

# Testing New Channels and Products to Maximize the Development Impact of Remittances for the Rural Poor in Georgia

## Remittances for the Rural Poor in Georgia

### Feasibility Study on the Use of Mobile Phones for Facilitating International Money Transfers to Georgia



International Organization for Migration



International Fund for Agricultural Development

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Prepared by: George Welton, IOM Consultant

Publisher: International Organization for Migration (IOM), Mission to  
Georgia  
41 Gogebashvili  
0179 Tbilisi  
Georgia  
Tel: + 995.32 25 22 16/ 29 38 94  
Fax: + 995.32 25 22 17  
E-mail: [iomtbilisi@iom.ge](mailto:iomtbilisi@iom.ge)  
Internet: <http://www.iom.ge>

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# **Testing New Channels and Products to Maximize the Development Impact of Remittances for the Rural Poor in Georgia**

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## **FEASIBILITY STUDY ON THE USE OF MOBILE PHONES FOR FACILITATING INTERNATIONAL MONEY TRANSFERS TO GEORGIA**

May 2009



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IOM International Organization for Migration

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## EXECUTIVE SUMMARY

The initial terms of this research was to look at whether mobile banking system is feasible in Georgia and if it is, to see if it could be used to facilitate the transfer of *international* remittances. Using mobile banking for international remittances requires two different elements and this research project was structured to investigate both. First, before it is possible to make international payments to mobile phones it is necessary to develop a national mobile banking system. Second, once the national system is in place it is necessary to attach it to an international remittance delivery system. This research projects assessed the feasibility, business logic and developmental impact of both of these stages.

Mobile banking, or ‘mbanking’ has been used in a number of countries to increase the number of people who have access to financial services by making the provision of those services cheaper. The system has two components. First, the mobile phone itself can hold credit-balances in an electronic ‘wallet’ and transfer that money between phones. This allows the phone to act like an in-country remittance system, a debit-card (for consumers) and a point-of-sale device (for retailers). Second, the system uses a network of (usually) retail ‘agents’ to collect or hand out cash from the system. Since the technology involves low operating costs and setting up an ‘agent’ is also fairly cheap, together this can allow the development of bank-like services in communities where it would never be profitable to open a bank-branch.

Georgia seems to be fairly well-suited for mobile banking in terms of mobile phone use, the levels of people who do not use bank services and the absence of major legislative hurdles. The country’s relatively small size also seems to make it more likely that the level of mobile banking acceptance could reach the critical mass necessary for some of the real benefits to emerge. In essence, if enough people could be persuaded to accept mobile-phone electronic payment for goods and services then mbanking could become a true ‘leap-frog’ technology, moving Georgia from a cash based society to one that has a lot of electronic account holdings. This would provide the currently unbanked with access to a wide range of useful financial services.

To look at the feasibility of mobile banking and its connection to international remittances, the research project took a three-step approach. First, it looked at the existing remittance market and the services already provided to service it. Second, it assessed the mobile banking model and the difficulties of mobile banking generally. Third, it combines these two things to look at how mobile banking and remittance systems might emerge and interact in Georgia.

The volumes of remittances are considerable. In 2008 over USD one billion was sent into Georgia using cash transfer systems like Western Union, Contact, Anelik and Unistream. This is almost four times higher than in 2004. A similar volume was transferred into personal bank-accounts in Georgia from foreign banks.

The dramatic recent increases in remittances seem to suggest that not only is the market large, but it is highly responsive to improvements in service provision. Therefore, using mobile phones and a local agent network to make remittance delivery easier would seem to offer a clear opportunity to take market share.

That said, remittance services that are currently provided in Georgia are already pretty good. Because of regional entrants into the market, the price of remitting money to Georgia has dropped dramatically in recent years with most services now offering a charge that is between 2 and 4% for a \$200 transfer. The World Bank assesses that money originating from the Russian Federation (the central source for Georgia) generally costs about 2%. According to 2007 EBRD survey, almost 80% of Georgians

currently receiving remittances electronically are ‘very satisfied’ with their service.<sup>1</sup> The key selling point for any new transfer system is, therefore, likely to be improved accessibility and convenience of the network rather than cost.

While the focus of the research was to look at the way in which cash remittances can be facilitated using new technology the research also discovered that there are a number of ways of providing improvements in the way money is transferred without much new technology. Providing more information about existing services is the simplest way to increase competition and create pressure for improvements in service delivery. In addition there seems to be no reason why existing remittance systems should not go directly into the bank-account of recipients, increasing the accessibility of the money through ATMs and encouraging account holdings. Finally, People’s bank already has a system of ‘cashiers’ who travel around the villages paying out pensions and social assistance. If this network could be leveraged to deliver remittances it could dramatically increase access.

A mobile banking network would provide far greater accessibility to transferred money. In Georgia around 65% of households have mobile phones and most small towns have a shop that sells phone cards. If a reasonable percentage of these could become agents for a mobile banking system then this would provide a far more extensive network than any bank. Also, since a mobile banking system would make it easier for small traders to send and receive payments in electronic form it would reduce the incentive for recipients to ‘cash-out’ any deposits they received. If they leave their deposit on account for longer then they can accrue interest and the credit profile necessary to get a loan.

A company is in the process of setting up a mobile phone based bank in Georgia, though the exact nature of their network is currently unclear. Once this system, or one like it, is in place it should be possible to connect this system to an international remittance payment organisation. In addition, since the level of international remittances appears to be far higher than local remittances in Georgia making this connection would seem a necessary revenue stream for any potential mbank.

There are not many places globally that have connected mobile banking to international remittances although the technology should not be too complicated to apply. Western Union is currently piloting a scheme through which money sent using their system can immediately appear in the mobile bank account (or ‘mwallet’) of the recipient. However, this is geographically limited so that money can only be sent from a few places and only received in the Philippines. At the current time there is nowhere in the world where mobile credit can be sent directly from one phone to another over an international border.

Facilitating the connection between mobile banking and international remittances is made easier in Georgia by a couple of considerations. First, over a third of the billion dollars of remittances originates in Moscow. Since connection to remittance systems will have to occur on the basis of bilateral relationships, this will help the system to catch a large part of the market with few relationships. Second, Georgia does have an extensive enough network of banks that the agents who would pay out the remittances would not have to travel too far to replenish their ‘cash-float’. However, the existing branch network is limited enough to make an agent network useful. Third, there seem to be no legal hurdles to a project of this kind at the moment and the government is likely to consider amending any legal hurdles that emerge.

However, perhaps most interesting, owing to Georgia’s small size relative to the countries that are currently ‘mobile banked’ it seems as though Georgia may be able to provide an intensive network of paperless payment. Since accepting paperless payment involves few if any additional costs to the

<sup>1</sup> European Bank for Reconstruction and Development. (July 2007) *Presentation on Georgia National Public Opinion Survey on Remittances*. p38

vendor, increasing uptake would seem to be a matter of persuasion and education. In Georgia one could, relatively cheaply, develop a national education and marketing campaign to achieve this. This would offer the opportunity in Georgia, for the first time in the world, not just to use mobile banking as a mechanism for transferring money more efficiently, but also for plugging cash holdings into a wider range of financial services.

## MARKET SIZE

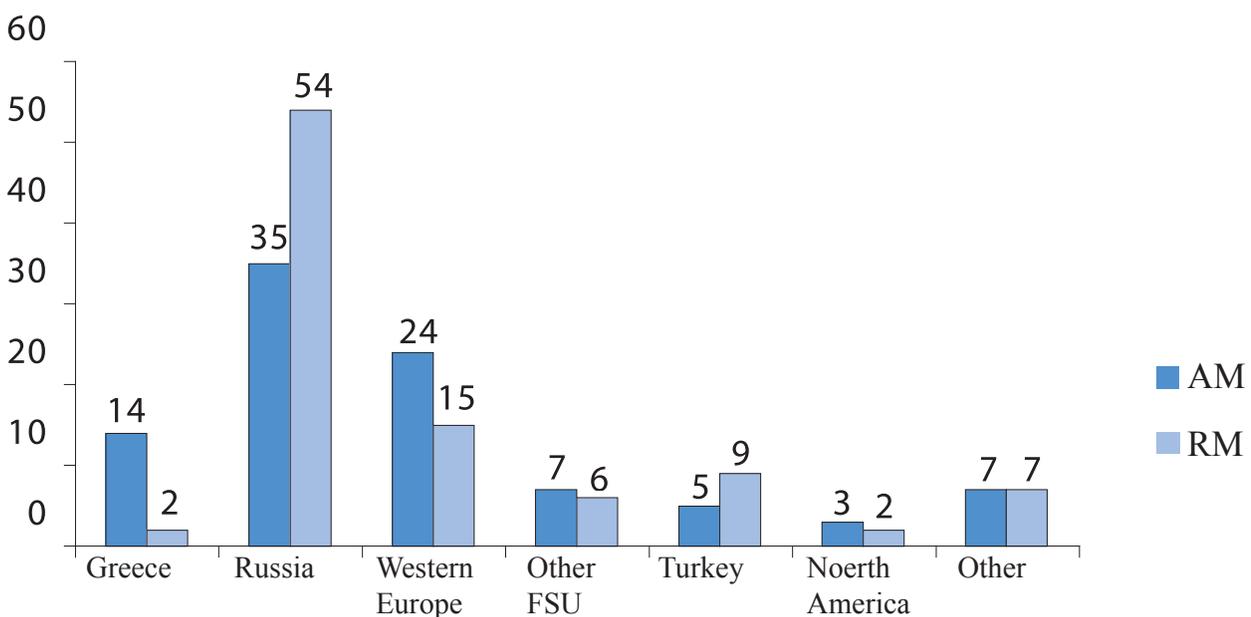
### Number of Migrants and Migrants patterns

There are two main approaches for assessing migrant patterns and volumes. The first is to try and assess historical population shifts. In this way many estimates of migrant numbers start by looking at the change in numbers between the last 1989 population census and the census carried out in 2003. In this time the population declined by 1.1 million. Even if these numbers are accurate they almost certainly massively over-estimate the migrant population. Particularly in the tumultuous 1989-1994 period (marked by two major wars and economic collapse) many, if not most, of the people who left the country were not ethnically Georgian and left no family here. So, from a practical point of view they are unlikely to either return to Georgia or send money.

The alternative approach is to ask households in Georgia whether they have a migrant living abroad or a returned migrant. A survey conducted by Caucasus Research Resource Centre (CRRRC) suggested that 8% of households had an absent migrant.<sup>2</sup> However, this number is likely to be heavily oriented to temporary migrants rather than those who may be more permanent (but who might still send money home).

Destinations are similarly difficult to assess. A recent national survey, also carried out by CRRRC for the Global Development Network suggested that, for migrants who are still attached to a household, the division by country was the following.

Figure 1: Destination country for absent migrants (AM) and Returned Migrants (RM)



Source: Presentation of Caucasus Research Resource Center/the Global Development Network (30 March 2009), *Georgia on the Move*, (GDN/IPPR Workshop)<sup>3</sup>

<sup>2</sup> Caucasus Research Resource Centre, *Data Initiative 2007* This finding is also confirmed by other, as yet unreleased, forms.

<sup>3</sup> This dataset is not currently available so more detailed country breakdown could not be obtained at this time. But the dataset should

However, again, one needs to keep in mind that this study, by focusing on households with absent or returned migrants generally tended to focus on temporary migrants who are more likely to be located in relative geographic proximity. Therefore, this probably under-estimates the number of migrants living in the Western Europe and the United States.

### Volume of remittances

Survey data seems to suggest that between 9% and 15% of the population are receiving remittances.<sup>4</sup> There are also two main approaches taken to assessing the volumes of remittances. First, using survey estimates of the number of remittance recipients one can multiply this by the average amount that the person themselves say they receive. The EBRD survey suggests that 9% of those surveyed are receiving remittances and from this they deduce a remittance level of USD 420 million in remittances received for 2006.<sup>5</sup>

Another approach is to simply look at electronic transfers as collated by the National Bank of Georgia.<sup>6</sup> There are two main sources of electronic transfers, those that use bank accounts and those that use cash transfer systems like Western Union, Contact, Anelik, Unistream and Moneygram.<sup>7</sup> Bank account transfers sub-divide once again into business account transfers and personal account transfers. Clearly, for remittances we are only likely to be interested in personal account transfers. According to the national bank of Georgia transfers to individual accounts (wire transfers) were USD 1.2 billion in 2008.<sup>8</sup>

The second set of systems for moving money are cash transfer systems. These systems are far more likely to be utilised by poor and rural migrants than bank-account to bank-account transfer since poorer migrants are unlikely to have bank-accounts (particularly those living in Russia). These amounted to very slightly over USD 1 billion in 2008, up from USD 259 million in 2004.<sup>9</sup>

It is also worth noting that these transfers have been extremely resilient to financial crisis. January transfers were down by 13% and February transfers were down 20% on the previous year. While this is a significant drop, it is massively smaller reduction than in other areas of the local or global economy like international trade or foreign investment volumes.<sup>10</sup>

If we compare the countries of origin for these two sources we also see very significant discrepancies.

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become available in June/July 2009.

4 9% is the percentage suggested by the 2007 EBRD survey while the Global Development Network Survey suggests a number closer to 15% (though they do not give an exact aggregate figure). This is higher than the number of households with migrants because many households receive remittances from people they don't consider to be 'household members' (for example, permanent migrants).

5 This is the simple multiplication of 318,000\*8\*165 (the number of people sending remittances\* the number of remittance payments received in a year\*the average value of the payments)

6 As I will explain below the cash transfer systems like Western Union tend to use banks as their principle agents. But individuals collecting money from the banks using this system do not need bank accounts.

7 These different systems are referred to by different names. For our purposes when I refer to 'cash transfer' I am talking about transfers that use systems like Western Union and Moneygram. When I say 'account transfer' I am talking about transfers from one bank-account to another.

8 Provided directly by National Bank of Georgia, March 2009

9 Provided directly by National Bank of Georgia, March 2009

10 Provided directly by National Bank of Georgia, March 2009

**Figure 2: Comparison between country of origin for cash transfer systems and bank transfer systems****Cash Transfer Systems (like Western Union)**

Country of Origin	USD (000)s	Market share
Russia	633,919	63%
Ukraine	70,474	7%
USA	63,866	6%
Greece	47,198	5%
Italy	36,621	4%
Armenia	21,940	2%
Turkey	20,885	2%
Spain	20,369	2%
Other	86,851	9%
<b>Total</b>	<b>1,002,122</b>	

**Transfer into Georgian Personal Bank Accounts**

Country of Origin	USD (000s)	Market Share
USA	234,621	19%
United Kingdom	104,802	9%
Germany	90,737	7%
Russia	61,803	5%
Switzerland	57,507	5%
France	27,918	2%
Ukraine	26,549	2%
Armenia	22,735	2%
Turkey	22,345	2%
Other	582,672	47%
<b>Total</b>	<b>1,231,690</b>	

Source: Data provided directly by National Bank of Georgia (March 2009)

As one would certainly expect, the largest volumes of cash-transfers originate from Russia. In fact almost 2/3 come from Russia and then only Ukraine, USA, Greece and Italy have significant percentages.

Russia and the CIS countries play a significantly smaller role in personal bank account transfers. This probably reflects a range of factors. First, it is substantially easier to transfer money from Russia using cash transfers than through the banking system. Second, the migrants living in Western Europe and America are generally more educated and more permanent and therefore both they and their families in Georgia are more likely to have bank accounts. Finally, these numbers may be skewed by the fact that, unlike cash transfers, when we talk about account transfers the location of the bank and the location/nationality of the remitter are not necessarily the same thing. So it would be a mistake to think that just because the originating bank is American that the money really originates in the United States.<sup>11</sup>

Even with these, apparently solid figures calculating the total value of remittances is difficult since this figure fails to capture some remittances that are sent physically and classifies some transfers as 'remittances' that are probably used for business purposes. According to the EBRD survey, in 2006, 66% of remittance receivers collected their remittance electronically, with the rest receiving money sent with bus drivers and family members physically travelling back and forth.<sup>12</sup> Taking the cash-transfer figure as our baseline, if USD 1 billion is only 66% of total remittances we would expect the total amount would be about USD 1.5 billion.

However, household remittances may be lower than this figure would suggest. Some of these transfers will undoubtedly be from businesses, for business purpose, and therefore should not be considered 'remittances'. For this second reason transfers between personal bank-accounts (USD 1.2 billion) are not classified as 'remittances' at all by the government of Georgia so it seems reasonable to deduce that the USD one billion official figure for remittances is probably conservative. Wherever the exact

<sup>11</sup> These suggestions are currently simply hypotheses based on conversations with Georgian bankers and from initial analysis of the CRRC/GDN survey data currently released. They are all worthy of further study.

<sup>12</sup> Though the issue of bank account holding is rather more complicated than this – as I will explain below.

figure lies, this is clearly a huge market for any new system that is able to capture even a small proportion of it.

### Patterns of cash transfer<sup>13</sup>

The number of cash transfer companies has expanded significantly in the last few years and with it the cost and ease of transfers has dropped dramatically. Generally speaking the market is made up of two different types of companies; truly international companies and the more regionally oriented. Western Union and Moneygram are more established, they have a more extensive international network and they are generally more expensive, though they have become a lot cheaper over the last few years. The others, including Anelik, Contact, Unistream and Bistraya Pochta have more extensive regional networks and are somewhat cheaper. The following chart shows how the market share between these different firms has shifted in recent years.

**Figure 3: Cash transfer by system (USD thousands)**

	2004		2005		2006		2007	
	Volume	Percent	Volume	Percent	Volume	Percent	Volume	Percent
<b>Western Union</b>	101,855	39%	130,263	32%	141,027	25%	156,649	18%
<b>Money Gramy</b>	23,863	9%	26,013	6%	37,885	7%	60,985	7%
<b>Anelik</b>	74,705	29%	86,350	21%	86,454	16%	140,423	16%
<b>Caucasus Express</b>	8,101	3%	5,685	1%	4,019	1%	1,406	0%
<b>Others</b>	50,598	20%	154,822	38%	283,864	51%	506,690	58%
<b>Total</b>	<b>259,122</b>		<b>403,133</b>		<b>553,249</b>		<b>866,153</b>	

Source: National Bank of Georgia (December 2008)

Not only has there been a huge increase in the use of cash transfer systems in the four year period covered here but that increase has been very unevenly distributed across the different cash-transfer systems. While Western Union has increased its overall turnover, it has almost halved its market share in four years. The shift in market share has mainly occurred because the dramatic increase in electronic remittances (3½ times in three years) has mainly occurred in the wide range of ‘other’ cash transfer services.

<sup>13</sup> When talking of remittances, the convention is to focus on cash transfer systems rather than bank account transfers because migrants, particularly those sending relatively small sums, tend not to have bank accounts. Also, cash transfer systems are more expensive than bank account transfers and so offer a more likely comparison market for any new service to compete with. For that reason, the rest of this section will focus on cash transfer systems.

The national bank provides a more detailed breakdown for 2008 where they showed:

**Figure 4: Cash transfer by system 2008<sup>14</sup>**

<b>Western Union</b>	200,265	20%
<b>Contact</b>	186,676	19%
<b>Anelik</b>	168,345	17%
<b>Unistream</b>	145,960	15%
<b>Leader</b>	67,463	7%
<b>Money Gramy</b>	56,088	6%
<b>Bistraya Pochta</b>	53,639	5%
<b>Other</b>	123,675	12%
<b>Total</b>	<b>1,002,112</b>	

Source: National Bank of Georgia 2009

The most obvious reason for this shift in market share away from Western Union is that, until recently there was a considerable difference in prices. However, in recent times Western Union has reduced its prices and is now closer to the rest of the market.

**Figure 5: Comparison of cash transfer fees for top 7 companies**

	Charge for \$200	Explanation (for \$200/200 Euro transfer)
Western Union	4-6%	Prices differ depending on sender and receiver. This is \$10 from Russia, \$10 from the Ukraine, \$8 from the United States and 9 Euros from Greece
Anelik	0.5% or 3%	Anelik charges a flat 3% charge unless the amount exceeds \$5000 and then the fee ranges between 0.5 - 0.9%. 0.5% is only available from limited locations.
Contact	2-3% (CIS)	From Russia they charge 2%. From other CIS countries 3% and fees differ outside of that region.
Unistream	2%-4%	From Russia \$5, from Armenia \$4, from US \$8
Moneygram	2.5-10%	From Russia charge is \$5, from Ukraine 10 Euro, from Greece 19 Euro and from Germany 14 Euro, from the US \$10, from Armenia \$20
Bistraya Pochta	2% (CIS)	Within CIS countries they have a flat 2% charge. For Greece their charge is 16 Euros flat rate. Half of this fee is paid by sender and the other half by the recipient.
Leader	1.2-2%	1.2% tariff is only received when money is sent to the microfinance organisation Alfa-Express. Otherwise the rate is 2%

Source: Information obtained directly from interviews/web-sites of the different companies

As one can see, regionally oriented companies (Contact, Anelik, Unistream, Bistraya Pochta and Leader) are generally cheaper than the more globally oriented companies (Western Union and

<sup>14</sup> Note that these figures only include money that uses the banking system as its major outlet. At this time the National Bank of Georgia does not collect information on the volumes transferred using specialized outlets let Western Union offices. However there are very few of these offices in Georgia.

Moneygram). However, the prices are a lot lower than commonly believed. In fact, remittance from the Russian federation are the cheapest ‘corridor’ in the world. The World Bank estimates that remittances to Georgia from Russia average around 2.2% for a \$200 transfer. This compares to a global weighted average of 8.3%<sup>15</sup> and charges between 15% and 30% in other major remittance ‘corridors’.<sup>16</sup>

However, this should not be taken to undermine the value of improved remittance systems. Remittance systems can still be improved in two main respects. First, they can be made more convenient. Second, they can be integrated more effectively into banking or banking-like networks so that money sent can be saved and can leverage access to additional financial services like small loans.

Convenience, at least, seems to be a high priority. According to research by UK’s Department for International Development (DFID) the top four priorities for those sending/receiving remittances globally are security, convenience (for both sender and receiver), speed of transfer and cost (in that order). In the polling that other elements of this project conducted in Tianeti, people were asked to explain why they selected a given system for sending money. The top three reasons they gave were, first on the basis of reliability/safety (29%), followed by speed of money transfer (14%) and its low cost (12%).

Clearly, in terms of the first category, Western Union as a very well established brand, is likely to have high confidence, but generally speaking the electronic systems are ALL reliable and certainly vastly more so than handing money to a driver. On speed, they are all pretty quick offering next hour or next day transfer (with faster transfer generally more expensive). But more importantly, the speed issue relates to convenience at both ends too. All of the cash transfer systems are relatively administratively simple. They all have fairly low documentation requirements. They all need identification but none of them check visas, work-permits or residency information in that way that a bank will. In that way they are vastly less demanding than banks.

In terms of convenience, the relative convenience of the different systems is determined by their network of agents and, consequently, how quickly and easily a sender can send the money and a recipient can pick it up.

In order to compare them we need to divide remittance network systems into two categories. Networks inside Georgia for taking cash-out (since we are generally talking about remittances received rather than sent) and networks outside of Georgia for making sure cash can be put in.

### Cash-out networks

Inside Georgia cash transfer systems principally use banks as payment outlets. When a bank acts as an agent for an international cash-transfer system it means that every branch of that bank *should* be able to pay-out transfers made by that system. Having existed in Georgia longer than anyone else, Western Union has the most extensive set of bank relationships in Georgia, covering all of the major banks. Most banks act as an agent for more than one remittance system. Peoples Bank, the largest bank in terms of branches and ATMs, for example, acts as an agent for the largest number of different cash-transfer systems in Georgia (21 in all) and includes all of the major ones. The chart below shows the relationships between the top six banks in Georgia (in terms of bank branches) and the top cash-transfer systems (in terms of market share).

15 Celent. (April 2008) *The Would Be Disruptors: New Technologies in the Remittance Space*.p9

16 World Bank/IFC, *Remittance Prices Worldwide: Country Corridors*, <http://remittanceprices.worldbank.org/CountryCorridors/> (reviewed 14<sup>th</sup> April 2009)

**Figure 6: Top Six Banks and their provision of different cash transfer systems**

Money Transfer Type	Market share 2008	Bank of Georgia	People's Bank of Georgia	TAO Private Bank	Procredit Bank	TBC Bank	Bank Republic	Total <sup>1</sup>
Number of Branches		160	180	71	57	52	43	456
Western Union	20%	X	X	X	X	X	X	563
Anelik	17%	X	X	X	X	-	-	468
Contact	19%	X	X	-	-	X	-	392
MoneyGram	6%	X	X	X	X	-	-	468
Unistream	15%	-	X	X	-	X	-	303
Bistraya Pochta	5%	-	X	-	-	-	-	180
Leader	7%	-	X	-	-	-	-	180

Derived from National Bank Statistics March 2008

As one can see from the list above, People's Bank has the best selection of remittance systems and Western Union has the most disbursed network of outlets.

### Cash-in networks

The easiest way to highlight the relative strength of these systems outside of Georgia is to look at where their market share is strongest.

**Figure 7: Volumes and market share of top four cash transfer systems by country of origin.**

	Total	Country Share of total	Of which:	System share of each country			
				Western Union	Anelik	Contact	Unistream
Russia	633,919	63%		15%	23%	20%	20%
Ukraine	70,474	7%		11%	9%	5%	9%
USA	63,866	6%		29%	1%	12%	0%
Greece	47,198	5%		24%	0%	0%	0%
Italy	36,621	4%		7%	0%	84%	0%
Armenia	21,940	2%		2%	59%	0%	3%
Turkey	20,885	2%		91%	0%	0%	0%
Spain	20,369	2%		12%	2%	58%	6%
Rest of the World	86,851	9%		49%	3%	6%	10%
Total	1,002,122						

As one would expect, Western Union is relatively weak in the former soviet states. It can only claim 15% of remittances coming from Russia, 11% from Ukraine and 2% from Armenia. However, it has a 29% market share of remittances coming from the US, 24% coming from Greece and takes almost half of the rest of the world's remittance volumes.

Of the other three fast growers, Anelik and Unistream are particularly influential in CIS countries. This reflects their network of agents outside the country. Anelik, as an Armenian firm, shows significant market share of Armenia and also has significant representation in Russia, Ukraine, Moldova, and Tajikistan. Unistream focuses heavily on Russia but also has significant representation in Ukraine and Spain. Contact has the broadest network of the three and so shows significant market share in former Soviet markets and in the US, Spain and Italy.

Therefore, one can say that market share is determined by price as well as in country and out of country networks.

### **Different models for phone payment systems**

The original premise of this research project was to look into the possibility of using mobile phones to facilitate transfers of remittance payments in Georgia. There are two separate problems involved in this issue. The first is the ways and extent to which, at a national level, the areas of mobile phones and banking have come to intersect or can come to intersect, to bring banking services to the unbanked in Georgia. The second is the question of how we can make the international remittance systems more accessible, either using mbanking or by some other means.

Having considered how remittance transfers currently work, this section will look at how mobile banking works in the rest of the world and remittances have been connected to it. This will highlight both the difficulties of setting the system up and the strengths and weaknesses of the system once it exists.

### **Mobile Banking**

Mobile banking, in its simplest sense, is the connection of banking or banking-like services to mobile phones. This can take two fundamentally different forms; additive and transformative. The additive form is most common in developed countries and simply connects mobile phones to existing bank accounts to allow mobile account management and bill payments. The second form is transformative and aims to use mobile phones and networks of agents to provide bank-like services to those who do not currently use bank accounts. Since the second form has the clearest application to poor communities it is the transformative form we will discuss for the rest of this section.

Mobile phones have been used in a range of interesting ways to provide bank or bank-like services to those who exist outside of a banking network. The earliest forms of mobile banking used innovative systems for bartering phone credit in order to use phone credit transfers as a de facto cash transfer system. For example, a rural village in India may only have one person with a mobile phone who then lets other people in the village use that phone for a charge. If someone in the capital city wants to send money to their family member in that village they could simply buy a phone card and SMS the number to the village phone owner, effectively giving them the purchased credit. The owner of the village phone could then give cash to the value of the transferred credit (minus a commission) to the family of the sender.

The current logic of mobile banking takes this a step further by allowing the credit held on a mobile phone to directly buy goods or to be transformed into cash. This allows bank-like services to be made available to remote areas at a fraction of the cost of setting up a bank branch. Bank networks are extremely expensive to maintain and so it is rarely profitable for a private bank to extend itself physically into every geographic area of a developing country. ATMs do not make the system that much better since they are often located at branches to reduce the burden on the branch and, even where they are not, they are rarely located in rural areas. They therefore rarely extend the accessibility of banks beyond the urban areas.

The developmental logic of mbanking is simple. Globally there are approximately one billion people in the world who own a mobile phone but do not have a bank account.<sup>17</sup> Mobile phones and the networks of agents who sell mobile phone cards offer a combination of networks and technologies that can provide banking services to this group at a significantly lower cost.

From a business point of view, this billion people with phones but no bank-accounts are a huge potential market. The service provider can make money by charging for cash transfers, electronic payments or electronic receipts. Since their overheads are far lower than traditional banking networks their charges can be lower too. In addition, particularly for a mobile phone company, the addition of a banking service to the mobile phone can help to encourage the customer to stay with a particular provider, reducing customer turnover.

The technology of mobile banking has two components, the phone itself and an 'agent network' to provide bank-like services. Phones combine a technology for transferring information and a technology for verifying identity. As a result phone credit can be transferred between users and the phone can be used as a cash transfer system. This can simply allow transfers between two individuals in different geographical locations or it can allow transfer in exchange for goods and services, acting like a credit/debit card for a consumer and like a point of sale device for a retailer or service provider.

Since developing countries are heavily cash dependent the effectiveness of a mobile banking system will also depend upon an extensive system for getting cash out. To provide this 'cash-out' facility the mobile phone network usually leverages another aspect of its network; the small shops that sell its phone credit cards. Most mobile companies have a vendor network, selling credit in the form of phone cards. This network is usually far more extensive than either bank branches or ATMS. By licensing some of these vendors as 'cash-agents', the phone company can reproduce the functionality of an ATM system at a fraction of the cost.

CGAP, a microfinance research organisation, distilled a range of lessons that have been learned from mobile banking and 'agent-based' banking businesses that have emerged in the world so far. The first thing that they highlight is that the degree of financial saving in providing banking services this way is considerable. A normal transaction through a bank in the Philippines costs about USD 2.50. With mobile banking it is more like USD 0.50. A cash transaction in Peru is estimated to cost USD 0.85 using an agent the cost is more like USD 0.32. In addition fewer of the transaction costs are fixed. Retailers already have a shop so there is no need to invest in bricks and mortar and mbanking does not need the same kind of training that bank-tellers require. So relatively low transaction volumes will not make a system unprofitable. In Pakistan setting up an agent for mobile banking costs about \$1,400 which is 32 times lower than opening a bank branch and the running costs of an agent are about 1% the running costs of a bank.<sup>18</sup>

The technology for turning an ordinary mobile phone into a mobile bank is simple, cheap and readily available. While the company who sets up the service will incur a range costs in purchasing the technology, running the back-office of a bank and managing the whole system, the adaptations necessary to the handset itself are minimal. The easiest variation of the system simply requires the individual user to register the handset with the mbanking company. Once the handset is registered then all of the functions can be provided through SMS. By typing an SMS with a particular series of letters/numbers one can already (in Georgia and elsewhere) send mobile phone credit between handsets. Once a mobile phone is registered then the same system can allow transfer of 'mwallet' credit to other phones.

17 Sinha, J. and A. Subramanian (2007). *The Next Billion Consumers*. Boston, USA, Boston Consulting Group.

18 Ivatury, G. and I. Mas (April 2008). "The Early Experience with Branchless Banking." *CGAP: Focus Notes*. p2

However, managing the whole system through complicated SMS codes is fairly cumbersome and requires the customer to remember the codes for different functions, and to type in a pin-code each time a transaction is performed. The preferred option for mbanking in most countries is to modify the SIM card so that options like ‘send money’ or ‘pay a bill’ are shown as options in the phone menu.

While the technology of mobile banking is simple, setting up a mobile banking system does have a number of common problems. The first problem is developing a network of agents. There are three reasons why a retailer might be interested in setting themselves up as an agent. First, they would make a commission on cash paid in or taken out. Routinely, they will make about half of the commission on cash transfers, so if the customer is charged 2% then the retailer would make 1% or one dollar for every hundred dollars provided. Second, it will provide them with a competitive advantage since it will encourage people to come into their shop. Third, if they are a large cash volume business (and many phone-card sellers collect a lot of cash) then handing cash out to customers can save them the trouble of depositing it in a bank.

The two most obvious costs involved in acting as a cash agent are the set-up costs of the technology and the time taken to process the transfers. On top of this, experience in other mobile banking systems has suggested that probably the biggest problem for any mobile phone banking system is that they are unlikely to have enough cash on hand to pay-out demands without regular trips to the bank. According to Olga Morawczynski a mbanking researcher, this was the one of the biggest problems for the Safaricom system in Kenya and, according to another researcher, managing liquidity (making sure there was enough cash to cover demand) was the largest expense of a Safaricom cash-outlets.<sup>19</sup> As Ignacio Mas, one of the World Bank’s leading experts on mbanking has stated, ‘the fundamental role of the agent is to aggregate the cash requirements of the community. The agent is indeed a cash-storing and transport business; it absorbs the fundamental risk of cash handling’.<sup>20</sup>

Setting up a viable agent network has probably been the biggest hurdle to mbanking. To accelerate the expansion of mbanking agent networks, most systems have started by building on already existing chains of vendors so that one agreement can gain the most agents. The groups that mbanking tend to leverage include national post-offices (Brazil and Kenya), lottery vendors (Brazil and Colombia), supermarket chains (Kenya, Phillipines and South Africa) and pharmacy chains (Brazil and Peru).<sup>21</sup>

The second biggest hurdle for mobile banking in most countries has been the regulatory environment. Most countries have strict limits on who can provide financial services and often, the use of agents (individuals who work on the bank’s behalf to provide services, but who are not employed by them) is precluded by law. Before an agent network can be established it is necessary that the legal infrastructure exists to allow them to act in that capacity.

Similarly, banks are usually required to make checks on their clients before opening accounts for them. Banks often have to check that the identity of their customers, including a check of their visa or residency documents. This is one of the main reasons why unregistered migrants fail to have bank accounts. In order to avoid money-laundering and to ensure that money transfers can be tracked mobile phone companies would have to fulfil similar requirements in order to act as financial agents.

The third enduring problem that anyone planning to start a mobile bank has to deal with is the technical orientation of their potential client base. The elderly, the poor and the uneducated may find it hard to understand or learn how to use mobile phones for this extended set of functions.

19 Rosenberg, J. (17 June 2008). Why Has MPesa Become So Popular in Kenya? *CGAP*, <http://technology.cgap.org/2008/06/17/why-has-m-pesa-become-so-popular-in-kenya/>.

20 Mas, I. and H. Siedek (May 2008). “Banking Through Networks of Retail Agents.” *CGAP: Focus Notes*. p5

21 Ibid.

The final problem for mobile banking is its ability to turn a mobile cash transfer system into a system that properly opens up a wider range of banking services for the poor. In the countries where mobile banking or agent-based banking has been tried it has mostly been used for payments and receipt of cash and not for credit or other financial services. Often between 80 and 90 percent of business is related to payment of bills or cash transfer.

The emphasis on cash transfers and on simple utility payments results from two factors. First, it is the clearest value proposition for the customer to understand. Second, none of the existing mobile banking systems have successfully developed extensive networks of retailers and service providers prepared to accept electronic transfer as a form of payment.

It is obvious to customers that they benefit from not having to go to a town to pay their utility bill or pick up their remittance. However, encouraging people to understand the value of leaving that credit on the phone for future use, to gain small amounts of interest, or to develop a banking track-record that will help them get loans in the future is harder to explain or to understand. As a result the overwhelming majority of people go to withdraw the full amount of money sent as soon as it is received.<sup>22</sup>

Curiously, in Georgia, the same problem exists in the banking system. Most of the country has a bank account at the moment since all social payments, pensions and government salaries are paid directly into bank accounts. However, many of these people do not consider themselves to have bank accounts since they generally withdraw the money they receive at the first opportunity from one of the 600 bank branches or 1200 ATMs in the country. This is hardly surprising given that most of the social payment recipients are, by definition, poor and so spend the money immediately on subsistence. Even though there are 6000 point of sale devices<sup>23</sup> (credit and debit machines in shops) in the country these are overwhelmingly located in urban areas and so offer little incentive for payment recipients to leave their money in the bank accounts.

The challenge to the next generation of mobile banks has to be to expand the benefits of keeping credit on a mobile phone. Most obviously this will involve ensuring that a wider range of product and service providers are prepared to accept electronic transfers as payment. If your local shop would accept payment for groceries electronically why would you bother to 'cash out'. Once people are leaving the money on their mobile bank 'wallet' for longer, it becomes a lot easier to leverage the network in order to provide financial services.

### **Remittances and Ebanking**

The connection between remittances and ebanking has, up until now been fairly thin. In the course of this research none of the mobile banking experts that have been interviewed have suggested anywhere in the world where two mbanking systems are connected across an international border. It is now fairly common-place for remittance companies to send a text message to the recipient to say when the money is available to be collected but cash is not currently transferred that way.

Remittances are connecting to mobile banking in a few test projects but in these systems, at the current time, the mobile bank essentially provides 'the last mile' of cash delivery, that uses already existing cash-transfer systems to travel over international borders. Western Union, for example, has one pilot scheme in operation, connecting its remittance system to Globe Telecom and Smart Communications in the Philippines. It will be connecting users to Safaricom in Kenya in the near future.

In these pilot schemes, people who want to send money to friends or relatives who have 'mobile-wallets' will go to their local Western Union agent as usual. But instead of wiring the money to

<sup>22</sup> Ivatury, G. and I. Mas (April 2008). "The Early Experience with Branchless Banking." Ibid. P7

<sup>23</sup> National Bank of Georgia statistical data. <http://www.nbg.gov.ge/index.php?m=306> (reviewed April 2009)

another Western Union agent in the destination country, this money will appear on the recipients mobile 'wallet' and can be then converted into cash at any agent, or used to buy goods from anyone using the same system.

However, even these pilot schemes are not global connections. Even though Western Union has an extensive global network, its relations with mobile banks are currently limited to a patchwork of bilateral relationships. So, Western Union only allows its agents in the United States, the Middle East and Asia Pacific to send money directly to the Philippines. The transfers into the Safaricom Mobile wallet will only come from the United Kingdom.<sup>24</sup>

The reason for this restriction is that, at the current time there is no single international agreement on electronic transfers of money into mobile banking systems and no standardised technology built into all of Western Union's operations. As a result they have to identify the markets where remittances are highest and then negotiate relationships with sending countries, assuming the local legislation will allow it. The Philippines was a natural first choice because they are acknowledged to have an extremely progressive attitude towards remittance legislation, because the mobile banking system is so extensive and because the volumes of international remittances are so large.

Until there is functioning international standards to manage both the legal and the technical side of remittance to mobile-bank transfers the attractiveness for an international cash-transfer system in partnering with a mobile bank will depend upon the concentration of remittances coming from one place (the more concentrated the place of origin the better) and the number of people outside the coverage of the existing system. As I will explain below, Georgia seems to score highly on both counts.

### **Existing Mobile Banking in Georgia**

There is one company that is currently in the process of negotiating the relationships necessary to set up a mobile banking platform in Georgia but until their negotiations are finalised it is hard to assess the details of their business model.

Apart from that there is a lot of interest in mobile banking in Georgia but there are only two ways in which banking currently connects with the mobile system and both of these are additive rather than transformative. First, if you are a customer of Bank of Georgia or TBC bank then you can use a mobile phone to gain access to the services of a pre-existing bank-account. By downloading a small Java application to your internet-enabled phone, you can access your bank account very much in the same way as you do with internet-banking but from a telephone handset.

However, this form of phone banking is critically weaker than the mbanking model we have discussed so far for two reasons. First, it requires an advanced hand-set and so it is targeted at high-end bank account users rather than those who currently do not have bank accounts. Second, it is not really branchless banking since it still requires the customer to have a conventional bank account, for holding money, to have a credit card for buying goods and to use a bank or ATM to withdraw cash. Without the ability to use the phone to buy goods or withdraw cash, these services do not offer an extension in the crucial banking functions.

The second element of phone/internet banking is that all of the major banks in Georgia provide a phone SMS service whereby any transactions that occurs on your bank account, including receipts and payments, will be SMSed to your mobile phone. This is clearly extremely limited since it does not provide any potential for actually carrying out transactions.

<sup>24</sup> Interview with Kristin Kelly April 2009, Media Relations Manager, The Western Union Company,

From the mobile phone companies there is also very little movement at this time. There are three main phone companies in Georgia; Magti, Geocell and Beeline. Both Magti and Geocell claim to have the largest market share with Beeline a distant third. There is no independent data to verify their respective market information since Georgian law does not require private companies to post earnings. All of the phone companies have the capacity to transfer phone credit between users, so that it is possible to send phone credit from one phone to another or put credit directly on someone else's phone (within the same network and country) fairly easily. This does open up the possibility of the barter-like internal remittance payments already discussed. However, none of the phone companies allows either purchasing of goods or 'cash-out' facilities whereby phone credit turned into goods or cash.

Of the three companies we interviewed, Magti expressed the most interest in the mbanking business and is currently engaging in the basic research to assess the applicability of the models used elsewhere in the world to a Georgian context. However, they have not advanced as far as developing potential cost or market structures, investigating the agent structure they might use, selecting technologies or developing business plans and it was hard to judge the extent to which these were merely aspirations.

Geocell says that this issue has not been a high priority up until now and they have no-one working on it. Irakli Lobjhanidze, Chief Marketing Operator for Magticom, argued that in allowing the 'transfer of credits we have achieved the first step to mobile banking'.<sup>25</sup> The next step, he argues, is to make it possible to pay for goods and services with the mobile phone. 'It is already possible to pay for the metro with a chip embedded in a plastic card. All you have to do is embed that technology in the SIM card and the phone is able to pay for similar things'.<sup>26</sup> The next stage is cash-out. The final stage, according to Irakli is to be able to provide micro credits through the phone.

However, the products development manager was wary about the process of mobile phones becoming banks. Not only did she suggest there are technical problems with allowing people to pay for goods with credit on phones, there are legal problems and business problems too. In particular they did not see the benefit in making it possible for people to take credit off their phone since, at the moment, as soon as they put credit on their phone it is the irretrievable revenue of the phone company.<sup>27</sup>

The third mobile company, Beeline, currently only provides the mobile phone device for bank of Georgia, it does not provide any 'transformative' mobile banking functions. Curiously enough, as the most international of the three companies, and as a strong regional player, Beeline is the most obviously placed to take a lead in this but is so far proving resistant. In some countries they do offer a function for payment of phone credit in one country that will be used in another (for example, Russian clients can buy phone credit for clients in Tajikistan). In addition, Russians use credit on their mobile phones to buy cinema tickets and pay utility bills but Beeline is not convinced that Georgians are sufficiently technologically oriented to duplicate those services in Georgia.

In addition to these groups, in the aftermath of the war a group of NGOs considered setting up a mobile phone system in order to make emergency cash transfers, but because of the time this would have needed to set-up they decided to simply use the same system that the government uses for pensions and social aid payments.

<sup>25</sup> Interview with Irakli Lobjhanidze, Chief Marketing Officer Magticom, 31 March 2009

<sup>26</sup> Interview with Irakli Lobjhanidze, Chief Marketing Officer Magticom, 31 March 2009

<sup>27</sup> Interview with Irina Yakubova, Products Development Manager, Geocell, 31 March 2009

## Low tech improvements to remittance delivery

The purpose of this project was to look at the way in which mobile banking could be used to leverage both access to remittances and improve the use of remittances in Georgia. However, the research did identify a number of relatively low-tech ways in which remittance payments could be improved, so before discussing the use of mobile phones for remittances I will review these.

The easiest way to improve the delivery of remittances in Georgia would simply be to persuade banks that it is in their interest to have enough cash to pay transferred remittances. In our analysis of the remittance system in Tianeti one surprising problem we found was that People's Bank did not always have enough money to pay-out the cash payments they received on their transfer system. As a result, people receiving cash transfers of more than USD 200 were often told that they had to wait a week, or they had to go to the larger branch in Tbilisi.

When People's Bank were interviewed about this they argued that it was simply impossible to predict remittance levels with sufficient accuracy to ensure that cash stocks were always available.<sup>28</sup> However, this seems a hard argument to maintain given that the growth of remittances has been gradual and seasonality of remittances are fairly well known.

One possible reason why Peoples Bank are not motivated to fix this problem is that, according to our research, Intelepress is the principle source of remittances sent to Tianeti and only People's Bank has a contract with them. As a result if People's Bank fail to provide the cash in a timely manner, then the money is left with them for longer (presumably earning People's Bank interest) or their clients will probably go to another People's Bank somewhere else. The only way they can lose the commission altogether is if the client goes directly to the Intelepress office in Tbilisi.

People's Bank need to be encouraged to have money available on demand for cash transfers. Persuading and educating people about the benefits of using their bank accounts is clearly an objective but forcibly restricting access to their money is not acceptable. If Peoples Bank cannot be encouraged to change their policy then an incentive can also be offered. Transfers using Western Union cost 9 Euros for each 200 Euro transfer. This is 4.5% which is only marginally higher than the Intelepress charge of 4%. Since Western Union already has a 24% market share for Greece it would be safe to assume that they are well represented in Athens. They also have a relationship with all of the banks, so that transferring money this way would expand the range of places where money could be collected by recipients and would also put more pressure on People's Bank to keep the necessary cash on hand.

In future research it would be worth identifying if this problem (non-availability of cash) is commonplace. It would also be worth making sure that people have easy access to a comparative list of remittance prices from most of the major remittance origin countries.

Another relatively easy and low-tech method of making remittances a little easier to access and possibly improving their usefulness would be to figure out why current remittance systems do not go directly into the recipient's bank account. At the moment, although recipients mainly collect their remittances from banks, these remittances do not go directly into bank accounts. This is strange given that most Georgians technically do have bank accounts and the technology for this kind of money-transfer to bank account is available elsewhere.

Sending money directly into the recipient's bank account would have two advantages. First, it would increase access to that money. Georgia has around 600 bank branches but around 1200 ATMs and 6000 point of sale machines (where plastic cards can be used), so transferring money onto bank

<sup>28</sup> Interview with Davit Gabadze 26th March 2009, People's Bank

accounts would allow it to be retrieved and spent more easily. Second, by putting money directly into bank accounts one would encourage the use of the banking system and help to develop the income profile of clients necessary to make loans.

The final low-tech suggestion for improving access to remittances is for People's Bank to expand the range of services that its 'cashiers' provide. At the current time People's Bank claim to have a network of 2000 'cashiers' who deliver pensions and social assistance money to customers that cannot reach an ATM. They say this system can already reach 400,000 people.<sup>29</sup> This service is provided for free. If this already existing network could be provided to pay remittances (particularly if it was combined with the previous suggestion and remittances were put on plastic cards) then this could expand the ease with which recipients could access remittances.

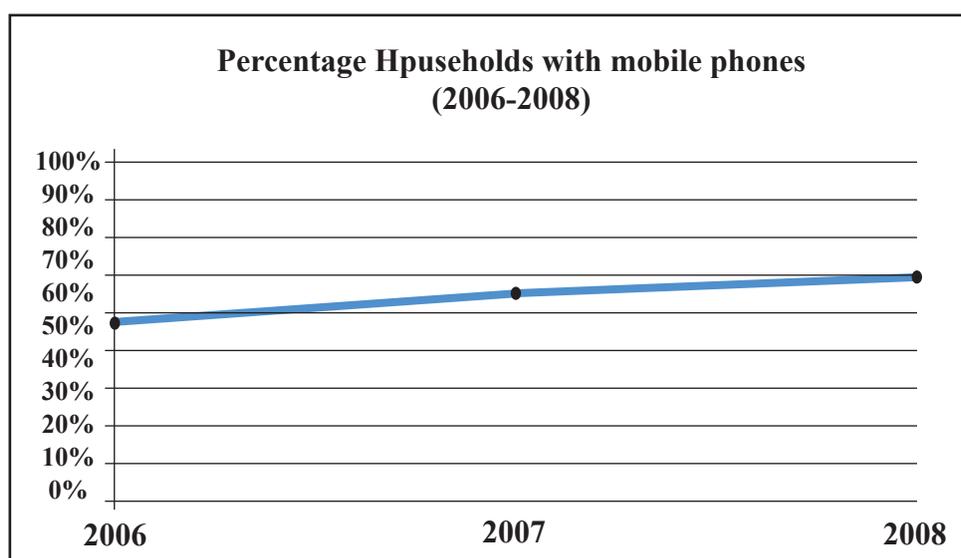
There are a number of potential problems with this. Most significantly, expanding the services of these 'cashiers' would obviously incur additional costs to the bank. Also, payments could not be made 'on demand' but would have to wait up to a week for the visits of the cashier. However, this definitely seems worth investigating.

### Mobile Banking and Remittance Systems in Georgia

The purpose of this research was to investigate the way in which mobile telephone technology can help facilitate the delivery of international remittances. It became clear in the course of this research that this involved two distinct steps. The first was the development of a national mobile bank and the second was the extension of international remittance services to that bank.

The two most obvious reasons for setting up a mobile banking system in any country is the combination of mobile phone usage and banking usage. Mobile phone use in Georgia is high given its level of development. According to the data-initiative survey around 65% of households had a mobile phone in 2008. This percentage was highly differentiated with only about 50% in rural areas, 64% in urban areas (excluding Tbilisi) and 73% in Tbilisi.<sup>30</sup>

Figure 8



Reference: CRRC Data Initiative Dataset (2006, 2007 and 2008)

<sup>29</sup> Interview with Beso Jighauri, Head of Social Assistance Department, Peoples Bank (15<sup>th</sup> April 2009)

<sup>30</sup> Note that these numbers disagree with the numbers offered by the mobile phone companies and by the telephone regulatory authority. However, it is worth noting the phone companies and the regulatory authority only keep track of number of active SIM cards. This is problematic since many people (particularly young people) change SIMs regularly to take advantage of new offers. In addition, it needs to be noted that this is the number of households not the number of phones in total.

This makes sense. In a country where about 1/3 of households are considered to be in poverty, it seems likely that this group would be unlikely to own a cell-phone.<sup>31</sup> Added to this high usage level, almost all of the country has mobile-phone access. Second, in spite of a relatively large number of banks, for its level of development, banking usage remains low. The majority of people do have bank accounts and plastic cards. They are necessary to receive government salaries, pensions and social assistance payments. However, relatively few people think of themselves as having ‘bank accounts’. In the same 2007 CRRC survey only about 8% of people claimed to have a bank account. The most likely explanation for this discrepancy seems to be that they do not think of the ‘plastic cards’ as attaching to bank accounts. They merely use these cards for collecting their cash on a monthly basis.

Therefore, with a high mobile phone coverage and low banking usage it seems as though mobile banking could be useful. However what about the hurdles? In the previous section we suggested that the biggest problems for setting up mobile banking related to the cash requirements of agent networks, the governance structure and technical orientation of the potential customers. For agent networks, there are a number of very different agent networks that could form the hub of a network. While there is no widely used post-office and the one supermarket chain is centred in urban centres, there are networks for paying utility bills, gas-station chains and, of course, a series of shops that sell mobile-phone cards.

Whether these systems have sufficient cash as part of their normal business to pay ‘cash-out’ requirements of mobile banking is unclear. It will partially depend on the businesses that are initially identified. If they do not then the cost of maintaining a float are directly related to the agent’s proximity to a bank. While it does not reach every area of Georgia, the banking system does have a surprisingly extensive network of banking branches for a country at its level of development and this should help the agent to maintain a float. The World Bank conducted a comparison of 99 countries to see how relatively extensive their banking networks were. This included countries at a range of different levels of development. They calculated the number of banks branches per 100,000 people and per 1000 square km. The table below compares their findings with my own calculations of the same figures for Georgia.

**Figure 9: Concentration of Bank Branches in Georgia compared the Rest of the World**

Location	Georgia (2009) <sup>2</sup>	World (2003-2004) <sup>3</sup>		
		Lowest 20%	Median	Highest 20%
Per 100,000 people	16.8	1.2	8.4	49.7
Example countries		Ethiopia, Honduras	Turkey, Poland	Austria, Belgium
Per 1000 sq/km	9.6	0.2	4.8	119.7
Example countries		Bolivia, Kazakhstan	Estonia, Sweden	Belgium, Malta

This should not be taken to suggest that everyone has easy access to a local bank. Banks in Georgia are still concentrated in urban areas. However, at least the network is sufficiently diverse that agents should be able to regularly go to the bank to maintain their float.

On governance issues there are three different legislative hurdles. The first hurdle is the registration of a mobile bank. The second issue is the legal status of the agents. In many countries banking ‘agents’

<sup>31</sup> Poverty figures are extremely hard to gauge but UNDP suggested that poverty in Georgia was 25% in 2007, the IMF suggested 31% and about a third of the population have registered themselves to request social assistance (United Nations Development Programme. (2008) *Georgia Human Development Report 2008: the Reforms and Beyond*. Tbilisi. p34)

who provide bank-like, or ATM-like, services are precluded by law. The third is the legal status of cash transfers internationally.

On the first issue, in Georgia, in order to provide financial services it is necessary to be registered as a bank or microfinance institution. For this reason companies like Western Union are registered as microfinance institutions. Similarly, a mobile bank would need to either operate through a registered bank or register itself as a microfinance institution. This should not be too difficult.

On the issue of ‘agents’ and the legality of international transfers, according to the National Bank of Georgia Head of transfer systems, there is no legislative impediment to setting up an agent network. However, the lack of impediment does not constitute a legal provision. He pointed out that the area is more characterised by a legal black-hole than progressive policy.<sup>32</sup>

Finally, as we suggested earlier, the technological orientation and adaptiveness of the population is sometimes seen as a hurdle to mobile banking. Opinions differ on how this issue relates to Georgia. The mobile phone companies we spoke to were sceptical about the likelihood of training the poor or the elderly in the use of complicated mobile services. However, one charity we spoke to, which had considered using mobile phones for distributing post-war emergency cash payments, said that the consensus was at the time, that Georgians would be susceptible to technical training.

There does seem some reason to believe that technical education could make mobile banking a usable product in Georgia. First, the country is highly literate. Second, people are increasingly used to technical interaction with ATMs and mobile phones. Third, the small size of the country should make it easier to reach an educational ‘tipping point’ where the general comfort zone with the product allows peer education.

All of that said, one US firm already seems poised to open a mobile banking system in Georgia. Therefore, the issue of whether it should be done may become irrelevant and the more important question becomes *how* to make sure that this system works most effectively. In particular, how do we make sure the mobile bank is used to provide financial services and how do we connect this bank to remittances?

### **Extending the Services Provided by Mobile Banking**

It is clear from the research that one of the great weaknesses of mobile banking in other countries has been its failure to connect cash transfers to the provision of wider financial services. If mobile banking is to work in Georgia it would have to be very focused on extending the benefits of the ‘mobile wallet’ beyond that of a simple national cash transfer system. In the examples of Kenya and the Philippines the system principally generates revenue by the charges that it makes on cash transfers and from cash withdrawals. This works because national remittances in these countries, and the distance between senders and receivers, are very large. Local remittances, in this respect, work rather like international remittances; they involve transfers over large distances and between people who rarely see one another.

In these systems a number of problems are created by the emphasis on cash. First, it puts a strain on ‘cash-in’ and ‘cash-out’ agents. Second, where the emphasis has been cashing (in and out) it has been difficult for mobile banks to encourage up-take of additional financial services. Since people are not leaving little money on their mwallet they do not use saving products to earn interest, or accumulate value for the future. This also makes it harder to use their mobile wallets to improve provision of loans and loan repayment schemes.

<sup>32</sup> Interview with Zurab Grigalashvili, Head of Payment Systems Department, National Bank of Georgia, 9 April 2009

In order to persuade people to start using their phones for more than simply transferring money, it is essential that the user sees a value in leaving money on the phone for longer periods of time. One of the reasons this has not happened in other mobile banking countries is that it is hard to gain a critical mass of vendors/retailers/service-providers who will substitute cash-payments for electronic payments.

Given the relatively small size of Georgia it should be a lot easier to develop a critical mass of regular retailers and service-providers that will be prepared to take mobile phone payment. The most obvious first step on this would be to make it possible for people to pay their utility bills with their mobile wallet. Payments of utility bills in Georgia already often occur through automated bank transfers and the benefits of electronic payments in this area are clear. Electronic payments are also used for travelling on public transport and this system should also allow easy adaptation to mobile-phone payments.

The next step is to persuade retailers to accept payment for goods using the mobile phone transfers. This seems to be simply a matter of education since, unlike credit card payments, this will not include any cost to the retailer. Since the mobile phone acts like a point of sale device to the retailer there is no need to spend additional money on equipment (like a credit or debit card machine). In addition, since this saves the system a need to 'cash' the credit on the mobile phone, the retailer should incur little if any charge.

If the range of services and facilities for making payments could be expanded then people would have more reason to leave money on their phones. Once this happens it becomes easier to start providing these users with access to other services. For a start, money left on a mobile wallet can gain interest, which is clearly a benefit in itself. Most importantly, the key financial service that small customers often want is bank loans. Mobile phone banking makes that easier in two ways. First, in the same way as bank accounts, mobile wallets can provide a financial history that bankers can use for making decisions about loan provision. Second, mobile phones can also provide a tool for easy loan repayments.

### **Development Spending in Georgia: An Opportunity for Mobile Banking**

In addition to the general development case that can be made for mobile banking in Georgia, it is worth taking a moment to reflect on the particular developmental opportunities presented by the large amount of development interest in the country. At the donors conference of November 2008 that followed Georgia's brief war with Russia in August, the international community pledged a total of USD 4.5 billion of post-conflict support. This is approximately USD 1,000 for each member of the population and makes Georgia the largest per capita recipient of aid money in the world.

Of course, a great deal of this money was intended to support government budget shortfalls, to offer liquidity to the struggling banking sector and to invest in large infrastructure projects.<sup>33</sup> However, there will still be a significant increase in development project spending. Three large requests for proposals are expected from USAID in the next few months alone that together could value USD 20-40 million.

Microfinance often forms a part of these strategies but is clearly constrained by the ability of any microfinance organisation to work over a large geographic area. For a microfinance organisation it is also difficult to work with established banks because it is extremely hard to convince the banks that small (less than USD 5000) loans are worthwhile. This clearly offers a huge opportunity for a new network that is prepared to work with the microfinance organisations to deliver credits targeting the relatively poor and a mobile bank could provide just this network.

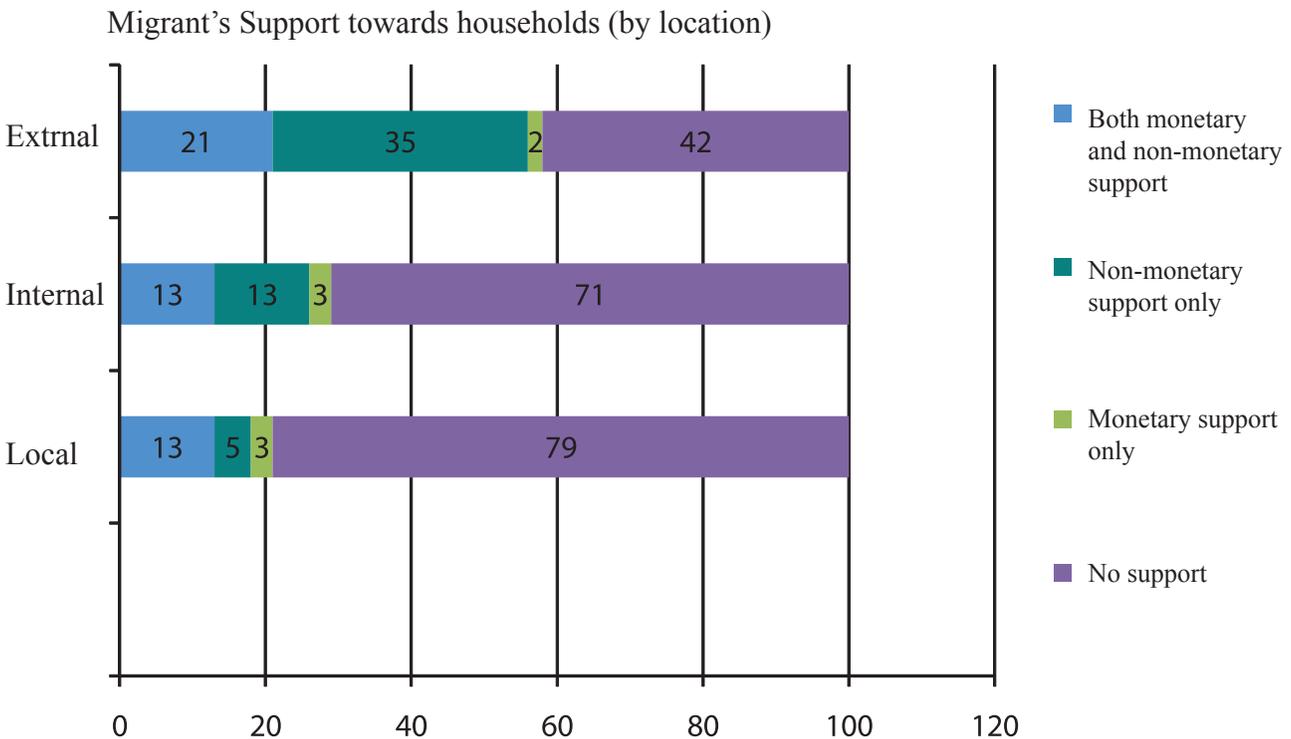
<sup>33</sup> For a useful summary of the aid that was pledged, its sources and purpose, see Transparency International Georgia. (9 December 2009) *Access to Information, Accountability and Aid to Georgia*. Tbilisi, Georgia.

### Connecting remittances to Mbanking

There are a number of reasons why it should be particularly possible and useful to connect international remittances to mobile banking when it emerges in Georgia. First, as we have already suggested, in the absence of a single international platform for money transfers, connecting international remittances to mobile banking involves the development of geographically targeted relationships that identify origin points for remittances and connect with local partners already located in those areas. In the Georgian case this should be relatively easy because of high migrant concentration in one place. As we have already suggested about 2/3 of cash-transfers come from Russia, but more than that, according to the EBRD poll over half of that comes from Moscow.<sup>34</sup> So by developing a relationship with a Moscow based money-transfer company (of which there are money) you would have access to over 1/3 of the remittance market in one step.

Second not only are international remittances large, but they seem to be far larger than internal remittances and so offer a relatively large revenue stream. The figures below, taken from the data-initiative 2007 dataset represent the level of support provided by absent household members.

Figure 10<sup>35</sup>



The third reason why Georgia seems well placed for connecting international remittances to a mbanking network is that while the banking system is not good enough to reach into rural communities, it is still pretty developed for a country of this size. This is important because if agents are going to act as locations for international remittance ‘cash-out’ then one would expect this to intensify the ‘float’ problem discussed earlier. Since international remittances are usually USD 100-250 then the agents themselves may have difficulty holding enough cash. Therefore, banks need to be well enough disbursed for the agent to get cash regularly. This does seem to be the case.

34 European Bank for Reconstruction and Development. (July 2007) *Presentation on Georgia National Public Opinion Survey on Remittances*. p17

35 ‘Local migrants’ are those who no longer live in the household but live in the same region. ‘Internal migrants’ moved from the household to another region but (including Tbilisi) but stayed inside Georgia. International migrants moved abroad. As one can see, international migrants were far more likely to send money home than either of the other two in-country groups.

The fourth reason that Georgia may be a good place to connect international remittances to a local mbanking is that there are no legal impediments to mobile phone based banking, to an agent based network or to a remittance system which connect to either. When discussing mobile banking with the authorities, they were clear that while it may be necessary to revise the law to ensure that money laundering does not occur, it is unlikely that these provisions would interfere significantly with a new system.<sup>36</sup>

This idea is further supported by the Georgian governments desire to develop Georgia as a financial centre and regional hub. The government has demonstrated an impressive willingness to open markets to trade and investment. It has also been willing to strongly encourage some movements towards wider use of e-money with the wide use of plastic cards for both receipt of government payments and for provision of services. Supporting a ‘leap-frog’ technology like mobile banking and using this to provide financial services in the regions would seem a natural next step.

Finally, Georgia is a good platform for testing mbanking and mobile remittance system because its geographic position and cultural history make it a good place to test systems that can then expand to Russia, Central Asia and Turkey.

**Figure 11: Estimates of Global Remittance Receivers**

Country	World Bank Estlmates (US\$ Millions)	IFAD Estlmates (US\$ Millions)
India	25.4	24.5
China	23.3	21.0
Mexico	24.7	24.3
Philipines	15.2	14.6
Indonesia	5.7	3.9
Russian federation	3.1	13.7

Source: Red Gillen (April, 2008), *The Would-Be Disruptors: Technologies in the Remittance Space*, Celent

In particular, Russia would be a natural focal point for mbanking and improvements in remittances because of its size and high levels of international remittances. It is listed by IFAD as the fifth largest remittance recipient in the world. In the World Bank lists it is 6<sup>th</sup>.<sup>37</sup> In addition to this Russia is unusual in that it is the only country in this list that is both a large recipient of remittances and a large payer of remittances. Therefore, there is a potentially massive market to be gained by any new technologies that can be made to work in Russia. However, Russia itself is both too large and too administratively difficult to break into directly so testing technologies and processes on a smaller and more manageable country like Georgia makes sense.

Therefore, it seems clear that if mobile banking is going to work in Georgia it will really need to connect to international remittances quickly. These remittances are almost certainly larger than the local remittance market and given their relative concentration in Moscow it should not be hard to set-up the bilateral relationship.

Also, it will be essential to develop methods to broaden the role of the mbank beyond the simple provision of transfer services. This is not just essential to make mobile banking as developmentally

<sup>36</sup> Interview with Tamuna Grdzlishvili, Deputy Head of Legal Methodology and International Relations (May 2009) and interview with Grigalashvili, Head of Payment Systems Department, National Bank of Georgia (April 2009)

<sup>37</sup> Neither of these organizations offer enough detailed reasoning for the figures to understand the basis for this discrepancy.

effective as possible. Without the large domestic remittances that one associates with other mbanks (like in Kenya and the Philippines) and the revenue that comes with them, developing and selling these services will probably be essential to the mbank's domestic success.

However, providing these services should be easier to do in Georgia than in larger countries. Its size makes broad education and marketing campaigns about the benefits of e-money feasible. Similarly, the huge number of development organisations in Georgia at the moment, many of whom are interested in stimulating small business development, will also provide a readily available local infrastructure to facilitate the local roll-out and training process. While the challenge to move a developing country away from cash remains considerable, the opportunities to do so in Georgia seems greater than in many places of its kind and the benefits in broadening credit access and business development are considerable.

(Footnotes)

1 This is not the total number of agents that the system has in the country since this figure does not include the rest of Georgia's banks, or the offices that the money-transfer companies sometimes run independently (which are registered in Georgia as microfinance firms).

2 Based on national bank figures that show 673 bank branches and service sectors in January 2009, an estimated Georgian population of four million and Georgian area of 70,000 square kilometres.

3 World Bank Research Department (2004), *Access to and Use of Banking Services Across Countries*, <http://www.fininc.eu/gallery/documents/3-wbankindicators-uev-111208.pdf> (accessed April 2009)