IFC Mobile Money Study 2011

SRI LANKA





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Foreword

Financial inclusion—access to a range of financial services and products for everyone needing them, in a fair, transparent, and cost-effective manner—is a goal of IFC (International Finance Corporation) and a priority of the Group of 20 development agenda.

IFC has committed to achieving greater financial inclusion by 2013 by providing more diversified financial services and by deepening outreach to microclients and small and medium enterprises. IFC also helped support and shape the G20 global financial inclusion agenda that calls for the promotion of a range of financial services beyond credit—including payments, savings, remittances, and insurance.

More than 2.7 billion people in developing countries do not have access to basic formal financial services, such as savings and checking accounts. Many governments have made savings accounts widely available, but to make payments and transfer funds, the poor must often depend on costly and unreliable informal financial services. Low levels of financial inclusion also represent an obstacle to economic development.

Developing innovative methods of retail payments is essential to increasing financial inclusion. New technologies and new business models are opening new methods of retail payments, as well as bill payments and transfers of funds among people and businesses.

Mobile technology is a channel that, once in place, allows for the delivery of other low-cost financial services bringing banking to unbanked and underserved people. Mobile money—the transfer of funds using cell phones—is an innovative method for both individuals and small businesses to transfer money. Mobile money is becoming common in developed countries for small, frequent payments such as mass transit fees. In some developing countries, it offers an opportunity for unbanked people to pay bills and transfer funds without using cash. Some businesses use it throughout their supply chain.

Why has the development of mobile money systems been so successful in some countries, yet seem blocked in others? What can be done to encourage its development globally?

This report looks at the technology required and the business models used by mobile network operators, banks, and others in four developing countries—Brazil, Nigeria, Sri Lanka, and Thailand. It compares these countries with Kenya and Japan, which have successfully developed mobile money operations, and with the United States.

Perhaps more importantly, it offers a framework for a quick market study of a country to determine whether or what type of mobile money services might be developed commercially. It offers models of user perception and demand surveys, then develops a set of parameters—such as regulatory

environments, current access to financial services, and the requirements of potential mobile money service providers to run viable businesses—that can spur or block mobile money development. By using these survey techniques and examining the relevant parameters, a government or development agency can assess a country's potential for a successful mobile money business.

We hope this report will contribute to mobile money business development globally. It is intended for regulators, mobile network operators, commercial banks, microfinance institutions, telecommunications equipment and handset manufacturers, and others that could be involved in the development of mobile money businesses.

I would like to express sincere thanks to the government of the Republic of Korea for its support of this study through the Korean Trust Fund.



Peer Stein
Global Business Line Leader
IFC Advisory Services, Access to Finance

Acknowledgments

This study was commissioned to increase understanding of mobile money (m-money) and help address key issues in scaling up further development of m-money ecosystems globally.

First and foremost, we are grateful to the government of the Republic of Korea for its leadership in the area of information and communications technology for development, and for funding this study to promote the m-money agenda for the public benefit.

Intelecon Research and Consultancy Ltd of Vancouver was contracted by IFC (International Finance Corporation) to conduct the IFC Mobile Money Study 2011, including in-country fieldwork. Andrew Dymond, Steve Esselaar, and Sonja Oestmann authored the reports, assisted by the rest of the Intelecon team. The team also included Jenny Hoffmann from RiskFrontier Consulting (United Kingdom) and local research partners in each country: Antonio Bothelo of Diálogo Regional sobre la Sociedad de la Información (Brazil), Ike Moweto of Research ICT Africa! (Nigeria), Harsha de Silva of LIRNEasia (Sri Lanka), and Deunden Nikomborirak of Thailand Development Research Institute (Thailand).

We are also extremely grateful to our partnering m-money operators for their cooperation: Oi Paggo in Brazil (a new company, Paggo Soluçoes, has since been formed), eTranzact in Nigeria, Dialog in Sri Lanka, and TrueMoney in Thailand. Other organizations, companies, and individuals in each country gave generously of their time and knowledge, including the Central Bank of Brazil, the Central Bank of Nigeria, the Central Bank of Sri Lanka, and the Bank of Thailand. Appendix B of each country report lists the many people interviewed during the study; their participation is greatly appreciated.

The following IFC and World Bank colleagues in the respective countries provided local insights and liaison with the above-mentioned partnering institutions, and helped the team conduct meetings and field surveys: Alexandre Darze and Terence Gallagher (Brazil), Theophilus Adewale Onadeko (Nigeria), Asela Tikiri Bandara Dissanayake (Sri Lanka), and Frederico Gil Sander and Ratchada Anantavrasilpa (Thailand).

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Arata Onoguchi, Leila Search, and Piya Baptista
IFC Mobile Money Study 2011 Project Team

Abbreviations

2G	second generation
3G	third generation
ATM	automated teller machine
B2B	business to business
e-money	electronic money
e-payment	electronic payment
e-wallet	electronic wallet
G2P	government to person
GDP	gross domestic product
GKCCC	Golden Key Credit Card Company
GPRS	general packet radio service
ICTA	Information and Communication Technology Agency
IFC	International Finance Corporation
KYC	know-your-customer
LSM	living standard measure
m-banking	mobile banking
m-money	mobile money
m-payment	mobile payment
MNO	mobile network operator
NDB Bank	National Development Bank
NFC	near-field communication
P2P	person to person
POS	point of sale
SIM	subscriber identity module
SMS	short message service
STK	SIM Toolkit
USSD	unstructured supplementary services data

The average exchange rate for the year 2010 of 113.06 Sri Lankan rupee/1 U.S. dollar is used throughout.

Summary

Of the four countries included in the IFC (International Finance Corporation) Mobile Money Study, Sri Lanka has the greatest potential for mobile money (m-money) expansion. However, existing initiatives have not been able to take advantage of the m-money opportunities for three main reasons:

- **Public access to financial services is already good.** Sri Lanka has high bank account penetration, but low electronic payment access, such as debit and credit cards. The banking sector is dominated, in terms of the mass market, by government-owned banks. The sector is fairly inefficient, which partly explains the low automated teller machine (ATM) and point-of-sale (POS) device roll-out. As in other parts of the world, the roll-out of ATMs and POS devices will be a crucial future focus of Sri Lankan banks. The country's high bank account penetration means that m-money is unlikely to be adopted as aggressively as in Kenya, for example, where financial sector penetration was very low. Instead, m-money will have to be an additional, but more targeted, service.
- **The status of government regulation is uncertain.** In the absence of m-money regulations, the status of m-money has not been clear. For example, it has not been clear whether a bank account is a precondition for m-money or if an m-money account can be opened without a bank account. After the conclusion of this study in early 2011, new regulations released by the Central Bank of Sri Lanka allow electronic money (e-money) and e-money accounts by licensed service providers, provided they maintain a custodial account at a licensed commercial bank that agrees to perform the duties and responsibilities outlined in the legislation (see box 3.1).
- **Mobile phone coverage is growing, but the dominant player is losing ground.** Mobile access is rapidly increasing outside of Colombo. The sector is experiencing increasing competition and pricing pressure. Dialog, the incumbent operator, is growing more slowly than its competitors. The major focus for investments by the mobile network operators (MNOs) is rolling out the 3G network and not m-money.

Despite these uncertainties, there are several potential opportunities for m-money in Sri Lanka. Table S.1 provides details on each opportunity.

- **Government-to-person (G2P) payments.** A large government social welfare program (Samurdhi) provides small payments to 1.6 million households. The current system is highly inefficient and could be improved through an m-money system.
- **Payroll (informal sector).** Sri Lanka has a large informal sector. The post office maintains a substantial network of accounts; maintenance of these accounts is mostly manual, with

no Internet access. Using the post office's network of branches to provide efficient payroll or person-to-person (P2P) transfer services represents a major opportunity.

- **Business-to-business (B2B) payments.** Some retailers, such as Cargills, have already identified an opportunity in the agricultural supply chain for m-money services and are piloting an initiative with small farmers.
- **International remittances.** The Middle East region has the most Sri Lankan expatriates. In 2007, 58 percent of all international remittances were from the Middle East, a value of US$1.4 billion or about 4.3 percent of gross domestic product (GDP).

In addition, there is a major opportunity in public transport, where m-money could provide more efficient services quickly. However, this requires near-field communications (NFC) technology, a substantial investment in card readers, and NFC-enabled mobile phones or cards.

Based on the analysis of the m-money ecosystem parameters in conjunction with the potential markets for m-money, a set of recommendations was generated. Market opportunities were found in bill payments, P2P transfers, and public transport.

Dialog, Sri Lanka's largest telecommunications provider with a 50 percent market share, launched its m-money venture, eZ Pay, in 2007 in collaboration with National Development Bank (NDB Bank). At present, only a small number of transactions go through the system, mainly because there is no clear value proposition to the consumer and minimal marketing. This report details the opportunities available in the Sri Lankan market, some of which Dialog could realize. However, each of these opportunities comes with a set of key elements that must be implemented for Dialog to take advantage of them. These elements are detailed in section 5.

Table S.1 shows several market opportunities for m-money in Sri Lanka. The first is a mass market strategy aimed at providing a safe and convenient way to pay bills. At the moment, the middle and upper segments of the market are the targets of commercial banks and their mobile banking (m-banking) products. But at the lower end of the market, there is an opportunity to provide a faster and cheaper mechanism to pay bills. As an indication of the size of this market, the Sri Lankan post office currently handles over 6.5 million electricity bill payments per year.

Another mass market opportunity is in the public transport sector where there are over 10 million daily commuters. Leakage from the current ticketing system is massive—between 15 percent and 25 percent.[1] The challenge is to develop a common NFC phone standard (rather than a particular brand of phone, which then has to penetrate the market from scratch), something that has not yet been achieved anywhere in the world. Alternatively, marketing an m-money solution that includes a debit card (like the existing eZ Pay system) that is also a smart card and that can be used on the public transport system could capture a sizable market share. Such a smart card solution breaks out of a closed loop—in the sense that most smart cards used for public transport can only be used for public transport—and represents a significant opportunity.

[1] See de Silva 2010a.

Table S.1 Mobile Money Opportunities in Sri Lanka

Potential market	Assessment	Description	Challenges and obstacles	Potential transactions/ month
Bill payments (utilities)	▲	▪ Low ATM and POS penetration ▪ High bank account penetration ▪ Many Sri Lankans queue to pay bills	▪ Building an agent network to areas not covered by banking infrastructure ▪ Large retailer, Cargills, offers utility payments at stores	6,440,168
P2P transfers	▲	▪ Rural population ▪ High use of informal channels ▪ Expensive current offerings	▪ Mobile operators are short of money to invest ▪ No agent network ▪ Competition from financial sector	Unknown
G2P payments	●	▪ Large-scale government social welfare program (Samurdhi) uses an inefficient, paper-based system, which could be improved and made cheaper for the government using m-money	▪ Amounts being paid are very small	1,600,000
Payroll (informal sector)	●	▪ Relatively large informal sector	▪ Market the service to people who currently use money orders from the post office	4,708,418
Public transport	▲	▪ Large-scale opportunity with clear value proposition to replace existing system	▪ Needs NFC to succeed, requiring investment	264,000,000
B2B payments	●	▪ Growing opportunity for some large retailers ▪ Cargills is offering utility payments at point of sale	▪ Most businesses have little knowledge about m-money	—
International remittances	●	▪ The Middle East region has the most Sri Lankan expatriates: in 2007, 58% of all international remittances were from the Middle East, a value of US$1.4 billion ▪ Up to 85% of international workers carry or send money home as cash	▪ Most workers deposit pay directly into family bank accounts at home ▪ Well-established informal black market system (*hawala*) in place	—
Credit and microfinance	●	▪ User survey respondents showed an interest in m-money microloans, with approximately 30% suggesting the need	▪ Collaboration with government will be a challenge ▪ Credit market is dominated by Samurdhi Bank Societies, a very inefficient system: nearly 65% of microcredit—including loans for consumption, income subsistence, and microenterprise start-up capital—is provided through these government banks	—

Source: IFC Mobile Money Study 2011.

Note: ● = significant and unrealized opportunity for m-money: many of the preconditions for m-money exist, such as demand, supportive regulation, and an identifiable group of customers; ▲ = potential opportunity but there are substantial challenges; — = not available.

1 Introduction

Sri Lanka's population is still largely rural—nearly 85 percent lives outside of cities. There will probably be rural-to-urban migration in the future, which represents a potential opportunity to m-money providers. People working in cities often wish to repatriate their savings to their rural families conveniently and at a low cost.

Income is fairly evenly spread across Sri Lanka's provinces, with the exception of the Western Province where Colombo, the largest city, is situated. This province is richer than the others. Table 1.1 shows the percentage of the poorest 40 percent of the country's population living in each province.

Its GDP per capita places Sri Lanka near the average of comparable Southeast Asian countries (table 1.2). Malaysia is clearly an outlier with a considerably higher GDP per capita, but Sri Lanka's GDP is higher than that of the Philippines, where m-money has taken off dramatically. Poverty is less of a problem in Sri Lanka relative to countries like Bangladesh or Cambodia, where GDP per capita is much lower.

The key point is that Sri Lanka is at a different stage in its economic development and is unlikely to have the same socioeconomic conditions that made m-money in Kenya accelerate so rapidly.

Table 1.1 Distribution of Poorest 40 Percent of Sri Lanka's Population by Province (%)

Province	Poorest 40%
Central	13
Eastern	15
North Central	14
North Western	14
Sabaragamuwa	14
Southern	15
Uva	14
Western	9

Source: Department of Census and Statistics n.d.

Table 1.2 GDP per Capita in Various Southeast Asian Countries (US$)

Country	GDP per capita
Bangladesh	574
Cambodia	775
India	1,031
Philippines	1,746
Sri Lanka	2,041
Indonesia	2,329
Thailand	3,940
Malaysia	6,897

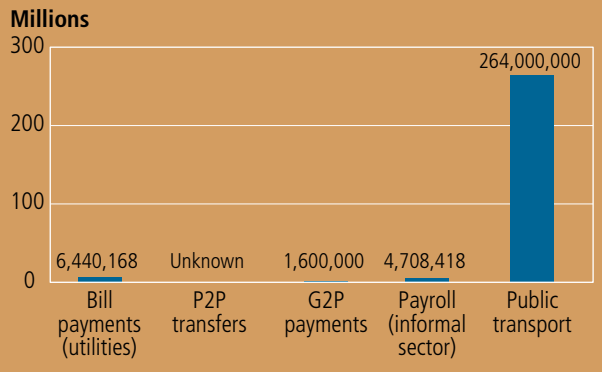
Source: IMF 2009.

Demand Perspective 2

The potential market segments for m-money described in table 2.1 were investigated. Where appropriate and possible, additional potential applications were also examined. Figure 2.1 shows estimates of total monthly volumes (not value) of transactions in five of the potential market segments. Because m-money must compete with both traditional payment methods and other e-money options, it is unlikely to be able to capture all of this potential.

Depending on data availability, the size of each of the demand markets was estimated to establish the relative size of the m-money opportunity.

Figure 2.1 Potential Monthly Transactions in Key Mobile Money Market Segments in Sri Lanka



Source: IFC Mobile Money Study 2011.

Table 2.1 Potential Mobile Money Market Segments

Market segment	Description
Bill payments (utilities)	In developing economies, it is common to pay bills by queuing outside the utility company. Although this may be a niche market, the value proposition is to provide a convenient, safe, and fast mechanism to pay bills.
P2P transfers	The success of Kenya's M-PESA indicates that there is a large unmet demand in transferring money between people.
G2P payments	Governments make regular payments to at least 170 million poor people worldwide.[a] The value proposition is to provide a more cost-effective and time-saving service to citizens.
Payroll (informal sector)	This segment might overlap with the P2P market, but is a more specific opportunity for an m-money application allowing small businesses in the informal sector to pay their staff.
Public transport	The success of NFC technology in Japan indicates that there is potentially a massive market, particularly for NFC-enabled phones.
B2B payments	B2B payments in rural areas beyond the reach of banks are difficult and handled mainly by cash or check. M-money could provide mobile payment capabilities at each stage along the value chain.
Retail payments	Cash is less secure than e-money. Consumers may find paying with an NFC-enabled card or phone more secure and more convenient than using cash.

Source: IFC Mobile Money Study 2011.

a. Pickens, Porteous, and Rotman 2009.

Bill Payments (Utilities)

In Sri Lanka, electronic bill payments are a burgeoning industry. Existing bill payment mechanisms are largely aimed at higher-income groups (LSM 6 and above).[1] For example, many commercial banks offer m-banking services (including some bill payments), but none of the commercial banks interviewed plan to expand this offering beyond their customer base. However, Cargills, a convenience store network, currently takes payment for utility bills for a small fee at its convenience stores: for paying a water bill, it charges 0.2 percent of the value of the bill; for all other bill payments, it charges SL Rs 15 (US$0.13).

Person-to-Person Transfers

Given that more than 75 percent of Sri Lankans have bank accounts, it is not surprising that a significant percentage use traditional bank accounts to transfer money. The Middle East represents the region with the most Sri Lankan expatriates. In 2007, 58 percent of all international remittances were from the Middle East, a value of US$1.4 billion or 4.3 percent of GDP. This volume of money transfer represents a major potential opportunity for m-money and was identified as a potential for m-money by survey respondents.

Table 2.2 shows that official remittances coming into Sri Lanka (not counting the monies being transferred using the informal *hawala* system) grew threefold from 2000 to 2007.

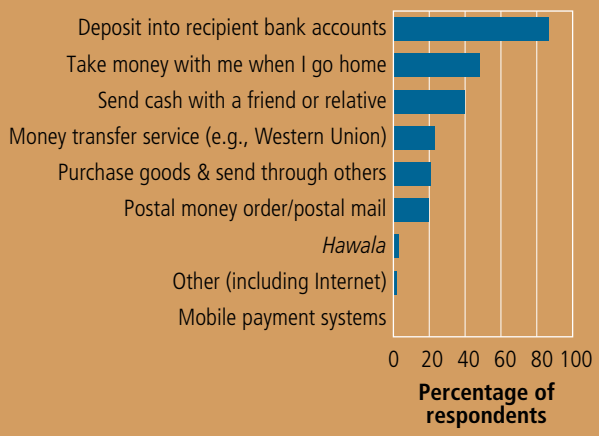
Figure 2.2 shows that of the Sri Lankans living overseas, nearly 50 percent still take money home physically, and 40 percent use friends and relatives to deliver money. Domestic workers tend to transfer money to family using bank tellers (63 percent) or ATMs (14 percent), as indicated in user survey responses. Multiple methods are used to transfer money.

Table 2.2 Formal Private Remittance Transfers from the Middle East, 2000–07

Year	Value		As % of all remittances to Sri Lanka
	Million SL Rs	US$	
2000	55,252	489	63.0
2001	62,680	554	60.8
2002	75,579	668	61.4
2003	77,579	686	56.8
2004	87,871	777	55.5
2005	111,179	983	56.2
2006	128,282	1,135	57.1
2007	160,502	1,420	58.0

Source: Central Bank of Sri Lanka annual reports.

Figure 2.2 Percentage of Overseas Sri Lankans Reporting Various Means of Remittance Transfer



Source: LIRNEasia 2009.

Note: Multiple selections were allowed.

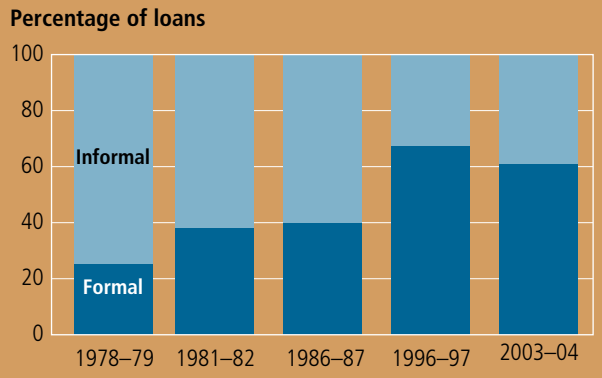
In a recent survey by LIRNEasia, a Sri Lankan think tank, demand for domestic remittances was estimated for both Thailand and Sri Lanka. Given Thailand's higher financial services penetration (bank accounts, ATMs, etc.), it is not surprising that there is a substantial contrast between the amount of Sri Lankan domestic migrants who physically take money home—85 percent—compared with only 22 percent in Thailand.

[1] Living standard measures (LSMs) are segmentation tools used in consumer marketing as a wealth proxy, calculated on ownership of household goods/assets and the degree of urbanization. The LSM categories range from 1 (very poor and rural) to 10 (wealthy and urban).

Formal versus Informal Transfers and Loans

Getting accurate statistics on formal versus informal money flows is difficult. The Central Bank of Sri Lanka conducts a consumer finance and socioeconomic survey about every five years. The 2003–04 survey[2] shows that informal loans have been declining since the mid-1980s compared with loans from the formal sector (figure 2.3). Even so, the informal sector is large, with about 39 percent of loan origination. If the movement of money outside the country using the *hawala* system is added, it is even larger.

Figure 2.3 Percentage of Loans Issued by Formal and Informal Institutions



Source: Central Bank of Sri Lanka, Consumer Finance and Socioeconomic Surveys.

Government-to-Person Payments

Samurdhi

Samurdhi is Sri Lanka's main poverty alleviation program; it distributes grants and microloans. It is a government program introduced in 1994 and established by the Samurdhi Authority of Sri Lanka Act of 1995. Samurdhi distributes monthly payments of SL Rs 400–1,000 (about US$3.50–US$8.80), to 1.6 million families. For its loans, Samurdhi uses a passbook system; repayments are made at Samurdhi offices or collected on the doorstep.

[2] No survey had been released for 2008–09 as of this writing.

To modernize the system (i.e., increase efficiency), the eSamurdhi Project has been launched by the Information and Communication Technology Agency (ICTA) of Sri Lanka.

Information and Communication Technology Agency

ICTA is the single high-level coordinator involved in information and communication technology policy and e-government in Sri Lanka. It is wholly owned by the government of Sri Lanka and is the implementing organization of the e-Sri Lanka Initiative, the country's overarching electronic development project that harnesses information and communication technologies to achieve socioeconomic development. Major donors include the World Bank.

ICTA's focus is on the interoperability among different government services and organizations. It has created a gateway or portal for electronic information and electronic interactions with government, generally referred to as the Lanka Gate initiative.

Lanka Gate is a messaging platform and portal that provides a short code for all government-based information services, such as railway timetables. The vision is to integrate all the banks and government departments, as well as include a mobile payment platform linking to the national central switch.

ICTA is working on several projects, including piloting a credit card payment system as part of the online vehicle license registration process.

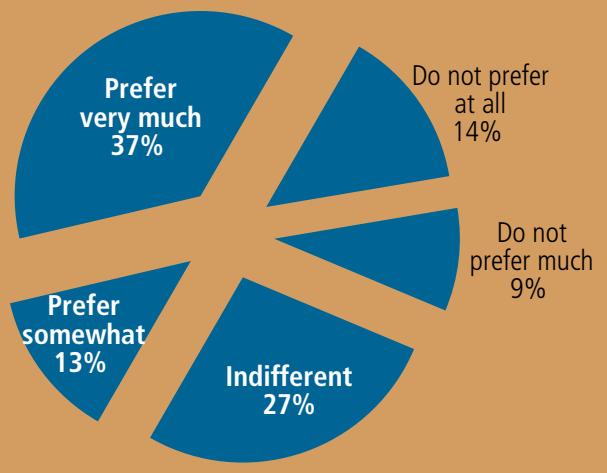
Public Transport

Sri Lanka's massive public transport system offers an opportunity for a faster, more reliable payment system. Because there is little rail infrastructure, buses are the primary means of transportation. According to LIRNEasia (2010), 10 million commuters travel daily on 18,000 buses.

The current ticketing system is mainly manual and operated by both private and public companies. Public (government-owned) companies lose

approximately 15 percent of the fare in transit, and private companies lose approximately 25 percent in transit. A portion of the leakage is due to fraud, but a considerable amount is due to the length of the manual payment process, whereby conductors are not able to complete all the transactions necessary in the time available. A large percentage of people surveyed indicated that transport was one of their common expenses. A fairly high percentage of commuters (37 percent) would prefer a mobile phone–based ticketing system (figure 2.4). The success of eChanneling, in which people can make and pay for doctor appointments over their mobile phone, means that consumers already have some comfort with using mobile phones to make purchases.

Figure 2.4 Degree of Commuter Preference for Mobile Phone–Based Ticket Sale and Purchase System



Source: de Silva 2010b.

To combat the fare leakage, two solutions are being considered: first, a smart card using an embedded chip, and second, a mobile phone equipped with NFC technology so payment can be made by swiping over a receiver.

Other

Business-to-Business or Business-to-Employee Transfers

eChanneling is a unique product in Sri Lanka; it is a system that semi-automates booking doctor appointments. Using eChanneling, a mobile subscriber (all three major mobile providers offer this service) phones the eChanneling call center and books an appointment with the relevant doctor. Doctors are allied to a particular hospital. The hospital and doctor's consulting fee, an eChanneling fee, and a small transaction fee for the MNO are deducted from the subscriber's airtime balance (prepaid or postpaid). The MNOs charge a premium rate for the phone call, but nearly the entire fee goes to eChanneling and the hospital and/or doctor. eChanneling charges a transaction fee of SL Rs 120 (about US$1) for a SL Rs 1,000 (about US$9) medical bill (the average size of an eChanneling bill).

In our user survey, many m-money users knew about or used eChanneling, but only a few nonusers did. eChanneling's primary target market is Sri Lanka's 500,000 upper-class families, and its secondary market is the middle class. The program averages 3,000 transactions per day on its mobile platform, and 5,000 more transactions occur via the Internet.

Microfinance and Microinsurance

Microfinance

The microfinance sector in Sri Lanka is dominated by Samurdhi Bank Societies. Nearly 65 percent of microcredit, including loans for consumption, income subsistence, and microenterprise start-up capital, is through the government's Samurdhi Program. Of these loans, about 20 percent are less than SL Rs 20,000 (US$177) and almost 65 percent are less than SL Rs 50,000 (US$442) (SAMN n.d.). In the user survey, about 30 percent of respondents expressed a need for m-money services to provide microloans.

Microinsurance

The microinsurance industry reaches 1.46 percent of the population and is offered by a limited number of institutions. The target market for insurance products is the middle and upper classes, and nearly all companies have avoided targeting the lower classes (ADB 2010).

Retail Sector: Cargills

Cargills Food City (part of the Cargills Ceylon Group) has 140 outlets across 19 districts, consisting of Cargills Food City supermarkets, Cargills Express convenience stores, and Cargills "Big City" super stores.

Cargills's vision is for each store to be a "convenience center" for all of a family's needs. As such, Cargills offers payment services for several utility bills through its Food City network. For a water bill, it charges 0.2 percent of the value of the bill. For all other bill payments, it charges SL Rs 15 (US$0.13)

To supply its Food City stores with fresh produce, Cargills has set up a supply network of about 10,000 farmers. To ensure quality, Cargills pays the farmers approximately 20 percent more than they would receive at the market. These payments are deposited directly into bank accounts—although in remote areas, cash is used.

To make up for the 20 percent premium, Cargills has implemented a supply chain management system (e.g., using crates and not bags), which has cut down on waste by 40 percent. Cargills employs field officers who confirm the crops, times of delivery, quantity, and quality by visiting farms at various times of the year. By managing the farmers directly, Cargills reduces the need for intermediaries, and thus further reduces the cost of supply.

Cargills has also started supplying farmers with fertilizer and seeds as part of its supply management program at a wholesale (or even subsidized) cost; it also gives its supplying farmers short-term loans for capital equipment.

Cargills is discussing an m-money pilot project with Dialog to increase efficiency and convenience for its entire network of farmers (eliminating the need for a special trip to a bank) and as an added convenience to farmers who live far from bank branches. Of the respondents surveyed, 67 percent said they were familiar with closed-payment systems such as prepaid cards and a similar mobile-based system has good chances for successful application.

Post Office

The Sri Lankan post office has approximately 4,500 outlets, of which 160 are computerized; it is currently undergoing a major computerization drive. The remaining post offices operate manually. Post offices exist in all districts and provinces in Sri Lanka.

Besides delivering the mail, post offices maintain accounts for government pensions for 811,194 former employees, and accept 6.5 million electric bill payments from nearly one-third of all Sri Lankans (table 2.3).

Table 2.3 Volume of Financial Services Transacted at Post Offices

Province	Government pension accounts maintained	Electricity bills paid
Central	95,034	1,085,527
Eastern	7,554	289,805
North Central	33,484	344,178
North Western	101,949	1,962,122
Northern	0	288,591
Sabaragamuwa	59,916	814,481
Southern	140,469	683,610
Uva	24,713	366,017
Western	348,075	667,565
Total	811,194	6,501,896

Source: Sri Lanka Post Office.

The government transfers funds into post office accounts, where retirees can claim their funds with the proper identification. Post office employees may even deliver the cash payments to retirees in remote areas as part of their rounds.

Electricity bill payments data are placed on a compact disc and uploaded daily from central branches because most post offices do not have Internet or intranet connectivity.

The main challenge in expansion is that the post office does not have a dedicated managerial role

to handle bill payments or expand the products it offers at its branches. New products and refinements to products take a long time to work through the bureaucracy. Some banks, both government and privately owned, are using the post office network, including HSBC Bank and the National Savings Bank, but these are mainly as stand-alone operations, and infrastructure (such as computers) is provided by the bank.

3 Parameters of the Mobile Money Ecosystem

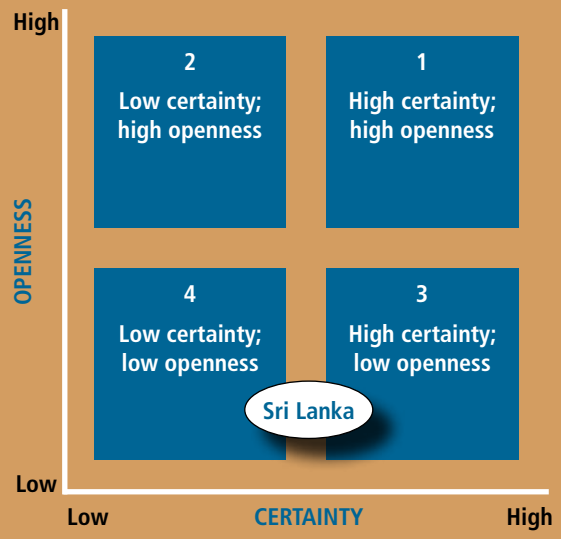
A set of parameters that affect the roll-out of an m-money system have been identified through a review of existing literature and refined during the field visits. Table 3.1 on the next page provides an overview of the parameters selected. The following sections provide an analysis of relevant parameters in Sri Lanka.

Enabling Regulation

Summary Assessment

There is some confusion about the regulatory environment for m-money in Sri Lanka. For example, the chief executive officers of the two main mobile operators believed that only a bank-led model of m-money was allowed by the Central Bank of Sri Lanka; in fact, the regulator indicated that a telecommunications company–led model is allowed. The Central Bank recognizes the need for greater certainty, and specific m-money regulations are pending (see box 3.1 for update). Nevertheless, they are accepting applications for licenses to operate m-money businesses. The lack of formality, however, contributes to a lack of certainty. Since the openness to new entrants on the part of the Central Bank has not translated into actual operational businesses, apart from Dialog, it is difficult to claim that there is a high level of openness. Consequently, Sri Lanka is assessed between Positions 3 and 4 in figure 3.1.

Figure 3.1 Sri Lanka's Mobile Money Market in the Porteous Regulatory Environment Model



Source: IFC Mobile Money Study 2011, based on Porteous 2006.

Two Schemes Approved by the Central Bank of Sri Lanka

The Central Bank's initial preference was that an "e-wallet" be linked to a bank account. After discussions with Dialog revealed that people did not necessarily want to open a bank account, a second scheme was proposed. The second scheme issues an e-wallet that must be mirrored by funds in a custodian account, which is held by the mobile operator and can bear interest for the mobile operator. Under this scheme, the Central Bank must

Table 3.1 Parameters Affecting the Success of Mobile Money Services

Category	Parameters			
Socioeconomic context	Population Poverty Urbanization; rural population	GDP/capita GDP by region Gini coefficient[a]	Geographic area	Remittance flow
Regulation	Clear and risk-based regulatory framework M-money license requirements Obstacles to international remittances	Know-your-customer regulation Bank outsourcing Mandatory services banks must offer	Agent regulation Interoperability requirements Regulations on new branches	ID system Pricing restrictions on accounts Level of expensive requirements
Existing access to financial services	Reach of networks/agents Informal financial access Competitiveness of banking industry	Penetration/use of cards Nonbank provision of financial services	Penetration/use of prepaid cards Cash-electronic transaction ratio (use of cash)	Internet banking usage Unbanked population
Existing mobile market situation	Population penetration/ coverage Churn[b]	Geographical coverage Level of fragmentation of industry	Level of competition	3G penetration/usage
Potential demand	Bill payments B2B transfers	Public transport Credit and microcredit	P2P transfers International remittances	G2P payments Savings Retail payments
Retail sector	Retailers with national coverage	Level of fragmentation	Postal network	Other distribution networks
Payment system	POS terminal penetration	Mass payment acceptance	Card penetration Dominant payment methods in the economy	National switch[c] Third-party payment processors
Pricing	Distortion through intervention/regulation	Banking services pricing		
User perceptions	Trust in mobile operators versus banks	Willingness to pay for m-money service	Cultural factors	

Sources: IFC Mobile Money Study 2011; CGAP.

a. The Gini coefficient is a measure of the inequality of a distribution, with a value of 0 expressing total equality and a value of 1 maximal inequality.

b. "Churn" in the telecommunications industry means customers move from one network operator to another.

c. "National switch" here means an online interbank fund transfer system.

approve the mobile company as an agent, and a bank must be able to provide an audit trail for the custodian account.

Regulations in draft form were sent out for comment with the deadline of October 18, 2010 (see box 3.1).

Multiple Types of Deposit-Taking Institutions

There are several types of financial institutions in Sri Lanka, authorized by disparate acts that govern the sector, including the Samurdhi Authority of Sri Lanka Act of 1995, the Agrarian Services Act

Box 3.1 Developments in Mobile Money Regulations

In March 2011, the Central Bank of Sri Lanka approved two guidelines—one regarding bank-led m-payment services, and the other custodian account–based m-payment services—enabling payment schemes under the leadership of either a bank or a telecommunications company.

Under the bank-led scheme, licensed commercial banks can offer three types of m-payment services to their account holders:

- **Basic**—provides account information, but not fund transfers
- **Standard**—basic services plus fund transfers including bill payments, fund transfers, and third-party transfers
- **Extended**—basic and standard services, plus the ability to deposit and withdraw though agents of respective banks

Banks that are not licensed commercial banks can provide only the basic type of m-money services.

Under the guidelines for the telecommunications company–led scheme, a telecommunications company can provide e-money services—specifically, an e-wallet that must be mirrored by funds in a custodian account, held by and earning interest for a mobile operator at a licensed commercial bank. The Central Bank of Sri Lanka must approve the mobile company as a licensed service provider (under the guidelines for service providers of payment cards), and the custodian bank must agree to perform a set of duties for account operations, including audits, reporting, and formulating know-your-customer and customer-due-diligence procedures. Licensed service providers (mobile operators) can appoint merchants to perform authorized functions such as cash-in/cash-out.

M-payment services must only be in Sri Lankan rupees and can only be used for domestic transactions.

Sources: Central Bank of Sri Lanka 2011a, 2011b.

of 1979, the Banking Act of 1988, and the Banking Amendment Act of 2006.

The many different types of financial institutions make consistent regulation difficult. For example, an institution accepting deposits under the Samurdhi Act is not regulated by the Central Bank. Consequently, the various acts are being harmonized. For future license applications, and to ensure uniformity of regulation, the Central Bank of Sri Lanka has set up the Inter-Regulatory Council so that any new deposit-taking institutions are authorized and regulated by the Central Bank.

Know-Your-Customer Regulation

A national identification card exists in Sri Lanka. All Sri Lankans are required to apply for it on their 16th birthday and to carry it with them at all times. Sri Lanka has not adopted an incremental know-your-customer (KYC) process.

M-money providers are required to comply with the same KYC requirements as banks. The latest regulations from the Central Bank for KYC require the following (Central Bank of Sri Lanka 2009a):

- Customer's name from an original document issued by an official authority
- Customer's permanent mailing address and supporting evidence confirmed through correspondence
- Authenticity and integrity of the identity documents confirmed by the bank
- Independent verification of introducer's address.

Agents

Sri Lanka has been one of the most liberalized markets in South Asia in terms of agents' ability to work on behalf of banks. Even so, Dialog had to overcome a number of bureaucratic hurdles. To become an agent, it needed approval from the board of the Central Bank of Sri Lanka. This requirement has subsequently been relaxed for agents that have been audited by a bank to ensure

compliance with KYC anti-money-laundering regulations. With the exception of bill payments through retail stores, agents have not taken advantage of the low barriers to entry. These financial services can be performed by agents in Sri Lanka (CGAP 2009):

- Private operators can provide financial services at post offices.
- Banks can formally contract with companies as banking agents.
- Agents can receive and forward applications to open accounts.
- Agents can open accounts on behalf of banks.
- Agents can receive payments for taxes, utilities, and the like.
- Agents can accept funds for deposit to client accounts.
- Agents can pay withdrawals from client accounts.
- Agents can receive and forward loan requests.
- Agents can collect loan payments on behalf of banks.

Note that agents cannot evaluate credit and approve loan requests on behalf of banks.

Conclusion

The m-money environment in Sri Lanka is uncertain. On the one hand, the Central Bank is open to m-money applications and prepared to modify its requirements based on feedback from licensees. On the other hand, the Central Bank has not released formal m-money guidelines, particularly regarding agents and their role in the m-money ecosystem. The uncertainty is likely to have an impact on the commitment of m-money providers.

Existing Access to Financial Services

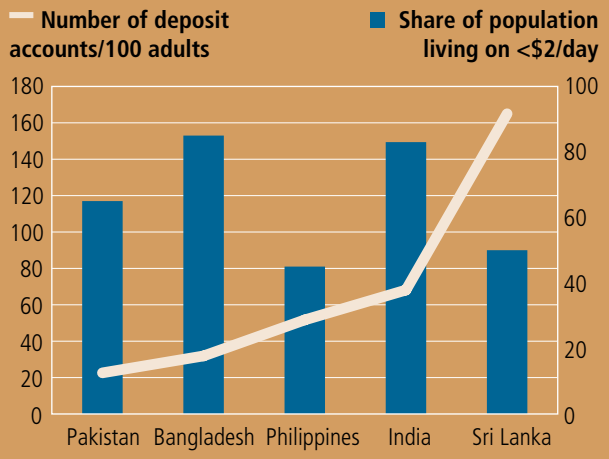
Formal versus Informal Access

Compared with other South Asian countries, Sri Lanka scores well on its financial inclusiveness, one reason being the government banks' mandate to increase financial inclusion.

Sri Lanka has a substantially smaller economy than nearly all its neighbors. Whereas the regional median in South Asia is 318 accounts per 1,000 adults, Sri Lanka scores 1,650 accounts per 1,000 adults (CGAP 2009)—more than 100 percent penetration (figure 3.2). However, since many people have more than one account, this translates into an actual bank account penetration of 59 percent (table 3.2).

Another measure of broad access to bank accounts is account size (figure 3.3). A relatively large

Figure 3.2 Poverty Rates and Bank Account Penetration in Selected South Asian Countries



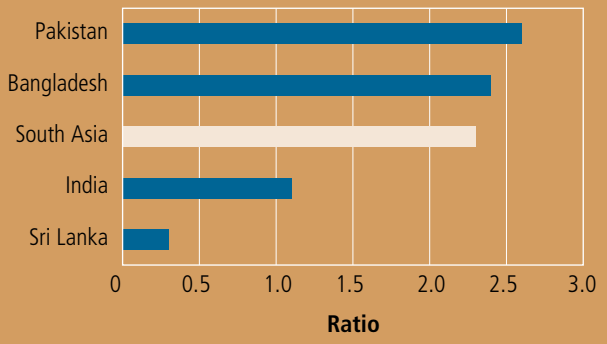
Source: CGAP 2009.

Table 3.2 Access to Formal Financial Sector as a Percentage of Country Population

Country	% of population
Bangladesh	32
India	48
Pakistan	60
Sri Lanka	59

Source: World Bank 2009.

Figure 3.3 Ratio of Average Bank Account Size to Income in Selected South Asian Countries



Source: CGAP 2009.

deposit balance is indicative of the general level of income and the probability that banks are less likely to serve a broad market. In Sri Lanka, the ratio of account size to income is lower than comparable South Asian countries. Banks in Sri Lanka serve a broader market than in other countries in the region.

Market Concentration

The retail banking sector in Sri Lanka is dominated by three government-owned banks: the Bank of Ceylon, the National Savings Bank, and the People's Bank. All have a mandate to extend their branch network to rural areas. They are guaranteed by the government[1] and perceived as being risk-free providers of savings accounts. The government banks have almost exclusive access to large-scale retail savings as a cheap source of funds allowing wide margins. This tends to encourage inefficiency as well as allowing the banks to cross-subsidize an uneconomic branch infrastructure.

Sri Lanka has three categories of banks: licensed commercial banks, licensed specialized banks, and regional development banks. The 21 state-owned banks that fall under these three licenses constitute 48.2 percent of the assets of the banking system. The 13 state banks licensed as commercial banks contributed 68.2 percent of the total growth in banking sector assets. Two of the state commercial banks have a 41.2 percent share of the assets in the licensed commercial banks sector. State-owned licensed specialized banks represent nearly 84.5 percent of the assets of the licensed specialized bank sector (Central Bank of Sri Lanka 2009c).

Because of the dominance of government-owned banks, commercial banks target niche markets, usually the middle- to upper-income segments. Commercial banks want to expand their range of services to their existing customer base rather than expand their base by competing with the government-owned banks in the lower-income market.

In December 2008, the Central Bank of Sri Lanka placed a large private bank, Seylan Bank, under state custody because its subsidiary, Golden Key Credit Card Company (GKCCC), went bankrupt. GKCCC was a pyramid scheme. As a result of the GKCCC debacle, the Central Bank has been cautious about nonbanks participating in the financial system and the risks of innovations such as m-money. Its focus has been mainly on ensuring that the existing financial services sector is healthy.

Banks

Most of the banks interviewed perceived m-money as m-banking. All banks see m-money/m-banking as a niche market that is an additional channel for services for existing customers. The user survey indicated a general lack of awareness about m-money as well as of the distinctions between m-money and m-banking.

Nearly all the major banks have some kind of m-banking bill payment scheme under consideration. For example, the National Savings Bank hoped to begin a pilot program offering bill payments and introducing insurance premium collection using the mobile application on the unstructured supplementary services data

[1] The People's Bank received four capital tranches from the government of Sri Lanka between 2004 and 2008 to meet its capital adequacy requirements of 10.5 percent.

(USSD) channel. They planned to use a third party to manage relationships with the operators to provide the channel. The Bank of Ceylon and Nations Trust Bank also indicate they are looking at m-banking.

Automated Teller Machines

Sri Lankans have higher access to bank accounts than their peers in neighboring countries. However, their access to electronic accounts is lower, with only 1,876 ATMs across the country, most of them concentrated in the Colombo area. The top four banks have 42 percent of all ATMs and 50 percent of these are based in the Western province (table 3.3). User survey findings show that ATMs are highly popular for cash withdrawals, but less used for bill payments and fund transfers. Further, existing users of m-money services in the survey also had a higher percentage of ATM use than nonusers.

Table 3.3 Number of ATMs at Top Four Banks by Province

Province	People's Bank	Seylan Bank	Hatton Nat'l Bank	Bank of Ceylon	% of all ATMs
Central	34	10	27	14	11
Eastern	23	4	14	3	6
North Central	18	4	8	7	5
North Western	26	5	14	7	7
Northern	9	5	10	5	4
Sabaragamuwa	17	7	15	8	6
Southern	36	4	19	12	9
Uva	15	2	7	6	4
Western	101	58	159	72	50
Total	279	99	273	134	100

Source: Commercial banks' Web sites.

Point-of-Sale Devices

The situation with POS device roll-out is similar. There are 24,977 POS devices in Sri Lanka, representing a penetration of 117.2 per 100,000 inhabitants. Most POS devices are located around Colombo. This POS penetration is dramatically lower than the average for developing countries—170 per 100,000 inhabitants; 2,088 per 100,000 is the average for developed countries.

Credit and Debit Cards

The credit card market in Sri Lanka is nascent. In the fourth quarter of 2009, there were more than 4.7 million transactions, representing a value of US$154 million and an average transaction value of US$36 (figure 3.4a). In contrast, the number debit card transactions was just under 1 million for a total value of US$5.7 million and an average transaction value of US$4.5 (figure 3.4b).

Credit cards are clearly focused on the upper end of the market, where people are able to make large-value transactions. Debit cards are targeted at the middle-income market. Even with the high bank account penetration, electronic payment penetration is low with low debit card use, low credit card use, low POS penetration, and low ATM penetration.

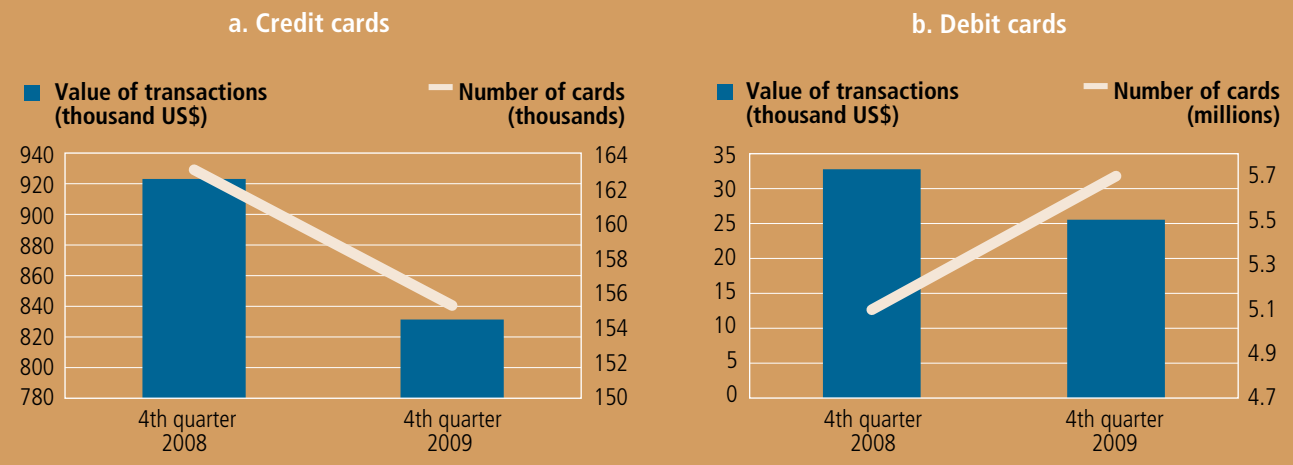
The user survey shows a lack of awareness and financial literacy with respect to POS, debit, and credit cards.

The lack of electronic payment mechanisms represents a significant opportunity for m-money. Rolling out a cost-effective, secure, and accessible payment mechanism would offer substantial advantages to the average Sri Lankan.

Existing Mobile Access and Market Situation

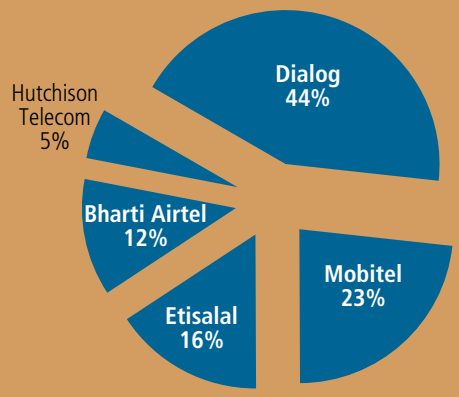
The mobile phone sector in Sri Lanka is quite competitive, with five mobile operators. Dialog, Etisalat, and Mobitel are the main operators. Airtel (owned by Bharti India) is increasing its subscriber base rapidly (though its market share currently remains low) (figure 3.5).

Figure 3.4 Credit and Debit Cards: Number of Cards and Value of Transactions



Source: Central Bank of Sri Lanka 2009.

Figure 3.5 Subscriber Market Shares of Sri Lanka's Mobile Operators



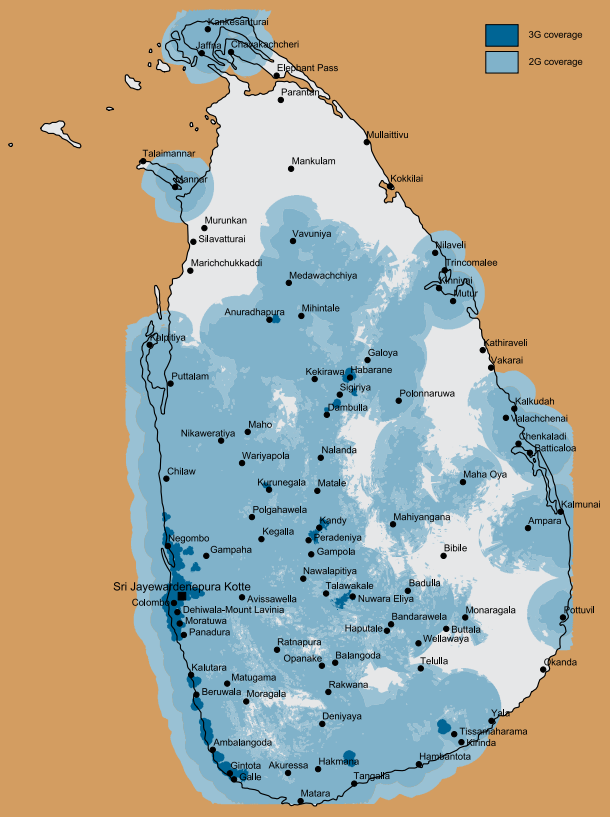
Source: Dialog 2009.

Network 3G services have been aggressively rolled out in Sri Lanka. Dialog has the largest 3G network and significant investments are being made by competing operators, such as Etisalat.

Figure 3.6 shows 2G and 3G coverage in Sri Lanka. As the map indicates, 3G is concentrated in the western part of the country, specifically around Colombo.

Outside of 3G, Sri Lanka continues to experience high mobile subscriber growth. The compound

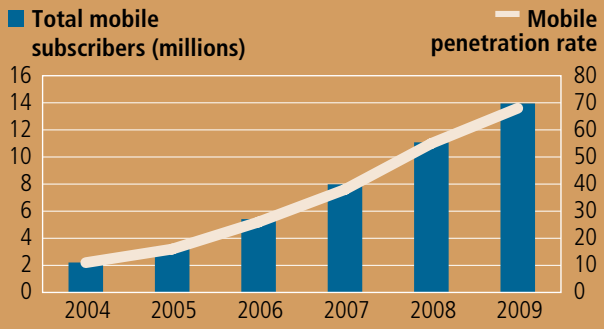
Figure 3.6 Sri Lanka's 2G and 3G Coverage



Source: Dialog 2009.

annual growth rate of mobile subscribers between 2004 and 2009 was 45 percent (figure 3.7). However, Dialog's compound annual growth rate for the same period was only 32 percent (Dialog 2009), indicating the level of competition the largest company is facing. Although the level of market concentration is still high, as the number of subscribers increases and new entrants such as Etisalat make inroads, it should decline. As competition continues, mobile operators face tight margins as they compete for subscribers.

Figure 3.7 Mobile Subscriber Growth and Mobile Penetration



Source: Dialog 2009.

User Survey Findings 4

This chapter summarizes the results of the survey of a small sample of Sri Lankan citizens in urban and semi-urban areas on the use and potential of m-money in general and specifically Dialog's eZ Pay product. No agent survey was done in Sri Lanka because the number of subscribers using eZ Pay is small and few outlets see any customers at all.

The survey is not intended to be a statistically significant sample of m-money users and nonusers. Its purpose is to provide an overview of people's attitudes, preferences, issues, and recommendations regarding m-money services, including trust in mobile operators versus banks, willingness to pay, and other user factors.

Survey Design

The survey methodology involved the identification of localities and stakeholders to engage in the survey, as well as criteria for design and sampling. Target populations included users of the eZ Pay m-money service.[1] Nonusers were not current users of eZ Pay or any other m-money system, but used both mobile phones and financial products.

[1] eZ Pay is an m-money service with an active (non-bank branch) agent network that supports transactions including payment, sign-up, cash-in/cash-out, etc.

Respondent Identification

In-country activities involved close collaboration with NDB Bank to identify users and agents of the system, as well as appropriate locations for the study. Efforts were made to select respondents randomly, but also to include people from semi-urban areas and from diverse socioeconomic backgrounds and circumstances. Survey respondents were polled in the locations shown in table 4.1.

Urban locations are areas in close proximity to services and economic activities and whose population is generally economically well-off and educated, but which can include significant numbers of poor inhabitants.

Table 4.1 Survey Locations

Urban	Semi-urban/rural
Ampara	Anuradhapura suburbs
Anuradhapura	Badulla
Colombo	Kurunegala suburbs
Galle	Matara
Gampaha	Puttalama
Kalutara	Ratnapura
Kandy	
Kurunegala	

Source: IFC Mobile Money Study 2011.

Semi-urban/rural locations include smaller towns and cities outside metropolitan areas or suburbs, characterized by fewer services and whose economic emphasis may extend into rural and agricultural areas outside the urban core.

A survey of 100 eZ Pay users and 100 nonusers were conducted via face-to-face and phone interviews. Approximately 10 percent additional people were surveyed in each group to account for any survey errors and to ensure quality.

Socioeconomic Profile of Respondents

The surveys were conducted in all central suburbs/districts in Colombo. Peri-urban areas included were Nugegoda, Maharagama, Dehiwala, and Mount Lavinia, which are 10–15 kilometers from central Colombo.

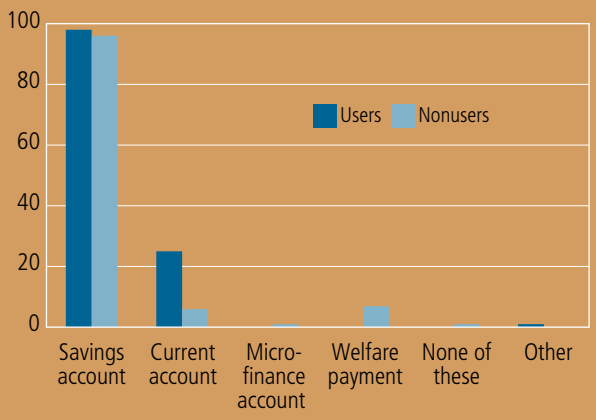
The main m-money service in Sri Lanka, eZ Pay, is provided by one of the major mobile operators, Dialog, in partnership with NDB Bank. There are currently only about 3,300 users. Transactions started out relatively strongly at the beginning of 2009, but nearly ground to a halt by February 2010. No new marketing has been done since the launch. Staff at Dialog outlets were aware of the product, but there was no marketing material visible to the customer.

Figure 4.1 shows that more than 95 percent of both users and nonusers have at least a savings account because of the strong presence of the three government banks, which are subsidized and have a clear mandate to provide bank accounts to all. However, current accounts, which are more transaction oriented and typically provided by commercial banks, are mainly held by m-money users, at approximately 25 percent.

Figure 4.2 shows that 88 percent of m-money users have mobile phones that are general packet radio service (GPRS)/Internet access capable, compared with 39 percent of nonusers.

Figure 4.3 provides the sociodemographic details of users and nonusers in Sri Lanka.

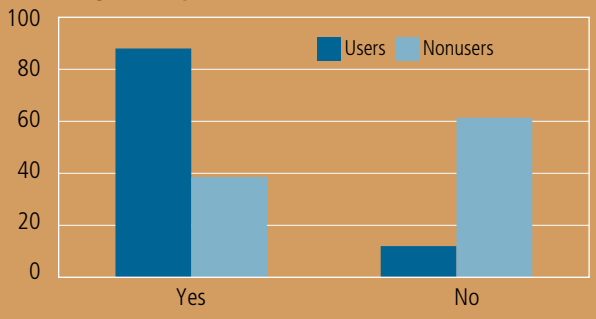
Figure 4.1 Types of Bank Accounts Held



Source: IFC Mobile Money Study 2011.

Note: Multiple selections were allowed.

Figure 4.2 Mobile Phone Access to GPRS/Mobile Internet

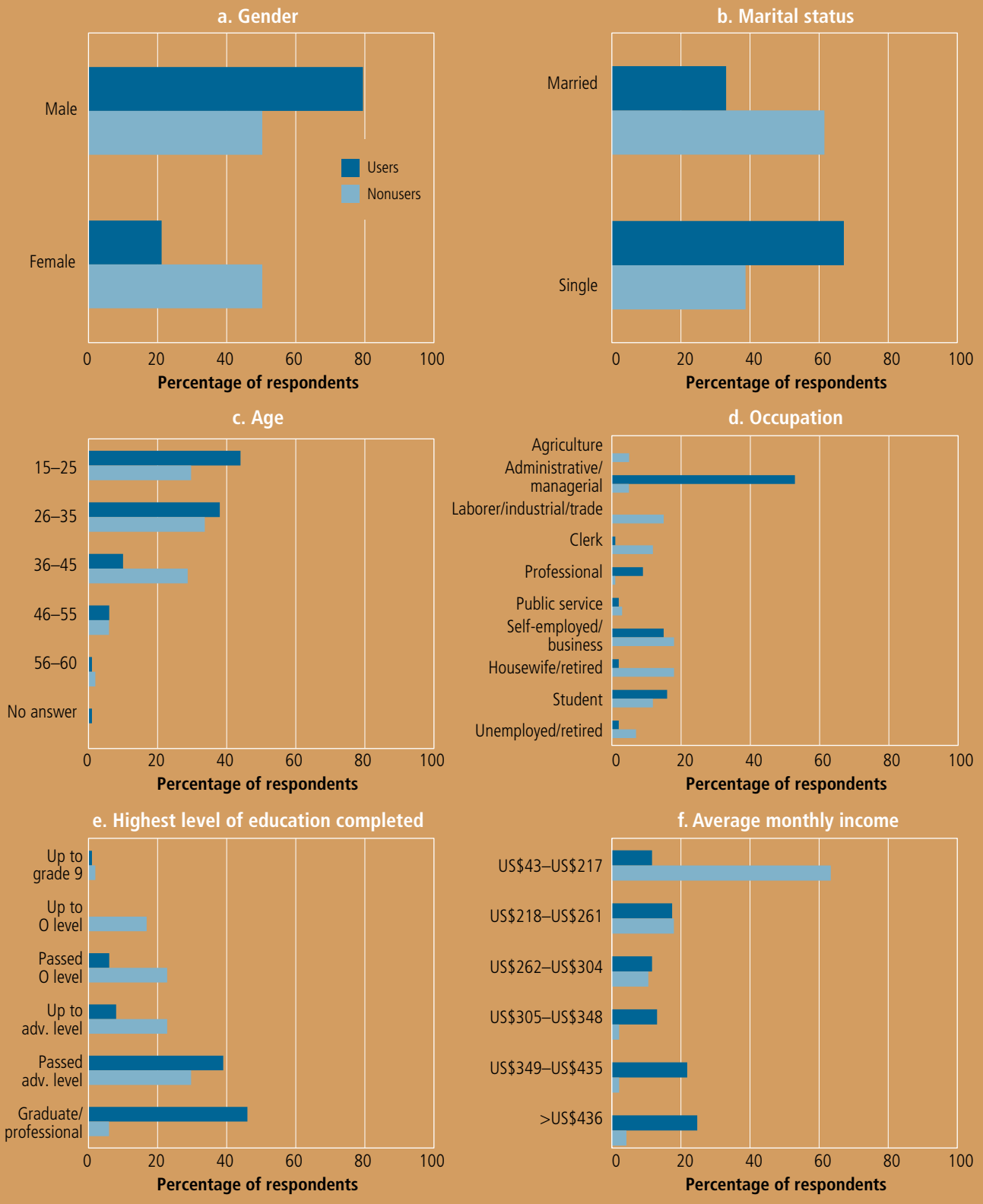


Source: IFC Mobile Money Study 2011.

Sri Lanka's m-money users are predominantly young male white-collar workers:

- 79 percent are male
- More than 40 percent are 25 years or younger (and more than 70 percent are 35 years or younger)
- 46 percent are college graduates
- Almost 70 percent are single
- More than 50 percent are in a junior administrative/managerial position, 16 percent are students, and 15 percent are self-employed/in business

Figure 4.3 Socioeconomic Characteristics of Mobile Money Users and Nonusers



Source: IFC Mobile Money Study 2011.

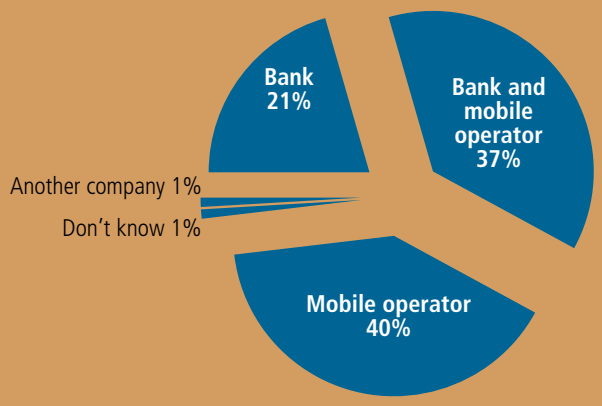
- More than 40 percent are in the top two income groups, while more than 60 percent of nonusers are in the lowest income group.

Profile of Mobile Money Use

Fifty-four percent of m-money user respondents use the eZ Pay service, offered through the mobile operator as a separate service to any existing bank account (often with government banks).

As figure 4.4 shows, there is some variation in opinion over who provides the m-money service. Only 40 percent of users were aware that the service is provided in partnership with a bank, though a bank account with NDB is not required.

Figure 4.4 Mobile Banking Service Provider

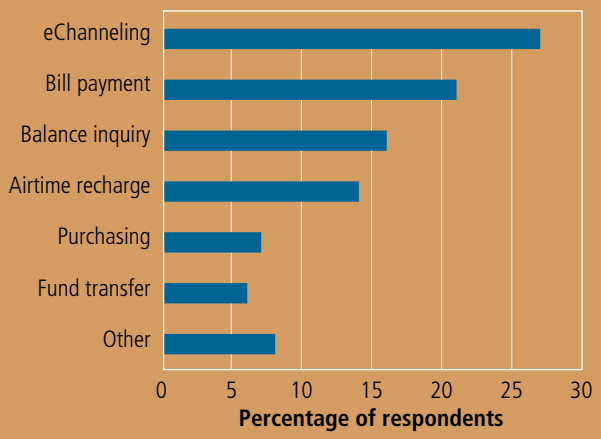


Source: IFC Mobile Money Study 2011.

Figure 4.5 shows that the main application used by respondents is eChanneling, the service that allows callers to set up and pay for doctor visits (see discussion in chapter 2).The second most-used m-money service is bill payment, used by more than 50 percent of respondents, illustrating an important demand, as many Sri Lankans have to stand in line to pay bills. Balance inquiries, airtime top-up, and fund transfers were also popular.

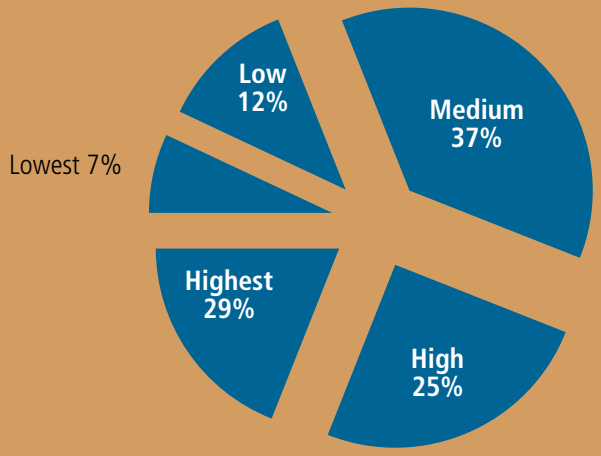
Overall, m-money users rated their knowledge of m-banking services as quite high, with almost 45 percent stating their knowledge is high or highest, and over 35 percent stating it is medium (figure 4.6).

Figure 4.5 Mobile Money Services Used



Source: IFC Mobile Money Study 2011.

Figure 4.6 Users' Reported Level of Knowledge of Mobile Banking Services



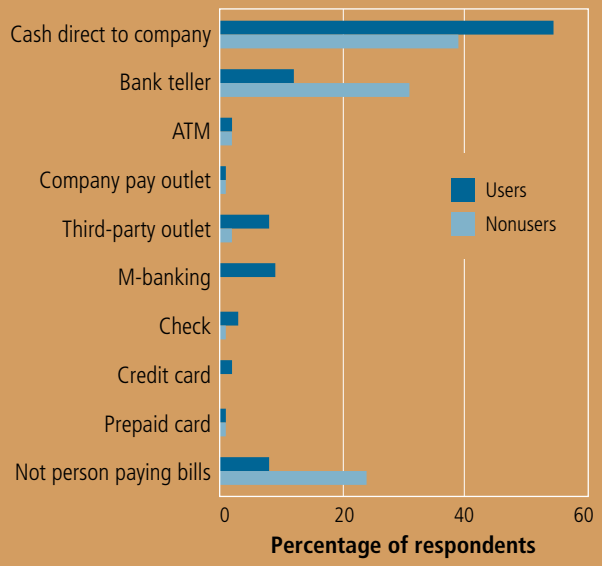
Source: IFC Mobile Money Study 2011.

Payment Methods

The most typical method of bill payment for all respondents was cash direct to the company or a bank teller. Sri Lanka is clearly still heavily dependent on cash for bill payment and use of electronic payment mechanisms is low.

Figure 4.7 shows that users were more apt to pay their bills to companies directly (54 percent) compared with 39 percent of nonusers. Conversely, 30 percent of nonusers made greater use of bank tellers versus only about 12 percent of users. About

Figure 4.7 Typical Bill Payment Channels



Source: IFC Mobile Money Study 2011.

10 percent of users paid bills via alternative channels such as m-banking or third-party pay outlets.

Reasons for Not Using Mobile Services

The main reasons for not using mobile services were a lack of necessity, a lack of awareness about the service, and unavailability of the service. Interest in new types of mobile services such as e-health (e.g., scheduling and paying for medical services) and greater promotion/awareness building of m-money services are seen as drivers for increased use of m-money services.

"No need for services" was cited by 53 percent of respondents, while 24 percent cited nonuse because they were not aware of the service or the service was unavailable to them. Unavailability of service and security issues were cited by 5 percent of respondents.

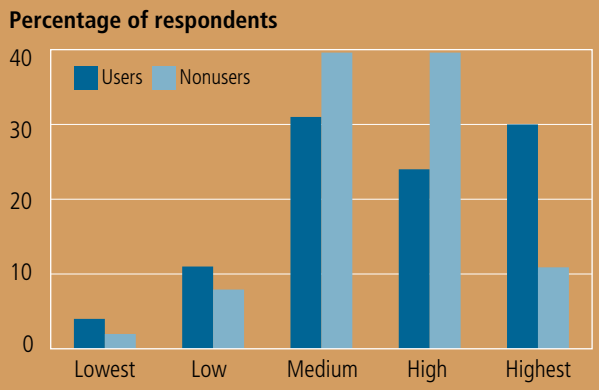
Currently available m-money services often mirror services offered by traditional means such as banks. Nonetheless, there seems to be an interest in new types of Internet- and mobile-enabled financial services such as eChanneling. A key barrier to adopting m-money services may be that a significant percentage of the population is simply not aware of the services, but could become interested in using m-money services.

General Use of Money

Financial Literacy

Virtually all nonuser and user respondents had a bank account (97–99 percent), which they identified as savings accounts. Twenty-five percent of users reported they also had current accounts, compared with only 6 percent of nonusers. Most respondents had a medium to high knowledge of bank services available, but more users (30 percent) reported highest knowledge versus 10 percent of nonusers (figure 4.8).

Figure 4.8 Knowledge of Bank Services Available through Branch



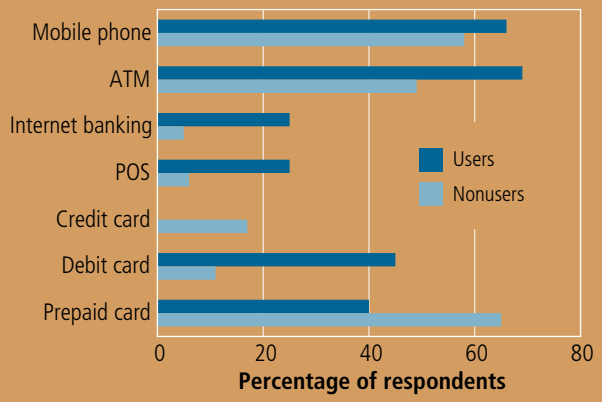
Source: IFC Mobile Money Study 2011.

Respondents indicated high knowledge and ability to use mobile phones, ATMs, and debit and prepaid cards. Sixty-four percent of nonusers indicated high knowledge of prepaid cards compared with only 40 percent of users. Conversely, approximately 60 percent of nonusers indicated low knowledge of POS transactions and debit card usage, and 40 percent of Internet banking.

Although overall knowledge levels were moderate to high, a significant portion (20–30 percent) of respondents, especially nonusers, cited moderate to low understanding of some m-money services (beyond basic transactions), such as POS

devices, credit/debit cards, and Internet banking (figure 4.9). The lack of penetration of POS devices and debit cards may explain the low level of knowledge about these services.

Figure 4.9 Respondents Reporting High Level of Knowledge of Various Financial Services and Channels



Source: IFC Mobile Money Study 2011.

Mobile Money Interface

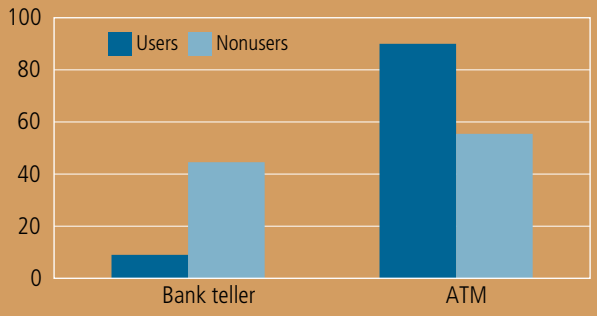
With respect to users' ease of conducting m-money transactions via the handset, 80–90 percent of users found the service interface and transactions of payments, transfers, and bill inquiries to be easy.

Primary Place of Cash Withdrawal

The most common places where cash was withdrawn were ATMs and bank tellers. Nonusers used both places almost equally, with a slight preference for ATM transactions. Users overwhelmingly (90 percent) withdrew cash from an ATM (figure 4.10).

A majority (56 percent) of nonusers withdrew funds less than several times a month, usually monthly or less frequently, compared with 89 percent of users who withdrew cash several times a month to several times a week. The low use of bank tellers by users, along with their higher financial literacy, is indicative of higher incomes and education levels. Clearly, m-money is not being targeted to the lower end of the market.

Figure 4.10 Cash Withdrawal Sources Used Most Frequently

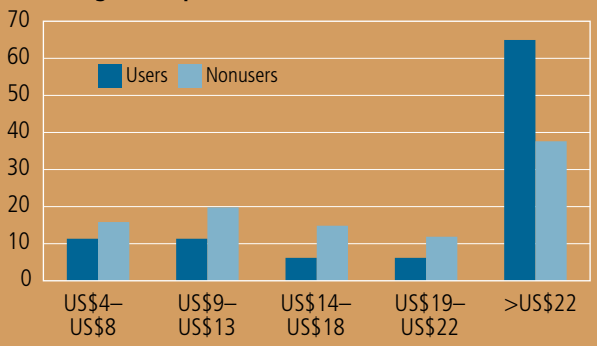


Source: IFC Mobile Money Study 2011.

Typical Withdrawal Amounts

Sixty-three percent of users typically withdrew more than US$22 at a time. Only around 38 percent of nonusers made this large a withdrawal, with amounts spread evenly (10–15 percent) around the smaller denominations (figure 4.11). Again, the target market for m-money is the middle- to upper-income brackets.

Figure 4.11 Typical Cash Withdrawal Amounts



Source: IFC Mobile Money Study 2011.

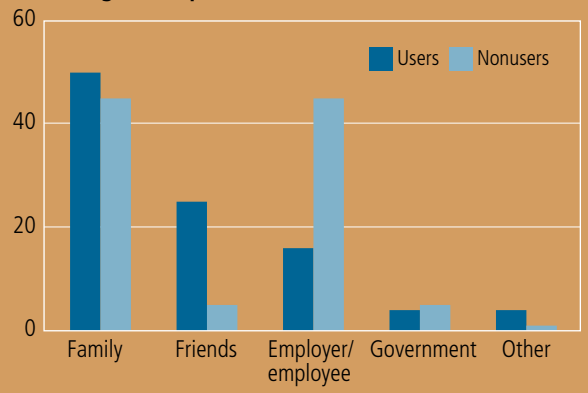
Time to Nearest Bank Branch

The majority of respondents (50–60 percent) said it took them between 5 and 20 minutes to get to a bank branch, while 35 percent said it took between 20 and 30 minutes. Twenty-one percent of nonusers said it took more than 40 minutes.

How Transfers Are Conducted

For nonusers, both ATMs and bank tellers were chosen almost equally as the main place where they conducted transfers. For users, 63 percent preferred to conduct transfers with bank tellers; only 14 percent used ATMs. This behavior contrasts with users' reported cash withdrawal behavior, with 90 percent of withdrawals accomplished via ATMs. Users did conduct more Internet-based transactions (13 percent). The majority of transfers by both users and nonusers were to family: 50 percent and 45 percent, respectively (figure 4.12).

Figure 4.12 Fund Transfer Destinations



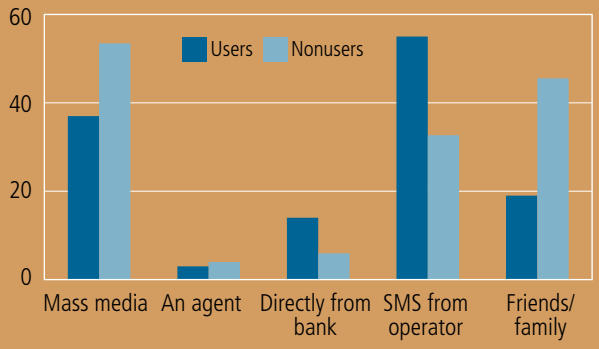
Source: IFC Mobile Money Study 2011.

Marketing and Advertising

Among users, knowledge of m-money services and eZ Pay is largely facilitated though short message service (SMS) marketing and mass media, including print media, TV, and billboards. Among nonusers, mass media (51 percent) and family and friend recommendations (47 percent) are key (figure 4.13). Respondents had heard of available m-money services that include eZ Pay and various other m-banking applications of the major banks such as Hatton, Sampath, HSBC, and Standard Chartered.

When given a choice of how they would prefer to receive information on m-money services, respondents indicated a mix of SMS text messages, e-mail, TV advertisements, and telephone. However, users were more comfortable with electronic mechanisms such as e-mail (67 percent compared with 10 percent of nonusers). Nonusers preferred mass media such as TV advertisements.

Figure 4.13 Preferred Source of Information on Mobile Banking Services



Source: IFC Mobile Money Study 2011.

Note: Multiple selections were allowed.

Attitudes and Perceptions

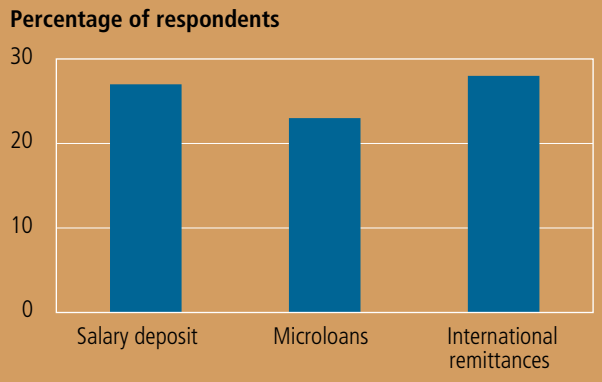
Overall, 90 percent of respondents indicated medium to high trust in m-banking, which was similar to trust levels for banks in general. Of nonusers, 25–35 percent had high levels of trust in m-banking technologies, third-party agents, and security from fraud. Users were more conservative, with high trust in these categories only 15–20 percent of the time.

In terms of specific m-money services that were perceived as high value, salary deposits, microloans, and international remittances were chosen (figure 4.14). Nearly 30 percent of users stated that international remittances were a high-value item to be offered. This supports the point that an international remittance service would find a significant market.

Value for Money

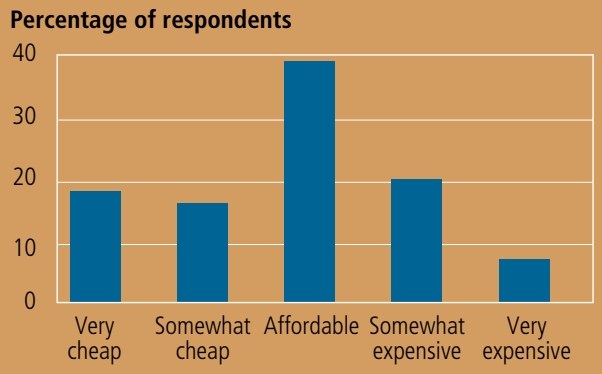
About 68 percent of respondents thought m-banking services were affordable to very cheap (figure 4.15). The same percentage of respondents felt the services were cheaper than traditional banking services. Those who thought the services were

Figure 4.14 Mobile Money Services in Which Users Express High Interest



Source: IFC Mobile Money Study 2011.

Figure 4.15 User Perceptions of Mobile Banking Fees



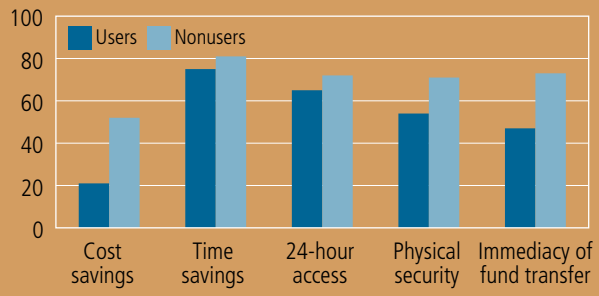
Source: IFC Mobile Money Study 2011.

expensive indicated that lack of widespread use, technical hurdles, and availability of more convenient methods to pay, increased the relative cost of the service. Respondents' income had an impact on the outcome of this question. Users usually had a higher income than nonusers, and therefore their perception of what is affordable may be different from that of the lower-income nonusers.

Benefits of Mobile Money

The convenience factors of m-money trump the cost factors. Respondents gave high ratings to time savings, 24-hour access, and physical security (figure 4.16). Cost savings was chosen less frequently, with only 20 percent of users selecting it as a main benefit.

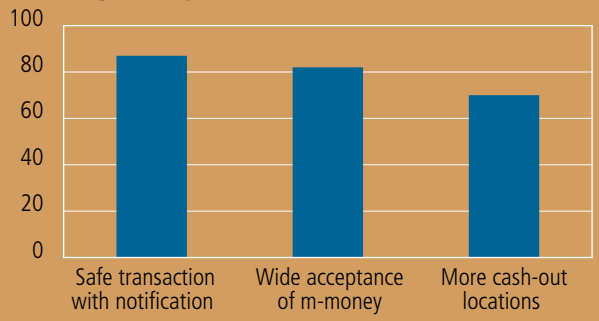
Figure 4.16 Perceived Mobile Money Benefits



Source: IFC Mobile Money Study 2011.

Respondents said the main reasons they used m-money services were, in order of preference, ability to conduct safe transactions with notification, wider acceptance of m-money, and the ability to cash out at more locations (figure 4.17).

Figure 4.17 User Reasons for Mobile Money Usage



Source: IFC Mobile Money Study 2011.

Conclusion

eChanneling is one of the most popular m-money applications in Sri Lanka. It has a clear value proposition, and the fact that nearly 70 percent of users in the survey have used it emphasizes its success. In contrast, most Sri Lankans continue to pay their bills at the bank teller or directly to the company using cash. There is clearly substantial demand for bill payment services.

One of the main challenges for m-money is lack of awareness. Dialog launched eZ Pay in 2007, but the

lack of recent marketing may have kept the service from growing: more than 20 percent of nonusers were not aware that there was an m-money service. Because of the low POS device and ATM penetration, 60 percent of nonusers have low knowledge of these devices. As the banks promote debit cards, knowledge will increase. M-money providers and banks can be expected to compete and to promote their services to potential customers in the future.

In terms of marketing m-money services, users are more comfortable with electronic means of communication, but nonusers prefer mass media. This is important information for future marketing initiatives to nonusers.

Finally, the survey results show a relatively high demand for a follow-up remittance survey, based on the findings of the key informant interviews.

5 Business Models

Existing Business Model: Dialog

Table 5.1 provides a brief summary of the Dialog business model for eZ Pay, a partnership between Dialog and NDB Bank. eZ Pay transactions started strong at the beginning of 2009, but nearly ground to a halt by February 2010. No new marketing has been done on eZ Pay since its initial launch. Staff at Dialog outlets are aware of the product, but there is no marketing material visible to the customer. Unless a customer signed on to eZ Pay at launch, there is little chance that any new customers would be aware of it. Few customers know that cash-out is possible at Dialog stores.

eZ Pay does not offer a compelling business model. It has not targeted a segment of the Sri Lankan population with a clear product. The eChanneling business makes it clear that Sri Lankans are prepared to experiment even if the service is expensive.

Other Business Models

As a result of increased competition in the mobile sector, Dialog is under financial pressure. In the last quarter of 2009, its mobile operations lost SL Rs 9.3 billion (about US$82 million), a substantial loss; in comparison, in the fourth quarter of 2008, Dialog lost SL Rs 272 million (about US$2.4 million).

The two other major mobile operators in Sri Lanka are Etisalat and Mobitel, neither of which have any m-money products. Etisalat is the most aggressive MNO at the moment and is apparently adding the most subscribers to its network. Market share statistics for 2010 are not available, but estimates are that Etisalat now has 25 percent of the market, compared with Dialog's 50 percent. Mobitel has a 15 percent share.[1]

Etisalat is investigating the introduction of an m-money product focused on the international remittance markets, particularly from countries in which Etisalat operates and where large numbers of Sri Lankan expatriates can be found, such as Saudi Arabia and the Gulf.

The roll-out of m-money requires significant upfront costs, particularly regarding the agent network. Dialog's current financial position in a competitive mobile market makes this investment somewhat unlikely. Its earnings before interest, tax, depreciation, and amortization are at the lower end of the scale compared with the other mobile operators.

[1] Data for 2010 are roughly in-line with 2009 market share data, where Dialog had a subscriber identity module (SIM) market share of 48 percent (see Dialog 2009).

Table 5.1 Dialog Business Model

Element	Description
Business objective	▪ Dialog—reduce distribution costs and bring new revenue streams ▪ NDB Bank—opportunity to obtain new accounts and more distribution ▪ Bank had three-year exclusivity agreement with Dialog, which has now expired ▪ Dialog wants other operators to join
Strategy	▪ Focus on maintaining variable costs and variable revenues (other than marketing costs), although there are high acquisition costs because of SIM swap ▪ The high acquisition cost constraint has been overcome by the USSD registration option, which is available now
Target market	▪ Potentially all Dialog, NDB Bank, Seylan Bank, and other business partners coming on board via the mobile commerce network ▪ Ideally need 100,000 customers to break even ▪ There are currently 3,300 customers, though transactions are at a lesser rate
Marketing strategy	▪ Minimal marketing effort
Revenue streams	▪ The transaction fee is shared between the software provider (mChek), the acquiring bank, the issuing bank (NDB Bank), and the issuing and acquiring operators (Dialog) ▪ SL Rs 25 (US$0.22) transaction fee is paid by the customer for electricity and water bills ▪ All other transactions cost customers SL Rs 10–25 (US$0.09–US$0.22) (depending on whether a promotion is being offered) compared with SL Rs 25 (US$0.22) bank charges ▪ SMS costs (one per transaction) are SL Re 1 (US$0.01)
Costs	▪ Platform is provided by mChek, which takes a cut of every transaction ▪ Marketing costs are shared between bank and operator ▪ New SIM is required to operate eZ Pay in the case of the SIM Toolkit (STK) application; customers also have the option of registering via USSD ▪ Cash handling not yet seen as a big issue (mainly because there is virtually no cash handling)
Transac-tions	▪ Utility bill payments ▪ Cash-in and cash-out (tiny)
Merchants	▪ All Dialog service centers and approximately 3,000 non-Dialog retail merchants nationwide that have been acquired onto the eZ Pay network ▪ Dialog outlets can do KYC on behalf of NDB Bank but sent daily to bank for final verification and approval; embossed cards are created, and the file is sent to mChek for activation within four working days ▪ Agents currently not incentivized to open accounts, but agents get paid for selling SIMs (this is linked to the lack of marketing)
Users	▪ Very limited use
Pipeline	▪ Merchant-initiated transactions—bill payments ▪ Bringing in other banks and operators (e.g., Seylan Bank) ▪ Seylan Bank USSD and NDB Bank USSD application already available ▪ Merchant acquisition—Ceylinco VIP added to the network of merchants
Model/ partners	▪ Model: Mobile operator–centric ▪ Partners: Acquiring bank—NDB Bank; issuing bank—Seylan Bank

Source: IFC Mobile Money Study 2011.

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Challenges

Dialog has several challenges in its current model of m-money. At the moment, transactions using eZ Pay are minimal. The initial launch of Dialog was aimed at the lower end of the income spectrum. However, customers using the service are from the middle- to upper-income segments. Most important, eZ Pay's overall value proposition is unclear. Is it intended to act as an alternative access channel for NDB Bank, or is it intended to add value for existing Dialog customers? If the latter, then the lack of a marketing strategy ensures that few customers will perceive its value.

The key issue Dialog must resolve is the value proposition of its services. What problem does eZ Pay address that makes it more attractive than existing products (such as cash)? Which markets is eZ Pay targeting? Once these questions have been resolved, fundamental business model challenges such as the marketing strategy can be addressed. The next section provides some insight into the value propositions available to Dialog.

Potential Business Opportunities

The Sri Lankan financial sector is unique. It has a very high bank account penetration rate of 59 percent. Even assuming that many people have multiple accounts, the penetration rate is still high. In the user survey, 98 percent of respondents had a bank account. Yet penetration of debit and credit cards is very low, and ATM and POS device rollout is very small. Most of the bank accounts are with government institutions, but private sector commercial banks are making inroads with the middle and upper classes. Bank accounts are primarily used to store value—that is, they are used as savings accounts rather than transactional accounts. Even with its high bank account penetration, the country has a large informal financial economy, especially for P2P transfers and international remittances.

Therefore, potential business opportunities can be divided into two groups:

- Mass market—based on low cost and increased efficiency
- Segmented market—providing a particular service to a specific target market.

The lack of mass market debit and credit cards means that there is a potential opportunity to use m-money for goods purchases. Another potential mass market strategy is in the P2P or remittances market, where current products are either aimed at the middle- to upper-income markets or are inefficient (for example, the post office's money order system).

A strategy that focuses on a particular segment of the market is also possible. There is a massive public transport market with an identified inefficiency. The formalization of this market could potentially benefit both consumers and bus companies. In the absence of an NFC-enabled phone, linking a smart card to alternative mechanisms of payment and allowing the smart card to be topped up using an m-money account represents a potential business opportunity.

Another potential strategy is the payment of bills such as water and electricity. Bill payment is often done at the post office, with more than 6.5 million utility payments made there each year. There are two ways to address this market: either as a partner with or as a competitor to the post office. As a partner, the post office has the advantage of providing an existing network of agents with the ability to pay out cash and an extensive branch network. The risk associated with this strategy is that Dialog would have to deal with an inefficient state-owned organization which is only starting the process of computerization. The alternative strategy of competing against the post office means that Dialog does not have to worry about the inefficiencies of the post office, but it must find an agent network.

Risks

Each strategy has a risk profile. Public transport as a strategy for m-money requires a very quick payment process. NFC provides this function, but

has yet to be successfully integrated into the wide range of mobile phones that are available. Thus, for NFC to successful, virtually all subscribers would have to replace their phones. As the experience of replacing subscriber identity module (SIM) cards for eZ Pay has shown, this would be is a major obstacle.

If a smart card option is chosen for public transport payment, it should be functional in other areas as well as transit. Breaking out of a closed loop (i.e., where smart cards can only be used for public transport purchases and no other payments) has been difficult in other parts of the world. Conveniently, the eZ Pay service is already allied to a debit card via its partnership with NDB Bank. Being used for transit would help eZ Pay develop a clear value proposition that would attract existing and new customers.

6 Conclusion

The Sri Lankan market has several m-money opportunities. Existing m-money implementations, such as eZ Pay, do not have a clear target market, and roll-out has basically been suspended. There is some regulatory uncertainty because no mobile payments regulation has been issued. Despite this, the market is relatively open, and the Central Bank of Sri Lanka is agreeable to m-money ventures. As Kenya has shown, the lack of a formal regulatory framework—at least initially—is not an obstacle.

While there are several m-money opportunities, Dialog is not well placed to take advantage of them because it has insufficient capital to invest in m-money initiatives, lacks a clear value proposition for its m-money service, and has a limited marketing strategy.

The issue of insufficient capital is based on a very competitive mobile market and Dialog's allocation of resources to other business areas such as mobile broadband. Dialog is currently the incumbent mobile operator, but its market share is declining as more aggressive competitors such as Etisalat enter the mobile market. The adoption of an m-money strategy using any of the proposed opportunities would reduce the challenges that Dialog faces, as well as shore up its market share.

An m-money strategy requires a clear value proposition. This report has argued that the high level of penetration of the formal financial sector means that the concurrent operation of an m-money system alongside the current financial system will not work. To a degree, Dialog has recognized this problem by partnering with NDB Bank. However, a key problem remains: Dialog and NDB Bank must determine where their eZ Pay product fits in its overall product basket. In other words, eZ Pay should not be seen as an experiment, but as part of the existing product portfolio. Currently, this is not the case. Dialog and NDB Bank must clearly segment their customer base to determine precisely which customers will be targeted. As a general offering, as is currently the case, eZ Pay gets lost among the wide range of other financial products.

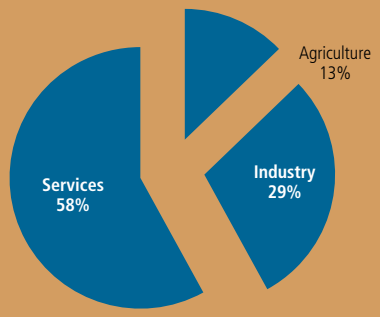
Once customers have been appropriately segmented, a formal marketing strategy can be adopted. Currently, there is no clear marketing strategy because Dialog and NDB Bank have not determined which customers would find eZ Pay appealing.

Dialog is facing pressure in its core mobile business. In other parts of the world, m-money has been successful in capturing an increased proportion of customers' wallets, reducing churn, and building loyalty. Thus, if Dialog can clarify its strategy, this would be a favorable time for investors to provide funding for Dialog to take advantage of these m-money opportunities.

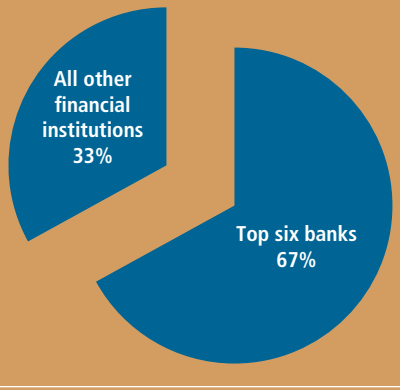
Appendix A
Fact Sheet and Demand Estimates

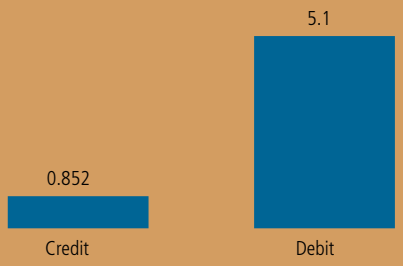
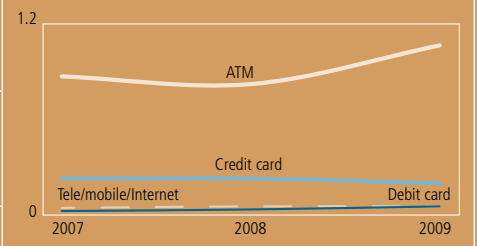
Table A.1 Fact Sheet

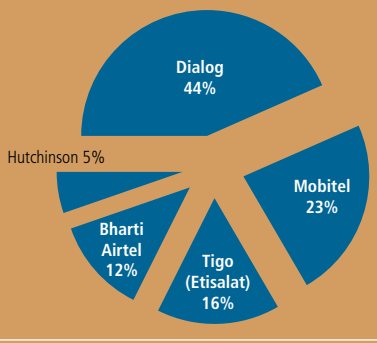
Country Profile		
Population	21.3 million[a]	**Sector shares of GDP**
Geographic area	65,610 sq. km[a]	
GDP	US$41.32 billion[b]	
GDP per capita	US$2,041[b]	
Gini index	41.1[c]	
Rural population	84.9% (17.1 million)[d]	
Rural poor	7.9% (1.35 million)[d]	
Population below poverty line	22.7% (4.8 million) (calculated; 2008)[d]	



Financial Profile		
Number of banks	36[e]	**Deposit market share of financial institutions**
Total branches	5,703[e]	
Total correspondent banking agents	—	
Number of bank accounts	7.0 million depositors[f]	
Banking penetration	59% (2008)[g]	
Number of POS devices	24,977[h]; 117.2 per 100k pop	
Number of ATMs	1,876[h]; 8.8 per 100k pop	
Number of payment cards	5.95 million (3rd quarter 2009)[i]	



Financial Profile (continued)		
Credit card growth	605,930 (3rd quarter 2005); 852,312 (3rd quarter 2009);[j] 8.9% average yearly growth 2005–09	**Number of payment cards (millions)** 
Debit card growth	2.2 million (3rd quarter 2005); 5.1 million (3rd quarter 2009);[j] 23.4% average yearly growth 2005–09	
Remittance flow—inbound	US$2,947 million[j] (Canada, Saudi Arabia, United Kingdom)	
Remittance flow—outbound	US$385 million[j] (India)	**Use of e-payment channels (transactions per capita)** 
Number of microfinance institutions	11 (2009)[k]	
Number of microfinance institution accounts	2.6 million depositors (2008)[k]	
Herfindahl-Hirschman Index (HHI)	—	

Mobile Profile		
Mobile operators	5	**Mobile operator market share** 
Mobile coverage	90% (2007)[l]	
Number of mobile subscribers	14.1 million[m]	
Mobile penetration	69.0%[n]	
Internet penetration	1.2%[n]	
Broadband penetration	—	
Herfindahl-Hirschman Index (HHI)	2851	

Note: All data are for 2009 unless otherwise stated. — = not available.

a. CIA 2010.

b. International Monetary Fund, World Economic Outlook Database, April 2010; http://www.imf.org/external/pubs/ft/weo/2010/01/weodata/weorept.aspx?sy=2008&ey=2010&scsm=1&ssd=1&sort=country&ds=.&br=1&pr1.x=33&pr1.y=9&c=524&s=NGDPD%2CNGDPDPC&grp=0&a=.

c. United Nations Development Programme, Human Development Report Statistics 2009, http://hdrstats.undp.org/en/indicators/161.html.

d. IFAD 2010.

e. Central Bank of Sri Lanka, http://www.cbsl.gov.lk/htm/english/05_fss/f_1.html#2.

f. Central Bank of Sri Lanka 2010, appendix.

g. Honohan 2008.

h. Central Bank of Sri Lanka 2010, chapter 8.

i. Central Bank of Sri Lanka 2009d.

j. Central Bank of Sri Lanka 2005.

k. MIX Market, Microfinance in Sri Lanka: Country Profile, http://www.mixmarket.org/mfi/country/Sri%20Lanka.

l. International Telecommunication Union, World Telecom ICT Indicators, http://www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx.

m. Telecommunications Regulatory Commission of Sri Lanka, http://www.trc.gov.lk/information/statistics.html.

n. Central Bank of Sri Lanka, http://www.cbsl.gov.lk/pics_n_docs/10_pub/_docs/efr/annual_report/ar2009e/PDF/12_chapter_08.pdf.

Table A.2 Demand Estimates

Socioeconomic data	
Population (millions)	21.3[a]
GDP per capita (US$)	2,041[b]
Gini index	41.1[c]
Financial data	
Bank accounts (million)	7[d]
Banking penetration (percent)	59.0[e]
Number of POS devices	24,977[f]
POS devices (per million inhabitants)	1,173[g]
Number of ATMs	1,876[f]
ATMs (per million inhabitants)	88[h]
Payment cards (million)	5.95[i]
Payment cards (per million inhabitants)	279,343
Mobile data	
Mobile operators	5
Mobile penetration (percent)	69.0
Number of mobile subscribers (million)	14.1[j]
Potential demand	
E-payments (per month)	1,521,750[k]
G2P (transactions per month)	1,600,000[l]
Payroll, informal sector (transactions per month)	4,708,418[m]
P2P (transactions per month)	Unknown
Public transport (trips per month)	264,000,000[n]
Unbanked (persons)	4,885,396[o]
Utility (payments per month)	6,440,168[p]

a. CIA 2010.

b. International Monetary Fund, World Economic Outlook Database, April 2010; http://www.imf.org/external/pubs/ft/weo/2010/01/weodata/weorept.aspx?sy=2008&ey=2010&scsm=1&ssd=1&sort=country&ds=.&br=1&pr1.x=33&pr1.y=9&c=524&s=NGDPD%2CNGDPDPC&grp=0&a=.

c. United Nations Development Programme, Human Development Report Statistics 2009, http://hdrstats.undp.org/en/indicators/161.html.

d. Central Bank of Sri Lanka 2010, appendix.

e. Honohan 2008.

f. Divide number of POS devices by population (million).

g. Central Bank of Sri Lanka 2010, chapter 8.

h. Divide number of ATMs by population (million).

f. Central Bank of Sri Lanka 2009d.

i. Telecommunications Regulatory Commission of Sri Lanka, http://www.trc.gov.lk/information/statistics.html.

j. E-payments per year (18,261,000), divided by 12 months.

k. Central Bank of Sri Lanka 2008.

l. Samurdhi payments to households.

m. Informal sector = 61.9 percent (Sri Lanka Labor Force Survey, http://www.statistics.gov.lk/samplesurvey/LFS_Annual%20Report_2009.pdf).

n. Public transport data (de Silva 2010b):

Public transport (per month) = 264,000,000
Bus trips (state-owned) per day = 2,000,000
Bus trips (state-owned) per month = 44,000,000
Bus trips (privately owned) per day = 10,000,000
Bus trips (privately owned) per month = 220,000,000

o. Unbanked data: Number of bank accounts = 7,030,204. Assuming 59% penetration, total number of potential accounts = 1,915,600. Unbanked = 4,885,396 (Central Bank of Sri Lanka). Calculation of total number of potential bank accounts (11,915,600), minus the number of actual bank accounts referenced above.

p. Utilities consists of

Postpaid subscribers: 2,000,000 (estimate that 16 percent of subscribers are postpaid; see de Silva 2010b)
Satellite television (DTV): 160,000 (*Lanka Business Online* 2010)
Electricity: 4,280,168 (Ceylon Electricity Board).

Appendix B
Persons Interviewed

Asanga Karunaratna, Chief Executive Officer, eChanneling

Dedunie de Silva, Senior Legal Officer, Group Legal Strategy and Operations, Dialog

Druvi Sirisena, M-Commerce Manager, Group Commercial, Dialog

Dumindra Ratnayaka, Chief Executive Officer, Etisalat Sri Lanka

Fariq Cader, Senior General Manager, Group Finance Operations and Revenue Assurance, Dialog

Gehan Dias, Assistant Vice President, Cards and Alternate Distributions Channels, NDB Bank

Janaki Mampitiya, Assistant Governor, Central Bank of Sri Lanka

K.B. Dissanayake, Postmaster General, Sri Lanka Post Office

Kanchana Abeywickrama, Operations Analyst, IFC-SEDF Colombo

R.P. Bandula Thilakasiri, Director General, Samurdhi Authority of Sri Lanka

Rangana De Silva, Project Manager, ICTA, Sri Lanka

Reshan Dewapura, Chief Operating Officer, ICTA, Sri Lanka

Rohan Peiris, Head of Information Technology, Bank of Ceylon

S.D.N. Perera, Senior Deputy General Manager, National Savings Bank

Saliya Rajakaruna, Chief Executive Officer, Nations Trust Bank

Sanjaya Karunasena, Head of Technology and Chief Software Architect, ICTA, Sri Lanka

Sathika Wickramasinghe, Nielsen Sri Lanka

Shabbir Raheem, Assistant Manager, Card Operations, NDB Bank

Shaheen Cader, MD, Nielsen Sri Lanka

Shakila Wijewardena, MD, SEEDS

Sheahan Arasaratnam, General Manager, Retail Banking Products and Head of Marketing, Standard Chartered

Sunil Jayantha Nawaratne, Director, Human Capital and Youth Development, Cargills (Ceylon) PLC

Supun Weerasinghe, Chief Executive Officer, Dialog

Sushanya Samarakkody, Coordinator M-Commerce, Dialog

Trevine Fernandopulle, Chief Risk Officer, Bank of Ceylon

Wasantha Deshapriya, Program Director, ICTA, Sri Lanka

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