PD-ABF-265

APPENDIX D

A.I.D. EVALUATION SUMMARY - PART I

XD ISN 82101

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit:

Mission or AID/W Office ______________

(ES# ______________)

B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?

Yes [ ] Slipped [ ] Ad Hoc [X]

Evaluation Plan Submission Date: FY ____ Q ____

C. Evaluation Timing

Interim [ ] Final [X] Ex Post [ ] Other [ ]

D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
513-0616-A-00-8001-00	INTERCOUNTRY TECHNOLOGY TRANSFER MICRO-BUSINESS SUPPORT	88	9/92	370,000	370,000

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director

Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
1. To accomplish closeout procedures	Juan Carlos Diaz	3/31/93
2. Disseminate PROPESA's impact evaluation Report	Juan Carlos Diaz	3/31/93

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: (Month) 12 (Day) 14 (Year) 92

G. Approvals of Evaluation Summary And Action Decisions:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Name (Typed)	Juan Carlos Diaz	Robert Christen		Paul Fritz
Signature	[signature]	[signature]		[signature]
Date	12/14/92			12/14/92

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

Four main conclusions can be drawn from PROPESA's evaluation:

1. PROPESA's micro-enterprise support program has had highly favorable and significant impacts on PROPESA's clients in terms of key indicators - increases in value added and increases in wage rates and employment opportunities - end, at the same time, PROPESA has come to reach a clientele of much smaller micro-enterprises, largely through the introduction of group lending;

2. PROPESA has confronted serious loan delinquency problems and, through the design and implementation of effective loan recovery techniques, has overcome these problems and emerged as a stronger institution;

3. PROPESA has not yet been able to demonstrate that it can cover its operating expenses with operating revenues and thus continues to depend on donor funding, thereby implying the viability of PROPESA and the sustainability of its programs has not been insured; and

4. the comparison of PROPESA's benefits - the value of the positive impact of its programs on its clients - with PROPESA's costs - the operating losses that it has sustained since the initiation of its operations - yields an extremely favorable result with a rate of return of more than 200 percent.

COSTS

I. Evaluation Costs

1. Evaluation Team

Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. $)	Source of Funds
Juan Carlos Diaz	AID/Chile	3		A.I.D.
Robert Christen	PROPESA	3		A.I.D.
Susan Wright	PROPESA	5		A.I.D.
Robert Vogel	Consultant		$16,170	A.I.D.
Luis Fuenzalida			$25,667	A.I.D.

2. Mission/Office Professional Staff Person-Days (Estimate) 3

3. Borrower/Grantee Professional Staff Person-Days (Estimate)

A.I.D. EVALUATION SUMMARY – PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)
Address the following items:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:	Date This Summary Prepared:	Title And Date Of Full Evaluation Report:

Purpose of the evaluation

1. to measure the impact of PROPESA's assistance on its clients, especially increases in value added and in the quantity and quality of employment that can be attributed to the credit and technical assistance provided by PROPESA; and

2. to evaluate the viability and sustainability of PROPESA and its assistance program for micro-enterprises, especially as reflected in loan delinquency and other costs and other costs incurred by PROPESA in providing credit and technical assistance to its clients.

Methodology used

1. Analysis of the evolution of PROPESA's target group throughout the years of operations;

2. analysis of a control group, composed of non assisted micro-enterprises, so as to have a comparison base to evaluate PROPESA's impact on assisted micro-enterprises versus non assisted ones;

3. analysis of the evolution of supported micro-enterprises throughout the years of assistance they have received from the Program;

4. Economic evaluation of the Program; and

5. Financial evaluation.

Findings and conclusions

1. PROPESA's micro-enterprise support program has had highly favorable and significant impacts on PROPESA's clients in terms of the key indicators - increases in value added and increases in wage rates and employment opportunities - and, at the same time, PROPESA has come to reach a clientele of much smaller micro-enterprises, largely through the introduction of group lending.

The main finding from the evaluation was that value added for PROPESA's clients increased substantially during their participation in the program (from $621 to $903 on average). For employment, the effects of PROPESA's program were also positive as all the key indicators had increased significantly by the end of the third year of participation: the number of workers employed from 1.5 to 1.9 on average, the total wage bill from $143 to $240 on average; and the wage rate from $118 to 200 on average.

Another interesting indicator of the success of PROPESA's program is that participating micro-enterpreneurs increased the proportion of their incomes that they reinvested in their micro-enterprises (from 39% to 41%) and decreased the proportion that they took out as dividends for consumption or investment in other activities (from 39% to 27%).

2. PROPESA has confronted serious loan delinquency problems and, through the design and implementation of effective loan recovery techniques, has overcome these problems and emerged as a stronger institution.

Loan recovery performance for PROPESA's group loans has consistently surpassed the performance of its individual loans. As of September 30, 1992, only 1.1 percent of the group loan portfolio was delinquent more than 30 days, compared to 11.3 percent of individual loan portfolio in the same category. As of this same date, 72 loans of a total active portfolio of 3,093 loans are currently being handled by a legal collections firm.

In December of 1989, 18.9 percent of PROPESA's portfolio included overdue payments; the significant improvement in the portfolio's quality, when compared with the statistics shown above, was due to several factors. These include: new ways of organizing PROPESA internally, and new approaches to dealing with all of PROPESA's clients that exceeded merely "getting tough" with delinquent borrowers.

3. PROPESA has not yet been able to demonstrate that it can cover its operating expenses with operating revenues and thus continues to depend on donor funding, thereby implying the viability of PROPESA and the sustainability of its programs has not been insured.

A high percentage of PROPESA's receipts is in the form of donations from both foreign and domestic sources, so that PROPESA is not currently self-sustaining in the sense of being able to generate adequate operating income to cover its expenses.

4. The comparison of PROPESA's benefits - the value of the positive impact of its programs on its clients - with PROPESA's costs - the operating loses that it has sustained since the initiation of its operations - yields an extremely favorable result with a rate of return of more than 200 percent.

Principal recommendations

Because of the relative success of PROPESA, there are few major recommendations to be made except, perhaps, with respect to promoting PROPESA's long-run viability. In the long run, reliance on donor funds cannot, by definition, insure PROPESA's sustainability in the sense of enabling PROPESA to cover its operating expenses with operating revenues. In fact, heavy dependence on donor funding may even present a barrier to PROPESA's viability by imposing unnecessary monitoring costs and constraining PROPESA's behavior in ways that may prevent it from charging fully market rates of interest on loans or from seeking the most opportune sources of funds. With respect to sources of funds in particular, PROPESA should seek out every option to gain access to Chilean capital markets and to mobilize savings from its micro-enterpreneur clients. Due to the high liquidity of the Chilean financial sector, the first option would be a longterm solution for PROPESA's need to finance a continually increasing loan portfolio; the second option would allow PROPESA to become a more complete financial institution that provides a full array of services to its clients, including the provision of liquidity services through saving mechanisms.

Lessons learned

The impact of PROPESA's assistance on its clients, especially increases in value added and in the quantity of employment, can be attributed to the credit and technical assistance provided by PROPESA. Group loans, strategic planning, staff organization and training, technical assistance and clients training, loan policies, frequent visits to borrowers, collection efforts, etc. are conditions of PROPESA's strategy to assure impact.

PROPESA should seek to increase its access to funding other than that provided by international and national donors. Given the current quality of its portfolio, it may be able to implement creative financing techniques adopted from the formal financial sector. Similarly, although PROPESA currently is not permitted to accept deposits from the public without becoming a fully regulated financial institution, there may be other mechanisms through which it could mobilize funds from its own borrowers and thereby provide them with valuable liquidity services.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

1. An evaluation of PROPESA's Micro-enterprise Assistance Program. Robert C. Vogel Sept. 1991

2. Summary of the evaluation of PROPESA. ECYES Ltda. April, 1992

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

PROPESA agrees with evaluation conclussions, represented by its General Secretary (of their board)m Mr. Robert Christen

XD-ABF-65-A

An Evaluation of PROPESA's Micro-enterprise Assistance Program

Robert C. Vogel

SEPTEMBER, 1992

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Evaluation of PROPESA's Micro-enterprise Assistance Program

Robert C. Vogel

Introduction

The following evaluation focuses primarily on two crucial aspects of PROPESA's micro-enterprise assistance program:

1. the impact of PROPESA's assistance on its clients, especially increases in value added and in the quantity and quality of employment that can be attributed to the credit and technical assistance provided by PROPESA; and

2. the viability and sustainability of PROPESA and its assistance program for micro-enterprises, especially as reflected in loan delinquency and other costs incurred by PROPESA in providing credit and technical assistance to its clients.

The plan for the evaluation of PROPESA and its program to provide financial services and technical assistance to micro-enterprises was developed early in 1990, not long after PROPESA had initiated its micro-enterprise support activities, in order to assure that pertinent and reliable data would be available covering as long a period of time as possible. The development of the evaluation plan is outlined in an annex to this report, "Design for Evaluation of the PROPESA Program of Credit and Technical Assistance for Micro-enterprises." In order to measure the true impact of PROPESA's activities on its clients (point 1 above), particular care was devoted to the selection of a control group against which to compare the achievements of PROPESA's clients and thereby attempt to avoid some of the limitations of micro-enterprise program evaluations described by Kilby and D'Zmura in Searching for Benefits (AID, 1985). Because the success of a micro-enterprise assistance program depends not only on the impact on the beneficiaries but also on the viability of the institution and the sustainability of its program, particular care was also taken to see that PROPESA's management information systems would be adequate to provide the kind of data that would be required to analyze PROPESA's costs, including especially loan delinquency, in providing services to its micro-enterprise clients (point 2 above) -- but without excessively burdening PROPESA's information systems whose essential purpose is to allow PROPESA's management to function as effectively and efficiently as possible.

The next section of the evaluation report focuses on the changes in PROPESA's clientele -- which have in fact been dramatic as PROPESA has introduced new group lending techniques that have successfully reached micro-enterprises of much smaller size, many run by women. The following section summarizes the results of the impact study, which is included as an annex to the report, "Evaluation of PROPESA" by Fuenzalida and Fuenzalida (ECYES, 1992), and shows that PROPESA's clients increased their value added and their employment levels significantly more than a comparable set of non-assisted micro-enterprises. The next section deals with PROPESA's experiences with loan delinquency and, in particular, its ability to identify and overcome the serious problems that confronted it during 1990. The following section examines the evolution of PROPESA's systems to create provisions for loan losses and to write off uncollectible loans and shows how these have become increasingly sophisticated and accurate and thus of greater use, both to PROPESA's management and to potential regulators. The next section analyzes PROPESA's financial statements, with the most important finding being that PROPESA's progress toward viability was halted during 1991, apparently by the failure of funding from international development agencies to be received on a timely basis. The last section focuses on the volatility of PROPESA's spreads and the main options to deal with this issue -- attempting to secure longer-term commercial funding and raising interest rates on loans to truly market levels.

It is hoped that the findings contained in this evaluation will be useful not only for international development agencies but also for PROPESA and its clients in helping to facilitate the more efficient provision of a wider range of financial services to a wider array of clients. The patience of these potential beneficiaries in bearing the burden of providing the information requested of them is greatly appreciated and hopefully will be rewarded by following analysis and recommendations.

PROPESA's Changing Clientele

The annex to this report that analyzes the impact of PROPESA's credit and training activities on the participants in its program reveals a dramatic change in PROPESA's clientele since the initiation of its activities. As shown in the annex, PROPESA now serves on average much smaller micro-enterprises. Total assets of participants were more than 50 percent lower in 1991 than in 1988 and 1989, the first years of the program. Value added and the number of employees were also substantially lower in 1990 and 1991 than in 1988 and 1989, but (and partly as a consequence) return on assets and salary per employee were higher. Other aspects of participants such as the age of the enterprise and the micro-entrepreneur, martial status, educational level and whether the micro-enterprise is the main source of support for the household have not shown significant change. However, as part of the shift toward micro-enterprises of smaller size, a much larger portion of PROPESA's clients are now women (about 40 percent in 1990 and 1991 as compared to about 20 percent in 1988 and 1989), and there have also been marked changes in the economic activities of micro-entrepreneurs (e.g., increases in food and retailing and decreases in shoes and leather products, furniture and wood products, and metalworking and mechanical products).

The main reason for these significant changes in PROPESA's clientele was the introduction of group loans in 1990. This type of loan has not only grown rapidly but has also provided PROPESA with an important new market niche in which it has achieved much lower rates of loan delinquency than for its traditional individual loans, as shown later in this report. In fact, the success of PROPESA's group lending has reached the point that the discontinuation of individual loans has been under consideration.

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Table 1

PROPESA Loans Disbursed Each Month 1991 (Pesos)

Month	Number of Operations					Amounts				
	New Individual Loans	Follow-on Individual Loans	New Group Loans	Follow-on Group Loans	Total	New Individual Loans	Follow-on Individual Loans	New Group Loans	Follow-on Group Loans	Total
April	27	57	64	89	237	3,205,463	9,398,772	2,593,758	12,385,155	27,893,148
May	24	56	129	171	380	2,532,706	9,749,424	9,789,355	19,858,237	41,929,722
June	24	58	50	104	236	2,583,465	10,934,454	2,434,834	12,012,436	27,965,189
July	15	73	269	155	512	1,682,962	14,451,232	14,685,192	17,031,278	47,850,664
August	46	64	229	276	615	4,853,686	14,543,243	13,892,497	35,301,833	68,591,259
September	44	45	277	220	586	5,353,635	8,786,526	17,832,893	26,968,940	58,941,994
October	53	64	270	348	735	6,958,337	12,311,678	15,991,780	41,618,918	76,880,713
November	54	68	274	402	798	6,478,591	15,236,366	20,410,775	53,247,544	95,373,276
December	34	75	184	543	836	4,647,837	14,920,432	12,653,047	68,300,515	100,521,831

PROPESA Loans Outstanding at End of Each Month 1991 (Pesos)

Month	Number of Operations					Amounts				
	New Individual Loans	Follow-on Individual Loans	New Group Loans	Follow-on Group Loans	Total	New Individual Loans	Follow-on Individual Loans	New Group Loans	Follow-on Group Loans	Total
April	426	533	182	442	1583	30,823,284	69,103,959	5,406,913	27,804,478	133,138,634
May	418	537	290	471	1716	30,193,073	70,140,160	13,090,395	32,105,063	145,528,691
June	381	547	336	469	1733	29,189,202	71,943,807	13,500,064	35,990,367	150,623,440
July	345	544	499	478	1866	27,255,113	73,208,843	19,053,469	29,967,272	149,484,697
August	355	551	614	579	2099	28,314,390	77,622,915	24,088,713	49,333,397	179,359,415
September	375	546	757	697	2375	29,937,727	75,444,979	26,286,211	53,690,331	185,359,248
October	399	547	791	865	2602	32,619.581	76,031,505	26,666,998	69,014,488	204,332,572
November	413	555	766	1,064	2798	34,031,021	80,292,724	31,117,307	89,582,468	235,023,520
December	310	507	618	1,282	2717	25,245,951	73,244,394	25,879,534	104,283,387	228,653,266

Source:PROPESA

Table 1 indicates clearly the major changes in the composition of PROPESA's loan portfolio, and hence in the composition of its clientele, during 1991. With respect to loans given out each month, the number of loans to individuals has grown somewhat during the course of 1991, as have the amounts disbursed, but it is for group loans that the numbers have increased dramatically. The number of loans to newly-incorporated groups averaged less than one hundred each month in the second quarter of 1991, but increased to an average of well over two hundred per month during the second half of the year. At the same time, the amounts disbursed to newly-incorporated groups have increased from well under $10 million pesos per month in the second quarter of 1991 to the vicinity of $15 million pesos each month in the second half of the year. Loans to groups that have already received at least one loan have increased even more dramatically: from slightly more than one hundred loans given out and less than $20 million pesos disbursed each month during the second quarter of 1991 to more than four hundred loans and more than $50 million pesos per month by the end of the year.

These changes in the composition of clients served and amounts disbursed each month are, of course, reflected in a major change in the distribution of PROPESA's portfolio of outstanding loans, as also shown in Table 1. For individual loans, the number of new individuals in the portfolio has remained in the range of three to four hundred, and the amount of the portfolio of such loans has remained in the range of $25 to $30 million pesos. Likewise, the number of individuals in the portfolio who had already received at least one loan remained at a level of about five hundred, with $70 to $80 million pesos for the amount of such loans outstanding. On the other hand, the number of new groups in the portfolio increased from around two hundred to well over six hundred, and the amount of such loans outstanding from around $5 million pesos to more than $25 million pesos. Even more dramatically, the number of groups in the portfolio that had already received at least one loan increased from around four hundred to well over one thousand, while the amount of such loans in the portfolio increased from around $30 million pesos to over $100 million pesos.

As noted above, this dramatic change in the composition of loans disbursed and in the portfolio of loans outstanding has caused PROPESA's management to question whether it would be better to focus all its efforts on group loans. The main potential advantages of group loans are well known: (1) possible economies in transaction costs for both lenders and borrowers by reducing the number of independent transactions; and (2) possible improvements in loan repayment performance because of the group's joint liability. For PROPESA, it has not been possible to measure differences in transaction costs between individual loans and group loans, primarily because of the way the work of PROPESA's credit analysts is organized (i.e., by geographic areas rather than by type of loan). Nonetheless, it is possible to say, as discussed in greater detail later in this report, that loan recovery performance has been much better for group loans than for individual loans.

The apparent superiority of group loans does not mean, however, that PROPESA should necessarily give up individual loans. It should only do this if individual loans are, in themselves, unprofitable -- either because they generate losses once all costs (including loan delinquency) are taken into account or because they interfere with the more profitable business of group loans. In making this decision, two important points should be noted: (1) as shown above, PROPESA's individual loans and group loans appear to represent two distinct market niches; and (2) group loan programs of other institutions and in other countries often run into serious difficulties if groups are not correctly formed around significant and on-going common benefits for the group but instead are created for the sole purpose of taking advantage of a group loan program.

PROPESA's Impact on its Clients

In the design for the evaluation of the impact of PROPESA's program on its micro-enterprise clients, special attention has been paid to selecting an appropriate control group for the evaluation. As noted most prominently by Kilby and D'Zmura in Searching for Benefits but also by other evaluators, the results of many micro-enterprise evaluations are not credible because the control group used for comparison with the beneficiaries of the program is not truly comparable but rather suffers from serious selectively bias. In particular, if the micro-enterprises in the control group are selected randomly while the micro-enterprises participating in the program to be evaluated have been carefully selected for their probability of successful performance according to the criteria to be used for evaluation -- as should be the case if the implementors of the program are behaving rationally and the evaluation criteria have been chosen properly -- then the micro-enterprises selected for the program should perform better than the control group even if the program has no (or even a negative) impact on its intended beneficiaries. To avoid such bias, the control group for the evaluation of PROPESA's impact is composed of micro-enterprises that were selected by PROPESA for its program but subsequently chose not to participate. It is, of course, possible that the reasons that the micro-enterprises in the control group choose not to participate in PROPESA's program are related to the probability of successful performance according to the criteria used for the evaluation, but there is no obvious reason that this should be the case.

Non-response and biases introduced by interviewers are the other main sources of statistical bias in interview-based evaluations. In the present evaluation, the beneficiaries of PROPESA's program continued to be interviewed by PROPESA's loan officers who were responsible for the recovery of existing loans and the subsequent extension of new loans, so that non-response was not a problem. Moreover, since the information collected in the interviews would be the same information that would be used to evaluate the beneficiaries for further loans, the loan officers undertaking the interviews had an incentive to assure that responses were as accurate as possible. In addition, the results of these interviews were closely monitored by the firm contracted to undertake the evaluation of PROPESA's impact.

For the control group, to minimize the possibility of bias introduced by interviewers, the interviews were carried out by the firm contracted to undertake the evaluation of PROPESA's impact, in case a reason for the micro-enterprises in the control group to decline to participate in PROPESA's program was a bad relationship with the potential loan officer or any other negative perception of PROPESA and its program. Non-response could have been a potential source of bias for the control group, since only 85 of the 119 micro-enterprises selected for the control group could in fact be interviewed. However, of the 34 control group micro-enterprises selected but not interviewed, only 7 refused to be interviewed (the usual source of non-response bias) while the other 27 simply could not be found (e.g., the micro-enterprise had moved and could not be traced or the owner had died).

In the process of obtaining information from the control group micro-enterprises, two further checks were performed: (1) the firm's interviewers did not have access to the information previously obtained by PROPESA's loan officers, but when the two sources of information were subsequently compared, no significant difference were found; and (2) the characteristics of micro-enterprises in the control group (e.g., assets of the micro-enterprise and type of economic activity, and age, sex, martial status and educational level of the micro-entrepreneur) did not differ significantly from the characteristics of PROPESA's micro-enterprise beneficiaries. In addition, to avoid the well-known problem of inaccuracy due to asking the micro-enterprises interviewed to recall data from far in the past, the data collected (e.g., on sales and purchases) pertain only to the month of the interview, with appropriate adjustments for seasonality.

The main finding with respect to the micro-enterprises in the control group was a lack of economic progress from the time of the initial interview to the time of the final observation. The two basic criteria used to evaluate the impact of PROPESA's program were the increase in value added and the increase in employment provided by the micro-enterprise. With respect to value added, the control group showed a slight decline on average (from $710 to $595), but this decline was not large and consistent enough to be statistically significant. Nonetheless, because assets of the micro-enterprises in the control group increased, albeit not significantly, the combination of this factor with the decrease in value added led to a significant decline in return on assets for micro-enterprises in the control group (from 31 percent to 13 percent). With respect to employment, the micro-enterprises in the control group showed, on average, a decline in the number of workers employed (from 1.35 to 1.34), in the total wage bill (from $176 to $168) and in the wage rate (from $126 to $120), although none of these changes was statistically significant. Moreover, when the control group of micro-enterprises was broken down according to the various categories used in the evaluation (e.g., type of economic activity and age, sex, martial status and educational level of the micro-entrepreneur), there were no statistically significant changes in value added or employment. Finally, it is important to point out that the mediocre performance of the micro-enterprises in the control group reflects a similar performance by the overall Chilean economy during 1990 and early 1991, as mentioned in the next section of the report in the discussion of PROPESA's problems with loan delinquency.

Because PROPESA's interest rates on loans are fully at market levels and because training is paid for largely by the recipients, no significant subsidies are transferred to the beneficiaries of PROPESA's program. Consequently, the ability of PROPESA's staff to select clients that potentially can benefit from credit and training, and not the transfer of subsidies, is crucial for the positive impact of PROPESA's program on participating micro-enterprises. Given the performance of the micro-enterprises in the control group, to show a positive impact of PROPESA on the micro-enterprise participants in its program requires only to show increases in value added and employment and their significance. Moreover, the analysis showing this covers all 524 micro-enterprises that were in PROPESA's program at the time the evaluation was initiated, so that sampling bias cannot have been introduced by any systematic inclusion or exclusion of particularly successful or unsuccessful micro-enterprises that were in the program.

For each of these 524 micro-enterprises, there is an initial observation corresponding to its condition at the time of its selection for participation in the program, and there is a second observation one year later for those 333 micro-enterprises that had been in the program for at least one year when data collection for the evaluation ended. For those micro-enterprises that entered the program early enough, there is a third observation at the end of their second year of participation (171), and for some there is even a forth observation at the end of the third year of participation (47). This time dimension of the analysis helps to show whether PROPESA's impact diminishes or increases with the length of time in the program, although the declining number of observations for additional years of participation reduces the likelihood of statistical significance.

The main finding from the evaluation is that value added for PROPESA's clients increased substantially during their participation in the program (from $621 to $903 on average), that the impact was especially significant in the first year (from $621 to $778 on average), but that the year-to-year changes beyond the first year were not statistically significant due to the smaller sample size and the smaller increments in value added. For employment, the effects of PROPESA's program were also positive as all the key indicators had increased significantly by the end of the third year of participation: the number of workers employed from 1.48 to 1.92 on average, the total wage bill from $143 to $240 on average; and the wage rate from $118 to $200 on average. However, the increase in the number of workers was not significant until the third year, and the increase in the wage bill only became significant by the second year, so that just the increase in the wage rate was significant in the first year. Nonetheless, this pattern should not be unexpected, as employers normally respond to improved business conditions by first increasing the wage rate and only later by increasing the level of employment.

Another interesting indicator of the success of PROPESA's program is that participating micro-entrepreneurs increased the proportion of their incomes that they reinvested in their micro-enterprises and decreased the proportion that they took out as dividends for consumption or investment in other activities. This result was neither planned for as part of the program nor encouraged by PROPESA's management or loan officers, but it clearly indicates the increasing attractiveness with which the micro-entrepreneurs participating in the PROPESA program view their micro-enterprises, and as such a finding is clearly worthy of further investigation.

In order to identify as precisely as possible differential impacts of PROPESA's program, participating micro-enterprises were separated according to the following characteristics:

sex of the micro-entrepreneur;

marital status;

- whether or not the micro-entrepreneur was the main source of support for the family unit;
- educational level;
- type of economic activity of the micro-enterprise;
- whether the loan was an individual or a group loan; and
- whether or not training was provided along with the loan.

For each of the first three categories (sex of the micro-entrepreneur, marital status, and whether or not the micro-entrepreneur was the main source of support for the family unit), PROPESA's impact on participating micro-enterprises was positive and significant, and there were no significant differences in the strength of the impact between each of the different categories. However, the positive impact of PROPESA's program on value added was not statistically significant for all levels of educational attainment or for all types of economic activity, largely because of inadequate sample size for certain categories. More importantly, the impact of PROPESA's group loans and PROPESA's training was positive but not statistically significant, again mainly because of small sample size (e.g., there were only 15 micro-enterprises that received both credit and training). Because of the substantial operational importance of differences in impact between group and individual loans and between loans with and without training, further evaluation is clearly essential -- whether carried out by an external evaluator or by PROPESA itself.

Subsequent sections of this report discuss PROPESA's operating costs and financial results, including especially the costs of loan delinquency. From the foregoing it is nonetheless already clear that PROPESA has had a substantial positive impact on its micro-enterprise clients and that this impact is not due to the transfer of subsidies to these beneficiaries. Two further questions thus remain to be dealt with in the remainder of this report: (1) whether PROPESA has been able to earn enough revenues to cover its operating costs; and (2) if not, if the positive impact of PROPESA on its clients is substantial enough to offset any losses that PROPESA may have incurred.

PROPESA's Experience with Loan Delinquency

A summary of PROPESA's experience with loan delinquency is given in Tables 2 and 3. First of all, it is important to note that PROPESA's key measure of loan delinquency, presented in Table 2, includes the total value of loans with overdue payments and not just the amount of payments overdue. The importance of using such a measure is that it immediately shows PROPESA's total exposure to losses from the failure of borrowers to repay their loans -- which is the total value of outstanding loans with overdue payments and not just the amounts overdue. The traditional focus only on amounts overdue, which is presented for PROPESA in Table 3 for comparison, can easily obscure the onset of serious loan recovery problems, and in fact there

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are numerous examples of financial institutions that have used the traditional measure to minimize the significant of loan delinquency for outside observers such as government regulatory entities or international donor agencies. It is also important to note, as discussed in greater detail below, that PROPESA has over time reported its loan delinquency situation with increasing detail and, in addition, maintains highly detailed breakdowns of loan delinquency in its management information systems for analysis and subsequent treatment of loan delinquency problems.

As shown in Table 2, loan delinquency had become a significant problem for PROPESA by the end of 1989 and continued to be troublesome throughout 1990 and well into 1991. In contrast, the traditional measure of loan delinquency given in Table 3 did not reveal significant loan delinquency problems for PROPESA until 1990, and the potential seriousness of the problem was never shown by this measure. Although it is possible to point to the slowdown in the Chilean economy during this period due to the uncertainties surrounding Chile's elections and the transition to a new government as the underlying source of PROPESA's loan delinquency problems, the life expectancy of financial institutions that rely on such explanations as excuses for poor loan recovery performance is notoriously brief. Instead, as pointed out in greater detail below, PROPESA undertook serious analyses of the internal sources of its loan delinquency problems and, based on these analyses, instituted strong measures to improve loan recovery performance.

As indicated in Table 2, loans seriously in arrears (more than 30 days overdue) exceeded 25 percent of the total value of PROPESA's loan portfolio during most of 1990 and reached more than 35 percent in early 1991. By contrast, the traditional measure of loan delinquency given in Table 3 barely reached 20 percent, and this was in April 1991 when PROPESA's loan delinquency situation had already begun to improve. The action program instituted by PROPESA's management, which is described in detail below, began to show results as early as March 1991, as the percent of the loan portfolio with payments more than 30 days overdue was brought down to less than 7 percent by the end of 1991, while loans fully on time exceeded 85 percent. However, it should be noted that the dramatic improvements in loan delinquency registered in June and December are largely attributable to major write-offs of uncollectible loans in those two months, as described in the following section of this report, which removed such loans from subsequent calculations of loan delinquency. It is rather the steady progress in bringing down loan delinquency rates in virtually every month after February 1991 that is the true measure of PROPESA's ability to deal with its serious problems. As explained below, the substantial write-offs were an appropriate part of PROPESA's new and better approach to provisioning for uncollectible loans, but their impact on delinquency rates provides yet another warning of the care needed in interpreting the measures of loan delinquency that are often presented.

Table 2

PERCENT OF PORTFOLIO WITH PAYMENTS OVERDUE										
		Total Portfolio			Individual Loans			Group Loans		
Year	Month	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue
1988	November	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
	December	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
1989	January	98.5	1.5	0.0	98.5	1.5	0.0	0.0	0.0	0.0
	February	86.5	11.8	1.7	86.5	11.8	1.7	0.0	0.0	0.0
	March	88.0	7.2	4.8	88.0	7.2	4.8	0.0	0.0	0.0
	April	85.1	6.4	8.5	85.1	6.4	8.5	0.0	0.0	0.0
	May	87.4	3.7	8.9	87.4	3.7	8.9	0.0	0.0	0.0
	June	89.9	4.5	5.6	89.9	4.5	5.6	0.0	0.0	0.0
	July									
	August									
	September									
	October									
	November									
	December	72.3	8.8	18.9	72.3	8.8	18.9	0.0	0.0	0.0
1990	January									
	February	61.7	13.3	25.0	61.7	13.3	25.0	0.0	0.0	0.0
	March	64.0	10.3	25.7	64.0	10.3	25.7	0.0	0.0	0.0
	April									
	May	64.7	9.0	26.3	64.7	9.0	26.3	0.0	0.0	0.0
	June	61.4	11.2	27.4	61.4	11.2	27.4	0.0	0.0	0.0
	July	68.9	6.8	24.3	68.9	6.8	24.3	0.0	0.0	0.0
	August									
	September									
	October	72.5	11.0	16.5	68.5	12.0	19.5	88.6	7.0	4.4
	November	69.7	9.3	21.0	62.5	10.5	27.0	92.6	5.4	2.0
	December							82.0	7.9	10.1

PERCENT OF PORTFOLIO WITH PAYMENTS OVERDUE										
		Total Portfolio			Individual Loans			Group Loans		
Year	Month	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue
1991	January	54.1	10.0	35.9	48.7	10.2	41.1	75.9	9.5	14.6
	February	55.8	6.7	37.5	47.2	7.5	45.3	82.7	4.5	12.8
	March	57.6	6.4	36.0	48.8	7.6	43.6	86.4	2.5	11.1
	April	58.3	7.1	34.6	50.0	8.7	41.3	86.5	1.8	11.7
	May	61.6	9.5	28.9	50.7	11.0	38.3	86.4	6.1	7.5
	June	76.3	7.9	15.8	70.7	8.9	20.4	88.3	5.6	6.1
	July	77.8	9.3	12.9	71.0	11.6	17.4	90.7	4.9	4.4
	August	76.3	12.2	11.5	69.2	14.4	16.4	85.8	9.3	4.9
	September	76.8	10.6	12.6	65.9	14.0	20.1	90.1	6.3	3.6
	October	82.2	6.2	11.6	70.7	9.8	19.5	94.5	2.4	3.1
	November	80.9	6.9	12.2	69.0	8.6	22.4	91.5	5.4	3.1
	December	87.1	6.3	6.6	76.1	10.2	13.7	95.5	3.4	1.1

Source: PROPESA

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Table 3

AMOUNTS OVERDUE AS A PERCENT OF PORTFOLIO										
		Total Portfolio			Individual Loans			Group Loans		
Year	Month	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue
1988	November	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
	December	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
1989	January	99.7	.3	0.0	99.7	.3	0.0	0.0	0.0	0.0
	February	96.7	2.9	.4	96.7	2.9	.4	0.0	0.0	0.0
	March	95.4	3.3	1.3	95.4	3.3	1.3	0.0	0.0	0.0
	April	94.1	2.0	3.9	94.1	2.0	3.9	0.0	0.0	0.0
	May	92.8	2.4	4.8	92.8	2.4	4.8	0.0	0.0	0.0
	June	93.0	1.3	5.7	93.0	1.3	5.7	0.0	0.0	0.0
	July									
	August									
	September									
	October									
	November									
	December	89.4	3.3	7.3	89.4	3.3	7.3	0.0	0.0	0.0
1990	January									
	February	84.6	4.8	10.6	84.6	4.8	10.6	0.0	0.0	0.0
	March	83.7	4.6	11.7	83.7	4.6	11.7	0.0	0.0	0.0
	April									
	May	81.9	3.9	14.2	81.9	3.9	14.2	0.0	0.0	0.0
	June	81.2	4.8	14.0	81.2	4.8	14.0	0.0	0.0	0.0
	July	83.4	3.5	13.1	83.4	3.5	13.1	0.0	0.0	0.0
	August									
	September									
	October	89.7	3.1	7.2	88.0	3.4	8.6	96.5	2.3	1.2
	November	87.1	4.1	8.8	85.4	3.7	10.9	92.6	5.4	2.0
	December	84.6	4.6	10.8	82.6	4.5	12.9	90.8	4.9	4.3

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AMOUNTS OVERDUE AS A PERCENT OF PORTFOLIO										
		Total Portfolio			Individual Loans			Group Loans		
Year	Month	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue	On-time	5-30 days overdue	Over 30 days overdue
1991	January	79.9	5.1	15.0	18.6	4.8	16.6	85.1	6.3	8.6
	February	78.6	4.9	16.5	75.6	5.4	19.0	88.2	3.1	8.7
	March	76.5	4.6	18.9	73.1	5.2	21.7	87.5	2.6	9.9
	April	75.2	4.3	20.5	71.5	5.2	23.3	88.0	0.9	11.1
	May	78.4	2.6	19.0	72.2	3.5	24.3	92.3	.6	7.1
	June	88.0	2.2	9.8	85.2	2.4	12.4	94.0	1.7	4.3
	July	91.2	1.1	7.7	89.2	1.3	9.5	95.2	0.7	4.1
	August	90.8	2.4	6.8	87.4	2.8	9.8	95.4	1.8	2.8
	September	90.6	2.5	6.9	86.3	3.3	10.4	95.8	1.5	2.7
	October	91.4	2.1	6.5	86.1	3.5	10.4	97.0	0.6	2.4
	November	91.1	2.5	6.4	84.5	4.1	11.4	96.9	1.0	2.1
	December	93.8	2.0	4.2	88.6	2.8	8.6	97.8	1.4	0.8

Source: PROPESA

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As mentioned at the beginning of this report, PROPESA began to make group loans in mid 1990, and, as indicated clearly by the figures in Table 2, loan recovery performance for PROPESA's group loans has consistently surpassed the performance of its individual loans. In only one month, January 1991, did the percent of group loans fully on time fail to exceed 80 percent, and in this month the comparable figure for individual loans was less than 50 percent. During the early months of 1991, the percent of PROPESA's individual loan portfolio with payments more than 30 days overdue exceeded 40 percent, while the maximum for group loans never reached even 15 percent. By the end of 1991, more than 95 percent of group loans were fully on time, with only 1 percent more than 30 days overdue, while the comparable figures for individual loans were less than 75 percent fully on time and more than 13 percent seriously overdue. Such figures are clearly of major importance for PROPESA's decisions about the future of individual loans relative to group loans, as discussed elsewhere in this report.

As noted above, for those periods when loans with overdue payments have reached significant proportions, PROPESA has developed management information systems that have been able to pinpoint the sources of the problem and, on the basis of this information, to institute management techniques to deal with existing delinquency problems and to reduce future loan delinquency. PROPESA's management information system can, in particular, produce fully up-to-date data each day on delinquency for its total loan portfolio (not only amounts overdue but also the total value of loans with payments overdue) according to the following categories:

- on time (less than 5 days overdue);
- 5 to 30 days overdue;
- 31 to 60 days overdue;
- more than 60 days overdue; and
- in legal collection.

For analysis of the sources of loan delinquency and for actions to be taken, this information can be further broken down, on demand, according to the following characteristics:

- sex of the borrower;
- location (by comuna);
- the borrower's primary economic activity;
- stated use of the loan;
- number of prior loans from PROPESA;

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- source of funds for the loan;
- credit analyst responsible for the loan;
- whether it is an individual or a group loan;
- terms and conditions of the loan; and
- schedule of payments due on the loan.

In practice, the main characteristics of delinquent loans that PROPESA monitors continually are (in addition to how long overdue a loan is): whether the loan is an individual loan or a group loan and the credit analyst responsible for the loan. Delinquency patterns of individual as compared to group loans are monitored closely because the question of the extent to which PROPESA should focus on one type of loan or the other is continually under review as a crucial component of basic market strategy. The careful monitoring of the loan delinquency performance of each credit analyst is based on the fact that PROPESA has found that this is the over-riding factor in controlling loan delinquency. Moreover, based on performance, credit analysts can receive incentive payments that increase their salaries as much as 50 percent -- or they can be transferred to other jobs or terminated. Nonetheless, other characteristics of delinquent loans are also maintained in PROPESA's management information system to provide the possibility of identifying other sources of loan delinquency and, consequently, implementing new management techniques to maintain loan delinquency at acceptable levels.

PROPESA's ability to identify serious loan delinquency problems expeditiously and to deal with them effectively can be illustrated by the actions that were initiated beginning in 1990. As indicated in the preceding discussion of PROPESA's loan delinquency performance, overdue loans in PROPESA's portfolio reached unacceptable levels during 1990. Because of PROPESA's focus on the total value of loans with overdue payments, rather than the traditional focus of considering only the amount of payments overdue, PROPESA was able to identify the onset of a significant increase in loan delinquency well before the amount of payments overdue reached unacceptable levels.

The program to control loan delinquency that was implemented beginning in 1990 had several key elements:

- more restrictive loan repayment schedules;
- more frequent visits to borrowers;
- smaller initial loans;
- initiation of cosigner guarantees for individual loans;

- procedural modifications to provide more rapid decisions for credit applicants;
- creation of a loan collection department to support the credit analysts in their loan collection efforts;
- contracting of a specialized outside firm to handle judicial proceeding against delinquent borrowers;
- more rapid assignment of delinquent loans to judicial collection (even before 60 days) if prospects for recovery are thereby improved;
- surrender to PROPESA of mortgaged machinery and equipment by borrowers in partial (or total) fulfillment of payments due;
- development of a manual detailing effective loan collection procedures;
- re-assignment of credit analysts, including a focus on smaller geographic areas;
- re-organization of borrower files according to the credit analyst responsible;
- preparation of daily information for each credit analyst with respect to payments due and overdue from each borrower; and
- incentive payments to credit analysts according to their performance in loan collection.

As discussed above, the results of this program can be seen clearly from Table 2, as loan delinquency rates began to fall early in 1991 and continued to do so throughout the year and approached acceptable levels by the end of the year. The slow but steady impact of PROPESA's action program on loan delinquency, except for the months of June and December when delinquency fell sharply due to the write-offs of uncollectible loans noted above, was not due to any slowness in identifying the problem but rather to the basic nature of the changes made -- involving new ways of organizing PROPESA internally and new approaches to dealing with all of PROPESA's clients and not just "getting tough" with delinquent borrowers. Given the nature PROPESA's action program, basically the changes listed above, and the maturity structure of PROPESA's loan portfolio, it would have been difficult to expect substantial reductions in loan delinquency in much less than six months. In any case, the greater focus on group loans and the reorganization of PROPESA's credit analysts and the procedures involving their contacts with clients, in addition to the other measures listed above, should have a lasting effect not only on PROPESA's loan recovery performance but also its ability to select and deal with clients from the Chilean micro-enterprise sector more efficiently.

PROPESA's Provisions for Loan Losses and Write-Offs

As indicated by PROPESA's balance sheets and income statements (see Tables 5 and 6 below), there are three main types of provisions for losses. For all checks returned because of non-payment, PROPESA, like other financial institutions in Chile, is required to make a provision for the total amount of each check. However, a significant proportion of the value of these checks is eventually recovered, so that PROPESA's financial statements also show a significant offsetting income entry. In addition to provisions for losses on loans, PROPESA's financial statements also have a significant category of "other" provisions which are mainly amounts due to employees but also include somewhat smaller amounts of miscellaneous provisions. In any case, provisions for uncollectible loans are the most important category of provisions and will be the only category considered in the present analysis.

The development of PROPESA's approach to provisions for loan losses can be divided into three periods: (1) from January 1989 to July 1990; (2) from August 1990 to May 1991; and (3) from June 1991 to the present. In addition to provisions for losses on loans, it is also necessary to consider PROPESA's loan write-off policy, which was developed at the end of the second period and further refined during the present period. As a result of these developments, criteria for providing for loan losses have become more precise and conservative to insure that provisions are created and uncollectible loans are written off in a timely fashion.

Loan loss provision policy for the first period, from January 1989 to July 1990, was determined at the initiation of PROPESA's operations in late 1988, when it was decided to follow a policy of provisioning the equivalent of 5 percent of the outstanding loan portfolio against losses. As Table 4 indicates, provisions grew slowly during the first period, from $437,624 pesos in January 1989 to $3,927,225 pesos in June 1990, always representing at least 5 percent of the loan portfolio. Since PROPESA only granted loans to individuals during this period, provisions reflected expectations of loan repayment behavior by individuals.

As indicated in the preceding section of this report, a significant worsening in PROPESA's loan delinquency became apparent during 1990, and this led to a decision to change the policy for loan loss provisions in August 1990 to keep them more in line with the increasing proportion of overdue loans. The months of August 1990 through May 1991 thus represent the second stage in the development of PROPESA's loan loss provision policy. During these months there was a significant increase in provisions for loan losses, as shown in Table 4, as the percentage of the loan portfolio to be provisioned was increased from 7.1 percent in December 1990, to 10.5 percent in January 1991, and 12.2 percent in February. From February through May, provisions remained fairly stable at approximately 12 percent of the loan portfolio. In addition, it was during this period that group loans were initiated and the methodology for such loans was defined.

Table 4

Provisions for Losses on Loans
(Pesos)

Year	Month	Amount	Amounts Written Off		
			Total	Individual Loans	Group Loans
1989	January	437,624			
	February	----			
	March	618,812			
	April	531,491			
	May	663,800			
	June	898,611			
	July	1,223,027			
	August	1,447,656			
	September	1,621,283			
	October	1,976,756			
	November	1,621,283			
	December	2,600,508			
1990	January	2,795,041			
	February	2,985,041			
	March	3,245,000			
	April	3.404,291			
	May	3,699,084			
	June	3,927,255			
	July	4,675,091			
	August	5,547,049			
	September	6,198,838			
	October	6,664,894			
	November	7,331,721			
	December	10,012,120			
1991	January	13,256,031			
	February	16,282,062			
	March	15,920,207			
	April	16,030,415			
	May	16,330,330			
	June	6,126,174	10,209,388	9,502,758	706,630
	July	5,276,886			
	August	5,325,483			
	September	4,940,822			
	October	7,236,837			
	November	8,690,242			
	December	6,773,695	9,764,546	7,410,009	2,354,537

Source: PROPESA

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Table 5

PROPESA Year-End Balance Sheets
(Thousands of Pesos)

	1991	1990	1989
Current Assets	293,935	168,821	63,072
Cash	14,280	3,430	176
Sight Deposits	24,833	7,055	3,448
Time Deposits	11,960	4,808	6,389
Accounts Receivable	13,415	12,812	1,038
Prepayments to Suppliers	490	474	10
Loan Portfolio	228,958	140,242	52,010
Loans On-Time	214,141	134,968	50,018
Overdue Loans	8,719	1,461	823
Loans in Legal Collection	6,098	3,813	1,169
Fixed Assets	109,227	17,011	12,651
Equipment	47,196	19,988	13,460
Land and Buildings	69,142	0	0
Depreciation	(7,111)	(2,977)	(809)
Other Assets	5,688	1,118	672
Total Assets	**408,850**	**186,949**	**76,395**
Current Liabilities	254,928	104,953	33,175
Bank Loans	224,552	82,583	26,902
Accounts Payable	14,103	9,624	1,749
Provisions	16,273	12,746	4,524
Overdue Loans	4,500	7,012	2,600
Bad Checks	2,273	550	0
Other	9,500	5,184	1,924
Other Liabilities (mortgage loan)	31,689	0	0
Net Worth	122,233	81,996	43,220
Total Liability and Net Worth	**408,850**	**186,949**	**76,395**

Source: PROPESA

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Table 6

PROPESA Yearly Income Statements
(Thousands of Pesos)

	1991	1990	1989
Operating Income	98,312	59,178	11,301
Technical Assistance	17,288	4,065	2,304
Interest on Loans	79,480	55,113	8,997
Recovery of Prior Write-Offs	1,554	0	0
Interest on Investments	1,519	663	2,244
Domestic Donations	59,217	32,036	23,348
Foreign Donations	38,719	25,892	26,249
Misc. Adjustments (e.g., monetary correction)	(10,676)	(8,258)	(1,699)
Total Receipts	**187,091**	**109,511**	**61,443**
Operating Expenses	104,379	48,352	26,051
Employee Compensation	77,125	34,947	18,669
Rent	1,222	2,503	942
Services	5,701	2,707	1,199
Insurance	983	166	335
Transportation	3,980	2,163	1,124
Maintenance	2,745	1,338	294
Materials	6,986	2,641	1,830
Promotion	3,029	612	821
Miscellaneous	2,608	1,275	837
Interest Expense	27,880	23,107	5,024
Other Expenses	2,915	0	0
Commissions	933	1,559	1,110
Depreciation	3,647	1,999	563
Provisions	22,110	7,680	3,197
Overdue Loans	14,262	4,411	2,313
Bad Checks	2,273	550	0
Other	5,575	2,719	884
Total Expenses	**161,865**	**82,697**	**35,945**

Source: PROPESA

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During the third period, from June 1991 to the present, various additional changes were implemented in PROPESA's policy for loan loss provisions. There was also a change in PROPESA's loan write-off procedures, resulting in more timely writing off of bad loans. Before June 1991, losses from delinquent loans not considered collectable were reflected in PROPESA's income statement through adjustments in provisions, but such loans continued to be carried in PROPESA's loan portfolio and hence on PROPESA's balance sheet. However, in June 1991 loans considered uncollectible were written off in the amount of $10,209,388 pesos, which reflected loan losses not only for 1991 but also for the prior years of 1989 and 1990. As indicated in Table 4, this write-off caused the amount of provisions for bad loans to fall sharply from May to June, and, as discussed in the preceding section of the report, the equivalent fall in delinquent loans in PROPESA's loan portfolio gave the appearance of a major improvement in PROPESA's loan delinquency situation. Again in December it was decided to write-off major amounts of unrecoverable loans, this time $9,764,546 pesos. For the future, loans are to be written off on a month-by-month basis after all avenues of legal collection have failed, and the amount to be written off in 1992 is expected to reach about $4 million pesos.

During the third period, the first change in loan loss provisions implemented by PROPESA was to fix the level of provisions at 20 percent for overdue loans and 40 percent for loans in legal collection, but without any distinction between individual and group loans. This was a significant change in PROPESA's loan loss provision policy from a given percentage of the whole loan portfolio to percentages that recognized the greater riskiness of overdue loans and the even greater riskiness of loans in legal collection. This methodology was used from June through September 1991, and PROPESA's loan loss provision policy was further refined in October 1991 when it was recognized that, although group loans had much lower levels of delinquency than individual loans, once group loans became overdue the risk of uncollectibility was much higher than for individual loans. In October 1991 the parameters for loan loss provisions were consequently adjusted to those that are still in use:

- 20 percent for individual loans with payments more than 60 days overdue;
- 40 percent for individual loans in legal collection;
- 40 percent for group loans with payments more than 60 days overdue; and
- 80 percent for group loans in legal collection.

The situation at the end of 1991 suggests that the amount of PROPESA's provisions for losses due to uncollectible loans should be fully adequate. Against loans with payments more than 30 days overdue of slightly less than $15 million pesos, PROPESA has provisions of approximately $6.7 million pesos. Moreover, the introduction of the present system of loan loss provisions and write-off has led to a charge against income of about $14 million pesos for 1991, thereby making 1991 appear to be an unusually unprofitable year, as discussed in the next section of this report. Nonetheless, PROPESA's present system of provisioning against loan losses could be improved

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further by making provisions against all categories of loans, including those less than 60 days overdue and even those fully on time, to reflect the probability of future non-recovery for each category of loans.

PROPESA's Financial Statements

PROPESA's year-end balance sheets for 1989 through 1991, presented in summary form in Table 5, reveal an institution that is growing rapidly and is well capitalized. PROPESA's main liabilities are short-term bank loans that are used to fund its loan portfolio, and traditional measures might suggest that these current liabilities are not adequately balanced by liquid assets. However, PROPESA has been able to extend or replace these short-term loans with no difficulty and, in fact, has several other potential lenders that appear eager to have PROPESA among their clients, because PROPESA is well capitalized and has been able to demonstrate adequate loan recovery to manage its liquidity effectively, but especially because these loans are covered by an ACCION-USAID loan guarantee program. Among the other aspects of PROPESA's balance sheet worth noting is the purchase of a building during 1991 that is partly (conservatively) funded by a mortgage loan. Other major items on PROPESA's balance sheet that are discussed in detail elsewhere in this report are PROPESA's loan portfolio and provisions, especially for overdue loans.

PROPESA's yearly income statements for 1989 through 1991, presented in summary form in Table 6, reveal an institution for which total receipts have consistently and substantially exceeded total expenses. However, a high percentage of these receipts is in the form of donations from both foreign and domestic sources, so that PROPESA is not currently self-sustaining in the sense of being able to generate adequate operating income to cover its expenses. It is not surprising that for 1989, the first full year of PROPESA's operations when the organization and its systems were just being developed and the level of income-generating activity was still relatively low, operating income was far below expenses. In fact, during that year PROPESA's operating income, primarily interest on loans but also including some income from the provision of technical assistance, was less than one-fourth the amounts received from domestic and foreign donations and covered only about one-third of PROPESA's total expenses.

PROPESA's performance during the next year, 1990, showed substantial progress toward self-sustainability, as might be expected from an organization that was developing an effective organization and efficient operating systems while growing rapidly in its income-generating activities. Operating income for that year exceeded the amounts received from domestic and foreign donations and covered more than two-thirds of PROPESA's total expenses. During 1991, however, there was no further progress toward sustainability, as operating income was approximately equal to the amounts received from domestic and foreign donations and continued to cover about two-thirds of total expenses. Part of the explanation for the failure of PROPESA's performance to continue to improve in 1991 can be found in the major increase in provisions for losses from delinquent loans, as explained in detail in the preceding sections of the report. Nonetheless, the major factor was a more than doubling of PROPESA's employee

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compensation from 1990 to 1991, along with similar increases in certain other operating expense categories, without a commensurate increase in income-generating activity -- as shown in Tables 5 and 6, respectively, PROPESA's loan portfolio and interest income each increased by less than 50 percent from 1990 to 1991.

The figures for 1991 suggest that PROPESA had prepared for a much higher level of income-generating activity that subsequently failed to materialize, and discussions with PROPESA's management confirm this conjecture. PROPESA had in fact anticipated much higher levels of lending based on increased funding from international development agencies and had consequently increased its staff substantially and incurred various other operating expenses, but this funding did not become available on a timely basis during 1991. The lack of timeliness on the part of international development agencies reveals one of the dangers of depending on such institutions in crucial ways. As indicated in the discussion of spreads in the following section of the report, PROPESA has moved to establish a wider range of commercial ties, especially with banks, to attempt to assure more timely sources of funding at reasonable cost. The main lesson for PROPESA from this experience is the danger of depending on sources of funds that initially appear to be low cost but may not in fact be so inexpensive in the long run when all aspects of cost are taken into account.

The foregoing experience suggests that the possibility of continuing to depend significantly on donations to enhance total receipts and thereby filling the gap between operating income and expenses may not be such an attractive option. Even if it were possible to assure a steady flow of donations into the long run on a timely basis, securing a reliable and continuing flow of donations requires pleasing potential donors -- which may not always be consistent with PROPESA's basic objectives of providing financial services as efficiently as possible to as many micro-enterprises as possible. In addition, the monitoring requirements imposed by donors to insure that the uses of donated funds are consistent with donor objectives are often very costly. Both these points are addressed in the following section that discusses PROPESA's spreads. In particular, to the extent that PROPESA's objectives are not to provide subsidies to micro-enterprises but rather to provide them with access to financial services, PROPESA should attempt to cover its costs through adequate charges and allow donor funds to be allocated to other activities that may in fact warrant continuing subsidies.

PROPESA's Spreads

As can be seen from Table 7 and the accompanying graph, the most notable feature of PROPESA's spread between its weighted cost of funds and the weighted interest rate on its loan portfolio is the substantial variation over even short periods of time. These fluctuations derive primarily from fluctuations in the cost of funds, as the weighted interest rate on PROPESA's loan portfolio is relatively stable. However, this stability is not necessarily advantageous as it reflects a portfolio composed primarily of loans of three to six months' duration at fixed rates of interest -- which thereby exposes PROPESA to certain risks from fluctuations in the cost of funds. Although PROPESA is aware of these risks and has shortened its maturity structure

Table 7

PROPESA Interest Rate Spreads				
Year	Month	Weighted Monthly Interest Rate for Funds*	Weighted Monthly Interest Rate on Loans	Spread
1990	mid-August	2.38	5.63	3.25
	end-August	2.47	5.74	3.27
	mid-September	2.97	5.77	2.80
	end-September	3.59	5.83	2.24
	mid-October	5.63	5.81	0.18
	end-October	5.72	6.08	0.36
	mid-November	4.70	6.16	1.46
	end-November	4.36	6.32	1.96
	mid-December	1.84	6.13	4.29
	end-December	1.82	6.13	4.31
1991	mid-January	1.26	6.01	4.75
	end-January	1.27	5.97	4.70
	mid-February	.96	5.63	4.67
	end-February	1.75	5.57	3.82
	mid-March	0.71	5.21	4.50
	end-March	0.89	5.05	4.16
	mid-April	1.58	4.85	3.27
	end-April	1.82	4.66	2.84
	mid-May	1.83	4.42	2.59
	end-May	2.15	4.30	2.15
	mid-June	2.65	4.16	1.51
	end-June	2.80	4.18	1.38
	mid-July	2.74	4.21	1.47
	end-July	2.74	4.37	1.63
	mid-August	2.79	4.48	1.69
	end-August	2.55	4.61	2.06
	mid-September	1.93	4.67	2.74
	end-September	1.95	4.64	2.69
	mid-October	2.05	4.51	2.46
	end-October	2.21	4.35	2.14
	mid-November	3.19	4.35	1.16
	end-November	2.87	4.51	1.64
	mid-December	1.83	4.69	2.86
	end-December	1.41	4.79	3.38

Source: PROPESA

* Interest rates for funds without explicit interest payments are imputed according to the following formulas:

- for own funds, the rate of inflation most recently announced by the Central Bank;
- for funds from the Inter-American Development Bank, the interest rate paid on savings deposits.

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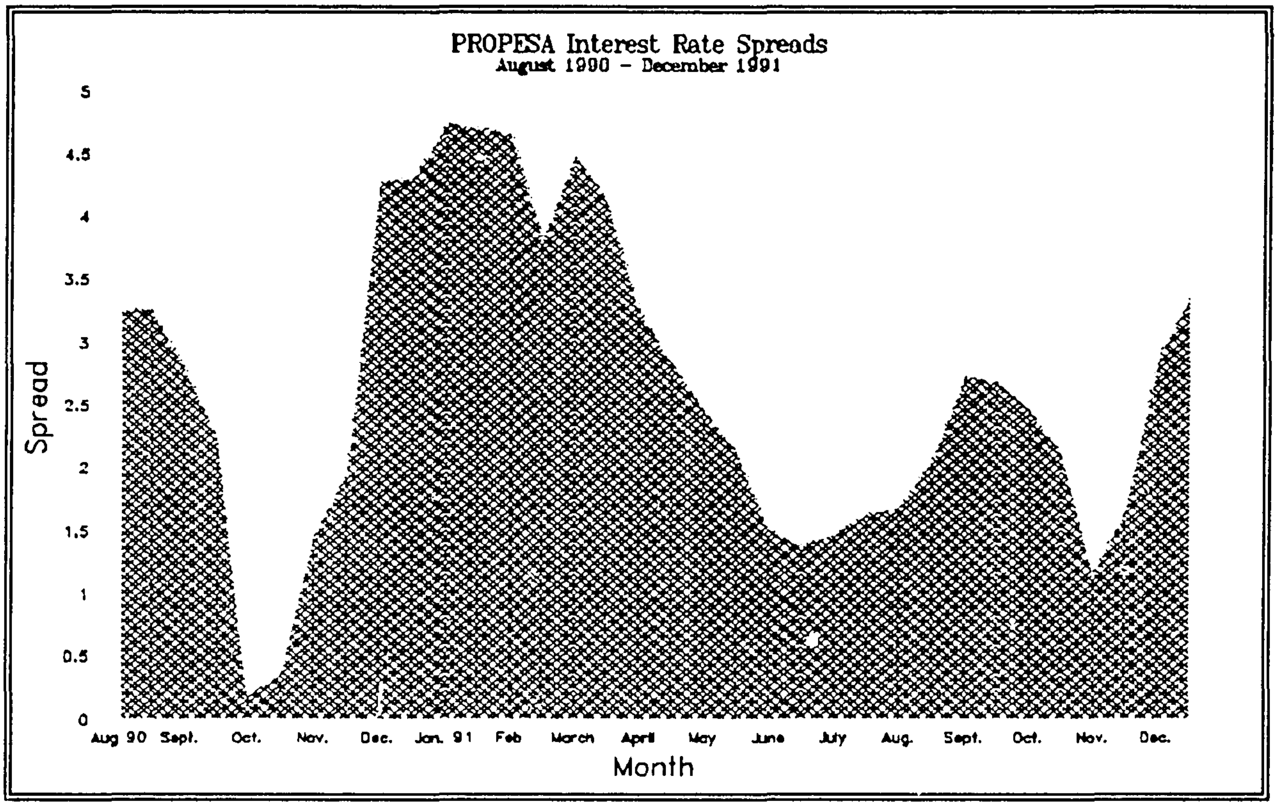
Figure 1



Source: PROPESA

appreciably, PROPESA's management thinks that it would be very difficult to market variable interest rate loans to its clientele. This leaves two possibilities to deal with the risks from the mismatching of maturities: (1) attempt to reduce fluctuations in the cost of funds by lengthening funding maturities or by some other device; or (2) attempt to increase the average spread to compensate for the risk of maturity mismatching by either reducing the average cost of funds or by increasing the average interest rate on loans.

With respect to the first option, it is important to note that a significant portion of PROPESA's funds comes from its own resources or from international development agencies, and the cost of these funds is therefore imputed rather than actually paid to an outside entity. (For its own funds, imputation is at the rate of inflation announced most recently by the Central Bank; for funds from the Inter-American Development Bank, it is the interest rate paid on savings deposits.) The imputation of these costs is essential for maintaining the value of PROPESA's equity, but the level and variability of these costs should not distract attention from the importance of interest costs actually paid to outside entities. In the past, PROPESA has focused appropriately on obtaining access to credit from commercial banks, but given its success in that endeavor it now needs to shift its focus more toward obtaining bank credit (or credit form other types of financial institutions) on the most favorable terms, including two dimensions -- interest

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rates and maturities. The fact that PROPESA has at times curtailed credit from high cost sources indicates its awareness of the problem, but it might also want to consider obtaining better technical expertise for its cash management activities.

With respect to the second option, PROPESA needs to increase its spreads not only to compensate for the risks from the mismatching of maturities but also to help cover its costs, especially since it continues to run losses. PROPESA seems to believe that it cannot raise interest rates on loans beyond the limits imposed on regulated lenders (e.g., commercial banks). In fact, however, it is not clear that these limits would ever be applied to PROPESA, nor is the issue borrower willingness to pay, as PROPESA already imposes fees that raise total costs to borrowers above the restricted level. Rather, the issue seems to be the possible adverse impact of higher interest rates on the image of individual members of PROPESA's Board of Directors -- a not unreasonable fear for someone asked to volunteer time for a non-profit institution.

With respect to the possibility of reducing the cost of funds, there is an ever-present danger that PROPESA might decide to attempt to solve its problem in the short run by focusing excessive attention on obtaining subsidized funding from donors. In the long run, however, the dependency that arises from such a focus has been the undoing of many otherwise successful financial institutions, and in the case of PROPESA it is already possible to see the excessive costs imposed by the reporting requirements of international development agencies (as, for example, when these agencies insist on detailed reports on the use of their funds even though such reporting is totally arbitrary because of fungibility and does not deal with the basic issue of PROPESA's overall performance). The most promising route to a lower cost of funds may be to seek to develop means of mobilizing funds directly from the Chilean public. Even though PROPESA is (correctly) not permitted to accept deposits from the public without becoming a fully regulated financial institution, there may nonetheless be other mechanisms to achieve a similar result -- which would be especially beneficial if PROPESA could mobilize funds from its own borrowers through "deposit-like" instruments and thereby provide them with valuable liquidity services.

Conclusion

Four main conclusions can be drawn from this evaluation of PROPESA:

1. PROPESA's micro-enterprise support program has had highly favorable and significant impacts on PROPESA's clients in terms of the key indicators -- increases in value added and increases in wage rates and employment opportunities -- and, at the same time, PROPESA has come to reach a clientele of much smaller micro-enterprises, largely through the introduction of group lending;

2. PROPESA has confronted serious loan delinquency problems and, through the design and implementation of effective loan recovery techniques, has overcome these problems and emerged as a stronger institution;

3. PROPESA has not yet been able to demonstrate that it can cover its operating expenses with operating revenues and thus continues to depend on donor funding, thereby implying the viability of PROPESA and the sustainability of its programs has not been insured; and

4. The comparison of PROPESA's benefits -- the value of the positive impact of its programs on its clients -- with PROPESA's costs -- the operating losses that it has sustained since the initiation of its operations -- yields an extremely favorable result with a rate of return of more than 200 percent, as calculated and explained in detail in the annex to the evaluation report.

Because of the relative success of PROPESA, there are few major recommendations to be made except, perhaps, with respect to promoting PROPESA's long-run viability. In the long run, reliance on donor funds cannot, by definition, insure PROPESA's sustainability in the sense of enabling PROPESA to cover its operating expenses with operating revenues. In fact, heavy dependence on donor funding may even present a barrier to PROPESA's viability by imposing unnecessary monitoring costs and constraining PROPESA's behavior in ways that may prevent it from charging fully market rates of interest on loans or from seeking the most opportune sources of funds. With respect to sources of funds in particular, PROPESA should seek out every option to mobilize savings from its micro-entrepreneur clients, not only to secure additional funds for itself but also to become a complete financial institution that provides a full array of services to its clients, including the provision of liquidity services through savings mechanisms.

E C Y E S L T D A.

SUMMARY OF THE EVALUATION OF PROPESA.

(CORPORACION DE PROMOCION PARA LA PEQUENA EMPRESA).

Santiago, Chile.
April 1, 1992.

SUMMARY

There are very many evaluations on Programs of support to micro enterprises. In general, such studies focus on the progress of the supported micro enterprises. The main characteristic of the present evaluation is that, appart from measuring that progress, supported micro enterprises have also been compared with non supported micro enterprises in order to determine how they would have evolutioned if they had not received any support, or in other words, in order to measure the genuine effectiveness of the Program.

I. INTRODUCTION.

The Program of Support for Micro Enterprises, PROPESA, was established in Santiago, Chile, in 1988. It started operations during the last quarter of 1988 and since then has furnished support in terms of managerial tecnical orientation and short term loans to nearly 3,539 micro urban business entrepreneurs in the Metropolitan Area of Santiago.

PROPESA's purposes are to contribute to urban micro enterprises' progress. This progress is conceptualized in terms of business scale expansions and better business management, with a consecuent increases in supported firms' income generation, larger employment, greater administration eficiency and an increase in their stability.

The purpose of the present evaluation is to advice PROPESA's Board of Directors and donors on the eficiency and effectiveness to accomplish the purposes established in the Program. Due to this fact, the evaluation of PROPESA is centered on the achievement of such goals, concentrating on two essential purposes: the income increase of the assisted micro enterprises and the operational sustainability of the Program.

The evaluation's results are very favourable to PROPESA. They can be described briefly as follows:

(1) The evaluation shows high effectiveness of the PROPESA program. In order to measure this effectiveness, the progress observed in the non supported micro enterprises was subtracted from the progress observed in assisted micro enterprises (the Program's beneficiaries). As such, the effectiveness of the Program measures the genuine result of it's assistance to micro enterprises.

(2) In terms of economic efficiency, the operational costs are among the lowest in the world. The use of resourses to generate such good results is extremely low, thus resulting in a exceptionally high implicit internal rate of return (greater than 200%).

(3) The financial information, which is controled by external auditors, evidences a very efficient internal management of the organization. The accounting records show low medium operational costs and, also, a very high rate of portfolio recovery, even high during periods of economic hardships, such as the second semester of 1990. All of the monetary

values have been presented in United Stated dollars for international comparison purposes.

II. EVALUATION METHODOLOGY.

The methodology applied to the present evaluation comprises the following steps:

(1) Analysis of the evolution of PROPESA's target group throughout the years of operation.

(2) Analysis of a control group, composed of non assisted micro enterprises, so as to have a comparison base to evaluate PROPESA's effect on assisted micro enterprises versus the evolution on non assisted micro enterprises.

(3) Analysis of the evolution of supported micro enterprises throughout the years of assistance they have received from the Program.

(4) Economic evaluation of the Program, which includes:

(a) Effectiveness Evaluation, measuring the increase in the income generation of supported micro enterprises versus non supported micro enterprises. In order to measure this income generation increase, the business income was identified with gross value added. If gross value added is plotted against the micro enterprise's age, an inverted U shaped curve should be obtained (the lifecycle income curve). The gross value added life cycle curves for both types of micro enterprises are determined and their difference reflects the Program's effectiveness throughout the entire life span of the micro enterprises. The income generated in the micro enterprise is the main target that should be influenced (increased) by the Program's action. Another benefit that was taken into consideration in the evaluation is the increase in the stock of entrepreneurship stemming from support to microenterprises. Accordingly, all the income flow generated by these additional entrepreneurs is a genuine benefit of the program.

(b) Efficiency Evaluation, which determines if the cost of generating the benefits detailed above is lower or greater than those benefits.

(5) Financial evaluation of the Program, where the key point is to verify how feasible is the growth of the Program on the basis of operational self-financing.

III. THE EVALUATION'S RESULTS.

A. PROPESA'S TARGET GROUP.

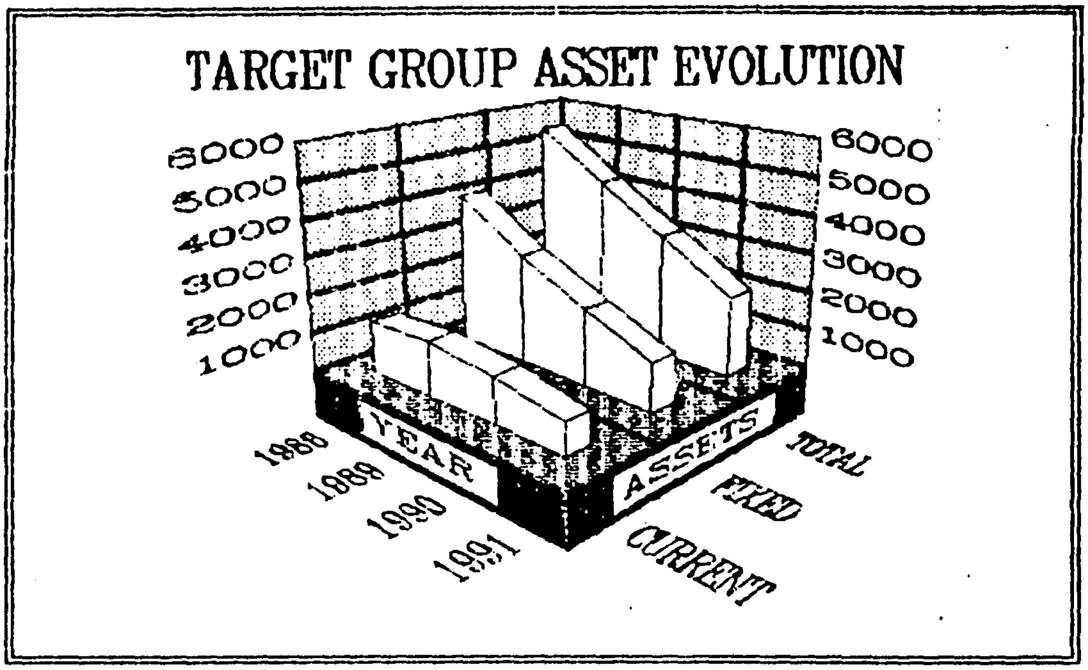
The first step of the present evaluation is to briefly describe PROPESA's target group, so as to understand to whom are directed the Program's efforts and assistance. Throughout the years of operation PROPESA's focus has shifted towards a greater emphasis on smaller scale micro enterprises which employ the humblest workers. The average micro enterprise which enters the program has 10 years of age, which allows PROPESA's assistance to have a positive effect during 18 years, due to the fact that these micro enterprizes have an expected life span of 28 years. This is an adecuate age to accept micro enterprises since they have already passed the initial high risk phase in which many of them fail to survive.

In relation to the distribution of economic activities of the micro enterprises that enter the program each year, in 1988 the economic activity of main importance was metalmechanics, which since then has decreased in importance, while textiles & clothes, retailing and food have taken a larger portion of the operations. The increasing support to these latter activities can be explained by two main reasons:

(1) Increasing portion of credits given to solidary groups, which are more concentrated in these activities.

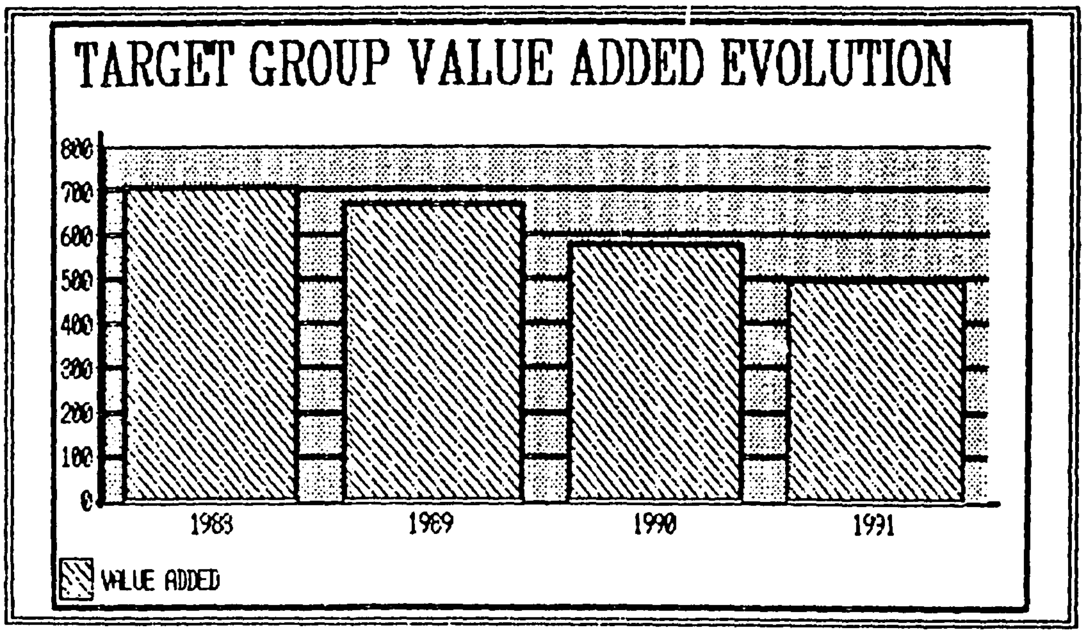
(2) A trend to support smaller scale businesses, which are more given to exist in these economic activities.

When PROPESA started it's operations in 1988, the Program's target group had average total assets per micro enterprise of US$5,471. By 1991, the target group had average total assets of US$2,077, which is 62% less than in 1988. The target group asset evolution throughout the period of PROPESA's operations can be visualized in Graph No.1.



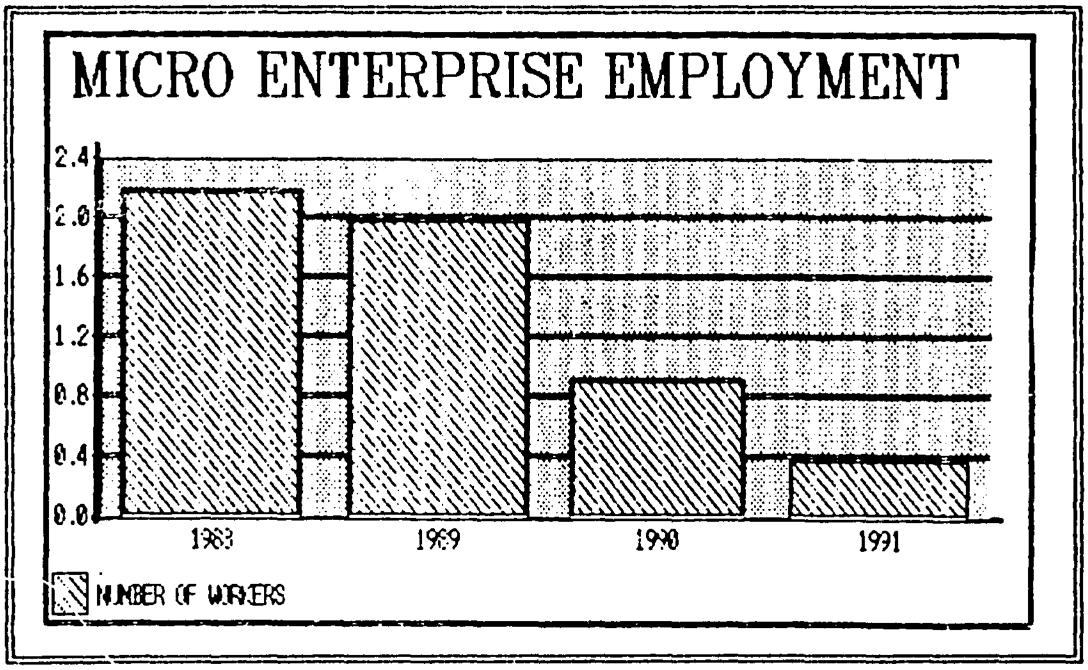
GRAPH No.1

The target group's operational results, before support, decreased from an average of US$704 in 1988 to US$494 in 1991. This reduction reflects smaller scale predominance, since the return on assets among micro enterprises entering the Program rose from 13% in 1988 to 24% in 1991 (see Graph No.2).

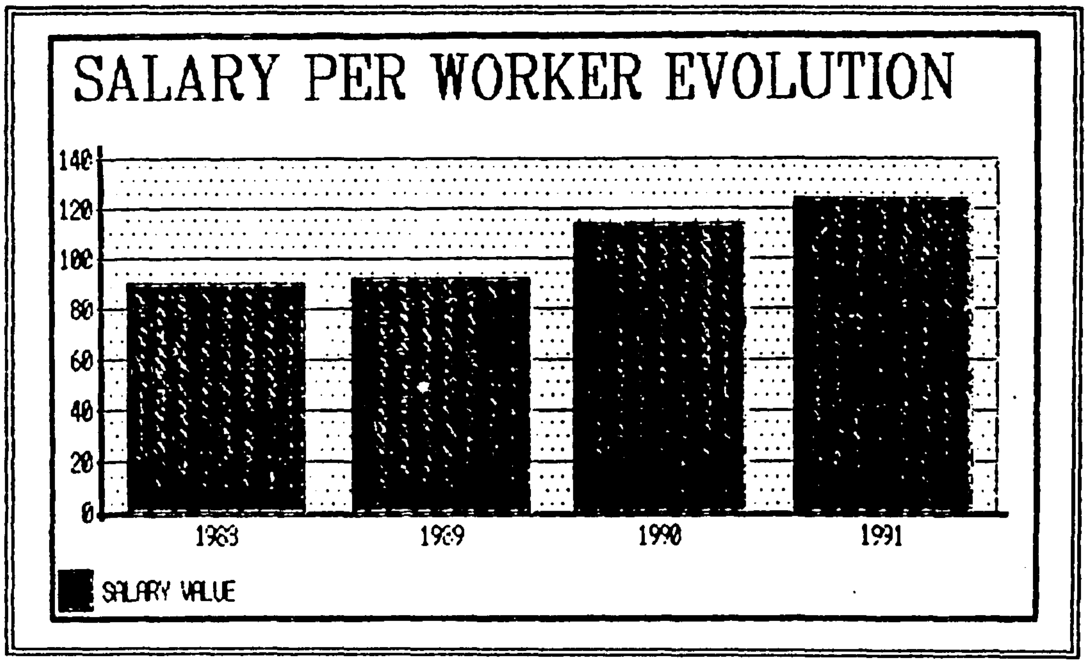


GRAPH No.2

As the Program assists further smaller businesses throughout the years, the number of employees, per selected firm, also decreases (see Graph No.3), and so does the wage bill, but the salary paid per hired worker increases (see Graph No.4).

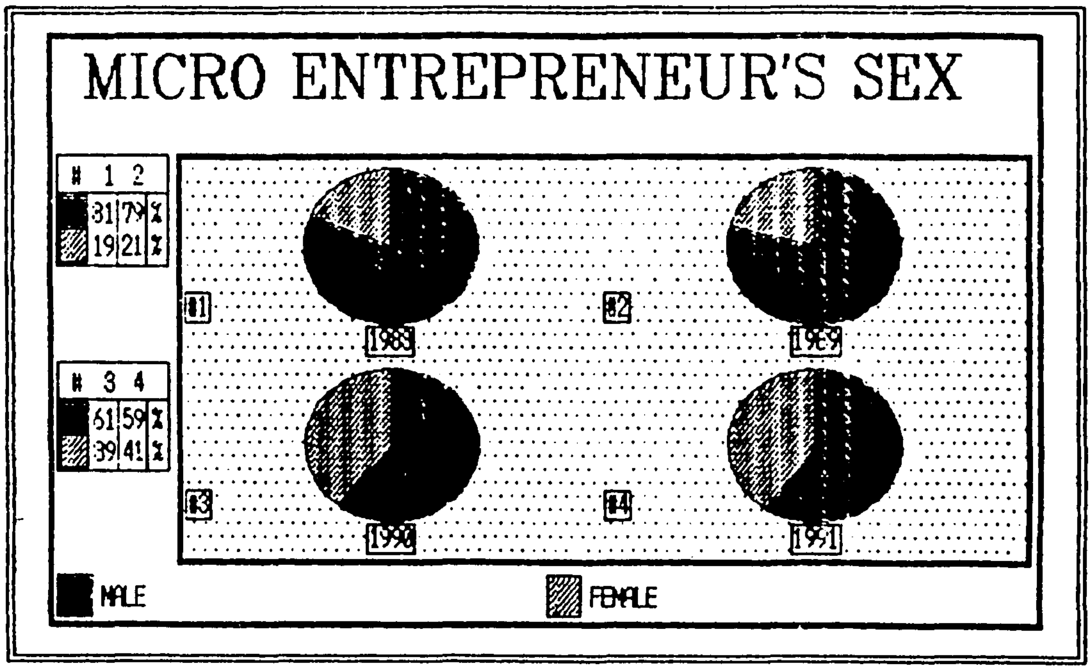


GRAPH No.3



GRAPH No.4

The average micro entrepreneur that enters PROPESA's credit and tecnical assistance program is 40 years old, male, married, main support of the family group and has an incomplete high school educational level. Throughout PROPESA's years of operation the average age of selected micro entrepreneurs has a slight trend to increase. This is not the case of entrepreneurs' sex participation: Graph No.5 shows that the female entrepreneur participation in the Program increases along time, starting with a 19% share in 1988 and reaching a 41% participation in 1991. The maritial status of the participants in the program is mainly married (86%), attribute that does not change significantly throughout the period of operation. In relation to the micro entrepreneur's position in the household, the majority of the participants are the main support of the family group, although the proportion of participants that are not the main support of the family has increased moderatedly with time, from 15% in 1988 to 20% in 1991. The last trait to be examined is the micro entrepreneur's educational level. This variable tends to maintain the same value throughout time, namely, an incomplete high school level.



GRAPH No.5

B. NON SUPPORTED MICRO ENTERPRISES' EVOLUTION.

The evidence obtained from the control group shows no statistically significant progress for unsupported firms and even exhibits some slight deterioration. There are no significant changes in their financial indicators, employment level, wagebill and wage rates and these results do not differ if the data is broken down by sex, maritial status, household position, sector of economic activity or educational level.

The control group is indeed a sample of micro enterprises selected from within the set of firms which originally would have received PROPESA's support and in which, for some unknown reason, their micro entrepreneurs were not interested in entering the Program. In order to determine their evolution throughout time without recieving any support from the Program, these micro entrepreneurs were reinterviewed. There was a risk of receiving biased answers from non supported entrepreneurs, if they were reinterviewed by PROPESA personnel. To avoid this danger ECYES engineers were the interviewers. In order to assure that both samples, the control group and PROPESA's supported micro enterprises, stem from a same population different indicators of enterprise traits were compared between both groups. The variables taken into consideration were total assets, gross value added and employment levels. No statistically significant differences were observed between both groups. It can be concluded that the control group and PROPESA's supported micro enterprises originate from the same population.

Table No.1 shows that non supported businesses' current, fixed and total assets grow throughout the period under analysis (1988-1991), but their growth is not statistically significant.

CONTROL GROUP EVOLUTION		
I T E M :	AVERAGE VALUE	
	INITIAL	FINAL
CURRENT ASSETS	1,491.08	1,847.97
FIXED ASSETS	4,937.24	5,039.82
TOTAL ASSETS	6,428.32	6,887.78
VALUE ADDED	710.53	594.55
RETURN ON ASSETS	31.00%	12.52%
NUMBER OF EMPLOYEES	1.35	1.34
WAGEBILL VALUE	176.43	167.82
SALARY LEVEL	126.18	120.19

TABLE No.1

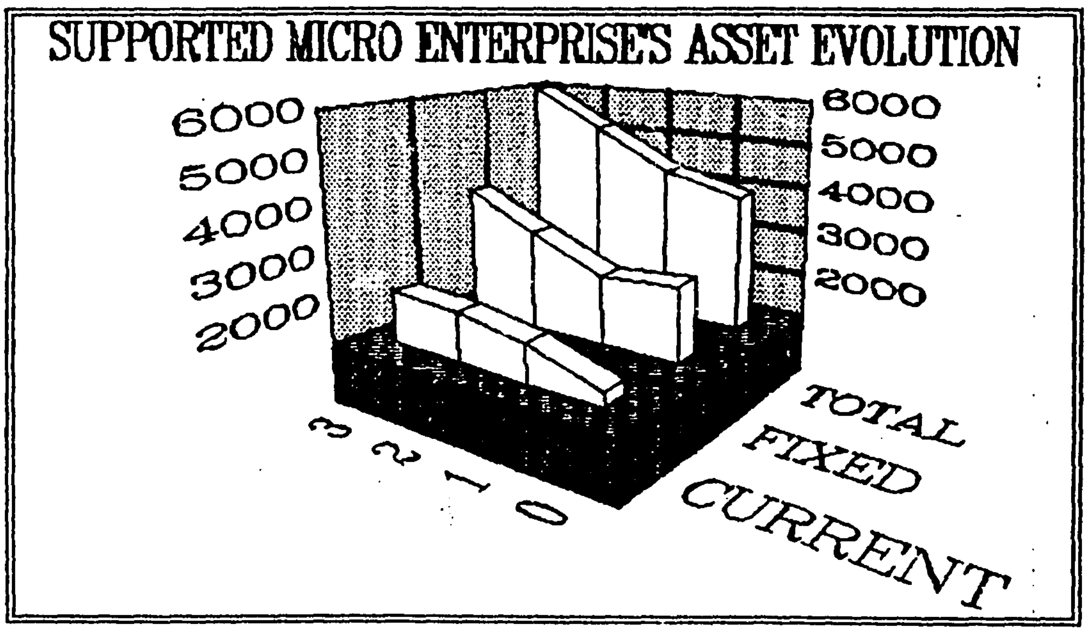
Gross value added decreases on the average among non supported micro enterprises, although this deterioration in their operational results is not statistically significant (see Table No.1). The lower average value observed in the gross value added accounts to the fact that many reinterviewed micro entrepreneurs had gone bankrup during the period examined, and as such their operational results were zero.

The return on assets of the non assisted micro enterprises decreases, statistically significanly, throughout the years of under analysis. This fact can be appreciated in Table No.1.

In relation to the employment variables there does not seem to be any changes in the situation. Slight deteriorations can be observed in the employment level, the wagebill value and wage rate value, but non of these changes are statistically significant (see Table No.1).

C. PROPESA'S EFFECT ON SUPPORTED MICRO ENTERPRISES.

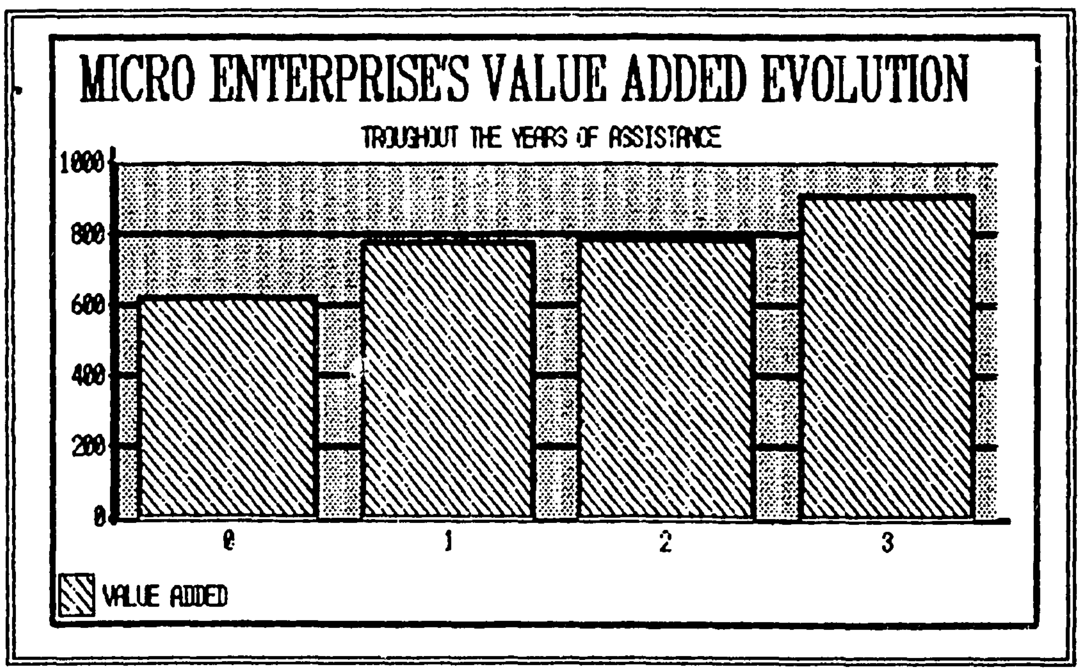
Graph No.6 shows that supported businesses' assets grow remarkably throughout the years of assistance. The increase in the micro enterprises' total assets is of 10% during the first year of assistance and of 32% and 52% during the second and third year of assistance with respect to the original asset level (all three statistically highly significant).



GRAPH No.6

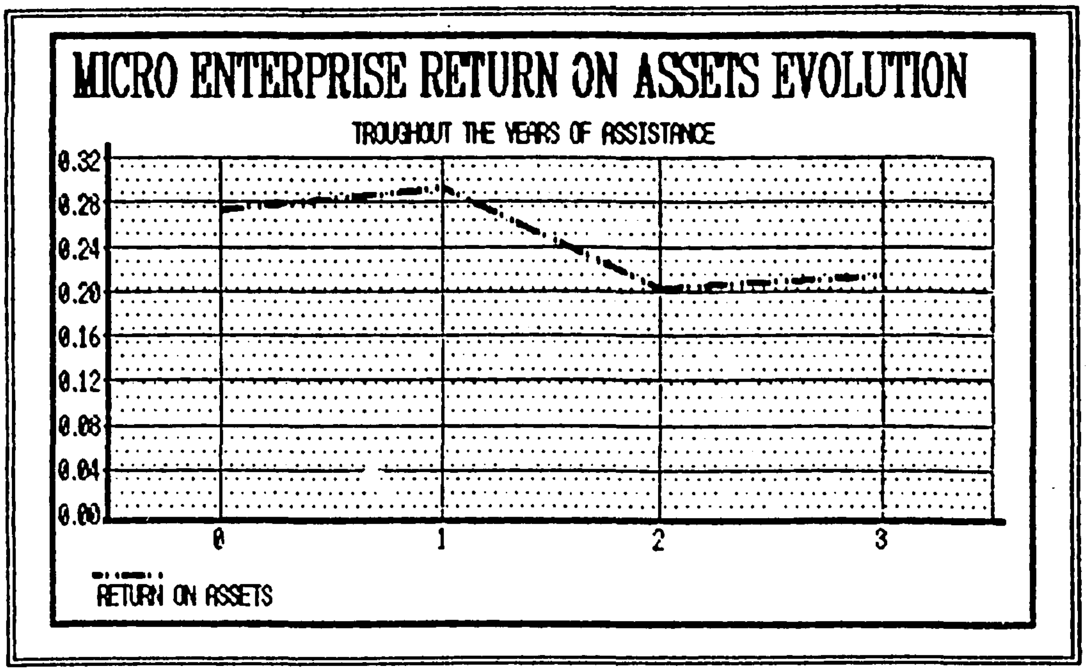
Asset increments concentrate in the second year of Program support (all three differences are significant). In particular, current assets grow fastest initially, as most micro enterprises usually are severely short of "working capital"; this component levels off rapidly, registering no significant increases in the second and third year of support. Fixed assets, on the contrary, though decreasing initally, increase substancially (-3%, 25% and 22% per annum) throughout the last two years of participation, having statistically significant rates for the latter. Therefore, it can be stated with high confidence that PROFESA promotes and succeeds in leading supported micro entrepreneurs to adequatedly expand their productive capacity.

Gross value added increases substantially, by 25% (and highly significantly) during the first year of support; it keeps growing thereafter (not statiscally significant between years, but highly significantly with respect to the diagnosis right before support) reaching a level 45% higher by the end of the third year of participation (see Graph No.7). This fact evidences that PROFESA not only manages to stimulate and help increasing productive capacity but also helps to raise the gross income formation among supported firms.



GRAPH No.7

On the other hand, the return on assets of the assisted micro enterprises decreases throughout the years of assistance. This fact can be appreciated in Graph No.8. As assets increase at a higher rate than gross value added throughout the years of support, the return on assets rates decrease, from an original non supported level of 27% down to 21%. Such a decrease is not surprising: it is in harmony with so large increments in total assets and the principle of decreasing marginal productivity (well accounted in theory and empirical evidence).



GRAPH No.8

The gross value added composition can be appreciated in Graph No.9. Although gross value added increases enormously throughout the years of assistance, it's composition changes slightly. It is worth mentioning that the proportion of gross value added accruing to accountants is in fact part of the wagebill; though it is very neglegible, it has been shown separatedly in order to illustrate supported micro enterprises' modernization. The micro entrepreneur tends to reinvest more in his business as the support from PROPESA is extended: the net profit reinvested increases in proportion while the micro entrepreneur's profit withdrawal ("dividends") decreases in proportion and the other components of the value added maintain their shares. Such small changes are supported only by point estimates of the respective proportions.

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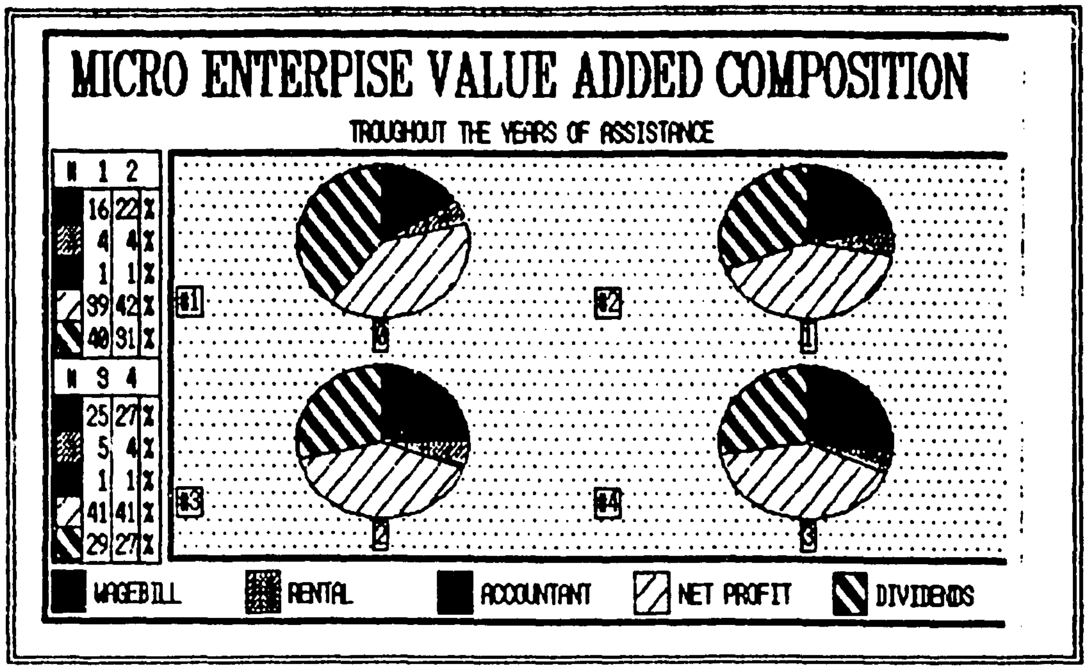
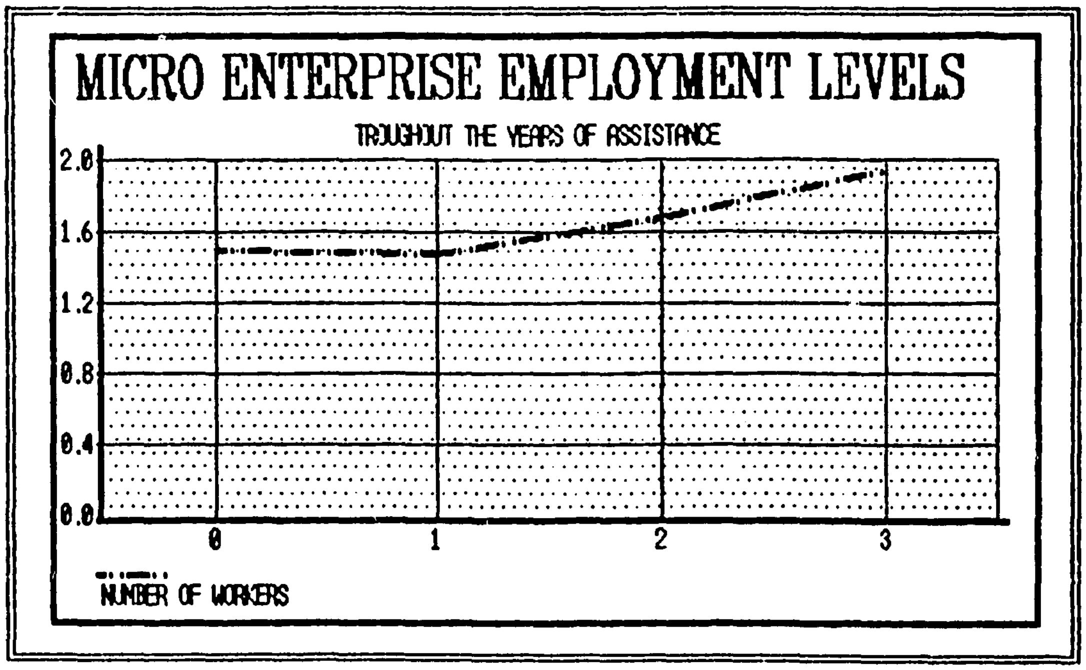


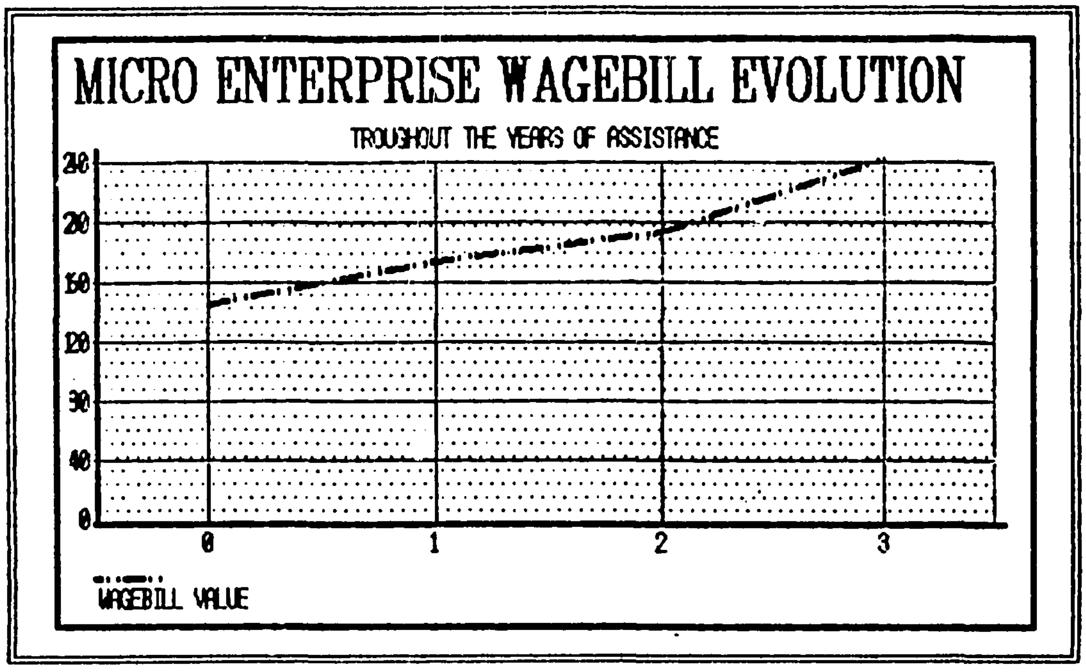
GRAPH No.9



GRAPH No.10

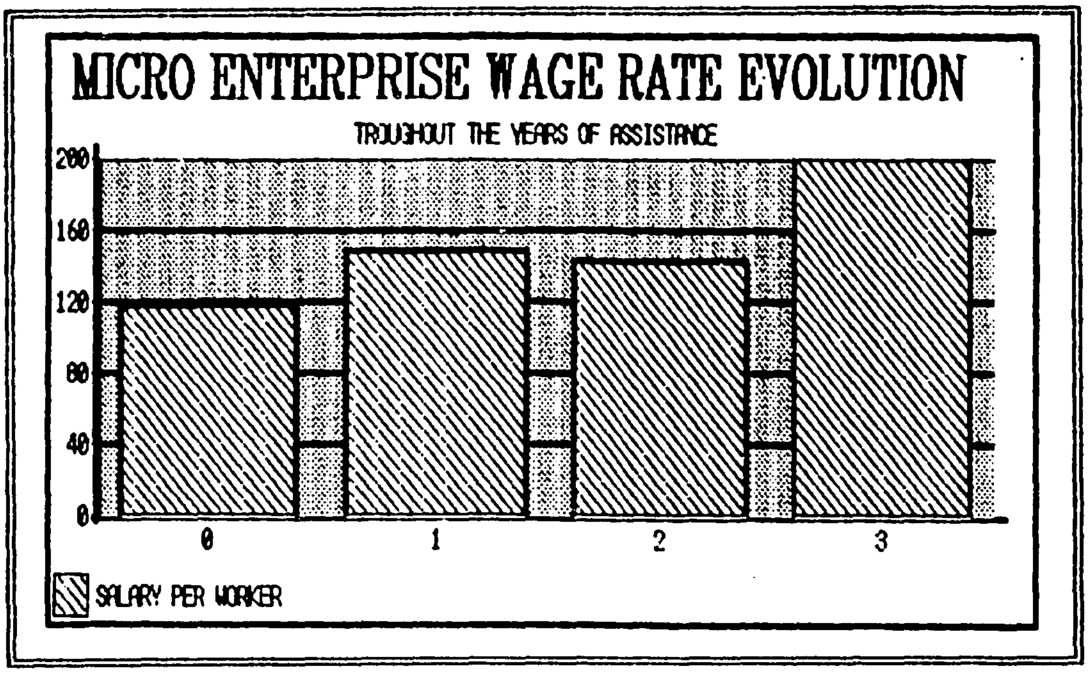
The initial number of employees among micro enterprises, before they become Program participants, is on the average 1.48 (see Graph No.10); by the third year of support this average has grown up to 1.92 (statistically highly significant). In fact, this level has changed -1% in the first year of support, 13% in the second year of support and 16% in the third year of support. Therefore, the bulk and significant portion of the employment effect materializes in the third year of support. The evidence shows, significantly, that the size of supported microenterprises grows not only in terms of assets and gross value added (production and sales) but also in terms of employment. In other words, the Program effects on supported firms are increases in the productive capacity and in the current income formation jointly with creation of additional employment.

Not all of the increment in gross value added accrues to the participant entrepreneur. Indeed workers also share part of the Program induced fruits as the percentage change in the wagebill value is greater than the percentage change in the number of employees. Graph No.11 illustrates that the wagebill, a component of value added, increases by 19% in the first year of support, by 12% in the second and by 26% in the third year of support (staticticaIly significant accumulated differences).

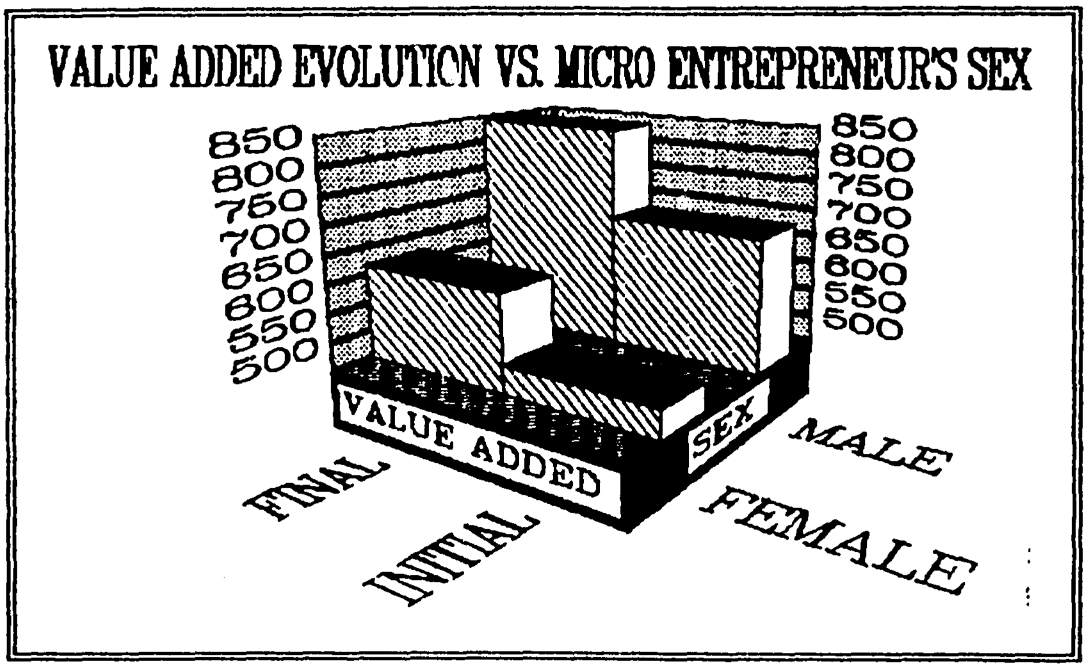


GRAPH No.11

As supported micro enterprises expand their business size and, among some other things, hire additional workers, the wage rate increases very substantially right from the beginning (see Graph No.12). From US$118, the average salary before support grows, statistically highly significantly, by 26% in the first year of support (year 1989); it decreases slightly (but not significantly) by 4% in the second year (1990, which comprises the main time span of the Chilean 1990-1991 mini recession); and increases by 40% in the third year (1991).



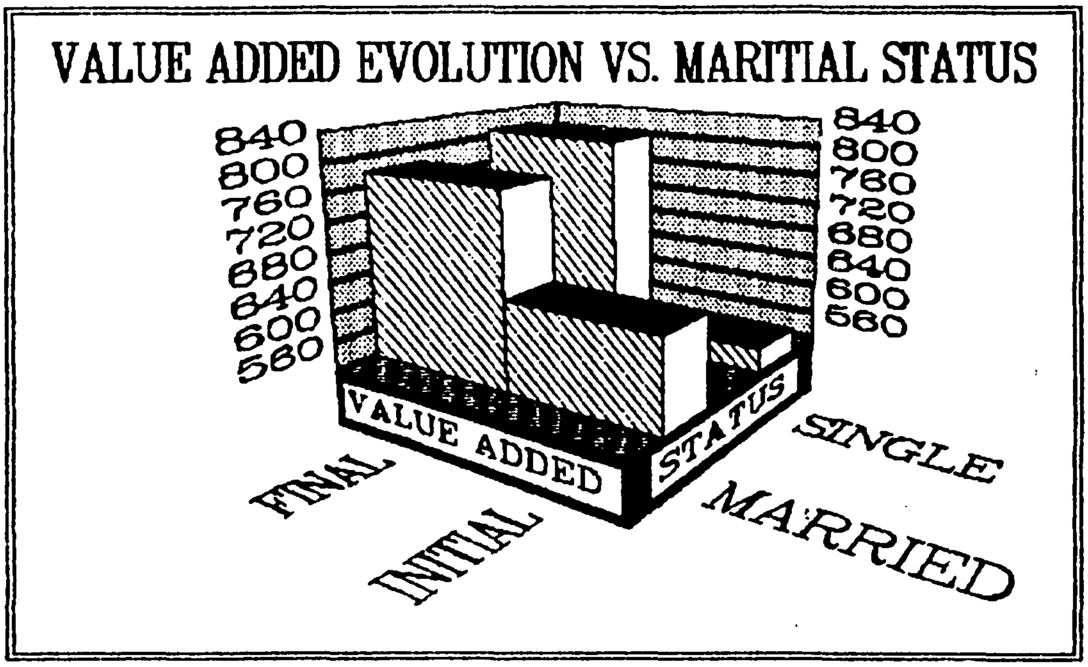
GRAPH No. 12



GRAPH No. 13

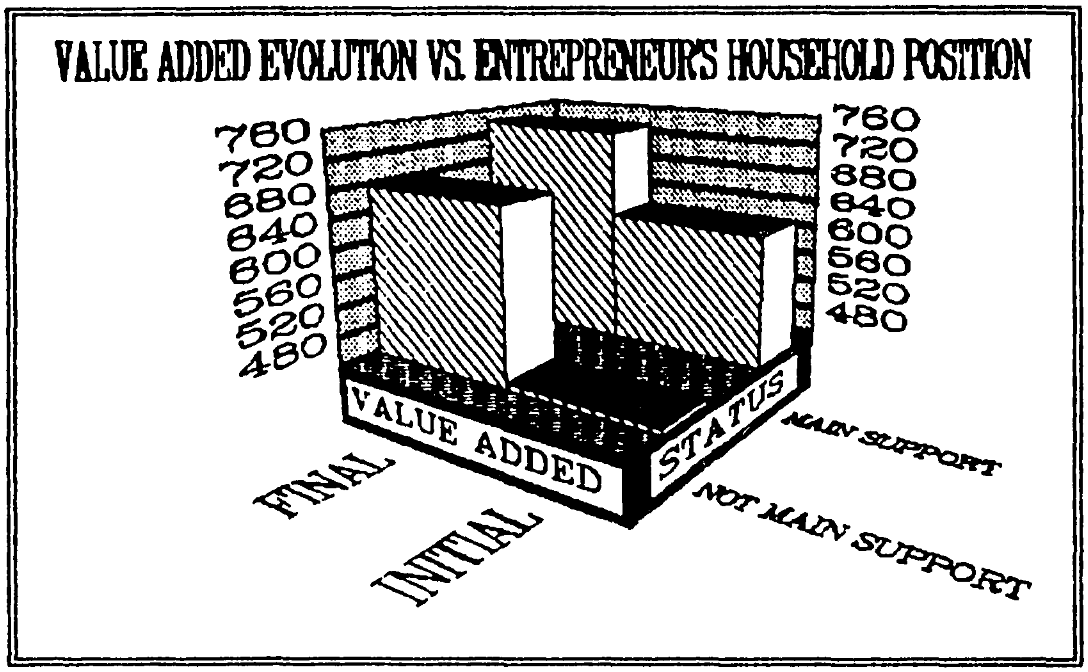
Gross value added response of supported micro firms, broken down by the entrepreneur's sex, is illustrated in Graph 13. Increases for males, 23%, are similar to the increases for females, 24%. Both levels of gross value added, initial and final, are substantially and statistically significantly larger for males. Therefore, it is seems more effective and, from the viewpoint of national resource allocation, more efficient to support male micro businessmen. This evidence suggests the existence of a national trade off between efficient allocation of producitive resources and equity in income and wealth distribution by sex. In spite of this, PROPESA's attention increasingly shifts toward female micro entrepreneurs.

PROPESA's typical participant is married. Gross value added is significantly more responsive to Program support if the entrepreneur is single (see Graph No.14). Differences through stages are significant whatever the marital status; however, being significant the initial difference through marital status, the final is not significant. These results do not impair, therefore, PROPESA's preference for married participants.



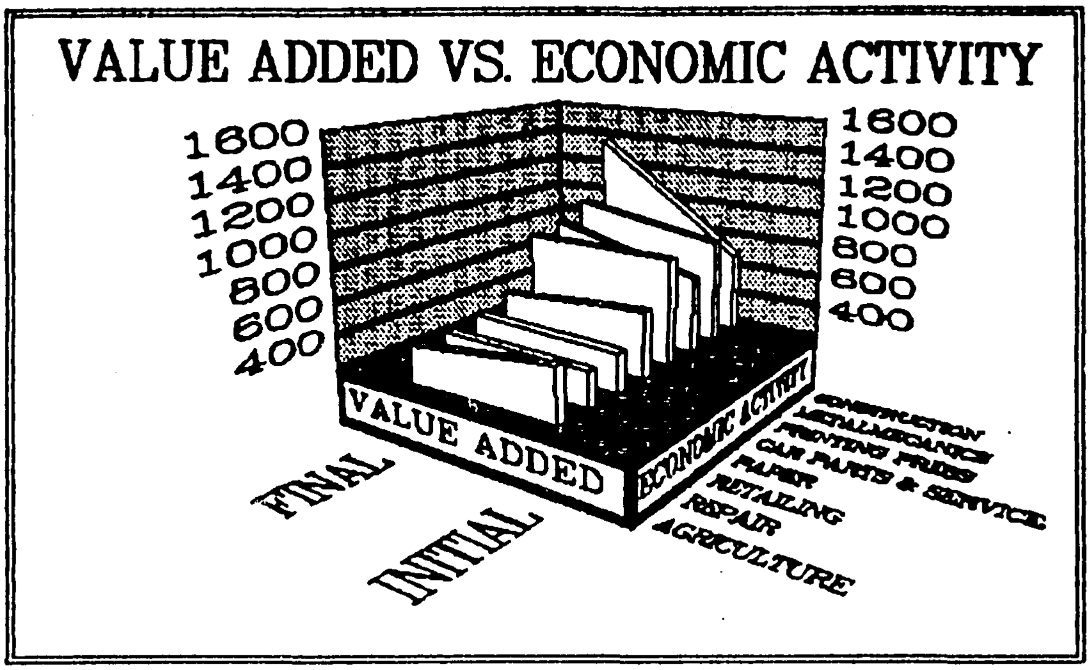
GRAPH No.14

The Program attends mainly those entrepreneurs who are main support for their family. Graph No.15 illustrates that gross value added has larger changes in its magnitude if the entrepreneur is not the main support for his family (51% versus 19%), but it reaches higher level if he is the main support. The differences in gross value added levels through stages are highly significant; through household position, the initial levels are significantly different, but the final ones are not. Same as in the case of marital status, the evidence does not reject PROPESA's preference for entrepreneurs who are main support of the family.

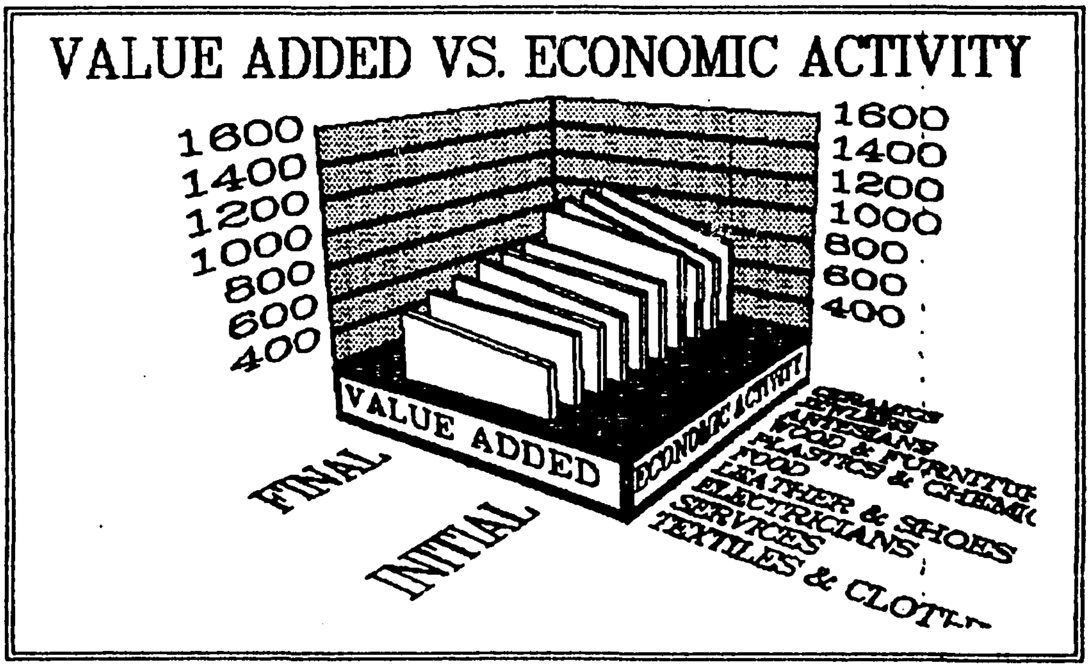


GRAPH No.15

The Program mainly assists micro enterprises whose economic activities are ceramics, food, retailing, leather & shoes, wood & furniture, metalmechanics, jewlery and textiles & clothes. Graphs No.16 and No.17 illustrate point estimates of the value added changes due to PROPESA's assistance in relation with the micro enterprises' economic activities. The final levels for gross value added are significantly larger than initial ones in sectors related to textiles & clothes, jewlers and leather & shoes; and are not significantly smaller (although the point estimates are so) than initial value added in agriculture and paper & cardboard; these apparently decaying business lines have very few observations, in fact they are, respectively, 1 and 3. Metalmechanics, where there are quite numerous (42) final observations show non significant change in gross value added; and retailing, with 51 final observations, is a subsector that shows very small gross value added and no significant change whatsoever.

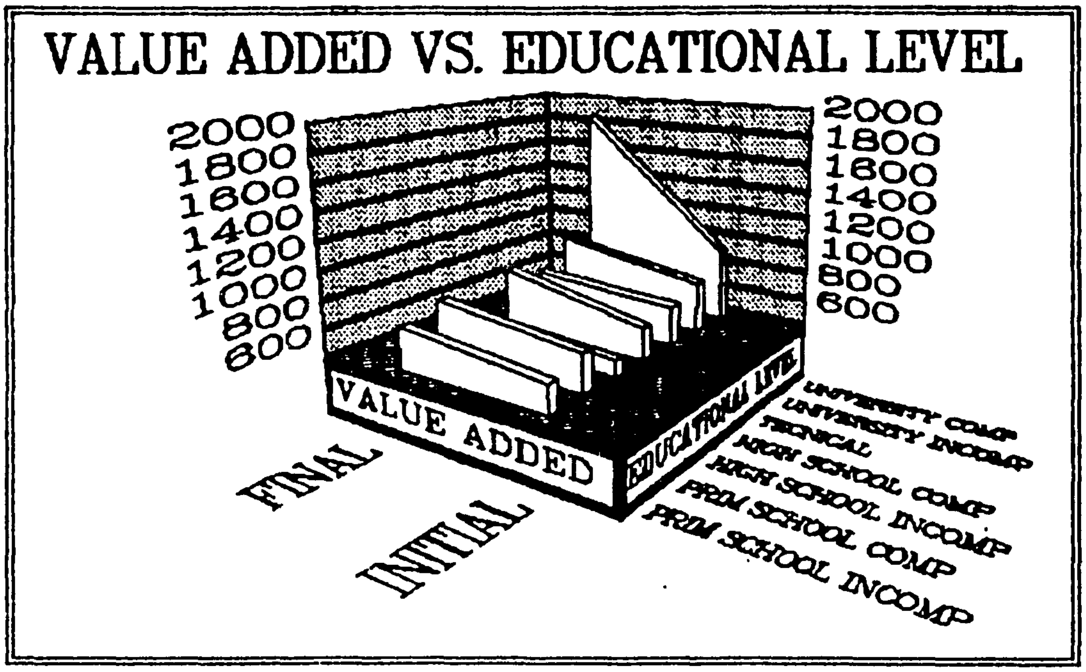


GRAPH No.16



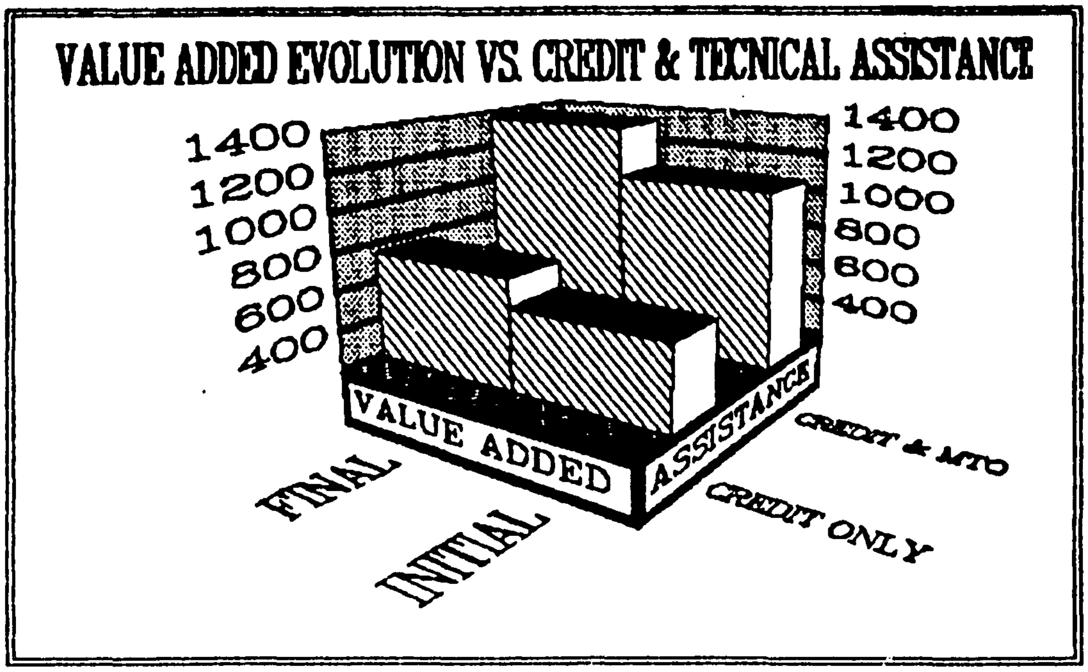
GRAPH No.17

PROFESA's average micro entrepreneur has an incomplete high school educational level. Graph No.18 relates the behaviour of gross value added when plotted against the micro entrepreneur's educational level. It can be appreciated, broadly, that according to point estimates higher educational levels match with larger value added among the Program's participants. It is PROPESA's merit to have average micro entrepreneurs with relatively high schooling while the typical micro entreprenuer does not reach such high educational standards.



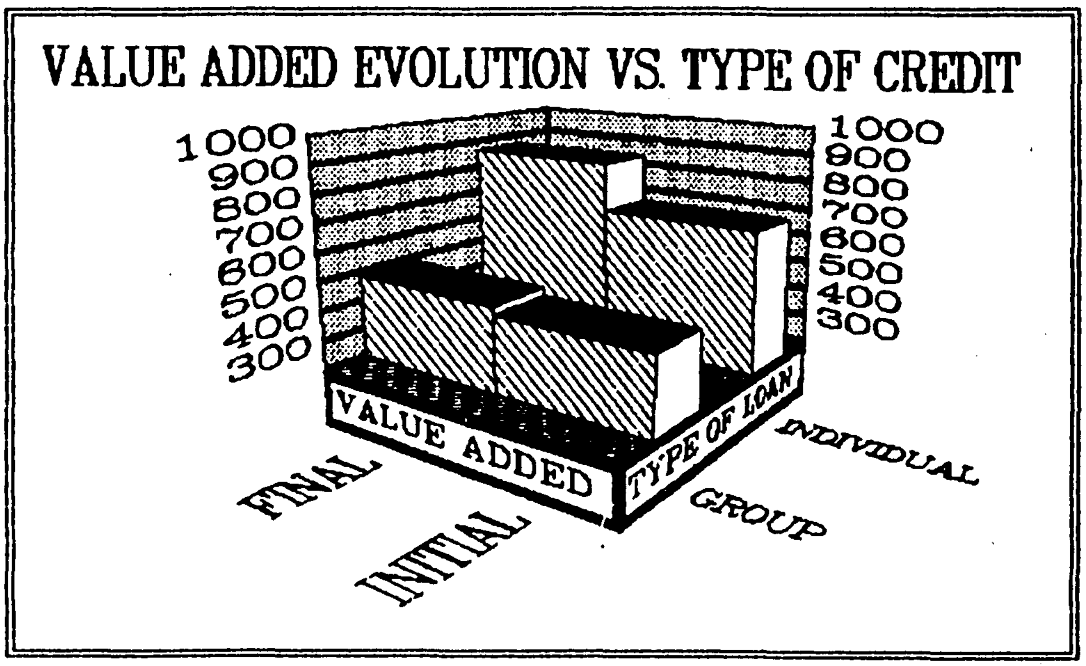
GRAPH No.18

Graph No.19 pictures gross value added levels and the type of support provided by PROPESA, that is to say, if the micro enterprise has only received credit assistance or has received credit and management technical orientation (MTO). The effect on value added, according to point estimates, is the same for micro enterprises that receive both credit and management technical orientation or only credit, namely, 23%. However, there are significant differences in the average of gross value added between participants receiving credit cum managerial orientation and those receiving mere credit, both in the initial and final stage of observations. There is scarcity of observations among micro entrepreneurs that received credit and managerial technical orientation to draw any conclusions.



GRAPH No.19

PROFESA gives financial assistance to micro enterprises through two types of credits, idividual loans and solidary group loans. The individual loan consists on a credit given to one particular micro entrepreneur, while the solidary group loans are



GRAPH No.20

loans given to a group of micro entrepreneurs in which each is responsible of each others payments. The second type of loans have lower costs for PROPESA in terms of administration costs and portfolio recovery. As can be appreciated in Graph No.20 individual loans show a substancial increase in income generated (gross value added) upon receiveing the Program's support. The increase is statistically highly significant. This is not the case within the set of solidary group loans, where the point estimate of the mean increases, but the change is not statistically significant. Furthermore, at the starting point, micro enterprises within each set do not differ, statistically, in terms of gross value added. Whereas, after receiving support, the individual loans set reach significantly larger gross value levels than the solidary group set.

In the preceeding paragraphs the response of gross value added (among participants) with respect to different supposedly relevant factors was examined one by one. It is important to assess how relevant are all of them together and which of them might not add much explanation over and above what others do. For these purposes a multiple regression analysis was done.

The examined model relates a linear regression between the changes in gross value added (Y_1) to years of entrepreneur's experience (X_1), years of age of the micro enterprise (X_2), number of days of support (X_3), change in the number of employees (X_4), change in the total assets (X_5), sex (X_6), maritial status (X_7), household position (X_8), type of support --credit only versus credit & management technical orientation-- (X_9), type of credit --solidary group loan versus individual loan-- (X_{10}), entrepreneur's educational level --assuming the values 1 for incomplete basic , 2 for complete basic, 3 for incomplete high, 4 for complete high, 5 for technical, 6 for incomplete univesity and 7 for complete university education-- (X_{11}), productive sector --all sectors except for two, namely, retailing and services-- (X_{12}) and retailing sector (X_{13}). This regression was run with 603 observations.

The results (fully detailed in the expanded report) showed fairly good outcomes: reasonable fitness (given that the first differences were regressed), main explanatory variables' coefficients as expected. There is consistency with the results of a productive function, increases in total assets (capital) or in the number of employees (labour) have a positive relation with the change in gross value added. There is a positive relation between the change in gross value added and the time span of the support given by PROPESA. As the educational level increases, the change in gross value added also increases. The change in gross value added is greater for male, single and inidividual loan participants who only receive credit as the Program's type of support. The coefficient for the micro enterprise age is not statiscally significant and it is negative which indicates that the older the micro enterprise the smaller the change in gross value added, the same is applicable to the micro entrepreneur's experience. Therefore, the results favour formal education rather than informal education (mere experience as worker).

D. FINANCIAL EVALUATION OF PROPESA.

In Appendix I are presented the detailed cash inflows and cash outflows for the 20 years projected activities. These projections suggest that PROPESA faces no source for selffinancing, because starting on the year 1992 the Program loses working capital (the final cash balance is negative). Consequently, the net present value is less than zero and the Program is not profitable.

It is important to remark that the unableness to self finance operating costs does not stem from managerial inefficiency. In fact, PROPESA's average cost per supported microenterprise falls from US$401, when it attends 71 firms, down to a minimun of US$90 if it attends 17,174 businesses per year and rises thereafter , smoothly, up to US$100 if support reaches 19,727 micro enterprises per annum. This is a typical average cost curve as seen in Management and Economics textbooks. Further interesting, the average cost for 1993, namely, US$110 seems to be well below estimates for overseas programs (MEYER, 1991, p. 17), where such levels (not significantly different from statistical viewpoints) rank in the order of US$ 575 up to US$2,549. Comparative cost efficiency of PROPESA might be larger because Chilean currency overvaluation leads to overestimate PROPESA's operating costs when expressed in US currency.

Non profitability or unableness to selffinance its activites stems from two facts:

(1) According to current Chilean legislation PROPESA cannot raise its own lending interest rate because it would exceed the maximun conventional interest rate set by law. In fact this upper limit (based on a 50% increase over the average rate charged by commercial banks in the previous semester) is too low, because it is heavily influenced by the rates charged on lending operations belonging to an entirely different financial market, namely, the market of less risky

customers who compose the bulk of commercial banks clientele. This is why PROPESA's spread is insufficient to solve operating expenses.

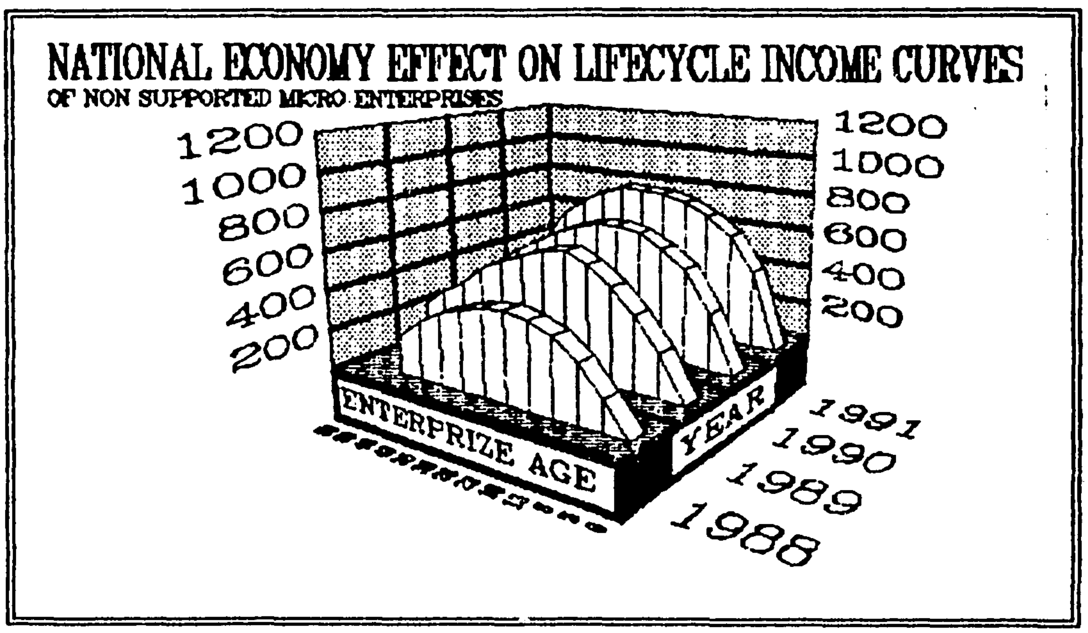
(2) If financial costs (interest payments to commercial banks) were excluded from operating costs, PROPESA would indeed self finance its activities. Therefore, a source of insufficient self financing capacity is simply insufficiency in the revolving loanable fund belonging to PROPESA. In fact an adequate grant would turn positive all of the cash flow except for 1989.

E. ECONOMIC EVALUATION OF PROPESA.

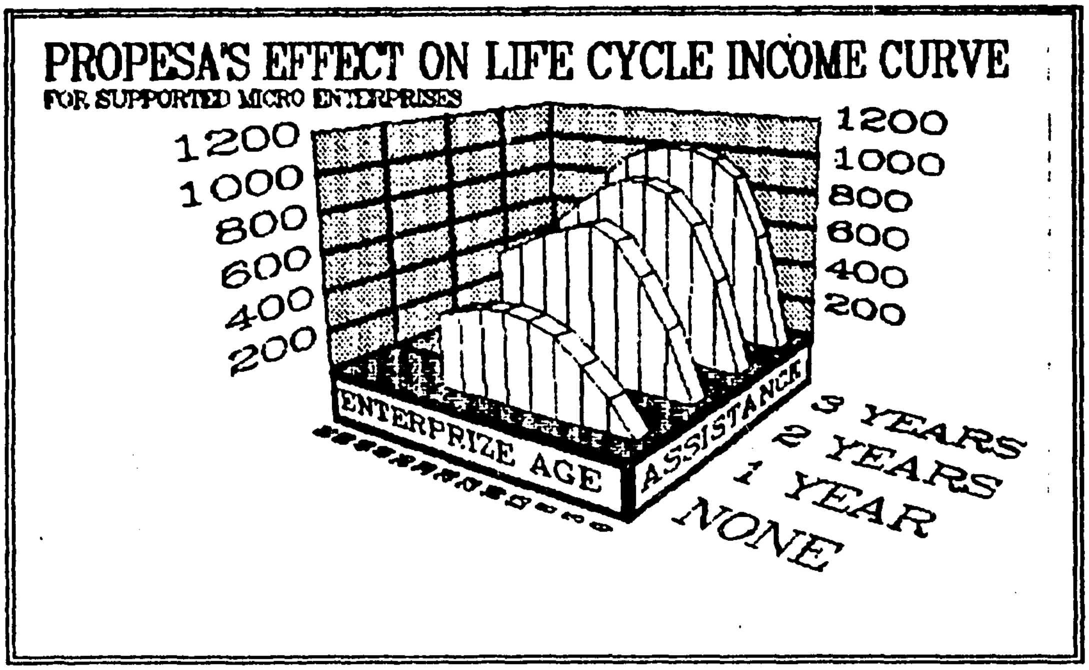
E.1. PROGRAM EFFECTIVENESS.

In order to determine the Program's effectiveness, the progress observed in the supported micro enterprises must be checked with the general economic prosperity. One way to accomplish this task is to compare achievement among supported and non supported micro enterprises. This section concentrates on this matter.

The life cycle income curves for supported and for non attended micro enterprises were estimated (on near simple regression). See Graphs No.21 and No.22.

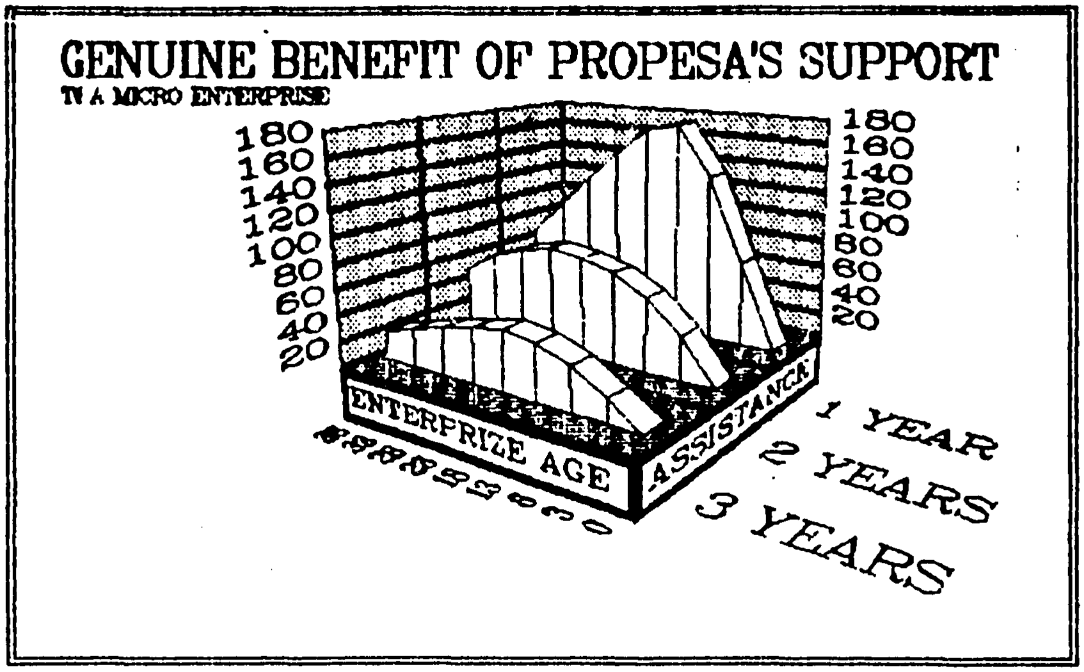


GRAPH No.21



GRAPH No.22

Graph No.21 illustrates the plot for the first hypothesis set up in the evaluation methodology: non attended, or micro enterprises in general, have a lyfe cycle income conforming an inverted U shaped curve. It also makes it clear that the income generated by such mini businesses increases and follows the general economic progress in the economy. Graph No.22 pictures the life cycle income curve for microenterprises supported by PROPESA: it clearly shows larger increases in gross value added since the very first year of attention, and substantial increases thereafter up to the third year (last observed) of attention. This fact provides backing for the second hypothesis established in the evaluation methodology, namely, that PROPESA's action shifts the life cycle income curves of supported microenterprises upwards. Accordingly, it is possible to plot (Graph No.23) the residual increases in gross value added, namely those over and above the shift detected for unattended microenterprises, and so illustrate the nature of genuine benefits generated by PROPESA. Graph No.23 pictures the substantial residual increase only attributable to PROPESA's efectiveness, fruit that further grows as the support is extended over two and three years.



GRAPH No.23

The evidence presented confirms a tremendous effectiveness of the Program. The observations on gross value added among non attended and among supported microenterprises show that PROPESA's action increases substantially the gross income generated among supported microenterprises, whatever the business age. In other words, the Program effect considerably pushes upwards the life cycle income curve. Further, the results suggest that those effects extend the economic life or survival of supported micro enterprises, since the proxy indicator for expected life span of non supported micro enterprises is 19 years while for supported micro enterprises it rises to 28 years of age.

E.2. PROGRAM EFFICIENCY.

The estimations of the net global genuine benefit and factor cost outlays incurred in order to generate those benefits, presented in Appendix II, evidence that the Program is highly efficient. The cash flow resulting from the net global genuine benefit is moderatedly negative just in the two beginning years of the Program, 1988 and 1989; from then on, it is always positive and grows at a very high annual compounded rate. It grows from the 1990 level up to a more than a hundredfold level in the year 2007.

The implicit internal rate of return results in 224.5% per year, an expression of the above mentioned speed of growth and an indication of remarkably high efficiency. It is worth recalling that rates of return as high as that one have been recorded only for very few programs, overseas, mainly in Brazil (D'ZMURA & KILBY). Methodologically it is rather venturous to make international comparisons, but it should be stressed that PROPESA's achievement ranks among the best ever recorded.

IV. CONCLUSIONS.

In relation to PROPESA's target group, as the Program's years of operation have gone by, more efficient micro enterprises have been selected for support, if their financial situation is taken into consideration.

The evidence obtained from the control group shows no statistically significant progress for unsupported firms and even exhibits some slight deterioration.

PROPESA's effect on the micro enterprises it supports and has assisted, throughout the years, is a notorious improvement in these businesses' situation. Their financial situation after receiving PROPESA's help is superior to their original level; the same is applicable to their operational results. PROPESA's effect on the value added is amazingly favourable. The value added increases on average in 23% among assisted micro enterprises.

There is no data available to detect what happened, after two or three years, with gross value added of firms that received support for only one or two years. Therefore, there is no basis, up to now, to assess whether it is more efficient to shorten the time span of the support. So, up to now, all that is known, in this respect, is that support extended up to three years yields very substantial favourable results.

The employment levels are increased ano the salary per worker also raised throughout time. PROPESA's effect on the micro enterprises' employment levels and wage rate levels is highly substantial. Not only does the Program create new employment, but it also raises the employees income. The largest part of the employment effect takes place during the third year of assistance, in which the employment level rises in 30% while the wage rate also increases.

PROPESA successfully manages to well select micro entrepreneurs for support, picking up, among the humblests, precisely those with good schooling and, so, good potential for progress. Contrarily to usual expectations and assertions, the effectiveness of the Program seems stronger when the support envolves both credit and managerial technical assistance (training and entrepreneurial advise) instead of mere credit support.

On financial terms the Program is not profitable, as stated in Chapter III, because PROPESA's lending rate is too low. However, it cannot be raised since it already reaches the upper limit (on interest rates) set by law. The resulting small spread for PROPESA is not sufficent to cover it's operational costs (despite these are notoriously low relative to other programs of this nature that operate overseas). However, a very important remark must be mentioned: PROPESA has the capability to finance all of it's operational costs if the financial costs it currently incurs on are excluded (the interest paid to the commercial banks for the loans which PROPESA relends to the micro enterprises). The key importance of this fact is that, if PROPESA had a net worth large enough to finance it's high growth rate without having to depend on commercial banks, the Program would be self sufficient in financial terms.

In regard to the financial evaluation which shows no way for self financing, the following comments should be stressed:

(1) PROPESA is extremely efficient in financial terms if compared to other programs of this nature.

(2) The main reason for the operational dependence is the legal ceiling on the lending rate. This ceiling is inadequate because it is highly weighted by the rates of comercial banks, who service a market substantially less risky than the sector of microenterprises. According to the present study a spread of 19.69% would turn PROPESA self dependent.

(3) A larger own revolving fund would exempt PROPESA from bank borrowing and thus reduce its operational costs, making the way for self dependence.

The life cycle income curve of microenteprises supported by PROPESA is way up distant from the curve of non attended firms. This result shows a strong effectiveness in the Program with respect to the so called income effect. This effect is not instantaneous. It materializes from the very first year of support, but it keeps on fructifying as the support is extended to two and three years. It is believed that something similar takes place among microenterprises supported for only one year but not followed up thereafter. There is enough and strong evidence, therefore, to state that PROPESA operates a very effective support program.

PROPESA's factor cost, necessary to generate the Program genuine global benefits, is quite small, despite many components corresponding to grants in kind were measured and added to cash outlays. It is remarkable how cheap was the setting up and the setting in motion of the Program, a conspicuous merit for the management of PROPESA. It must be emphasized that, everytime a conjecture was made or a controversial solution for a methodological problem was adopted, it was done so trying to underestimate the resulting internal rate of return for the Program. In fact, only the first two years of operation give place to negative net global genuine benefits, which numerically are quite low relative to the large and fast increasing flows in subsequent years. Therefore, the resulting internal rate of return for the Program is unusually and remarkably high, namely, 224.5% per year.

Workers who resign from supported microenterprises to set up their own business, do so when, on the average, they have ten years of experience. It was assumed that 16% of workers with that experience in fact set up their own firm. On that basis was measured the "additions to the stock of microentrepreneurs effect" of supported firms or "entrepreneurial expansion effect". The referred lag and conservative proportion of this effect turned out to be quite negligible in its influence on the magnitud of the internal rate of return for the Program.

In the 224.5% estimate of the internal rate of return for the Program is implicit a growth rate in the credit portfolio adopted by PROPESA. This latter rate is optimistic. It is suggested to choose a rate rather declining over time, because many large programs will be competing with PROPESA within the market for elite micro entrepreneurs that all ONGs wish to support. Such an adjustment will punish heavier the remote years of the net global cash benefit flow, so it might not diminish significantly the Program internal rate of return.

It is hard to believe that, while the Program expands its scope in Santiago and other regions, its productivity will remain constant as implicitly assummed in PROPESA's own projections. On the contrary, it is more realistic to admit that average variable costs will increase over time. It is proposed a moderate but exponencial increase. This adjustment will also punish heavierly the remote years in the cash flow, so it will moderately reduce the internal rate of return.

It is good to emphasize that the unusually high internal rate of return here estimated reflects (a) the low operational costs of PROFESA and (b) its tremendously high effectiveness on supported microenterprises.

APPENDIX I. CASH FLOWS.

PARAMETERS IMPLICIT IN THE CASH FLOWS.

PARAMETERS	VALUE	
PORTFOLIO LOSSES	2.00%	
DIAGNOSIS CHARGE	1.50%	ON LOAN
CLIENTS IN LEVEL 1 COURSE	15.00%	OF LOAN CLIENTS
CLIENTS IN LEVEL 2 COURSE	50.00%	LEVEL 1
CLIENTS IN LEVEL 3 COURSE	50.00%	LEVEL 2
AVERAGE CREDIT MATURITY	4	MONTHS
VALUE OF ONE COURSE	59.35	US$
LENDING INTEREST RATE	15.47%	
AVERAGE LOAN SIZE	500	US$
BORROWING INTEREST RATE	10.31%	
PORTFOLIO GROWTH RATE	2.00%	

PORTFOLIO EXPANSION CHART

PROPESA'S OUTSTANDING PORTFOLIO CLASIFIES IN:

0 TO 1 YEAR SUPPORT	:	61%
1 TO 2 YEARS SUPPORT	:	28%
2 TO 3 YEARS SUPPORT	:	11%

YEARS	TOTAL SUPPORTED	1 YEAR SUPPORT	2 YEARS SUPPORT	3 YEARS SUPPORT
1988	71	71		
1989	465	430	36	
1990	1206	974	215	18
1991	1695	1034	475	186
1992	3337	2036	934	367
1993	4700	2867	1316	517
1994	5611	3423	1571	617
1995	8199	5001	2296	902
1996	9626	5872	2695	1059
1997	11215	6841	3140	1234
1998	12986	7921	3636	1428
1999	14963	9127	4190	1646
2000	17174	10476	4809	1889
2001	17517	10685	4905	1927
2002	17867	10899	5003	1965
2003	18225	11117	5103	2005
2004	18589	11339	5205	2045
2005	18961	11566	5309	2086
2006	19340	11797	5415	2127
2007	19727	12033	5524	2170

CASH FLOWS.

YEAR	1988	1989	1990
INITIAL CASH BALANCE	0	24,280	12,188
CASH INFLOWS:			
PORTFOLIO PAYMENTS	20,919	183,977	502,622
PORTFOLIO INTEREST	405	12,957	29,824
DIAGNOSIS	495	4,110	9,849
TECNICAL ORIENTATION			
INVESTMENTS			7,143
BANK LOANS			87,635
GRANTS	71,858	170,941	194,583
TOTAL CASH INFLOWS	93,677	371,985	831,656
CASH OUTFLOWS:			
CREDITS	33,030	273,975	656,626
INITIAL INVESTMENT	5,933		
OFFICE ADEQUATION	1,969	87	1,813
BANK LOAN PAYMENTS			
BANK LOAN INTERESTS		16,895	4,141
VARIABLE OPERATIONAL COSTS	16,331	50,038	100,240
FIXED OPERATIONAL COSTS	12,134	43,081	51,804
TOTAL CASH OUTFLOWS	69,397	384,076	814,623
NET CASH FLOW:	24,280	(12,091)	17,033
FINAL CASH BALANCE	24,280	12,188	29,221
TOTAL OPERATIONAL COSTS	28,465	110,014	156,185
UNITARY OPERATIONAL COSTS	401	237	130

YEAR	1991	1992	1993
INITIAL CASH BALANCE	29,221	(1,093)	(2,803)
CASH INFLOWS:			
PORTFOLIO PAYMENTS	1,321,898	2,733,873	4,160,753
PORTFOLIO INTEREST	79,098	158,264	228,906
DIAGNOSIS	25,425	50,055	70,500
TECNICAL ORIENTATION	19,804	38,989	54,915
INVESTMENTS			
BANK LOANS	504,577	1,268,659	1,966,959
GRANTS			
TOTAL CASH INFLOWS	1,950,803	4,249,841	6,482,033
CASH OUTFLOWS:			
CREDITS	1,695,000	3,337,000	4,700,000
INITIAL INVESTMENT			
OFFICE ADEQUATION			
BANK LOAN PAYMENTS	87,635	504,577	1,268,659
BANK LOAN INTERESTS	24,220	62,117	98,397
VARIABLE OPERATIONAL COSTS	111,245	192,570	261,327
FIXED OPERATIONAL COSTS	63,017	155,287	155,287
TOTAL CASH OUTFLOWS	1,981,116	4,251,551	6,483,670
NET CASH FLOW:	(30,314)	(1,710)	(1,637)
FINAL CASH BALANCE	(1,093)	(2,803)	(4,440)
TOTAL OPERATIONAL COSTS	198,481	409,974	515,011
UNITARY OPERATIONAL COSTS	117	123	110

YEAR	1994	1995	1996
INITIAL CASH BALANCE	(4,440)	(5,795)	(8,398)
CASH INFLOWS:			
PORTFOLIO PAYMENTS	5,200,860	7,189,117	8,967,163
PORTFOLIO INTEREST	277,777	397,966	477,436
DIAGNOSIS	84,158	122,978	144,390
TECNICAL ORIENTATION	65,553	95,791	112,470
INVESTMENTS			
BANK LOANS	2,538,886	3,707,799	4,523,505
GRANTS			
TOTAL CASH INFLOWS	8,167,233	11,513,650	14,224,964
CASH OUTFLOWS:			
CREDITS	5,610,500	8,198,500	9,626,000
INITIAL INVESTMENT			
OFFICE ADEQUATION			
BANK LOAN PAYMENTS	1,966,959	2,538,886	3,707,799
BANK LOAN INTERESTS	128,423	186,116	229,683
VARIABLE OPERATIONAL COSTS	307,419	437,465	508,160
FIXED OPERATIONAL COSTS	155,287	155,287	155,287
TOTAL CASH OUTFLOWS	8,168,588	11,516,254	14,226,929
NET CASH FLOW:	(1,355)	(2,603)	(1,966)
FINAL CASH BALANCE	(5,795)	(8,398)	(10,364)
TOTAL OPERATIONAL COSTS	591,129	778,868	893,130
UNITARY OPERATIONAL COSTS	105	95	93

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YEAR	1997	1998	1999
INITIAL CASH BALANCE	(10,364)	(12,536)	(14,951)
CASH INFLOWS:			
PORTFOLIO PAYMENTS	10,471,300	12,147,263	14,017,757
PORTFOLIO INTEREST	556,694	645,039	743,668
DIAGNOSIS	168,218	194,783	224,445
TECNICAL ORIENTATION	131,030	151,722	174,827
INVESTMENTS			
BANK LOANS	5,468,213	6,514,986	7,675,272
GRANTS			
TOTAL CASH INFLOWS	16,795,455	19,653,794	22,835,969
CASH OUTFLOWS:			
CREDITS	11,214,500	12,985,500	14,963,000
INITIAL INVESTMENT			
OFFICE ADEQUATION			
BANK LOAN PAYMENTS	4,523,505	5,468,213	6,514,986
BANK LOAN INTERESTS	277,828	331,351	390,676
VARIABLE OPERATIONAL COSTS	593,598	682,948	781,788
FIXED OPERATIONAL COSTS	188,196	188,196	188,196
TOTAL CASH OUTFLOWS	16,797,627	19,656,209	22,838,646
NET CASH FLOW:	(2,172)	(2,415)	(2,677)
FINAL CASH BALANCE	(12,536)	(14,951)	(17,628)
TOTAL OPERATIONAL COSTS	1,059,623	1,202,495	1,360,660
UNITARY OPERATIONAL COSTS	94	93	91

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YEAR	2000	2001	2002
INITIAL CASH BALANCE	(17,628)	(20,600)	(22,353)
CASH INFLOWS:			
PORTFOLIO PAYMENTS	16,107,933	17,054,430	17,395,519
PORTFOLIO INTEREST	853,905	883,056	900,717
DIAGNOSIS	257,603	262,755	268,010
TECNICAL ORIENTATION	200,655	204,668	208,761
INVESTMENTS			
BANK LOANS	8,963,695	9,668,851	10,412,619
GRANTS			
TOTAL CASH INFLOWS	26,383,790	28,073,760	29,185,626
CASH OUTFLOWS:			
CREDITS	17,173,500	17,516,970	17,867,309
INITIAL INVESTMENT			
OFFICE ADEQUATION			
BANK LOAN PAYMENTS	7,675,272	8,963,695	9,668,851
BANK LOAN INTERESTS	456,544	495,400	533,575
VARIABLE OPERATIONAL COSTS	893,250	911,252	929,416
FIXED OPERATIONAL COSTS	188,196	188,196	188,196
TOTAL CASH OUTFLOWS	26,386,762	28,075,514	29,187,349
NET CASH FLOW:	(2,972)	(1,753)	(1,723)
FINAL CASH BALANCE	(20,600)	(22,353)	(24,076)
TOTAL OPERATIONAL COSTS	1,537,991	1,594,849	1,651,188
UNITARY OPERATIONAL COSTS	90	91	92

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YEAR	2003	2004	2005
INITIAL CASH BALANCE	(24,076)	(25,890)	(27,802)
CASH INFLOWS:			
PORTFOLIO PAYMENTS	17,743,429	18,098,298	18,460,264
PORTFOLIO INTEREST	918,732	937,106	955,848
DIAGNOSIS	273,370	278,837	284,414
TECNICAL ORIENTATION	212,936	217,195	221,539
INVESTMENTS			
BANK LOANS	11,195,637	12,021,287	12,891,873
GRANTS			
TOTAL CASH INFLOWS	30,344,105	31,552,724	32,813,938
CASH OUTFLOWS:			
CREDITS	18,224,656	18,589,149	18,960,932
INITIAL INVESTMENT			
OFFICE ADEQUATION			
BANK LOAN PAYMENTS	10,412,619	11,195,637	12,021,287
BANK LOAN INTERESTS	573,771	616,150	660,836
VARIABLE OPERATIONAL COSTS	946,676	965,503	984,703
FIXED OPERATIONAL COSTS	188,196	188,196	188,196
TOTAL CASH OUTFLOWS	30,345,919	31,554,636	32,815,954
NET CASH FLOW:	(1,814)	(1,912)	(2,016)
FINAL CASH BALANCE	(25,890)	(27,802)	(29,818)
TOTAL OPERATIONAL COSTS	1,708,644	1,769,850	1,833,736
UNITARY OPERATIONAL COSTS	94	95	97

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YEAR	2006	2007
INITIAL CASH BALANCE	(29,818)	(31,944)
CASH INFLOWS:		
PORTFOLIO PAYMENTS	18,829,469	19,206,059
PORTFOLIO INTEREST	974,965	994,465
DIAGNOSIS	290,102	295,904
TECNICAL ORIENTATION	225,970	230,489
INVESTMENTS		
BANK LOANS	13,809,825	14,777,705
GRANTS		
TOTAL CASH INFLOWS	34,130,332	35,504,622
CASH OUTFLOWS:		
CREDITS	19,340,150	19,726,953
INITIAL INVESTMENT		
OFFICE ADEQUATION		
BANK LOAN PAYMENTS	12,891,873	13,809,825
BANK LOAN INTERESTS	707,953	757,633
VARIABLE OPERATIONAL COSTS	1,004,285	1,024,256
FIXED OPERATIONAL COSTS	188,196	188,196
TOTAL CASH OUTFLOWS	34,132,458	35,506,864
NET CASH FLOW:	(2,126)	(2,242)
FINAL CASH BALANCE	(31,944)	(34,186)
TOTAL OPERATIONAL COSTS	1,900,435	1,970,085
UNITARY OPERATIONAL COSTS	98	100

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APPENDIX II. SOCIAL COSTS & BENEFITS.

YEAR	1988	1989	1990
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	0	141,217	1,002,316
2 YEARS ASSISTANCE	0	0	30,369
3 YEARS ASSISTANCE	0	0	0
NEW ENTERPRISES	0	0	0
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	0	28,271	206,735
NEW ENTERPRISES	0	0	0
PORTFOLIO LOSSES	1,378	12,640	29,879
CAPITAL ALTERNATIVE COST	4,182	34,447	72,180
AITEC CONSULTING COST	73,818	88,582	88,582
DONATIONS ALTERNATIVE COST	0	26,320	0
OPERATIONAL COSTS	44,562	134,270	168,457
GLOBAL SOCIAL BENEFITS	0	141,217	1,032,685
GLOBAL SOCIAL COSTS	123,941	324,530	565,833
NET GLOBAL SOCIAL BENEFIT	(123,941)	(183,313)	466,853

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YEAR	1991	1992	1993
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	2,978,782	5,120,947	9,245,514
2 YEARS ASSISTANCE	214,652	624,674	1,435,621
3 YEARS ASSISTANCE	9,206	106,094	298,652
NEW ENTERPRISES	0	0	0
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	641,143	1,171,466	2,198,065
NEW ENTERPRISES	0	0	0
PORTFOLIO LOSSES	30,485	62,931	95,516
CAPITAL ALTERNATIVE COST	186,324	366,821	516,650
AITEC CONSULTING COST	88,582	0	0
DONATIONS ALTERNATIVE COST	0	0	0
OPERATIONAL COSTS	211,621	437,115	549,106
GLOBAL SOCIAL BENEFITS	3,202,639	5,851,715	10,979,786
GLOBAL SOCIAL COSTS	1,158,154	2,038,334	3,359,337
NET GLOBAL SOCIAL BENEFIT	2,044,485	3,813,381	7,620,450

YEAR	1994	1995	1996
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	15,103,587	22,114,322	32,269,853
2 YEARS ASSISTANCE	2,588,039	3,979,780	6,016,442
3 YEARS ASSISTANCE	572,893	904,635	1,390,241
NEW ENTERPRISES	0	0	0
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	3,656,411	5,404,931	7,942,925
NEW ENTERPRISES	0	0	0
PORTFOLIO LOSSES	119,211	165,089	205,507
CAPITAL ALTERNATIVE COST	616,737	901,224	1,058,143
AITEC CONSULTING COST	0	0	0
DONATIONS ALTERNATIVE COST	0	0	0
OPERATIONAL COSTS	630,263	830,431	952,257
GLOBAL SOCIAL BENEFITS	18,264,519	26,998,737	39,676,535
GLOBAL SOCIAL COSTS	5,022,621	7,301,675	10,158,832
NET GLOBAL SOCIAL BENEFIT	13,241,898	19,697,061	29,517,703

YEAR	1997	1998	1999
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	44,237,686	58,100,532	74,072,491
2 YEARS ASSISTANCE	8,430,592	11,266,055	14,571,104
3 YEARS ASSISTANCE	1,962,913	2,629,709	3,399,674
NEW ENTERPRISES	0	0	0
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	10,936,727	14,413,082	18,426,326
NEW ENTERPRISES	0	0	0
PORTFOLIO LOSSES	239,961	278,351	321,197
CAPITAL ALTERNATIVE COST	1,232,759	1,427,437	1,644,815
AITEC CONSULTING COST	0	0	0
DONATIONS ALTERNATIVE COST	0	0	0
OPERATIONAL COSTS	1,129,773	1,282,103	1,450,739
GLOBAL SOCIAL BENEFITS	54,631,191	71,996,296	92,043,270
GLOBAL SOCIAL COSTS	13,539,220	17,400,974	21,843,078
NET GLOBAL SOCIAL BENEFIT	41,091,971	54,595,322	70,200,192

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YEAR	2000	2001	2002
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	92,361,148	113,214,058	134,338,415
2 YEARS ASSISTANCE	18,400,997	22,818,349	27,376,978
3 YEARS ASSISTANCE	4,284,502	5,293,682	6,318,990
NEW ENTERPRISES	0	7,290	73,644
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	23,031,418	28,292,352	33,639,139
NEW ENTERPRISES	0	1,543	15,583
PORTFOLIO LOSSES	369,077	390,306	398,112
CAPITAL ALTERNATIVE COST	1,887,805	1,925,561	1,964,073
AITEC CONSULTING COST	0	0	0
DONATIONS ALTERNATIVE COST	0	0	0
OPERATIONAL COSTS	1,639,809	1,700,432	1,760,501
GLOBAL SOCIAL BENEFITS	115,046,647	141,333,379	168,108,027
GLOBAL SOCIAL COSTS	26,928,109	32,310,194	37,777,407
NET GLOBAL SOCIAL BENEFIT	88,118,537	109,023,185	130,330,619

YEAR	2003	2004	2005
SOCIAL BENEFITS			
GENUINE BENEFITS:			
1 YEAR ASSISTANCE	155,552,330	176,829,984	198,139,424
2 YEARS ASSISTANCE	32,071,017	36,889,286	41,821,975
3 YEARS ASSISTANCE	7,356,523	8,402,182	9,451,543
NEW ENTERPRISES	345,962	1,030,776	2,407,352
SOCIAL COSTS			
LABOUR OPPORTUNITY COST:			
SUPPORTED ENTERPRISES	39,033,410	44,466,938	49,930,476
NEW ENTERPRISES	73,205	218,112	509,396
PORTFOLIO LOSSES	406,074	414,196	422,480
CAPITAL ALTERNATIVE COST	2,003,354	2,043,421	2,084,289
AITEC CONSULTING COST	0	0	0
DONATIONS ALTERNATIVE COST	0	0	0
OPERATIONAL COSTS	1,821,761	1,887,018	1,955,134
GLOBAL SOCIAL BENEFITS	195,325,832	223,152,227	251,820,294
GLOBAL SOCIAL COSTS	43,337,805	49,029,685	54,901,774
NET GLOBAL SOCIAL BENEFIT	151,988,027	174,122,542	196,918,520

YEAR	2006	2007
SOCIAL BENEFITS		
GENUINE BENEFITS:		
1 YEAR ASSISTANCE	219,346,176	238,893,806
2 YEARS ASSISTANCE	46,831,159	51,769,717
3 YEARS ASSISTANCE	10,491,459	11,459,262
NEW ENTERPRISES	4,886,870	9,027,757
SOCIAL COSTS		
LABOUR OPPORTUNITY COST:		
SUPPORTED ENTERPRISES	55,386,879	60,482,564
NEW ENTERPRISES	1,034,062	1,910,273
PORTFOLIO LOSSES	430,929	439,548
CAPITAL ALTERNATIVE COST	2,125,975	2,168,495
AITEC CONSULTING COST	0	0
DONATIONS ALTERNATIVE COST	0	0
OPERATIONAL COSTS	2,026,248	2,100,510
GLOBAL SOCIAL BENEFITS	281,555,664	311,150,541
GLOBAL SOCIAL COSTS	61,004,094	67,101,390
NET GLOBAL SOCIAL BENEFIT	220,551,571	244,049,151

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