Case Study No. 9

Papua New Guinea: The limits of the mobile payments model

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Acronyms
ADB Asian Development Bank
ANZ Australia and New Zealand Banking Group
ATM Automated Teller Machine
BFIA Banks and Financial Institutions Act
BSP Bank South Pacific
EFTPOS Electronic Funds Transfer Point of Sales
ERP Enterprise Resource Planning
GSMA Global System for Mobile communications Association
IFC International Finance Corporation
IMF International Monetary Fund
MMP Mobile Money Operator
MNO Mobile Network Operator
NGO Non-Governmental Organisation
PFIP Pacific Financial Inclusion Programme
PGK Papua New Guinea Kina
PNG Papua New Guinea
SMK Salim Money Kwik/Send Money Quick
UNDP United Nations Development Programme
UPU Universal Postal Union
I. Overview

Like several Postal operators around the world, the Post Office in Papua New Guinea (Post PNG) has come to play an important role in providing access to financial services in rural and remote areas in PNG. Through its network of post offices and agencies, Post PNG provides a domestic remittance service, Salim Moni Kwik (“Send Money Quick”), which enables clients to transfer cash from post office to post office. In 2011, Post PNG launched a mobile version of Salim Moni Kwik, “MobileSMK,” allowing customers to conduct person-to-person (P2P) money transfers using the mobile phone. Post PNG also offers office space to Australia New Zealand Bank (ANZ), which has recently opened bank branches in two post offices on the Post PNG network.

Over a short period of time, PNG has seen a rapid uptake of mobile technologies for financial services, and a range of service providers have introduced mobile money services in the last three years. MobileSMK was the second mobile money service to emerge in PNG, and five other mobile money services have been launched since then. Other mobile money operators (MMOs) include commercial banks, microfinance banks, as well as the main mobile network operator (MNO), Digicel. Post PNG represents an interesting case of the early adoption of mobile technology for the provision of postal financial services. Despite the initial success in rolling-out MobileSMK, Post PNG has faced several obstacles in the operation and management of the service. Significant resource constraints, coupled with intense competition within the mobile money environment in PNG, have led to significant losses for the Post. Specifically, the Mobile SMK appears to be cannibalising revenues from the existing SMK service, resulting in reduced overall revenues, and significant increase in costs.

Although this experience is not unique to Post PNG, it does indicate that for Postal operators in particular, a more cautious approach may be necessary when adopting new technologies for the expansion of financial services. This is crucial for the sustainability of the Post, as well as for the sustainability of postal initiatives aimed at promoting financial inclusion.


Access to financial services is severely limited in PNG. It is estimated that nearly 85% of the adult population is financially excluded, the majority of which are women, rural communities, and informal workers.¹ The lack of access to basic financial services by the majority of the population is considered a significant constraint to social and economic development in PNG. The Government of PNG has thus prioritised financial inclusion, and has embarked on a National Strategy for Financial Inclusion and Financial Literacy, which is aimed at promoting financial education, the development of the National Payment System, and the expansion of microfinance services throughout the country².

II.1 Socio-Economic Context of Papua New Guinea

PNG has an extremely diverse population of 7 million people, speaking over 800 languages. A significant proportion of the population lives in rural and remote areas, and subsistence agriculture is the main form of employment for many households. The geography of the country, with a large mountain range and numerous islands, makes most places outside the capital, Port Moresby, hard to reach. PNG is rich in natural resources, including oil and gas, minerals, timber and fisheries. The economy is highly fragmented, however, with a small formal sector oriented towards the extraction of mineral resources, and a large informal sector dominated by subsistence and semi-subsistence activities.³ There has been some growth in the small and medium enterprise

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sector, but mining continues to be the main driver of the economy. According to the Asian Development Bank (ADB), recent developments in the liquefied natural gas sector have positioned PNG as one of the fastest growing economies in Asia. Economic growth in 2012 stood at 9.2%, one of the highest in the region.4

Translating the recent economic boom into broad-based social development remains a significant challenge for the Government. Roughly 37% of the population live below the national poverty line5, and PNG’s Human Development Index value ranked the country 156th out of 187 countries and territories in 2012.6 In addition to widespread poverty, PNG has also been beleaguered by widespread corruption, and increasing levels of crime and violence. However, there are indications that the social and economic outlook is improving. The Government has launched a series of ambitious strategic development plans, including the Medium Term Development Plan 2011-2015, and public sector reforms have been initiated to address service delivery in healthcare, education, and land and infrastructure development.7

II.2 Characteristics of the Financial Services Market

The financial services market in PNG is fairly diverse, with a mix of commercial banks and non-bank financial institutions. As in many developing countries, however, commercial banks dominate the financial system, as banking sector assets make up nearly 70% of the total assets in the domestic financial system.8 There are currently four commercial banks in PNG: BSP, Australia and New Zealand Banking Group (ANZ), Westpac Bank, and Maybank. The banking sector has a combined network of 66 branches, over 300 ATMs, and over 10,000 Electronic Funds Transfer and Point of Sale (EFTPOS) terminals in merchant outlets. BSP has the largest retail market share, holding over 80% of all accounts. It also has the widest network of access points, with 35 branches, 295 ATMs and 10,000 EFTPOS, as well as over 60 agents, which include Post PNG offices and District Treasury Offices.9 Australia and New Zealand Banking Group (ANZ) also holds a fairly large share of the retail market, providing credit to a sizeable number of small-scale coffee exporters, and other traders.

Other financial institutions include finance companies, superannuation (pension) funds, insurance companies, and savings and loans societies.10 A small microfinance sector is emerging, with three microfinance banks: PNG Microfinance Limited, Nationwide Microbank, and the recently launched People’s Micro Bank (a division of the state-owned National Development Bank). The National Development Bank also provides rural lending, and a number of non-governmental organizations (NGOs) offer microfinance services in rural areas.

Despite the relatively wide range of financial service providers, the outreach of financial services in PNG is limited. According to the IMF, “approximately 650,000, or 10 percent of the population and 17 percent of adults, currently have access to formal financial services.” Several challenges have long hindered the development of an inclusive financial system in PNG, which include the complicated terrain, weak security environment, critically poor infrastructure, and low levels of financial literacy among the adult population. As a result, the financial services market is largely oriented towards the formal sector, in urban and easy-to-reach markets. Some service providers are making efforts to expand financial services to rural areas, and mobile money services are becoming the main means through which providers are reaching the unbanked.

Figure 2. Mobile Money Service Providers in PNG

<table>
<thead>
<tr>
<th>Provider</th>
<th>Service</th>
<th>Launched</th>
<th>Description of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post PNG</td>
<td>Mobile SMK</td>
<td>2011</td>
<td>Money transfer service, only available on Digicel network</td>
</tr>
<tr>
<td>BSP</td>
<td>BSP Mobile Banking</td>
<td>2011</td>
<td>Mobile banking: view account balances, transfer funds between BSP accounts only, also pay bills, and top-up airtime credit. Available on all mobile networks</td>
</tr>
<tr>
<td></td>
<td>Wantok Moni</td>
<td>2013</td>
<td>Wantok Moni: transfer funds to anyone, only available on Digicel network</td>
</tr>
</tbody>
</table>

5 World Development Indicators. World Bank (2011)
10 Ibid.
Post PNG has been an important player in the mobile money environment, as its MobileSMK service was the first mobile money service launched in PNG. BSP launched their mobile banking service the same year, and other banks are following suit. Mobile money developments are also taking place in the microfinance sector, despite its small size. For instance, Nationwide Microbank recently introduced a mobile bank account, ‘MiCash,’ as well as a mobile microinsurance product, ‘MiLife.’ According to a recent Global System for Mobile communications Association (GSMA) report, 70 percent of MiCash customers are not previous customers of the Microbank, indicating that the service is indeed reaching the unbanked.12 Digicel, the largest MNO, also offers a mobile money transfer service, ‘CellMoni,’ in addition to hosting the mobile platforms for all other MNOs in PNG. Other MNOs include BeMobile and Cilton (operated by the state-owned telecommunications provider, Telikom), both of which have limited network coverage and infrastructure, and have not actively promoted mobile money services on their platforms.

These recent advances in mobile money have begun to transform the financial landscape in PNG. The GSMA reports that there are currently more mobile money agent outlets than bank branches in the country.13 Mobile money services are therefore enabling financial institutions, MNOs, as well as the Post, to overcome the geographic and infrastructural challenges that have limited the expansion of financial services to the unbanked population in PNG. In addition, mobile money solutions are starting to provide consumers with safe access to financial services, an important consideration in an environment where cash safety is a major concern in both rural and urban areas.13

However, mobile money in PNG is not without its own challenges. On the demand side, mobile penetration is still considerably low, as only 34 percent of the population report using a mobile phone. The lack of interoperability between MNOs and mobile money service providers raises the costs of mobile transactions, presenting yet another barrier to access for low-income and poor households. On the supply side, it is obvious that there is little competition between MNOs, as nearly all the mobile money services are currently only available on the Digicel network. Digicel has outmanoeuvred the incumbent Telikom, and has captured a considerable share of the mobile market, as well as customer confidence, in PNG.

There is also room for improvement in technological infrastructure, in agent networks and delivery channels, and most importantly, in the operation and regulation of the national payments system. As yet, the payments system does not adequately cater for mobile and electronic payments, and there is no official regulatory framework guiding mobile banking and mobile payments services. According to Bank PNG, the payments system in PNG is still very much “paper and cash based, where cheques and cash transactions are the most common means of settlement.”14 Addressing these challenges will be key, especially if mobile money services are to contribute to the development of an inclusive financial system in PNG.

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12 Ibid.
14 Bank of Papua New Guinea: www.bankpng.gov.pg
II.3 Legal and Regulatory Framework for Financial and Postal Services

As indicated above, there are important weaknesses in the regulatory environment for banks and other financial institutions, although significant reforms are currently underway. For the Post, the laws regulating postal services do not explicitly promote the provision of postal financial services beyond postal orders and money orders; and this may be limiting the contribution of the postal network to financial inclusion in PNG.

II.3.1 Legal and Regulatory Framework for Financial Services

The Central Banking Act, as amended in 2000, provides Bank PNG with supervisory and regulatory powers over all banks and other licensed financial institutions, with the exception of general insurance companies. Bank PNG is therefore the main supervisory authority for the financial system in PNG. The Banks and Financial Institutions Act (BFIA) of 2000 is the main piece of legislation governing the activities of banks and other licensed financial institutions in PNG. Importantly, the BFIA makes concessions for licensed microfinance banks, permitting them to maintain lower minimum capital ratios than banks, in a bid to promote the expansion of microfinance services in PNG. Other relevant legislation regulating financial institutions in PNG includes the Savings and Loans Societies (Amendment) Act of 1995, the Superannuation (General Provision) Amendment Act of 2000, and the Life Insurance Act of 2000.

The main shortcoming of the regulatory framework for financial services, however, is the absence of guidelines for electronic and mobile payments, and for agent banking relationships. This is a significant weakness, given the rapid advances in mobile money and agency banking in PNG. Although a Draft National Payment Systems Act was published in 2011, it is unclear as to how the Act will be applied to mobile money service providers, especially non-bank providers. Currently, Bank PNG grants approval for mobile money licenses on a case-by-case basis. Although Bank PNG intends to promote a bank-led model for mobile money, it has recognised the necessity of non-bank operators to expand mobile money services throughout the country, and has therefore made special provision for Post PNG and Digicel.

II.3.2 Legal and regulatory framework for the Post

Post PNG was established under the Post and Telecommunications Corporation (Corporatisation) Act of 1996, which transformed the Post from a division within the government-controlled Post and Telecommunications Corporation into an independent company, Post PNG Limited. The primary piece of legislation governing the activities of Post PNG is the Postal Services Act of 1996.

The Postal Services Act provides Post PNG with the exclusive right to carry out certain postal services, and to transact money orders and postal orders. The Act indicates that “a ‘money order’ means a money order issued under this Act or by any postal authority for payment under this Act and includes Salim Moni Kwik and other methods of remitting funds.” From this definition, it would appear that the Post is legally able to provide mobile money orders, since it is only an upgrade of the traditional money order (SMK), although it is not explicitly empowered to offer additional financial services such as deposits, loans or insurance.

In terms of supervision, Bank PNG provides oversight of Post PNG’s money transfer and agency banking services, which are offered in a separate business unit within the Post Office. Although the central bank has been accommodative of the Post, the Postal Services Act may still be limiting Post PNG from expanding into other financial services which would not only contribute to enhancing financial inclusion, but also to ensuring the financial sustainability of the Post.

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III. The Business Model: Post PNG and Mobile SMK

Post PNG represents an interesting case of a postal-led mobile money service, especially as it was one of the first adopters of mobile technologies for financial services in PNG. Few Postal operators have entered the mobile money environment with proprietary services, although several are offering mobile financial services either as a cash-merchant, or in partnership with other service providers. This is especially the case in Africa. Post PNG therefore demonstrates that Postal operators have the potential to lead the deployment of mobile financial services; but this effort does not come without considerable cost.

Post PNG currently has a network of 37 post offices, and 4 post office agencies. It provides a range of postal services, and its financial service offering is comprised primarily of domestic money transfer services (SMK). It also provides office space for the operation of ANZ bank branches in two post offices. The original SMK service has been very successful, and financial services have been an important source of revenue for Post PNG. In particular, revenues from financial services increased from 15 percent to 28 percent of total revenues between 2007 and 2011.¹⁶

III.1 Strategic Objectives for MobileSMK

Post PNG introduced its Mobile SMK service in July 2011, primarily to improve and modernize its existing SMK service and to take advantage of the increasing uptake of mobile phones and mobile technologies for financial services. Some objectives for launching the Mobile SMK included:

- **Enhancing the accessibility of the existing money transfer service**
  Despite the Post's relatively wide network of offices and agencies, the SMK service could only be conducted in a limited number of locations. The mobile version of SMK would allow the Post to expand its money transfer service to a wider segment of the population.

- **Stemming the threat of competition from commercial banks and mobile network operators**
  In recent years, commercial banks have been aggressive in pushing “branchless banking” strategies in PNG, through the development of rural branches, EFTPOS networks, and new mobile money transfer services. Banks have also reduced account-opening requirements, targeting the low-income retail market which has traditionally been Post PNG’s core target market. New mobile platforms have also significantly decreased costs for commercial banks, allowing them to reduce cash handling and transportation costs, and to target new clientele through mobile channels.¹⁷ These developments were seen a threat to the Post's dominance in the money transfer market for rural areas, in particular the SMK product. As the introduction of new mobile money transfer services would compete directly with the original SMK service, it was hoped that MobileSMK would enable Post PNG to maintain its competitive advantage in the market for domestic money transfers.

- **Supplementing revenue from postal services**
  As is the case for many Postal operators around the world, basic mail services are no longer generating sustainable revenues for Post PNG. Indeed UPU statistics show that income stemming from letter post decreased from 34% in 2007 to 15% in 2011. While parcels and logistics services are now an important component of the services provided by Post PNG, expanding the financial service offering would provide much needed revenues for the Post. Its share in total revenues almost doubled in five years from 15% in 2007 to 27.8% in 2011.

¹⁶ Postal Statistics 2011. Universal Postal Union (UPU)
¹⁷ Post Papua New Guinea (PNG) Ltd, Interview conducted on 14 October 2013
III.2 Description of the Business Model for MobileSMK

Mobile SMK as a product is wholly-owned by Post PNG. It is not a business model based on partnerships, but one where the Post intended to offer the service directly by conducting all the activities in the mobile money value chain (see Appendix 3 for a description of the mobile money value chain). The Post purchased the license for the mobile money transaction platform from Telepin Software Corporation, a Canadian-based software firm, for roughly PGK6 million (~US$ 2,400,000), which does not include annual maintenance costs and on-going fees.\(^{18}\) This is a large investment considering that total revenues in 2011 were of PGK55 million (~US$ 22 million). The platform is hosted on the Digicel mobile network, and is currently available only to consumers with a Digicel phone. There have been plans to expand the service on the BeMobile and Citifon networks, but as yet, these plans have not been implemented.

Post PNG has developed a network of MobileSMK agents to provide cash-in and cash-out services, in addition to its existing network of post offices and agencies (see Figure 3). The Post does not supervise the agent network directly, instead this network is managed by an external third party. The funds received by MobileSMK agents are ring-fenced following Universal Postal Union (UPU) regulation for postal financial services, and account reconciliation is conducted by Post PNG staff. The Post is reliant on Bank South Pacific (BSP), a large local bank, for cash management and as a source of funds and debt, for the carrying out of the MobileSMK service.\(^{19}\)

Figure 3. Network of MobileSMK agents

III.3 Analysis of the Business Model: Key Issues and Challenges

The deployment of MobileSMK was an initial success. In the first month, Post PNG processed PGK1 million (~US$ 400,000) worth of transactions, and it announced a partnership for mobile loans with Moni Plus, a licensed finance company in PNG.\(^{20}\) Plans were also made to partner with Western Union, for international remittances via mobile phone. However, in the two years following the launch of MobileSMK, Post PNG is now making a significant loss, and the operation of the Mobile SMK service has encountered a number of problems. For instance, many customers do not have proper proof of identity (ID), making it difficult for the Post to verify

\(^{18}\) Conversion from PGK to US$ conducted at rate of PGK 2.50/ US$. This rate is applied throughout the report.

\(^{19}\) Post Papua New Guinea (PNG) Ltd, Interview conducted on 14 October 2013

\(^{20}\) PNG Post Courier, “Loans made easy with mobile SMK,” 23 September 2011
intended recipients of money transfers. Furthermore, there have been complaints from customers that they have not received funds sent to them, or that funds sent via mobile have not reached the intended recipients. 21

Several issues have led to Post PNG’s unfavourable experience with Mobile SMK, most of which are not unique to the Post. Some external factors that have contributed to the situation include intense competition in the market for mobile financial services on the one hand, and the lack of competition within the telecommunications market on the other. However, internal factors have been more to blame for the current situation facing Post PNG and MobileSMK. In particular, the Post has faced challenges with regards to financial and human resource constraints, problems with product development and operation, cash management and logistics, as well as with internal controls and system management, resulting in internal theft and fraud. Issues with mobile network connectivity have also impeded the efficient operation of MobileSMK. These issues are discussed further, as follows:

- **Weak organizational structure**
The main issue behind the diminished success of MobileSMK rests with the business model adopted by Post PNG to offer the service. Although some processes within the mobile money value chain for MobileSMK have been outsourced, Post PNG is ultimately responsible for the whole service – from obtaining the license, regulatory engagement, and product and business development, to marketing and customer care. This is an onerous load for a Postal operator that has little experience managing proprietary financial services. To make matters worse, the partnership agreements entered into by Post PNG have significant conflicts of interest, as the Post's mobile network provider also has a competing product, and the firm managing the Post's agent network also manages the agent networks of several other MMOs in PNG. This has not only made it difficult for Post PNG to ensure that its product is prioritised by its partners, but the outsourcing of important processes within the value chain has also made it difficult for the Post to have adequate oversight over its own service. In short, had the Post adopted a business model based on mutually beneficial partnerships, MobileSMK may have experienced more sustained success.

- **Lack of human resource skills and capabilities**
Human resource capabilities are the most important component of postal financial services, and can be a key factor behind the success or failure of any service. This has been particularly true for Post PNG. Having only had experience managing domestic money orders, the Post lacked the human resource capabilities to manage a more complex service like MobileSMK. Staff skills within the Post are reported to be very low, and the Post has been unable to attract skilled employees given the decline in postal business and the losses the Post has incurred. As such, current staff and management have a very limited understanding of the internal processes associated with the MobileSMK service, and are unable to establish adequate checks and balances, nor ensure proper account reconciliation. For instance, the firm managing the agent network recently queried transaction data for MobileSMK, but Post PNG has been unable to verify the data, as staff are not familiar with how the data is generated in the first place. 22 Furthermore, as only one or two members of staff are responsible for the operation of the system, the Post has been exposed to cases of account manipulation and fraud. Management at the Post considers the system to be a “black box” which they do not understand, and therefore cannot establish proper internal controls.

- **Limited financial resources and capacity**
As a corporatized entity, Post PNG is self-financed through loans and internal cash flows. It no longer obtains funding from the Government, and is unable to access private markets for capital. 23 Yet, in spite of its limited financial resources, Post PNG made a substantial investment in the technological, network and customer support infrastructure necessary for the delivery of MobileSMK. This investment continues to be a drag on the financial resources of the Post. Although it is not unusual for mobile money services to be loss-making in the initial years after deployment, unlike large MNOs with deep pockets, Post PNG was not in a position to bear such a considerable loss over a sustained period of time. In addition, MobileSMK has not significantly reduced the cash handling costs. On the contrary, before the

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21 Post Papua New Guinea (PNG) Ltd, Interview conducted on 14 October 2013
22 Post Papua New Guinea (PNG) Ltd, Interview conducted on 14 October 2013
23 Post Papua New Guinea (PNG) Ltd, Interview conducted on 14 October 2013
introduction of Mobile SMK, the government took care of the cash-handling for the SMK product. For mobile SMK, however, this is not the case anymore and the Post is reliant on BSP for the provision of cash, especially in “cash-out” areas. The introduction of cash-handling fees has raised the cost of providing MobileSMK to unsustainable levels.

- Inadequate product development and marketing strategy
The management of Post PNG is of the view that in promoting MobileSMK as a cheaper, more convenient alternative to SMK, they may have cannibalised revenues from SMK. Although there is demand for mobile money services, particularly in rural areas, the product development and marketing strategy for MobileSMK was not appropriate to capture this demand, especially with the recent proliferation of competing services. Another element lacking in the marketing and delivery strategy for MobileSMK was financial education. Given the low levels of literacy among the adult population in PNG, addressing this limitation would have helped sustain the uptake of Mobile SMK. In any case, the Post may have done better to focus on improving the existing SMK service, and introduce different financial services, rather than a similar service using new channels.

- Inadequate internal systems and network connectivity
Post PNG currently uses an ERP system for the SMK and MobileSMK service. Currently, all post offices are online and are connected to the centrally based ERP system at the Head Office. However, the network is not particularly stable. The loss of network connectivity between post offices means that post offices are unable to conduct transactions. Limited network connectivity has also limited the processes and recording of transactions in the internal system. In addition to problems with network connectivity, the Post has also had operational troubles with the mobile platform itself. Requests by Post PNG for further technical support from the software provider have not been addressed to date. As a result, the lack of limited support for the mobile platform, combined with weak network connectivity, have also affected the performance of MobileSMK.

- Small network of access points
Despite having the largest network of physical branches, Post PNG’s network is not nearly as extensive as the network of access points developed by the banking sector, which include a substantial number of ATMs and EFTPOS devices. As ATMs, EFTPOS, and rural bank branches can now be used for cash-out transactions, the postal network alone is no longer sufficient to ensure the uptake of MobileSMK.

Overall, the issues raised above indicate that for Post PNG, the foundations for the deployment and operation of a mobile money service were not in place. Had a more gradual approach been taken or one built on partnerships from the beginning, by first acting as a cash-merchant for existing mobile money providers for example, Post PNG might have been able to build the necessary capabilities and systems it needed to manage more complex financial services, like MobileSMK. This would have also allowed Post PNG to offer the service at a lesser investment.

**IV. Conclusions and Lessons Learned**

As in many developing countries, the emergence of mobile technologies for financial services is transforming the financial landscape in PNG. In foreseeing a threat to its domestic remittances, Post PNG led the deployment of its own mobile money service, MobileSMK. While initially successful, MobileSMK has become a burden for Post PNG, forcing a re-think of the Post’s strategy for financial services. This was accelerated by the fact that the Post itself is not in a good financial position and therefore cannot cope with losses on the mobile financial services which is supposed to bring additional revenues as it does in several other posts worldwide.

What the case of Post PNG shows is that for Postal operators with little experience offering financial services, a more cautious approach must be taken in offering mobile money, even in the face of increasing competition from mobile money service providers. Most importantly:

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24 Ibid.
25 Ibid.
- There is need for Posts to build human resource skills and capabilities for managing financial services before embarking on postal-led deployments of mobile money;
- The postal network is no longer sufficient to ensure the success of postal-led mobile money deployments. Mobile money requires significant investments in developing wider networks of agents and access points. Posts must seriously consider whether they have the resources to fund an agent network in addition to their existing network of post offices; and,
- The business model adopted for mobile money must properly take into account the Post's capacity, financial and human, to carry out certain activities along the mobile money value chain. It is not necessary for Postal operators to take ownership of the whole value chain for mobile money services.
Appendix

Appendix 1. Socio-Economic Overview of Papua New Guinea

<table>
<thead>
<tr>
<th>General Indicators</th>
<th>Source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (in millions)</td>
<td>7.0</td>
<td>2011</td>
</tr>
<tr>
<td>Adult population, age 15 - 64 (% of total population)</td>
<td>58.4</td>
<td>2012</td>
</tr>
<tr>
<td>Population density (people per sq. km of land area)</td>
<td>15.5</td>
<td>2011</td>
</tr>
<tr>
<td>Rural population (% of total)</td>
<td>87.4</td>
<td>2012</td>
</tr>
<tr>
<td>GDP per capita (current, US$)</td>
<td>2,184</td>
<td>2011</td>
</tr>
<tr>
<td>Mobile cellular subscriptions (per 100 people)</td>
<td>34.2</td>
<td>2011</td>
</tr>
<tr>
<td>Internet users, per 100 people</td>
<td>2.0</td>
<td>2011</td>
</tr>
<tr>
<td>Unbanked population (% adult population)</td>
<td>85</td>
<td>2011</td>
</tr>
</tbody>
</table>

**Access to Finance Indicators**

| Commercial bank branches per 1,000 km²                                  | 0.18                            | 2012 |
| Commercial bank branches per 100,000 adults                            | 1.88                            | 2012 |
| ATMs per 1,000 km²                                                     | 0.80                            | 2012 |
| ATMs per 100,000 adults                                                | 8.45                            | 2012 |
| Deposit accounts with commercial banks per 1,000 adults                | 202.49                          | 2012 |
| Loan accounts with commercial banks per 1,000 adults                   | 43.64                           | 2012 |

Appendix 2. Financial Market Structure of Papua New Guinea

**Financial Institutions in Papua New Guinea**

4 Commercial banks:
- Bank South Pacific - 35 branches, 295 ATMs, over 200 agents
- Australia New Zealand Banking Group - 14 branches and 40 ATMs
- Westpac Bank - 15 branches and 32 ATMs
- Maybank - 2 branches

3 Microfinance banks:
- Nationwide Microbank
- PNG Microfinance Limited
- People’s Micro Bank

55 licensed financial institutions:
- 8 finance companies
- 22 savings and loans societies,
- 5 life insurance companies and 12 non-life insurance companies
- 7 superannuation (pension) funds
- 1 national development bank

7 Mobile Money Operators:
- Bank South Pacific
- Australia New Zealand Banking Group
- Nationwide Microbank
- Post PNG
- Digicel
Appendix 3. The Mobile Money Value Chain

Source: Neil Davidson, GSMA, 2012