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# Cash Flow Analysis of Client's Household for Availing a Microfinance Loan: A Study in Two Districts of Odisha

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**Abstract**
One of the prime reasons for the outcome of over-indebtedness is inability of financial institutions to estimate the borrowing capacity of a household. This study was conducted within this context of imprecise assessment of income and cash-flows. The study focuses on the two districts of Odisha, i.e. Khordha and Ganjam, the districts where the highest cases of over-indebtedness were reported within the states. The sample size for the study was 300 respondents (150 in each district), interviewed using a questionnaire-survey. The surveys were conducted with clients who have at least one active loan from an MFI. In addition to questionnaire-surveys, qualitative interviews were conducted with MFIs in order to get a better understanding of how their cash-flow estimation processes work. To calculate the cash flow, the variables like income, consumption, savings & information related to sources of loans is being used. MFIs usually access credit bureau data to get information on outstanding loans of the clients.

The workings and the operations of NBFCs are regulated by RBI and other regulatory bodies like Sa-Dhan and MFIN (Microfinance Institutions Network). Guidelines were set up to avoid over indebtedness on the side of the clients and to ensure responsible lending from the side of the NBFCs. The data was tested against each guideline mentioned by the RBI and found some interesting results. These included 66% of the households having an annual household income of over the limit prescribed for borrowings from an MFI. 5.18% of the sample clients had total indebtedness of more than ₹1,00, 000. This shows that the RBI guideline which puts a cap of ₹1,00,000 on the total indebtedness of a client is not being followed in the case of these households. Additionally, 13.15% of the clients in our sample were repaying more than 2 MFI loans at the same time, even while the prescribed limit is of 2 MFI loans. Despite the fact that all the MFIs follow some or the other method of estimating cash-flow of potential client households, problems related to over-indebtedness and default still exist.The study recommends that in order to develop a robust cash-flow analysis tool, concerted efforts needs to be put in by various stakeholders in the sector. Firstly, a proper client protection mechanism needs to be set up by each MFI in order to ensure that issues faced by the clients in relation to repayment, MFI products, behavior of the loan officer and customer service is adequately captured and addressed. This can be ensured through Interactive Voice Response (IVR) calls from the credit bureau. Secondly, the credit bureau can also come up with a memo which is updated every quarter with the latest information on clients' financial situation, outstanding loans etc., aggregated at a block or district level. This would give MFIs and other lenders a proper understanding of the loan situation in specific regions.

**Keywords:** *Cash-flow, Credit Bureau, Household income, Indebtedness and MFI*

## 1. Introduction

The estimated size of the organized microfinance industry in India is roughly INR 46,842 crore as of the end of March 2017, with about 2.95 crore last mile borrowers being directly impacted by RBI registered NBFC-MFIs[1]. Back in 2010, Andhra Pradesh was highly penetrated by both Microfinance Institutions (MFIs) and Self Help Groups (SHGs) giving rise to multiple borrowing and was hit by a crisis. Some of the causes identified for multiple borrowings included client poaching and loan pushing on the MFIs side, and loan recycling on the clients' side. Although, data now suggests that MFIs have picked up again after the AP crisis, recent reports are suggesting that the sector may be heading towards a fresh crisis. New incidents of over-indebtedness have surfaced in regions of Odisha, Karnataka and Uttar Pradesh which have been associated with pipeline loans (taking loans using their KYC for others and ending up with multiple loans), spending loan amounts on consumption rather than income generation etc. Some reports have argued that these incidents are a cause of worry for they point to deeper problems within the system.

According to Bhrat Microfinance Report 2017, while MFIs portfolio declined to INR 468 billion in FY2017 from INR 638 billion in FY 2016. This wasn't accompanied with concurrent growth in the number of MFI branches, employees and clients. This could mean that the infrastructure, employees and clients of MFIs are being stretched beyond capacity. This fast growth of microfinance services without sufficient infrastructural support, it is argued, runs the risk of multiple borrowing by clients and over-indebtedness, without proper checks and governance of these borrowings.

[1] Bharat Micro Finance Report, 2017

The lack of reflection of such episodes in the credit bureau data could be because of the existing gaps in reporting to credit bureaus. Some spurious localized lenders are aping MFIs without being supervised by RBI, SHG lending is not reported and some NGO-MFIs with large portfolios may not be subscribing to credit bureaus. A study by IFMR lead on over-indebtedness of MFI clients in Karnataka, Uttar Pradesh (UP), and Madhya Pradesh (MP) suggests that one of the prime reasons for the outcome of over-indebtedness is inability of financial institutions to estimate the borrowing capacity of a household. The data showed that while having multiple number of loans increased the likelihood of clients being over-indebted, 41 per cent of the respondents who had loans in accordance to the RBI guidelines (2 loans of less than 1.60 lakhs) were over-indebted. Further follow ups with MFIs point towards loan officers giving less weightage to debt estimation of the household, when the potential client has less than two loans or falls within the prescribed loan limit. Application of a standard limit as such does not take into account the varying levels of household income within the prescribed limit, and therefore reducing the ability of respondents to service loan repayments based on their income. With this backdrop, the current study has made an attempt to analyse the income and cash flow of client household for availing a microfinance loan.

## 2. Review of literature

India has been a late starter compared to its neighbor Bangladesh in terms of microcredit. However, since its inception in the 90s the microfinance sector in India has come a long way. Given the history of credit being used as an instrument for social policy; we can see the transformation that has happened clearly over the past 50 years. A large portion of lending to poor people in India in the 1970s and 1980s came from the state through the Integrated Rural Development Program (IRDP), whose subsidized credit for farming improvements and livelihood diversification projects was not an operational success, but left a legacy of rural lending as a major tool in the development portfolio (Taylor, 2011). This was followed by the setting up of SHGs by the state in the late 80s. Therefore, microfinance began in India with state sponsored SHG lending models increasingly fulfilling formal lending to the poor (Mader, 2013).

As mentioned in the previous section, in the mid 2000s there was an enormous growth in microfinance sector especially in states like Andhra Pradesh. Loans were easily available and in many cases people were holding multiple loans borrowed from the same MFI with no means to pay it back. This unscrupulous lending by the MFIs led to a minor crisis in the Krishna district of Andhra Pradesh in 2006 followed by a major crisis in the entire state in 2010. The immense growth of MFIs along all dimensions had overstretched their internal systems, and they had cut corners everywhere, particularly in the client acquisition process (Arunachalam, 2011). This led to large scale delinquency in the repayment of loans by clients. In the same period, the average borrower’s debt balance (toward each MFI) more than doubled; a debt accumulation compounded by multiple borrowing (Mader, 2013). Ghate (2006), author of the Indian microfinance State of the Sector reports, argued that the underlying” longer-term causes for the crisis was rooted in MFIs’ “quest for numbers”, their in-transparent interest charges and coercive collection practices. In addition Mishra and Mohapatra (2010) also argued that some problems might arise if the proper systems are not in place to support the intensification of microfinance. They went on to add that if lending institutions are not well-versed about the creditworthiness of potential clients, it can lead to negative effects on the performance of MFI loan portfolios and will result in over-indebtedness of clients.

India’s experience shows that, until the recent past, MFIs did not have a proper cash-flow assessment in place or their assessment of clients repaying capacity was based more on informal sources rather than a more formal one. There have been a few studies that have been done in this context. Aggarwal et al, (2012) suggest that, among micro finance clients who are willing to borrow at either weekly or monthly repayment schedules, a more flexible schedule can significantly lower transaction costs without increasing client default. Another study done by Mishra and Mohapatra (2010) suggests that delinquency management requires a comprehensive review of the lending methods, operational procedures, and institutional image of the MFI. Delinquency is often a result of poorly designed loan products and delivery mechanisms. For this reason the clients must be screened carefully before loan disbursement. They go on to add that the MFIs should follow a credit scoring model which would help them in making better decisions. In addition, N, Abhay, founder of a microfinance blog named “Indian microfinance” adds MFIs can neither afford to be too conservative in their lending (as it will restrict their growth) nor can they be over enthusiastic, which will result in losses. Hence, an MFI needs to have an effective risk management system to have reasonable growth without letting the risk cross the thresholds of acceptable limits. While measures along these fronts are being taken in the MFI sector post the crisis in 2010, these measures are mostly being taken by individual MFIs rather than being unanimously adopted by MFIs across the sector. Measures taken to accurately calculate credit capacity of clients can however go a long way in having sustainable borrowing/lending practices. “In Latin America, India and Southeast Asia, MFIs are competing on both loan sizes and client numbers, and therefore are reluctant to make distinctions based on clients’ ability to repay. Default risks are higher because of the inability of MFIs to forecast client cash flows during and after each cycle. This is typically due to the inaccuracy of classification information, starting all the way from when the loan officer first acquired clients and incorrectly classified them based on household cash flows. The author further states that one of the measures through which an MFI can limit this default risk is by accurately assessing the credit capacity of clients by identifying which clients have stronger or weaker capacity to repay, categorize them accurately, then provide them with loan products that balance their varying credit limits with a need to enforce group liability".

Laksmypriya K (2013), identifies institutional culture, staff orientation, client orientation, as few of the strategies for successful delinquency management. Evidence from other parts of the world also suggests that focusing on the cash flow estimation procedures followed by the MFIs, can go a long way in inculcating sustainable lending practices in the industry. Sometimes management & the loan officers are also to blame for not following the correct estimation procedures. The study by Dixon et al (2006) finds that that the management put the loan officers under pressure to form groups. The loan officers lent out loans in order to reach targets within a short period of time. As a result, loan officers enrolled clients with little or no assessment and not just those who were in need for credit and economically active. Loan officers did not necessarily follow officially stated lending procedures. For instance, the Clients' businesses were not visited before disbursing loans.

## 3. Methodology

The process of calculating near accurate cash-flow estimates of potential clients is one of the basic tenets for a well-functioning loan model as it is a process that helps the MFIs get quality information on counterparties. Reducing the information asymmetry between lenders and borrowers will provide a fillip to growth of credit especially among disadvantaged sections of society and foster financial inclusion and inclusive growth. However, there are certain challenges on this front especially due to the absence of accurate information on variables such as income, expenses, saving and outstanding loans. This is further compounded by the absence of a strong credit bureau data. Hence, it is of utmost importance that this process be improved in order to aid the MFIs in their aim for improving their loan portfolio and also help them move towards a more responsible loan lending model. With this backdrop, the study aims

1) To assess the credit eligibility of a client for an appropriate loan amount through income and cash flow of client's household, which meets the client's aspiration and also ensures repayment to maintain credit security from a provider level.
2) Suggest the various parameter to develop a robust cash flow tool to help in estimating optimal microfinance loan.

These objectives will not only help in providing a robust mechanism to estimate the cash flow of a client, but will also be helpful from the point of view of client protection as it will address the issue of over indebtedness. These together will aid the MFIs towards a more responsible lending model. Our sample is composed of 300 clients in total, evenly split across our two field sites. Majority of the respondents in our sample are female as MFIs lend primarily to women. The average annual income for the primary respondent was found to be INR 21208.81, with a significant difference between the two districts. The mean monthly household income of our sample size, stood at ₹20,634. The 25th percentile/first quartile income was ₹7166 whereas the 75th percentile income was ₹18,333 (Table-1). In terms of overall income distribution by district, Allahabad district had the lowest average household monthly income ₹833.33 and also the highest ₹3, 50,000.

**Table 1: Monthly Income of Primary respondents**

| Sl.No | Area | Mean | Percentile | |
|---|---|---|---|---|
| | | | 25th percentile | 75th Percentile |
| 1 | Overall | 20634 | 7166 | 18333 |
| 2 | Khordha | 28672 | 8000 | 24000 |
| 3 | Ganjam | 12532 | 6150 | 16500 |

The mean age of the primary respondent was found to be 38.25 years. Within our sample 38.25% of the respondents belonged to the 40-50 age category followed by people in the 30-40 age group (30.85%) and 20-30 (18.34%).

**Fig-1: Age Category of the Primary Respondents**

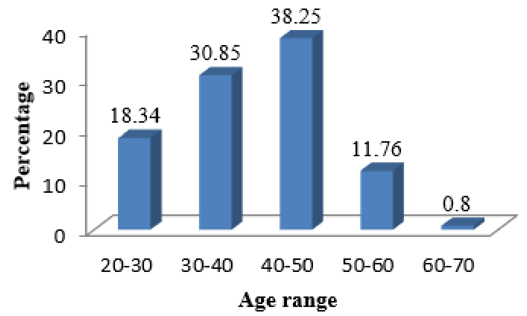



**Fig-2: Annual Income of the Primary Respondents**

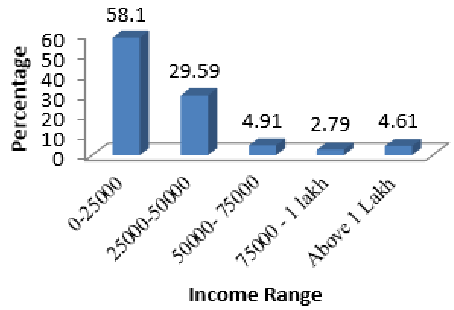
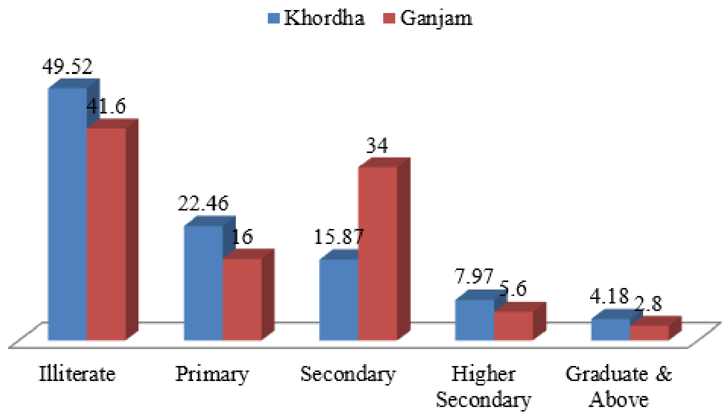
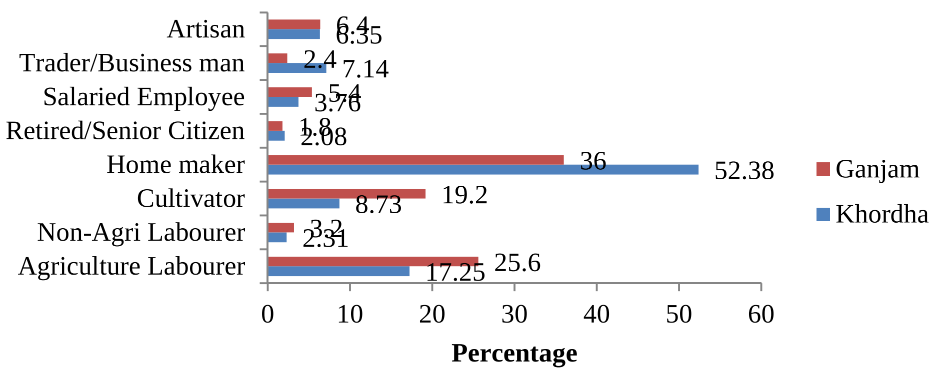



**Fig-3: Educational Status of respondents**




Majority (49.52%) of our respondents had never attended school. i.e. no form of schooling was given to them. This was followed by a quarter of our respondents who had completed secondary school and those who completed primary school. The percentage of people having a degree was found to be very low within our sample. One hypothesis behind this may be the fact that majority of them may have belonged to agrarian households who might have felt the need to discontinue their studies after school in order to help their relatives in their family activity. In terms of the primary occupations of the clients that we interviewed, the results were varied (Fig-4). However, the majority stated that they worked as a "Home Maker". Within patriarchal cultural set up, this is not surprising, as majority of our respondents were women. The second largest occupation category in our sample was that of "Agricultural laborers" which comprised of 34.22% of our sample, followed by "Cultivators" who formed 13.94 % of our sample.

**Fig-4: Primary Occupation of the respondents**



**4. Improved Cash-Flow estimation as a means to a robust risk management system.**
Like any other industry, microfinance is faced with financial and operational risks. Given the nature of the market in which MFIs operate, there are some risks, such as the risk of over-indebtedness which is more prevalent and inherent to microfinance. The degree of credit understanding of the target segment population of MFIs is low. While this might differ from one MFI to another, most MFIs understanding of credit eligibility of existing or potential clients is limited as pointed out in the literature review section. Additionally, the increasing number of MFI institutions in a given market area, lack of or limited regulations and strong credit bureau checks, barriers to knowing multiple sources of borrowing of a given client further limit accurate credit assessment of a client (Nandal, 2012). An excessive accumulation of debts combined with household's liquidity constraints could cause deterioration in household's economic well-being thus increasing their vulnerability towards social exclusion and poverty.

Cash-flow estimation in such a scenario becomes an important process on which a MFI can rest its judgment on the eligibility of the client to receive a loan. The primary goal of cash flow analysis is to identify, in a timely manner, cash flow problems as well as cash flow opportunities. It is essential therefore to have a robust cash-flow assessment instrument in order to ensure a reduction in the incidence of default in the sector which in turn would help the MFI in mitigating the problems related to over indebtedness.

The primary document used in cash flow analysis is the cash flow statement. However, capturing accurate information related to a clients' income, expenses and other sources of loan is more easily said than done. This is especially true for the clientele that MFIs cater to, many of whom lack documentation on the same. Such a process should be robust on the following aspects:

i. ***It should accurately capture income, expenditure and the outstanding loans of the household:*** Given the lack of reliable supporting/ supplementary information on these variables for low-income groups, more often than not MFIs have to depend on self-reported data from the clients on these. Additionally, the process must not just look at individual income of the client or potential client but also capture the household income of all members from primary and secondary sources. This is important, given the variations in income that such low-income households are subject to due to predominantly engaging in seasonal occupations.
ii. ***It should not be time consuming:*** The process of estimation of cash flow should not take a lot of time as long questionnaires tend to make the respondent anxious and tired which affects their ability to give accurate information. Participants in the process are less likely to omit any details, eventually lowering the overall risk if the process is precise and short.
iii. ***It should be clear and easy to follow:*** The questions in the assessment should be clear and easily comprehendible. Once the respondent comprehends the question, he or she must retrieve the relevant information from memory, make a judgment as to whether the retrieved information matches the requested information, and communicate a response. This entire process becomes easier to start with if the respondent understands the questions better.

The study captured client household information related to income, consumption, outstanding and repaid formal & informal loans trends, business well-being, savings of the household etc. The information collected from the detailed survey-interview with the clients helped in not only understanding parameters that are essential for developing a screening tool with a robust cash flow, but also designing and testing the same.

**5. Outstanding Loans per Household**
In terms of outstanding loans, 51.20% of the households surveyed had only 1 outstanding loan that they were currently repaying. This was followed by 29.68% of households having 2 loans outstanding. Additionally, there were about 19.12% of households which had more than 2 loans which means that these households had an increased loan burden compared to the remaining 80.88% (Fig-5). Around 66.62% of loans were sourced from MFIs (Fig-6). This is not surprising given that the villages that were surveyed were rural and with around 58.1 percent of the respondents having an annual income less than ₹25000 (Fig-2).

**Fig 5: Outstanding loans per HH**

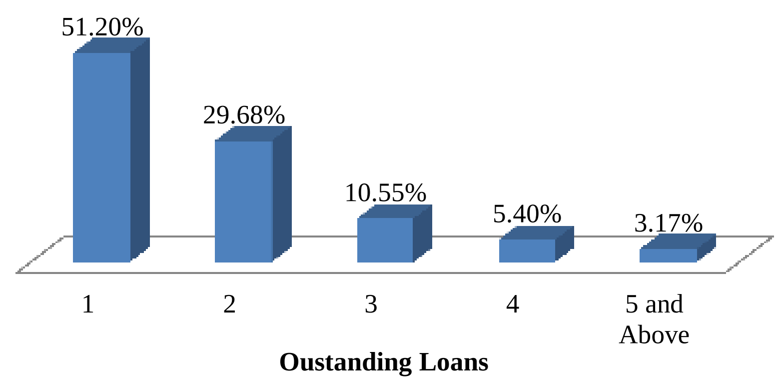
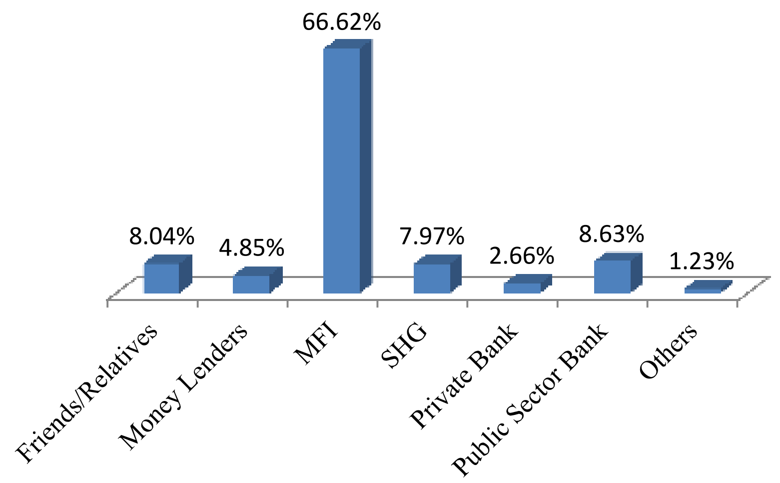
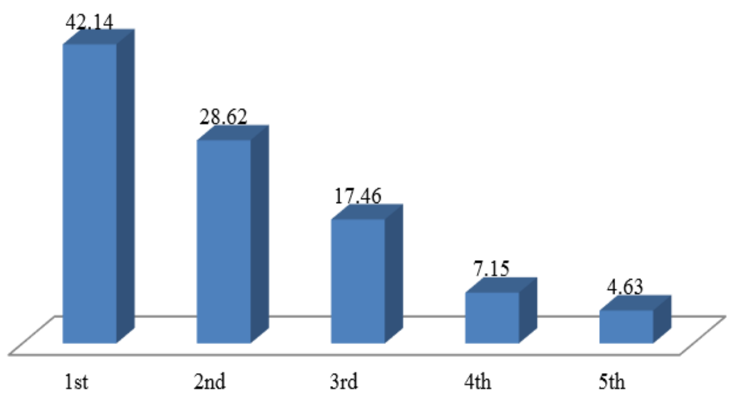


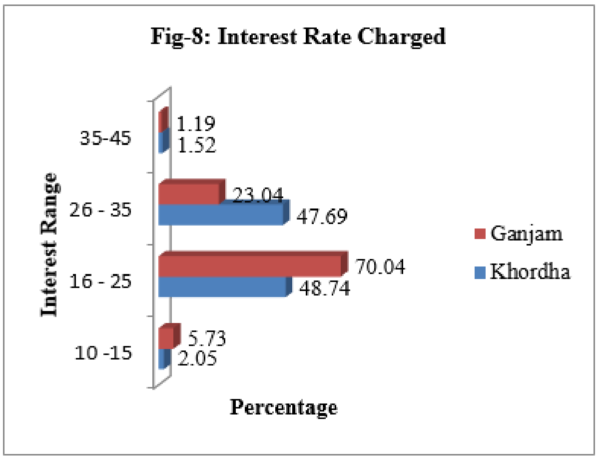
**Fig 6: Source of loans taken by HH**

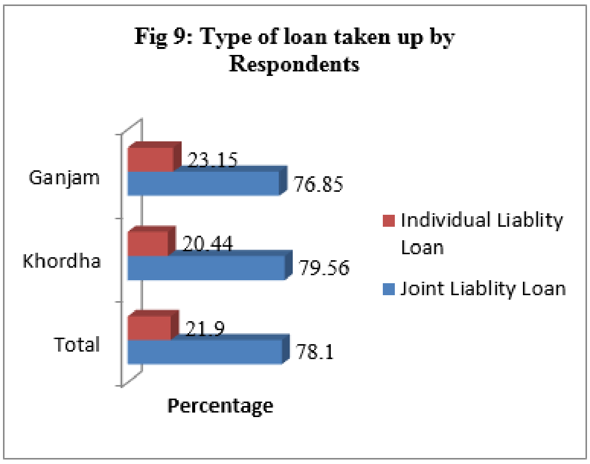


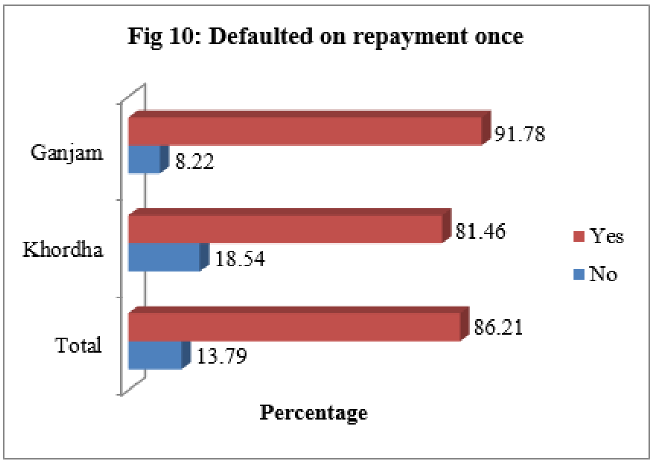

Out of the loans that the respondent households had with MFIs, most of them were in their first cycle (42.14%). This was followed by borrowers who were repaying their second loan (28.62%). One can clearly see that as the loan cycle increases, the percentage of clients in these loan cycles decreases (Fig-7). The interest rate for majority of these loans was between 15-25 percent.

**Fig 7: Loan Cycles of HH (In %)**






13.79% of clients reported to have defaulted on repayment of loan at least once. The default rates were reported to be higher in Khordha (18.54 per cent) as compared to Ganjam (8.22 per cent) (Fig-10). The default rate that has been shown in the figure pertains to the client defaulting on a repayment at least once. Apart from collecting information on households defaulting on a repayment once, the study also captured data through the surveys on inability of clients to repay loan installments three times in a row. This question was targeted to those who said that they had defaulted at least once. Such defaults, where the clients had missed payments three times in a row were prevalent among 14% of them.

The percentage of households who reported having defaulted on the repayment of a loan installment for previous loans they had taken stood at 8.88% (10 percent in Khorda and 8 percent in Ganjam). This shows that even though they have repaid these loans, they struggled to make some repayment installments. This may be due to many factors ranging from increased loan burden due to repayment on multiple loans, increase in household expenses to varied income in some months. The study also captured information on the primary intended use of the loan amount, and the actual use of the loan once it was received by the respondent. Most respondents intended to use the loan for income generating purposes (Fig-11). However, when it came to actual usage, there was a drop in this percentage (Fig-12). There is a sharp increase in the actual use of loans for household consumption smoothening (3.29% to 10.59%) and health emergencies (4% to 8.94%).

Fig 11: Stated Use of Loan

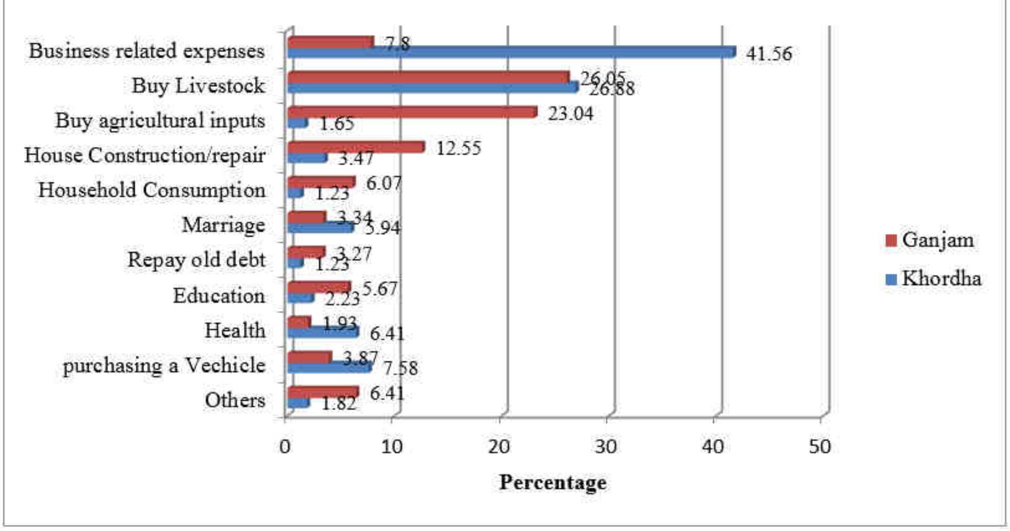
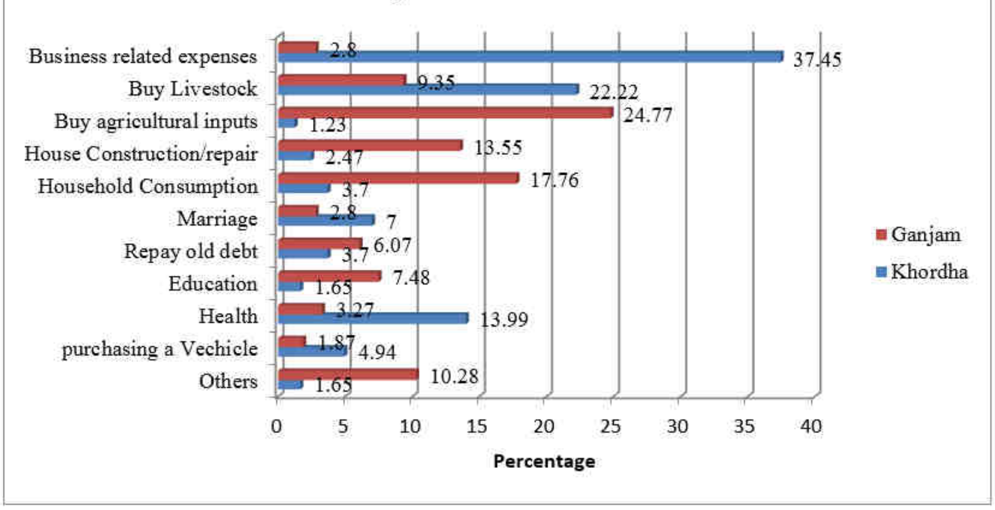



Fig 12: Actual use of Loan




One of the reasons for this allocation of loan amount towards other non-income generating purposes stemmed from shortage of income during some months to cover consumption costs. For instance, 31% of the households surveyed stated experiencing over the course of a year, one or more instances in which their income was less than their expenses. This may be a combination due of over-indebtedness, reduction in income or some form of emergency (health, marriage etc.). Out of the respondents who stated as having incomes that were at times lower than their expenses, 38.46% of them cut back on spending in order to adjust for this in months when income was lower. This was closely followed by 37.18% household who would prefer selling something they owned to cope up with the high expenses and work overtime to earn extra money (Table 2). Using savings to cope with this income shortage was not an option for many, as a significant portion of our respondents had savings which were less than ₹5000.

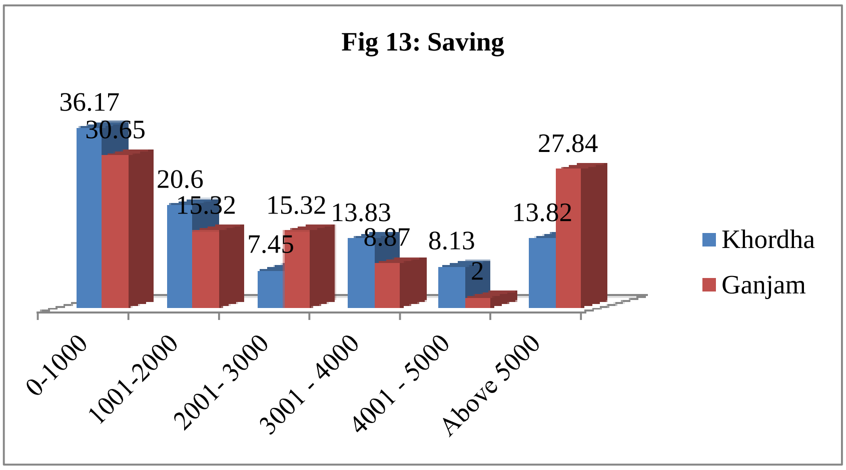
**Table 2: Coping strategy of the respondents**

| Sl. No | Primary Method of Coping | Frequency | Percent |
|---|---|---|---|
| 1 | Don't know | 1 | 1.28 |
| 2 | Draw money out of savings or transfer savings into current account | 9 | 11.54 |
| 3 | Cut back on spending, spend less | 30 | 38.46 |

| | | | |
|---|---|---|---|
| 4 | Sell something that I own | 29 | 37.18 |
| 5 | Borrow food or money from family or friends | 4 | 5.13 |
| 6 | Borrow from employer/salary advance | 1 | 1.28 |
| 7 | Pawn something that I own | 3 | 3.85 |
| 8 | Use an existing loan from an informal provider/moneylender | 1 | 1.28 |
| **Sl.No** | **Secondary method of Coping** | **Frequency** | **Percent** |
| 1 | Cut back on spending, spend less | 4 | 9.76 |
| 2 | Sell something that I own | 3 | 7.32 |
| 3 | Work overtime to earn extra money | 23 | 56.1 |
| 4 | Borrow food or money from family or friends | 4 | 9.76 |
| 5 | Borrow from employer/salary advance | 4 | 9.74 |
| 6 | Pawn something that I own | 2 | 4.88 |
| 7 | Use an existing loan from an informal provider/moneylender | 1 | 2.44 |

**Savings:** Majority of the households (98.17%) had savings only of ₹25000 at the most. The same trend can be seen across both the districts. However, as stated above even within this category a majority of the households had savings below ₹5000 for both the districts. It can therefore also be said that majority of the clients do not have sufficient savings to even repay a loan using their savings in case they find themselves in a difficult position when making repayments.




**6. Data validation against Industry norms:** The workings and the operations of NBFCs are regulated by RBI and other regulatory bodies like Sa-Dhan and MFIN (Microfinance Institutions Network). Guidelines were setup to avoid over indebtedness on the side of the clients and to ensure responsible lending from the side of the NBFCs. The evolution of the regulatory framework for NBFCs in India has gone through a cyclical phase, from simplified regulations to stringent and extensive regulations and finally towards rationalization as part of the recently revised NBFC regulatory framework. In line with the recommendations of the Nachiket Mor committee on ‘Comprehensive Financial Services for Small Businesses and Low Income Households’ and to give a fillip to the microfinance industry, the RBI significantly enhanced the borrowing limits for an individual, income limits borrowers, and disbursement amount for NBFC-MFIs.

i. Borrower’s household annual income does not exceed ₹1, 00,000 or ₹1,20,000 for rural and urban areas respectively.
ii. Maximum loan size of ₹60,000 (first cycle), subsequent cycles 1 lakh INR for rural households.
iii. Maximum borrower total indebtedness of 1 lakh. Cap of 2 MFI loans.
iv. Minimum tenure of 24 months when loan exceeds ₹15,000.
v. No prepayment penalties.
vi. No collateral.
vii. Repayable by weekly, fortnightly or monthly installments at the choice of the borrower.

The study tested the data against each guideline mentioned by the RBI and found some interesting results: (i) Clients from rural households whose annual income exceeds 1 lakh: Around 38.79% of the households in the sample have an annual household income which exceeds ₹ 1 lakh. Majority of them had their household income deviating between 0-1 lakh (61.21%).

**Fig 14: Deviation of HH income from 1 lakh**

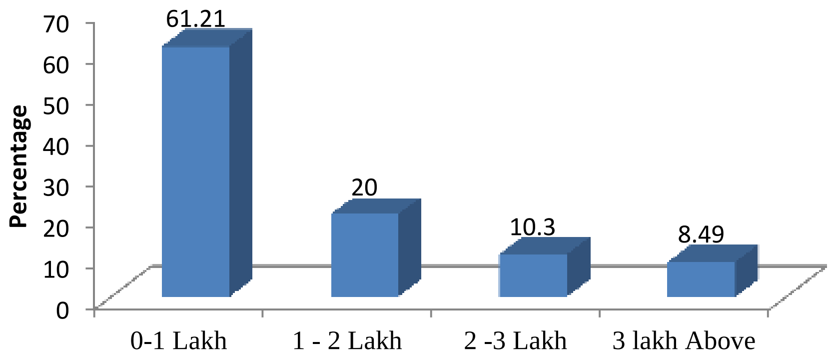



**Fig 15: Total indebtedness is more than 1 lakh**

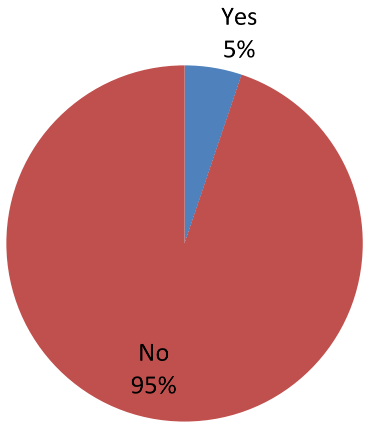
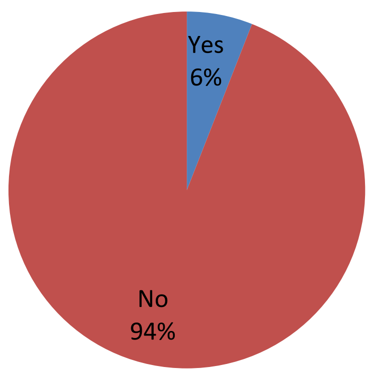



**Fig 16: Respondents with more than 3 formal O/S loan**




5.18% of the clients had a total indebtedness of more than ₹1,00, 000. This shows that the RBI guideline which puts a cap of ₹1,00,000 on the total indebtedness of a client is not being followed in the case of these households. Additionally, 13.15% of the clients were repaying more than 2 MFI loans at the same time. 5.97% of the clients had more than 3 formal loans. This shows that for these households the debt burden was already high.

In the previous section important statistics were discussed for a nuanced understanding to cash-flow estimation in the microfinance sector. Some prominent findings include that around 5.97% of the households reported having 3 or more outstanding loans (formal & informal loans) at a time. Additionally, for outstanding loans around 12.79 % reported on having defaulted on repayment at least once and among these around 14% reported to having defaulted on their repayment installments 3 times in a row. Adding to this, around 31% reported that in the past year they faced a situation where their income was less than their household expenses.

These findings point towards a gap between guidelines that exist on credit processing in the sector and a need also to restructure cash-flow estimation strategies in place. Despite the fact that all the MFIs follow some method for estimating cash-flow of potential client households, problems related to over indebtedness and default still exist as can be seen from the results above. Restructuring such a cash-flow estimation process is not an easy task especially when it means accurately capturing income, savings and information on other loans. It is a fact that the measurement of the characteristics and behavioral experience among members of the low-income and welfare populations offer particular challenges with respect to reducing various sources of response error. This is especially due to bias on the side of the client when they report such information. Such a bias originates when survey instruments like a cash flow estimation instrument ask questions on socially and personally sensitive topics. As a result there is a high probability that they might elicit patterns of under reporting (for income, savings and other sources of loan) as well as over reporting (household expenses).12 Many such questions contain data that cannot be independently verified or are not easily verifiable since they are self-reported in nature.

Given this limitation on calculating variables like income, consumption, savings & information related to sources of loans for the cash-flow estimation process of an MFI, certain ways through which near accurate information on these variables can be captured were identified and tested. Detailed interviews with MFIs were conducted to understand their cash flow estimation processes, and looked through various debt calculation sheets used by them for potential clients. During this process, it was observed that the debt calculation sheets used by the MFIs were less detailed, especially when it involved capturing information on variables like expenses (consumption) and outstanding loans. Additionally, it was observed that these instruments did not have any mechanism i.e. (checks) put in place to verify the information that they might capture. During these interviews, it is understood that MFIs more or less follow the same processes before disbursing a loan to a client. These processes involved a Continuous Group Training (CGT) conducted by the loan officer, which was followed up by a Group Recognition Test (GRT) by the branch manager. Cash-flow estimation is done as part of the GRT and it tries to capture the income and outstanding loan information of the client. Most MFIs stated that they have issues in capturing correct information on income & outstanding loans as this information is shared with the MFI during verification process verbally without much proof to support the information. Additionally, some MFIs also added that the credit bureau data is not fully reliable as they have encountered cases where certain clients had more loans than what was reported in the credit bureau data. The development of a tool-kit is further validated by the unanimous need felt by MFIs we interviewed for further improving their cash flow estimation methodology and consistently undergoing changes based on their learning from the field.While referring to the cash-flow estimation brochures of the MFIs and conducting the interviews, one could glean that changes were needed with respect to their cash flow estimation, especially with respect to capturing information on income and outstanding loans (both formal & informal).

## 7. Suggestions to prepare a robust cash flow analysis tool for MFIs

The cash flow analysis tool kit that the study have sugested has been divided into 7 parts. These are as follows: -

- **General information**: This covers the general information of the applicant.
- **Details of Family members** - Household roster: This covers details like name, age, gender, education, occupation, annual income (Both primary & secondary) for each member in the household.
- **Household income & expenses:** Information pertaining to household monthly income (primary & secondary sources) and income from various other sources will be captured in detail in this section.
- **Consumption of the household:** Expenditure incurred by the household on the items mentioned on a weekly, monthly and annual basis forms the core of this section.
- **Liabilities & savings**: This section captures information on different type of loans and the different types savings that a client can have.
- **Details on outstanding loans**: All the necessary information pertaining to the outstanding loans that a household can have will be captured within this section.
- **Business information**: Captures information on client's business, if any.

Following are the unique features which have been incorporated for segments on income, consumption and the outstanding loans: -

**7.1 Income:** In the cash-flow toolkit, questions have been added to capture income in a more accurate way. These questions capture and cross-check the income from primary and secondary sources of not just the primary respondent but also the household. In addition to this, questions related to income from various sources in the past 12 months have also been added. A need to do this was felt since through the fieldwork conducted for the study it was realized that there was a tendency for the respondents to go wrong in estimating these on the spot. Adding cross-checks not only helped surveys in detecting these discrepancies while the field team was conducting the assessments but also but also provided an opportunity to cross question the respondent on these. So if a client gives inaccurate information on income when he or she is asked for it the first time, then these cross checks that will follow later in the questionnaire will be able to help the loan officer to compare whether the responses match for all the income related questions.

**7.2 Consumption:** An entire section on consumption as a means to triangulate the stated income in the tool-kit has been added. The consumption roaster will capture the regular expenses the clients' household incurs. This section has been divided into weekly, monthly and yearly segments. The idea behind designing it in such a way is to accurately capture the expenses that the household incurs on many items. The probability of receiving accurate information is higher when questions on items are broken down into relevant purchase periods. The weekly segment captures information on items that the household spends on a daily basis like fruits and vegetables, dry fruits, dairy products, eggs, sugar.

The monthly segment captures information on items that are purchased once every 10-15 days or in a month. The monthly segment of the roaster captures information on expenditure on items such as cereal products, pulse products, edible oil, meat items, salt & spices, processed food, temptation goods, cooking fuel, toiletries, mobile recharge, entertainment, electricity & water charges, house rent, shop rent, salary paid to a servant or maid or an employee employed, monthly travel expenses (work, relatives etc.) Similarly the yearly segment captures expenditure on items like school & tuition fees, books, geometry set, library charges, stationary charges, school van/bus transport fees, uniforms etc., Festivals, Ceremonies and Religious Events and Expenditure, Weddings and Festivals, Funeral, expenditure on Clothing and Footwear, Medical Expenses – medication, doctor's fee, hospitalization, travel etc., Legal Expenses – fee to advocate, travel to court, etc., repair/ Improvement of House.

**7.3 Outstanding loans of the households (formal & informal):** MFIs usually access credit bureau data to get information on outstanding loans of the clients. However, credit bureau data does not cover informal loans and loans from some other sources. Additionally, it is really hard to get outstanding loan information correctly from a prospective client. Therefore, in order to capture more accurate information a few data check points have been added, as well as the loan roster in such a way that it is easy for the loan officer to keep track of information on different loans. As stated earlier, the purpose for adding cross checks is to improve the reliability of the data. Additionally, the toolkit should be designed in such a way that it is easy for both the loan officer and client to understand. Attention was need to paid to frame the questions in such a way that the client can clearly understand the data being asked for. The design of the loan roster, liabilities and savings and income boxes need to be kept really simple in order for the loan officer to make the calculations side by side as the client answers the questions.

## 8. Recommendations

A robust cash-flow estimation process is a necessary step to ensure responsible lending; however it is not sufficient to solve the issue of over-indebtedness of the client. A concerted effort needs to be put in by various stakeholders at the same time. There are other means which can complement a robust cash flow estimation process to assess debt capacity of potential clients accurately. The study has made two suggestions to make:

(i) **Setting up of a client protection mechanism:** The purpose of the credit bureau is to set up an environment for responsible lending and to guard against over indebtedness. One important aspect of such a framework is client protection. Client protection is not only beneficial to the MFI client but is also beneficial for the organization. In fact, a European Microfinance Platform study which was conducted has found a positive relationship between client protection principles and financial returns. Client protection goes a long way in developing a good understanding between the client and the MFI. Two relevant findings of the above mentioned study were (a) Good practices in transparency, collection practices, ethical staff behavior, complaints resolution, and privacy all coincide with better financial returns. (b) Secondly, ethical staff behavior and collection practices are also associated with higher financial returns.

If an environment for responsible lending is to be advocated, then client protection on two fronts i.e. on the part of the MFI & the credit bureau. Firstly, a proper client protection mechanism needs to be set up by each MFI in order to ensure that issues faced by the clients with regards to repayment, MFI products, behavior of the loan officer and customer service is adequately captured and addressed. This can be ensured through Interactive Voice Response (IVR) calls from the credit bureau. In fact, a study conducted by MIX and Hivos in India which involved four MFIs found that clients were inclined to provide more candid responses to sensitive questions when they perceive themselves to be answering under conditions of anonymity. Such information can then be captured and shared with the concerned institutions which in turn may help in influencing policy which might further help in reducing the problem of over-indebtedness. Secondly, short monthly IVR calls from the SROs to all MFI clients', sharing information on the best practices to follow while borrowing a loan may also go a long way in solving the issue of over indebtedness of the client. The best practices that should be shared during such calls may pertain to providing instructions to clients on giving correct information during loan application. Such calls could also make them aware of the maximum number of loans that they can borrow or the general guidelines in place in the sector for MFIs.

(ii) **Quarterly reports from the credit bureau:** In order to tackle the issue of over indebtedness, the credit bureau can come up with a memo which is updated every quarter with the latest information on clients' financial situation, outstanding loans etc. Given that the credit bureau has all of this data from various lending bodies, this will actually give MFIs and other lenders a proper understanding of the loan situation at the district level and thereby help them in lending responsibly.

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