IMPACTS OF MICROCREDIT ON CLIENTS IN BOSNIA AND HERZEGOVINA

FINAL REPORT

Impact Assessment/
Research and Development Component
Local Initiatives (Microfinance) Project II
—LIP II—

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**Foundation for Sustainable Development
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and
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I. INTRODUCTION

A. MEASURING THE IMPACTS OF MICROCREDIT

The first Local Initiatives Project (LIP I) was launched in 1996, just one year after the end of the war in Bosnia and Herzegovina (BiH). The purpose of LIP I was to promote economic opportunities for the war-affected population and economically poor citizens of BiH. The project pursued this purpose through three objectives:

1. Providing access to credit for entrepreneurs in this population;
2. Facilitating the development of independent, financially viable microfinance institutions to continue to provide access to this credit; and
3. Creating an appropriate legal and regulatory environment for the provision of credit and other financial services to low-income entrepreneurs.

By the time LIP I ended in June 2000, it had successfully met or exceeded all of its objectives. The supported microfinance institutions (MFIs) had disbursed 50,261 loans, valued at KM 148.37 million. Continuing in the footsteps of LIP I, a second Local Initiatives (Microfinance) Project (LIP II) was launched in March 2002. LIP II had two specific objectives:

1. Financing the growth and institutional development of high-performing microfinance institutions that have the capacity to serve a significant number of low-income clients who do not have, or have limited access to, commercial bank sources; and
2. Supporting the transition of the microfinance sector toward sustainable sources of financing.

LIP II is administered in the BiH constituent entities by the Local Initiatives Departments - Microfinance Units (MFUs) of the Foundation for Sustainable Development (FSD) in the Federation of Bosnia and Herzegovina and the Republika Srpska Development and Employment Foundation (DEF). The FSD and DEF are government created foundations with oversight by government appointed boards. At the time that LIP II was being designed and launched, both MFUs and the two entity governments they represent were seeking a better understanding and clear evidence of the contribution of microfinance to poverty reduction, income generation, and business development in BiH. This interest was shared by the MFIs, which are the direct providers of financial services to clients, and by the donors that funded the projects. This high degree of interest provided the motivation for the impact assessment that is described in this report.

B. ONE STUDY, THREE REPORTS

This report is the culmination of a three-year research effort to document the impacts of a sustainable microfinance sector in BiH. It describes the final results from an evaluation of the impacts of LIP I and LIP II on the entrepreneurs who receive program services and on their microenterprises. The evaluation was conducted in several phases and included

both quantitative and qualitative components. The final results reported in this paper come from a panel data set (quantitative component) involving two rounds of a survey administered to the entrepreneurs, some of whom received microcredit and some of whom did not. This report has also been informed by a set of case study interviews (qualitative component) that were conducted between the two rounds of the survey in June 2003.

The impact assessment was designed to address four key questions:

1. Do microcredit organizations in BiH reach their target populations?
2. Does microcredit improve the household welfare of borrowers?
3. Does microcredit promote business development?
4. Does microcredit ease or speed the post-conflict transition?

To answer these questions, the evaluation relied on a mixed-method approach, combining a longitudinal survey and case study interviews. The two rounds of the survey were separated by a two-year interval, resulting in a panel data set that followed the same households over time. The survey was based on a quasi-experimental design, meaning that both clients and non-clients were included in the study. Both groups were included so that the outcomes for the two groups could be compared. A more detailed explanation of the research plan for the longitudinal study is provided in appendix 1.

This report is the third in a series of reports that have all been generated out of the same long-term study. It was written to complement the other two reports. Instead of repeating the information contained in the first two reports, this third report attempts to focus on presenting what is new, while directing the reader to consult the previous two reports for related background information.

The first report in the series was published in April 2003.[1] The purpose of the first report was to use the first round of survey data to describe the characteristics of the entrepreneurs participating in the study, their enterprises, and their households. This first report provided a rich description of the statistical characteristics of the survey participants, including both clients and non-clients. It also provided background information on LIP I and II, the MFIs participating in the study, and the economy of BiH.

The second report in the series was published in February 2004.[2] This report described the qualitative results from a set of in-depth interviews with 16 microcredit clients. These 16 case studies provided information about how clients integrate microcredit into their financial management practices, how they use microcredit to develop their businesses, the challenges and obstacles they face in their businesses, and their views and opinions about microcredit. It is a rich story about the concerns and experiences of microenterprise owners in BiH.

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[1] The April 2003 report was entitled "Clients of Microcredit Organizations in Bosnia and Herzegovina: Report on Baseline Survey" and it was written by Elizabeth Dunn and Josip Tvrtkovic.
[2] The February 2004 report was entitled "...Then I Learned I Could Get a Loan" and it was written by Elizabeth Dunn and Josip Tvrtkovic.

C.   ORGANIZATION OF THIS REPORT

This report describes the findings from a two-round survey of 2,561 microentrepreneurs.[3] Its purpose is to describe the results of a statistical analysis of the impacts of microcredit on household welfare, business development, and post-conflict transition. There are four main sections in the report. Section II repeats much of the background information provided in the first report, with some updates of more recent information on the economy of BiH, the LIP projects, and the MFIs participating in the study. Section III provides information on the study participants: how they were selected, who they are, and how they use microcredit. The results from the impact analysis are presented in section IV. These findings are summarized in section V, which also includes a discussion of the limitations of the study and, in closing, the implications of the findings.

II.   ECONOMIC   ENVIRONMENT   AND   MICROFINANCE   IN BIH[4]

A.   GENERAL BACKGROUND INFORMATION

1.   Political and Geographic Information

The official name of the country is Bosnia and Herzegovina (BiH).   It is located in the western part of the Balkan Peninsula, with Serbia and Montenegro on its eastern border and the Republic of Croatia on its northern, western, and southern borders.   The country has a coastal outlet on the Adriatic Sea. The country is mountainous and has a surface area of 51,209 square kilometers.   The two longest rivers are the Drina (346 km) and the Sava (331 km). The highest mountain peaks are Maglić (2386 meters above sea level) in Foča municipality and

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[3] There were 3,333 respondents in the first round, with 23 percent fewer respondents in the second round. See section III and appendix 3 for discussion of the panel attrition rate.

[4] The information presented in section II is for the most part the same as the information presented in the April 2003 report. Some of the statistics related to the economy and the MFIs have been updated.

Volujak (2336 meters above sea level) in Gacko municipality.

The climate of Bosnia and Herzegovina differs according to location. Herzegovina and the southern area have a modified Mediterranean climate with average annual precipitation of 600 to 800 mm (24 to 32 inches), while the central and northern areas of Bosnia have a modified Alpine climate with average annual precipitation of 1,500 to 2,500 mm (59 to 98 inches). The warmest month is July and the coldest is January. Average temperature ranges in the capital city of Sarajevo are from minus 0.5 degrees Celsius (31 degrees Fahrenheit) in January to 19.6 degrees Celsius (67 degrees Fahrenheit) in July.

In the beginning of the 1980s, political changes began occurring rapidly in the Balkan Peninsula. There was a significant armed conflict between 1992 and 1995. By the time this war ended, according to estimates of the United Nations High Commission on Refugees (UNHCR), there were 1.3 million people who were internally displaced, and another 1.2 million who had become refugees in other countries.

Federation of BiH

8 Number of the Canton

IEBL

1 - Una Sana (Bosniac)
2 - Posavina (Croat)
3 - Tuzla Podrinje (Bosniac)
4 - Zenica Doboj (Bosniac)
5 - Bosna Podrinje (Bosniac)
6 - Central Bosnia (Mixed)
7 - Herzegovina Neretva (Mixed)
8 - West Herzegovina (Croat)
9 - Sarajevo (Bosniac)
10 - Livno (Croat)

Bosniac Canton
Croat Canton   } Federation
Bosniac-Croat Canton }
Republika Srpska

Under the Dayton Peace Accord that ended the war, the country was divided into two entities: the Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska (RS). The Federation of Bosnia and Herzegovina is administratively divided into ten cantons (districts), consisting of 84 municipalities. Republika Srpska is administratively divided into 64 municipalities. The city of Brčko is administered separately from FBiH and RS, and is known as Brčko District. The map at left indicates the entity boundaries and the cantonal boundaries for FBiH.

Information on the country's population is subject to considerable error because of population dislocations caused by military action and ethnic cleansing. The last national census was made in 1991. The Agency for Statistics of Bosnia and Herzegovina estimated the country's population to be about 3,862,000 in June 2003. The average population density is 202 people per square mile. The largest city is Sarajevo (387,876 est.), followed by Banja Luka (220,407 est.), Mostar (208,904 est.), and Tuzla (118,500 est.). Information from the 1991 census

indicated that the ethnic composition consisted of Bosniacs (44 percent), Serbs (31 percent), Croats (17 percent), and others (eight percent).

2.   Economic Information

There has been measurable economic recovery following the war, but much remains to be done, particularly in terms of achieving full employment for the country's labor force. In the two years immediately following the Dayton Peace Accord, per capita gross domestic product (GDP) doubled. After 1997, growth in per capita GDP began to slow. It held steady between 4.5 and 5.5 percent in 2000-2002, then the growth rate of per capita GDP slowed to 3.5 percent in 2003. The current per capita GDP of USD 1,818 places BiH in the group of lower middle-income countries. Table 1 indicates the per capita GDP, population, and currency exchange rates for 1996 through 2003.

Table 1: GDP, Population, and Currency Exchange Rates, 1996-2003

	1996	1997	1998	1999	2000	2001	2002	2003
Gross domestic product per capita (KM)	836	1,695	1,982	2,413	2,658	2,886	3,043	3,151
Gross domestic product per capita (USD)	556	978	1,126	1,316	1,254	1,320	1,466	1,818
Population, mid-year estimate (1000 people)	3,645	3,756	3,654	3,725	3,781	3,798	3,828	3,862
Ave. annual exchange rate (KM/USD)	1.50	1.73	1.76	1.83	2.12	2.19	2.08	1.73

Source: CBBH Annual Report 2003 and CBBH Bulletin 2, Jan-June 2001. Information on exchange rates for 1996-97 from IMF.

Inflation rates have been falling in the past several years, with levels tending to be higher in the RS than in the FBiH. Table 2 indicates the inflation rates in the two entities, beginning in 1998. The recent period has been characterized by a downward trend in inflation. This downward trend has continued into 2003, which is the last year for which data are available. As the table indicates, the inflation rate of retail prices in 2003 was negligible, at less than one percent in FBiH and less than two percent in RS.

Table 2: Inflation Rates, by Entity, 1998-2003 (percent change)

	1998	1999	2000	2001	2002	2003
Federation of Bosnia and Herzegovina	5.1	-0.9	1.2	1.7	0.2	0.1
Republika Srpska	---	15.1	13.6	6.5	1.7	1.8

Sources: CBBH Annual Report 2003 and CBBH Bulletin 2, Jan-June 2001.

Unemployment levels in BiH have remained high over the past several years. A number of factors have contributed to the high rates of unemployment. To start with, the country's structure of employment was still in a transitional phase away from heavy reliance on state sector employment when the transformation was interrupted by the outbreak of the war. Following the war, there have been challenges associated with the employment of repatriated refugees, internally displaced persons, and demobilized

soldiers. The two-entity system established under the Dayton Peace Accord does not encourage significant labor mobility within the country.

Employment statistics are drawn from the official registration of employed and unemployed persons. There is general consensus that these figures are inaccurate because they do not include unregistered employment in the "gray" economy. According to official statistics, there were 634,046 employed persons and 459,604 unemployed persons within the country at the end of December 2003. Thus, the official unemployment rate was 42 percent at that time. Table 3 lists the official unemployment rates for the period 1998-2003, as reported by the Central Bank of BiH. Actual unemployment rates are probably lower than the figures reported in table 3.

Table 3: Official Unemployment Rates, by Entity, 1998-2003

	Dec. 1998	Dec. 1999	Dec. 2000	Dec. 2001	Dec. 2002	Dec. 2003
FBiH						
Employed	407,047	410,104	411,305	405,689	390,201	387,294
Unemployed	256,487	261,793	261,773	269,004	290,715	304,830
Unemployment Rate	38.7 %	39.0%	38.9%	39.9%	42.7%	44.0%
RS						
Employed	244,267	220,786	227,748	219,954	234,713	234,685
Unemployed	142,009	147,497	153,264	137,949	134,990	138,111
Unemployment Rate	36.8%	40.0%	38.5%	38.5%	36.5%	37.0%

Source: CBBH Annual Report 2003.

It is difficult to reach universal agreement on a single measure for the unemployment rate, because there are a number of complicating conditions. First, there is an active "gray market" for labor that has arisen principally to circumvent prohibitive tax and labor laws. Although there is no hard information on gray market employment, it appears that many of these jobs do not provide year-round employment. In addition, some people who are officially employed do not receive their salary on time. There are also a number of people who are officially employed, but are not working because they have been idled and placed on a "waiting list" to return to their jobs. Table 4 provides several alternative estimates for the unemployment rate by taking all of these situations into consideration.

Table 4: Alternative Estimates of Unemployment Rates, August 2001

	FBiH	RS	BiH
1. Estimated population	2,400,000	1,450,000	3,850,000
2. Estimated population of working age (15 to 64)	1,650,000	970,000	2,620,000
3. Total work force	940,000	560,000	1,500,000
4. Official employment	412,805	228,834	641,639
5. Registered unemployment	267,934	153,264	421,198
6. "Wait-listed Workers"	40,262	32,000	72,262
7. Workers with salary two or more months in arrears	95,000	65,000	160,000
8. People working on gray labor market for three or more months	200,000	120,000	320,000
9. Narrow rate of unemployment (item 5/item 3x100)	28.5%	27.4%	28.1%
10. Unemployment rate including "wait-listed workers" (item 5 + item 6)/item 3 x 100)	32.4%	33.1%	32.9%
11. Potential unemployment rate, including workers with salaries in arrears	42.9%	44.7%	43.6%

by two or more months (item 5 + item 6 + item 7)/item 3 x 100)			
12. Unemployment rate accounting for gray market employment (item 5 + item 6 + item 7 – item 8)/item 3 x 100)	21.6%	23.3%	22.2%

Source: Human Development Report 2002 for Bosnia and Herzegovina, pages 36-37.

Yet another estimate for unemployment is based on a three-year survey of representative households.[5] This survey was conducted by the Statistics Agency of BiH and the entity statistics institutes. It consisted of three waves, one each in 2001, 2002, and 2003. The results indicate a gradual decline in the unemployment rate from 39 percent in 2001, to 37 percent in 2002, and to the lowest rate of 32 percent in 2003.

While it is not clear whether the unemployment rate in BiH is 20, 30, or 40 percent, it is clear that a large number of people in that country lack the opportunity to be productively employed on a full-time, year-round basis. For many of these people, self-employment through a microenterprise may be the only viable employment option. In some cases, microenterprises offer employment not only to the entrepreneur, but also to family members and others who have been adversely affected by high unemployment rates.

B.   THE MICROFINANCE SECTOR IN BiH

1.   Microenterprises

Microenterprises are private business activities on a small scale. Several measures of size can be used to distinguish microenterprises from small, medium, and large enterprises: number of employees, value of assets, or value of revenues. Microenterprises usually have five or fewer employees, but microenterprises may be defined to include up to ten employees.   These businesses are usually organized as sole proprietorships, but microenterprises may also be organized as partnerships.

Microenterprises may be operated on either a formal or informal basis.[6]   A microenterprise operated on a formal basis is registered with the municipal and/or tax authorities.   Formally operated microenterprises may also register their employees and pay the required labor taxes and contributions. On the other hand, microenterprise owners may choose to operate informally, without registering their enterprises or employees. While this may reduce costs and eliminate the entrepreneur's contact with the bureaucracy, it also involves the risk of being discovered and penalized.

Self-employment for the entrepreneur is the universal characteristic of microenterprises. Additional employees are most often members of the entrepreneur's household. Typically, the entrepreneur and other household members do not receive a predetermined, periodic salary for their labor. Instead, they are compensated out of the net returns of the enterprise. Salaries are usually paid only to workers from outside the household who are employed in the enterprise.

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[5] Cited in CBBH Bulletin 4, December 2004, page 26.
[6] The terms *microenterprise*, *enterprise*, *business*, and *business activity* are used interchangeably in this report and are not meant to indicate whether the microenterprise is operated formally or informally.

Microenterprises can be classified into five sectors: trade, small-scale production, services, livestock, and agriculture. These sectors are defined in terms of the nature of the product or service sold by the microenterprise:

- *Trade or commercial sector* microenterprises are involved in the purchase of goods for the purpose of resale. Trade sector microenterprises are as varied as the kinds of goods that can be sold, and include general grocery stores, food vending (e.g., meat, vegetables, fruit), apparel, house wares, electronics, and paper goods.

- *Small-scale production sector* enterprises transform raw materials into some finished product, with common types of small-scale production enterprises including tailoring, dressmaking, carpentry, and all types of small manufacturing.

- *Service sector* enterprises include restaurants, the selling of prepared foods, taxi services, hairdressing, and repair shops of all kinds.

- *Livestock/animal husbandry sector* microenterprises may raise any type of animal, selling either meat or animal products (e.g., eggs, honey, and milk). Poultry production is the most common type of enterprise in this sector.

- *Agriculture sector* microenterprises involve the cultivation of crops, including non-conventional crops, such as mushrooms.

2. Microfinance

Microfinance institutions support microenterprises by providing entrepreneurs with small-scale financial services, such as loans, deposit services, and insurance. The MFIs participating in this study are *microcredit organizations*, meaning that they are exclusively occupied with providing small loans, either to individuals or solidarity groups. At the end of 2004, there were a total of 46 microcredit organizations in BiH, of which 26 were registered in FBiH and the remaining 20 were registered in RS.

Microcredit organizations are registered as non-deposit taking, non-profit, non-governmental organizations. Their basic activity is to provide microcredit to the population that has limited or no access to credit provided by banks. In the FBiH, microcredit organizations register with the Federal Ministry of Displaced Persons and Refugees. In RS, Court registers microcredit organizations, and the registry is maintained at the Ministry of Finance. The Law on Microcredit Organizations, adopted separately in FBiH and RS, regulates some of the conditions under which credit can be offered. It is expected that the new Law on Microcredit Organizations will be adopted in 2005, either at the state level or in a harmonized form at the entity level.

In the FBiH, the Law on Microcredit Organizations was published in the *Official Gazette of the Federation of BiH* (24/00). Instructions on the documentation needed for opening representative offices and bureaus in the FBiH for microcredit organizations from BiH

with headquarters outside of the FBiH were published later in the *Official Gazette of the Federation of BiH* (13/02).

In the RS, the Law on Microcredit Organizations was published in the *Official Gazette of the Republika Srpska* (19/01). Normative acts published in the *Official Gazette of the Republika Srpska* (38/01) describe the documentation needed 1) to issue a permit for the founding of a microcredit organization and 2) to open a representative office of a microcredit organization whose main office is located in the FBiH. In addition, the sub-regulations provide a definition of *microcredit* that includes the following characteristics: 1) first loan no higher than KM 5,000; 2) the maximum for any loan no higher than KM 30,000; 3) loan length no longer than 36 months; and 4) loans must be for the purpose of financing business activities that generate income.

Financing of LIP I	
Source	USD
World Bank	6,694,208
Italy	3,223,262
Holland	4,590,000
Switzerland	1,123,170
Austria	584,857
Japan	2,000,000
UNHCR	3,538,003
UNDP	51,000
TOTAL	21,804,500

3.   The Local Initiatives Projects

The first Local Initiatives Project (LIP I) operated for 3.5 years, from the beginning of 1996 to June 30, 2000. It was financed by the World Bank and a number of other bilateral and multilateral donors at a total cost of USD 21.8 million (see box at right). The project was implemented through Local Initiatives Departments (LIDs) in Employment and Training Foundations in both the FBiH and the RS.

The development objectives for LIP I were to

1. Provide access to credit to the economically disadvantaged and war-affected, especially low-income microentrepreneurs who have no access to credit from the commercial banking sector;
2. Facilitate the development of independent, financially viable microfinance institutions that will continue to provide credit to low-income entrepreneurs over the long-term period; and
3. Create an appropriate legal and regulatory environment for the provision of credit and savings services to low-income entrepreneurs.

LIP I was successful in meeting all three of these objectives. By the closing date of the project (June 30, 2000), over 50,000 loans to microenterprises had been disbursed. This was five times larger than the original project goal of extending 10,000 loans. Half of these loans went to women and one-fifth went to people who were displaced from their homes as a result of the war. The average loan size was about KM 2,952. On the project closing date, the partner MFIs had a combined total of 19,361 active clients.

A total of 17 MFIs were originally funded under LIP I. Based on the recommendations of a mid-term review, which examined key institutional and financial indicators for all

partner institutions, the number of partners was reduced to eight MFIs.[7] This event precipitated a series of consolidations within the industry that resulted in a strengthening of the microfinance sector. Of the original 17 MFIs, seven reached full financial sustainability over the course of the project. In addition, LIP I succeeded in initiating the adoption of a legal framework for the operation of microcredit organizations in both FBiH and RS (the "Law on Microcredit Organizations" discussed above).

The second Local Initiatives (Microfinance) Project (LIP II) became effective on March 26, 2002, and is scheduled to end on June 30, 2005. The total value of LIP II is estimated at USD 24.06 million, of which the World Bank/IDA financed USD 20 million and the counterpart entity governments financed USD 4.06 million. The overall development objective of the project is to meet the urgent needs for raising income levels and developing employment in BiH by providing loans and other financial services to low-income people. More specifically, LIP II has concentrated on

1. Financing the growth and institutional development of high-performing microfinance institutions that have the capacity to serve a significant number of low-income citizens who do not have, or have limited access to, commercial bank services; and
2. Supporting the transition of the microfinance sector toward sustainable sources of financing.

In each of the two BiH constituent entities, LIP II is administered by the Local Initiatives Departments – Microfinance Units of the Foundation for Sustainable Development in the Federation of Bosnia and Herzegovina and the Republika Srpska Development and Employment Foundation. Despite the fact that these two management units are administratively separate, they cooperate daily on project implementation and share the common goal of creating a strong, sustainable microfinance sector in BiH.

MFIs Eligible for Funding under LIP II
EKI Sarajevo
SUNRISE Sarajevo
LOK micro Sarajevo
MI-BOSPO Tuzla
PARTNER Tuzla
BOSVITA Tuzla
MIKROFIN Banja Luka
SINERGIJA plus Banja Luka
BENEFIT Lukavica

As part of the planning for LIP II, potential partner MFIs underwent an independent assessment of their institutional and financial characteristics in 2001. This assessment was completed by Shorebank Advisory Services (Chicago). As a result of this process, nine MFIs were selected as eligible to receive funds through LIP II. The MFIs that were eligible for funding under LIP II are listed in the box at left. Due to a merger between PARTNER Tuzla and BOSVITA Tuzla, LIP II ended up financing eight MFIs, with five of these in FBiH and three in RS.

Both Local Initiatives Projects have had a major influence on the growth and development of an efficient and sustainable microfinance sector in

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[7] Of the eight MFIs that continued to receive funding after the mid-term review, five were from FBiH: AMK in Posušje, BOSPO in Tuzla, LOK in Sarajevo, MCI/SEA in Tuzla (now PARTNER), and SUNRISE in Sarajevo. Three of the funded MFIs were from the RS: BENEFIT in Lukavica, MIKROFIN in Banja Luka, and SINERGIJA plus in Banja Luka.

BiH. Whether measured in terms of outreach or in terms of operational and financial sustainability, the LIPs have played an important role in strengthening MFIs that, in turn, extend loans to microentrepreneurs who would not normally qualify for business loans from banks.

4. MFIs Participating in the Study

There were ten MFIs that participated in this study.[8] All of them were registered microcredit organizations, organized as non-profit, non-deposit taking, and non-governmental organizations. Some of the organizations were registered to operate in the FBiH, some in the RS, and some were registered to operate in both entities.

Table 5: Background on MFIs Participating in the Study

Name and Location	Year Lending Started	Original Affilia-tion	Loan Types	Target Population
MIKRO ALDI Goražde	1996	citizens assn.	group, indiv.	economically active, low-income population; existing businesses and start-ups; war affected population
BENEFIT Lukavica	1997	citizens assn.	indiv.	persons with income under KM 500/mo./person; firms with capital under KM 30,000 and under 10 employees; existing businesses
EKI Tuzla	1996	World Vision	group, indiv.	individuals without access to bank credit and businesses that can create and sustain jobs
LOKmicro Sarajevo	1997	citizens assn.	group, indiv.	natural and legal entities with registered and unregistered businesses and low income profile
MI-BOSPO Tuzla	1996	humanit. org.	group, indiv.	low-income women entrepreneurs
MIKROFIN Banja Luka	1997	CARE Intl.	group, indiv.	micro and small business, including agricultural enterprises
PARTNER Tuzla	1997	Mercy Corps, SEA	indiv.	low-income, economically active individuals; existing businesses and start-ups; war affected population
PRIZMA MIKRO Sarajevo	1997	ICMC	group, indiv.	poor and low-income women and their families
SINERGIJA plus Banja Luka	1997	citizens assn.	group, indiv.	legal, privately owned, existing, small-scale production, services, agriculture, and trade businesses
MIKRO SUNRISE Sarajevo	1997	humanit. org.	indiv.	economically active, low-income indiv. in informal sector and legal

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[8] When the study began, there were eleven MFIs participating. But due to the merger of BOSVITA Tuzla and PARTNER Tuzla in June 2004, the number of participating MFIs was reduced to ten.

	entities with under 5 employees

The ten MFIs participating in the study are listed in table 5, along with information about their backgrounds and target populations. All nine MFIs that were eligible for funding under LIP II participated in the study. Two additional MFIs also participated in the study: PRIZMA MIKRO Sarajevo[9] and Mikro ALDI Gorazde.

All of the MFIs in the study offered microenterprise credit. In other words, they all provided one or more types of loans for specific types of small-scale businesses and enterprises. LOK micro also provided technical, non-financial assistance, such as business planning, and they had a loan product with an associated life insurance policy. In addition to microenterprise loans, PRIZMA MIKRO provided basic needs loans and loans for housing repairs. However, only the PRIZMA MIKRO clients who had received microenterprise loans were included in this study.

The majority of the MFIs participating in the study offered microenterprise credit both in the form of individual loans and in the form of solidarity group loans, although a few offered only individual loans. Some of the MFIs originated as local citizens' associations or humanitarian organizations. Others evolved in partnership with international NGOs.

Selected characteristics of each participating MFI's loan portfolio, including measures of operational and financial sustainability, are provided in table 6. As can be seen in the table, these ten MFIs were providing loans to over 100,000 active clients as of December 31, 2004. Their total amount of outstanding loans on this date was KM 209,128,400, which was about USD 145.5 million. Average loan sizes differed for the ten MFIs, and ranged from about KM 1,000 to about KM 3,500. While typical loan lengths ranged from seven months to 14 months, most loans were extended for nine or ten months.

All of the participating MFIs were operationally self-sufficient and at or near financial self-sufficiency just prior to the time when the first-round sample of clients for this study was selected. At the time of the second-round survey, all of the MFIs had reached both operational and financial self-sufficiency. Thus, the MFI borrowers included in this study were receiving their microenterprise loans from microfinance institutions that can be characterized as financially sustainable.

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[9] PRIZMA MIKRO moved its headquarters from Mostar to Sarajevo in late 2004.

Table 6: Loan Portfolio Characteristics of Participating MFIs (December 31, 2004)

	Number Active Loans	Amount of loans outstanding (KM)	Average loan size, range of loans (KM)	Typical loan length, range (months)	Loans to women (percent)	Active clients per credit officer	Portfolio at risk (>30 days) (percent)	Percentage of write-offs	Operational self-sufficiency ratio	Financial self-sufficiency ratio
MIKRO ALDI	3,805	3,354,215	1,404 1,000-10,000	11 10-18	91	317	0.12	0.53	127	118
BENEFIT	7,068	12,514,674	1,771 500-15,000	10 1-12	42	236	0.00	0.00	125	111
EKI	18,985	37,449,347	1,973 1,000-20,000	14 3-18	37	288	0.40	0.40	142	103
LOK MICRO	5,100	15,382,544	3,016 500-30,000	9 1-36	42	182	1.10	0.20	112	101
MI-BOSPO	9,206	13,542,171	1,471 300-10,000	10 3-12	100	329	0.40	1.20	129	111
MIKROFIN	14,034	41,716,872	2,973 500-20,000	7 2-18	35	242	0.20	0.00	175	147
PARTNER	19,834	41,494,540	2,092 1,000-20,000	10 5-24	82	233	0.62	0.26	143	113
PRIZMA MIKRO	12,603	13,357,339	1,060 200-15,000	8 5-36	99	485	1.18	1.62	162	127
SINERGIJA PLUS	3,340	11,785,526	3,529 400-20,000	9 4-24	27	176	0.10	0.10	123	103
MIKRO SUNRISE	10,294	18,531,172	1,800 500-20,000	9 2-24	38	187	1.00	1.10	128	113
ALL MFIs IN STUDY	104,269	209,128,400	---	---	---	---	---	---	---	---

Source: Information provided by participating MFIs.
Note: As of December 31, 2004, the currency conversion rate was 1 USD = 1.4377 KM

III.   ENTREPRENEURS AND THEIR USE OF CREDIT

The results of the data analysis are presented in this section and the next. This section (section III) provides mainly descriptive information about the entrepreneurs in the panel data set, their enterprises, and (to a lesser extent) their households. It describes their characteristics and the changes they experienced between 2002 and 2004. In addition, this section contains information about how entrepreneurs in BiH use microenterprise credit and their opinions about the financial services they receive. Following this descriptive information, the findings related to the impacts of microcredit are presented in section IV.

A.   PARTICIPANTS IN THE PANEL STUDY

The 2,561 participants in this panel study were men and women who owned and operated microenterprises. Some of them borrowed money for use in their microenterprises, but others did not. Each one of them participated in two face-to-face interviews in which they answered the same (or similar) questions about their enterprises, themselves, and their family members. The first survey interview was conducted in 2002 and the second survey interview was conducted at the same time of year in 2004. The information from these two interviews was used to create a panel data set[10] of 2,561 entrepreneurs.

1.   From First Round to Second Round

When the participants were selected for the first-round survey in 2002, there were three types of participants: 1) clients; 2) new clients; and 3) non-clients. Clients were randomly selected from the MFIs' lists of active clients in March 2002. The new clients were randomly selected from the MFIs' lists of people who received a first loan in April 2002.   The non-clients were a specially screened, randomly selected group of entrepreneurs who were similar to the clients and new clients, but who had never received loans for their microenterprises from MFIs or banks. A total of 3,333 respondents were interviewed in the first-round survey, of which 1742 were clients, 399 were new clients, and 1192 were non-clients.[11]

For the second round of the survey in 2004, every attempt was made to contact and interview all of the participants from the first round. This was not possible for a variety of reasons. [12]   Instead, it was only possible to complete second-round interviews with 77 percent of the original participants. In other words, the attrition rate between the first and second rounds of the survey was 23 percent, which is an acceptable attrition rate for a study of this type. So there were 2,561 entrepreneurs who participated in both rounds of the survey. The questionnaire that was used in the survey is included in appendix 5.

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[10] A panel data set follows the same respondents over time, so that the respondents answer the same (or related) questions two or more times. Panel data are a type of time series data.

[11] The approach for selecting the participants for the first-round survey is described in more detail in appendix 2 of this report and in the April 2003 *Report on Baseline Survey*.

[12] See appendix 3 for a discussion of the reasons for panel attrition.

2.   The Four Respondent Groups

The 2,561 respondents in the panel data set were divided into four groups based on information about when they first received credit for their business activities:

1. **Clients** received their first business loans some time prior to March 2002. Respondents in the client group have the longest experience with microcredit.

2. **New clients type 1** received their first loans for their business activity in April 2002. At the time of the first round of the survey, and in the April 2003 *Report on Baseline Survey*, this group was referred to as simply the "new clients."

3. **New clients type 2** is a new group that was created based on the results of the second-round survey. Originally part of the non-client group, these respondents reported that they received their first business loans sometime after the first round of the survey and before the second round. So this group was separated out from the non-client group. They represent the entrepreneurs with the shortest length of experience with microcredit.

4. **Non-clients** never received bank or MFI loans for their business activities prior to or during the study period. These respondents operated their business activities without microcredit for the entire period up to 2004.

Therefore, the only new group to be created after the second-round survey was the group called *new clients type 2*. This group was pulled out from the non-client group and treated separately in the analysis, since they no longer fit the profile of non-clients. Table 7 summarizes the information on each of the four respondent groups and indicates the number of respondents in each group.

Table 7. Four Groups in the Panel Data Set (n=2561)

Name of Group	Sample Size (n)	Defining Characteristic	Name of Group in 2002
Clients	1385	received first microcredit prior to April 2002	Clients
New Clients, type 1	289	received first microcredit in April 2002	New Clients
New Clients, type 2	257	received first microcredit after April 2002	Non-Clients
Non-Clients	630	never received microcredit	Non-Clients

3.   Characteristics of Panel Participants[13]

The panel participants were about evenly divided between men (52 percent) and women (48 percent). The average age of the panel participants was 40 years old and they had completed an average of eleven years of school. The majority (79 percent) were married, with about 13 percent single, five percent widowed, and three percent separated or divorced. The non-clients differed in two respects from this profile. First, there were

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[13] The primary purpose of the April 2003 report was to describe the characteristics of the study participants. The reader is referred to that report for a much more in-depth description of the respondents.

significantly more men than women in the non-client group (64 and 36 percent, respectively). In addition, the marital status of the non-clients was somewhat different, with 69 percent married and 22 percent single.

The majority of panel participants lived in FBiH (57 percent), with 41 percent living in RS. Only two percent, or 61 respondents, lived in the Brčko District. The self-reported information on ethnicity was similar. About half (52 percent) of the panel participants reported that they were Bosniacs. The next largest group consisted of the respondents who reported that they were Serbs (41 percent). Only four percent of the panel participants reported themselves to be Croats. Another three percent reported their ethnicity as "other" or did not want to answer the question. In terms of location of residence and ethnicity, there were no significant differences between the four groups (i.e., clients, new clients type 1, new clients type 2, and non-clients were all similar).

Panel participants operated business activities in five sectors. As shown in figure 3, the greatest number of enterprises (36 percent) were in the trade sector, followed by the services sector (29 percent) and the livestock sector (19 percent). Enterprises in the production and agriculture sectors were each only eight percent of all enterprises. There were some differences between groups, with new clients type 1 having significantly fewer trade enterprises (27 percent) and more livestock enterprises (31 percent).

Figure 3: Distribution of Enterprises by Sector
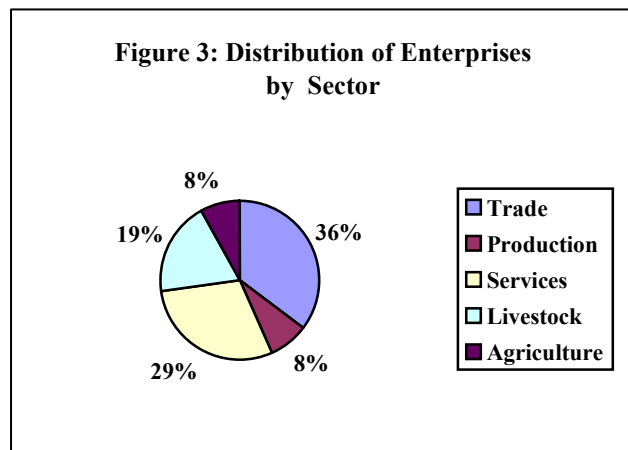
B. USE OF ENTERPRISE CREDIT

The 2,561 entrepreneurs who participated in both rounds of the survey can be divided into four groups, on the basis of when they received their first microenterprise loan. Credit history information for each of these four groups is provided in table 8. Respondents in the client group have the longest average experience with microcredit (3.6 years) and the greatest number of loans, averaging a total of four loans received. New clients type 1 have longer average experience with loans than new clients type 2. Respondents in the non-client group have not taken loans from banks or MFIs specifically for use in their microenterprises.

As indicated in table 8, clients and new clients type 1 may have received loans from both their "own" MFI as well as from other sources.[14] In fact, 29 percent of both clients and new clients type 1 reported that they had taken a loan from a source other than their

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[14] The phrase "own" MFI refers to the MFI with which the respondent was associated in the first-round survey. A respondent was associated with the MFI that provided the client list from which the respondent's name was drawn.

"own" MFI between 2002 and 2004. These other sources included the MFIs participating in the study, as well as a number of banks.[15] New clients type 2 were not associated with any MFI during the first round of the survey since they were originally part of the non-client group.

Table 8: Credit History Information, by Group

	Clients (n=1385)	*New Clients type 1 (n=289)*	*New Clients type 2 (n=257)*	*Non-Clients (n=630)*
Years since first loan received (mean)	3.6	2	1	0
Total number of loans received (mean)	4.0	2.4	1.4	0
Number of loans from "own" MFI (mean)	3.6	2.0	N/A	0
Number of loans from other sources (mean)	0.4	0.4	1.4	0
Total credit principal received (median, KM)	9,500	4,500	6,000	0
Total credit principal received from "own" MCO (median, KM)	8,000	3,500	N/A	0
Respondents with loans from other sources	29%	29%	N/A	0

Among those with current loans at the time of the second survey, 12 percent of clients and 14 percent of new clients type 1 had a current loan from a bank. The number of new clients type 2 who reported a current loan from a bank was substantially higher, at 23 percent (table 9). It is interesting to note that the total amount of loan principal received by new clients type 2 (KM 6,000) is higher than the total principal received by new clients type 1 (KM 4,500). This is probably because a significantly higher percentage of entrepreneurs in the new client type 2 group were receiving their microenterprise loans from banks.[16]

Table 9: Sources of Current Microenterprise Loans, by Group

Percentage of all respondents with current loans who reported that they had a current loan...	*Clients (n=663)*	*New Clients type 1 (n=145)*	*New Clients type 2 (n=154)*
...from an MFI	98.5	97.3	79.6
...from a Bank	11.6	13.8	23.2
...from some other source	5.0	3.4	5.8

Note: Columns sum to more than 100 percent because some respondents had more than one current loan.

When asked to identify the most positive aspect of the business credit they received, borrowers identified three top characteristics (in decreasing order of importance): 1) the

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[15] Respondents reported "other loans" from all ten MFIs participating in the study as well as MCO MIKRA Sarajevo and the following banks: Microenterprise Bank (MEB), Raffeisen Bank, Hypo/Kristal Bank, Zagrebacka Bank, Tuzlanska Bank, Univerzal Bank, HVB/Central Profit Bank, and Razvojna Bank.
[16] Another possible explanation is that the self-reported loan data for new clients type 2 are inflated relative to the loan data supplied primarily by MFIs.

credit was received quickly; 2) procedures were simple; and 3) they had an urgent need for money at the time. Figure 4 indicates how the three borrower groups responded to this question. There were a few differences between the groups. For example, new clients type 1 placed the highest importance on the ease of the procedures (37 percent), while new clients type 2 were the most likely to report that the most important aspect of the credit was that they had an urgent need for money at the time (20 percent).

Figure 4: Positive Features of Credit
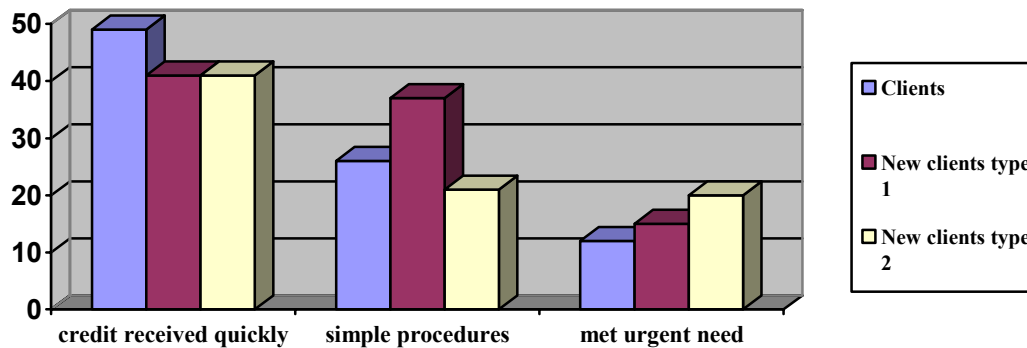
Borrowers were also asked whether they had any suggestions for improving lenders' products and services. Not surprisingly, the most common answer was that lenders should lower interest rates. Between 62 and 64 percent of borrowers in all groups suggested lower interest rates. The second most frequent suggestion was an increase in the length of the repayment period. This was most often suggested by new clients type 1 (26 percent), but it was also the second most frequent suggestion of clients (23 percent) and new clients type 2 (19 percent). The other three most frequent suggestions were 1) to give higher loan amounts (9 to 10 percent); 2) to provide a grace period (7 to 9 percent); and 3) to ease the guarantor requirements (5 percent). Interestingly, between seven and nine percent of borrowers answered that they would not change anything.[17]

C.   TRENDS FROM 2002 TO 2004

This section examines the changes that occurred between 2002 and 2004 in terms of the main impact variables: household income, employment, business investment, and business registration. The purpose of looking at trends is to better understand what was occurring in terms of the overall business environment and the general changes that panel participants experienced over this two-year period. The information on trends should not be used as the basis for reaching conclusions about the impacts of microcredit. Instead, this information, along with the general information on the macroeconomy (section II), provides a context for understanding and interpreting the impact results presented later in section IV.

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[17] These results are consistent with the qualitative information in the case studies. For more information about borrowers' opinions on credit, refer to section VI of the February 2004 *Case Study Report*.

1.   Business Closure

One of the important changes that occurred between 2002 and 2004 was the closure of a number of the primary business activities that were being tracked over time.[18] The status in 2004 of the tracked business activities is reported in table 10.   For most groups, between 69 and 72 percent of the primary enterprises were still operating in 2004.

Table 10: Business Closures Between 2002 and 2004, by Group (percentage)

	Clients (n=1385)	New Clients type 1 (n=289)	New Clients type 2 (n=257)	Non-Clients (n=630)
Business activity continues to operate	72	69	84	69
Business activity is closed temporarily	9	12	4	8
Business activity is closed permanently	17	16	10	20
Other answers or no answer	2	3	2	3
Total	100	100	100	100

The exception was the new client type 2 group, which had 84 percent of enterprises still in operation. This higher number can probably be attributed to the way that individuals in this group were selected (on the basis of recently receiving a first microenterprise loan). In general, the results on business closures are best interpreted as indicating a general business closure rate of about 30 percent over a two-year period.

The respondents provided information about the reasons that their businesses had closed. For those respondents who closed their businesses, the most important reason they cited was that they did not have enough working capital. The second and third most important reasons were that their costs were too high and that they did not have sufficient sales levels. Table 11 lists the top six reasons for business closure and the percentage of entrepreneurs in each group citing each reason.

Table 11: Top Reasons for Business Closures, by Group (percentage)

	Clients (n=365)	New Clients type 1 (n=82)	New Clients type 2 (n=35)	Non-Clients (n=174)
Not enough cash/working capital	30	37	37	32
Costs/expenses were too high	16	18	20	14
Not enough customers/sales	13	12	17	14
Entrepreneur took different job elsewhere	12	5	11	11
Illness of entrepreneur or family member	6	7	0	6
Problems with regulators/authorities	4	7	6	6
Other answers or no answer	19	14	9	17
Total	100	100	100	100

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[18] For clients and new clients type 1, the "primary" business activity was the one for which the MFI loan was received. For non-clients and new clients type 2, the "primary" business activity was the one that was identified in the initial screening process to match the characteristics of the client and new client type 1 business activities.

2. Trends in Income and Poverty

Between 2002 and 2004, average per capita incomes for all of the borrower groups increased between 15 and 38 percent. For the clients and the new clients type 1, the increases of 15 and 38 percent, respectively, were highly significant (p=0.01). The increase of 15 percent for new clients type 2 was significant, but at a lower level of significance (p=0.10). There was no significant change in the average income levels of non-clients between 2002 and 2004. Table 12 summarizes the trends in both incomes and poverty levels for the different respondent groups.

Table 12: Trends in Income and Poverty Levels, 2002 to 2004, by Group

	Clients *(n=1286)*	*New Clients* *type 1* *(n=273)*	*New Clients* *type 2* *(n=245)*	*Non-Clients* *(n=588)*
Annual per capita income (in KM)				
2002	3,254	2,487	2,852	3,009
2004	3,743	3,424	3,278	2,771
percent change, 2002-2004	+15 (p=.01)	+38 (p=.01)	+15 (p=.10)	-8 (p=.23)
Households below poverty level (percent)				
2002	51.3	59.5	54.9	54.4
2004	45.8	54.9	51.0	58.1
percent change, 2002-2004	-11 (p=.01)	-8 (p=.27)	-7 (p=.29)	+7 (p=.20)

Note: Statistically significant changes are highlighted in yellow.

The clients were the only group to experience a statistically significant change in poverty levels between 2002 and 2004. For clients, the percentage of households below the poverty level fell from about 51 percent in 2002 to about 46 percent in 2004 (p=.01). In other words, the number of client households in poverty was about 15 percent lower in 2004 than it had been in 2002.

The data indicate that income trends were generally positive between 2002 and 2004. The borrower groups—which include clients and both types of new clients—made progress in raising their income levels during this time. On the other hand, non-clients did not experience any significant changes in their income levels. During this same period between the two rounds of the survey, only the client group made significant progress in terms of reducing the number of households below the poverty level.

3. Trends in Business Development[19]

Compared to the income trends, the trends in business development between 2002 and 2004 were not nearly as positive. Changes in the employment variables were mixed, while changes in the investment variables were either negative or stagnant. For borrowers, the only positive trend during this period was the increased rate of business registration among clients.

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[19] The analysis in this section includes only primary enterprises that remained open in 2004.

Average values for the business development variables, along with changes that occurred between 2002 and 2004, are presented in table 13. Using the case of total employment as an example, the table indicates that clients employed an average of 2.15 workers in 2004. This represents a small but statistically significant drop in the number of workers these same enterprises employed in 2002. The new clients type 2 group also employed a relatively large number of workers in 2004. The average of 2.3 workers represents an increase of 20 percent over the number of workers employed by these same enterprises in 2002, before they had ever received any form of microcredit.

It is important to use caution in interpreting the trend data and comparing respondent groups. Differences between groups may be due to a number of factors, including dissimilarities in the composition of respondent groups by sector, location, age, and so on. Instead, the trend data in table 13 provide general information about the levels of the business development variables and the changes that occurred between 2002 and 2004.

Table 13: Trends in Business Development Variables, 2002 to 2004, by Group

	Clients	New Clients type 1	New Clients type 2	Non-Clients
Total number employed in enterprise	(n=934)	(n=184)	(n=207)	(n=399)
2002	2.28	1.97	1.92	1.73
2004	2.15	1.97	2.30	1.94
percent change, 2002-2004	-6 (p=.01)	0 (p=.99)	+20 (p=.01)	+12 (p=.01)
Weekly hours of non-household employees	(n=979)	(n=200)	(n=213)	(n=430)
2002	14.1	10.6	11.4	8.9
2004	11.6	8.7	12.5	8.6
percent change, 2002-2004	-18 (p=.01)	-18 (p=.19)	+10 (p=.42)	-3 (p=.76)
Business premise improvements (KM)	(n=965)	(n=198)	(n=214)	(n=433)
2002	2027	1919	2606	1127
2004	2275	1111	2358	1024
percent change, 2002-2004	+12 (p=.41)	-42 (p=.22)	-10 (p=.69)	-9 (p=.76)
Business equipment investments (KM)	(n=965)	(n=197)	(n=213)	(n=399)
2002	2739	1851	1719	1352
2004	2173	1282	2246	914
percent change, 2002-2004	-21 (p=.05)	-31 (p=.15)	+31 (p=.32)	-32 (p=.05)
Business registration (percent)	(n=979)	(n=195)	(n=215)	(n=428)
2002	.53	.41	.54	.51
2004	.55	.44	.58	.48
percent change, 2002-2004	+5 (p=.01)	+7 (p=.21)	+7 (p=.12)	-6 (p=.10)

Note: Statistically significant changes are highlighted in yellow.

IV.   IMPACT RESULTS

The results from the impact analysis are presented in this section. These findings indicate that microcredit had important positive impacts on household welfare and business development. More specifically, microcredit had positive impacts on household income, business investment, and business registration. There were also positive impacts on employment among the newest borrowers. Borrowers who had been heavily affected by the war also experienced many of these positive impacts.

The approach used to measure the impacts of microcredit was to compare the changes experienced by each of the borrower groups to the changes experienced by the non-clients. This was done using a procedure called analysis of covariance (ANCOVA). The ANCOVA procedure statistically matches observations in the borrower and non-client groups that have the same 2002 values for the impact variable and a set of other explanatory variables. The procedure then statistically compares all of these matched observations to determine whether there are any consistent differences in terms of the 2004 values of the impact variable.[20] The results provide a comparison of the outcomes in 2004 for people who started from similar situations in 2002.

A.   IMPACTS ON HOUSEHOLD WELFARE

An important goal of this study was to assess the effectiveness of microcredit in helping to improve the household welfare of borrowers. While household welfare has many dimensions, this study focused on the economic dimension of household welfare. Specifically, the variable used to represent household welfare was per capita household income. Per capita household income is the total income to the household divided by the number of people in the household. This includes income from all sources, such as income from business activities, full-time and part-time employment,[21] redundancy and severance payments, remittances and donations, pensions, rental and interest income, scholarships, and child endowments.

The results of the impact analysis indicate that microcredit has a positive and significant impact on household welfare. This positive impact was true for both clients and new clients type 1. After controlling for the effects of starting income levels in 2002 and several other variables that could affect household income, the per capita income for client households increased by about KM 900 more than did the per capita income for non-client households. This means that, by 2004, an income gap of 900 KM had

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[20] In other words, given similar measures on the 2002 value of the impact variable and the explanatory variables, the ANCOVA procedure looks for systematic differences in second-round outcomes. It does this by fitting separate, parallel regression lines through the data for the borrower group and the data for the non-client group. A statistically significant difference between these parallel regression lines is evidence for rejecting the null hypothesis of no impact. Only results with p=0.10 level of significance or better are reported in this section. A few marginally significant results are also discussed in this section, but the significance levels are explicitly stated in these cases.

[21] For employment income, only the wages and salaries actually received were included. Unpaid or past due wages were not included in the calculation of household income.

emerged between similar client and non-client households who had started at the same income levels in 2002.

Income Results

- Positive impacts of microcredit on per capita household income for clients and new clients type 1
- Negative relationship between dependency ratio and growth in per capita income
- Positive relationship between living in RS and growth in income
- Positive relationship between education and growth in income
- Positive relationships between number of income sources and growth in income

Similarly, microcredit had a strong positive impact on the per capita household income of new clients type 1 (those who received their first loans in April 2002). Compared to non-clients who were at the same income levels in 2002, these new clients had about KM 1100 more in per capita income by 2004. Both of these impact results—KM 900 for clients and KM 1100 for new clients type 1—were highly significant statistically (p=.01).

It is important to compare the size of the income impacts to the current poverty line for BiH. According to this poverty line, households with less than about KM 2200 in per capita income are classified as poor. The impacts of microcredit on per capita income, at 900 KM for clients and 1100 KM for new clients type 1, are large relative to this standard. This implies that the impacts of microcredit on income can be large enough to help households move out of poverty.

Several variables potentially related to per capita household income were included in the impact analysis (see box at right). The primary purpose of including these variables was to control for their influence when estimating the impact of microcredit. However, the results of the analysis also provide information about which of these variables were statistically related to changes in per capita household income between 2002 and 2004.

Variables Included in Household Income Analysis

- Income level in 2002
- Gender of entrepreneur
- Dependency ratio
- Region (FBiH, RS, Brcko)
- Displaced or returnee status
- Marital status (widowed or not)
- Demobilized soldier
- War disability
- Urban or rural location
- Education level
- Age of entrepreneur
- Number of enterprises in household
- Number of income sources

There were four variables that had a significant relationship to the change in per capita income between 2002 and 2004: 1) dependency ratio, 2) region, 3) education, and 4) number of income sources. As might be expected, a higher dependency ratio was associated with lower per capita income.[22] In addition, the education level of the entrepreneur and the number of income sources were both positively related to per capita income.

Less predictable was the result related to region. This result indicated that per capita incomes for entrepreneurs in RS had increased about KM 600 to KM 900 more than

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[22] The dependency ratio is the total number of household members divided by the number of income earners in the household.

incomes for entrepreneurs in FBiH during the period between 2002 and 2004. This may have been related to differences in policies and economic growth rates in the two entities during this time. In comparing FBiH to Brčko, there were no significant differences in the rate of income growth between 2002 and 2004.

In summary, the results provide strong statistical evidence that microcredit had a positive impact on the growth of household income for both clients and new clients type 1. The size of this impact ranged between about KM 900 and KM 1100.[23] When compared to the poverty line for BiH, the magnitude of this impact is relatively large. The implication of these findings is that microcredit can play an important role in improving the household welfare of borrowers and helping borrowers to avoid poverty.

B.   IMPACTS ON BUSINESS DEVELOPMENT

In this study, business development was measured in terms of three types of variables: 1) enterprise employment, 2) enterprise investment, and 3) business registration. In order to analyze the impacts of microcredit, a set of variables also potentially related to business development were included in the analysis (see box at right). The purpose of including these variables was to control for their influence on business development.

The main findings indicate that microcredit has a positive impact on business development by encouraging

Variables Included in Business Development Analysis
• Level of business development variable in 2002
• Gender of entrepreneur
• Age of enterprise
• Number of enterprises in household
• Enterprise location (urban/rural)
• Displaced or returnee status of entrepreneur
• Region (FBiH, RS, Brcko)
• Enterprise sector (trade, production, services, agriculture, livestock)
• Business registration (note: this was not included as an explanatory variable in the analysis of impacts on business registration)

investments. These investments allow businesses to develop and enhance their productivity so that they generate higher incomes for entrepreneurs and their families. In addition, the findings indicate that microcredit has a positive impact on business registration and that business registration, in turn, plays a significant role in promoting business development.

1.   Employment

The results indicate that shortly after the first microcredit loan is received, there is an immediate positive impact on employment. This higher level of employment is then maintained over time. As indicated in the trend analysis (in section III), the borrower groups had the highest levels of employment, with clients averaging 2.15 workers in their primary enterprises. The impact analysis indicates that the effect of microcredit on

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[23] The impact on new clients type 2 is also positive, but it is smaller (KM 400) and only marginally significant (p=.13).

employment occurs almost immediately, but that no additional impacts were measurable over the next several years.

The impacts on employment were examined using three employment variables:

1. total number of employees in the primary enterprise,
2. wages paid to non-household employees in the primary enterprise; and
3. weekly hours of non-household employees in the primary enterprise.

Employment Results

- Positive impacts of microcredit on the newest borrowers (new clients type 2) in terms of
  --number of employees
  --wages paid to non-HH employees
- Positive relationship between business registration and growth in all employment variables
- Positive relationship between service sector enterprises and growth in wages paid and weekly hours of non-household employees
- Positive relationship between livestock and agriculture sector enterprises and total number of employees

Microcredit had a positive impact on two of these variables: number of employees and wages paid to non-household employees. However, these impacts occurred only for the new clients type 2. This group of respondents consisted of the borrowers who had taken their first loan most recently. Based on this result, it would appear that the impacts on employment occurred immediately after the first loan.[24]

The size of the impact on number of employees was 0.26 employees (p=0.01). This represented about 14 percent of the average of 1.92 employees that new clients type 2 employed in their enterprises in 2002. In addition, the first microcredit loan was associated with an increase in the value of wages paid to non-household employees of about KM 21 (p=0.10). This was a relatively large increase, since it represented about 29 percent more than the KM 73 in wages paid to non-household employees by new clients type 2 in 2002.

There were several variables that were associated with faster growth in employment between 2002 and 2004. The most striking of these was business registration. Businesses that were registered had larger increases in all three of the employment variables than businesses that were not registered. Compared to unregistered businesses, the number of employees in registered businesses grew faster by about 0.5 and 0.6 employees, the wages paid increased by KM 90 to KM 105, and the weekly hours of non-household employees grew by ten to eleven hours (all at p=0.01).

There were some interesting relationships between the sector of the enterprise and the rate of employment growth. First, businesses in the service sector experienced significantly higher increases between 2002 and 2004 in terms of both the wages paid to non-household employees and the weekly hours of non-household employees. This

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[24] Note that the respondents in the new client type 1 group were interviewed one to three months after they received their first loan. Therefore, if they had increased employment in their microenterprises immediately after receiving the first loan, these higher levels of employment would have already been in place at the time of the first-round survey.

indicates that service sector enterprises expanded their employment of non-household employees more rapidly than did enterprises in other sectors over the same time period.

On the other hand, enterprises in the livestock and agriculture sectors expanded their total number of employees more rapidly between 2002 and 2004 than enterprises in other sectors. Most (if not all) of the employment growth probably involved members of the entrepreneur's own household, since there was no evidence of higher employment of non-household members. The increase in employment of household members ranged from 0.4 to 0.7 employees for enterprises in both the livestock and agricultural sectors (p=0.01).

In summary, the results from the analysis of impacts on employment indicated that microcredit had a small but significant positive impact on the newest group of borrowers. After this immediate impact, there were no measurable impacts on longer term borrowers. However, when combined with the analysis of trends in the employment variables, it appears that borrowers maintain this initial increase in employment. Other variables were associated with significantly more rapid employment growth, notably business registration. Enterprises in the service sector increased their employment of non-household employees more rapidly between 2002 and 2004 than did enterprises in other sectors, while employment expansion among enterprises in the livestock and agriculture sectors was based more on the employment of household members.

2. Investment

Investment is an important way to promote business growth and development. It helps to build the business and to increase productivity. In this study, two types of investment were measured: 1) investments made to improve the business premise and 2) investments made to purchase new business equipment. The results of the impact assessment indicate that microcredit had a positive impact on both types of investment.

Microcredit had a positive impact on entrepreneurs' willingness and ability to invest in improving the business premise. Examples of these types of investments include building additions to the premise, changing the walls or flooring, adding new doors or windows, or redecorating the premise. Compared to non-clients who had similar levels of investment in 2002, clients and new clients type 2 spent about KM 900 more on improvements to the business premise in the twelve months before the 2004 survey.

As might be expected, the age of the enterprise was positively related to investments in the premise; the older the enterprise, the larger the

> **Investment Results**
>
> - Positive impacts of microcredit on investments in business premise and business equipment for both clients and new clients type 2
> - Positive relationship between business registration and both types of investments
> - Positive relationship between age of enterprise and growth in business premise investments
> - Positive relationship between production sector and growth in business equipment investments
> - Positive relationship between male managers and growth in business equipment investments

investment in 2004. Also, businesses that were registered spent significantly more on improving the business premise than non-registered businesses. After controlling for the influence of all of the other variables included in the analysis, the results indicated that registered businesses invested about KM 1400 to KM 2400 more in their business premise than did non-registered businesses.

The results for investments in business equipment also showed a significant positive impact of microcredit. Both clients and new clients type 2 spent more on business equipment in 2004 than did non-clients who were similar to them in 2002. The size of this impact ranged from KM 900 to KM 1300.[25] The most commonly reported types of investments included the purchase of machinery for production, refrigerators, inventory shelving and display cases, furniture, computer equipment, and tools.

As with investments in the business premise, registered businesses invested significantly more in business equipment than their non-registered counterparts. Specifically, registered businesses spent about KM 700 to KM 1500 more on business equipment than did non-registered businesses. Two additional variables were also related to the value of investments: 1) gender of the manager and 2) business sector. Male business managers invested about KM 700 more in business equipment than did female managers. As might be expected, enterprises in the production sector invested about KM 1500 to KM 2400 more in business equipment than did business in the trade sector. This is logical, since production activities are more equipment intensive than trade activities.

In summary, microcredit has positive impacts on business investment, both in terms of improvements to the business premise and investments in business equipment. The size of the impact on improvements to the business premise is about KM 900, while the size of the impact on investments in business equipment ranges from KM 900 to KM 1300. Several variables were also related to investment growth, including age and sector of the enterprise and gender of the manager. In addition, business registration had a strong, positive relationship with both types of investment.

3. Business Registration

In the analysis of both employment and investment, business registration was included along with other variables thought to influence these business development variables. The results indicated that business registration has a consistently positive relationship with all of the employment and investment variables. For the analysis of the impact of microcredit on business registration, the business registration variable was only included in the estimation as an impact variables.[26]

The results of the impact analysis indicated that microcredit had a positive impact on entrepreneurs' decisions to register their businesses. This positive impact was true for all

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[25] The impact on new clients type 1 was also positive, but it is smaller in magnitude (KM 500) and only marginally significant (p=.11).
[26] See the data analysis plan in appendix 4 for an explanation of the differences.

three categories of borrowers.[27]   Borrowers who started with the same registration status as non-clients in 2002 (i.e., either registered or not registered) were between ten and 14 percent more likely to operate registered businesses in 2004. As with all of the other impact results, this finding is based on controlling for the influence of other variables.

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Business Registration Results

- Positive impacts of microcredit on business registration rates for clients and both types of new clients
- Negative relationship between growth in business registration rates and enterprises in the agriculture, livestock, and production sectors

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The results from the impact analysis indicated that sector was related to business registration. Compared to the trade sector, enterprises in the agriculture and livestock sectors were 50 percent less likely to operate registered businesses. Production enterprises were also less likely to register, although the difference in magnitude was not as great. There was also limited evidence to indicate that enterprises in RS were about ten percent more likely to register their businesses than enterprises in FBiH.

In summary, microcredit had a positive impact on business registration for all three borrower groups. These results are a bit surprising, given the negative attitudes that clients expressed toward business registration in the case studies. In the case studies, only entrepreneurs in the service sector considered business registration to be necessary, and this was because of high public visibility. The results from the survey indicated that, despite the negative attitudes expressed by entrepreneurs, microcredit played a statistically positive role in encouraging business registration.

C.   MICROCREDIT AND POST-CONFLICT TRANSITION

One of the motivations for the Local Initiatives Projects was to assist people who had been adversely affected by the war. Several groups were of particular interest, including people who were displaced from their homes, demobilized soldiers, people who were disabled, and women who had been widowed during the war. As described in the April 2003 report, the results of the first-round survey indicated that the MFIs participating in the study have provided financial services to a relatively high percentage of the war-affected population.   In particular, the MFIs have served a disproportionately high number of people who were dislocated from their homes during the war, men who were disabled during the war, and demobilized soldiers.

The impact analysis indicated that one of these groups—people displaced by the war or returnees to their homes after the war—continued to experience adverse effects through 2004.[28] One-third of the 2002 respondents had been forced to leave their homes during the war. Of these, about half remained displaced at the time of the first-round survey, while another eight percent returned to their pre-war municipality but not their pre-war

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[27] The results for clients and new clients type 2 were highly significant (p=.01), while the results for new clients type 1 were marginally significant (p=.115).

[28] There were no statistically significant differences for widows and the disabled, perhaps because there were so few of them in the sample. There was limited but inconclusive evidence that demobilized soldiers had slower income growth than non-soldiers.

home. The 2002 data confirmed that MFIs were reaching out to this population in disproportionately high numbers: while 36 percent of clients and 34 percent of new clients had been dislocated, only 29 percent of non-clients had been affected in this way (p=0.01).

Even though MFIs have provided substantial outreach of financial services to the displaced and returnee population, the results from the impact analysis indicated that they have continued to face significant challenges. It appears that microcredit has helped overcome some of these challenges, but only over time. While displaced clients enjoyed the same rate of income growth between 2002 and 2004 as clients who had not been displaced, the rate of income growth was slower for displaced non-clients and newer clients (type 1 and 2).

In addition, displaced entrepreneurs lagged behind their non-displaced peers in a number of the business development variables. In particular, people who were displaced or returnees reported slower growth in wages and weekly hours for non-household employees. In other words, displaced entrepreneurs were slower to employ non-household employees. This may have been because they lacked the social networks needed to locate and retain reliable non-household employees.

Some groups of displaced and returnee entrepreneurs were also less likely to register their businesses than entrepreneurs who had not been dislocated by the war. As with income, microcredit appeared to be help eliminate this difference over time. Only non-clients and the newest borrowers (new clients type 2) had slower growth in business registration rates. On the other hand, displaced and returnee entrepreneurs appeared to invest in their businesses at the same rate as their non-displaced peers.

In summary, the MFIs in the study have had a heavy outreach to the war-affected population, including the displaced, the demobilized, the disabled, and the widowed. The results from the data analysis indicated that microcredit has played an important role in improving the post-war transition for entrepreneurs who were dislocated during the war. In 2004, this population continued to face significant challenges in income generation and business development, but those with longer-term access to microcredit were more successful than newer borrowers or non-clients.

These findings are consistent with the results from the *Case Study Report* (February 2004), in which displaced entrepreneurs described the difficulties they faced and how microcredit helped them to adjust. In extensive interviews, displaced entrepreneurs described how they lost all or most of their property and arrived in communities where they did not know anyone and had difficulty establishing a regular income. These people, such as the single mother who came to Banja Luka as a refugee, used their first microcredit loans to start businesses. Others, who were returnees to their former homes, described how they used the loans to establish or revitalize their businesses, reintegrate into their communities, and repair their homes. These stories, and the statistical results of the impact analysis, point to the important role of microcredit in easing the post-war transition for displaced persons and returnees.

V.   SUMMARY AND IMPLICATIONS

A.   SUMMARY OF IMPACT RESULTS

The results from the two rounds of the survey indicate that microcredit had numerous positive impacts between 2002 and 2004. These positive impacts occurred despite the fact that the general trends in business development for microenterprises during this period were not particularly favorable. This section summarizes the statistically significant findings in terms of the impacts of microcredit on income, employment, investment, business registration, and the post-war transition.

1.   Impacts on Income

- Positive impact of KM 900 on the growth in per capita household incomes for clients (p=0.01).

- Positive impact of KM 1100 on the growth in per capita household incomes for new clients type 1 (p=0.01).

- The impacts on income are large relative to the national poverty line for per capita income, which is set at KM 1100.

- The number of client households below the poverty line fell from 51 percent in 2002 to 46 percent in 2004 (p=0.01).

2.   Impacts on Employment

- Positive impact of 0.26 on the growth in the number of microenterprise employees for new clients type 2 (p=0.01).

- Borrower groups have higher employment levels than the non-client group, with longer terms clients employing an average of 2.21 workers (including the entrepreneur).

- Positive impact of KM 21 on the growth of wages paid to non-household employees for new clients type 2 (p=0.10).

3.   Impacts on Business Investment

- Positive impact of KM 912 on the growth of investment in the business premise for clients (p=0.05).

- Positive impact of KM 857 on the growth of investment in the business premise for new clients type 2 (p=0.10).

- Positive impact of KM 896 on the growth of investment in business equipment for clients ($p=0.05$).

- Positive impact of KM 1,293 on the growth of investment in business equipment for new clients type 2 ($p=0.01$).

- Marginally significant positive impact of KM 474 on the growth of investment in business equipment for new clients type 1 ($p=0.117$).

4.   Impacts on Business Registration

- Positive impact of 13 percent on the growth of business registration for clients ($p=0.01$).

- Positive impact of 13 percent on the growth of business registration for new clients type 2 ($p=0.01$).

- Marginally significant positive impact of 12 percent on the growth of business registration for new clients type 1 ($p=0.115$).

5.   Impacts on Post-War Transition

- Outreach of financial services by participating MFIs was disproportionately high for entrepreneurs who were displaced by the war, demobilized soldiers, and the war-disabled.

- Displaced entrepreneurs continued to lag behind their non-displaced peers in terms of growth in per capita income, employment of non-household members, and business registration. Microcredit helped to eliminate these disadvantages over time.

B.   STUDY LIMITATIONS

Most impact studies in the social sciences are limited by the problem of self-selection, and this study is no exception. The self-selection problem occurs because the people who are most likely to benefit from microcredit are the ones who decide ("self-select") to take a loan. This can cause the borrower and non-client groups to differ in ways that affect income and business development, possibly leading to an overestimation of impact.

In this study, the self-selection problem is reduced by including in the statistical analysis many of the variables thought to be related to income and business development (e.g., gender, education, location, business sector). The ANCOVA procedure then statistically matches borrowers and non-clients who share common traits. While this procedure does not totally eliminate the problem of self-selection, it does eliminate the bias that would have been associated with many observable characteristics.

Another limitation of the study was the panel attrition, or loss of respondents between the first and second rounds of the survey. The panel attrition rate of 23 percent was not unusually high for this type of study. In order to understand the effect of panel attrition, the preliminary examination of the data included a careful analysis of the statistical differences between the panel leavers and the panel stayers (see appendices 3 and 4). These differences were then controlled for through the explanatory variables included in the estimation procedure.

A third limitation of the study was that it was only possible to analyze changes that occurred over a two-year period. Since only two years elapsed between the two rounds of the study, the findings do not reflect the impacts that might occur over a longer time horizon. For example, it would have been interesting to see if the measured impacts on investments that were observed during the study period would have led to employment impacts over a longer time horizon. On the other hand, the study did have the advantage of observing three groups of borrowers who had taken their first loan at different times. The analysis of three distinct groups of borrowers yielded some useful information about the evolution of impacts over time.

C.   IMPLICATIONS OF THE FINDINGS

1.   Microcredit Increases Investment, Productivity and Incomes

The most important implication of the findings is that microcredit helps the citizens of Bosnia and Herzegovina to improve their household welfare, develop their businesses, and contribute to national economic growth and development. Microcredit helps make productive microenterprises possible, which provides self-employment at levels that contribute significantly to household income.

Microcredit encourages business investment. Entrepreneurs who receive microcredit have higher levels of working capital and invest more heavily in business equipment and in improvements to their business premises. These investments make their businesses more productive, which contributes to the productivity of labor within the microenterprise and helps to build the productivity of the national economy.

As microenterprises become more productive, entrepreneurs earn more from their self-employment activities. The case studies revealed that the primary motivation for most of these entrepreneurs was to provide themselves with a good job and earn a good living for their families. In the face of national unemployment rates ranging from 20 to 40 percent, productive self-employment is an important option for BiH citizens. Microcredit helps entrepreneurs to earn more money and raise the welfare of their entire families.

2.   Microcredit Strengthens the Formal Economy

Microcredit encourages entrepreneurs to participate in the formal economy by registering their businesses. This helps to strengthen the official economy of BiH and increases the

size of the official economy relative to the gray economy.[29] This benefits the national economy by improving the tax base and creating a level playing field for business growth and development. Business registration is also associated with important benefits for the individual microenterprise. According to the findings of this study, registered businesses had higher levels of both employment and investment.

3.   Microcredit Assists Displaced Entrepreneurs

The microcredit industry has had significant outreach to displaced and returnee entrepreneurs, which has helped to ease the economic recovery process for these war-affected populations. However, the results of the study indicate that, almost a decade after the end of the war, displaced entrepreneurs continue to struggle and need special assistance to reintegrate into the national economy.

Displaced entrepreneurs earn less income and lag behind their peers in several areas of business development. While they invest in their enterprises at similar rates, displaced entrepreneurs are less likely to register their businesses and hire paid employees.   Only through longer term access to microcredit are displaced and returnee entrepreneurs able to match the rates of income growth and business development enjoyed by their non-displaced contemporaries.

4.   Future of Microcredit in BiH

During the three-year period between 2001 and 2004, the outreach of the ten MFIs participating in the study has nearly tripled. Today, there are more than 100,000 entrepreneurs with active loans from these MFIs. As a result of the loans they receive, these entrepreneurs are better able to invest in their businesses and are more likely to participate in the formal economy. Just as importantly, entrepreneurs with access to microcredit are productively employed and earn substantially higher incomes for their families.

At the same time that clients have experienced these positive impacts, the MFIs in the study have built strong financial institutions. These MFIs are financially sustainable and capable of continuing to serve microenterprise owners into the future. The MFIs fulfill an important mission, since the vast majority of their clients do not receive the equivalent financial services from other types of financial institutions. Continued strengthening of the microcredit industry will help to ensure that current and future clients enjoy higher incomes and stronger businesses, and that these microenterprises will continue to become integrated into the national economy and contribute to a more robust economy in Bosnia and Herzegovina.

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[29] According to CBBH estimates for 2003, about KM 4,600 million in nominal GDP was produced in the the non-observed economy, compared to KM 12,170 million of nominal GDP produced in the official (observed) economy. This would indicate that the gray economy in 2003 was about 38 percent as large as the official economy.

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DEFINITIONS AND ACRONYMS

Borrowers: Clients, New Clients type 1, and New Clients type 2

CBBH: Central Bank of Bosnia and Herzegovina

Clients (**CL**): the 1385 respondents in the panel data set who received their first microcredit prior to April 2002; also classified as "Clients" in 2002

FBiH: Federation of Bosnia and Herzegovina

KM: Convertible mark

LIP I: Local Initiatives Project I

LIP II: Local Initiatives (Microfinance) Project II

MFI: microfinance institution

New Clients type 1 (**New1**): the 289 respondents in the panel data set who received their first microcredit in April 2002; classified as "New Clients" in 2002

New Clients type 2 (**New2**): the 257 respondents in the panel data set who received their first microcredit after April 2002; classified as "Non-Clients" in 2002

Non-Clients (**NC**): the 630 respondents in the panel data set who had never received microcredit by the time of the second survey; classified as "Non-Clients" in 2002

Panel data set: the 2561 respondents who completed the survey in both 2002 and 2004; also called the "panel stayers"

Panel leavers: the 772 respondents who completed the survey in 2002, but did not complete the survey in 2004

Panel stayers: the 2561 respondents who completed the survey in both 2002 and 2004

Per capita household income: the total income to the household divided by the number of people in the household

RS: Republika Srpska

USD: U.S. dollar

APPENDIX 1:
RESEARCH PLAN FOR IMPACT ASSESSMENT

OBJECTIVES

1. To document the impacts of a sustainable microfinance sector in BiH.
2. To provide client-level information to MFIs for use in management decisions.
3. To build interest and understanding among MFIs on the use of client-level information for documenting program impacts, improving program management, and developing new products and services.
4. To build local research capacity for collecting and analyzing client-level information on microenterprises and microfinance.

HYPOTHESES/RESEARCH QUESTIONS

1. Do microcredit organizations in BiH reach their target populations?
   - Related question: What are the demographic and socio-economic characteristics of the MFI clients?
2. Does microcredit improve the household welfare of borrowers?
   - Impact variable: Total household income
3. Does microcredit promote business development?
   - Impact variable: Employment and job creation
   - Impact variable: Business registration
   - Impact variable: Improvements to business site and investment in equipment
4. Does microcredit ease or speed the post-conflict transition?
   - Analyze impacts on survey subgroups (e.g. displaced persons, returnees, widows, demobilized, disabled)
5. Each MFI will also have the opportunity to add a brief module reflecting their specific needs for client-level information. This module will be asked of their clients only.

INTENDED USERS/AUDIENCE FOR STUDY

- Microfinance sector within BiH, including the MFIs, AMFI (a national MFI network), and the LIDs (the project implementation units of LIP II)
- Government officials in national, entity, and local governments
- General public in BiH through national and local media
- World Bank
- Potential donors to MFIs
- Microfinance organizations and networks within region and in post-conflict settings, including the Microfinance Center (MFC)
- Global publication to microfinance industry

RESEARCH DESIGN

1. Mixed Method Approach

- Combined use of quantitative and qualitative analysis
- In-depth interviews prior to questionnaire design
- Survey data to measure direction and size of changes over time
- Case study data to complement quantitative analysis: to understand how changes occur, establish impact paths, and examine rival hypotheses
- (Optional) Focus groups as needed at end of project to resolve any unclear findings

2. Longitudinal Study

- Panel study following same households over time
- Two rounds of survey, with two-year interval between rounds
- Survey to be conducted in same month for each round
- One round of case studies, conducted at mid-point between surveys

3. Quasi-Experimental Design

- Include both a client (treatment) group and a non-client (control/comparison) group, with client group to include both longer term clients and new clients
- Treatment group: Clients selected randomly from current client lists of MFIs
- Control group: Non-clients selected from same neighborhoods as clients
- New entrant group: Clients who received their first loans shortly before the first round of the survey
- Comparison to results of LSMS as alternative baseline

4. Sample Sizes

- Ratio of clients to non-clients: 5/3
- Planned initial (baseline) sample
  - 2,500 clients
  - 1,400 non-clients
  - client group to include new clients and ex-clients, number to be determined
- Assume no more than 20 percent panel attrition rate, resulting in final sample no smaller than
  - 2,000 clients
  - 1,200 non-clients
- Approximately 16 case studies

4. Sample Coverage

- All operationally sustainable MFIs in BiH (survey will have national coverage)
- Sampling proportional to size (same percentage of clients from each MFI)
- If necessary, maintain minimal baseline sample size per MFI of 75 clients
- Case studies to be selected from throughout the study area

5. Sample Frames

- For clients and new clients: MFIs to provide current client lists; after selection of the sample, MFIs will provide address (contact) and credit information
- For non-clients: The sample frame for the control group will be constructed using a snowball technique to find enterprises in the same neighborhood as the selected client enterprise, continuing until three to five qualified non-client enterprises are registered. A corresponding non-client will then be randomly selected from that list.
- A "qualified" enterprise is defined as one that
  - Is in the same sector as the client enterprise (commercial, service, or industrial),
  - Has not received a formal or program microenterprise loan, and
  - Has fewer than ten employees (including the entrepreneur and family members).

6. Survey Interview Approach

- Survey interview length of 45-60 minutes
- Use of special enterprise module to collect survey data on each enterprise associated with the household
- Take positive steps to minimize panel attrition:
  - Provide small guest gifts worth about 6DM.
  - Collect primary and secondary contact information at end of baseline interview that can be used to locate respondents two years later.
  - Send New Year's greeting card with address correction request in 1/03 and 1/04
- Interviews to be conducted at homes and businesses of respondents

7. Analysis of Survey Data

- Analysis of baseline characteristics for full sample and separately by MFI, sector, region, gender, and war-affected subgroups
- ANOVA, t-tests and chi-square tests for analyzing baseline differences between treatment groups and significant changes within treatment groups over time
- Analysis of covariance (ANCOVA) for analysis of impacts, with separate ANCOVA investigation of cross-over effects among subgroups
- Multiple regression of impact variable on measures of length and/or depth of program participation
- Logit analysis of panel attrition and program attrition

8. Collection and Analysis of Case Study Data

- The interviews will follow a protocol developed by the consultant, in cooperation with the qualitative researcher
- The interviews will be held over two days, at the home and/or business of the informant, with each interview lasting 2-3 hours per day
- Appropriate guest gifts, worth approximately 20 DM, will be provided to the case study households as a token of appreciation for their cooperation
- The interviews will be tape recorded, transcribed, and translated into English
- A data base will be prepared for each case, consisting of the following items:
  - Written interview notes
  - Tape recordings of the interviews
  - Transcriptions of tape recordings and English translations of transcriptions (hard copies and electronic copies)
  - Photocopies of the filled questionnaires for 2002 and 2004
  - One-page summary (profile) of each case study household (electronic)
- The analysis of the case study data will follow two tracks
  - A written analysis of how closely each case matches the hypothesized patterns (i.e. analysis of the case study data based on the "pattern matching" technique)
  - A synthesis of illustrations and examples, including quotations, on a set of themes specified by the consultant

RESEARCH SCHEDULE

- March-July 2002: Conduct baseline survey
- August 2002-December 2002: Analyze baseline survey
- January-December 2003: Write and disseminate baseline survey results and conduct case studies
- January-September 2004: Conduct second rounds of survey and case studies
- October-December 2004: Disseminate impact results

APPENDIX 2:
TECHNICAL METHODS USED
IN FIRST-ROUND SURVEY (2002)

A.   SAMPLE SELECTION PROCEDURES

The objective of the study was to compare differences between three groups of respondents:

- *Clients*. Microentrepreneurs who have had one or more microenterprise loans and were on the active client list in March 2002 for one of the MFIs included in this study;
- *New clients*. Microentrepreneurs who received their first microenterprise loan in April 2002 from one of the MFIs included in this study;
- *Non-clients*. Microentrepreneurs who have not taken a microenterprise loan from any MFI or bank between the end of the war in 1995 and the date of the interview.

The planned sample was to include 2000 clients, 500 new clients, and 1400 non-clients, for a total of 3,900 respondents. The quota for the number of clients to be interviewed from each MFI was determined based on the total number of clients. The final sample size was 3,333 respondents, consisting of 1,742 clients, 399 new clients, and 1192 non-clients. The reduced sample was a result of a couple of unanticipated changes. One MFI that was planning to participate in the study decided not to participate after data collection had begun. The sample from another MFI included respondents who had received non-enterprise loans. When this was discovered, the final sample for that MFI had to be reduced.

1.   Selection of Clients

The selection of the client sample was conducted in the following manner:

- Each of the MFIs participating in the study were asked to provide lists that contained only the identification codes of their active clients (with no other identifying data) in order for the selection to be completely random.
- After the clients to be included on the survey were randomly selected, we sent each MFI the lists with the identification codes of these clients and requested that the MFIs provide the remaining data to enable us to locate and contact these clients. The contact data included the full name of the client, home address, business address, contact telephone numbers, and type of business activity for which the loan was received.
- The sample for each MFI contained 20 percent over sampling of clients as it was anticipated that some people would refuse to participate in the study for various reasons and it was necessary to ensure adequate alternatives for these cases.

It was agreed that each MFIs would inform their clients about the survey through a letter of invitation to participate. The letter informed the clients that an interviewer from Prism Research was likely to contact and visit them in relation to the study. The text of the invitation letter was prepared by the research team and was identical for all of the MFIs. Each MFI printed the letter on its own letterhead/logo next to that of Prism Research.

Each MFI delivered this letter to its clients and new clients through their own field agents. Field agents were requested to not give any subjective opinions about the study but rather to only deliver the letter of invitation to clients and to state that it relates to an important study being commissioned by the World Bank and that their participation is completely voluntary. The intention was that all respondents be equally and objectively informed about the study.

Table 21. Population and Sample of Clients, by MFI

	Number of Active Clients in 3/02	Sample of Active Clients in Study	Percent of All Active Clients	Percent of Client Sample
Mikro ALDI	956	123	12.9	7.1
BENEFIT	1904	142	7.5	8.2
BOSVITA	899	119	13.2	6.8
EKI	6879	205	3.0	11.8
LOK micro	3705	175	4.7	10.0
MI-BOSPO	4396	175	4.0	10.0
MIKROFIN	4648	201	4.3	11.5
PARTNER	6748	193	2.9	11.1
PRIZMA Mikro	4645	127	2.7	7.3
SINERGIJA	1223	141	11.5	8.1
SUNRISE	2557	141	5.5	8.1
Total Sample	38560	1742	4.5	100.0

Table 22. Population and Sample of New Clients, by MFI

	Number of New Clients in 4/02	Sample of New Clients in Study	Percent of All New Clients	Percent of New Client Sample
Mikro ALDI	178	33	18.5	8.3
BENEFIT	141	26	18.4	6.5
BOSVITA	85	18	21.2	4.5
EKI	443	70	15.8	17.5
LOK micro	198	31	15.7	7.8
MI-BOSPO	284	43	15.1	10.8
MIKROFIN	242	38	15.7	9.5
PARTNER	313	37	11.8	9.3
PRIZMA Mikro	685	39	5.7	9.8
SINERGIJA	47	12	25.5	3.0
SUNRISE	343	52	15.2	13.0
Total Sample	3127	399	12.8	100.0

2.   Selection of New Clients

Similar procedures were applied in the selection of new clients. However, in this case we used a proportional sample based on the total number of new clients each of the MFIs had in the month of April 2002. These persons were invited to participate in the study in an identical manner as described above.

3.   Selection of Non-Clients

The sample of non-clients was necessarily selected in a very different manner. First we set the total number of non-clients to be 70 percent of the total number of MFI clients. The same percentage was applied for each of the MFIs.

The non-client group is intended to be a control group for the purposes of this study. To ensure the comparability of data, interviewers were instructed to adhere to set principles in the selection of respondents in this group. The basic principle was that non-clients would be sought only for certain (previously determined) clients from the MFI client lists. This selection of clients from the MFI lists was made randomly and each such client name had a mark next to it to indicate that it was required that a corresponding non-client be found. If for any reason it proved not possible to conduct the interview with a client that had been identified as requiring a corresponding non-client to be identified, then the first available name on the reserve list was taken and the non-client identification requirement was transferred to this client.

A *corresponding non-client* for the purposes of this study means that the non-client has to have the following characteristics:

- Own and operate a microenterprise in the same sector as the corresponding client's microenterprise (i.e., trade, services, production, agriculture, livestock/animal husbandry), but not necessarily in the same subsector;
- The microenterprise must be in the same neighborhood or in a close area of the same town or village as the corresponding client;
- The entrepreneurs could not have received a microenterprise loan from a bank or MFI from the end of the war in 1995 up to the time of the study; and
- The enterprise must have fewer than 10 employees.

In order to ensure objectivity in the selection of non-clients, interviewers were instructed to use a specially constructed screening questionnaire to initially recruit five persons that met the *corresponding non-client* criteria and were willing to participate in the study. These completed screening questionnaires were then sent to the central office of Prism Research where one of the five identified potential non-client respondents was randomly selected for inclusion in the study.

In order to boost the participation rates when the survey is repeated two years later with the same respondents, each respondent was given a small gift at the end of the interview as a token of appreciation for their time and cooperation. The gift was one-half kilogram of coffee, valued at approximately 6 KM.

B. QUESTIONNAIRE DEVELOPMENT AND PILOT TEST

The questionnaire was developed under the guidance of Elizabeth Dunn in close cooperation with the quantitative research department of Prism Research. The questionnaire sections were developed in accordance with the fundamental hypotheses of this study. It was agreed that the questionnaire should be composed of the following sections:

- Introduction (self-introduction of enumerator, explanation of purpose of interview and study, confidentiality and use of information, request for honesty, etc.);
- Interview details (respondent name, code, home address, business address, type of loan, interviewer name and code, etc.);
- Demographic information on household members (name or nickname, age, gender, marital status, education, person's primary occupation, etc.);
- Information on microenterprises owned by the respondent and members of his or her client household (number of distinct business activities, main products or services in each activity, employment, money spent on improving or enhancing the business location and/or equipment, etc.);
- Household income (including all sources of income to all members of the household); and
- Other questions related to war-affected status and closing questions.

The draft version of the questionnaire was prepared and pilot tested. In the pilot study, a number of MFI clients in various parts of BiH engaged in various types of business activity were interviewed. In this way we tested for the clarity and comprehension of questions and interview procedures. After some minor changes and adjustments to the questionnaire, a second draft version of the questionnaire was pilot tested on new respondents, but in this case interviewers who had been specially trained in the administration of the questionnaire conducted the pilot interviews. In this manner we gathered valuable information that was used in the improvement of the questionnaire and interview procedures.

C. INTERVIEWER SELECTION AND TRAINING

Experienced Prism Research interviewers were selected for engagement in this study. Interviewers over the age of 25 were preferred in order for them to leave an impression of maturity and experience on the respondents. All interviewers had to undergo a training process comprised of a number of segments as follows:

- Familiarization with the general methodology of social research,
- Familiarization with the basic objectives of this study,

- Familiarization with the specific methodology of this research,
- Familiarization with respondent identification procedures (separately for non-client identification from that of client and new client procedures),
- Familiarization with the questionnaire and the constituent modules, and
- Practical role-play exercise of questionnaire administration in pairs.

The interviewer training was conducted in group sessions in a number of cities throughout BiH, including Sarajevo, Mostar, Bihać, Banja Luka, Tuzla, and Zenica. Where it was necessary to conduct additional training sessions for new or additional interviewers, the regional coordinators conducted either group or individual training.

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│   RESEARCH DIRECTOR & PROJECT MANAGER            │
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┌─────────────────────────────────────┐      ┌──────────────────────┐
│   FIELD WORK MANAGERS                │─────▶│   INDEPENDENT        │
│   (training, coordination, control)  │      │   FIELD/TELEPHONE    │
└─────────────────────────────────────┘      │   CONTROL            │
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│  COORDINATORS FOR    │      │  COORDINATORS FOR    │
│  FEDERATION OF BiH   │      │  REPUBLIKA SRPSKA    │
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│                     INTERVIEWERS                                 │
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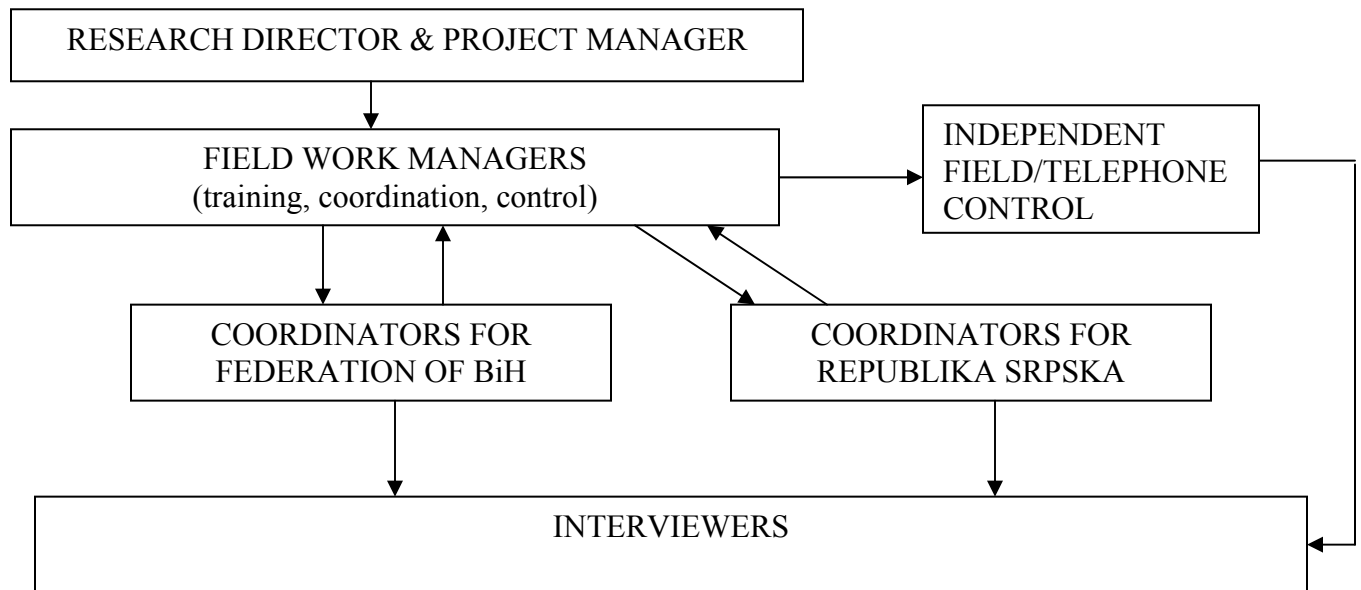
The above diagram indicates the organization of the fieldwork and how the project manager was related to the interviewers and coordinators.

D.   FIELDWORK AND QUALITY CONTROL

The fieldwork for the study commenced in early May 2002. Coordinators and interviewers were given lists of names and contact details for clients and non-clients, including residential address, business address, contact telephone numbers, credit type, and type of business activity engaged in and for which the credit was taken. Interviewers were instructed to first contact the person they were to interview by telephone in order to make an appointment for the interview. For persons on the lists without contact telephone numbers, the interviewers were instructed to go to one of the given addresses (residential or business) and attempt to conduct the interview at that time or to make an appointment for conducting the interview at a time more convenient to the respondent.

Interviewers were instructed to be very polite and cooperative and ensure that they make the least possible disruption. In the case where the identified respondents did not wish to

participate in the study for any reason, the interviewer was instructed to replace this respondent with the first respondent on the reserve list provided.

In the first part of the fielding of the study only clients and new clients were interviewed. At this stage the recruitment of potential corresponding non-client respondents was also conducted. This first phase went through to the middle of June 2002. At this stage all completed questionnaires were collected and an overview of the results achieved was conducted. Due to the somewhat poorer than expected responsiveness and willingness of clients and new clients to participate in the study, additional potential respondents were selected from the same lists of clients and new clients that had been used in the first phase, of course excluding the identification codes of those clients who were selected in the previous phase.

Control of the completed questionnaires from the first phase of the study was conducted in one of two ways – either by telephone or by field visit. In both cases, control included a check of the work of the interviewer, adherence to prescribed procedure, and the correctness of data collected. If there was evidence of errors, these were corrected through contact with the respondent. In such cases the interviewer concerned was contacted, as was the coordinator, in order to bring these errors to their attention and to avoid similar errors in later work.

E.   DIFFICULTIES ENCOUNTERED IN THE FIELDING OF THE SURVEY

The fielding of the project proved to be very demanding and required concerted and concentrated effort to overcome the difficulties encountered in the best possible manner. The two main problems encountered relate to the unexpectedly low level of cooperation from clients and new clients, and difficulties in the process of recruitment of non-clients. The following specific problems were encountered in this regard:

- REFUSALS TO PARTICIPATE - The problem of a high level of refusals plagued the fieldwork. For this reason, in the middle of July we selected an additional sample of clients and new clients in order to be able to complete the project;
- DELAY WITH LISTS – The commencement of the project was delayed somewhat as not all of the MFIs provided the lists at the anticipated time. In one case, the MFI lists did not contain the necessary contact information for respondents, while for some clients the contact information was incorrect. In this case, the lists were returned to the MFI for completion with the necessary information or Prism Research staff sought contact information for the listed clients over the Internet or the telephone operator to obtain this information where available;
- CLIENTS NOT INFORMED ABOUT THE PROJECT – Although the initial agreement was that all clients and new clients would be informed about the research through a letter of invitation, and in order to allow time for this we started the field work with a 10-15 day delay. However, this was not done in all cases and this was the source of problems arising in contact between interviewers

and clients in the field. To overcome this problem, Prism Research arranged for all clients and non-clients on the lists that had not been contacted already to be contacted by telephone in order to check whether these persons had been informed of the study and at the same time to attempt to set a time for an interviewer to visit to conduct the interview;

- LOANS THAT ARE NOT BUSINESS RELATED – Two of the MFIs provided loans other than enterprise loans and this was a fact that Prism Research was not aware of at the outset. This resulted in numerous misunderstandings with such clients until this was clarified, since these clients did not in fact meet the basic criteria for participation in the study. Once this problem was identified, we requested a revision of the lists but, unfortunately, this took quite a long time and led to delays in the fielding of the study;

- ANNUAL LEAVE / HOLIDAYS – The fielding period included July and August, which is the important summer holiday season in BiH. This resulted in considerable difficulties in contacting respondents, so that it was necessary to interrupt the fieldwork in the month of August and recommence at the start of September;

- PROBLEMS WITH INTERVIEWERS – One result of the high level of refusals was that it affected the motivation for many of the interviewers, and a large number of interviewers resigned from work on the project. This resulted in a new challenge – the need for recruitment and training of new field interviewers in various parts of BiH. The table at right indicates the number of interviewers engaged in this survey by region. In each region Prism Research has one coordinator. These numbers are some 20 percent higher when we include those who withdrew after the training or in the following few days without completing any interviews.

Region/Coordinator	Number of interviewers
Brčko	6
Bihać	14
Bijeljina	4
Banja Luka	14
Doboj	11
Donji Vakuf	4
Foča/Srbinje	3
Kiseljak	4
Mostar	5
Pale	4
Prijedor	9
Sarajevo	34
Tomislavgrad	2
Trebinje	9
Tuzla	25
Zenica	20
Zvornik	3
TOTAL	171

- PROBLEMS ENCOUNTERED IN RECRUITMENT OF NON-CLIENTS – Difficulties relating to the recruitment of non-clients include most of those already mentioned above, but there were some others that were specific for this part of the study. These specific problems are described below.

The original research plan called for the recruitment of five qualified non-clients for each corresponding client. This proved very difficult to realize for a number of reasons:

- Lack of interest – Many people contacted did not display any interest whatsoever in being interviewed as they personally saw no benefit in doing so;

- Fear and distrust – Some of these people believed that this was some sort of monitoring of their business and for this reason resolutely refused any sort of participation or the collection of any data about them;
- Too busy – Some refused recruitment, citing lack of time. Others may have been interested, but it was not possible to meet with them, even when there was an appointment set with the interviewer. There were cases where interviewers went back to the same address a number of times but did not manage to complete the interview.
- Had already taken a credit for their enterprise – People who stated that they had already taken a microenterprise loan were not eligible to be recruited for the survey. This problem was particularly evident in Prijedor and Gradiska, and partly in Tuzla (although once we broadened the region in which recruitment was conducted in this city we managed to

Region	Recruited	Interviewed	Ratio Recruited/ Interviewed
Brčko	128	29	4.41
Bihać	94	62	1.52
Bijeljina	59	22	2.68
Banja Luka	654	172	3.80
Doboj	196	68	2.88
Donji Vakuf	17	15	1.13
Foča/Srbinje	42	28	1.50
Kiseljak	87	25	3.48
Mostar	144	44	3.27
Pale	104	87	1.20
Prijedor	83	61	1.36
Sarajevo	807	214	3.77
Tomislavgrad	30	3	10.00
Trebinje	149	44	3.39
Tuzla	1782	338	5.27
Zenica	256	95	2.69
Zvornik	59	12	4.92
TOTAL	4691	1319	3.56

obtain a sufficient number). For this reason it was not always possible to achieve five recruitments per client in all cases. The table above shows that an average of 3.56 eligible non-clients were recruited for each one that was interviewed, with the ratio varying by region.

- Insufficient number of eligible potential respondents – This was especially the case in smaller settlements.
- Type of activity – As a rule it proved easier to recruit people engaged in farming or livestock because they were easier to find. Clients in these two groups could direct interviewers to the exact addresses of appropriate people for recruitment, since these people tended to know one another well. This was not as often the case with merchants or person engaged in production or service enterprises.

F. DATA ENTRY AND DATA CLEANING PROCEDURES

Data entry was conducted at the central office of Prism Research in Sarajevo.

- The software program utilized for data entry was Epi-Info 6 in which a data entry mask was constructed to assist data entry and minimize data entry operator error.

- Quality control over the entered data was conducted through random selection of questionnaires, followed by a check of the accuracy of data entered.
- Another form of control used to clean the data was logical control. All of the responses that are not within the possible range of responses were checked using the original completed questionnaire. If the illogical entry proved to be a data entry error, it was corrected. If it proved to be an error in the completion of the questionnaire, then the problematic data was declared to be *missing data*.
- There was also a crosscheck of responses that should be logically related, such as filter questions. For example, we checked whether the number of private business activities in question B.1 was the same as the number of activities written in question B.2. Also, we checked whether the activities written in question B.2 were the private business activities of a member of the household or whether they belonged to someone outside of that household.

APPENDIX 3:
TECHNICAL METHODS USED
IN SECOND-ROUND SURVEY (2004)

A. SAMPLE SELECTION PROCEDURES

Since this survey is longitudinal in character, the sample frame in the second round conducted in 2004 was defined by those respondents interviewed in 2002 and as such the sample was limited to the 3333 same respondents from the first round.

During the first round of the study, Prism Research created the data base containing all of the identification data of the respondents relevant for the continuation of the study. These data included the name of the respondent, address and phone number, type of respondent *(Client, New Client, and Non-Client)*, and type of private enterprise in 2002. In addition to this, for the group of clients and new clients there was information about the MCO to which they belong. This data base contained these and other data for all of 3333 respondents from the first round, and represented the starting point for the sample selection in the second round.

The main objective in the second round of the survey was to find as many respondents from the first round as possible and to conduct interviews with them. Based on the credit information provided by respondents during the second-round interviews, a new group of respondents was identified. This new group received microcredit for the first time after the baseline survey. The definitions for the types of respondents were reorganized in the following way:

1. *Clients*- received first micro credit prior to April 2002
2. *New Clients type 1*- received first micro credit in April 2002
3. *New Clients type 2*- received first micro credit after April 2002
4. *Non-Clients*- never received micro credit by the time of the second round

B. QUESTIONNAIRE DEVELOPMENT

The questionnaire for the second round was developed on the basis of the questionnaire for the first round of the survey. As for the first round, it was developed under the guidance of Elizabeth Dunn, in cooperation with the project manager of Prism Research.

The questionnaire used in 2004 kept a similar structure to that used in 2002 so that the sections of the 2004 questionnaire were basically the same as for the questionnaire used two years earlier. It is attached as an appendix to this document.

Comparing to the process of questionnaire development in 2002, the main difference in the process of questionnaire development in 2004 was that only one questionnaire was developed for all groups of respondents. Namely, there were not two different questionnaires for clients and non-clients as there were in 2002. In addition, questions

were added to capture information on business closures and credit use between the two rounds of the survey.

C. INTERVIEWER SELECTION AND TRAINING

As far as possible, interviews in the second round were conducted by the same interviewers who were involved in the first round in order to make the extent of familiarity with the project as high as possible.

123 interviewers all over the Bosnia and Herzegovina conducted the second round of the survey. These 123 interviewers are coordinated by 17 field coordinators responsible for 17 different regions of Bosnia and Herzegovina.

The main training in conducting interviews was organized by the project manager of Prism Research for the field coordinators. After this initial training, each field coordinator provided training for the network of interviewers for which they are responsible.

All interviewers completed the training comprised of several key segments:

- general methodology of social research
- basic objectives of this study
- specific methodology that should be used in this particular study
- familiarization with the questionnaire
- familiarization with the additional survey documentation and its administration
- familiarization with the sample specification

Out of the primary data base, a sample specification is generated for each of the field coordinators. The sample specification contained data such as name of the respondent, address and phone number and primary business activity.

For most of the respondents, interviewers had at their disposal a few 'alternative' additional addresses, in case they are not available on the originally stated address. These additional addresses were to be used only in the case the interviewer was unable to find the appropriate respondent he/she was looking for.

D. FIELDWORK (DATA COLLECTION)

The data collection during the fieldwork lasted for approximately 3 months. This prolonged period of data collection was caused by several key factors:

1. Respondents not being available at the time he/she was contacted for the interview, so that interviewer was forced to visit those households several times;

2. Some respondents had changed their addresses, and additional addresses were not useful either, so that interviewers had to find out the new addresses of the respondents by their neighbors, etc.;

3. Some respondents were not willing to participate in the second round of the study, so these respondents were contacted by the phone after some time, in order to try and persuade them agree to participate. After they agreed, they were visited by the interviewer again;

4. Some of the respondents were visited by the interviewer more than once because the questionnaire was not administered correctly, or there were some missing data in the questionnaire.

Each contact made in the field was recorded on a *contact sheet*. In the contact sheet each of the contact outcomes was coded with special codes indicating whether the questionnaire was administered in the given household or not. In the case the questionnaire was not administered in the given household, the interviewer was required to note the reason that he/she didn't conduct the interview in the given household. These data were the basis for generating an additional data base containing names of the respondents that were not interviewed for any reason.

This additional data base also contained phone numbers of those respondents who were contacted by the phone in order to agree and make appointments for participation. The interviewers whose assignment was to contact and make appointments with these respondents were specially trained for this assignment and were given written instructions about how to approach these respondents and how to respond in some anticipated situations (such as repeated refusal etc).

Once they agreed to participate, a new date of the interview was arranged so to best suit the respondent, and the interviewer was sent to the address again to conduct the interview.

In addition to the data being collected in fieldwork, some of the data about the client group were, similar to the procedure in 2002, collected in cooperation with MCOs. Namely, after fieldwork was completed, for each MCO a sheet containing the name and some other identification data was constructed and delivered to the given MCO. In each MCO, these sheets were completed with data related to the number of loans and value of each loan disbursed to the clients in the period after May 31, 2002 through to the date the interview was conducted. After MCOs completed these sheets, they sent them back to Prism Research and these data was added to the main survey data base.

After all attempts were made to recruit as many respondents as possible, the fieldwork ended after approximately three months. During this period logical, field, as well as telephone control of the interviews conducted was performed.

E. PANEL ATTRITION

At the end of the data collection phase, out of 3333 in total, Prism Research had 2561 interviews completed. There were 772 respondents from the first-round survey who were not interviewed during the second round. There were several key reasons for this panel attrition:

1. The respondents and their families moved permanently out of Bosnia and Herzegovina;
2. The respondents refused to participate;
3. Fear and distrust of the respondents - as was the case 2 years earlier, some people still believed the survey is actually a camouflage for some kind of the monitoring of their business activities;
4. The respondents claimed they never participated in the study before;
5. Incorrect names, addresses, phone numbers;

The last two key reasons made the greatest contribution to the overall attrition rate.

With regards to the type of respondent defined in 2002, the outcome of the data collection in 2004, the related attrition rate is as follows:

	TYPE OF RESPONDENT			
	Client	New client	Non-client	Total
2002	1742	399	1192	3333
2004	1385	289	887	2561
Attrition rate %	20.49	27.57	25.59	23.16

With regard to the different MCOs, the outcome of data collection in the second round of the survey and the related attrition rate is as follows:

ATTRITION RATE BY MCO			
MCO	2002 N (Clients and New Clients)	2004 N (Clients and New Clients)	Attrition rate (%)
SUNRISE	193	126	34.7
PRIZMA	166	111	33.1
BENEFIT	168	122	27.4
LOK	206	153	25.7
EKI	275	206	25.1
BOSVITA	137	109	20.4
ALDI	156	125	19.9
MIKROFIN	239	194	18.8
PARTNER	230	188	18.3
MI-BOSPO	218	195	10.6
SINERGIJA	153	145	5.2
Total	2141	1674	

F.   DATA ENTRY AND DATA CLEANING PROCEDURES

The final data base is organized so that data collected in the two rounds of the survey are gathered in one data base.

The data entry was performed parallel with the arrival of the questionnaires after they were controlled for quality and validity. There were 7 data entry operators engaged into the process of data entry. Since data entry was performed in the course of fieldwork, it is difficult to make a precise estimate of the actual time spent on data entry. The data entry was conducted at the central office of Prism Research in Sarajevo.

Quality control of the data entered was conducted by random selection of questionnaires and back-check of data accuracy. In addition, a logic check was performed to reveal whether there were some inconsistencies in responses that should be logically related.

This procedure was very similar to the one previously used after the 2002 data entry.

APPENDIX 4:
PLAN FOR DATA ANALYSIS

OVERVIEW OF STEPS IN DATA ANALYSIS

1. Calculate general sample characteristics and analyze effects of panel attrition.
2. Document changes in key impact variables between 2002 and 2004.
3. Document changes by subgroup: MFI, sector, region, gender, and war-affected.
4. Analyze credit history information provided by MCOs.
5. Analyze impacts of microcredit (test hypotheses).
6. Analysis of remaining questions.

SURVEY SUBGROUPS

The total number of respondents who completed the survey in both 2002 and 2004 is 2561. The 2561 respondents in the panel data set can be classified into four subgroups, according to when they received their first loan for their microenterprise: 1) clients (CL); 2) new clients, type 1 (New1); 3) new clients, type 2 (New2); and 4) non-clients (NC). Table 1 summarizes information on each of these four groups.

Table 1. Four Subgroups in the Panel Data Set (n=2561)

Name of Subgroup	Abbrev-iation	Sample Size (n)	Defining Characteristic	Subgroup Name in 2002
Clients	CL	1385	received first microcredit prior to April 2002	Clients
New Clients, type 1	New1	289	received first microcredit in April 2002	New Clients
New Clients, type 2	New2	257	received first microcredit after April 2002	Non-Clients
Non-Clients	NC	630	never received microcredit by time of second round	Non-Clients

STEP 1: SAMPLE CHARACTERISTICS AND ATTRITION ANALYSIS

The first step is to calculate some of the basic characteristics of the panel data set (n=2561), as well as the characteristics of each of the subgroups (CL, New1, New2, NC). At the same time, we want to analyze the possible effects of panel attrition by comparing the characteristics of those who stayed in the panel (n=2561), with those who left the panel (n=772). We will use appropriate statistical tests (t-tests and chi-square tests) to determine whether any differences between subgroups are statistically significant. For this first step, we will use only the 2002 data.

The sample characteristics (variables) to be included in this analysis are listed in table 2. The table also indicates the unit of measurement for each characteristic and a reference to the page where the characteristic is presented and discussed in the baseline report. Although these characteristics have already been tabulated once, after the baseline (2002) data were collected, those previous calculations were based on a sample of 3333 respondents. These statistics must be recalculated to include only the panel stayers (n=2561). Also, we now have four subgroups in the data set, rather than the three subgroups discussed in the baseline report.

Table 2. Basic Sample Characteristics (based on 2002 data)

Characteristic (Variable)	Units of Measurement	Discussion in Baseline Report
a. Characteristics of Primary Respondents		
1. Gender of Primary Respondent	percent male, female	pp. 18-19
2. Age of Primary Respondent	years	pp. 18-19
3. Education of Primary Respondent	years	pp. 18-19
4. Marital Status of Primary Respondent	percent married, single, widowed, divorced	pp. 18-19
5. Ethnicity of Primary Respondent	percent Bosniac, Serb, Croat, other	pp. 18-19
b. Characteristics of Households		
6. Number of Household Members	persons	p. 20
7. Annual Per Capita Income	KM	p. 23
8. Poverty Level of Household	percent non-poor and poor, using 2200KM as poverty threshold	pp. 23-26;
9. War-Affected Status	percent displaced; percent of male primary respondents demobilized, disabled	pp. 20-22
10. Region of Residence	percent in FBiH, RS, Brcko	see, e.g., p. 25
c. Characteristics of Primary Enterprises		
11. Sector of Primary Enterprise	percent trade, production, service, livestock, agriculture	pp. 28-29
12. Age of Primary Enterprise	years	p. 30
13. Location of Primary Enterprise	percent urban, rural, remote	pp. 31-32

Separate tables should be used to present each of the 13 descriptive statistics. The tables should contain ten rows, with statistics presented for the following sample groups:

1. Total Respondents in Panel (n=2561)
2. Clients (n=1385)

3. New Clients, type 1 (n=289)
4. Combined New2 and NC (n=887)
   5. New Clients, type 2 (n=257)
   6. Non-Clients (n=630)
7. Total Panel Leavers (n=772)
8. Clients (n=357)
9. New Clients, type 1 (n=110)
10. Combined New2 and NC (n=305)

The tables should report the results of appropriate t-tests and chi-square tests to determine if there are statistically significant differences between a) subgroups within the panel stayers (rows #2, #3, #4, #5, #6) and b) corresponding subgroups in the panel stayers and panel leavers (row #2 vs. #8; row #3 vs. #9; and row #4 vs. #10).

Summary of Step One

There are three main objectives in step one:

1. <u>Generate Descriptive Statistics</u>: Calculate descriptive statistics for the panel data set based on 2002 data. Table 2 (above) lists the variables to be included.
2. <u>Compare Sample Subgroups</u>: Compare subgroups within the panel data set for statistically significant differences in descriptive statistics.
3. <u>Analyze Effects of Attrition</u>: Compare panel stayers with panel leavers for statistically significant differences in descriptive statistics.

STEP 2: CHANGES IN IMPACT VARIABLES OVER TIME

The main objective of step two is to determine whether there have been any statistically significant changes in the key impact variables between 2002 and 2004. In addition, step two investigates whether different sample groups experienced different levels of changes in key impact variables. Calculations in step two should be based on the following:

- Include <u>only the panel stayers</u> (n=2561) in the analysis.
- Calculate the value of the impact variable for both 2002 and 2004.
- Calculate the percentage change in the impact variable between 2002 and 2004

The key impact variables to be included in this analysis are listed in table 3. The table also indicates the unit of measurement for each variable and a reference to the page where the variable is presented and discussed in the baseline report.

Prior to calculating the 2002 and 2004 mean values for the key impact variables, the data should be analyzed for the presence of extreme outliers. Extreme outliers should be detected, interpreted, and possibly eliminated using an appropriate criterion, such as a value more than three standard deviations from the mean. Once the extreme outliers have been detected and analyzed, the resulting values for each variable should be tested

for consistency with the assumption of normality. The Kolmogorov-Smirnov test should be used to determine whether or not the variables follow normal distributions.

Table 3. Key Impact Variables for Step Two

Characteristic (Variable)	Units of Measurement	Discussion in Baseline Report
1. Annual Per Capita Income	KM	p. 23
2. Poverty Level of Household	percent non-poor and poor (2200KM threshold)	pp. 23-26
3. Number of People Employed in the Primary Enterprise	employees	pp. 33-35
4. Number of Non-Household Members Employed in Primary Enterprise	employees	pp. 35-38
5. Weekly Hours of Non-Household Employees in Primary Enterprise	hours	pp. 35-38
6. Wages Paid to Non-Household Employees in Primary Enterprise	KM	pp. 35-38
7. Improvements to Business Premise of Primary Enterprise	percent reporting improvement (B.11)	pp. 38-39
8. Value of Improvements to Business Premise of Primary Enterprise	KM (only for those reporting improvements, see B.12)	p. 39
9. Investments in Business Equipment for Primary Enterprise	percent reporting investment (B.13)	pp. 39-40
10. Value of Investments in Business Equipment for Primary Enterprise	KM (only for those reporting investments, see B.14)	p. 40
11. Registration of Primary Enterprise	percent registered	p. 31

Separate tables should be used to present each of the 11 variables. Each table should report the value of the impact variable in 2002, the value in 2004, and the percentage change in the variable from 2002 to 2004. The tables should contain seven rows, with the calculations presented for the following sample groups:

1. Total Respondents in Panel (n=2561)
2. Clients (n=1385)
3. New Clients, type 1 (n=289)
4. New Clients, type 2 (n=257)
5. Non-Clients (n=630)
6. Combined New Clients type 2 and Non-Clients (n=887)
7. Combined New Clients type 1 and New Clients type 2 (n=546)

In addition, appropriate t-tests and chi-square tests should be used to determine if there are statistically significant differences in the percentage change in the variable from 2002

to 2004. Results of significance tests should be reported for each of the seven groups above.

STEP 3: CHANGES IN IMPACT VARIABLES BY SPECIFIC POPULATIONS

Step three is a continuation of step two. The main objective of step three is to determine the changes in selected impact variables experienced by specific populations of respondents. As in step two, the calculations in step three should be based on the following:

- Include <u>only the panel stayers</u> (n=2561) in the analysis.
- Continue to exclude the outliers identified in Step 2.
- Perform calculations for the following groups:
    - Total Respondents in Panel (n=2561)
    - Clients (n=1385)
    - New Clients, type 1 (n=289)
    - New Clients, type 2 (n=257)
    - Non-Clients (n=630)
- Calculate the value of the impact variable for both 2002 and 2004.
- Calculate the percentage change in the impact variable between 2002 and 2004.
- Test whether the change in the impact variable is statistically significant.

The first column of Table 4 lists the specific populations of respondents to be included in the analysis. The second column lists the impact variables to be calculated.

Table 4. Selected Impact Variables for Step Three

Specific Population	Impact Variable
1. By MCO (microcredit organization) NOTE: Calculate for only 3 groups: 1) clients; 2) new clients type 1; and 3) combined clients and new clients type 1.	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise --Wages Paid to Non-Household Employees in Primary Enterprise -- Registration of Primary Enterprise
2. By sector of primary enterprise (trade, production, services, livestock/animal husbandry, agriculture)	--Number of People Employed in the Primary Enterprise --Number of Non-Household Members Employed in Primary Enterprise --Weekly Hours of Non-Household Employees in Primary Enterprise --Wages Paid to Non-Household Employees in Primary Enterprise --Value of Improvements to Business Premise of Primary Enterprise --Value of Investments in Business Equipment

	for Primary Enterprise -- Registration of Primary Enterprise
3. By gender of respondent (male, female)	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise --Weekly Hours of Non-Household Employees in Primary Enterprise
4. By region (Fed B&H, RS, Brcko)	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise -- Registration of Primary Enterprise
5. By category: 1) displaced, 2) returnee (group both types of returnees together), and 3) other	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise
6. Female respondents only, by three categories of marital status: 1) married; 2) widowed; 3) single, separated, or divorced	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise
7. Male respondents only: 1) demobilized soldiers; 2) all other male respondents	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise
8. Male respondents only: 1) disabled; 2) all other male respondents	--Annual Per Capita Income --Poverty Level of Household --Number of People Employed in the Primary Enterprise

STEP 4: ANALYSIS OF CREDIT HISTORY DATA

Step 4 has two objectives: 1) summarize and characterize the credit information for clients, new clients type 1, and new clients type 2; and 2) construct four types of credit variables that can be used as alternative "treatment variables" during the impact analysis (Step 5).

There are two sources for credit information within the data set and both sources will be used in step 4: 1) the credit history data provided by the MCOs and 2) the credit history data provided by the respondents in 2004 (section E of second round questionnaire).

Guidelines for the step 4 calculations are similar to the previous two steps:

- Include only the panel stayers (n=2561) in the analysis.
- Continue to exclude the outliers identified in Step 2.

- Perform calculations for the following groups:
  - Clients (n=1385)
  - New Clients, type 1 (n=289)
  - New Clients, type 2 (n=257)
  - Non-Clients (n=630)

4.1   Preliminary Analysis

Before constructing the credit variables, the data from section E of the second round questionnaire should be carefully examined to verify that <u>ALL</u> respondents classified as "Non Clients" meet the following conditions:
- respondent answered "2=no" to <u>BOTH</u> question E.1 <u>AND</u> question E.5.
- respondent is NOT listed on any of the MCO client or new client lists

Respondents classified as "New Clients type 2" should meet the following conditions:
- respondent answered "1=yes" to either one or both of E.1 or E.5
- respondent is NOT listed on any of the MCO client or new client lists

In addition, any double counting of loans across the two data sets must be eliminated. This procedure is necessary for two sample subgroups: 1) clients and 2) new clients type 1. If these respondents reported any loans in E.2 and E.6 from their assigned MCO, then the amounts reported in section E should be suppressed for the analysis. For example, if the respondent is a "client" of MI-BOSPO, then any loans that are reported in section E of the survey as being from MI-BOSPO should not be included in the calculation of the credit variable. This procedure will ensure that loans are not counted twice.

4.2   Construct Credit Variables and Generate Descriptive Statistics

Four types of credit variables will be constructed. These credit variables will be based on the two sources of credit data: 1) the credit history data provided by MCOs and 2) the data in section E (E.1-E.8) of the second round questionnaire. The following credit variables should be constructed:

1. **Use of Credit**. This is a categorical variable indicating the respondent's subgroup. There are four subgroups:
   - Clients (n=1385)
   - New Clients, type 1 (n=289)
   - New Clients, type 2 (n=257)
   - Non-clients (n=630)

2. **Length of Time**. Length of time since receiving first loan. This is a numeric variable measured in terms of the approximate number of years from the date the first loan was received to June 2004. The value of this variable can be assigned on the basis of sub-groups:
   - For clients, length of time = (2004 minus year first loan received)
   - For new clients type 1, length of time = 2

- For new clients type 2, length of time = 1
- For non-clients, length of time = 0

3. **Number of Loans**. Total number of loans received. This is a numeric variable measured in terms of the number of loans received. It should be the sum of the number of loans in the MCO-provided data and the number of loans reported in the section E data. For non-clients, number of loans should be "0".

4. **Total Credit Received**. The aggregate value of loan principal received beginning with first loan and ending with the last reported loan. This is a numeric variable measured in KM (currency).

The credit variables are cumulative. They add together ALL the available credit history to create one variable. For example, take the case of number of loans. In 2002, the MCOs provided information on the number of loans that their clients had received up to May 2002. The new clients, by definition, received their first loan in April 2002, so that all new clients had received one loan by May 2002. The description of the 2002 credit data is provided in the baseline report (section III.B). In 2004, the MCOs provided additional credit history data to cover the period of May 2002 to May 2004. Additional loans may be reported by the respondent in section E of the second-round survey.

For example, suppose Djorge was a client of BENEFIT and had received 4 loans from BENEFIT by May 2002. Between May 2002 and May 2004, BENEFIT reported that Djorge received 2 more loans. Therefore, Djorge has received a total of 6 loans from BENEFIT. In addition, suppose Djorge reported on the second round survey that he took one loan from PRIZMA and one loan from Raiffeisen Bank. Then the "number of loans" variable for Djorge would be

Total number of loans = 8
Number of loans from own MCO = 6
Number of loans from other sources = 2

Where "own MCO" is the MCO that Djorge is assigned to in our data (i.e., BENEFIT).

Similarly, for "total credit received," suppose the data indicate the following:

BENEFIT loan #1:	900 KM
BENEFIT loan #2:	1,000 KM
BENEFIT loan #3:	1,200 KM
BENEFIT loan #4:	1,200 KM
BENEFIT loan #5:	1,500 KM
BENEFIT loan #6:	2,000 KM
PRIZMA loan:	2,000 KM
Raiffeisen loan:	5,000 KM

Then the "total credit received" variable for Djorge would be

> Total credit received = 14,800 KM
> Total credit received from own MCO = 7,800 KM
> Total credit received from other sources = 7,000 KM

Finally, suppose that credit history data provided by BENEFIT in 2002 indicates that Djorge received his first loan from BENEFIT (the loan for 900 KM) on August 15, 1999. Then the "length of time" variable would equal 5 years: 2004 – 1999 = 5 years.

For clients and new clients type 1, it is necessary to combine the credit history data from the MCO (both 2002 and 2004 data) with the credit data reported by the respondent in the second round survey. For new clients type 2, the calculations are based solely on the credit data reported by the respondent in the second round survey. Anyone classified as a "non-client" should not report any credit in the second-round survey. The value of the credit variables should all be "zero" for non-clients.

4.3   Generate Descriptive Statistics for Credit Variables

Descriptive statistics should be generated for the three numeric credit variables (i.e., length of time, number of loans, and total credit received) in order to 1) understand the characteristics of the credit variables and 2) search for anomalies.   For each of the three numeric credit variables, the descriptive statistics should consist of the following:

- average value (mean)
- standard deviation
- median value
- minimum value
- maximum value
- number of cases more than 3 standard deviations from the mean

For the credit variable "use of credit" the descriptive statistics consist only of the value of the categorical variable (0, 1, 2, 3) assigned to each of the four subgroups and the number (n) of respondents in each subgroup.

The descriptive statistics should be reported for each of the four subgroups. In addition, for the clients and new clients type 1, the descriptive statistics should be reported by 1) "credit from own MCO" (the value from the MCO credit history data); 2) "credit from other sources" (the value from the section E survey data); and 3) "total credit" (the aggregated value across both data sets). In addition, conduct K-S tests for the normality of the three credit variables by subgroup.

4.4   Summarize Client Satisfaction Data

Summarize the results of E.9 through E.11 by indicating

- number of respondents who answered question E.9, by subgroups
- number of times each lender was named, by subgroups
- numeric and histogram distribution of responses to E.10, by subgroups
- numeric and histogram distribution of responses to E.11, by subgroups

STEP 5: IMPACT ANALYSIS AND HYPOTHESES TESTING

The purpose of step 5 is to test the hypotheses about the impacts of microcredit. The statistical procedure to be used to test the impact hypotheses will be analysis of covariance (ANCOVA).

5.1   Impact Variables/Hypotheses

The impact hypotheses to be tested in step 5 relate to household welfare, business development, and post-conflict transition.

For <u>household welfare</u>, the impact (dependent) variable will be based on
- annual per capita household income.

For <u>business development</u>, the impact variables will be based on
- number of people employed in the primary enterprise
- weekly hours of non-household employees in the primary enterprise
- wages paid to non-household employees in the primary enterprise
- registration of the primary enterprise
- value of improvements to business premise of the primary enterprise
- value of investments in business equipment for the primary enterprise

For <u>post-conflict transition</u>, explanatory variables for specific war-affected groups will be included in the estimation equations. The estimated coefficients for these variables will be interpreted as representing the differential impact on these war-affected groups:
- displaced persons and returnees
- widows (female)
- demobilized soldiers (male)
- disabled persons

5.2   ANCOVA Procedure

The analysis of covariance (ANCOVA) procedure operates to statistically match observations in the borrower and non-client groups that have the same baseline measures on the impact variable and on the explanatory variables (the "covariates"). It then compares these matched observations to determine whether there are any consistent differences in terms of the second-round measures of the impact variable. In other words, given similar measures on the impact variable and the explanatory variables in the

baseline, the ANCOVA procedure looks for systematic differences in second-round outcomes. It does this by fitting separate, parallel regression lines through the data for the borrower group and the data for the non-client group.

5.2.1 Number of Comparisons

The ANCOVA procedure explicitly compares two groups. Since we have four subgroups (clients, new clients type 1, new clients type 2, and non-clients), it will be necessary to implement the ANCOVA procedure four times for each impact variable:

1. Compare clients to non-clients.
2. Compare new clients type 1 to non-clients.
3. Compare new clients type 2 to non-clients.
4. Compare all borrowers to non-clients.

5.2.2 Implementation of ANCOVA Procedure

The ANCOVA procedure is implemented in SPSS 11.5 as follows:

1. Select "Analyze"
2. Select "General Linear Model"
3. Select "Univariate"

The variables should be included in the model as follows:

- "Dependent Variable": Measure of the impact variable in 2004.
- "Fixed Factor": Participation status, measured as 1 = "borrower", 0 = non-client (where borrower may be clients, new clients type 1, new clients type 2, or all borrowers)
- Covariates: 1) The impact variable, measured in 2002, plus 2) all other included explanatory variables. Covariates may be either numeric or categorical.

[Note: There is no "random factor" or "WLS weight" to be included in the model.]

The following options in SPSS should also be selected:

- type III sums of squares
- descriptive statistics
- estimates of effect size
- parameter estimates
- display estimated marginal means for fixed factor variable
- compare main effects (select the box)

Any categorical variables included as explanatory variables ("covariates") must be binary (0, 1). If the existing categorical variable has more than two categories, then it must be recoded as a series of binary variables for inclusion in the model. For example, since

enterprise sector is a categorical variable with five categories, it must be recoded as a series of four binary variables. The explanatory variables to be included in each model are listed in table 6, which also indicates how the categorical variables should be recoded for inclusion in the ANCOVA model.

Table 6. Dependent and Explanatory Variables for ANCOVA Estimations

Dependent Variable	Explanatory Variables (Covariates)
Annual per capita household income in 2004 (KM)	1. Annual per capita household income in 2002 (KM) 2. Gender of respondent (1=male; 0=female) 3. Education of respondent (years) 4. Age of respondent (years) 5. Number of income sources 6. Number of enterprises 7. Dependency ratio 8. Region 1 (1=FBiH; 0=other) 9. Region 2 (1=Brcko; 0=other) 10. Mobility 1 (1=displaced; 0=other) 11. Mobility 2 (1=returnee; 0=other) 12. Marital (1=widowed female; 0=other) 13. Soldier (1=demobilized soldier; 0=other) 14. Disability (1=disabled; 0=other) 15. Location of business address (1=urban; 0=other)
Number of people employed in primary enterprise in 2004 (employees)	1. Number of people employed in primary enterprise in 2002 (employees) 2. Gender of manager (1=male; 0=female) 3. Age of primary enterprise (years) 4. Number of enterprises in household (number) 5. Location of business address (1=urban; 0=other) 6. Mobility (1=displaced or returnee; 0=other) 7. Region 1 (1=FBiH; 0=other) 8. Region 2 (1=Brcko; 0=other) 9. Sector 1 (1=production; 0=other) 10. Sector 2 (1=service; 0=other) 11. Sector 3 (1=agriculture; 0=other) 12. Sector 4 (1=livestock/animals; 0=other) 13. Registration of enterprise (1=registered; 0=other)
Weekly hours of non-household employees in primary enterprise in 2004 (hours)	1. Weekly hours of non-household employees in primary enterprise in 2002 (hours) 2.-13. Same as above
Wages paid to non-household employees in primary enterprise in 2004 (KM)	1. Wages paid to non-household employees in primary enterprise in 2002 (KM) 2.-13. Same as above
Value of improvements to business premise of	1. Value of improvements to business premise of primary enterprise in 2002 (KM)

primary enterprise in 2004 (KM)	2.-13. Same as above
Value of investments in business equipment for the primary enterprise in 2004 (KM)	1. Value of investments in business equipment for the primary enterprise in 2002 (KM) 2.-13. Same as above
Registration of primary enterprise in 2004 (1=registered; 0=not)	1. Registration of primary enterprise in 2002 (1=registered; 0=not) 2.-12. Use the same as above, but do **NOT** include #13

STEP 6: ANALYSIS OF REMAINING QUESTIONS

Additional statistical analysis will be conducted to better understand the relationships in the data. In particular, the value of several variables will be calculated individually by MCO. In addition, we will explore the issue of business closures (questions B.1 and B.2 on the second round questionnaire) by calculating the following:

- Percentage of businesses in each subgroup (client, new client type 1, new client type 2, non-client) that remained open. Include a bar chart.
- Percentage of businesses that remained open among the poor and non-poor (using income data from 2002).
- Percentage of businesses that remained open by gender of manager.
- Under reasons for business closure (B2), calculate the distribution of the reasons in two ways: 1) including all businesses and 2) including only those whose businesses did NOT remain open. This information should also be shown by subgroup (client, new client type 1, new client type 2, non-client), by poverty status, and by gender.

As the report is being written, additional data analysis may be needed to answer specific questions that arise.

PRISM RESEARCH
Market, Media & Social Research

LIP II IMPACT ASSESSMENT – QUESTIONNAIRE

INTRODUCTION

At the start of the interview you have to:

➤ Introduce yourself
➤ Make reference to the New year postcard that was sent to them by Prism Research
➤ Remember them that they were interviewed by our interviewer two years ago
➤ Make a statement that you are not an employee of the MKO
➤ Explain that the information is confidential and that the respondent's answers will be combined with the responses of the other 4000 respondents who are also engaged in some sort of business activity
➤ Explain that the purpose of this research is to discover how people in B&H manage their business activities, how their business activity helps them in supporting their household, and what the effects of credits has on these business activities
➤ Explain that we are especially interested in the changes that have occurred since the previous interview
➤ Request for honesty/openness:
   • There does not exist a link between the respondents answers and whether he/she will receive a credit in the future
   • The information obtained from the respondent will not be relayed to government taxation offices or other government offices. The questionnaire includes questions about income and employment, but the purpose of these is to learn how small business enterprises/activities effect the household.
➤ Give the respondent the opportunity to ask questions before continuing with the interview
➤ Check does the data told by respondent match with the data you received form your coordinator and if not explain why
➤ Ask respondent if they prefer that the interview be conducted at their home, at their place of work, at work that is conducted from home, or in some other place.

DATE OF INTERVIEW:	START TIME: |___|___:___|___|	MUNICIPALITY:	CITY / VILLAGE:
FULL NAME OF INTERVIEWER: _____		**INTERVIEWER CODE:** |___|___|___|___|	**COORDINATOR CODE:** |___|___|___|___|
FULL NAME OF RESPONDENT: _____		**RESPONDENT CODE:** |___|___|___|___|___|___|	

IS THIS THE SAME RESPONDENT WHO ANSWERED THE QUESTIONS IN 2002? 1 – YES (GO TO ► B1) 2 – NO (GO TO ► A1 AND A2)	A1. WHY IS THE RESPONDENT FROM 2002 UNAVAILABLE? 1- DEATH 2- ILLNESS 3- PERMANENTLY RELOCATED 4- AWAY FOR EXTENDED PERIOD 5- OTHER_____	A2. WHAT IS THE RELATIONSHIP OF THE CURRENT RESPONDENT TO THE RESPONDENT FROM 2002? 1 – SPOUSE 2 – SON/DAUGHTER 3 – PARENT 4 – BROTHER/SISTER 5 – OTHER_____

B1. RESPONDENT'S HOME ADDRESS: _____	IS THIS THE SAME HOME ADDRESS AS TWO YEARS AGO: 1 – YES 2 - NO
RESPONDENT'S WORK ADDRESS: _____	IS THIS THE SAME WORK ADDRESS AS TWO YEARS AGO: 1 – YES 2 - NO

PLACE WHERE INTERVIEW IS BEING CONDUCTED: 1 – AT HOME 2 – AT WORK 3 – AT WORK THAT IS CONDUCTED FROM HOME 4 – OTHER (WRITE WHERE) _____	TYPE OF SETTLEMENT OF BUSINESS ADDRESS: 1 – URBAN 2 – RURAL 3 – OUTLYING SETTLEMENTS
COMMENTS: 	

DEMOGRAPHIC DATA

Process:
1) *Start with the respondent themselves and gather data about him using the first row in Table A.*
2) *Explain that the «members of the household» are persons who «live and normally eat» with the respondent.*
3) *ASK FROM THE RESPONDENT TO LIST ALL MEMBERS OF THE HOUSEHOLD.*
4) *Go to the person in the second row and so collect data for every person in the household.*
5) *Ask if there is someone else who depends on the earnings of this household (if yes, add this person also to the table and collect data for that person as well).*

ID	Relation to respondent	First and last name	Gender	Age	Marital status	**A.7** Years of education	**A.8** Attendance at school or courses	**A.9** Type of school or courses	**A.10** Main occupation
	For "others" please write in the relationship with the respondent (for example: brother, sister, uncle, grandfather, etc.)		1=Male 2=Female	If they are between 4-15 years go to A7 If they are 3 years of age or younger go on to the next person *(Write in how many years)*	1=Married 2=Separated or divorced 3=Widowed 4=Single: never married	**How many years of schooling has the person completed?** *(Summarize all completed years in primary and secondary school, higher school or university)*	**Did this person attend school or some kind of course in the past 6 months?** 1=Yes 2=No→ **go to A10**	**What type of school or course?** 1= Primary school 2= Secondary school 3= College 4= University 5= Post-graduate or specialization 6= Course related to the work that you do 7= Other course (write in)	**What is the most important activity /job that this person devotes their time to?** 1-Manager of business activities that are owned by his household 2-Employed in business activities that are owned by his household 3-Employed in a private business activity that is NOT owned by his household 4-Employed in the government sector 5-Student/Pupil 6-Unemployed 7-Housewife 8-Pensioner 9-Invalid 10-Military 11-Other (write in) 12-Pending 13-Pre-school 14- Economically active 99- Don't want to answer
01	**respondent**								
02	spouse								
03	child 1								
04	child 2								
05	child 3								
06	child 4								
07	child 5								
08	father								
09	mother								
10	other _____								

A.11 Is there any other person that depends on the earnings of this household?
1 – Yes → add the name or names to Table A and gather information about them   **2 – No**→ go to section B (business activity)

PRIVATE BUSINESS ACTIVITY

	B.0 Our agency made an interview with you two years ago, and in that moment you and the members of your household had these enterprises: (Interviewer – prior to the interview, write in the names of all businesses that the respondent and members of respondent's household had worked on in the 2002 survey. List the main private business from the list you have received form your coordinator first.) (name or description of activity)	B.1 What is going on with each of these business activities at the moment? 1-This business continues to operate 2-This business is closed temporarily 3-This business has been permanently closed 4-Something else (write in)	B.2 If business activity is closed temporarily or permanently, what was the most important reason? 0-This business is not closed 1-Death of entrepreneur or family member 2-Illness of entrepreneur or family member 3-Not enough customers/sales 4-Not enough cash/working capital 5-Costs/expenses were too high 6-Problems with regulators/authorities 7-Entrepreneur took different job elsewhere 8-Entrepreneur retired 9-Location was no longer available 10-Other (write in) 98-Don't want to answer 99-Don't know (do not read the answers to respondent, just select only one which match to his/her answer the best or write it in the box)	B.3 If you have started any new private business activities in the past two years, could you please tell me the name of that business or describe it? (name or description of activity)	B.4a What is the main product or service of each of these business activities? (explain what they produce, trade, offer as service, etc.)
Main private business	1.				
	2.				
Other private businesses	3.				
	4.				
	5.				
				N1.	
				N2.	
				N3.	
				N4.	

B.4b So, how many private business activity which are active in this moment do you have? _____ (write in the correct number; check if this number match with the data from B1 and B3; if something doesn't match check again which private business activity belong to his/her household, and how many of them are active; make correction in B.0 to B.4a if necessary)

MAIN PRIVATE BUSINESS ACTIVITY

The following questions relate exclusively to the business activity for which you received the credit form MCO in 2002. or to the private business activity you were selected to be interviewed in 2002.

B.5 To which sector does this business activity belong?
>1=Trade/sales …………….....….....…….............………………………1
>2=Production ………………….…...........……………………2
>3=Service activities ……....……………....…………………………3
>4=Livestock/poultry……........…………...…….…….............……..4
>5=Farming/agriculture…….........……………………………………5

B.6 Is this business activity...? (Read the alternatives to the respondent and ask them to choose one)
>1=In the majority ownership of your household…....……………........…..............………. 1
>2=In co-ownership with other persons who are not a part of your household…...........……. 2
>3=In the ownership of someone else, and you are only an employee there......….…….…. 3 ► *go back to question B.1 and check is this business activities wholly or at least partly owned by the respondent or any member of their household. If not, do not continue with asking about this business!!! Go to another PRIVATE business activity own by this household if that exist, but if not go to E.12 in the main questionnaire.*

B.7 Who is the person who is primarily responsible for the managing of this business activity?
>1=the respondent …...………………...….………………….…..……..……1
>2=household member => **ID number from A.1 _____** 2
>3=not a member of the household (co-owner or paid manager) ……………3

B.8 Gender of manager?
>1=Male.. ……………………………………………….. 1
>2=Female ..……...…………………………………………… 2

The interviewer needs to pose the remaining questions from section B to the manager of the business activity in question.

B.9 Which year did you start with this business activity?   _____ year

B.10 Where is this business activity conducted? (read the alternatives and circle only one response)
>1=At home, within living area …....………….....…..……………..............…….……….…... 1
>2=At home, separate to living area ....……….....……..……………..………. 2
>3=Residential area, but not including own house or apartment in which they live in ….....…… 3
>4=Shop in the commercial part of town ....….......………………….….................…..……… 4
>5=Market ....………...…..……………..5
>6=Industrial zone ....……...…………………..……… 6
>7=Immovable/permanent building (kiosk) by the road (road or footpath) ……………….....… 7
>8=Movable construction/building.....…….…...………… 8
>9=Own arable land ....……...…………………………… 9
>10=Other arable land (not owned by the respondent)...…………………………………..… 10
>11=Other (*write in*): _____ ……... 11

B.11 In the past 12 months, have you spent or invested money in order to improve or increase your business premises, on things such as painting, changing the parquetry, new doors, renovating walls, additions or construction of new rooms, or anything similar to what is listed on this card 1? *(show to respondent the card 1)*

        1=Yes…………………….…………. 1 ► **go to B.12**
        2=No …………………….…………. 2 ► **go to B.13**
        Do not read to respondent!!!
        9=Don't want to answer ………… 9 ► **go to B.13**

B.12 Could you tell me which of these types of investments you have made to improve or increase your business in the past 12 months and how much money have you spent for each of them? *(show to respondent the card 1)*

Type of expense *(write in each type of premises separately)* *98=Don't want to answer 99=Don't know*	Code form card 1	Amount 999=DK/DWA	Currency

B.13 In the past 12 months, have you spent or invested money into improving or obtaining equipment for work, such as for example shelving, cash register, refrigerators, machines for work, computers, or anything similar to what is listed on this card 2? *(show to respondent the card 2)*

        1=Yes………………….…………. 1 ► **go to B.14**
        2=No …………………….…………. 2 ► **go to B.15**
        Do not read to respondent!!!
        9=Don't want to answer ………… 9 ► **go to B.15**

B.14 Could you tell me on which of these types of business equipment you have purchased in the past 12 months and how much money have you spent for each of them? *(show to respondent the card 2)*

Type of expense *(write in each type of equipment separately)* *98=Don't want to answer 99=Don't know*	Code form card 2	Amount 999=DK/DWA	Currency

B.15 Is your business activity officially registered?

        1=Yes..……………….…………. 1
        2=No …………………….…………. 2
        Do not read to respondent!!!
        9=Don't want to answer …………… 9

B.16 Was this your private business activity active at any time in the past 30 days?

        1=Yes ………………….…………. 1 ► **go to section C (employees)**
        2=No …………………….…………. 2 ► **go to section E (credit for business activities)**
        Do not read to respondent!!!
        9=Don't want to answer …………… 9 ► **explain the respondent that you need to get the answer on this question because you can't continue, and ask him/her again B.16**

EMPLOYEES IN MAIN PRIVATE BUSINESS ACTIVITY

Now I would like to ask you a few questions about persons who work in this business activity. In the past 30 days, who are the people that have worked in this business activity? Let us start with your name and then tell me the names of all the people who have worked in this business activity in the last 30 days, including members of your family, persons who were paid and persons who were not paid for their work, persons who work full time, and persons who worked only part time, and those that are worked on a casual basis.

Note: This is a critical question. Write in all of the persons who worked in the LAST 30 DAYS, including the owner/manager, members of family, unpaid workers, permanently employed, persons who work half or part time, casual workers, etc.

After you have written the names of all workers in the first column, then ask the rest of the questions for each worker, starting with the respondent themselves.

Table C: Only for workers who are MEMBERS OF THE RESPONDENT'S HOUSEHOLD				
C.1a *Relationship to the respondent (for "others" you have to write in the relationship)*	**C.1b** *Name of that person*	**C.2 Household member code (from A1)**	**C.3** *Work hours in the last week (last 7 days)* **How many hours did …[NAME]… work in this business activity in the past week?** *write in number of hours or use: 0=didn't work at all; 999=DK/DWA*	**C.4** *Work days in the last month (last 30 days)* **How many days did …[NAME]… work in this business activity in the past month?** *write in number of days or use: 0=didn't work at all; 999=DK/DWA*
respondent				
spouse				
child 1				
child 2				
child 3				
child 4				
child 5				
father				
mother				
other 1: _____				
other 2: _____				
other 3: _____				
other 4: _____				

Table D: Only for workers who are NOT members of the respondent's household					
D.1 *First & last name*	**D.2** *Gender*	**D.3** *Age*	**D.4** *Hours of work in the last week (last 7 days)*	**D.5** *Work days in the last month (last 30 days)*	**D.6** *Pay in the last month (in the last 30 days)*
What is the first and/or last name of the worker?	**Is … [NAME] …male or female?** 1=male 2=female	**How old is … [NAME]…?** *(write age in years)*	**How many hours did …[NAME]… work in this business activity in the past 7 days?** *write in number of hours or use: 0=didn't work at all; 999=DK/DWA*	**How many days did …[NAME]… work in this business activity in the past month?** *write in number of days or use: 0=didn't work at all; 999=DK/DWA*	**How much money was …[NAME]… paid in the last month in the form of day's work paid ('nadnice') or salary?** *0=didn't paid at all; 999=DK/DWA (write currency)*

CREDITS FOR MAIN BUSINESS ACTIVITY

E.1 Do you currently have a credit for THIS business activity from any micro credit organization or from any commercial bank? By this, I mean credit that you are currently repaying?

        1=Yes … ……….………………… 1 ► **go to E.2**
        2=No ………………………………. 2 ► **go to E.5**

If yes, write in all sources of credits in the first column (E.2), then ask E.3 and E.4 for every source.

E.2 From which micro credit organization or commercial bank do you currently have a credit for THIS business activity? *(write in the code of MCO or bank from code list at the bottom of this page)*	E.3 What is the value of the credit (amount of credit)? *(write in exact amount and a currency or 99999=DK/DWA)*	E.4 What is the term for repayment of the credit (length/duration of the credit)? *(write in term of credit in months or 999=DK/DWA)*	E.4b Who took this credit? *(write in ID form A1 or 99=DK/DWA)*

E.5 Other than the credit we listed above that you are <u>currently</u> repaying, have you received a credit for THIS business activity from any microcredit organization or any commercial bank since the first time we interviewed you – in the summmer of 2002?

        1=Yes … ……….………………… 1 ► **go to E.6**
        2=No ………………………………. 2 ► **go to E12**

If yes, write in all sources of credits in the first column (E.2), then ask E.3 and E.4 for every source.

E.6 From which micro credit organization or commercial bank did you receive a credit for your business activity? *(write in the code of MCO or bank from code list at the bottom of this page)*	E.7 What was the value of the credit (amount of credit)? *(write in exact amount and a currency or 99999=DK/DWA)*	E.8 What is the term for repayment of the credit (length/duration of the credit)? *(write in term of credit in months or 999=DK/DWA)*	E.8b Who took this credit? *(write in ID form A1 or 99=DK/DWA)*

Code list:

1=SUNRISE
2=LOK
3=EKI
4=PARTNER
5=MI-BOSPO
6=BOSVITA
7=SINERGIJA
8=BENEFIT
9=MIKROFIN
10=PRIZMA
11=MIKRA
12=ALDI
13=MEB – Micro Enterprise Bank / Pro-credit banka
14=Raffeisen bank

15=HVB / Central profit banka
16=Hypo / Kristal banka
17=Zagrebačka banka
18=Tuzlanska banka
19=Univerzal banka
20=Razvojna banka
21=Other (write in the name)

E.9 Interviewer--enter the names of all MCOs and banks with which the respondent has a <u>current</u> loan. If there is no current loan, enter the name of the MCO or bank from which respondent borrowed the most money in the past 24 months. 1=SUNRISE 2=LOK 3=EKI 4=PARTNER 5=MI-BOSPO 6=BOSVITA 7=SINERGIJA 8=BENEFIT 9=MIKROFIN 10=PRIZMA 11=MIKRA 12=ALDI 13=MEB – Micro Enterprise Bank / Pro-credit banka 14=Raffeisen bank 15=HVB / Central profit banka 16=Hypo / Kristal banka 17=Zagrebačka banka 18=Tuzlanska banka 19=Univerzal banka 20=Razvojna banka 21=Other (write in the name)	E.10 Tell me ONE characteristic of the credit that you received from ...[name of MCO or bank]...that you consider to be the most desirable? (don't read the answers to respondent, just chose one from the list and write in) 1=Credit received quickly 2=Simple/easy procedures 3=Interest rates are acceptable 4=Repayment period is proper/adequate 5=Guarantor requirements are not very demanding 6=Loans available even for those who starting up a business 7=Personnel/staff are pleasant/friendly/respectful 8=Special advantages for clients who has already took loans in that MCO 9=Convenience/availability of repeat loans 10=I urgently needed money/loan was help at that time 11=Only place I could get a loan 12=You don't need a lot of documents/cerificates 13=Other (write in what)	E.11 Tell me ONE suggestion that you would make to ...[name of MCO or bank]...to improve their products or services? (don't read the answers to respondent, just chose one from the list and write in) 1=Lower interest rates 2=Increase length of repayment periods 3=Give higher loan amounts 4=Reduce/eliminate/change guarantor requirements 5=Provide grace period or longer grace period 6=Provide individual loans instead of to solidarity groups 7=Make procedures less time consuming (easier) 8=Provide loans for housing construction 9=Provide loans for other purposes (write in what) 10=Provide savings/deposit services 11=Provide insurance services 12=Remain the same/would not change anything 13=Other (write in what)

Warning!!!: *If the household has more than one private business activity, include ADDITIONAL BUSINESS QUESTIONNAIRES separate for each private business activity. Mark every additional questionnaire with the RESPONDENT CODE and write in the number of these additional questionnaires in the E12 !!!*

E.12 Does this household has any other private business activity:

1. Yes, they have got some other private business activities ……..……... 1 ► take as many additional private business questionnaires as this household has these other private business activities and fill in each for particular private business. When you finished go to E 13!!!

2. No, this household has got only one private business activities ……..… 2 ► go to E.13

E.13 Number of additional »business questionnaires« :

a. No additional questionnaires (household don't have any other private business activity!!!)……...…….. 0
b. Total number of additional questionnaires (write in how many additional questionnaires!!!) ……….._____

HOUSEHOLD INCOME

Now I have a few questions about the way in which you and your household members earn money. I am interested in all of the sources of income of your household in <u>the past 12 months</u>**. We already know that you have a _____** (see B.4b) **private business activity related to your household. We will start with listing theses business activity. Let's start with…** (read the respondent first private business you wrote in B.0)

F.1 (write in the name of income sources)
F.2 (write in the code of income sources from the card 3)

F.3 In the past 12 months, who are the members of your household who have earned or received money through engaging in this business activity or from this income resources? *(The interviewer needs to ask for each family member has it earned or received money through engaging in this business activity or income resources)*

F.4 In the past 12 months, how many months did this person work in this job? *(The interviewer needs to ask for each family member how many months did each family member work in this job and to write it separately)*

F.5 In the past 12 months, how many months did this person receive income from this source? *(The interviewer needs to ask for each family member how many months did each family receive income from this source and to write the answer separately)*

F.6 For the months that you received this income, how much were the "typical" or average earnings from this source of income for one month? *(The interviewer needs to ask this question for each family member who earned money through engaging in this business activity and to write the answer separately)*

(show to respondent card 3) **In the past 12 months, have you or any other member of your household received income from any other source that you have not already mentioned?**
Interviewer: Go back to question F.1 and ask the same questions for next business activity or income sources!!! You have to ask questions from F.1 to F6 for all possible income sources . Ask these questions until you are completely sure there are no other income sources in this household!!!
WARNING!!!: This is a critical question. Utilize the list of household members from Table A and their main occupations in question A.10 as assistance in checking. Also, carefully probe for the existence of other jobs, temporary/irregular sources of income, and unexpected sources of income. Use the card 3 and check has any member of the household received money from any of those income sources in the past 12 months.

F.1 A short description of sources of income (e.g. beauty parlor; taxi; agricultural activity; chicken farm; car wash; work in factory; work at petrol station; child minding; office work; pension; scholarship; casual work etc.)	F.2 Type of income source *(use the codes below)*	F.3 **Who earned this income?** *(use codes A.1 from Table A)*	F.4 **In the past 12 months, how many months did this person work in this job?** *Write in the number of months or 99 if the respondent refuse to answer*	F.5 **In the past 12 months, how many months did your household receive income from this source?** *Write in the number of months or 99 if the respondent refuse to answer*	F.6 **For the months that you received this income, how much were the "typical" or average earnings from this source of income for one month?** ➢ *For those employed write in the monthly salary* ➢ *For income from business operation, mark in the profit (income minus expenses).* *(write in currency or use 99999=DK/DWA)*

F.2: Codes for types of income sources
1=Business activity in full or part ownership of the household
2=Employed full or part time in a private business activity that is NOT in the ownership of the household
3=Employed full or part time in the government sector
4=Redundancy payment for demobilized soldiers
5=Redundancy or severance payment for sacked workers
6=Monetary assistance from members of family or friends (who do not live in the same household)
7=Monetary assistance or donations from a foreign government or other organization
8=Pensions
9=Income from renting out a room/apartment/house
10=Income from interest or dividends
11=Scholarship for pupils/students
12=Child endowment
13=Other *(write in exactly what is it)*
88=Don' know
99=Don't want to answer