



New Financial Services
Review of Mobile Money Transfers in the Asia-Pacific

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Overview

Mobile money transfers, together with other facets of branchless banking,¹ have the potential to increase financial inclusion while reducing the costs of remittances, increasing savings, and providing a new revenue stream for banks and providers of mobile services.

In this review of mobile money transfers in the Asia-Pacific, we bring together material from reports by international organisations, discussion lists, industry reviews and academic papers. We investigate mobile money transfers as one component of branchless banking. Drawing particularly on the work of the Consultative Group for the Alleviation of Poverty (CGAP) and the Department for International Development (DFID), we summarise the important success factors for mobile money transfers. We concur that branchless banking is set to grow, particularly for payments. We also agree with their cautious view that sustained and profitable use of mobile money transfers will depend on the fit with social and cultural practice; and flexible business and regulatory models.

The Asia-Pacific region is a fertile territory for branchless banking, and particularly for mobile money transfers. Up to 80 percent of the population of some countries in the region remains unbanked. Mobile coverage is increasing. International remittances are important, but costly to send. Some areas in the region are always going to be too remote for a widespread banking network.

For the potential of branchless banking to be realised, there needs to be regulation that enables innovation, but continues to protect the consumer. A partnership between mobile network operators (MNOs) and banking providers is the most likely to provide payments, savings and access to credit. In the Pacific, regional initiatives are more likely to succeed because of a larger and more sustainable market place. These initiatives need to be built on knowing how people manage and control money in the household, so that the technology can offer additional benefit. Hence, promoting mobile money transfers has to be a fourfold partnership between MNOs, financial institutions, regulators and researchers studying the ways in which the unbanked manage and control their money within their social and cultural context.

¹ Consultative Group for the Alleviation of Poverty (CGAP) and the Department for International Development (DFID) define branchless banking as the delivery of financial services outside conventional bank branches using information and communications technologies such as mobile phones.

Introduction

I use(d) to send money home by taxi. It wasn't secure, it was expensive and it took a long time. Now that I use WING, it has become convenient for me. It is secure with low cost ...

Som Mony, 22 years old, Garment Factory Worker in Cambodia, eldest of 10 children²

WING is a new business wholly owned by the Australia and New Zealand Banking Group (ANZ). It launched a controlled pilot with garment workers in November 2008. WING is attempting to capture the main remittance corridors from Phnom Penh to the six closest provinces. Over 90 per cent of garment workers are located in this area. These workers have been using informal methods of money transfer including mobile scratch cards, taxis/couriers or taking the money home themselves. It would cost Som Mony \$US 2 to send an average payment of \$US 20. With the mobile money transfer the costs would drop down to 25 per cent of the original costs. Using WING would cost approximately \$US 0.50, that is \$US 0.10 for the person to person transfer, and then \$US 0.40 transaction fee when the recipient cashes the transfer.

Mobile money transfers are an important component of branchless banking. 'Branchless banking is the delivery of financial services outside conventional bank branches using information and communications technologies and non-bank retail agents' (Bank Negara Malaysia, 2009). Branches and Automated Teller Machines (ATMs) will continue to remain the centre of the banking network. However some kind of branchless banking network will also be needed to reach out to the almost 4 billion people that remain unbanked. 'Mobile phones can provide great opportunity to achieve greater financial inclusion as more than a billion people worldwide may not have bank accounts, but they do own mobile phones' (Bank Negara Malaysia, 2009).

Mobile money transfers have been spectacularly successful in Kenya. Since its launch in September 2007, Safaricom, a subsidiary of Vodafone has signed up more than 7 million people to M-PESA. Brazil took the approach of using agents with point of sale devices in every municipality in the country to increase financial inclusion (CGAP and DFID, 2009).

Mobile money transfers at present depend on the basic handset, often using SMS to convey the message that money has been transferred. The person wanting to send money goes to a cash-in agent. The agent sends a message to the recipient giving a code number that needs to be taken to a cash-out agent at the receiving end. As Mas and Kumar (Mas & Kumar, 2008) say, 'mobile phones are ingenious devices, but one thing they cannot do by themselves is convert cash into electronic value or dispense cash' (p. 7). In some cases, the recipient can go with the code to withdraw from an ATM or a bank branch.

Regulatory authorities differ as to who can be an agent, but in the successful cases in the Philippines and Kenya, it is the agents of the mobile operators who are also agents of mobile money transfers. An important criterion for a successful agent network is that the agent has enough liquidity to maintain a float, and sufficient business to make that float economically feasible.

² Personal communication, Brad Jones, CEO, WING, 13 February 2009

In developed countries, mobile banking offers another channel for banking information and services, adding mobility to the services already on offer to existing customers. Mobile banking is broader than just the transfer of money via the mobile phone. It is most often designed to retain customers rather than attract new ones (The World Bank Group, 2009a). Mobile money transfers differ from mobile banking in that they can attract the unbanked for they can operate without a bank account. Their initial functionality is limited to payments and money transfers. But many people also use them for storing small amounts of savings. For financial inclusion, it is hoped that mobile money transfers will lead to a more complete banking experience.

Mobile money transfer projects started in 2003 in the Philippines, followed by Kenya and South Africa. These projects are being embraced enthusiastically by regulators and providers in Asia, Africa and Latin America. Mobile money transfers will continue to grow in the next ten years. More than 80 per cent of the world population now has mobile coverage. In 2009, there were more than 4 billion mobile subscriptions. Eighty per cent of these new subscriptions were in emerging markets and held mostly by lower income consumers (CGAP and DFID, 2009). It is important to remember that despite the growth of mobile phones in developing countries, approximately two billion people, particularly in low income rural areas do not have a mobile phone. This is not counting the estimated 500 million users who may be using shared phones (Kalba, 2008).

The euphoria around mobile money transfers lies in the fact that a large number of the unbanked have mobile phones. Hence they have access to a familiar payment channel. However, surveys of the use of mobile money transfers show that the majority of current customers are coming from the banked group. This does not diminish the fact that some 30 per cent of the people using mobile money transfers do not have a bank account (CGAP and DFID, 2009). So the rates of financial inclusion do increase as a consequence of mobile money transfer. Nevertheless it remains to be seen whether the adoption of mobile money transfers will be sustained over time. Or will they become dormant like bank accounts that are newly opened by previously unbanked customers?

Success factors for mobile money transfers

The success of mobile money transfers rests on their fulfilment of customers' needs and the offer of a better solution than was previously available. Branchless banking is relatively new. Currently it is the branch and ATM network that is central for banking and payments. CGAP and DFID conclude that branchless banking will increase the number of people who are banked. The enabling environment is that there are a large number of the unbanked who have mobile phones which can be used for money transfer. The electronic transfer of money is cheaper than the traditional informal methods used before. The trigger application for most of the existing schemes is urban to rural remittances. However, once it is ascertained that this form of branchless banking satisfies an important customer need, it is also important to get the business, technology, and regulatory aspects right.

The mobile remittance market

Remittances are a large market for mobile money transfers. Urban to rural remittances have been the initial trigger for the use of mobile money transfers. Formally recorded international remittances to developing countries are estimated at \$338 billion in 2008 (Ratha, Mohapatra, & Silwal, 2009). The true amount of international remittances is higher when informal remittances are included. Informal remittances are estimated to be at least 50 per cent of recorded remittances (Development Prospects Group, 2007).

We know more about international remittances than urban rural remittances. In the case of China, urban to rural remittances were more than US \$30 billion in 2005 (Murphy, 2006), that is, they were larger than the recorded international remittances for China.

In Asia, informal remittances could be anywhere between 15 and 80 percent of the true value of remittances (Buencamino & Gurbunov, 2002). Informal remittance channels continue to be important, particularly for small sums of money because these channels are cheaper, faster and trusted (Maimbo & Adams et al., 2005). Informal channels are important in countries where large proportions of the population are unbanked and there are few alternatives to cash. It should be noted that the informal remittance process for the unbanked sector can be slow, problematical and risky. It can involve multiple intermediaries, carrying cash over long distances, with no guarantee of reaching the intended recipients (Mirabaud, 2009).

Mobile money transfers can address some of the impediments that encourage informal remittances from the senders' and receivers' perspectives. Senders move to the informal channels because of the high cost involved particularly for smaller amounts, inconvenient access to banks and their inability to prove identity via documents such as a drivers' licence or credit cards for the formal financial system. Hence mobile remittances will attract senders who are unskilled, unauthorized migrants or in shift work. Mobile remittances will particularly suit receivers in rural unbanked areas without access to bank accounts, and those who lack financial literacy among poor, rural users or women – the dominant components among the unbanked. Formal transfer mechanisms have seldom been able to serve this segment of the population (Buencamino & Gorbunov, 2002; Maimbo, Richard H. Adams, Aggarwal, & Passas, 2005; Passas, 2005).

Governments are enthusiastic about the conversion of informal remittances to the formal transparent channel. This change will make a larger amount available for securitization of loans, that is backing loans against the security of expected remittances. This greater transparency is also seen to reduce the threat of money laundering and aiding terrorism (Development Prospects Group, 2007).

Governments and international organizations are working on reducing the costs of remittances. This is to channel more money through formal money transfer organizations thus increasing the possibility of securitization. Though most informal money transfers are of relatively small amounts directed to family, informal channels are also used to fund terrorist activities (Passas, 2003).

The mobile telephone, email, internet, and banking technologies like Automated Teller Machines (ATMs) and direct credit, offer new ways of sending money home. People still send money home via trusted intermediaries, particularly if these are the most reliable ways of ensuring that money gets sent and received.

In China, the postal system continues to be a trusted way of sending remittances within the country. As Murphy (Murphy, 2006) notes, a survey of 400 migrant workers showed that ‘around three quarters of China’s domestic remittances are sent through China Post, commercial banks and rural credit cooperatives’ (p. 11). The Post Office accounts for 62 per cent of the remittances. The cost of remittances is between 1-1.5 per cent, which equates to 30 to 50 yuan as ‘a migrant remits roughly 3,000 yuan a year’ (Murphy, 2006, p. 8).. But even at this level the cost can equal the monthly food allowance for workers in poor regions (Murphy, 2006).³

The business model

Mobile money transfers have increased because providers hope there is a new revenue stream from a previously unserved consumer market. The business excitement centres round the lower cost of transactions, the growth of mobile phones in developing countries, their greater availability and convenience compared with bank branches and ATMs.

The business model can vary from the stand alone telecommunications provider as with Globe Telecom in the Philippines and Safaricom in Kenya or a partnership of telecommunications and banking providers as with South Africa. It is likely that the partnership model will become more frequent, as mobile money transfers also move into taking deposits and the issuance of e-money. This partnership of two different kinds of institutions raises issues of the ownership of the customer and trying to work with varied business cultures. These possible tensions have been detailed in one of the 2020 scenarios dealing with the Pacific in the CGAP and DFID 2009 study *Scenarios for Branchless Banking in 2020*.

As CGAP and DFID note (CGAP and DFID, 2009), the agents network is an important part of the business model. Agents need to have a sufficient transaction volume and commission income for them to keep the cash float necessary for the mobile money transfers to work. Safaricom’s success is partially based on its network of 11,000 agents which is four times the combined number of bank branches and ATMs in Kenya. These agents continue to operate because

³ Part of this section draws on (Singh, 2009b)

the typical M-PESA agent in urban slums and rural areas earns 4.3 times greater profit from being an agent (US\$5.01 per day) than selling airtime⁴ (US\$1.55 per day). This requires high average transaction volumes. M-PESA agents average some 86 transactions per day, but agents in other countries, such as the Philippines, see far fewer customers and struggle to earn sufficient revenue (p. 6).

A successful business model will see the agents as a special type of customer, for without them, the essence of branchless banking is lost.

The increase in mobile money transfers being offered in developing countries rests on the promise of profit. In CGAP and DFID's 2009 study there are few providers of branchless banking who serve more than a million active low-end clients, and at the same time are profitable. One of the providers that claim profitability is the Mobile Banking business unit of First National Bank (FNB). It uses mobile payments as the main channel for serving low-income customers. Safaricom's Chief Executive revealed in May 2009, that M-PESA was not profitable on a standalone basis. It is also worth noting that in two of the scenarios pertaining to 2020, CGAP and DFID envisage agents' income declining because of competition from other agents and the success of mobile money transfers in encouraging mobile payments for goods and services and decreasing the importance of cash (CGAP and DFID, 2009).

Innovative regulation and customer protection

Stipulating who can be an agent has been an important part of innovative regulation. The global financial crisis has heightened government awareness of the importance of regulating the banking and payments system. A balance has to be struck between regulation that is flexible enough to allow for innovation, while at the same time, providing trust in the system and maintaining consumer protection. As Porteous said, regulators have to be conscious of 'enablement' (Porteous, 2006). They need to manage 'the delicate balance between sufficient openness and sufficient certainty' (p. 50) to enable new models and markets to emerge but at the same time protect customers who must entrust their money to new mobile money providers.

Privacy and security of financial transactions remains paramount. Though branchless banking in the first instance reduces the incidence of cash related crime, the future development of branchless banking also brings forward the spectre of money laundering and increased cybercrime. Consumer protection measures will need to be further defined and consumer liability capped.

Some of the regulatory challenges particularly for branchless banking were summarized well after a meeting in Malaysia between regulators from Asia Pacific countries, providers and international organizations (Bank Negara Malaysia, 2009). The press release said that some of the challenges for regulators were:

- Allowing non-bank third parties, such as local merchants, to conduct "cash-in/cash-out" functions and to interact directly with customers and to perform 'Know Your Customer' procedures for remote account opening.

⁴ Talk time.

- Adopting the right measures to address money laundering and combating the financing of terrorism under the Anti-Money Laundering and Anti-Terrorism Financing Act (AMLFA) of 2001.
- Ensuring effective consumer protection to avert potential issues that may arise with the use of mobile phones and the use of agents, including issues such as privacy and fraud.
- Identifying the right regulatory space for the issuance of e-money and other stored-value instruments (particularly when issued by parties other than licensed and supervised banks).
- Allowing an appropriate balance of competition and cooperation in retail payment systems in order to promote a certain degree of interoperability.
- Getting the balance right in competition policies - providing the right incentives for pioneers to invest in the branchless banking business without allowing for the formation of customer-unfriendly monopolies.

Attention also has to be paid to a broadening and coordination of regulation across previously separate areas as mobile network operators become an important part of the delivery of payments and banking services. As yet, there has been little consideration of changes in the regulation of banking and payments arising from changes in communication.

Cultural fit with money management practices

The success of branchless banking depends on its fit with the ways in which people manage their money. There is a growing appreciation of the social and cultural context of money in the evaluation of mobile money transfers. User studies are trickling in and adding a cautious note to the early enthusiasm about mobile money transfers (CGAP and DFID, 2009). These user studies are still a small percentage of the studies on the business and technical dimensions of mobile money transfers. Most of CGAP and DFID's scenarios of 2020 focus more on provision and regulation rather than use.

There are three kinds of studies of use. The first are surveys of the impact of mobile money transfers. Ivatury and Pickens (2006) for instance surveyed 515 low-income individuals in South Africa, of which 215 were customers of WIZZIT, a mobile banking provider (Ivatury & Pickens, 2006). They found that WIZZIT is attracting low-income customers, but many of them have more income and assets and financial literacy than South Africa's poorest people. The WIZZIT customers find WIZZIT convenient, accessible and affordable. Those who use and do not use WIZZIT say they are open to technology, but value human interaction. Most of the non-customers knew little about mobile banking and saw it as expensive and complicated. Those who were unemployed still perceived themselves as ineligible for bank accounts.

Other surveys focus on remittances and people's use of different channels. Christine Hougaard in a survey of remittances in Zambia for FinMark Trust Zambia focused on the amount sent, their irregularity and the informal channels. She found that 53 per cent of the remittances were informal, and cash was delivered in person or by a third party such as a taxi or bus. It is the convenience and familiarity of the channel that is attractive, for the fee charged ranges from 10-30 per cent. The demand for cheaper, more convenient and reliable remittances is apparent. However, a more persistent

issue will be changing the cash culture in Zambia where up to 85 per cent of adults receive their money in cash (Hougaard, 2008).

The second group of studies comprised ethnographic studies of branchless banking within its cultural and social context. Morawczynski studied the use of M-Pesa in two communities in Kenya – an urban slum located on the outskirts of Nairobi and a rural receiving community (See (Morawczynski, 2009; Morawczynski & Miscione, 2008; Olga Morawczynski, 2008)). It is one of the few studies using ethnographic methods for studying mobile money transfers within a community's cultural and social context. She found that M-PESA succeeded because it offered a new, cheaper and more convenient solution for urban-rural remittances. People trusted this channel, because they trusted Safaricom, the provider, rather than trusted the agents. There remained problems with the speed of the service and with some agents who ran out of cash. However the alternative to mobile money transfers was a long and arduous journey to the nearest bank branch.

Morawczynski (2009) also found that the transfer of urban-rural remittances had extended to payments for other goods and services. The channel was used to store small amounts of money, even if the person had a bank account. Women used it to have a secret stash of money that gave them a measure of financial autonomy.

M-PESA had increased the frequency of remittances, enabling both the senders and recipients to get it 'in bits' when the money was most needed. At one level, this frequent sending of money increased relationships within the family in the rural areas, but at another level, it also decreased the need to visit to deliver cash.

The third group of studies focuses on the complicated ways in which the poor actively manage money – how they manage the peaks and troughs of their income and expenditure; save; and borrow (Collins, Morduch, Rutherford, & Ruthven, 2009; Ruthven, 2002). Ruthven (2002) makes the important point that financial devices and networks are embedded in 'wider kinds of relationships with relatives, co-residents, employers, patrons and others' (p. 249). Studying these relationships among residents in a squatter settlement in West Delhi, she concluded

that access to adequate services does not necessarily correspond with access to formal or semi-formal services as is often presented by microfinance advocates. Rather it reflects people's awareness, job and income security, and capacity to leverage personal networks, all of which contribute to the capability of squatter residents to make financial relations and services work for them (p. 249).

When formal financial services fit in with these networks of relationship, there is a sense of comfort. It is this lack of fit that explains why in some cases, a large percentage of newly opened bank accounts lie dormant (CGAP and DFID, 2009).

There is also a body of work using the frameworks of the sociology of money. The basic tenets are that money shapes and is shaped by social relations and cultural values. Money is a medium of relationship. Money is not homogenous for there are different kinds of monies, which often need to be separated (V. Zelizer, 1994; V. A. Zelizer, 2005). Complementing this approach are studies of the way couples manage and control money (See (Blumberg, 1991; Pahl, 1989; Vogler, Lyolette, & Wiggins,

2008). One has to go beyond seeing money in terms of its functions as a unit of account, a store of value and a medium of exchange. Money is embedded in networks of trust and only then it becomes money (Dodd, 1994).

These studies of money, family, trust, relationships, management, control, and power are yet to connect with the studies on the ways in which mobile money transfers will change everyday life for men and women in the household (See Donner and Telez, 2008)). As Duncombe and Boateng (Duncombe & Boateng, 2009) note ‘m-finance research could be more strongly linked to multidisciplinary approaches combining social, cultural and economic perspectives, based on a more detailed understanding of the financial service behaviours and preferences of poor clients and users’ (p. 1254).

Asia-Pacific and mobile money transfers

In one of four scenarios about branchless banking in 2020, CGAP and DFID envisage customers paying by phone in stores in a small fictional Pacific post-conflict state which was named Telmar (CGAP and DFID, 2009). They say:

In the Telmar scenario alignment of the government, international donors, and the private sector leads to the banking poor using branchless channels. In this case, two large traditional service providers (a bank and an MNO) are offered incentives to form joint ventures on a regional basis to reach places where they would not go alone. They successfully bid to offer government payments to citizens on a widespread basis. However, the management of a complicated partnership between the bank and the MNO also brings challenges. In the end, openness of the regulators ultimately leads to ongoing innovation that endures, such that formal financial inclusion becomes widespread. (p. 18)

The scenario while showing a positive view of branchless banking in the Pacific includes a few hiccups. When a global financial access group first approached the MNO and the bank, both providers thought it was a crazy idea, for they could not see how it would be profitable. But three factors turned it around - having a regional focus; the Telmar government awarding the consortium the right to deliver social welfare payments to 200,000 of its one million citizens; and support from an international donor (CGAP and DFID, 2009). The bank and the MNO had found it difficult to work together but in two years they were ready to deliver the electronic payments to the 200,000 welfare recipients in Telmar. As one anonymous source said, ‘those telco guys just spoke another language—they thought that payments were as easy as phone calls. We bankers had to teach them a thing or two’ (CGAP and DFID, 2009, p. 19). It did work well and they extended the service to other islands in the region, covering 2.2 million potential customers.

Five years later in the scenario, the Central Bank of Telmar allowed the MNO to issue an electronic wallet. The ability to pay another person electronically appealed particularly to the young people of Telmar. The bank was less happy with these developments and felt they were being pushed out. Finally the MNO agreed to link its electronic wallet to the bank and its accounts. In a few more years, the Central Bank allowed them to use agents to open accounts on behalf of banks. Their customers increased to 400,000 (CGAP and DFID, 2009).

This scenario has yet to play out in the Pacific Island countries. AusAid estimates that only 20 per cent of the population of Pacific Island countries have access to financial services (AusAid, 2009). Table 3 provides a list of MNOs and commercial banks in the Asian Pacific countries that could potentially partner with a commercial bank operating in the country to develop mobile money initiatives.

Initiatives in mobile banking being discussed in Samoa by the Pacific Financial Inclusion Programme (PFIP) in partnership with the Central Bank of Samoa (CBS). PFIP together with the United Nations Capital Development Fund have also been engaged in discussions in Fiji, Vanuatu and Solomon Islands and Samoa. A report has been published exploring the best way of establishing a mobile money network in Papua New Guinea (Bruett and Firpo, 2009; United Nations Capital Development Fund, 2010).

Perhaps because of the lack of mobile money initiatives, there is little academic information available on the Pacific. The geographic focus has been on Africa, and South Asia, hence there are gaps about mobile money in the Asia-Pacific (Duncombe & Boateng, 2009).

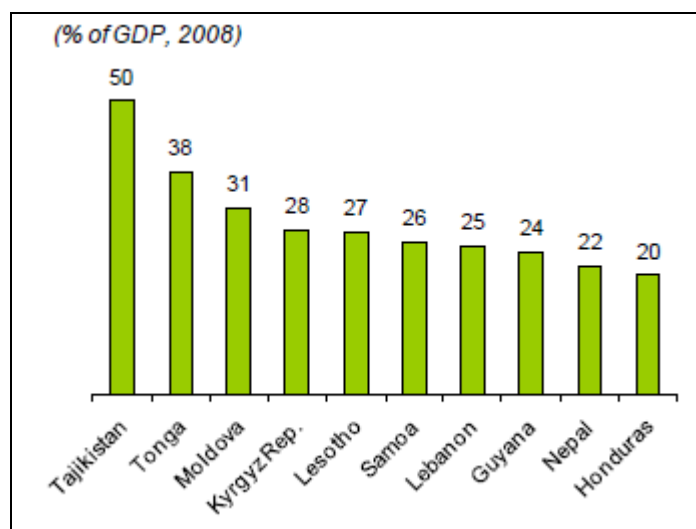
The Asia-Pacific region is home to 46 percent of the world’s population but is demographically very diverse. China alone accounts for 54.6 percent of the 2.4 billion people living in the Asia-Pacific region. The region also includes nine small island developing States in the Pacific that have populations of less than 100,000, including four with fewer than 15,000 people. (UNESCAP, 2009).

Mobile usage varies from country to country, but the rate of increase is high. During the five year period between 2002 and 2007, mobile phone subscriptions increased by more than 1.1 billion in the Asia Pacific region (International Telecommunication Union 2009a). Table 2 highlights the growth in mobile phone subscriptions (per 100 people) for the period between 2002 and 2007. Where data is available for mobile usage after 2007, it is seen that mobile phone ownership is showing phenomenal growth. In Papua New Guinea it is estimated that 80 per cent of the population will have mobile phone reception by 2010 (Bruett and Firpo, 2009).

The Pacific Island countries also depend to a varying extent on remittances. For some of the smaller countries in the region, remittances account for more than 25 per cent of the Gross Domestic Product. Tonga receives the second highest at 38 per cent of GDP and Samoa the sixth highest at 26 per cent of GDP (See figure 1) (Ratha et al., 2009).

The cost of sending money varies greatly. In 2009, the Australian and New Zealand governments, supported by the World Bank, set up the sendmoneypacific.org website to help people compare the costs of remittances. To send \$200 from Australia to Fiji for instance, can cost between six to 38 per cent, that is \$12.23 and \$75.18. To send \$200 to Tonga would cost at least \$21.72 and at the most \$65.71. Australian banks dominate the providers, but they are also the most expensive and slowest.

Figure 1: Top recipients of migrant remittances among developing countries in 2008



Source: (Ratha et al., 2009)

The ability to compare prices is valuable, but it only heightens the reality that even at the lowest rate of six per cent, the fees are unacceptably high. Manjula Luthria, Senior Regional Economist for the Pacific Islands, World Bank says,

Fees on money transfers out of Australia to the Pacific are the highest in the world, ranging from 15 to 40 percent of the amount sent...Recent evidence from New Zealand has shown how an amendment to domestic financial regulations lowered money transfer fees significantly for our South Pacific neighbours. Australia, through the leadership of the Australian Transaction Reports and Analysis Centre (AUSTRAC), should consider a similar amendment now. Australia is one of three major remittance source countries for the Pacific, and Australian banks have the most extensive financial infrastructure across the Islands (Luthria, 2009).

In table 1, we bring together the known data connecting mobile phones, the unbanked⁵ and level of remittances for the countries of the Asia-Pacific. This table paints a picture of the region as having a high percentage of people who are unbanked; the important role of remittances and varying levels of mobile subscriptions.

For some countries like Australia, the challenge is to reach people who are technically banked, because government benefits are paid electronically through bank accounts. But because of remoteness, the lack of or financial literacy, and the poor design of financial services, some groups have little access to financial services. Hence despite the overall country picture, there is much in common between customers from the islands of the Torres Straits in Australia and Ambunti in Papua New Guinea. In both places, it takes customers six hours to two days to access cash and financial services ("Ambunti has no bank," 2009; Singh, Cabraal, Demosthenous, Astbrink, & Furlong, 2007).

Mobile money transfer systems have been long established in the Philippines since 2003 and have been introduced into Cambodia in 2009. In Thailand, Bangkok Bank began offering mobile banking in 2009 English and Thai. Customers can view their account information, pay bills, transfer funds and top-up their mobile phone account (McMurray, 2009). As table 2 shows, Thailand has one of the highest mobile subscriptions in the region, at 123.8 per 100 persons in 2007.

In the sections below, we give the stories of the Philippines and Cambodian experiments.

Mobile money in the Philippines

Most of the action on mobile money transfers of late has been happening in Africa. It is easy to forget, that the first successful applications were in the Philippines, when money was sent via a text message. Smart Money started in December 2003. It was provided by an MNO Smart Communications partnering with Banco de Oro, plus a number of retail merchants who acted as their agents overseas. GCash started nearly a year later in November 2004. Unlike Smart Money, this was run wholly by a subsidiary of an MNO, Globe Telecom. It was the MNO which was licensed as a remittance agent. All the prepaid deposits are held in a pooled account at 16 licensed banks (Mas & Kumar, 2008). Globe Telecom is now linked to a partially owned bank, BPI Globe BankO.

⁵ Data relating to the unbanked is scarce

The lower cost of mobile money transfers allowed migrants – mainly women - to control their remittances better, by sending smaller amounts to more people. When a migrant sends money via the Smart Communication network from Hong Kong, China, to the Philippines, the fee is about \$2. In the Philippines, the transaction costs one per cent plus the fee for the text message. The transaction is also secured by the need for a different PIN for the mobile phone and the Smart account. Moreover an ID is required when collecting cash. (World Bank, 2006)

The Smart remittance works as follows (World Bank, 2006):

A Filipino in Hong Kong, China, deposits money to be remitted with one of Smart's remittance partners, which then sends a text message to the beneficiary in the Philippines, informing him or her of the transfer. The remittance is credited into a Smart Money "electronic wallet" account by any Smart mobile customer. The money can be withdrawn from an ATM using the Smart Money cash card, which can also be used as a debit card for purchases (p. 150).

The regulation was flexible enough to allow an MNO to deal with e-money. Consumer protection was aided by capping the amount of money to be remitted and the amount held on the card. However, problems with agents have not been fully resolved as there are reports from the Philippines that sometimes the agents do not give the whole amount remitted (Soriano, 2007).

Mobile money in Cambodia

WING, a subsidiary of ANZ, launched its mobile money transfer service in Cambodia in early 2009. It already has representation in 16 of the 24 provinces of Cambodia and 150 points of representation. It is currently partnering with one mobile operator. WING has focused on providing a service to garment workers and other rural customers who work in PhnomPenh and other urban centres. Mobile money transfer offers them a cheaper and faster way to transfer money to their rural relatives. In urban centres, it has concentrated on the student population offering air time top-up and person to person transfers ("Mobile banking in Cambodia," 2009).

Cambodia is not yet fully covered by mobile phones. There are approximately three million phone users in a country of 14 million people but the banked population is even lower, for it is estimated that there are only 500,000 accounts in the country, and about 200 ATMs. WING has designed its money transfers so that they can be used on shared phones. In the urban areas, cash is available via a card from ATMs. WING has also designed a web interface which can be used for employee payments. In the rural areas WING is partnering with micro-finance institutions to provide the cash-in, cash-out network ("Mobile banking in Cambodia," 2009).

As McMurray (2009) notes (McMurray, 2009):

WING has noted particular challenges it has faced in implementing a mobile payments business in Cambodia. There are few mobile handsets which have the Khmer Unicode character capability. This has meant that WING has had to design support materials to aid those with low English literacy to use the product. Furthermore, like many other markets, there has been an absence of regulations for the mobile payments in Cambodia. WING works with

progressive regulators in the National Bank of Cambodia, who are able to monitor the development of the payment system (p. 15).

Despite these challenges, McMurray says, WING is optimistic about the future, though it only has anecdotal evidence of use.

WING estimates its project will reach approximately 8 million Cambodians, aged 15 to 55, who do not currently have access to traditional banking services... The anticipated benefits of their project include: savings of approximately US\$16.8 million per year for 560,000 rural receivers; improved financial literacy in rural areas; the generation of an additional 750 merchants/ small businesses operating in rural areas to service customers; and finally, improved access to low cost financial services that will facilitate micro business activities and provide women, in particular, with increased security in their financial transactions (p. 15).

Money in the Asia-Pacific region

There are few connections between the social and cultural study of money and the introduction and use of mobile money transfers.

We do not yet know how the use of a shared mobile influences the privacy of financial transfers. It is an untested assumption that money is less private in the Asia Pacific than in Western developed countries.

We also do not know how different boundaries of money co-existing in the same country will shape the use of mobile money transfers. Are these different boundaries of money influencing the poor performance of Australian banks in the Pacific in regard to the high cost of remittances? Among the middle-income Anglo Celtic households in Australia and New Zealand, it is the couple and the nuclear family that are the domestic units of money (Singh, 1997; Taiapa, 1994). The domestic boundaries of money are however broader among Aboriginal and Maori communities.

A 1991 study of the Aboriginal Ngukurr community in south-east Arnhem Land (Senior, Perkins, & Bern, 2002) showed that money was distributed within the fluid household cluster rather than the household. Senior et al. (2002) said this cluster may 'vary in composition from a couple, nuclear family, extended family through to one based on a set of siblings or other close relatives' (p. 5).

To understand Maori money, it is also important to take into account the money that goes from households to the *whānau*, a group of kin descended from a common ancestor or an extended family group. Money is gifted up and down generations with younger people giving to 'parents, grandparents or others in their parent's generation as well as to brothers, sisters or cousins' (Taiapa, 1994). Money is gifted to the *whānau* for ritual gatherings to mark crises in the lives of *whānau* members. The obligation to gift money for the funeral meeting at the *whānau* takes priority over every day household expenses.

The concept of family money is widespread in Fiji and Tonga. When people remit money back to these countries, money goes to both migrant and non-migrant households. In Fiji and Tonga nearly 20 and 80 per cent goes to non-migrant households respectively (The World Bank, 2006).

It is difficult to know how cash cultures will influence the acceptance of mobile money. Will mobile money be seen as acceptable for remittances, but not for symbolic gifts marking life stage events? In cultures like India, China and Japan, where gifts of cash are mandatory for life stage events such as births, marriages and death, it is the cash that is packaged (Singh, 2007). Will digital money convey the same meanings in the Pacific? Will mobile money be acceptable for distance payments but not for face-to-face business transactions? How will this new form of money impact on expenditure and savings?

Need for concerted and collaborative action

Drawing the lessons of this decade of mobile money transfers, we know that a successful outcome is built on:

- A recognition of customer needs in terms of payments, banking and financial literacy;
- An understanding of how people use money in their social and cultural contexts;
- A mobile network operator willing to partner with a bank to profitably introduce mobile money; and
- Flexible regulation that would permit innovation while stressing the importance of consumer protection.

Mobile money transfers in the Asia-Pacific would help increase the number of people who could use formal payments methods and be a first step towards financial inclusion. There are already some networks in place to ensure that international organizations, governments, MNOs and financial institutions can work together. The missing element till now has been a focus on use within the social and cultural context. A continuing emphasis on this aspect will ensure that the initiatives are sustainable and improve the well-being of people. It may well be that CGAP and DFID's Telmar scenario for 2020 might become a reality. Ambunti in PNG) may not get a bank, but it could get a mobile tower and thus get remittances. It may even be possible for the people of Ambunti to participate in micro-credit schemes, if they don't have to go six hours on a river to get the money and then repay it.

Tables

Table 1: Bank accounts, mobile phones, & remittances in the Asia-Pacific

Country	Population Million (rounded) (July 2009 est.) ¹	Number of accounts per 1000 adults (2009) ²	Mobile phones subscriptions per 100 inhabitants (2007) ³	Officially Recorded Inward Remittance flow US \$ million (2007) ⁵	Officially Recorded Inward Remittance as % of GDP (2007) ⁵	Officially Recorded Outward Remittance Flow US\$ million (2007) ⁵	Average % cost to send \$AUS 240 from Australia in the third quarter of 2009 ⁶
Australia	21.263	N/A ⁷	102.5	3,828	0.5	3,026	NA
Brunei	0.338		89.4	NA	NA	405	
Cambodia	14.494	32	17.9	353	4.2	169	
People's Republic of China	1,338.61		41.2	32,833	1.0	4,372	
Hong Kong	7.055	N/A ⁷	149.2	317	0.2	388	
Macau	0.560		165.1	399	NA	838	
Taiwan	22.974	5390.2 ⁷	106.1				
Fiji	0.945		63.2	165	4.8	32	13.78
Indonesia	240.272	464	35.3	6,174	1.4	1,654	
Japan	127.079	N/A ⁷	83.9	1,577	0.0	4,037	
Kiribati	0.113		0.8 ⁴	7	9.0	NA	10.88
North Korea	22.665		N/A	NA	NA	NA	
South Korea	48.509	N/A ⁷	90.2	1,128	0.1	4,070	
Laos	6.835	N/A ⁷	25.2	1	0.03	1	
Malaysia	25.716	2177	87.9	1,803	1.0	6,385	
Marshall Islands	0.0645		1.4 ⁴	NA	NA	NA	
Federated States of Micronesia	0.107		24.7 ⁴	NA	NA	NA	
Nauru	0.0140		N/A				
New Zealand	4.213	N/A ⁷	101.7	650	0.5	1,207	
Palau	0.0208			NA	NA	NA	
Papua New Guinea	6.057	N/A ⁷	4.7	13	0.2	135	17.60
Philippines	97.977	566	58.9	16,302	11.3	35	
Samoa	0.220		46.0 ⁴	20	22.8	13	12.32
Singapore	4.658	2058	133.5	NA	NA	NA	
Solomon Islands	0.596		2.2 ⁴	20	5.3	3	14.02

Country	Population Million (rounded) (July 2009 est.) ¹	Number of accounts per 1000 adults (2009) ²	Mobile phones subscriptions per 100 inhabitants (2007) ³	Officially Recorded Inward Remittance flow US \$ million (2007) ⁵	Officially Recorded Inward Remittance as % of GDP (2007) ⁵	Officially Recorded Outward Remittance Flow US\$ million (2007) ⁵	Average % cost to send \$AUS 240 from Australia in the third quarter of 2009 ⁶
Thailand	65.905	1352	123.8	1,635	0.7	NA	
Timor-Leste	1.132			NA		NA	
Tonga	0.121		46.4 ⁴	100	39.4	12	11.77
Tuvalu	0.0124		16.8 ⁴				
Vanuatu	0.218		11.5 ⁴	6	1.2	3	11.53
Vietnam	86.967	83	27.2	5,500	8.0	NA	
United States Territories:	307.212		83.5 ⁴	2,972	0.0	45,643	
American Samoa	0.0656			NA	NA	NA	
Guam	0.178			NA		NA	
Northern Mariana Islands	0.0887			NA	NA	NA	

Notes:

1. (Central Intelligence Agency, 2009)
 2. (The World Bank Group, 2009a)
 3. (International Telecommunication Union, 2009b)
 4. (International Telecommunication Union, 2009a)
 5. (Ratha & Xu, 2008)
 6. (The World Bank Group, 2009b)
 7. Accounts for Deposits at Commercial Banks (CGAP 2009)
- NA Not Available

**Table 2: Comparison of mobile phone subscriptions
(per 100 people) in 2002 & 2007**

Country	Mobile phones subscriptions per 100 inhabitants (2002) ¹	Mobile phones subscriptions per 100 inhabitants (2007) ¹	Percentage increase in Mobile Usage between 2002 and 2007
Australia	64.9	102.5	57.9
Brunei	44.0	89.4	103.2
Cambodia	2.9	17.9	517.2
People's Republic of China	15.9	41.2	159.1
Hong Kong	94.0	149.2	58.7
Macau	61.2	165.1	169.8
Taiwan	108.3	106.1	-2.03
Fiji	10.9	63.2	479.8
Indonesia	5.5	35.3	541.8
Japan	63.9	83.9	31.3
Kiribati	0.5 ²	0.8 ²	60
North Korea	N/A	N/A	
South Korea	68.4	90.2	31.8
Laos	1.0	25.2	2420
Malaysia	37.8	87.9	132.5
Marshall Islands	1.0 ²	1.4 ²	40
Federated States of Micronesia	0.1 ²	24.7 ²	24600
Nauru	N/A	N/A	
New Zealand	62.8	101.7	61.9
Palau	N/A	N/A	
Papua New Guinea	0.3	4.7	1466.7
Philippines	19.6	58.9	200.5
Samoa	1.5 ²	46.0 ²	2966.7
Singapore	79.6	133.5	67.7
Solomon Islands	0.2 ²	2.2 ²	1000
Thailand	16.3	123.8	559.5
Timor-Leste	N/A	N/A	
Tonga	3.3 ²	46.4 ²	130.6

Country	Mobile phones subscriptions per 100 inhabitants (2002) ¹	Mobile phones subscriptions per 100 inhabitants (2007) ¹	Percentage increase in Mobile Usage between 2002 and 2007
Tuvalu	N/A ²	16.82	
Vanuatu	2.5 ²	11.5 ²	360
Vietnam	2.4	27.2	1033.3
United States Territories:	48.9 ²	83.5 ²	70.8
American Samoa	N/A	N/A	
Guam	N/A	N/A	
Northern Mariana Islands	N/A	N/A	

Notes:

1. (International Telecommunication Union, 2009a)
 2. (International Telecommunication Union, 2009b)
- NA Not Available

Table 3: Mobile Phone Network Operators & Commercial Banks in Asia Pacific

Country	Mobile Phone Network Operators ¹	Commercial Banks ²
Australia	Hutchison 3G Australia Pty Limited Singtel Optus Limited (Optus) Telstra Corporation Limited Vodafone Pacific Limited	Over 50 commercial banks (including foreign owned banks) operate in Australia
Brunei	B-Mobile Communications Sdn Bhd DataStream Technology	Baiduri Bank Berhad Bank Islam Brunei Darussalam Berhad Citibank, NA The Hongkong and Shanghai Banking Corporation Malayan Banking Bhd RHB Bank Berhad Standard Chartered Bank United Overseas Bank
Cambodia	Applifone Co. Ltd (StarCell) Cambodia Advance Communications Co. Ltd (CADCOMMS) CamGSM (MOBITEL) Latelz Co., Ltd (SMART MOBILE) Mfone Co., Ltd Sotelco Ltd. (Beeline-KH) Telekom Malaysia International (Cambodia) Co. Ltd Viettel (Cambodia) Pte Ltd	Over 20 commercial banks operate in Cambodia
People's Republic of China	China Mobile China Unicom	Over 120 commercial banks operate in the People's Republic of China ⁴
Hong Kong	China Mobile Hong Kong Company Ltd CSL Limited Hong Kong Telecommunications (HKT) Limited Hutchison Telecom (HK) Ltd SmarTone Mobile Communications Limited (SmarToneVodafone)	Over 200 commercial banks operate in Hong Kong ⁵
Macau	CTM Hutchison Telephone (Macau) Company Ltd SmarTone Mobile Communications (Macau) Ltd	Over 20 commercial banks (including foreign owned banks) operate in Macau
Taiwan	Chunghwa Telecom Far EasTone Telecommunications Co Ltd KG Telecom Taiwan Mobile Co.Ltd VIBO Telecom Inc	Over 70 commercial banks (including foreign owned banks) operate in Taiwan

Country	Mobile Phone Network Operators ¹	Commercial Banks ²
Fiji	Digicel (Fiji) Limited Vodafone Fiji Ltd	ANZ Bank (Fiji) Bank of Baroda Bank South Pacific Colonial (Fiji) Westpac (Fiji)
Indonesia	Excelcom (XL) Hutchison CP Telecommunications (3) PT Indonesian Satellite Corporation Tbk PT Natrindo Telepon Seluler PT Telekomunikasi Selular	Over 127 commercial banks operate in Indonesia
Japan	eMobile, Ltd NTT DoCoMo, Inc Softbank Mobile Corporation	Over 200 commercial banks operate in Japan
Kiribati	Telecom Services Kiribati Limited	ANZ Bank (Kiribati) ³ Bank of Kiribati ⁴ Development Bank of Kiribati ³
North Korea	N/A	
South Korea	KT Corporation SK Telecom	Over 50 commercial banks (including foreign owned banks) operate in South Korea
Laos	Enterprise of Telecommunications Lao Lao Telecommunications Millicom Lao Co Ltd (Tigo) Star Telecom Company Ltd (STL)	Over 15 banks operate in Laos
Malaysia	Celcom (Malaysia) Sdn Bhd DiGi Telecommunications Sdn Bhd Maxis Communications Berhad U Mobile Sdn. Bhd.	Over 20 commercial banks (including foreign owned banks) operate in Malaysia
Marshall Islands	N/A	Bank of Guam ³ Bank of the Marshall Islands ³ Development Bank of the Marshall Islands ³
Federated States of Micronesia	FSM Telecommunications Corporation	Bank of the Federated States of Micronesia ³ Bank of Guam ³ Federated States of Micronesia Development Bank ³
Nauru	N/A	
New Zealand	Telecom New Zealand Limited Two Degrees Mobile Limited Vodafone Mobile NZ Limited	19 registered banks (including foreign incorporated banks) operate in New Zealand
Palau	Palau Mobile Corporation Palau National Communications Corp (PNCC)	Bank of Guam ³

Country	Mobile Phone Network Operators ¹	Commercial Banks ²
Papua New Guinea	BMobile Limited (Bee Mobile) Digicel PNG Ltd.	ANZ Bank (PNG) Bank South Pacific Maybank (PNG) Westpac Bank (PNG)
Philippines	Connectivity Unlimited Resource Enterprise Inc (CURE) Digital Telecommunications Phils, Inc (Digitel Mobile/Sun Cellular) Globe Telecom Smart Communications Inc	Over 20 commercial banks operate in the Philippines
Samoa	Samoatel Limited (Samoatel Mobile)	ANZ Bank (Samoa) National Bank of Samoa Samoa Commercial Bank Westpac Bank (Samoa)
Singapore	MobileOne Ltd Singapore Telecom Mobile Pte Ltd (SingTel) StarHub Mobile Pte Ltd	Over 115 commercial banks operate in the Singapore
Solomon Islands	Solomon Telekom Co Ltd (BREEZE)	ANZ (Solomon Islands) Bank of South Pacific (Solomon Islands) Westpac Bank (Samoa)
Thailand	ACT Mobile Company, Limited Advanced Info Service PLC Digital Phone Co Ltd Total Access Communications Co (DTAC) True Move Company Ltd	Over 30 commercial banks (including foreign owned banks) operate in the Thailand
Timor-Leste	Timor Telecom	ANZ (Timor-Leste) Caixa Geral de Depósitos, SA (CGD) Instituição de Micro Finanças de Timor-Leste (IMFTL) PT. Bank Mandiri (Persero) Tbk. Dili
Tonga	Digicel (Tonga) Limited Tonga Communications Corporation	ANZ (Tonga) Malaysian Banking Finance Westpac Bank (Tonga)
Tuvalu	N/A	National Bank of Tuvalu ³ Development Bank of Tuvalu ³
Vanuatu	Digicel (Vanuatu) Ltd Telecom Vanuatu Ltd	ANZ Bank (Vanuatu) ³ National Bank of Vanuatu ³ Westpac (Vanuatu) ³
Vietnam	GTEL Mobile Joint Stock Company Hanoi Telecom Joint Stock Company Vietel Corporation	Over 70 commercial banks (including foreign and joint venture banks) operate in Vietnam

Country	Mobile Phone Network Operators ¹	Commercial Banks ²
	Vietnam Mobile Telecom Services Company Vietnam Telecom Services Company (GPC)	
United States Territories		
American Samoa	American Samoa License, Inc. (Blue Sky Communications)	
Guam	DOCOMO Pacific Inc. IT&E Overseas, Inc Pulse Mobile LLC Wave Runner LLC (Guam)	12 banks operate in Guam ⁶
Northern Mariana Islands	DOCOMO Pacific Inc. PTI Pacifica Inc Wave Runner LLC Mariana Islands	

Notes:

1. GSMA 2008
2. Information listed is from each country's central bank website. See <http://www.bis.org/cbanks.htm> for a list of central bank websites.
3. Pacific Islands Trade and Investment Commission
4. See http://en.wikipedia.org/wiki/List_of_banks_in_the_People%27s_Republic_of_China
5. See http://en.wikipedia.org/wiki/List_of_banks_in_the_Hong_Kong#Licenses_banks_incorporated_in_Hong_Kong
6. Guam Chamber of Commerce: See <http://www.guamchamber.com.gu/?pg=visitorinfo>

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