

**TECHNOLOGIES FOR FINANCIAL INCLUSION PROGRAM  
2010 CALL FOR PROPOSALS  
PERU**

<b>Title:</b>	Expanding Financial Inclusion in Rural Areas through the Use of Mobile Telephony		
<b>Number:</b>	PE-M1077		
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<b>Executing agency:</b>	Consortio de Organizaciones Privadas de Promoción al Desarrollo de la Pequeña y Micro Empresa [Consortium of Private Organizations for the Development of Microenterprises and Small Businesses] (COPEME)		
<b>Financing plan:</b>	Technical cooperation (nonreimbursable):	US\$241,504	
	Local counterpart:	<u>US\$311,256</u>	
	<b>Total:</b>	<b>US\$552,760</b>	
<b>Execution period:</b>	36 months		
<b>Disbursement period:</b>	42 months		
<b>Funding source:</b>	Project RG-M1155		

## **I. BACKGROUND**

- 1.1 **Rural poverty and access to credit.** In 2009, nearly 34.8%<sup>1</sup> of the population of Peru was in living in poverty. The situation was most acute in rural areas, where 60.3% of the people were poor and 27.8% were extremely poor. The low-income population in rural communities is composed primarily of families earning their livelihoods from small-scale agricultural activities and/or from microenterprises focused on production, commercial, and service activities, many of which are informal and with a high participation of women. One development obstacle faced by small producers and rural microenterprises is inadequate access to credit facilities that would enable them to finance their investment and working capital

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<sup>1</sup> Source: Informe Técnico, Evolución de la Pobreza 2009 [Technical Report, Evolution of Poverty 2009], Instituto Nacional de Estadística e Informática [National Institute of Statistics and Informatics].  
[http://censos.inei.gob.pe/DocumentosPublicos/Pobreza/2009/Infome\\_Pobreza.pdf](http://censos.inei.gob.pe/DocumentosPublicos/Pobreza/2009/Infome_Pobreza.pdf)

needs expeditiously, efficiently, and in sufficient amounts to expand their production, commercial, and services activities and increase their incomes. This is due to the fact that financial services for rural microenterprises are still limited, and the credit supply for rural production and business activities is just emerging, although it is growing, especially among regulated microfinance institutions (MFIs). A study conducted by MIX Market,<sup>2</sup> based on a sample of a group of MFIs (some of which are COPEME partners and participants in the project) showed that the trend for this market since 2008 has been positive.

- 1.2 **Rural microfinance services and the potential of technology.** One of the difficulties facing Peruvians living in rural areas, especially those living in the more remote areas, is their limited access to financial services, which contrasts with the widespread access to financing in urban areas. Self-employed workers and microentrepreneurs in rural areas rely on informal credit: stores, suppliers, family savings, or lenders, but these sources are insufficient and are frequently associated with usurious practices. Increasingly, these groups have been turning to MFIs<sup>3</sup> that act as local credit agents; this includes nongovernmental organizations (NGOs), microenterprise and small business development companies (EDPYMES), rural savings banks, municipal savings banks, and financial cooperatives. Since these institutions are based in the country's secondary cities, their services reach remote communities that would normally not have access to credit. However, it is difficult for them to cover their operating costs and serve the poorest and most remote population profitably. Although international experience has shown that information and communications technologies offer great potential for reducing transaction costs, that potential has yet to bring about significant changes in the scale and cost of microfinance services in the region's rural areas.
- 1.3 **Mobile telephony<sup>4</sup> as an opportunity for decision-making: the EQUIFAX EXPERTO technology solution.** This project aims to contribute to solving the cost problem by installing an automated decision-making and consultation system based on mobile telephony. Specifically, the idea is to incorporate the technology solution known as EXPERTO, developed by EQUIFAX,<sup>5</sup> a technology provider and one of most widely used credit reporting agencies in the world. EQUIFAX is the most successful and largest credit bureau in Peru. It has had an agreement in effect with COPEME since 1998, which has enabled it to incorporate information on the loan portfolios of over 100 MFIs (including NGOs, EDPYMEs, private finance companies, municipal savings banks, rural savings banks, and financial cooperatives) into its databases. In recent years, EQUIFAX has developed products

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<sup>2</sup> Source: Microfinance Information Exchange. <http://www.themix.org/node/1010>

<sup>3</sup> Such as nonprofit nongovernmental organizations (NGOs), as well as some credit cooperatives, a few EDPYMEs, and private finance companies.

<sup>4</sup> Appendix 1 contains information on cellular telephone coverage in the areas served by the MFIs that may participate in the project.

<sup>5</sup> Known commercially in Peru as Infocorp.

that specifically target the microfinance sector and its stakeholders, as well as tools for improving portfolio management. One of the tools developed by EQUIFAX is an EXPERTO version for use in urban lending (generic version of the model).<sup>6</sup> This version will be adapted by EQUIFAX for use in rural areas, taking into account the credit policy of each participating institution (one model for each MFI, for one rural credit product), all in partnership with COPEME. If successful, the experience and achievements will be replicated in other countries of the region, beginning with those where EQUIFAX has a significant presence (Argentina, Brazil, Chile, Ecuador, and Honduras).

- 1.4 EXPERTO consists of a standard model that currently runs on a Web platform connected to the EQUIFAX servers (application service provider (ASP) model) that only goes to the “credit type” level, not the “product type” level (which is under consideration for EXPERTO RURAL). The current EXPERTO is used via the Web by 37 MFIs in Peru and approximately 50 other organizations, including commercial companies, large stores, and public service providers.
- 1.5 The main tangible and perceived benefits for institutions using the generic version of EXPERTO are: (i) efficiencies obtained as a result of lower transaction costs; (ii) greater opportunities for clients, who will benefit from a more streamlined evaluation process and better response times through the elimination of unnecessary and often useless trips, and of cumbersome procedures; (iii) lower risk associated with the loan operation due to consultation with the largest risk database in the Peruvian market; (iv) greater staff productivity stemming from the opportunity for more business; and (v) expansion of MFI operations to new areas of attention by being able to bring their services closer to rural and peri-urban businesses and households. These same outcomes are expected for EXPERTO RURAL, with the added benefit that the model will be used in conjunction with mobile telephony.
- 1.6 **Potential of combining EXPERTO with mobile telephony.**<sup>7</sup> At present, the generic version of EXPERTO is not being used with mobile telephony. This is not a problem in urban areas, where distances between businesses, and between businesses and branch offices, are short. However, distances are an obstacle in rural areas, which are characterized by lower population density, greater distances between rural towns and villages, and poor means of communication. Therefore, using telephony coverage in Peru to implement EXPERTO RURAL with cellular telephones offers great potential.

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<sup>6</sup> Model: Understood as computer software consulted both via the Web and by wireless application protocol (WAP), which embeds the policies and criteria used by each institution for making loans, based on consultations with the credit bureau database.

<sup>7</sup> Source: Telephony service providers. Prepared by: Organismo Supervisor de Inversión Privada en Telecomunicaciones [Oversight Agency for Private Investment in Telecommunications] (OSIPTEL) <http://www.osiptel.gob.pe/WebSiteAjax/> on a population of 28.23 million inhabitants. The district-level calculations were based on a universe of 1,834 districts, of which 1,555 districts have coverage.

- 1.7 **Mobile telephony penetration in Peru** allows for the development of mobile-based products that enable online responses. Mobile telephony coverage in the country and its continuous expansion makes extension and replication of the model a timely proposition. This is supported by mobile telephony penetration in the Peruvian market, which currently stands at 91.2%.<sup>8</sup>
- 1.8 **Participating MFIs and their selection.** COPEME has initially preselected eight MFIs for the project, taking into account the significant volume of their loan placements and the high share of agricultural and rural loans in their portfolios. In addition, in order to facilitate replication in Peru and other countries of the region, four MFIs supervised by the Superintendency of Banks, Insurance Companies, and Pension Fund Administrators were included, two of which also take deposits; four credit NGOs that use different lending methodologies and have been actively engaged in the Private Prudential Supervision System promoted by COPEME have also been included. These establishments, whose operations are served by branches in different parts of the country, are: CMAC SULLANA, Financiera CONFIANZA, EDPYME NUEVA VISION, COOPAC SAN MARTÍN DE PORRES, PROMUJER PERU, PRISM, FONDESURCO, and ARARIWA.
- 1.9 **Opening the model to different cellular telephony providers.** EQUIFAX is willing to facilitate contacts and arrangements with the best telephone service provider, as determined by the quality of communications in the geographical areas served by the MFIs. This offers two advantages: (a) lower costs through volume purchases, and inclusion of the cost of the equipment purchased in monthly billings; and (b) stress tests performed by the EQUIFAX technical team in each MFI service area; the one that produces the best results will be selected.

## II. PROJECT OBJECTIVES, COMPONENTS, AND ACTIVITIES

- 2.1 **Goal.** The goal of the project is to contribute to financial inclusion through the use of mobile information technology. The purpose of the project is to implement a mobile information technology solution for rural microcredit in Peru by expanding credit facilities to microenterprises in rural and peri-urban areas with the use of mobile information technology. To achieve its objectives, the project will have three components:
- 2.2 **Component I: Configuration and implementation of the technology solution.** The purpose of configuration is to modify the generic model of EXPERTO, tailoring it for the management of rural microfinance portfolios. This will involve two major changes: (i) adjusting the software<sup>9</sup> and incorporating the policies and regulations that govern the different types of loans offered by the various

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<sup>8</sup> OSIPTEL: <http://www.osiptel.gob.pe/WebSiteAjax/>

<sup>9</sup> The software programs will be developed by the EQUIFAX programming team. Should the MFI model require consultation with a proprietary database (with which EQUIFAX does not have a contract), the database will be placed on the EQUIFAX servers. The solution will be executed on the EQUIFAX servers.

- participating MFIs (defined according to the criteria presented in paragraph 1.8); and (ii) incorporating an in situ and online evaluation and approval process that will issue an opinion (based on the credit product and/or economic activity of the client) regarding the evaluation and possible approval of the loan.
- 2.3 This will enable EXPERTO RURAL to serve as an automated solution, accessible by mobile telephony, for evaluating microfinance businesses among a population whose business activities and dynamics are at a substantial distance from those in urban areas. It will include three key functionalities: (i) processing of loan applications in the rural sector (in situ) by the credit analysts at the MFIs, in automated form (online), using a flexible, user-friendly, parameterizable technology solution; (ii) consultation and integration of the credit history of clients of microfinance and banking systems at the national level, through the data held and administered by EQUIFAX; and (iii) incorporation of the approval policies and criteria established in the microcredit regulations of each MFI. These functionalities will enable other MFIs in the region to replicate the experience.
- 2.4 To that end, the following activities will be carried out: (a) signing of an agreement between COPEME and EQUIFAX establishing the role of each institution in meeting the purpose of the project; (b) signing of agreements between the MFIs and COPEME establishing the activities, commitments, and responsibilities required for effective project implementation; (c) signing of contracts between the MFIs and EQUIFAX that duly indicate the characteristics and conditions of service to be provided by EQUIFAX, and the requirements for access; (d) mapping of information contributors in rural areas in order to enrich the EQUIFAX databases and increase the success level of credit checks performed on prospective clients; (e) development of a module for monitoring use of the solution, to be incorporated into the COPEME software, called the "System for monitoring the use of the EQUIFAX credit reporting agency," in order to monitor use of the credit reporting agency by participants; (f) analysis and design of the solution model, to include establishing the business rules of each MFI and the visualization screens; (g) development of EXPERTO RURAL by the EQUIFAX technical team, based on previously approved specifications; and (h) installation and operation of the solution, including the procurement of cellular equipment and wireless application protocol (WAP) service (by participants), training of MFI-designated users, final tests, and launch of EXPERTO RURAL.
- 2.5 **Component II: Pilot study and extension of the use of the technology solution.** EXPERTO RURAL will be *a user-specific solution* that provides the MFIs with state-of-the-art technology for automating the credit evaluation process (especially, evaluation and approval) without having to make large investments.<sup>10</sup>

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<sup>10</sup> EQUIFAX will offer to develop the WAP version simultaneously alongside the Web solution, which will be extremely useful if there are difficulties with communication systems and/or rural access problems, or if there are any obstacles to performing the operations at the MFI branch offices.

- 2.6 To this end, this component calls for the following activities: (i) customization and pilot implementation in three MFIs for a period of three months (of the software solution developed under component I); (ii) adjustment and expansion of the tool to five additional MFIs; and (iii) simultaneously, adaptation and testing of telephone and communications equipment, for implementing the functionalities of the EXPERTO model.<sup>11</sup>
- 2.7 The three MFIs that will participate have already made a commitment to take part in the pilot study. In addition, and as indicated in the background information, the project intends for eight MFIs to use the technology solution. Accordingly, during execution of this component, COPEME will confirm the MFIs' commitments to participate in the project: in terms of local counterpart contributions, and their commitment to maintain and, as the case may be, increase the share of rural and peri-urban clients in their portfolios. This component also calls for stress tests to be performed using mobile telephony with an open strategy that works with the different mobile telephony service providers used by the MFIs.
- 2.8 **Component III: Dissemination and documentation of progress and the results of EXPERTO RURAL.** In order to familiarize the microfinance industry with project activities and achievements, two workshops will be held with COPEME, EQUIFAX, and Bank/MIF personnel associated with the project, representatives from the Superintendency of Banks, and respected guest experts. By project completion, the experiences and lessons learned will have been documented and disseminated in a publication and through the different communication channels of the TEC-IN program.
- 2.9 **Expected outcomes.** The following outcomes are expected by project completion: (i) an expansion of the supply of credit resources through the use of mobile-based evaluation and decision-making systems, to 90,000 rural and peri-urban microentrepreneurs; and (ii) implementation of eight models of the EXPERTO RURAL technology solution in eight MFIs.
- 2.10 The advantages for MFIs, to be confirmed during the pilot study and its expansion (component II), will be shorter implementation and development times, lower total cost of ownership,<sup>12</sup> uniform application of credit policies, re-use of information

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<sup>11</sup> Activities (i) and (ii) will be documented on the invoices issued for credit checks (the EXPERTO RURAL model will consult the credit bureau). The intention is to provide access to credit to 20,000, 30,000, and 40,000 small business owners and microentrepreneurs in rural and peri-urban areas each year, respectively, in other words, a total of 90,000 entrepreneurs during the life of the project (36 months). Procurement of the mobile telephone lines needed by the eight MFIs for implementing the technological solution during the three years of project execution will be assumed fully by the local counterpart, and corresponds to the communications necessary for making fluid, timely, and efficient use of EXPERTO RURAL, both in situ and online.

<sup>12</sup> Since it is based on an application service provider (ASP) model, the initial payment will cover the programming and implementation of the model; subsequently, payments will be made per credit check (no additional investments in hardware or software will be needed). The business model is described in paragraph 5.2.

checks—control of duplication—and better response times for clients, as well as the greater flexibility, responsiveness, and speed that is needed by small-scale rural entrepreneurs. The introduction and use of the proposed solution (EXPERTO RURAL) will enable credit decisions to be made in rural areas with greater flexibility and timeliness, and afford MFIs that use it with: (i) greater coverage and scope; (ii) increased staff productivity; (iii) increased revenues, since, as mentioned in paragraph 1.5, they will have greater opportunities for serving prospective clients due to more efficient processes for evaluating client prospects, and better response times through the elimination of unnecessary and often useless trips, and of cumbersome procedures; (iv) better client services; (v) decentralized operations; (vi) more accurate credit decisions; and (vii) capacity. This will increase the sustainability of their rural microfinance operations while also improving portfolio control and monitoring, making their continued presence in the sector and their work with the groups least served by the financial system ever more viable.

### III. PROJECT COST, FINANCING, AND EXECUTION PERIOD

- 3.1 This three-year project will have a total cost of US\$552,760, of which the program will cover US\$241,504 (44%) and the local counterpart will contribute US\$311,256 (56%).

Component	Source of financing (US\$)		
	MIF	Counterpart	Total
Configuration and implementation of the technology solution	30,944	52,416	83,360
Pilot study and extension of the use of EXPERTO	61,880	219,240	281,120
Dissemination and documentation	18,600		18,600
Execution unit	88,800	39,600	128,400
Monitoring and supervision	5,280		5,280
Evaluation, audit, and contingencies	36,000		36,000
<b>Total</b>	<b>241,504</b>	<b>311,256</b>	<b>552,760</b>

### IV. EXECUTING AGENCY

- 4.1 The Consortium of Private Organizations for the Development of Microenterprises and Small Businesses (COPEME) will be the executing agency for the project. COPEME is a nonprofit association that was created in July 1990 for the purpose of promoting and executing programs, projects, and activities related to financing, training, technical assistance, marketing, reporting, etc., for small businesses and microenterprises. COPEME comprises 52 Peruvian MFIs.<sup>13</sup> The services provided by its microfinance team aim to strengthen the country's microfinance industry, in both the urban and rural sectors. Hence, they serve EDPYMEs, private finance

<sup>13</sup> See Appendix 1.

companies, municipal savings banks, rural savings banks, NGOs, and credit cooperatives that offer lending programs for microenterprises.

- 4.2 The Microfinance Initiative is an organizational division of COPEME that was created in 1998 under an agreement with the United States Agency for International Development (USAID) for the purpose of increasing the country's supply of financial services for small businesses and microenterprises with MFIs that are sustainable, or on the way to becoming sustainable. The Microfinance Initiative provides member MFIs with various services, including: (i) data storage, processing, and generation; (ii) preparation of institutional performance and monitoring reports; (iii) advisory and consulting services on various aspects of microfinance activities; (iv) special-purpose audits; (v) courses, seminars, and workshops; (vi) promotion of financial transparency and of the use of credit reporting agencies; (vii) transfer of know-how and use of risk classification and rating techniques and tools; (viii) promotion and identification of funding sources; and (ix) development of new credit, micro-savings, and other products.
- 4.3 The experience and lessons learned by COPEME have been and are currently being transferred to similar networks in the region. During the past 12 years, COPEME's microfinance unit has taken the initiative to sign agreements and form partnerships with a variety of national and international donor and funding agencies, including USAID, the Ford Foundation, Planet Finance and Planet Rating, the Microfinance Information Exchange (MIX), and the Consultative Group to Assist the Poor.
- 4.4 COPEME works in coordination with key actors involved in efforts to increase financial inclusion in Peru. It has held talks with the Superintendency of Banks, as a result of which the *Private Prudential Supervision System for Credit NGOs* was created, with support from USAID and subsequently the Netherlands Organisation for International Assistance. As a result, 20 MFIs (NGOs and EDPYMES) have been able to bring their account management, risk, internal audit, and governance practices into line with the Superintendency's regulations.
- 4.5 COPEME also has experience with information and communications technologies, having implemented projects in the following areas: (i) statistical models for credit scoring; (ii) processes for capturing and processing data and evaluating and monitoring agricultural loans via portable devices; (iii) design, development, and implementation of loan portfolio management software that is accessible online with remote agencies, which has enabled them to administer their operations with commercial banks; and (iv) implementation of a system for the collection, administration, management, and monitoring of financial and operational information of Peruvian MFIs, both regulated and unregulated, that operate via the Web and online.
- 4.6 **EQUIFAX** is an information technology company founded over 100 years ago that provides credit reports. As it evolved, the company has conceptualized its vision with the slogan "*Equifax empowers businesses and consumers with information they can trust.*" It is currently the global leader for information solutions in the

credit risk sector. EQUIFAX has more than 7,000 employees and operates in 17 countries on four continents.

- 4.7 EQUIFAX's portfolio of products and services encompasses all phases of the credit cycle (approval, management, recovery), and is designed to enrich its clients' decision-making processes, minimize their financial risks, and maximize their opportunities for growth through the use of information, employing high value-added technology tools. It has been operating in Peru for 14 years under the brand name Infocorp and is considered the principal provider of credit and commercial information. Its databases are consulted by more than 25,000 users from 4,500 companies nationwide; it processes nearly 5 million queries a month, has a database of nearly 21 million natural and legal persons nationwide, and obtains its information periodically from approximately 1,500 different sources, many of which are exclusive suppliers to EQUIFAX.
- 4.8 **Relationship between COPEME and EQUIFAX.** The two agencies provide a sound foundation for this project, given: (i) the joint effort they carried out nationwide in 2004 and 2006 to identify MFIs with debt records willing to share their databases and gain access to the benefits of the agreement; (ii) the large number of records held by EQUIFAX (nearly 20 million) with information from the financial system, the microfinance system, large companies, public services, telephony service providers, etc.; (iii) a mutual collaboration agreement and the growing number of consultations made within its framework, from 214,000 in 2002 to 2.3 million in 2009; (iv) the increase in the success rate,<sup>14</sup> from 81.2% of consultations in 2002 to 93.4% in 2009 (in some regions of the country, it is 97%); and (v) the technical and financial solvency of EQUIFAX as a credit reporting agency that also works in the area of microfinance, which guarantees continuity of service and application of the technology solution beyond the scope of the project.

## V. MAIN CONSIDERATIONS

- 5.1 **Description of the technology and its use by the organizations.** One of the technological advantages of the EXPERTO RURAL solution proposed for the project is that it is offered as an ASP. Under this arrangement, EQUIFAX provides the software application from its remote data center (application hosting), which gives the MFIs access to all of its infrastructure and the necessary support for the technology solution to be used through the WAP, and even via the Web. Users pay for each consultation with its credit analysts.
- 5.2 **Business model for use of the tool.** The ASP model frees the MFIs of the cost of purchasing hardware and software, and from the requirement of having support and information management personnel on staff. Moreover, EQUIFAX assumes full responsibility for the operation; that is, its services include guaranteed availability

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<sup>14</sup> The success rate refers to the effectiveness of online searches as compared to the number of attempts; in other words, the greater the number of results obtained for a search on a specific topic, the greater the opportunity for success.

of the application and its correct performance. This will enable the MFIs to focus on their business and not on the information infrastructure and systems needed to carry it out. There will be no compatibility problems with the MFIs' information systems since the solution does not require installation of software. The MFIs will use the tool online only and will have round-the-clock access seven days a week.

- 5.3 **Beneficiaries.** The project is expected to reach 90,000 microentrepreneurs who are clients of MFIs with lending programs primarily in the rural provinces of Piura, La Libertad, Lambayeque, Ancash, Arequipa, Junín, Ayacucho, Puno, Cusco, Apurímac, and San Martín (see Appendix 1). Clients in the rural sector, a market targeted for a significant portion of the services and resources of the MFIs that will work with COPEME, are for the most part small-scale entrepreneurs engaged in agricultural and livestock activities, ceramics and textile production, retail merchants in small markets and fairs, and individuals who purchase and fatten small animal for sale, all of whom borrow from these institutions through community banks, solidarity groups, or individual lenders, and also combine the three products. A significant portion of these clients live in remote, high-altitude areas, where there are few lending institutions.

#### 5.4 Indicators

Perspective	Indicator/ Year	1	2	3
Scope	Number of clients (cumulative):	20,000	50,000	90,000
	Regions served	not < 6	not < 10	not < 12
Cost	Administrative efficiency <sup>1</sup>	< 24%	< 22%	< 20%
	Productivity per credit analyst (No.) <sup>2</sup>	> 250	> 270	> 280

<sup>1</sup> Relationship between the MFI's administrative spending and its average portfolio

<sup>2</sup> Number of loans administered by each MFI analyst

- 5.5 **Sustainability.** At present, few institutions concentrate the bulk of their loan portfolios in the rural sector, where lending needs are generally small and thus considered to be costly and risky. Because of this, and given their desire to continue expanding coverage and scope, some institutions use their credit teams or contract third parties to conduct studies of new markets so they can familiarize themselves with the habits, loan histories, and credit records of their clients and potential borrowers. Typically, these activities incur costs that are ultimately transferred to the clients. With this project, COPEME aims to provide the means for conducting credit rating and loan approval processes in situ and online, with credit history checks, and reviews of operations in accordance with the credit policies of each institution. This solution will make it possible to meet the needs for speed and risk management in loan operations. Thus, the Bank's contribution is justified by the benefit of lower start-up costs, helping to meet the needs of a larger number of users of rural microfinance services in the immediate term.

- 5.6 **Dissemination.** Given the potential positive impact of this project and the lessons that may be generated for the microfinance sector, a case study will be documented,

- covering project activities, methodology, lessons learned, and outcomes achieved, with a view to making them available on the TEC-IN platform. In addition, the COPEME personnel involved in the management of the project have expressed their desire to participate in activities to disseminate the experience (workshops, forums, conferences, and meetings), organized in coordination with the Bank/MIF.
- 5.7 **Risks and mitigating factors.** Two main risks have been identified: **Risk 1:** EQUIFAX's market share could deteriorate, either because other credit bureaus offer better terms or for other reasons, which would weaken the strength of the proposed technology solution. **Mitigating factor:** EQUIFAX's position and the fact that the other two credit bureaus have less time and experience in the market, combined with EQUIFAX's close and intensive partnership with COPEME over a period of almost 13 years, would enable the two stakeholders to rapidly identify and address any decline in EQUIFAX's share of the MFI market. **Risk 2:** Mobile telephony companies could offer chronically poor service for their online communications systems, either because their networks crash or because they are too slow. **Mitigating factor:** EQUIFAX's own technical team will perform the stress tests on the telephone equipment and lines for each operator that provides coverage in the various rural areas served by the MFIs.
- 5.8 **New knowledge to be generated for the institution and for the microfinance sector.** In recent years there has been a push to introduce correspondent banks, small transactions in savings operations, transfers, loan payments, and payment for services, mainly at stores, pharmacies, and supermarkets. Mobile telephony in Peru is still not used in the financial system in general, and in the microfinance market in particular. This project will be a pioneering effort in the country to target rural areas with little access to financial services, and where there is enormous development potential for MFIs, given the saturation of supply in urban areas. The development of a technology solution that incorporates the specific policies and procedures of eight MFIs and the diverse economic activities of their clients will represent a significant step forward towards the goal of extending application of the solution to other institutions working in rural and peri-urban areas for regulated and unregulated MFIs, as well as to networks in other countries of the region.

## VI. PROJECT SUPERVISION AND IMPLEMENTATION

- 6.1 The project will be monitored by the Bank's Country Office in Peru, in accordance with the risk- and performance-based project management model (achievement of milestones) established by the MIF in April 2008. Milestones are activities or outputs that are critical for achieving the development objectives and should be identified by mutual agreement between the executing agency and the MIF. The milestones may be revised and rescheduled during project execution. The executing agency may also ask the Bank to modify the milestones provided their target date has not expired. The achievement of milestones does not exempt the executing agency from the responsibility of meeting the targets specified in the logical framework for the project.

- 6.2 **Disbursement by results:** For the disbursement of MIF funds an advance of up to 20% of the MIF contribution will be established. The first disbursement of MIF funds will be advanced to the executing agency after the agreement has been signed and the following conditions precedent have been met: (i) signing of the agreement between COPEME and EQUIFAX;<sup>15</sup> and (ii) signing of the agreement with the first three MFIs.
- 6.3 In addition to the General Conditions of the technical-cooperation agreement to be entered into with the Bank, the following conditions will be met: (i) approval by the Bank of the project's annual work plan, including the first cycle of milestones; and (ii) selection of the members of the execution unit. The amounts of subsequent disbursements will be calculated based on the needs of the activities planned for the period concerned. Funds will be disbursed at the request of the executing agency in order to proceed with the normal course of project execution, provided that there are no milestones pending as of the date of the request. To demonstrate this, the executing agency will submit evidence of achievement of milestones to the MIF before presenting the disbursement request. If milestones have not been met, the MIF will analyze the seriousness and take appropriate measures to prevent this failure from having an impact on project implementation and/or the achievement of project objectives. Supporting documentation for the disbursement requests submitted by the executing agency will be reviewed on an ex post basis.
- 6.4 **Procurement of goods and consulting services:** Goods and consulting services financed with resources from the MIF contribution will be procured in accordance with the "Policies for the procurement of goods and works financed by the Inter-American Development Bank" (document GN-2349-7, as amended), the "Policies for the selection and contracting of consultants financed by the Inter-American Development Bank" (document GN-2350-7, as amended), and the guidelines issued by the MIF in the framework of those policies. Before any procurement may be carried out, the executing agency will deliver, for Bank approval, the initial procurement plan proposed for the project. This plan will be updated annually or whenever there is a significant change in the methods established for procurement or in the good or service to be procured. Each new version will be sent to the Bank for approval. Because COPEME was previously assessed as presenting a low risk, reviews will be conducted ex post.
- 6.5 **Project status reports:** The executing agency will be responsible for submitting project status reports (PSRs) to the MIF within 30 days after the end of each six-month period or more frequently and on the dates set by the MIF, which will inform the executing agency at least 60 days in advance. These reports will follow a format previously agreed upon with the MIF and will contain information on project execution, accomplishment of milestones, outcomes achieved, and their

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<sup>15</sup> Interagency agreement signed by COPEME and EQUIFAX, to include, primarily, the rationale, objectives, duration, a detailed description of the actions to be carried out to design, configure, and launch production of the solution, terms of use, contributions of the two parties to the project, cost of access for MFIs, and reports to be prepared.

- contribution to completion of the project objectives in accordance with the indicators in the logical framework and other operational planning tools. The PSRs will also describe problems encountered during execution and outline possible solutions. Within 90 days after the end of the execution period, the executing agency will submit to the MIF a final PSR, which will highlight the outcomes achieved, the sustainability plan, and lessons learned.
- 6.6 **Financial supervision:** The executing agency will establish and maintain adequate financial accounts, internal control mechanisms, and filing systems for the project that are consistent with Bank/MIF rules and policies on financial management. An audit will be financed with MIF resources. The Bank/MIF will contract independent auditors to perform this audit and conduct reviews of procurement processes and the supporting documentation for disbursements according to the agreed upon schedule and modality. The MIF may modify the application and periodicity of these reviews depending on the results of reviews and/or subsequent risk analyses performed during the project execution.
- 6.7 **Evaluations:** Two evaluations—one midterm and one final evaluation—will be conducted by consultants contracted by the Bank. The midterm evaluation will be performed when 50% of the contribution has been disbursed or midway through the execution period, whichever occurs first. The midterm evaluation will: (i) determine to what degree the objectives, as defined in the logical framework, were achieved at the date of evaluation; (ii) identify whether any significant variations occurred in the execution of activities; and (iii) identify alternatives and strategies to help improve execution and thus increase the likelihood of achieving the project's expected outcomes. The final evaluation will be performed when the last group of milestones has been met and the execution period is over. It will include: (i) an analysis of actual outcomes relative to the baseline and targets of the logical framework; (ii) the impact of the project and potential expansion of the services developed; (iii) best practices and lessons learned; and (iv) the degree of sustainability of project-driven actions once the MIF contribution has concluded. This evaluation will be commissioned by the Bank with resources from the contribution. In addition, this project may be selected for an additional evaluation in coordination with the other projects in the Technologies for Financial Inclusion Program. This additional evaluation may review aspects of the project's impact on the low-income population that will benefit from the services, as well as other aspects that the MIF considers important.
- 6.8 **Closing workshop:** At least three months before the end of the project disbursement period, the executing agency will hold a closing workshop to be attended by the members of the project team, representatives of the beneficiaries and the sector, and any other individuals agreed upon with the Bank/MIF. The purpose will be to jointly evaluate outcomes, identify additional tasks to ensure the sustainability of project-initiated actions, and identify lessons learned and best practices.

**TECHNOLOGIES FOR FINANCIAL INCLUSION PROGRAM  
CALL FOR PROPOSALS 2010  
PARAGUAY**

<b>Title:</b>	Provision of Mobile Financial Services under the “Last Mile” Business Model		
<b>Number:</b>	PR-M1021		
<b>Project team:</b>	Carlos Ortiz (MIF/CPR), Project Team Leader; Jessica Villanueva (MIF/ATF), Project Team Co-leader; Fermin Vivanco (MIF/ATF); Frank Nieder (ICF/CMF); Nathanael Bourns and Carlos Paredes (DAI consultants); Ruben Doboin (MIF/DEU); and Anne Marie Lauschus (LEG/NSG)		
<b>Executing agency:</b>	Mobile Cash Paraguay S.A.		
<b>Financing plan:</b>	Technical cooperation (nonreimbursable):	US\$383,524	
	Local counterpart:	<u>US\$523,484</u>	
	<b>Total</b>	<b>US\$907,008</b>	
<b>Execution period:</b>	24 months		
<b>Disbursement period:</b>	30 months		
<b>Funding source:</b>	Project RG-M1155		

## **I. BACKGROUND**

- 1.1 **Paraguay and microfinance.** The microfinance sector in Paraguay is relatively competitive. In its study “Global microscope on the microfinance business environment 2010,” the Economist Intelligence Unit ranks Paraguay 15<sup>th</sup> among 54 countries across the globe, with an overall score above its 2009 level, partly owing to its improved regulatory environment.<sup>1</sup> Although microcredit activity has been regulated, there is still no broad-based regulation of microfinance, and the sector is led by financial institutions and nongovernmental organizations that focus on offering microcredit. The seven Paraguayan microfinance institutions (MFIs) that report their data to MIX Market indicate that they serve 404,874 microcredit

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<sup>1</sup> Overall score for microfinance business environment, page 11 of “Global microscope on the microfinance business environment 2010,” Economist Intelligence Unit, with support from the Multilateral Investment Fund (MIF), the Andean Development Corporation (CAF), and the Dutch Ministry of Foreign Affairs.

clients but only 100,569 active savers,<sup>2</sup> in part because several are not regulated for deposit-taking. Nevertheless, microfinance activity in the areas most easily accessible through traditional microfinance channels, as in other countries in the region, continues to be characterized by poor access to financial services for Paraguay's small producers and rural microenterprises. A high percentage of people in rural areas are still without sufficient and easy access to working capital to run their business, investment capital to support their economic activities in the long term, or formal accounts to manage their resources. And in rural areas underserved by the Paraguayan financial system, high transaction costs limit the viability of traditional points of service, such as branches or offices of the institutions active in the sector.

**1.2 Rural poverty, access to financial services, and lessons learned from the Tigo Cash experience.** More than 80 municipios in Paraguay have no direct access to formal financial services. These municipios are located in over 15 departments, four of which have the highest poverty rates according to the latest studies by Paraguay's Statistics and Census Bureau (DGEEC) and the Bank.<sup>3</sup> Accordingly, Mobile Cash Paraguay S.A.<sup>4</sup> launched its first mobile payment service, called Tigo Cash, in May 2008. The service was available initially in the capital, including the Asunción and Greater Asunción areas, with plans for later expansion to Paraguay's principal cities. Although important lessons were learned, the results during the launch phase were unsatisfactory owing to: (i) insufficient incentives; (ii) an inadequate business model; and (iii) an ineffective process for gaining access to the service:

- (i) **Insufficient incentives:** During the initial months of operation, there were not enough incentives for people to use electronic money instead of cash. There was no sufficiently demonstrable tangible benefit to convince users to transfer money into their electronic wallets and use them in the Tigo Cash

<sup>2</sup> <http://www.mixmarket.org/mfi/country/Paraguay>

<sup>3</sup> Source: Study conducted as part of support activities under the Bank-financed MECOVI program for the DGEEC, by Robles from the Bank's Poverty and Inequality Unit and Santander from the DGEEC.

Poorest			Most unequal		
#	District	% poor	#	District	Gini coefficient
1	San Pedro – Choré	68.2%	1	Caaguazú – Dr. J. Eulogio Estigarribai	0.707
2	Itapúa – Leandro Oviedo	67.2%	2	Itapúa – Pirapó	0.675
3	Concepción – Loreto	66.9%	3	Caaguazú – Dr. Juan Manuel Frutos	0.662
4	Itapúa – Alto Verá	63.1%	4	Itapúa – La Paz	0.660
5	Concepción – Horqueta	63.0%	5	Caapzapá – Abai	0.639
6	Caaguazú – La Pastora	62.9%	6	Itapúa – San Rafael del Paraná	0.639
7	Concepción – Belem	62.9%	7	Itapúa – Carlos Antonio López	0.630
8	Caaguazú – Carayaó	62.3%	8	Alto Paraná – San Cristóbal	0.624
9	Caaguazú – Simón Bolívar	61.8%	9	Itapúa – Bella Vista	0.614
10	Caaguazú – Dr. Cedillo Báez	61.8%	10	Misiones – Ayolas	0.613

Source: Bank-financed MECOVI program for the DGEEC.

<sup>4</sup> The company that handles mobile telephony for Tigo, a telephone operator in Paraguay.

network at partner businesses. Clients also had trouble understanding the relatively complex, abstract concept of an electronic wallet when the service was initially offered. Against this backdrop, new incentives were sought for users to log onto the menu on their mobile phones and carry out transactions. These incentives included drawings and store discounts. The concept of drawings was abandoned because it was regarded as inconsistent with robust, reliable transactions, financial services, and money transfer services that clients generally do not want to associate with games of chance.

- (ii) **Inadequate business model:** The distribution network was focused on selling telephone airtime for the operator, Tigo. It did not give priority to establishing partnerships with businesses that could meet client demand for access to pay basic services such as food, fuel, clothing, or medicine. The agents responsible for setting up and maintaining the network were not familiarized with the new product, and as a result, 5,000 low-quality businesses subscribed to the network.
  - (iii) **Ineffective process for gaining access to the service:** Under the initial arrangement, all users, i.e., clients who would use the service for transactions, were required to fill out a form at any of Tigo's 50 offices across the country in order to get permanent service. A subsequent market study found this to be a major barrier to users who saw no need or latent benefit (or at least initially did not perceive one) in going through such a subscriber process due to the high transaction cost.
- 1.3 **Market study and pilot plan for local money transfers.** Given these results, a market study was conducted in late 2009 to look into uses, potential clients, market size, and products such as local and foreign remittances, methods of payment, and microcredit. Based on the results of the study, an international consulting firm with experience in mobile transactions in Africa was hired to develop a strategic business plan focused on channels or services that could serve as an “educational step” for users and indirectly channel balances in clients’ electronic wallets. The resulting proposed approach was to begin with local transfers, subsequently add mobile banking and payments for basic services, and ultimately offer international transfers, regular payments, and other services.
- 1.4 A pilot plan for local transfers was begun in May 2010, using a new product with competitive advantages based on low cost and immediacy of transfers. These features were aimed at covering the identified gaps resulting from the minimum fixed payment charged by remittance companies on small transactions, as described below. The market study revealed that, although people wanted to send small amounts more often, they tended to send their local transfers once per month, gathering as much as possible to send in a single transaction because remittance companies charged a minimum fixed fee up to certain amounts, which discouraged small transfers. With this in mind, a new product was created that carried a percentage-based cost and no fixed minimum payment, designed to be competitive

- in market segments where users wish to send small amounts of money several times per month. The product has limits of US\$2,000 per user per month and US\$500 per user per day, and the percentage-based cost scheme eliminates minimum transfer amounts.
- 1.5 **New business model.** The pilot experiment led to the development of a new business model for the product, which generates more transactions and makes it more attractive for distributors (agents), who obtain more attractive fees.
  - 1.6 The product also utilizes detailed market information identified in the study (as indicated in paragraph 1.3, particularly in regard to uses, potential clients, and market size), adapts the operating procedures, and helps create a more attractive network for local transfers and for businesses or points of sale. In addition, the smaller transaction amounts allow for better control of the initial phase of the product and its implementation among distributors, whose liquidity and capacity for managing transfers are key factors to be measured during the current phase.
  - 1.7 Building on the pilot experiment and the new approach, this project is based on a business model that uses the advantage of the technological platform of Mobile Cash Paraguay (Tigo's payment company), improved interfacing with a number of networks or entities, and extensive knowledge and handling of the distribution network. Tigo is currently building an ecosystem of mobile financial services in which the mobile network operator, in synergy with partner institutions at cash entry and exit points, forms a partnership with Paraguay's financial sector specialized in microfinance to achieve the results proposed here. The project addresses the problem of lack of financial access faced by microentrepreneurs and low-income individuals living in rural communities and remote areas not served by financial institutions. Through mobile telephony applied to a financial services access model by way of interfaces already developed with a number of formal financial institutions and others in progress, users will be able to bring up a specific menu from any mobile phone model connected to the Tigo network. Different options will be available, depending on the desired service, to handle loan payments, disbursements, balance inquiries, and other services available from the operator such as payments for basic services, local transfers, and regular payments.
  - 1.8 **Description of the business model.** The "Last Mile" business model is intended to consolidate the role of communications channel and to serve as a means for financial institutions to reach unbanked areas and provide users with access to services such as: (i) disbursements; (ii) loan payments; (iii) deposits; (iv) local transfers; and (v) payment for services. Expansion will be directly related to the interests of the partner institutions and the penetration needed in each area, but the target set by the project is to partner with businesses in 20 locations covering 100 points of sale in the first year, and 50 locations with 200 points of sale in the second year.
  - 1.9 **Current regulatory issues.** Mobile Cash Paraguay does not accept savings, and therefore it is not regulated by the Central Bank of Paraguay or the Superintendency of Banks. However, a process has been initiated to engage the regulatory authorities

in the service and business model, as well as in other international experiences. There is a demonstrable willingness on the part of both Mobile Cash Paraguay and the Superintendency of Banks to facilitate future regulation on the basis of the experience gained.<sup>5</sup> This situation points to the project's significant potential for helping to chart the course towards eventual regulation of mobile banking.

## II. PROJECT OBJECTIVES, COMPONENTS, AND ACTIVITIES

- 2.1 **Goal:** The goal of the project is to provide access to financial services for individuals in unbanked areas using mobile phones under the “Last Mile” business model (telephone operator – financial institution). The purpose is to implement mobile financial services by establishing a business model that links financial institutions and the telephony operator.
- 2.2 **Components:** In order to implement mobile financial services and establish a business model that links financial institutions and the telephony operator, the project has three components: (i) establishment of a structure for distributing services from the mobile payment platform; (ii) pilot test of the new “Last Mile” business model; and (iii) expansion of the “Last Mile” business model and development of the mobile savings product with a regulated financial institution.
- 2.3 **Component I: Establishment of the distribution structure.** The activities in component I will bring about growth in the sectors in which there is a real need for market penetration, where priorities will be established according to the needs of the end user and the microenterprises in the area. This component will finance the following activities:<sup>6</sup> (i) agreements will be established with the financial institutions, including conditions for their participation in the business model (financial institution – operator); (ii) the areas for penetration will be identified and a link will be established between the distributor and the points of sale that will join the distribution network; and (iii) a financial analysis will be conducted and the need for operating capital at the points of sale will be estimated.
- 2.4 It will also be important to work with the partner institutions to prioritize the areas where the service is expected to be more heavily used, based on Tigo's current relationships with area businesses that have been strengthened and where Tigo's commercial track record with those businesses can support the credit analysis of the microenterprises. At the same time, individuals can be shown how the business will work and how they can be a positive influence in their communities. This

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<sup>5</sup> The two parties showed willingness to coordinate at the meeting between the Banking Superintendent, Edgar V. Paredes, the directors of Tigo, and the analysis mission team, held on 30 September 2010 at the offices of Paraguay's Superintendency of Banks.

<sup>6</sup> These will include the following subactivities: (i) setting of conditions and signing of the contract with the partner institutions; (ii) mobile banking tests on the Giros Tigo menu with each partner institution; (iii) creation of prospects (locations and businesses) and selection of preapproved institutions; and (iv) analysis and evaluation of needs for operating capital at the point of sale.

component is based on Tigo's prior experience, adjusted to the objectives of this project, and will be carried out by the staff of Mobile Cash Paraguay.

- 2.5 **Component II: Pilot test for the new “Last Mile” business model.** The objective of this component is to implement the pilot test for the business model and then adjust and expand it in order to optimize the experience at the user level as well as at the business level. This component includes the following activities as part of the pilot test:<sup>7</sup> (i) measure the basic needs (of the institutions and clients) so as to ensure proper communication and education; (ii) verify that the mobile banking menu can be activated by each user (on his own mobile telephone) to connect to his banking institution, and that the experience is comfortable and trouble-free; and (iii) test different ways to ensure liquidity at service points (agents), including (a) own financing by the agent; and (b) provision of a line of credit to the business based on information shared about the point of service between Tigo and the partner financial institution. To that end, two locations with two different types of credit models will be chosen. In the first location, partnerships will be created with two businesses that have their own capital; in the second location, partnerships will be formed with two businesses without their own capital, and these will be channeled with the institutions as possible credit recipients in order to obtain the operating capital they need to work in the system.
- 2.6 **Component III: Expansion of the “Last Mile” business model and development of the mobile savings product with a regulated financial institution.** Based on the results of the pilot test, the objective of this component is to adjust the “Last Mile” business model and the technology where necessary in order to broaden its operation, expand geographical coverage, and promote entry into new market sectors such as savings. This component includes the following activities: (i) establish the conditions for implementing the business model<sup>8</sup> in at least 50 locations and 200 trained points of sale; (ii) determine the baseline, evaluate the business model, and systematize the lessons learned; and (iii) coordinate with a financial institution regulated by the Superintendency of Banks in order to accept savings deposits from the public, to develop a mobile savings product that meets the needs of small savers in Paraguay, to be tested in the market.
- 2.7 Once all the conditions are established for implementation of the business model, the project will move forward in the 50 locations set up by the operator and the

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<sup>7</sup> The following subactivities will be included: (i) selection of locations based on needs determined with the partner institution; (ii) visit and closing with the selected points of sale (signing of contract with Mobile Cash Paraguay); (iii) signing of contract between the point of sale and the financial institution; (iv) capital infusion; monitoring by the developer and the executive officer of the institution; (v) training of existing clients; (vi) training of new clients by the financial institution; and (vii) local communications plan (direct marketing).

<sup>8</sup> The steps needed to ensure that the model works properly include hiring of staff, training of users (partner institutions and end clients) at the point of sale, site development (signs, painting, etc), platform adjustments, etc.

partner institution to make the service available at 200 points of sale trained to meet client demand.

- 2.8 **Expected outcomes:** The following outcomes are expected upon project completion: (i) at least 45,000 people living in areas with low bank coverage will be using mobile financial services (loan payments, disbursements, payment for services, and transfers); (ii) at least 200 subscribing points of sale will be providing service in 50 locations that currently have no access to financial services, with an average of 250 transactions per month at each point of sale and a margin of about US\$150 per month per point of sale; (iii) 30% of points of sale will have their own operating capital versus 70% with capital financed by financial institutions, preferably microfinance institutions; (iv) the adoption rate (trained versus active points of sale) among points of sale and distributors and the retention rate<sup>9</sup> will be over 80%; (v) at least three financial institutions will be involved in the project; (vi) the “Last Mile” business model will be standardized and systematized; and (vii) a savings product will be evaluated and developed for implementation.

### III. PROJECT COST, FINANCING, AND EXECUTION PERIOD

- 3.1 This two-year project will have a total cost of US\$907,008, of which the Bank, through the Multilateral Investment Fund (MIF), will provide US\$300,000, the Andean Development Corporation (CAF) and Bank windows other than the MIF will provide US\$83,524,<sup>10</sup> and Mobile Cash Paraguay S.A. will contribute US\$523,484.

Component	Source of financing (in US\$)		
	TEC-IN	Counterpart	Total
Establishment of the distribution structure	400	10,808	11,208
Pilot test for the “Last Mile” model	27,671	18,872	46,543
Expansion of the “Last Mile” business model and development of mobile savings product	287,933	443,133	731,066
Dissemination and systematization, executing unit, monitoring and supervision, evaluation and auditing	67,520	26,280	93,800
Contingencies	-	24,391	24,291
<b>Project total</b>	<b>383,524</b>	<b>523,484</b>	<b>907,008</b>

### IV. EXECUTING AGENCY

- 4.1 **Mobile Cash Paraguay S.A.** is part of **Millicom International Cellular**, a provider of voice, data, cable television, and other value-added services to 34 million clients in emerging markets in Central America, South America, and

<sup>9</sup> Active users / subscribed users.

<sup>10</sup> In coordination with the Capital Markets and Financial Institutions Division (ICF/CMF).

- Africa that ranks first or second in 85% of its markets. Its leadership and major share in the Paraguayan market has enabled it to continue investing in the country. The company's dedication to the creation of innovative services and greater opportunities for access to technology for the largest number of Paraguayans possible has reduced the country's digital gap. In recent years it has also expanded its transmission network on a national scale, strengthened capacity, and increased the availability of its services to a top-ranking national coverage of over 442 locations. It has answered the challenge of expanding coverage to geographic areas of the country that have no telecommunications services. To date, more than 3,270,000 Paraguayans have chosen Tigo as their telecommunications provider, and the company serves 57% of the mobile telephone market.
- 4.2 At the present time, more than 30 Paraguayan executives in Europe, Latin America, and Africa are working in different Millicom operations—a strong indication of the company's investment in developing Paraguayan talent. Tigo Paraguay currently leads Millicom's mobile payment and mobile banking activities in Latin America. Its efforts in 2010 were focused on understanding client needs, creating innovative offerings to meet their expectations, and consolidating added value by introducing Giros Tigo as another service available to users, to increase their sense of responsibility and enable them to make electronic transfers.

## V. MAIN CONSIDERATIONS

- 5.1 **Description of the technology:** The proposed technology for handling data communications between mobile phones and the payment network is called Unstructured Supplementary Service Data (USSD). It will operate on a previously developed platform that enables communication from most mobile telephones by way of an interactive menu resident on the phone itself, with a mobile banking option. The technology will provide access to services such as balance inquiries for checking or savings accounts, loan payments, and disbursements. In the future, once experience and proper training create a mature organizational structure and user acceptance, the possibility of including planned savings will be studied. Communications using USSD are considered secure from origin to arrival at the Mobile Cash signaling card, since the data are encrypted at the network level and cannot be diverted from the route configured in the switch.
- 5.2 From a technological standpoint, the USSD operating mechanism is very similar to short message service (SMS) technology, the main difference being that it has no Short Message Service Center. This means that sent messages cannot be stored and forwarded, so if they cannot be delivered instantly, they are dumped. By skipping this intermediate storage step, interactive response times for USSD-based services are generally faster than SMS response times, so they tend to be used for real-time telephony and instant messaging services. Moreover, transactions handled on a single communications network offer the benefit of greater security.

- 5.3 **Integrating the technology with partner institutions.** Institutions with a high transaction volume can connect to the system through a socket interface<sup>11</sup> on an encrypted virtual private network (VPN)<sup>12</sup> using SSL encryption.<sup>13</sup> A user name and password are required for authentication. In addition to the security implemented for connecting an outside institution, other institutions are asking clients for new validations such as an additional PIN number.
- 5.4 **Focus on being a competitive channel.** After having considered operating directly in the financial sector, Tigo Paraguay has decided to make its mobile payment operations a competitive *means of payment* in the low-income and micro and small enterprise sectors.<sup>14</sup> Tigo has found mobile banking to be an efficient method by which end clients, as well as financial institutions specialized in designing and operating financial services, can carry out transactions from a mobile telephone, including loan payments, receipt of disbursements, balance inquiries for checking and savings accounts, and other services that the institutions consider appropriate. Tigo Paraguay operates on the principle that the public's confidence is not won through mass media alone, but rather with an education plan tailored to the specific market segment to be served (which will be carried out under component III as part of implementation of the business model). This project clearly targets the population that does not have full access to the financial services it needs but that financial institutions do not yet offer directly due to the high costs involved.
- 5.5 **The role of points of sale.** The profile of a desirable agent for the project is a business that has the capacity to absorb the demand of client transactions, and the minimum operating capital, working capital, and sufficient liquidity, of its own or with credit from a microfinance institution, to operate as an agent. These points of sale will become nonbank correspondents at strategic locations and areas with high client traffic in remote parts of the country.
- 5.6 **Beneficiaries:** By project completion, it is expected that at least 45,000 people living in areas with low financial inclusion rates will have access to mobile financial services (loan payments, disbursements, payment for services, and transfers) provided by three or more financial institutions partnered with the project. The project is also designed to bring financial and payment services to the

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<sup>11</sup> An abstract concept in which two programs (which may be on different computers) can exchange any data flow in a generally reliable and orderly manner.

<sup>12</sup> A virtual private network, or VPN, is a network technology that enables the local network to be extended over a public or uncontrolled network such as the Internet.

<sup>13</sup> A Secure Sockets Layer (SSL) is a cryptographic protocol that provides security for communications over a network, usually the Internet.

<sup>14</sup> In addition, in order to provide cash backing for the amount of electronic money placed in the market, a trust agreement has been put into place to manage funds with a local regulated bank. This arrangement makes it possible to maintain a 1-to-1 balance between the amount held in accounts by clients of Mobile Cash Paraguay and the amount being managed by an institution regulated by Paraguay's Superintendency of Banks. This trust agreement prevents the emergence of a parallel currency and ensures that Mobile Cash Paraguay cannot leverage the public's funds held with the service.

89 districts currently unserved by financial institutions, banks, or payment networks, by providing financial services (mobile banking, payment for basic services, and remote payments) to at least 10,000 people in those areas.

- 5.7 **Sustainability:** Through this project, Mobile Cash Paraguay aspires to penetrate areas as yet unserved by the Paraguayan financial sector, and eventually to build a sustainable distribution structure based on effective communication and education channels. To that end, it will seek to make services available on end clients' mobile phones that are practical in their daily life so as to improve their quality of life and make them feel part of the financial environment, with the potential for establishing (at regulated financial institutions) telephone-based savings programs in the future. The company also intends to bring the business model to other Tigo operations where it can be replicated and to learn from the experience, thereby building even stronger justification for its implementation, as will surely occur with this project.
- 5.8 **Dissemination of information.** The experiences and lessons learned from this project will be documented and disclosed in accordance with the policies of the Bank/MIF and Mobile Cash Paraguay. For that purpose, content will be developed and published in printed and electronic formats to describe the methodology used throughout project execution. It will include a log of every step taken during the two-year period, from start to completion. The staff of Mobile Cash Paraguay involved in project management have indicated their desire to take part in any dissemination activities (workshops, forums, conferences, meetings) organized in coordination with the Bank/MIF and in connection with the Technologies for Financial Inclusion Program (TEC-IN).
- 5.9 **Risks and mitigating factors:** The following risks and mitigating factors were identified during the project design phase: **Risk 1 – The cultural barrier:** The process of adopting a new mobile banking service is expected to reveal an adaptation and education gap. The project will mitigate this factor at the beginning of the project by studying and designing in-demand services that are simple to adopt and operate, to enable end users in Paraguay to adopt the model as they did with text messaging, which now has a high penetration rate (over 91% of the base). To that end, plans are in place (component III) to hire business boosters and developers to provide training at points of sale. **Risk 2 – Poor service by partner businesses or points of sale:** In order for the model to be viable, the partner businesses/agents have to make a profit with the service and must have the necessary liquidity at each point of sale. To mitigate this risk, training sessions, technical talks, and proper support will be provided so as to prevent network deterioration and promote proper management under the business model over time. **Risk 3 – Novelty of the business model.** As with the second risk, the project involves an innovative initiative targeted to a service channel that does not yet exist in the Paraguayan market, so the risks are not fully known. As a mitigating factor, the project was designed to take into account lessons learned from mobile payment initiatives in other countries as well as the Tigo Cash initiative, but it is based on a wide range of learning experiences from the company's early initiatives.

- 5.10 **Lessons for Tigo Cash and the microfinance sector.** Mobile telephony has not yet been used for banking purposes in Paraguay. Under this project, three basic pillars will be developed to generate new knowledge in technology for financial inclusion: (i) considerations on how to set up a business model that works for the mobile network operator, its distribution network, and multiple financial institutions; (ii) how to put together and implement a plan for educating the network of agents and end users; (iii) how to inform and work with regulators to develop supervised mobile banking services that are coordinated by the mobile network operator and its partner financial institutions, which will facilitate the development of future regulation based on shared information about practical experience. The successful implementation of these steps will solidify demand and set a benchmark for demonstrating that it is possible to increase financial inclusion in developing countries such as Paraguay through partnerships with multiple stakeholders, in which each profits and helps tailor services to end users who presently have limited access to the Paraguayan financial system.

## VI. PROJECT SUPERVISION AND IMPLEMENTATION

- 6.1 The project will be monitored by the Bank's Country Office in Paraguay, in accordance with the new risk- and performance-based project management (achievement of milestones) established by the MIF in April 2008. Milestones are activities or outputs that are critical for achieving the development objectives and should be identified by mutual agreement between the executing agency and the MIF. The milestones may be revised and rescheduled during project execution. The executing agency may also ask the Bank to modify the milestones provided their target date has not expired. The achievement of milestones does not exempt the executing agency from the responsibility of meeting the targets specified in the logical framework for the project.
- 6.2 **Disbursement by results:** Project disbursements will be contingent upon the achievement of milestones, which will be agreed upon between the executing agency and the MIF along with their means of verification. Achievement of milestones does not exempt the executing agency from the responsibility of meeting the project's objectives. Under the new risk- and performance-based project management model, project funds will be disbursed as per mechanism 1: an advance of approximately 30% of the MIF contribution will be made for execution of the project through achievement of milestone 1. Subsequent disbursements will be processed against presentation of evidence of fulfillment of the milestone, in accordance with the annual plan.
- 6.3 The first disbursement of MIF funds will be advanced to the executing agency after the agreement has been signed and the following conditions have been met, in addition to those established in the General Conditions of the technical-cooperation agreement to be entered into with the Bank: (i) the Bank has approved the project's annual work plan, including the first cycle of milestones; and (ii) members of the execution unit have been selected. The amounts of subsequent disbursements will

be calculated based on the needs of the activities planned for the period concerned. Funds will be disbursed at the request of the executing agency in order to proceed with the normal course of project execution, provided that there are no milestones pending as of the date of the request. To demonstrate this, the executing agency will submit evidence of achievement of milestones to the MIF before presenting the disbursement request. If milestones have not been met, the MIF will analyze the seriousness and take appropriate measures to prevent this failure from having an impact on project implementation and/or the achievement of project objectives. Supporting documentation for the disbursement requests submitted by the executing agency will be subject to ex post reviews.

- 6.4 **Procurement of goods and consulting services:** Goods and services financed with resources from the MIF contribution will be procured in accordance with the “Policies for the procurement of goods and works financed by the Inter-American Development Bank” (document GN-2349-7, as amended), the “Policies for the selection and contracting of consultants financed by the Inter-American Development Bank” (document GN-2350-7, as amended), and the guidelines issued by the MIF in the framework of those policies. Before any procurement may be carried out, the executing agency will deliver, for Bank approval, the initial procurement plan proposed for the project. This plan will be updated annually or whenever there is a significant change in the methods established for procurement or in the good or service to be procured. Each new version will be sent to the Bank for approval.
- 6.5 **Project status reports:** The executing agency will be responsible for submitting project status reports (PSRs) to the MIF within 30 days after the end of each six-month period or more frequently and on the dates set by the MIF, which will inform the executing agency at least 60 days in advance. These reports will follow a format previously agreed upon with the MIF and will contain information on project execution, accomplishment of milestones, outcomes achieved, and their contribution to completion of the project objectives in accordance with the indicators in the logical framework and other operational planning tools. The PSRs will also describe problems encountered during execution and outline possible solutions. Within 90 days after the end of the execution period, the executing agency will submit to the MIF a final PSR, which will highlight the outcomes achieved, the sustainability plan, and lessons learned.
- 6.6 **Financial supervision:** The executing agency will establish and maintain adequate financial accounts, internal control mechanisms, and filing systems for the project that are consistent with Bank/MIF rules and policies on financial management. An audit will be financed with MIF resources. The Bank/MIF will contract independent auditors to perform this audit and conduct reviews of procurement processes and the supporting documentation for disbursements according to the agreed upon schedule and modality. The MIF may modify the application and periodicity of these reviews depending on the results of reviews and/or subsequent risk analyses performed during the project execution.

- 6.7 **Evaluations:** Two evaluations—one midterm and one final evaluation—will be conducted by consultants contracted by the Bank. The midterm evaluation will be performed when 50% of the contribution has been disbursed or midway through the execution period, whichever occurs first. The midterm evaluation will: (i) determine to what degree the objectives, as defined in the logical framework, were achieved at the date of evaluation; (ii) identify whether any significant variations occurred in the execution of activities; and (iii) identify alternatives and strategies to help improve execution and thus increase the likelihood of achieving the project's expected outcomes. The final evaluation will be performed when the last group of milestones has been met and the execution period is over. It will include: (i) an analysis of actual outcomes relative to the baseline and targets of the logical framework; (ii) the impact of the project and potential expansion of the services developed; (iii) best practices and lessons learned; and (iv) the degree of sustainability of project-driven actions once the MIF contribution has concluded. This evaluation will be commissioned by the Bank with resources from the contribution. In addition, this project may be selected for an additional evaluation in coordination with the other projects in the Technologies for Financial Inclusion Program. This additional evaluation may review aspects of the project's impact on the low-income population that will benefit from the services.
- 6.8 **Closing workshop:** At least three months before the end of the project disbursement period, the executing agency will hold a closing workshop to be attended by the members of the project team, representatives of the beneficiaries and the sector, and any other individuals agreed upon with the Bank/MIF. The purpose will be to jointly evaluate outcomes, identify additional tasks to ensure the sustainability of project-initiated actions, and identify lessons learned and best practices.