORROWER PROFILE

The loan officers administer loans primarily for commercial use; production, service and housing loans are some of the other reasons mentioned once. Borrowers of the surveyed loan officers worked in commerce, service and production.

6 out of 9 loan officers noted that there has been an increase in the number of borrowers while 2 noticed a decrease. 8 out of 9 noted an increase in the size of disbursed loans. A handful of these changes are attributed to increases in food and fuel costs. About half of them attributed these increases to rising costs.



As before, 5 denotes a large increase, while 1 denotes a large decrease.

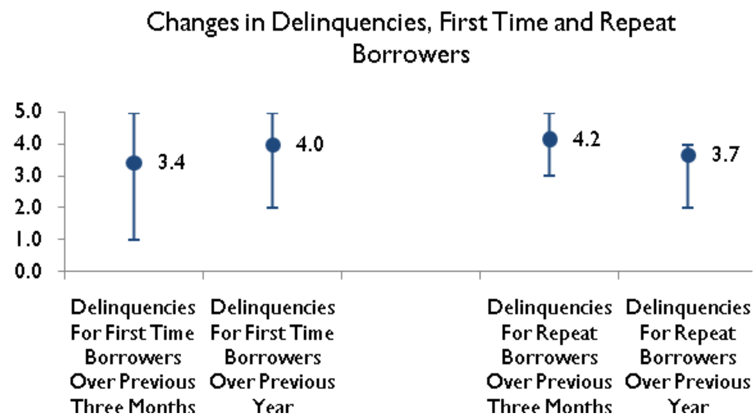
Loan officers therefore note that, on average, there have been increases in both the number and amount of loans for first time and repeat borrowers, and those who engage in individual and group lending, though the change is much more spread out for individual borrowers, compared to group borrowers.

In terms of the focus of this study, 2 respondents out of 9 attributed these changes as being related to an inflationary economy in general. Others noted commerce (both increasing and decreasing), and a new MFI product called "rapid cash" as reasons for the general trend of more and larger loans.

Rising prices was not noted as a reason by those who saw numbers and amounts decrease, the worsening of the security situation was.

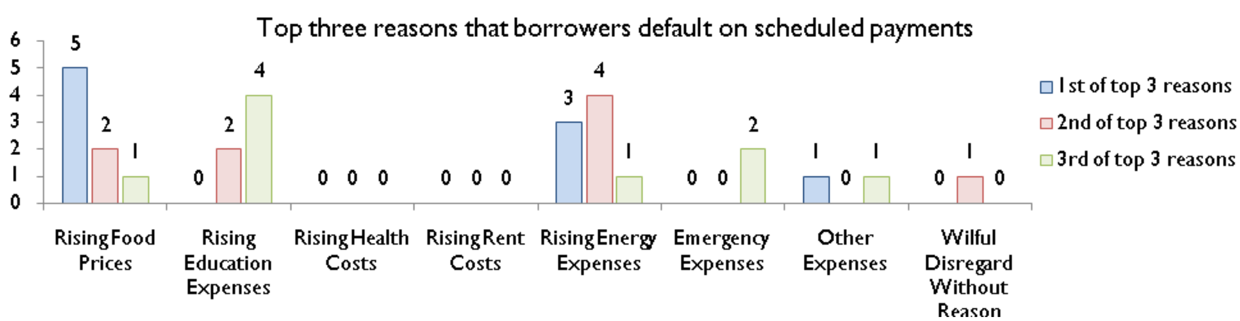
DELINQUENCIES AND RESTRUCTURING

Loan officers noted that on average, delinquencies went up across the board, for first time and repeat borrowers, and those borrowing as individuals or in groups. [17]



3 of the respondents noted rising food and fuel expenses as a reason behind these higher delinquencies. Other reasons included reduction in income, indebtedness, and economic woes in general.

When asked to list the top three reasons that borrowers default on their scheduled payments, rising food prices tied with rising energy expenses were identified most often, featuring 8 times in the top 3 each:



Rising food and fuel prices are clearly seen by loan officers are being responsible for borrowers defaulting on their payments.

Mixed responses were obtained from loan officers in terms of restructuring. Officers from the same MFI responded both in the affirmative and negative when asked if their MFI allowed restructuring for all three MFIs. Those who answered in the affirmative noted that the restructuring involved changing the payment amount and the payment frequency, but not the interest rate on the loan.

When asked what proportion of borrowers "reallocate funds from their MFI loans to other uses related to rising food and fuel prices", 2 loan officers said "often", 1 each said "frequently" and "occasionally", 4 said "rarely" and 1 said "never".

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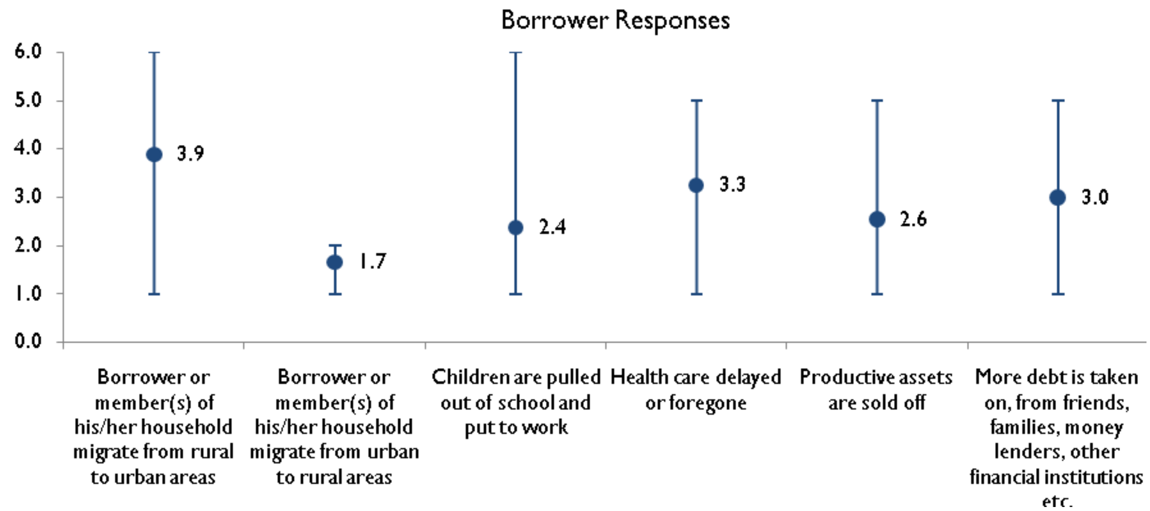
[17] (The responses for the latter category are not plotted because of the paucity of responses.)

OBSERVED BORROWER RESPONSES

Respondents were asked on what responses they have seen borrowers take to address rising food and fuel prices. Their responses were scaled on a 6-point scale, where 6 is "always", 5 is "often", 4 is "frequently", 3 is "occasionally", 2 is "rarely" and 1 is "never":



Loan officers, therefore, noticed borrowers or members of his/her household migrating from rural to urban areas with the highest incidence, when compared to other responses to rising food and fuel prices.

CASE STUDY III: BANGLADESH

OVERVIEW

Microfinance has been integral to the process of socio-economic development in Bangladesh. It is home to microfinance giants like Grameen Bank, BRAC and ASA, as well as countless others who operate at a smaller scale. The recent spate of increasing food and fuel prices has exacerbated a situation made already dire by natural disasters.

PARTICIPATING MFIS

The two MFIs who participated in the study serve more than 6.5 million clients, and have a total portfolio of over US$ 647 million.

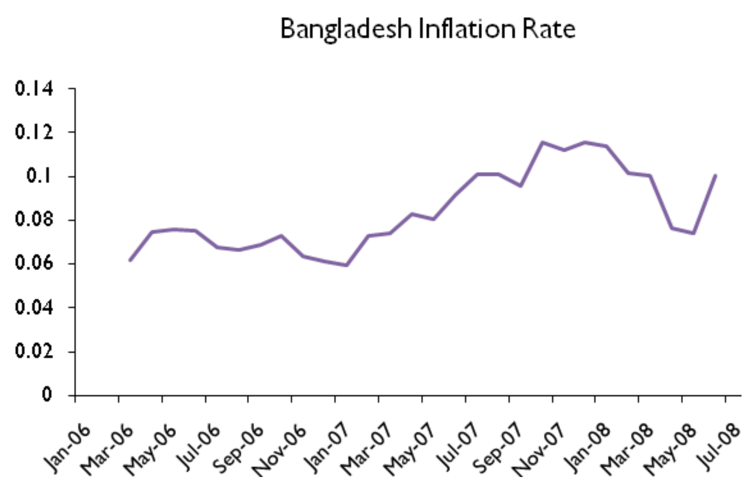
PARTICIPATING MFIS				
MFI	**Portfolio (USD)**	**Borrowers**	**PAR 30 (%)**	**As of**
BRAC	631,032,626	6,397,635	2.3	Jun-08
Shakti Foundation for Disadvantaged Women (Shakti)	16,610,216	145,888	1.3	Dec-07

BRAC enjoyed robust portfolio growth rates of 53% and 35% during the years ending June 2007 and June 2008 respectively. The portfolio growth rates for Shakti for the corresponding periods were 8% and 12%.[18]

2 senior managers (1 from each MFI), 10 loan officers and 19 borrowers were surveyed.

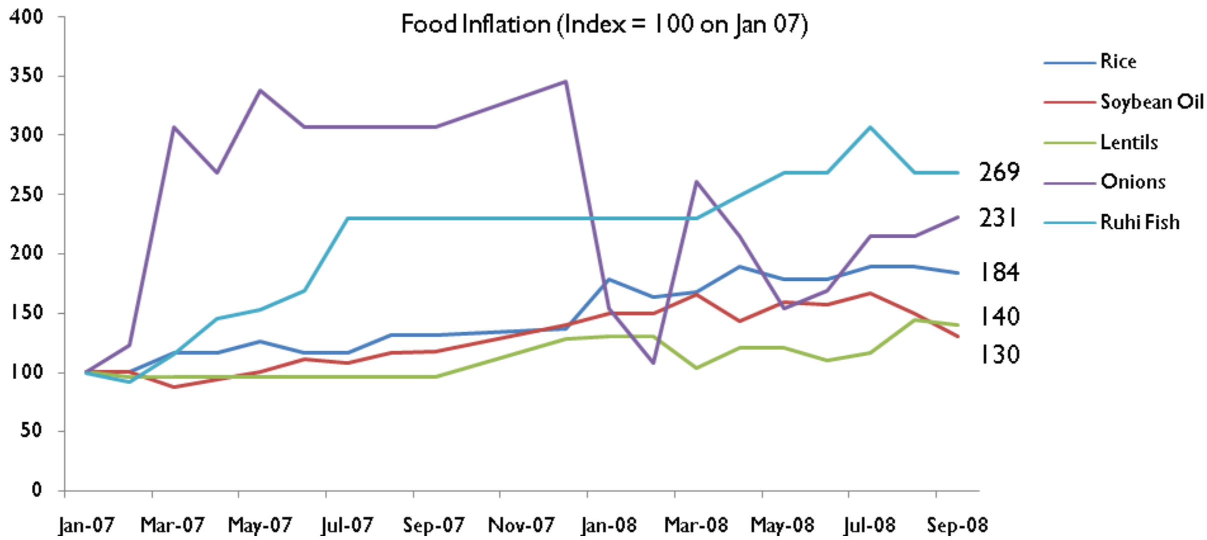
INFLATION

Bangladesh's economy is based primarily on manufacturing and agriculture. These segments of the economy account for 33.0% of GDP. Bangladesh's general inflation has increased from 6.1% in 2006 to 11.6% in 2007, and was at 10.0% as of June 08 (see graph).



[18] Data supplied by participating MFIs, MixMarket

FOOD AND FUEL INFLATION



Rice, lentils and vegetables are the primary staple foods of consumers in Bangladesh. The price of rice has almost doubled since January 2007, according to this graph derived from official government statistics. However, in actuality commodity prices in the open market are even higher than these official figures, as often demonstrated by the long lines and rapid selling out of government open market sales measures.

Furthermore, both domestic and non-domestic pressures on general food prices over the last three years, combined with two floods and a devastating cyclone in 2007, have systematically increased the price of food, transforming consumption habits and deepening social and economic problems for over 60 million people who spend more than 40% of their income on rice.

Prices of petroleum products are set through state-owned entities. They were increased for petrol from Tk. 56 per liter in 2006 to Tk. 65 per liter in 2007, and again to Tk. 87 per liter in 2008, marking increases of 16% and 34% respectively. Though this resulted in the hiking of transportation fares, the state subsidized part of the cost such that prices did not skyrocket as they did in the international market.

SENIOR MANAGEMENT RESPONSES

Senior managers noted that operational and administrative costs have increased for the MFI because trips to the field now are more expensive. The MFIs are especially concerned about self-sustainability and net worth, as the inflation issue becomes more severe. Additionally, as costs increase, borrowers are taking out larger loans. The fear among senior managers is that delinquencies could further increase if businesses are poorly managed. One senior manager acknowledged that rising food prices have had a beneficial effect on some of their customers who are in the agricultural sector.

None of the MFIs provide programs to assist borrowers to tackle rising food and fuel prices. However, senior managers often see borrowers reallocating funds from their MFI loans to other uses related to rising food and fuel prices.

The study MFIs are considering adapting some of their existing products to allow borrowers to better cope with rising food and fuel prices. Both institutions are considering refocusing lending policies towards agriculture related industries and investing in agricultural products, which are less affected by inflationary issues compared to business/commercial loans. Additionally, the MFIs have discontinued fees for certain programs.

Senior managers added that there has been a small increase in the number of restructurings because of inflationary pressures. When a restructuring happens, either the interest rate or individual payment amount is changed.

None of the MFIs index the interest rate for loans to inflation. In terms of liabilities, the MFI has a mixture of government-backed and domestic/international bank loans. The average interest rate for the loans is 11.3% per month. Half the loans are fixed and the other half are floating. Senior managers would like to see a subsidy program from the government to lessen the effects of inflation.

BORROWER RESPONSES

PROFILE

The 19 borrowers who participated in the study had loan sizes ranging from US$ 72-727. The median loan amount was US$ 145 and the average amount was US$ 195. 95.0% of the respondents were female. The term of the loans was twelve months and loan payments were all required on a weekly basis. 63.0% of respondents indicated that the purpose of the loan was for business, while 37.0% indicated that the purpose was for agriculture. 36.8% of the loans were for groups and 63.2% for individuals. 36.0% of the respondents were first time borrowers and the remainder was repeat borrowers.

In terms of multiple sources of income, 53% of the respondents noted that they receive more than one source of income for their family. In terms of the breakdown of the types of businesses that participated, 32% were related to agriculture, another 32% to industrial, 16% in service, and the rest in manufacturing and others.

From 2007 to 2008, 12.5% of the respondents indicated that their income remained the same. 62.5% had an increase in income while 25.0% had a decrease in income. The average increase for those who had a positive change in income was 34.2%, while those who had a decrease in income had an average change of 28.9%. The frequency by which income received remained the same for the period.

It should be noted that these income changes are based on nominal income values.

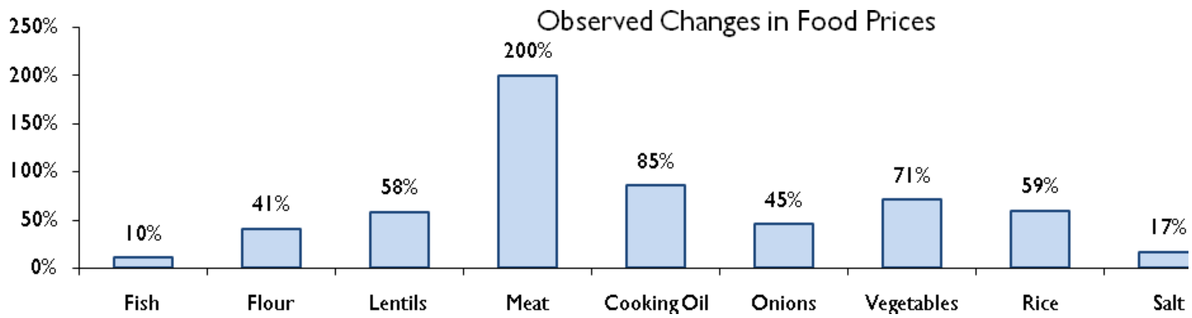
Within the study group, 21% of the respondents indicated that they received income from a remittance. This included remittances from fishing activities, a job, and a business.

One respondent received monthly rental income.

FOOD, FUEL AND OTHER EXPENSES

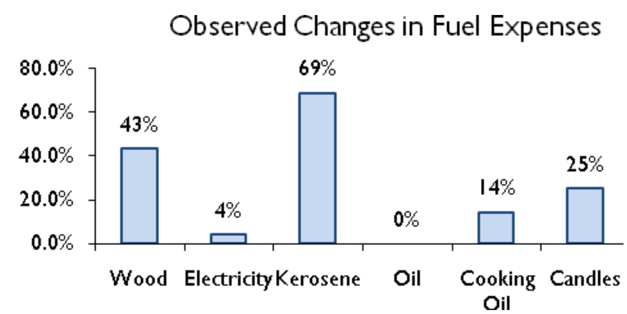
From 2007-2008, the purchasing preference, frequency of purchases and quantity purchased remained constant. The top five food purchases for borrowers were rice, cooking oil, lentils, vegetables and fish. From 2007-2008, 31.0% of the respondents changed the purchasing preference of food items.

As indicated, food prices paid for by borrowers for all products increased from 2007-2008. The observed change in food prices varied depending up the food product. The increases ranged from 10% (Fish) to 200% (Meat).

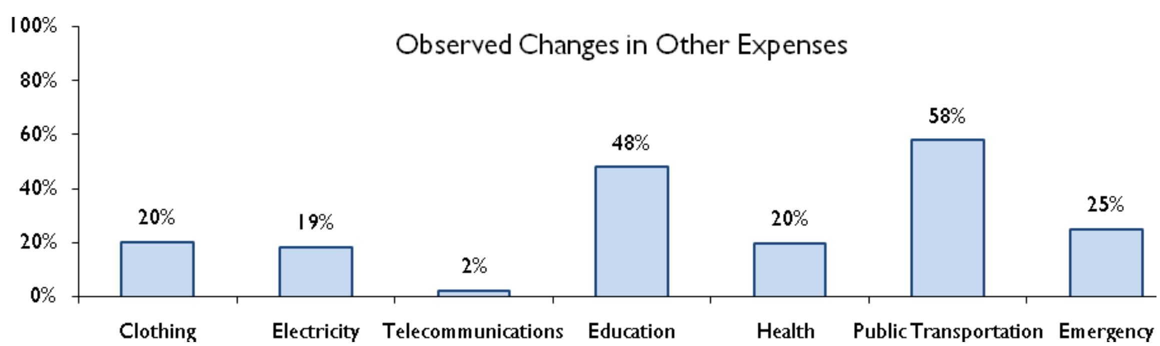


From 2007-2008, borrowers indicated that their top fuel purchases in order of most purchased were wood, electricity, kerosene and oil.

On the whole, the purchasing preference, frequency of purchases and quantity purchased for fuel items remained constant.



The study's respondents indicated no change in the frequency of purchases for other items. Prices for other expenses have had increases ranging from 2% (Telecommunications) to 58% (Public Transportation). The average increase amongst the expense was 27%.



SAVINGS AND OTHER ASSETS

Borrowers were asked if they sold off any assets over the previous year, and reasons for doing so, in order to determine if sales were related to inflationary pressures. The 19 respondents noted 17 incidences of asset acquisitions, and 12 instances of sales. Of the sales, 2 respondents noted the reason as having to pay for food; the assets that were sold were a refrigerator and jewelry.

100.0% of the borrowers had savings and 42.0% of the respondents had multiple sources of savings. 84.0% held savings with their MFI, 26.0% held savings in a commercial bank, 21.0% had savings at home, 10.5% had ROSCA savings and 15.7% had savings with other MFIs. The predominant reason to save was for "other" (47%), followed by housing needs (24%) and provisioning for emergencies (18%).

DEBT

Borrowers were asked what other debt they had, if they had restructured any of them, and if so, what the reason was.

In addition to the loan from this MFI, 3 respondents noted that they had loans from friends, and 4 respondents noted that they had debt owed to another MFI. These loans were taken for business, to deal with emergencies, and to pay off other debt.

All the respondents who had other loans restructured one or more aspect of the loan: duration, interest rate, frequency and payment amount.

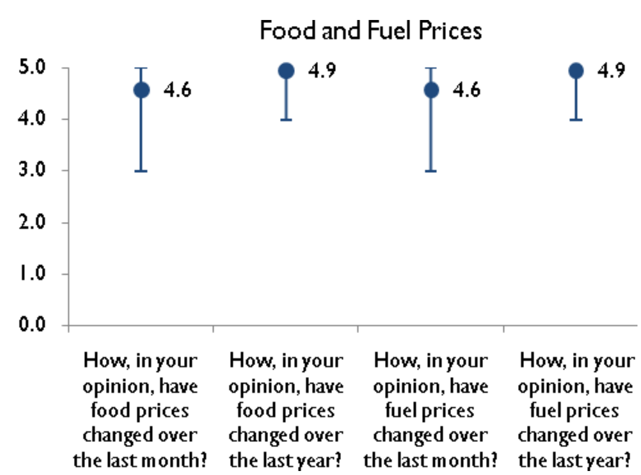
QUALITATIVE RESPONSES AND OPINIONS

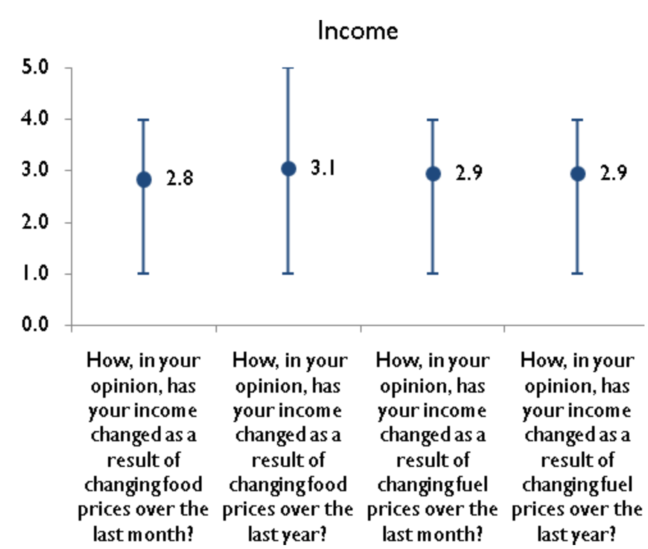
Borrowers were asked to note changes in food and fuel prices, and their income, expenses and profits. The results are summarized below. Responses are measured on a scale of 1 to 5, where:

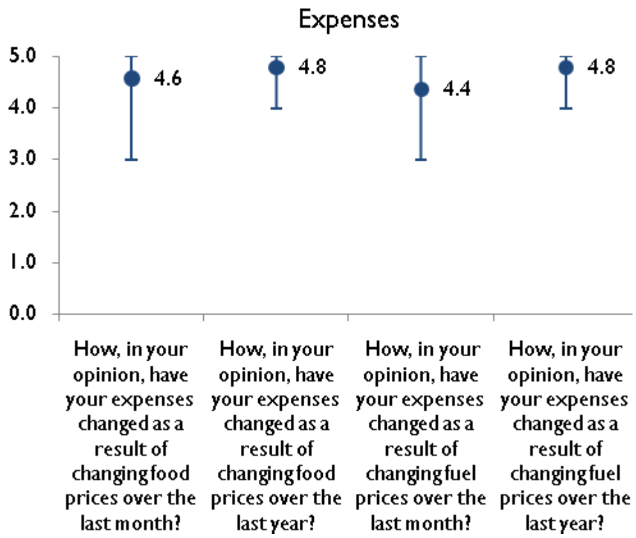
- 5 – large increase
- 4 – minor increase
- 3 – remained the same
- 2 – minor decrease
- 1 – large decrease

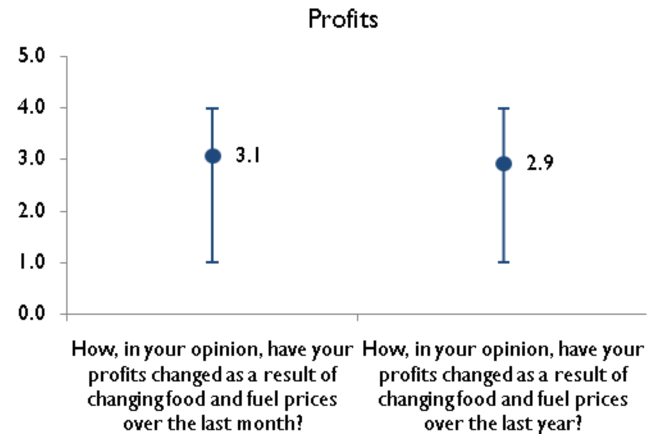
Subsequent 5-point scales used in this study will refer to this nomenclature.

Every graph shows the mean response, as well as the maximum and minimum, for the 19 respondents.









Food and fuel prices, and expenses, were observed to have increased significantly, on average, over both the course of the previous month, and the previous year.

Both income and profits of borrowers are marked by great variability, spanning the entire range from "large increase" to "large decrease", with as much increase as there was decrease, over both the short and long term.

GOVERNMENT PROGRAMS

47.0% of the respondents indicated that they were aware of government programs to alleviate food and fuel inflation pressure. The government provides a food hand out program, subsidized food sales, food for work and food distribution. None of the borrowers were aware of any MFI programs to assist with price pressure.

LOAN OFFICER RESPONSES

PROFILE

The 10 loan officers who participated in the questionnaire had between 109 and 500 borrowers, with average loan sizes ranging between US$ 72 to US$ 1,457. The interest rates on these loans ranged from 13.0% to 15.0% per year. Additionally, loans are issued to both individuals and groups, but the majority was made to groups.

PORTFOLIO AND BORROWER PROFILE

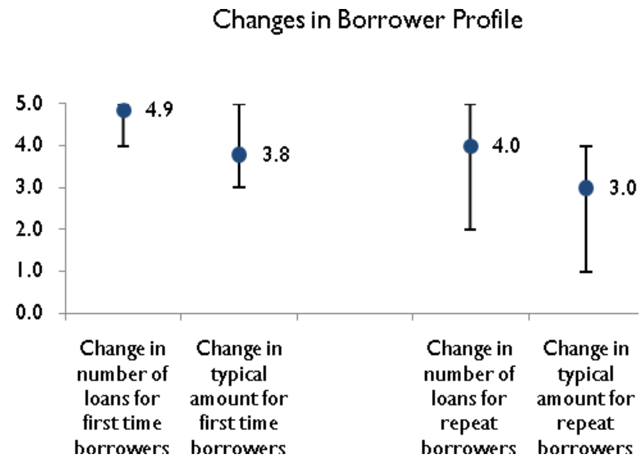
The loan officers administer loans for agricultural, business, consumer, debt repayment, emergency and expense purposes, and business loans represent the majority of loans issued. Borrowers of the surveyed loan officers worked in agriculture, fishing, industry, manufacturing, services and the government.

5 loan officers noted an increase in the number of borrowers, and 6 noted an increase in the average size of the loan.

As before, 5 denotes a large increase, while 1 denotes a large decrease.

Loan officers noted that, on average, there have been increases in the number and amount of loans for first time and repeat borrowers.

Only 1 respondent out of 10 attributed an increase in the number and amount of loans as being related to increase in prices of foodstuff. Others noted change in MFI regulations, return of borrowers who had left previously, business needs, and decrease in interest rate as reasons behind the general trend of more and larger loans.



DELINQUENCIES AND RESTRUCTURING

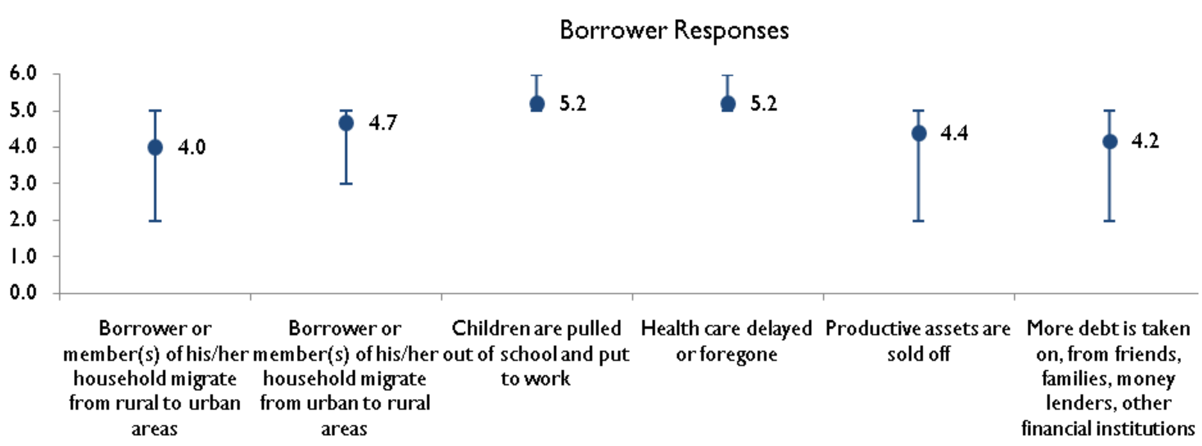
Most loan officers noted that delinquencies have decreased; one said he had no delinquencies at all in his portfolio. One loan officer noted that the reason for delinquencies going down was that there were floods last year which had pushed up delinquencies.

Only one loan officer noted an increase in delinquencies.

The MFIs allowed restructurings in term, interest rate, frequency and payment amount of the loan. Inflation is listed as one of the reasons for such restructurings, but so are business needs and reduction in interest rates.

OBSERVED BORROWER RESPONSES

Respondents were asked what responses they have seen borrowers take to address rising food and fuel prices. Their responses were scaled on a 6-point scale, where 6 is "always", 5 is "often", 4 is "frequently", 3 is "occasionally", 2 is "rarely" and 1 is "never":



The high incidence of children being pulled out of school and healthcare being foregone is troubling.

CONCLUSION

Unlike inflation crises in the past, the current high inflation environment is characterized not by loose monetary policy but by the global increase in demand for food and oil. MFI borrowers spend disproportionately more of their income on food and fuel (35% and 10% respectively prior to the current inflation crisis) and as such are unequally affected by this unique inflation phenomenon. Unlike monetary inflation which tends to raise both prices and wages, food and fuel inflation is predominately localized on the cost side. While this is generally better for an economy than monetary inflation, it has the unfortunate repercussion of taxing the poor at a greater rate since their incomes do not rise in step with the costs for their necessities.

This study finds that food and fuel inflation from 2006 to 2008 has increased significantly and has been accelerating throughout this time horizon. For the purpose of this report, MFA studied 8 MFIs in 3 regions across the world. It should be emphasized that, given the number of respondents to this study, these observations should be considered simply as anecdotal.

SUMMARY OF FINDINGS

The following observations can be made from the data cross section of borrowers, types of borrowers, types of loans, geographies and types of MFIs in Nicaragua::

- Senior management noted that they expect borrowers to reduce consumption, diversify sources of income and demand higher loan amounts in response to inflation.
- They would also like to see further studies into this phenomenon, increase in the financial margin of loans, and indexing of loans to inflation.
- The prices of staple food items have gone up between 31% for sugar and 51.6% for cooking oil, and that of fuel, by between 29% for diesel and 53% for gasoline, as observed by borrowers.
- One borrower noted selling his automobile due to rising fuel prices. Only a fifth of the respondents had savings.
- Though some borrowers have taken on other debts, none of them are related to rising prices of food or fuel.
- The income of borrowers ranged from large decrease to large increase, with as much increase as there was decrease, as a result of changing food and fuel prices. The same can be said for profits over the course of the previous year, although there was little change over the preceding month.
- Loan officers identified rising food prices and rising energy expenses as the 2 top reasons that would cause borrowers to default on scheduled payments. More than half have also seen borrowers “frequently” reallocate funds from their MFI loans to other uses related to rising food and fuel prices.
- Loan officers observed borrowers nearly always taking on debt from friends, family and other financial institutions in response to rising food and fuel prices, and some noted that borrowers would take children out of school and forego healthcare to cope.

The following observations can be made based on the responses obtained from Haiti:

- Senior managers noted that high food and fuel prices have worsened the situation in a country already suffering from a tense political situation and natural disasters .
- MFIs whose customers were on the lower end of the economic scale were vocal in their need for institutional support; MFIs which targeted higher economic strata customers, were less urgent in their requests.

- The prices of staple food items have gone up between 40% for meat and 124% for cooking oil, and that of fuel, by between 32% for diesel and 118% for coal, as observed by borrowers.
- Of the 12 incidences of asset sales noted by borrowers, 1 was directly attributed to higher food prices, and 3 to general increase in cost of living.
- 85% of the respondents have savings, primarily to deal with emergencies. 2 respondents cited provisioning for food as the reason to save, and 1 respondent did so for fuel expenses.
- Both income and profits of borrowers are marked by great variability, spanning the entire range from “large increase” to “large decrease”, with income over the previous month increasing slightly, but decreasing slightly over the previous year.
- Loan officers identified rising food prices and rising energy expenses as the 2 top reasons that would cause borrowers to default on scheduled payments, with both being cited 8 times.
- Loan officers noticed a higher incidence of borrowers or members of his/her household migrating from rural to urban areas, when compared to other responses to rising food and fuel prices.

Finally, the study can make the following observations based on responses obtained from Bangladesh:

- Senior managers noted that operational and administrative costs have increased for the MFI because trips to the field were more expensive, and there is greater concern for self-sustainability and net worth, as the inflation issue becomes more severe.
- The MFIs are considering adapting some of their existing products to allow borrowers to better cope with rising food and fuel prices, refocusing lending policies towards agriculture related industries and investing in agricultural products, and discontinuing fees for certain programs.
- Borrowers observed price increases for staple food items ranging from 10% for fish to 200% for meat, while fuel price increases have ranged from 0% for oil to 69% for kerosene.
- Of the 17 incidences of asset sales noted by borrowers, 2 were directly attributed to higher food prices.
- 100% of the respondents have savings, primarily to deal with emergencies; neither food nor fuel inflation was cited as a motivation.
- Both income and profits of borrowers are marked by great variability, spanning the entire range from “large increase” to “large decrease”, with as much increase as there was decrease, over both the short and long term.
- Loan officers noticed delinquencies actually decreasing in some cases, when compared with the spike experienced in the previous year as a result of floods.
- Loan officers noted that borrowers “often” pulled their children out of school to put them to work, and delayed health care in response to rising food and fuel prices.

MFA’s research has confirmed the operating thesis that MFI borrowers are distressed due to the precipitous rise of food and fuel inflation. However, further study into the direct causal effects of these price increases is warranted. Worsening portfolio quality suggests that price inflation for basic goods has eroded borrower incomes, which make them less able and less inclined to repay their microloans in a timely fashion. MFA has witnessed this trend through the various data sets studied: borrower, loan officer and senior MFI management interviews, portfolio data as reported by the MFIs and Central Bank data.

The interviews conducted also highlighted certain unnerving changes in borrower behavior in response to inflation which go well beyond loan defaults. Borrowers were increasingly pulling their children out of school, foregoing medical treatment, changing their eating habits to less caloric and nutritious diets, and most troubling cases of malnutrition have begun to increase.

The increases in delinquency observed by both senior management and loan officers are partially attributable to increase in inflation. The primary concerns for MFIs from higher delinquencies are three fold:

1. the impairment of operating income and balance sheet quality related to an increase in delinquencies, defaults and restructurings,
2. the associated tightening of credit, and
3. the shifting of lending activity away from developmentally critical loan types.

By focusing on the general effects of inflation on three separate global regions, this report has confirmed that inflation is indeed affecting MFIs and borrowers across all jurisdictions; however, the full extent and repercussions that inflation will have on MFIs and borrowers has yet to be fully understood. This study leads to the central question of how best to deal with the issue in order to best mitigate the food/fuel inflation risk for all parties.

RECOMMENDATIONS

More research is needed in order to fully assess inflation scenarios and develop applicable tools to assist MFIs and borrowers. The next stage of research would intensively research and analyze specific MFIs that have successfully navigated and overcome high inflation environments. A necessary component in crafting an effective strategy must include the deep statistical analysis of granular loan level data in order to determine:

- Which elements of a loan portfolio are bearing the brunt of inflation and to what extent they are impaired.
- Predict how food/fuel inflation impacts a loan portfolio given each portfolio's unique asset allocation.
- Optimally structure a portfolio to best withstand inflationary pressure.
- Test new loan products behavior under inflationary stress prior to rolling out the products in the market place.
- Test and structure effective hedges which would mitigate inflation effects.

This next level of research would seek to develop a list of best practices that any MFI could utilize to mitigate inflationary pressure. During the course of research for this report, respondents recommended several possible tools and ideas. These options are presented below with the disclaimer that they be applied only after they have been thoroughly researched and matched with appropriate situations:

- Portfolio analysis tools: In MFA's experience, a frequent complaint among senior managers is the lack of knowledge about the inherent risk within their portfolio. Often the management information systems in place for MFIs are not capable of accurately providing a picture of the portfolio's quality beyond PAR values and aggregate accounting. The problem is often made worse as an organization grows, adding new branches, hiring more loan officers and developing new products. The senior managers would like a tool that provides knowledge of the portfolio by analyzing different parameters that drill deep into the portfolio and analyzing trends across various slices and time horizons.
- Inflation adjusted loan products: The majority of MFI loans are not indexed to inflation, which means that the loan's interest rate does not take into account inflation. In jurisdictions where this is allowed, it would benefit MFIs in developing a loan that is indexed to inflation, though this has the possibility of increasing credit risk further.
- Access to cheaper capital: MFIs survive through the loans they receive from international/domestic banks, private investors and international aid organizations. The lower the interest rate a MFI receives on a loan, the more buffer room and less risk it has when making loans to its customers.
- Support and help from the governments and international and development finance organizations.

Furthermore, the sustainability of MFIs will depend on the implementation of strategies that hedge the institution against adverse domestic macro conditions and the influence of global trends. Therefore, microfinance institutions should also explore diverse hedge strategies to cover inflationary risks, either by implementing natural hedges such as long-term borrowing against short term lending, changes in the structure of loans or through the use of financial products that provide customized hedging.

For the short-term, the report noted that MFIs could help clients through the possible crisis--by assisting in advance purchases, securing inventories, and diversifying client businesses. MFIs could also create forums that would allow clients to share experiences and brainstorm solutions. For the long-term, the MFI could increase client support, ramp up business training and provide other services. Furthermore, the MFI could seek operational improvements to decrease costs, consider partnerships with other organizations, consider increasing the wages and benefits of employees, offer flexible products, consider offering consumption loans, and avoid increasing interest rates and debt forgiveness.

Though no financial institution can ever fully protect itself from inflation, many have navigated inflationary environments by proactively managing their assets and liabilities. The nature of food and fuel inflation and its disproportionate effect on MFI borrowers pose a unique challenge for MFIs. Any response will have to incorporate a number of different levers and be thoroughly vetted. Most likely, any answer will include tailoring products for the borrower which incorporate some element of inflationary indexing. Additionally, interest rate and currency hedging should be used to manage the liability side of the balance sheet. Through a multi-pronged approach, MFIs can achieve a large measure of protection from food and fuel inflation and thereby continue to execute their crucial mission in opening up economic opportunity to the world's poor.

APPENDIX

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