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# CLIENT-FOCUSED TECHNOLOGY USAGE IN MICROFINANCE INSTITUTIONS

REPORT ON MARCH 2006 SURVEY

microREPORT #77

**AUGUST 2006**

This publication was produced for review by the United States Agency for International Development. It was prepared by DAI Washington.



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# SECTION 1

## EXECUTIVE SUMMARY

As part of the Accelerated Microenterprise Advancement Project (AMAP) Financial Services Knowledge Generation Task Order, DAI and ACCION International conducted research on the penetration and impact of client-focused information and communications technologies (ICTs) on microfinance institutions (MFIs). The study focused on four of the most common client-focused technologies, including personal digital assistants, point-of-sale/smart cards, automated teller machines, and mobile phones. The research included three components: a census/desk study of the current literature about ICT innovations in microfinance; a survey to measure penetration and impact of specific ICTs; and a case study of one or more of the technologies within the scope of the project.

The specific objectives of this research were to:

- Determine the level of usage of ICTs
- Understand the challenges of implementing these technologies
- Identify factors critical to successful implementation, high adoption rates, high level of usage, and growth in usage
- Ascertain if these investments are producing business benefit for the MFIs

This report focuses on the survey. The survey measured the participating institutions' expectations, perceptions, and experiences with client-focused technologies, as reported by the MFIs. To understand their expectations and measure whether those expectations were met, MFIs were asked to rate 10 benefits of using a new ICT innovation using a four-point scale, ranging from 1 (expected/received no benefit) to 4 (expected/received a very substantial benefit). These benefits were:

1. Improved productivity/efficiency
2. Increase in number of customers
3. Increase in savings deposit transactions
4. Standardization/improvement of procedures and processes
5. Improved revenue/profit
6. Better information flow and data quality for management decision making
7. Reach areas beyond the branch network
8. Faster and more accurate credit approval and disbursement process
9. Improved competitive advantage
10. Improved product/service quality

The survey was conducted in February and March 2006 and received 54 responses. See Appendix A for further information on the design and implementation of the survey.

## KEY OBSERVATIONS

The key observations from the study were:

1. **Half of the responding institutions are using one or more client-focused technologies, but a number of these appear to be unable to measure the benefits they are receiving.** Out of 54 respondents, 28 reported that they are currently using one or more of the following technologies: personal digital assistants (PDAs), mobile phones, automated teller machines (ATMs), and point-of-sale (POS)/smart card systems. However, the response rate dropped sharply for the second half of the survey as the questions became more specific to the benefits expected and received from the four technologies: PDAs, POS, ATMs, mobile phones, voice recognition, or biometrics. We believe that the lower response to this section indicates that many MFIs are either in an early stage of usage, not able to measure the benefits, or both, and is not an indicator of survey fatigue.
2. **It is unclear whether PDAs, in particular, are delivering the benefits to MFI operations that previous publications have suggested.** Over the past several years various publications have touted the use of PDAs as a way to reach the rural poor, achieve scale, and increase loan officers' efficiency. These publications suggest great benefits to MFIs but provide no concrete evidence of this.<sup>1</sup> By contrast, the DAI/ACCION survey asked MFIs to report their experience, and the survey results show that across the board, PDAs did not meet expectations. In fact, only one MFI reported an area in which PDAs exceed expectations, and that was "improved competitive advantage." The survey also showed that in four of the 10 areas for which respondents had foreseen potential benefits, PDAs consistently disappointed 60 to 80 percent of the respondents. These areas of potential benefit were improved revenue/profit, improved product/service quality, improved productivity/efficiency, and better information flow/data quality.

Anecdotal evidence suggests that PDAs still hold great appeal for MFIs in Latin America, but success has been mixed. One reason for the limited success may be that MFIs are not maximizing the capabilities of the technology. For example, most respondents reported using PDAs for loan collection, but not for loan application and review, which could have resulted in greater efficiency gains. However, these types of uses might require an MFI to decentralize its credit analysis process, which institutions may not be willing to do.

3. **The greater the size of the client base and the larger the loan portfolio, the higher the ratio of IT-related spending to an MFI's total operating expenses.** In the U.S. commercial banking sector, the recommended average annual investment in IT is 7 percent of operating expenses (OE). The survey revealed that MFIs with the largest client bases (more than 10,000 clients) and the largest portfolios (having a total outstanding loan value of more than \$1,000,000)<sup>2</sup> tended to have higher levels of investment in IT with almost half spending 7 percent or more annually. Over all institution types, the AMAP survey shows that 31 percent of responding institutions spend 4–6 percent of their operating expenses on IT, while 26 percent spend less than 4 percent.

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<sup>1</sup> Based on the census/desk research DAI performed to review the current literature on client-focused technologies.

<sup>2</sup> All figures are in U.S. dollars.

4. **Certain organization types appear more likely to invest more heavily in IT.** Only 38 percent of responding nongovernmental organizations are investing 7 percent or more of their operating expenses on IT, while 80 percent of the responding commercial banks and 86 percent of the responding microfinance banks are investing 7 percent or more.

Further analysis and charts are provided in the main section of this report.

## SUMMARY OF SURVEY RESULTS

1. **MFIs have high expectations that they will benefit from the use of ICT technologies, especially mobile phones.** In general, the survey revealed that MFIs have high expectations across the board for the types of gains to be made from the uptake and use of these technologies. In the case of PDAs, 80 percent of respondents expected very high benefits in six of the 10 areas:

- Improved product/service quality
- Standardization of procedures and processes
- Improved productivity/efficiency
- Better information flow/data quality
- Improved competitive advantage
- Improved revenue/profit

For mobile phones, 100 percent of respondents expected gains in four out of the 10 projected benefit areas. These include reaching areas beyond the branch network, improved competitive advantage, standardization of procedures and processes, and improved productivity/efficiency.

2. **ATMs may be the only technology proven to deliver value to MFIs.** ATMs appear to be performing the best at meeting or exceeding MFIs' expectations of benefits, as this report describes later in more detail. ATMs are the technology most used today by MFIs (15 out of 42 respondents), in part because customers have begun to expect all types of financial institutions to offer ATMs and because MFIs report that their main competitors are offering ATM services.
3. **The use of mobile phones by MFIs is growing the fastest of all the technologies.** Out of the four technologies studied, mobile phones are the newest. Yet already one-third (14 out of 42) of survey respondents are currently using them. There is a lot of interest surrounding the potential of mobile phones to truly bridge the digital divide, as evidenced by articles in mainstream media sources such as the *New York Times*, the *Washington Post*, and the *Economist*.<sup>3</sup> However, more time may be needed to ascertain the true impact of this technology as more MFIs begin to use mobile phones and their experiences are studied.

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<sup>3</sup> John Markoff, "Microsoft Would Put Poor Online by Cell Phone," *New York Times*, January 30, 2006; Kevin Sullivan, "In War-Torn Congo, Going Wireless to Reach Home," *Washington Post*, July 9, 2006; "Calling Across the Divide," *Economist*, March 10, 2005; "Calling An End to Poverty," *Economist*, July 7, 2005; Tom Easton, "Micro No More," *Economist*, November 3, 2005.

4. **PDA's and POS/Smart cards are the next technologies in which investment is likely to occur.** Sixty percent of respondents answered that they are not currently using PDAs or a POS/smart card solution but plan to invest in one or the other, or both, during the coming year. At first glance this result may seem surprising, given the PDAs' disappointing performance in the survey, but PDAs still garner much attention in the literature. Based on the response to the POS questions in the survey, there is optimism about the benefits of POS solutions.
5. **Commercial and microfinance banks are adopting client-focused technologies in higher numbers than non-bank financial institutions (NBFIs) and nongovernmental organizations (NGOs).** Eight private commercial banks and eight microfinance banks were surveyed about their use of client-focused technologies. Of those, five commercial banks and seven microfinance banks responded that they have adopted and are using client-focused technologies today. More importantly, they report that they are adopting multiple technologies, as opposed to investing in a single technology.

By contrast, among the 12 NBFIs and 13 NGO MFIs surveyed, the uptake of client-focused technologies was much lower. Only 5 NBFIs and 5 NGOs reported using client-focused technology. Most surprising was the fact that the five NGOs had adopted only a single technology out of the four—mobile telephones.

The table below shows a breakdown of the different types of MFIs using client-focused technologies. The total instances of adoption of client-focused technologies may be higher than the unique number of institutions because some institutions are using more than one technology. Two organization types—state-owned banks and housing/building societies—are not listed because the one state-owned bank that responded to the survey did not answer this survey question, and no housing/building societies responded to the survey.

**TABLE 1. TYPES OF MFIS ADOPTING SPECIFIC TECHNOLOGIES**

Technology Adopted	Number of Private Commercial Banks	Number of Microfinance Banks	Number of NGOs	Number of Non-Bank Financial Institutions	Number of Savings and Credit Cooperatives / Credit Unions	Number of Other Institutions <sup>4</sup>
PDA's	1	1	0	1	1	4
POS/Smart Card	3	2	0			
ATM	5	5	0	1	2	2
Mobile Phone	3	2	5	1	1	4
Voice Recognition	0	0	0	1		
Biometrics (fingerprint identification)	1	1	0	1		

<sup>4</sup> The "other institutions" category includes three rural banks, a donor, a government body, and a national federation of microfinance associations.

Technology Adopted	Number of Private Commercial Banks	Number of Microfinance Banks	Number of NGOs	Number of Non-Bank Financial Institutions	Number of Savings and Credit Cooperatives / Credit Unions	Number of Other Institutions <sup>4</sup>
Total Instances of Adoption of Client-Focused Technologies	13	11	5	5	4	10
Total Number of Institutions Surveyed	8	8	13	12	4	12
Total Number of Institutions Using One or More Client-Focused Technologies	5	7	5	3	3	6

## CONCLUSION

In general, the survey found that half of the responding institutions are using one or more client-focused technologies. A number of these, however, appear to be unable to measure the benefits they are receiving. In at least some cases, this may be because they are still in an early stage of use. Many did not attain the average annual investment in IT recommended by the U.S. commercial banking sector, which is 7 percent of operating expenses (OE). The institutions most likely to be investing strongly in information technology—at 7 percent or more of OE annually—are those with a high total loan value outstanding (more than \$1 million) and a large client base (10,000 or more clients). The survey also found that commercial and microfinance banks are more likely to be investing 7 percent or more of OE annually and are the leading adopters of multiple technologies.

MFIs had high expectations that many of these new technologies would substantially benefit their bottom lines, but so far, the record is mixed. ATMs appear to be the best performers in delivering on those benefits. Point-of-sale technology, which based on our limited survey is one of the least used technologies, nevertheless appears to be the most interesting of these technologies in terms of increasing productivity and revenue. However, more data are needed to gain a clearer idea of MFIs' experience with POS systems. PDAs appear to be less successful at delivering business benefits, contrary to what one might believe from the literature. Mobile phones also showed mixed results. However, since the latter technology is the least mature of the four studied, it is worthwhile to continue to monitor and evaluate mobile phone implementations.

With additional research drawing on a wider sample—especially if more responses can be generated to the technology-specific sections of the survey—it would be possible to better quantify the benefits or deficiencies MFIs have experienced, understand the contributing factors, and draw firmer conclusions. In the next phase of research, DAI and ACCION will conduct in-depth interviews with a sample of MFIs, asking more specific questions about the factors that may be critical to successful client-focused technology implementations and the challenges they have faced, as well as posing detailed questions based on their survey answers. This should make it possible to gain more insight into the topics that have already been addressed in a preliminary way by this study.



# SECTION 2

## INTRODUCTION

In today's fast-changing, competitive microfinance industry, many microfinance institutions (MFIs) are analyzing the potential benefits to be derived from information and communications technology (ICT). This focus on ICT has taken on even greater urgency as institutions struggle to serve harder-to-reach clients efficiently, particularly in rural areas. In recent years, significant amounts of institutional capital and donor funds have been invested in overcoming the technology and infrastructure barriers that have confounded microfinance practitioners. Unfortunately, the results of many of these investments have disappointed donors, users, management, and ICT professionals alike.

With so much money spent on ICT, why has the microfinance industry been largely unable to demonstrate significant results? The blame for poor results does not necessarily lie with the technology. The answers fall into a few very practical categories that repeat across institutions and countries. They include:

- Common problems of MFIs that affect their ability to deploy and manage advanced technology
- Cost versus benefits of ICT investments (for example, are MFIs receiving commensurate value or impact for the investment made in the new technology?)
- Issues of theory versus practice inherent in the solutions themselves (are they really appropriate to the adopter's situation?)
- Infrastructure limitations in developing-country environments that hinder deployment of a new ICT

As part of the Accelerated Microenterprise Advancement Project (AMAP) Financial Services Knowledge Generation Task Order, DAI and ACCION International conducted research on the penetration and effectiveness of client-focused ICTs on MFIs, with a specific focus on personal digital assistants (PDAs), point-of-sale (POS)/smart cards, automated teller machines (ATMs), and mobile phones. The research included three components: a census/desk study of the current literature on ICT innovations in microfinance; a survey to measure penetration and impact of specific ICTs; and a case study of one or more of the technologies within the scope of the project.

The specific objectives of this research were to:

- Determine the level of usage of ICTs by microfinance institutions
- Understand the challenges of implementing these technologies
- Identify factors critical to successful implementation, high adoption rates, high levels of usage, and growth in usage
- Ascertain whether the investments are producing business benefits for the MFIs

## PROFILES OF SURVEY RESPONDENTS

A survey of microfinance providers was conducted in February and March 2006, which received a total of 54 responses. See Appendix A for further information on the design and implementation of the survey.

Respondents are from the following 21 countries, as shown in Table 2:

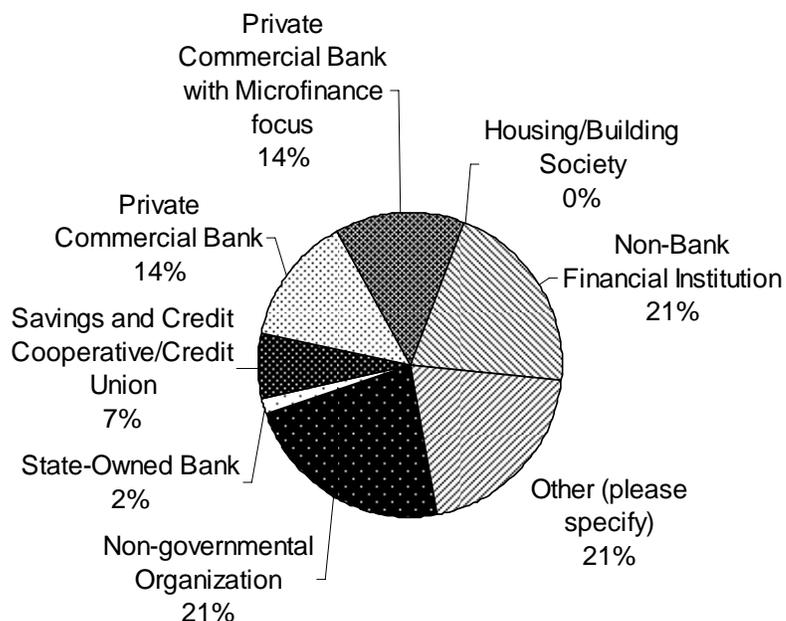
**TABLE 2. COUNTRIES OF ORIGIN FOR QUESTIONNAIRE RESPONSES**

Africa	Kenya, Malawi, Tanzania, Senegal, South Africa, Uganda
LAC	Bolivia, Ecuador, Haiti, Mexico, Paraguay
Asia	Bangladesh, India, Philippines, Tajikistan
MENA	Lebanon, Morocco
Eastern Europe/NIS	Albania, Moldova, Russia, Serbia and Montenegro

LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; NIS = New Independent States

The total breakdown of respondents by organization type is shown in Figure 1:

**FIGURE 1. RESPONDENTS BY ORGANIZATION TYPE**



**Note:** The “Other” category included several rural banks, a donor, a government body, and a national federation of microcredit associations.

## LEVEL OF IT INVESTMENT BY MFIS

Overall, the survey showed that the greater the size of an MFI's client base and the larger its loan portfolio (measured by total value of loans outstanding), the higher the ratio of IT-related annual spending to total operating expenses (OE). In the U.S. commercial banking sector, the recommended average annual investment in IT is 7 percent of operating expenses. By comparison, MFIs with more than 10,000 clients and outstanding loan portfolios greater than \$1,000,000 were most likely to invest 7 percent or more of their OE in IT annually.

Figure 2 shows how the size of respondents' IT investment (as a percentage of their operating expenses) related to the size of their client base. Half the MFIs with a client base larger than 10,000 clients are investing 7 percent or more of their OE in IT. MFIs with a large client base are likely to have a greater need to invest in IT, in order to manage the volume of transactions and scale their operations more efficiently as the client base grows.

**FIGURE 2. TOTAL ANNUAL IT INVESTMENT AS A PERCENTAGE OF MFI OPERATING EXPENSES BY SIZE OF CLIENT BASE**

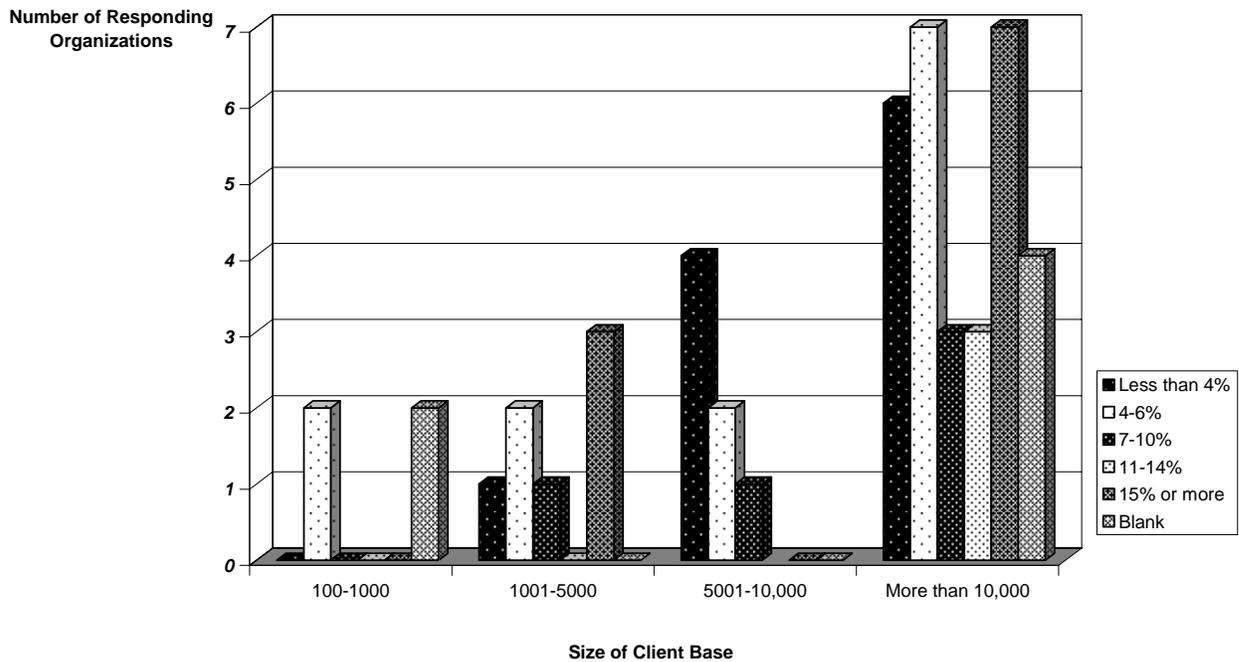


Figure 3 shows how the size of respondents' IT investments relates to the total amount of their outstanding loans. The AMAP survey shows that 31 percent of responding institutions spend 4–6 percent of their operating expenses on IT, while 26 percent spend less than 4 percent. Among the MFIs with the largest portfolios, however, almost half spend 7 percent or more, while one-fourth spend 15 percent or more. These MFIs potentially have more funds available than the smaller institutions, and have more at stake as well; it is likely that they therefore feel more incentive to invest in IT.

**FIGURE 3. TOTAL ANNUAL IT INVESTMENT AS A PERCENTAGE OF MFI OPERATING EXPENSES BY TOTAL LOANS OUTSTANDING**

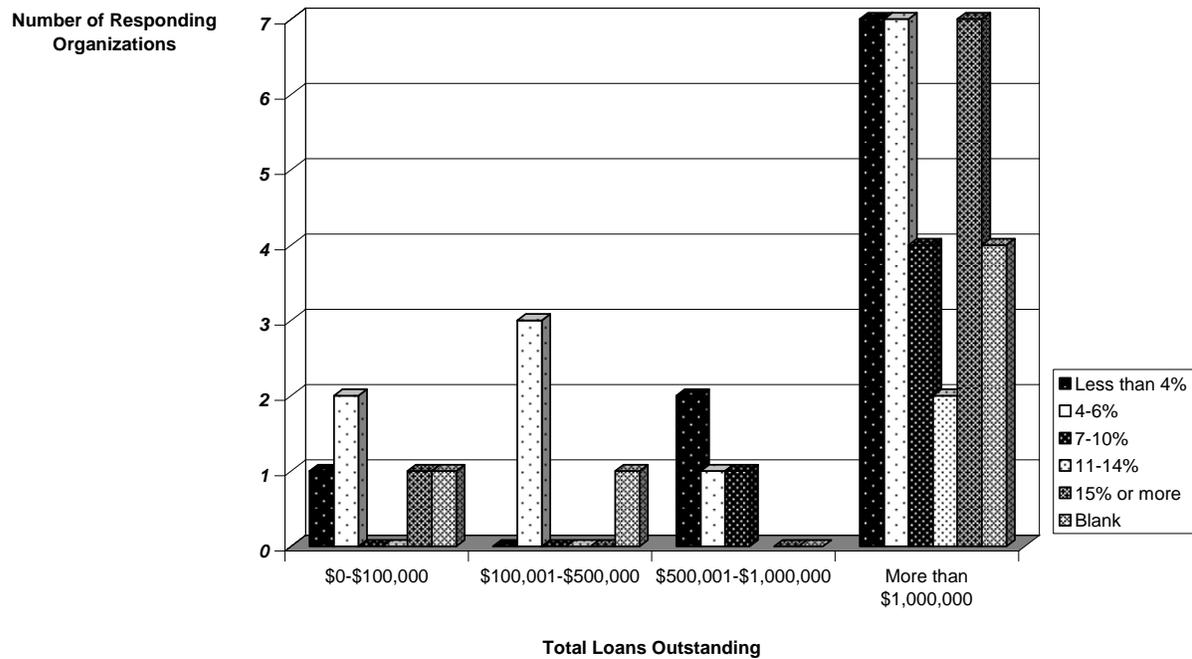


Figure 4 shows how MFIs' total annual IT investments relate to the average size of the loans they make. Most institutions making smaller loans are not investing a high percentage of their operating expenses in IT:

**FIGURE 4. TOTAL ANNUAL IT INVESTMENT AS A PERCENTAGE OF MFI OPERATING EXPENSES BY AVERAGE SIZE OF LOAN**

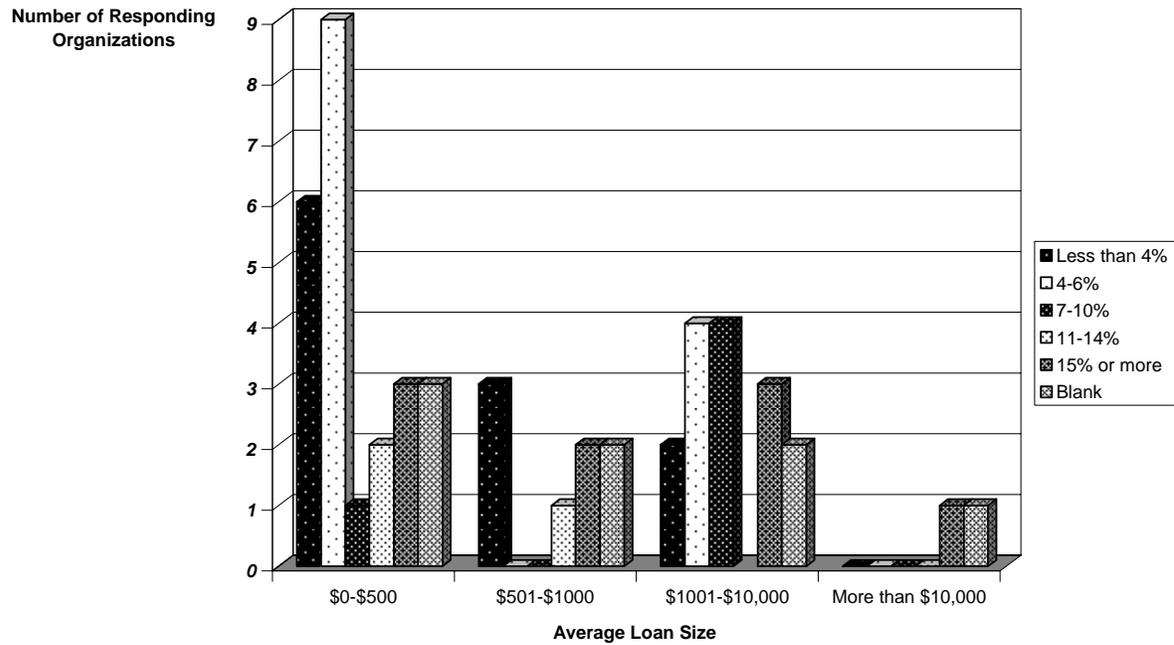
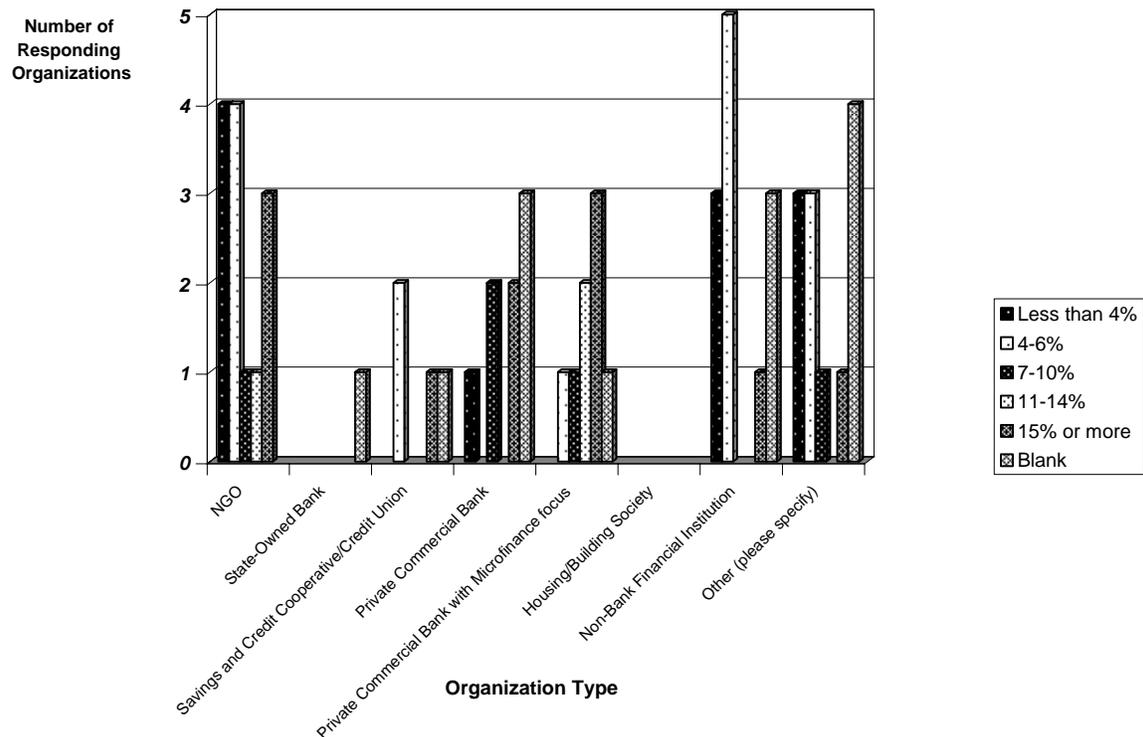


Figure 5 shows how the total amount of MFIs' annual IT investment relates with the type of organization they belong to. While NGOs are able to invest 7 percent or more of their operating expenses in IT, only 38 percent of responding NGOs are investing this amount, while 80 percent of responding commercial banks and 86 percent of responding microfinance banks are investing 7 percent or more. This appears to be consistent with the earlier finding that commercial and microfinance banks are adopting client-focused technologies in greater numbers than NGOs and NBFIs in particular. Of the responding NBFIs, 89 percent are spending less than 7 percent of their OE on IT.

**FIGURE 5. TOTAL ANNUAL IT INVESTMENT AS A PERCENTAGE OF OPERATING EXPENSES BY ORGANIZATION TYPE**



# SECTION 3

## SURVEY RESULTS BY TECHNOLOGY

### PERSONAL DIGITAL ASSISTANTS (PDAs)

For at least the past seven years, MFIs have been implementing the use of PDAs as a way to raise loan officers' productivity, shorten loan approval time, and reduce costs. As reported in the survey, MFIs are using PDAs for the following types of transactions:

**TABLE 3. TRANSACTIONS FOR WHICH MFIS ARE USING PDAS**

Transaction Type	Response Total
Loan applications	2
Loan review and approval	1
Collections	6
Other (please specify)	2
<b>Total Respondents</b>	<b>6</b>

All respondents are using PDAs for collections, which might imply that this is the primary function of PDAs. It would be worth exploring why MFIs are not making greater use of the power of PDAs to process loan applications, as PDAs enable loan officers to reach clients who reside outside of the branch network and to broaden their customer base. Such a change could potentially lead to increased revenues and profits and a higher return on the MFIs' investment in the PDA solution. In addition, the use of PDAs to prequalify clients may also lead to improved efficiency in loan processing. Of the "Other" types of transaction usages, one MFI reported that they use PDAs for account spot checking and the second reported using it for scoring.

### PDA BENEFIT ANALYSIS

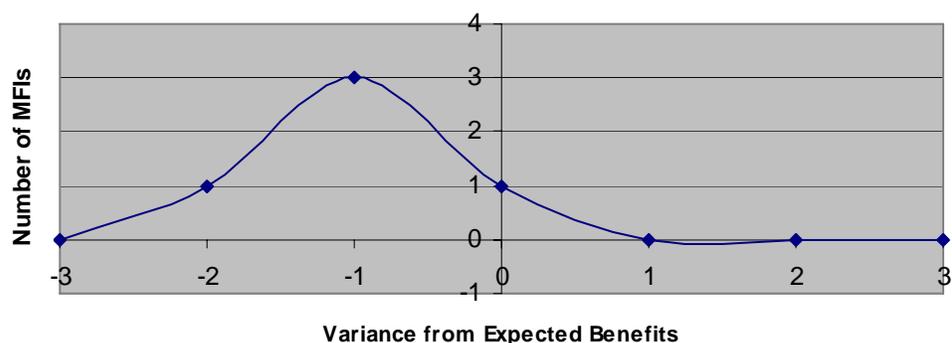
Since PDAs were one of the first client-focused technologies to be implemented by MFIs on a wider scale and are thus the technology with which MFIs have the most experience, one might assume that many of the challenges associated with PDAs have already been encountered and dealt with. It would be expected that as a result, MFIs would have evolved more mature PDA solutions and would report a relatively high satisfaction level. However, the survey results showed that PDAs are not living up to MFIs' expectations. MFIs were most dissatisfied with the results of PDA adoption as regards the following projected benefits:

**TABLE 4. SHORTFALL IN EXPECTED BENEFITS FOR PDAS**

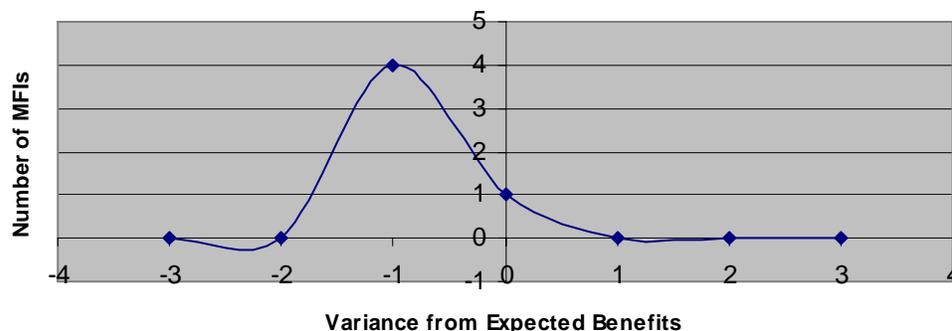
Benefit Expected	% of Respondents for Whom Benefit Received Was Below Expectations
Improved Revenue/Profit	80
Improved Product/Service Quality	80
Improved Productivity/Efficiency	60
Better Information Flow/Data Quality	60

Figures 6 and 7 below illustrate the two areas in which the failure of PDAs to live up to their hype has been the most pronounced—namely, improved revenue/profit and improved product/service quality.

**FIGURE 6. PDA BENEFIT—IMPROVED REVENUE/PROFIT**



**FIGURE 7. PDA BENEFIT: IMPROVED PRODUCT/SERVICE QUALITY**



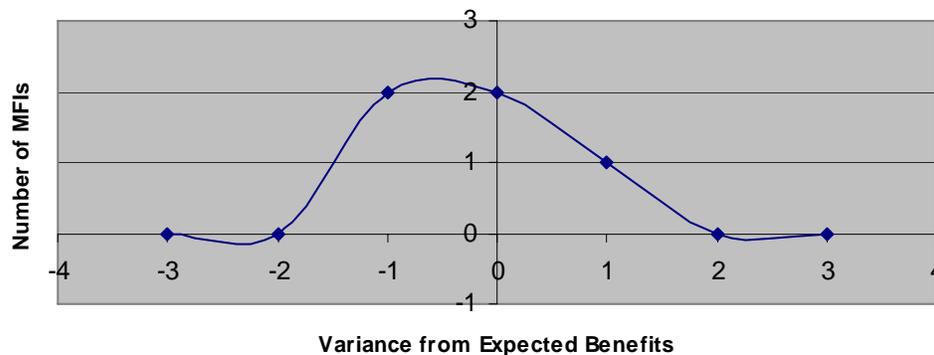
The two charts show the number of MFI respondents and to what degree their benefit expectations were met. When the curve is left of the vertical axis, it indicates that the technology has not delivered the expected benefit. When the curve is to the right of the vertical axis, it indicates that the technology has exceeded the the MFIs’ expectations. The zero point on the Y axis indicates that MFIs have received exactly the degree of benefit they expected. For example, in the above chart for the PDA benefit “improved product/service quality,” one MFI experienced zero deficiency. This means the

MFI received exactly the degree of benefit it anticipated. By contrast, four MFIs experienced a benefit deficiency of one. (Note that if the MFI did not provide an answer we did not count it.)

If more data were available, it would be interesting to compare the results for “improved revenue/profit” for the MFIs using PDAs only for collections versus the results for those using PDAs for loan applications and approvals. In theory, the latter group would likely report higher satisfaction levels in the area of improved revenue/profit, and that PDAs met or exceeded their expectations, because they are exercising the PDAs more fully—and in a way that should have directly enhanced their revenues and bottom line.

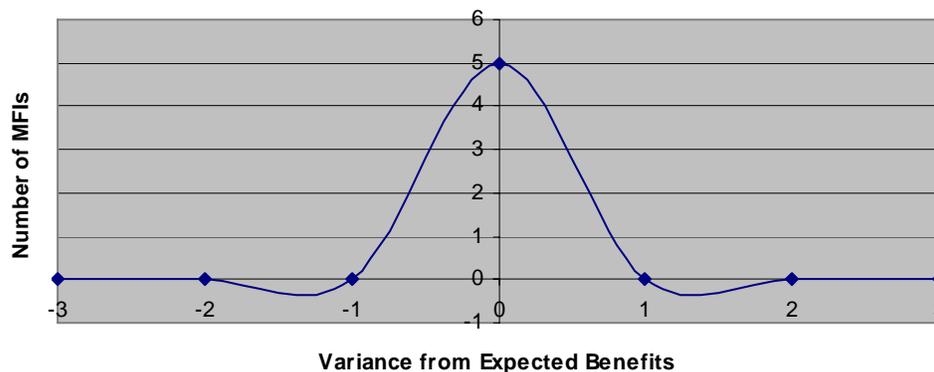
The PDA exceeded expectations in only one benefit area and for only one client, as shown in Figure 8: improved competitive advantage.

**FIGURE 8. PDA BENEFIT: IMPROVED COMPETITIVE ADVANTAGE**



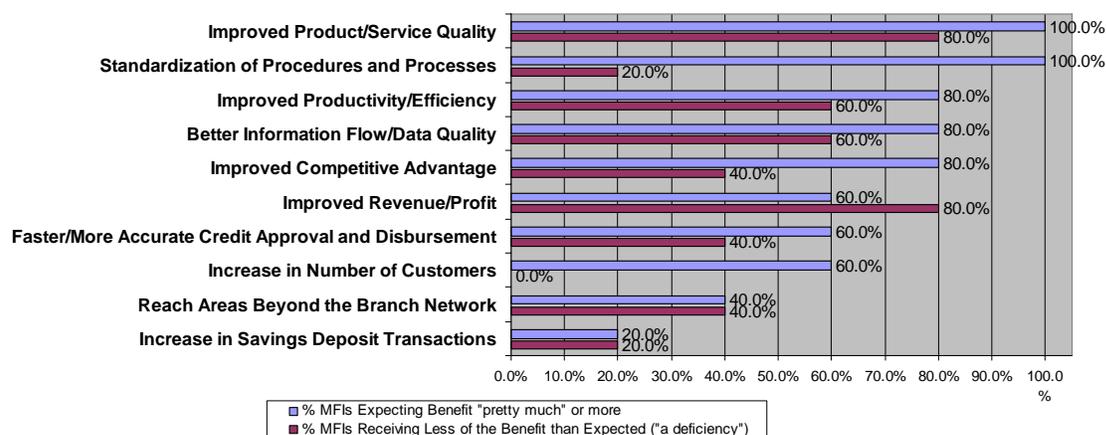
The report on PDAs is not all bad. As shown below, PDAs met MFIs’ expectations for most of the respondents in three areas: increase in savings deposit transactions, standardization/improvement of procedures and processes, and (as shown in Figure 9) increase in number of customers.

**FIGURE 9. PDA BENEFIT: INCREASE IN NUMBER OF CUSTOMERS**



To give a sense of the respondents’ overall satisfaction with PDAs, Figure 10, the “benefit comparison” chart, shows the percentage of respondents who expected to benefit “pretty much” or “a whole lot” from adopting PDAs, as well as the percentage of respondents who received less benefit than they expected (experienced a deficiency), for each benefit:

**FIGURE 10. PDAS: BENEFITS EXPECTED VERSUS THOSE RECEIVED**



The benefit comparison chart shows that most MFIs did not see an improvement in revenue/profit from the PDA as expected. In fact, this chart shows a high degree of disappointment with the use of PDAs.

## MOBILE PHONES

Mobile phones first became available over 10 years ago and have become ubiquitous in the developed world. They are now being adopted by the poor in developing countries in increasing numbers—in fact, in some of these countries they are approaching the same penetration rates as those found in developed countries.<sup>5</sup> As a result, lower-income people who never had access to traditional land lines are now using cell phones in growing numbers, as are the institutions that serve them. Media discussions touting the promise of mobile phones to bridge the digital divide are generating much excitement within the microfinance sector about the potential of mobile phones, which MFIs believe will allow them to reach poor clients and deliver services to them more easily.

The survey reported on the experiences of pioneering MFIs who have implemented a mobile phone solution. Fourteen MFIs reported using mobile phones, yet the number of responses to the survey questions that were specific to mobile phones ranged between five and seven. The reason for this difference is unknown. Some of the MFIs may be in too early a stage of implementation to measure the actual results/benefits of the technology; some may use the mobile phone only for communications; and some may have simply chosen to not answer these questions.

Table 5 lists the types of transactions for which MFIs are using mobile phones:

<sup>5</sup> International Telecommunication Union, "Free Statistics", 26 May 2006, [http://www.itu.int/ITU-D/ict/statistics/at\\_glance/cellular05.pdf](http://www.itu.int/ITU-D/ict/statistics/at_glance/cellular05.pdf). (August 31, 2006).

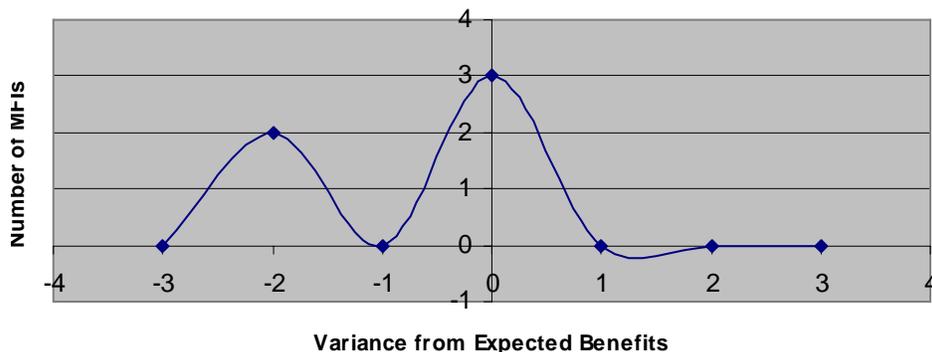
**TABLE 5. TRANSACTIONS FOR WHICH MFIS ARE USING MOBILE PHONES**

Transaction Type	Response Total
Payment for goods and services	2
Cash back	1
Deposits	0
Money transfers within own account	1
Money transfers between two client accounts	1
Check bank account balance	2
Airtime transfers between two client accounts	2
Overseas remittances	1
Other (please specify)	4
<b>Total respondents</b>	<b>6</b>

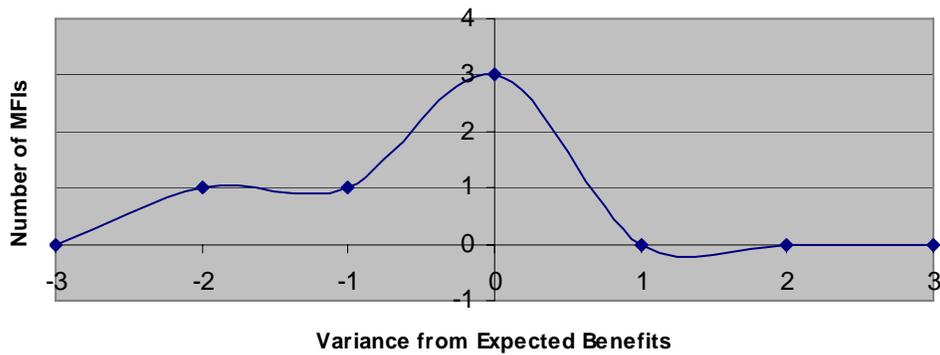
Of the four “Other” responses to the question about transaction uses, two MFIs reported using mobile phones for loan payments and one for communication. The fourth answer appears to have been an error, since it described a PDA transaction.

### MOBILE PHONE BENEFIT ANALYSIS

Out of the four technologies surveyed, the mobile phone inspired the highest expectations in MFIs. The survey, however, shows that their experience has been uneven, as can be seen in the following two graphs for the anticipated benefits of improved competitive advantage and improved productivity/efficiency. This uneven success could be attributed to MFIs’ still struggling with the technology learning curve surrounding mobile phones, but the survey did not delve into the reasons for the missed expectations.

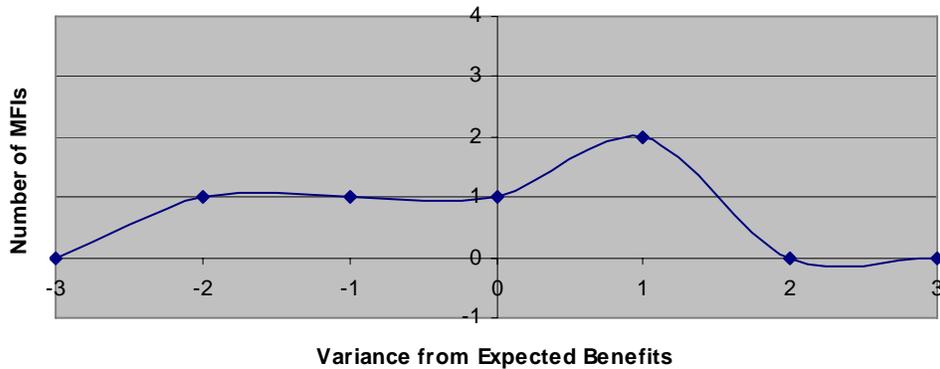
**FIGURE 11. MOBILE PHONE BENEFIT: IMPROVED COMPETITIVE ADVANTAGE**

**FIGURE 12. MOBILE PHONE BENEFIT: IMPROVED PRODUCTIVITY/EFFICIENCY**



Mobile phones exceeded expectations in only two areas of potential benefits—increase in number of customers and increase in savings deposit transactions—and only for some MFIs, as shown in Figures 13 and 14.

**FIGURE 13. MOBILE PHONE BENEFIT: INCREASE IN NUMBER OF CUSTOMERS**



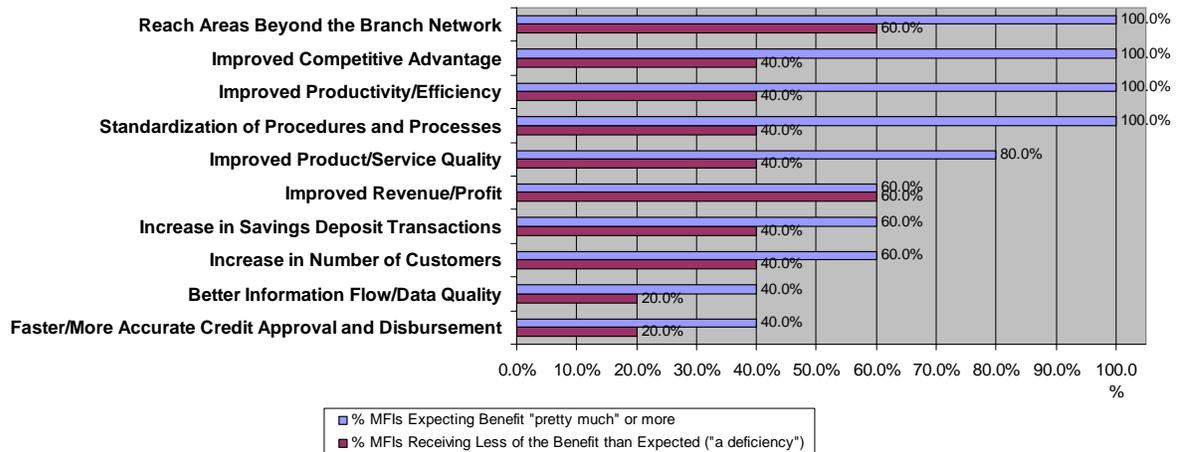
**FIGURE 14. MOBILE PHONE BENEFIT: INCREASE IN SAVINGS DEPOSIT TRANSACTIONS**



In the mobile phone benefit comparison chart below, the original high expectations for mobile phones are apparent, with 100 percent of respondents having projected high benefits in four domains: reach areas beyond the branch network, improved competitive advantage, improved productivity/efficiency,

and standardization of procedures and processes. However, the benefit comparison shows that the MFIs' results have been disappointing to date, with many benefit areas not meeting MFI expectations.

**FIGURE 15. MOBILE PHONES: BENEFITS EXPECTED VERSUS THOSE RECEIVED**



## AUTOMATIC TELLER MACHINES (ATMS)

ATMs are the technology most used by both MFIs and their competitors, as reported in the survey. Table 6 lists the types of transactions that are commonly made by MFIs using ATMs.

Transaction Type	Response Total
Payment for goods and services	4
Cash back	13
Deposits	2
Transfers within own account	4
Transfers between two client accounts	4
Checking account balance	12
Other (please specify)	4
<b>Total Respondents</b>	<b>14</b>

The five responses to “Other” transaction types were:

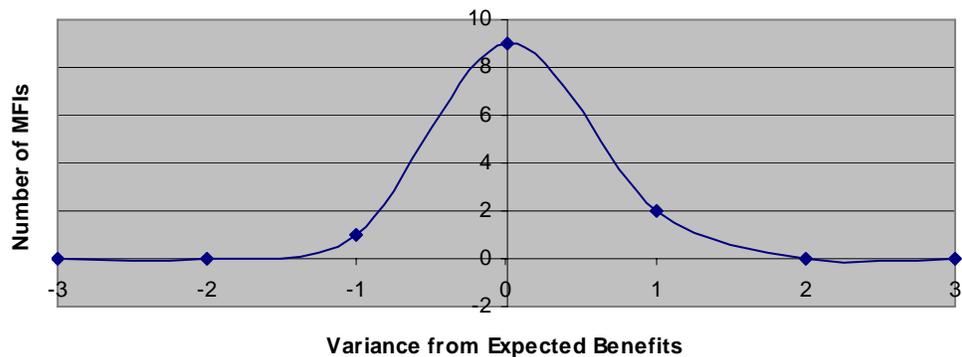
- Transfer to other client's smart cards
- Print smart card transaction statement
- Purchases on other banks' ATMs, and visa versa
- Payment of utility
- Print mini-statement

Deposits were the least common transaction made by MFI clients using the ATM. The reasons for this are unknown, but we speculate that because the ATMs’ cash-back function, which is the most common transaction offered according to the survey, requires the MFI to transport and supply cash to each ATM, the MFIs have no issue with handling cash. It is more probable that clients either do not demand this type of transaction from an ATM or do not know about it. It could be that while clients trust ATMs to dispense money, they do not feel the same assurance that ATMs will deposit the funds into their accounts.

### ATM BENEFIT ANALYSIS

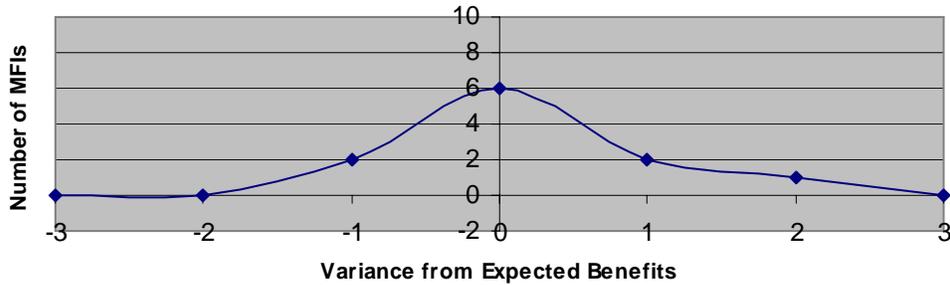
Out of the four technologies surveyed, ATMs were the most successful at meeting and even exceeding expectations, doing so in nearly all 10 benefit areas. Probably the best-performing benefit was the increase in savings deposit transactions.

**FIGURE 16. ATM BENEFIT: INCREASE IN SAVINGS DEPOSIT TRANSACTIONS**



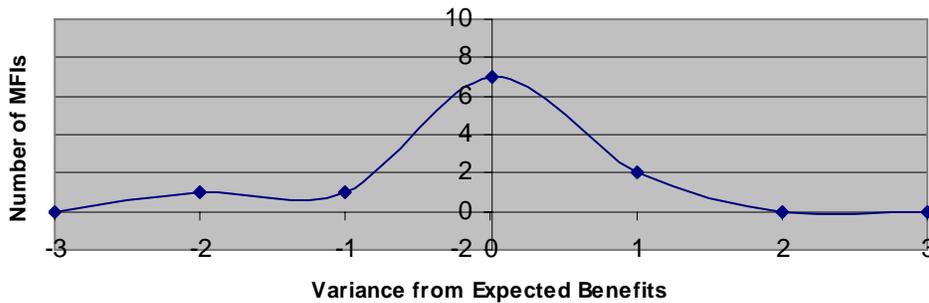
MFIs appear to have been most surprised by the results for one potential benefit area—a faster and more accurate credit approval and disbursement process. Expectations for receiving this benefit were relatively low, as can be seen later in the benefit comparison chart, but ATMs exceeded MFI expectations in a few cases:

**FIGURE 17. ATM BENEFIT: FASTER AND MORE ACCURATE CREDIT APPROVAL AND DISBURSEMENT PROCESS**



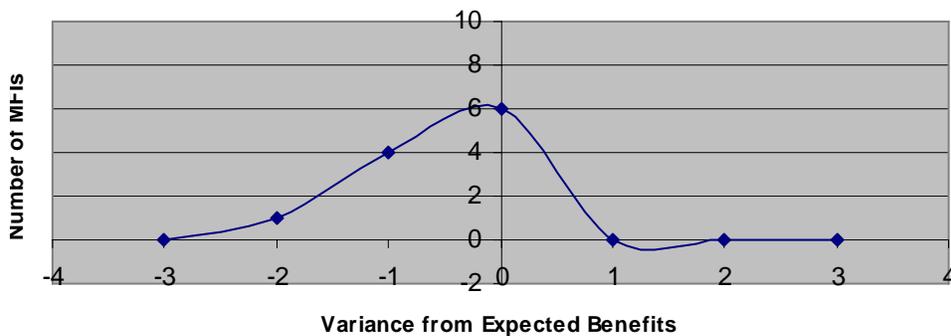
With respect to another benefit area—reaching areas beyond the branch network—there was mostly satisfaction but also some variance in both directions.

**FIGURE 18. ATM BENEFIT: REACH AREAS BEYOND THE BRANCH NETWORK**



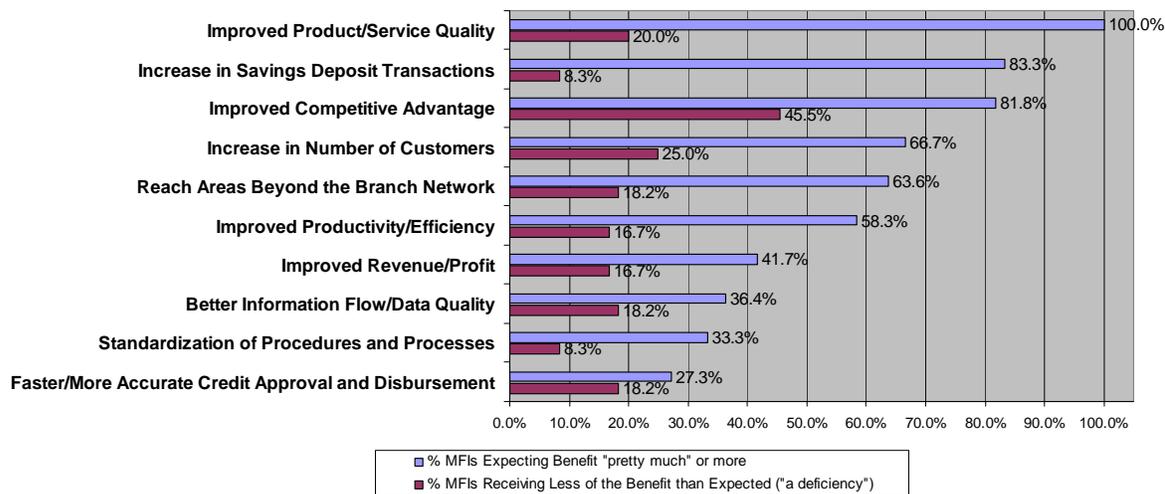
ATMs were least successful in contributing to improved competitive advantage for MFIs; in this area approximately half the MFIs reported a deficiency. One possible explanation might be that in more competitive markets, clients expect financial institutions to provide ATMs as a standard service, leading more and more financial institutions to implement them, thereby reducing the competitive advantage of the ATM adopters.

**FIGURE 19. ATM BENEFIT: IMPROVED COMPETITIVE ADVANTAGE**



Overall, MFIs had high expectations of ATMs and for the most part, ATMs appear to have delivered the promised benefits. As compared to PDAs and mobile phones, ATMs performed the best at delivering the expected benefits and had the lowest overall percentage of MFIs experiencing deficiencies, as can easily be seen by the length of the bars in the following chart:

**FIGURE 20. ATMS: BENEFITS EXPECTED VERSUS THOSE RECEIVED**



## POINT-OF-SALE (POS)

MFIs appear to be using point-of-sale systems for a broader variety of transactions than they are ATMs.

**TABLE 7. TRANSACTIONS FOR WHICH MFIS ARE USING POS SYSTEMS**

Transaction Type	Response Total
Payment for goods and services	4
Cash back	3
Deposits	2
Transfers within own account	2
Transfers between two client accounts	2
Other (please specify)	1
<b>Total Respondents</b>	<b>4</b>

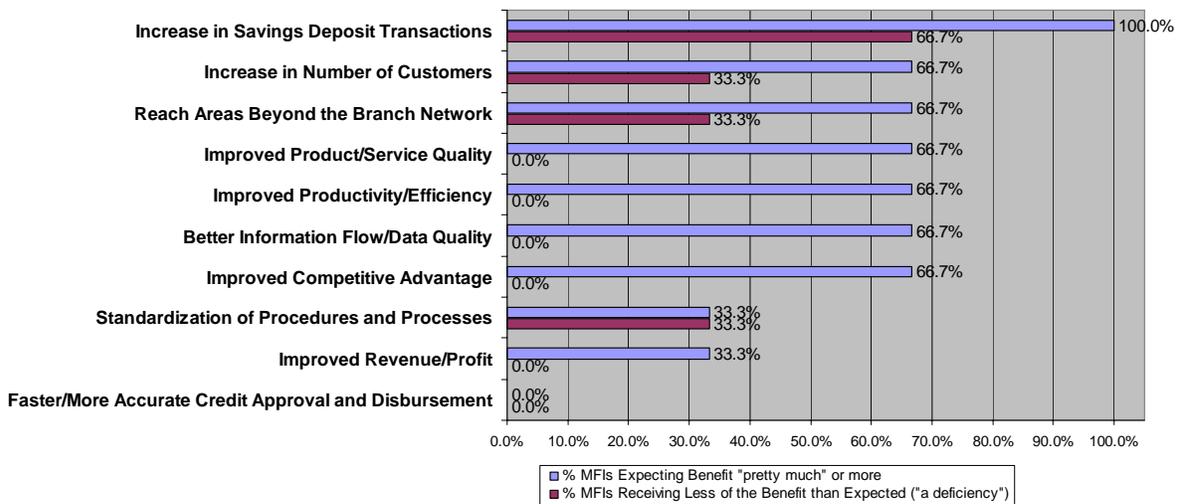
The single “Other” response mentioned using POS systems for balance enquiries, savings, and payment of wages.

Half the MFI respondents accept deposits with their POS system, whereas only two out of the 14 MFIs who responded are accepting deposits through their ATMs. With just four responses to the POS questions about the types of transactions people are performing, it is difficult to know whether this difference in service is significant. However, one main difference between these two technologies is that the point-of-sale device is used by other merchants with staff on-site where the POS is located. Clients may feel more comfortable with POS because it allows them to easily retrieve their check from a live human being, the merchant’s employee, as opposed to the ATM, if there is a problem with the deposit transaction. If that is the case, then it only makes sense to offer the deposit transaction on POS systems, not ATMs. Both systems issue receipts for the transaction, but as far as deposits are concerned, the human element may be a key factor in establishing trust between a client and the technology.

### POS BENEFIT ANALYSIS

The few MFI respondents in this area seemed very satisfied with their POS solution. But as there were only three responses to the POS survey questions about expected benefits, more data are needed to enable better analysis of whether POS is really delivering value to MFIs. The benefit comparison chart for POS is below:

**FIGURE 21. POS: BENEFITS EXPECTED VERSUS THOSE RECEIVED**



As can be seen in the chart, POS appears to have performed very well, delivering without disappointment in six out of the 10 benefit areas. However, without more data it is too early to say if these positive trends truly indicate that POS delivers solid benefits to MFIs.



# SECTION 4

## CONCLUSIONS

In general, the survey found that half of the responding institutions are using one or more client-focused technologies. A number of these, however, appear to be unable to measure the benefits they are receiving. In at least some cases, this may be because they are still in an early stage of use. Out of 54 respondents, 28 reported that they are currently using one or more of the following technologies: PDAs, POS, ATMs, mobile phones, voice recognition, or biometrics. Many did not attain the average annual investment in IT recommended by the U.S. commercial banking sector, which is 7 percent of operating expenses (OE). The institutions most likely to invest strongly in information technology—at 7 percent or more of OE annually—are those with a high total loan value outstanding (more than \$1 million) and a large client base (10,000 or more clients). This pattern is most likely due to these MFIs' greater need to increase efficiency, coupled with their desire to continue to scale up and to protect their expanding portfolios. The survey also found that commercial and microfinance banks are more likely to invest 7 percent or more of OE annually and lead in the adoption of multiple technologies.

MFIs had high expectations that many of these new technologies would substantially benefit their bottom lines, but so far, the record is mixed. ATMs appear to be the best performers in delivering on those benefits. Point-of-sale technology, which based on our limited survey is one of the least used technologies, nevertheless appears to be the most interesting of these technologies in terms of increasing productivity and revenue. However, more data are needed to gain a clearer idea of MFIs' experience with POS systems. PDAs appear to be less successful at delivering business benefits, contrary to what one might believe from the literature. Mobile phones also showed mixed results. However, since the latter technology is the least mature of the four studied, it is worthwhile to continue to monitor and evaluate mobile phone implementations as more MFIs “go live” with these solutions.

With additional research drawing on a wider sample—especially if more responses can be generated to the technology-specific sections of the survey—it would be possible to better quantify the benefits or deficiencies MFIs have experienced, understand the contributing factors, and draw firmer conclusions. In the next phase of research, DAI and ACCION will conduct in-depth interviews with a sample of MFIs, asking them more specific questions about the factors that may be critical to successful client-focused technology implementations and the challenges they have faced, as well as posing detailed questions based on their survey answers. This should make it possible to gain more insight into the topics that have already been addressed in a preliminary way by this study.



# APPENDIX A

## SURVEY DESIGN AND IMPLEMENTATION

DAI has had previous success with using surveys to compile the experiences of many organizations in a way permitting numerical analysis of the results. The goal was to conduct a statistically significant survey that would help determine the true impact and value of these technologies by adding quantitative information to the large body of case studies on this topic that discuss benefits but do not measure them.

The technologies analyzed in the survey include:

- Hand-held devices (personal digital assistants or PDAs)
- Smart cards/point-of-sale (POS) technology
- ATMs
- Mobile phones
- Biometrics
- Voice recognition

Since biometrics and voice recognition are more rarely used by MFIs, the survey simply asked respondents to indicate their usage and plans, if any, to implement these technologies. The survey delved more deeply into the first four technologies, which are the ones that MFIs are most likely to be interested in and to adopt. The study employed benefit structure analysis, an approach used in consumer product market research, to measure the benefits expected and received from the technology.

MFI were asked to rate 10 potential benefits for each technology employed:

1. Improved productivity/efficiency
2. Increase in number of customers
3. Increase in savings deposit transactions
4. Standardization/improvement of procedures and processes
5. Improved revenue/profit
6. Better information flow and data quality for management decision making
7. Reach areas beyond the branch network
8. Faster and more accurate credit approval and disbursement process

## 9. Improved competitive advantage

## 10. Improved product/service quality

Respondents were asked to rate their answers from 1 to 4 (1 = not at all, 2 = somewhat, 3 = pretty much, 4 = a whole lot). The difference between the benefit received and the benefit expected indicated the value and impact of the technology. For example, if the difference between benefit received and benefit expected was positive—say, an MFI received “a whole lot” of benefit where it had expected to benefit “somewhat” ( $4 - 2 = 2$ ), then the technology exceeded the MFI’s expectations. If the difference was negative, then the technology did not meet expectations (was “deficient”). An example would be if an MFI received benefits only “somewhat” where it had “pretty much” expected them ( $2 - 3 = -1$ ). The larger the difference in either direction, the greater the benefit or deficiency. If the difference was zero, then the technology met the MFI’s expectations exactly.

Although ideally it would have been preferable to gather more quantitative data instead of only measuring benefits expected and received, few MFIs have the data or reporting systems to analyze and compare their financial and organizational performance both before and after implementing a technology. Thus, the benefit structure analysis method was deemed most appropriate. Additionally, there was some concern that the response rate might drop if the questions became too cumbersome to answer.

The survey was distributed by email in two formats: Microsoft Word and PDF. MFIs also had the option of completing the survey online using the website SurveyMonkey.com. The link to the online survey on SurveyMonkey, together with the Word and PDF versions, was sent to more than 120 MFIs worldwide who were believed to be already using some type of advanced client-focused technology. The survey was also posted on the USAID microLINKS and Microfinance Gateway websites and advertised through the Microfinance Practice electronic mailing list on Yahoo. SurveyMonkey was selected because it was inexpensive, had a low learning curve, and was already familiar to many of the target organizations. It also offered easy distribution and the ability to capture and download results into a spreadsheet.

The survey was pretested with two African MFIs. After the survey was launched, DAI received reports that some MFIs in Latin America had encountered problems with SurveyMonkey, a development that lowered their rate of response. As a result, the survey was redistributed in a shorter form. This change helped ensure a higher response from the Latin American MFIs.

# APPENDIX B SURVEY RESULTS SUMMARY

Survey Summary

http://www.surveymonkey.com/DisplaySummary.asp?SID=1863963&...

SurveyMonkey.com because knowledge is everything

Home New Survey My Surveys List Management My Account Help Center

Wednesday, November 15, 2006

Privacy Contact Us Logout

Results Summary Show All Pages and Questions Export View Detail >>

### Filter Results

To analyze a subset of your data, you can create one or more filters.

Edit Filter... Total: 55  
Visible: 55

### Share Results

Your results can be shared with others, without giving access to your account.

Configure... Status: Enabled  
Reports: Summary and Detail

## 3. Financial Institution and Client Profile

1. Which of the following categories applies to your business? (Check all applicable)



2. Number of branch offices staffed by your institution that serve microfinance clients:



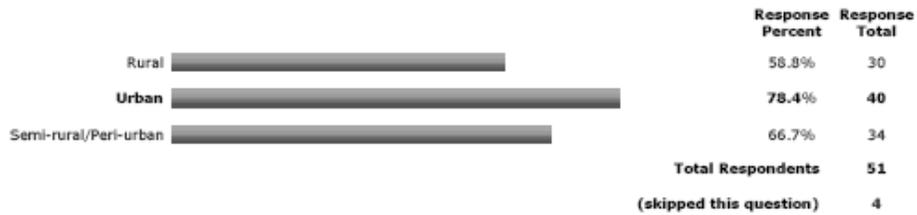
3. Total loans outstanding (in USD):



4. Average size of microfinance loans (in USD):



5. Geographic markets served: (Check all applicable)



6. Number of clients:



7. What percentage of operating expenses (non-interest expense) is spent on total annual investment in IT?

	Response Percent	Response Total
Less than 4%	26.2%	11
4 - 6%	31%	13
7 - 10%	11.9%	5
11 - 14%	7.1%	3
15% or more	23.8%	10
<b>Total Respondents</b>		<b>42</b>
<b>(skipped this question)</b>		<b>13</b>

8. Does your MFI use any of the following Internet connections?

	Using Now	Don't use now but will use	Will never use	Response Total
Dial up	82% (23)	0% (0)	18% (5)	28
ADSL	63% (19)	27% (8)	10% (3)	30
Satellite	25% (5)	45% (9)	30% (6)	20
Cellular	25% (5)	45% (9)	30% (6)	20
Others (e.g. Leased line, T1, Wifi ☛)	80% (20)	16% (4)	4% (1)	25
<b>Total Respondents</b>				<b>43</b>
<b>(skipped this question)</b>				<b>12</b>

9. Are the following telecommunication services available in your area and what is the reliability of service? Check the boxes that apply.

	Service is available	High Reliability	Medium Reliability	Low Reliability	Respondent Total
Dial up	92% (35)	39% (15)	37% (14)	11% (4)	38
ADSL	87% (27)	52% (16)	39% (12)	0% (0)	31
Satellite	83% (20)	71% (17)	17% (4)	0% (0)	24
Cellular	93% (27)	52% (15)	24% (7)	7% (2)	29
Others (e.g. Leased line, T1, Wifi ☛)	94% (29)	55% (17)	23% (7)	3% (1)	31
<b>Total Respondents</b>					<b>43</b>
<b>(skipped this question)</b>					<b>12</b>

10. How reliable is your electrical power?

	Response Percent	Response Total
High	42.9%	18
Medium	45.2%	19
Low	11.9%	5

**Total Respondents** 42  
**(skipped this question)** 13

11. Check all that apply:

	Check if your MFI is using this technology:	Check if your MFI is NOT using the technology now but plan to in the next year:	Check if your MFI has no plans to use this technology:	Check if your competition is using this technology:	Respondent Total
PDA	21% (7)	45% (15)	33% (11)	27% (9)	33
POS/Smart Card	16% (5)	47% (15)	31% (10)	34% (11)	32
ATM	43% (15)	29% (10)	23% (8)	46% (16)	35
Mobile Phone	42% (14)	36% (12)	18% (6)	24% (8)	33
Voice Recognition	4% (1)	12% (3)	83% (20)	8% (2)	24
Biometrics (fingerprint identification)	11% (3)	36% (10)	46% (13)	39% (11)	28
				<b>Total Respondents</b>	<b>42</b>
				<b>(skipped this question)</b>	<b>13</b>

**4. Personal Digital Assistant Usage**

1. How long has your MFI been using PDAs (do not count the pilot phase)? Round to the nearest year.

	Response Percent	Response Total
Less than 1 year	12.5%	1
1 year	37.5%	3
2 years	12.5%	1
3 years	25%	2
4 years	0%	0
5 years or more	12.5%	1
	<b>Total Respondents</b>	<b>8</b>
	<b>(skipped this question)</b>	<b>47</b>

2. What type of transactions do you perform on the PDA?

	Response Percent	Response Total
Loan applications	33.3%	2
Loan review and approval	16.7%	1
Collections	100%	6
Other (please specify)	33.3%	2
	<b>Total Respondents</b>	<b>6</b>
	<b>(skipped this question)</b>	<b>49</b>

3. Please provide the number of PDAs in use at the points in time given below:

	Response Percent	Response Total
<a href="#">View</a> Number Currently in Use 	100%	6
<b>Total Respondents</b>		<b>6</b>
<b>(skipped this question)</b>		<b>49</b>

4. What were the *expected* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	17% (1)	17% (1)	67% (4)	3.50
Increase in number of customers	0% (0)	33% (2)	50% (3)	17% (1)	2.83
Increase in savings deposit transactions	0% (0)	80% (4)	20% (1)	0% (0)	2.20
Standardization/Improvement of procedures and processes	0% (0)	0% (0)	67% (4)	33% (2)	3.33
Improved revenue/profit	0% (0)	33% (2)	33% (2)	33% (2)	3.00
Better information flow and data quality for management decision-making	0% (0)	20% (1)	40% (2)	40% (2)	3.20
Reach areas beyond the branch network	17% (1)	33% (2)	17% (1)	33% (2)	2.67
Faster and more accurate credit approval and disbursement process	20% (1)	20% (1)	40% (2)	20% (1)	2.60
Improved competitive advantage	0% (0)	17% (1)	50% (3)	33% (2)	3.17
Improved product/service quality	0% (0)	0% (0)	50% (3)	50% (3)	3.50
Staff readily embraces and uses the technology	0% (0)	0% (0)	100% (3)	0% (0)	3.00
<b>Total Respondents</b>					<b>6</b>
<b>(skipped this question)</b>					<b>49</b>

5. What were the *actual* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	20% (1)	80% (4)	0% (0)	2.80
Increase in number of customers	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Increase in savings deposit transactions	20% (1)	60% (3)	20% (1)	0% (0)	2.00
Standardization/Improvement of procedures and processes	0% (0)	20% (1)	60% (3)	20% (1)	3.00
Improved revenue/profit	20% (1)	80% (4)	0% (0)	0% (0)	1.80
Better information flow and data quality for management decision-making	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Reached areas beyond the branch network	20% (1)	60% (3)	20% (1)	0% (0)	2.00
Faster and more accurate credit approval and disbursement process	40% (2)	0% (0)	60% (3)	0% (0)	2.20

Improved competitive advantage	0% (0)	40% (2)	40% (2)	20% (1)	2.80
Improved product/service quality	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Staff readily embraces and uses the technology	0% (0)	33% (1)	33% (1)	33% (1)	3.00
<b>Total Respondents</b>					<b>5</b>
(skipped this question)					<b>50</b>

**5. Point of Sale/Smart Card Usage**

1. How long has your MFI been using your POS/Smart Card solution (do not count the pilot phase)? Round to the nearest year.

	Response Percent	Response Total
Less than 1 year	40%	2
1 year	20%	1
2 years	20%	1
3 years	20%	1
4 years	0%	0
5 years or more	0%	0
<b>Total Respondents</b>		<b>5</b>
(skipped this question)		<b>50</b>

2. Please indicate which types of transactions can be performed on your POS/Smart Card system.

	Response Percent	Response Total
Payment for goods and services	100%	4
Cash back	75%	3
Deposits	50%	2
Transfers within own account	50%	2
Transfers between two client accounts	50%	2
<input type="button" value="View"/> Other (please specify)	25%	1
<b>Total Respondents</b>		<b>4</b>
(skipped this question)		<b>51</b>

3. Please provide the number of POS devices in use at the points in time given below:

	Between 0 and 20	Between 21 and 50	Between 51 and 100	More than 100	Response Total
Number Currently in Use	0% (0)	75% (3)	0% (0)	25% (1)	4
<b>Total Respondents</b>					<b>4</b>
(skipped this question)					<b>51</b>

4. Which kind of cards do you issue to your clients for use with your POS solution? Check all that apply.

	Response Percent	Response Total
Smart Cards	40%	2
Debit Cards	60%	3
Credit Cards	0%	0
<b>Total Respondents</b>		<b>5</b>
<b>(skipped this question)</b>		<b>50</b>

5. What were the *expected* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	33% (1)	67% (2)	0% (0)	2.67
Increase in number of customers	33% (1)	0% (0)	0% (0)	67% (2)	3.00
Increase in savings deposit transactions	0% (0)	0% (0)	67% (2)	33% (1)	3.33
Standardization/Improvement of procedures and processes	33% (1)	33% (1)	0% (0)	33% (1)	2.33
Improved revenue/profit	67% (2)	0% (0)	33% (1)	0% (0)	1.67
Better information flow and data quality for management decision-making	33% (1)	0% (0)	33% (1)	33% (1)	2.67
Reach areas beyond the branch network	0% (0)	33% (1)	0% (0)	67% (2)	3.33
Faster and more accurate credit approval and disbursement process	100% (3)	0% (0)	0% (0)	0% (0)	1.00
Improved competitive advantage	33% (1)	0% (0)	33% (1)	33% (1)	2.67
Improved product/service quality	33% (1)	0% (0)	33% (1)	33% (1)	2.67
Staff readily embraces and uses the technology	0% (0)	0% (0)	67% (2)	33% (1)	3.33
<b>Total Respondents</b>					<b>3</b>
<b>(skipped this question)</b>					<b>52</b>

6. What were the *actual* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	33% (1)	67% (2)	0% (0)	2.67
Increase in number of customers	33% (1)	0% (0)	33% (1)	33% (1)	2.67
Increase in savings deposit transactions	0% (0)	33% (1)	67% (2)	0% (0)	2.67
Standardization/Improvement of procedures and processes	33% (1)	33% (1)	33% (1)	0% (0)	2.00
Improved revenue/profit	33% (1)	33% (1)	33% (1)	0% (0)	2.00
Better information flow and data quality for management decision-making	33% (1)	0% (0)	33% (1)	33% (1)	2.67
Reached areas beyond the branch network	0% (0)	0% (0)	33% (1)	67% (2)	3.67

Faster and more accurate credit approval and disbursement process	<b>100% (3)</b>	0% (0)	0% (0)	0% (0)	<b>1.00</b>
Improved competitive advantage	0% (0)	0% (0)	<b>67% (2)</b>	33% (1)	<b>3.33</b>
Improved product/service quality	0% (0)	<b>33% (1)</b>	<b>33% (1)</b>	<b>33% (1)</b>	<b>3.00</b>
Staff readily embraces and uses the technology	0% (0)	0% (0)	<b>67% (2)</b>	33% (1)	<b>3.33</b>
<b>Total Respondents</b>					<b>3</b>
<b>(skipped this question)</b>					<b>52</b>

**6. Automated Teller Machine Usage**

1. How long has your MFI been using your ATM solution (do not count the pilot phase)? Round to the nearest year.

	Response Percent	Response Total
Less than 1 year	14.3%	2
1 year	14.3%	2
2 years	14.3%	2
<b>3 years</b>	<b>21.4%</b>	<b>3</b>
4 years	14.3%	2
5 years or more	21.4%	3
<b>Total Respondents</b>		<b>14</b>
<b>(skipped this question)</b>		<b>41</b>

2. Please indicate which types of transactions can be performed on your ATM system.

	Response Percent	Response Total
Payment for goods and services	28.6%	4
<b>Cash back</b>	<b>92.9%</b>	<b>13</b>
Deposits	14.3%	2
Transfers within own account	28.6%	4
Transfers between two client accounts	28.6%	4
Check account balance	78.6%	11
<a href="#">View</a> Other (please specify)	35.7%	5
<b>Total Respondents</b>		<b>14</b>
<b>(skipped this question)</b>		<b>41</b>

3. Please provide the number of ATMs in use at the points in time given below:

	Between 0 and 20	Between 21 and 50	Between 51 and 100	More than 100	Response Total
Number Currently in Use	<b>50% (7)</b>	21% (3)	7% (1)	21% (3)	<b>14</b>
<b>Total Respondents</b>					<b>14</b>

(skipped this question) 41

4. Which kind of cards do you issue to your clients for use with your ATM solution?

	Response Percent	Response Total
Smart Cards	7.7%	1
<b>Debit Cards</b>	<b>92.3%</b>	<b>12</b>
Credit Cards	15.4%	2
<b>Total Respondents</b>		<b>13</b>
(skipped this question)		42

5. What were the *expected* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	17% (2)	25% (3)	<b>42% (5)</b>	17% (2)	<b>2.58</b>
Increase in number of customers	8% (1)	25% (3)	<b>50% (6)</b>	17% (2)	<b>2.75</b>
Increase in savings deposit transactions	8% (1)	8% (1)	<b>75% (9)</b>	8% (1)	<b>2.83</b>
Standardization/Improvement of procedures and processes	<b>33% (4)</b>	<b>33% (4)</b>	25% (3)	8% (1)	<b>2.08</b>
Improved revenue/profit	25% (3)	<b>33% (4)</b>	<b>33% (4)</b>	8% (1)	<b>2.25</b>
Better information flow and data quality for management decision-making	<b>42% (5)</b>	25% (3)	33% (4)	0% (0)	<b>1.92</b>
Reach areas beyond the branch network	<b>33% (4)</b>	8% (1)	25% (3)	<b>33% (4)</b>	<b>2.58</b>
Faster and more accurate credit approval and disbursement process	<b>58% (7)</b>	17% (2)	8% (1)	17% (2)	<b>1.83</b>
Improved competitive advantage	8% (1)	8% (1)	25% (3)	<b>58% (7)</b>	<b>3.33</b>
Improved product/service quality	0% (0)	0% (0)	<b>58% (7)</b>	42% (5)	<b>3.42</b>
Staff readily embraces and uses the technology	0% (0)	22% (2)	<b>44% (4)</b>	33% (3)	<b>3.11</b>
<b>Total Respondents</b>					<b>12</b>
(skipped this question)					43

6. What were the *actual* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	17% (2)	25% (3)	<b>42% (5)</b>	17% (2)	<b>2.58</b>
Increase in number of customers	8% (1)	33% (4)	<b>42% (5)</b>	17% (2)	<b>2.67</b>
Increase in savings deposit transactions	0% (0)	25% (3)	<b>58% (7)</b>	17% (2)	<b>2.92</b>
Standardization/Improvement of procedures and processes	17% (2)	<b>50% (6)</b>	17% (2)	17% (2)	<b>2.33</b>
Improved revenue/profit	17% (2)	<b>58% (7)</b>	8% (1)	17% (2)	<b>2.25</b>

Better information flow and data quality for management decision-making	27% (3)	<b>55% (6)</b>	0% (0)	18% (2)	<b>2.09</b>
Reached areas beyond the branch network	18% (2)	<b>36% (4)</b>	9% (1)	<b>36% (4)</b>	<b>2.64</b>
Faster and more accurate credit approval and disbursement process	<b>55% (6)</b>	0% (0)	27% (3)	18% (2)	<b>2.09</b>
Improved competitive advantage	9% (1)	27% (3)	<b>36% (4)</b>	27% (3)	<b>2.82</b>
Improved product/service quality	0% (0)	0% (0)	<b>60% (6)</b>	40% (4)	<b>3.40</b>
Staff readily embraces and uses the technology	12% (1)	12% (1)	25% (2)	<b>50% (4)</b>	<b>3.13</b>
<b>Total Respondents</b>					<b>12</b>
<b>(skipped this question)</b>					<b>43</b>

7. Did you encounter the following challenges (check all that apply):

	Response Percent	Response Total
<b>Illiteracy amongst the client population</b>	<b>92.3%</b>	<b>12</b>
Reliable electrical and/or network infrastructure	61.5%	8
Secure cash replenishment of ATMs	30.8%	4
Security of ATM locations	61.5%	8
Reliable support and maintenance services for the ATMs	69.2%	9
Old (non-crisp) bills in circulation	46.2%	6
<a href="#">View</a> Other (please specify)	15.4%	2
<b>Total Respondents</b>		<b>13</b>
<b>(skipped this question)</b>		<b>42</b>

### 7. Mobile Phone Usage

1. How long has your MFI been using your Mobile Phone solution (do not count the pilot phase)? Round to the nearest year.

	Response Percent	Response Total
<b>Less than 1 year</b>	<b>57.1%</b>	<b>4</b>
1 year	14.3%	1
2 years	28.6%	2
3 years or more	0%	0
<b>Total Respondents</b>		<b>7</b>
<b>(skipped this question)</b>		<b>48</b>

2. Please indicate which types of transactions can be performed on your mobile phone solution.

Response Percent	Response Total
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Payment for goods and services		33.3%	2
Cash back		16.7%	1
Deposits		0%	0
Money Transfers within own account		16.7%	1
Money Transfers between two client accounts		16.7%	1
Check bank account balance		33.3%	2
Airtime Transfers between two client accounts		33.3%	2
Overseas remittances		16.7%	1
<a href="#">View</a> Other (please specify)		66.7%	4
<b>Total Respondents</b>			<b>6</b>
<b>(skipped this question)</b>			<b>49</b>

3. Please provide the number of unique customers (not mobile phones) who have used your Mobile Phone solution at the points in time given below:

	Response Percent	Response Total
<a href="#">View</a> Current Number of Unique Customers	100%	4
<b>Total Respondents</b>		<b>4</b>
<b>(skipped this question)</b>		<b>51</b>

4. What were the *expected* results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	0% (0)	60% (3)	40% (2)	3.40
Increase in number of customers	0% (0)	40% (2)	40% (2)	20% (1)	2.80
Increase in savings deposit transactions	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Standardization/Improvement of procedures and processes	0% (0)	0% (0)	80% (4)	20% (1)	3.20
Improved revenue/profit	0% (0)	40% (2)	40% (2)	20% (1)	2.80
Better information flow and data quality for management decision-making	20% (1)	40% (2)	40% (2)	0% (0)	2.20
Reach areas beyond the branch network	0% (0)	0% (0)	60% (3)	40% (2)	3.40
Faster and more accurate credit approval and disbursement process	60% (3)	0% (0)	40% (2)	0% (0)	1.80
Improved competitive advantage	0% (0)	0% (0)	40% (2)	60% (3)	3.60
Improved product/service quality	0% (0)	20% (1)	20% (1)	60% (3)	3.40
Staff readily embraces and uses the technology	0% (0)	67% (2)	33% (1)	0% (0)	2.33
<b>Total Respondents</b>					<b>5</b>
<b>(skipped this question)</b>					<b>50</b>

5. What were the actual results from using this technology?

	Not at all	Somewhat	Pretty Much	A Whole Lot	Response Average
Improved productivity/efficiency	0% (0)	40% (2)	40% (2)	20% (1)	2.80
Increase in number of customers	0% (0)	60% (3)	20% (1)	20% (1)	2.60
Increase in savings deposit transactions	0% (0)	80% (4)	0% (0)	20% (1)	2.40
Standardization/Improvement of procedures and processes	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Improved revenue/profit	0% (0)	100% (5)	0% (0)	0% (0)	2.00
Better information flow and data quality for management decision-making	0% (0)	80% (4)	20% (1)	0% (0)	2.20
Reached areas beyond the branch network	0% (0)	40% (2)	60% (3)	0% (0)	2.60
Faster and more accurate credit approval and disbursement process	60% (3)	20% (1)	20% (1)	0% (0)	1.60
Improved competitive advantage	0% (0)	40% (2)	40% (2)	20% (1)	2.80
Improved product/service quality	0% (0)	60% (3)	20% (1)	20% (1)	2.60
Staff readily embraces and uses the technology	0% (0)	67% (2)	33% (1)	0% (0)	2.33
<b>Total Respondents</b>					<b>5</b>
(skipped this question)					<b>50</b>

8. General Information

1. Please provide your MFI company name, address, and contact information:

		Response Percent	Response Total
<a href="#">View</a>	Company Name	100%	37
<a href="#">View</a>	Address Line 1	94.6%	35
<a href="#">View</a>	Address Line 2	54.1%	20
<a href="#">View</a>	City	83.8%	31
<a href="#">View</a>	State/Province	32.4%	12
<a href="#">View</a>	Country	78.4%	29
<a href="#">View</a>	Postal Code	45.9%	17
<a href="#">View</a>	Phone	97.3%	36
<a href="#">View</a>	Fax	81.1%	30
<a href="#">View</a>	Year company established	94.6%	35
<a href="#">View</a>	Website	78.4%	29
<b>Total Respondents</b>			<b>37</b>
(skipped this question)			<b>18</b>

2. Name

	<a href="#">View</a> Total Respondents	23
	(skipped this question)	32
3. Email		
	<a href="#">View</a> Total Respondents	20
	(skipped this question)	35
4. Would you be willing to be contacted for further clarification or an interview?		
		<b>Response Percent</b> <b>Response Total</b>
Yes		83.3%   15
No		16.7%   3
	<b>Total Respondents</b>	<b>18</b>
	(skipped this question)	37
5. Name		
	<a href="#">View</a> Total Respondents	25
	(skipped this question)	30
6. Email		
	<a href="#">View</a> Total Respondents	23
	(skipped this question)	32
7. Would you be willing to be contacted for further clarification or an interview?		
		<b>Response Percent</b> <b>Response Total</b>
Yes		95.7%   22
No		4.3%   1
	<b>Total Respondents</b>	<b>23</b>
	(skipped this question)	32
8. Name		
	<a href="#">View</a> Total Respondents	8
	(skipped this question)	47
9. Email		
	<a href="#">View</a> Total Respondents	7
	(skipped this question)	48

10. Would you be willing to be contacted for further clarification or an interview?

	Response Percent	Response Total
Yes 	87.5%	7
No 	12.5%	1
<b>Total Respondents</b>		<b>8</b>
<b>(skipped this question)</b>		<b>47</b>

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