

# Mobile Banking in Indonesia

ASSESSING THE MARKET POTENTIAL FOR  
MOBILE TECHNOLOGY TO EXTEND BANKING  
TO THE UNBANKED AND UNDERBANKED

*FINAL REPORT*



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Indonesia Mobile Banking project aims to provide widespread access to financial services in Indonesia by leveraging mobile phones and other telecommunication technologies. As part of the project activities, the Mobile Banking Study was conducted to assess the market potential for mobile technology to extend banking to the unbanked and underbanked.

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# 1. Executive Summary

In Indonesia, a large percentage of the population has little or no access to financial services due to geographical, infrastructural and cost barriers. With only 50-60 million Indonesians, out of a total population of 250 million, estimated to have bank accounts and, by our estimates, between 96 million and 114 million actual mobile subscribers, mobile telephone networks look to have a huge potential to provide – and extend the provision of – financial services. Furthermore, the gap between bank account holders and mobile subscribers is only going to increase over the next few years as the mobile subscriber population continues to grow, currently estimated at around 70 million bank account holders and approximately 150 million unique mobile subscribers by 2013.

Where mobile banking *has* already been made available in Indonesia, it has primarily been as an additional channel for those already holding bank accounts. It has also been disproportionately concentrated upon the larger developed urban areas of Jakarta, Bandung, Surabaya, and Denpasar, Bali. The questions being addressed here are whether there is demand from those without bank accounts or those with limited access to financial institutions, what that demand may be (i.e., whether it differs from the services being offered by banks and financial services providers), and whether it could be provided via mobile phone networks.

Although m-banking is still in its early stages of development in Indonesia, a number of players have already been becoming actively involved in various forms of mobile banking and mobile payments services. These early movers primarily come from the leaders of the banking sector and the telecom industry, but they also include third-party platform and software providers. As a result, three distinct models of m-banking service delivery can

be drawn: the carrier-led model, the bank-led model and third-party models. We are therefore also here looking at the strategic approaches companies – be they MNOs, banks, or third party providers – can take to reach the unbanked and underbanked populations across the country. The third-party led model offers a particularly interesting option for Indonesia currently in that it is operator-agnostic and benefits from the possibilities offered by the current banking regulations. We strongly encourage further investigation of the possibilities that this nascent model offers for furthering mobile banking adoption in Indonesia.

## Defining m-banking

In its original meaning, m-banking refers to financial transactions undertaken *using a mobile device against a bank account accessible from that device*. But traditional m-banking is only one aspect of the broader set of payments and financial transactions that can be enabled across mobile networks. These other services can be defined as follows:

- **M-Payment**: point of sale or remote payments made through a mobile device.
- **Mobile Money Transfers**: the ability to move stored value from one account to another account using a mobile device
- **M-Wallets**: an electronic store of value linked to the mobile number of their holder. They do not require the holder to have a bank account, and can also be used as a payment instrument and a transfer instrument.

Because of the overlap across these definitions they are at times used interchangeably – and not always correctly. As such, m-banking is increasingly used in a broad sense to refer to a range of applications, technologies, and business models involving some form of financial transaction using a mobile device, *whether there is an underlying bank account or not*. Unless otherwise specified we do not use m-banking in this broader sense to refer to all mobile financial services (m-banking, m-payment, mobile money transfers), as we are looking specifically at the use of mobile technologies to *extend existing financial services to the unbanked*. We have however investigated the application of these broader services within this report as they can be seen as potential drivers, or forerunners, of m-banking – particularly given the slow take-up of existing m-banking services that has been the case in Indonesia to date.

## Key findings

Demand for mobile banking services, transformational or otherwise, can be ranked in the following order:

1. Top-up
2. Bill payments
3. Transfers
4. Remittance
5. Transactions

These services could be viewed as an iterative progression, with over-the-air top up already prevalent throughout the market. Moreover, each of these services could be enabled *with or without an attached savings account*, so the demand for these services does not necessarily translate into additional savings accounts. However, all else being equal, our findings show that the overwhelming desire is for inclusion in the formal financial sector, not least because of a crucial factor – trust – which appears to reside most strongly with the banks. And, in particular, the large commercial and state banks.

Bill payments are overwhelmingly of interest, most particularly for the un- and under-banked, and should be seen as a potential point of market entry. Mobile money transfers tend to make more sense to those who have already had some experience

with mobile money services or who can see a specific need to address. Remittance has a natural constituency among migrant workers, and while this group is large, it also tends to be quite geographically specific in Indonesia.

Despite the expressed desires for formal financial participation, informal financial institutions service a greater proportion of the market than do commercial banks; one-third of Indonesians *don't save at all*, with less than half saving at banks.

A *part* of the reason is access. In many cases financial services are simply not convenient *enough* to be bringing the excluded or underbanked into the formal financial system. To be realistically able to enjoy a savings account many within the micro-finance segments need more immediate access to their funds.

The more serious impediments to access arise from high monthly fees and high minimum account balances. Most banks intentionally structure their interest payments on deposits and monthly fees in a way that discourages small deposits. Banks do this because small accounts are a costly, administrative nuisance, and because unilaterally closing a non-zero dormant account entails (contingent) financial liabilities. In other words, new business models will need to be adopted if financial access is to be successfully extended and this means that the banks and other providers will need to adapt their pricing and their product portfolios as well as their mode of delivery if these initiatives are to be successful.

All that said, the possibility for enabling new business models based on large potential subscriber acquisition, and extending access, appear profound. This report was put together in two distinct phases. In the first we reviewed the existing literature on banking and access in Indonesia and the existing m-banking initiatives taking place. We also conducted extensive interviews with many of the key players on the ground. These results are summarised in Chapters 2 and 3. A detailed discussion framework/ survey allowing us to test these early conclusions was then put together and focus group discussions were conducted in various locations around Indonesia, as summarised in Chapter 4. Chapter 5 brings the various conclusions of this research together, and Chapter 6 provides some suggestions for further research and next step initiatives. The material used in the course of this work is detailed in the various appendices.

This report was prepared by TRPC for IFC Advisory Services in Indonesia.

## 2. Key Issues for M-Banking in Indonesia

The first part of this report looks at the key issues for mobile banking deployment and development in Indonesia from the perspective of the mobile network operators (MNOs) firstly, and then the banks. Third party service provision is considered as and where relevant, although being at a nascent stage of development when the research was undertaken we have not broken it out into a separate section. That does not mean that we believe the mobile banking market in Indonesia to be either bank-centric or telco-centric, with no role for third party providers. Quite the contrary. The Indonesian market in many ways looks uniquely suited to third party providers playing a role, however the existing literature and players in the market meant that the focus for this report was on the potential for existing players to extend financial access to the unbanked and the underbanked.

An extensive amount of existing literature was reviewed prior to undertaking field research (see Appendix A), followed by some 34 interviews with 42 subjects in 27 companies and organizations (Appendix B). These were conducted in a semi-structured interview manner, primarily focusing on the operations, aspirations and plans of the MNOs and banks for existing services delivery, for m-banking services, and for using mobile technologies to extend access to the unbanked and underbanked. This Chapter breaks the results of that research out into the key issues. These issues were then used as the basis for a set of working hypotheses (Chapter 3) that were tested in focus group discussions in various locations around Indonesia (Chapter 4).

### 2. 1 Mobile Network Operators (MNOs)

#### 2.1.1 CUSTOMER BASE (SIMS AND SUBSCRIBERS)

At the end of 2008, there were officially 137.1 million active SIM cards according to the regulator, BRTI (although these are referred to by the regulator as subscribers), and the total SIM base was growing at approximately 45 percent per annum. SIM cards and subscribers are not a 1:1 match however, due to a range of factors. Therefore, estimates of what the actual addressable subscriber base is vary widely, from 40 million subscribers (an MNO) to 60 million subscribers (a consultant) to more than 100 million subscribers (an MNO and a third party provider). There are several issues that are currently serving to confuse the market:

- (i) SIMs per subscriber: Many subscribers hold more than one SIM card, thereby bringing the total subscriber pool down. There are a number of reasons for this. Some customers have a GSM phone and a CDMA phone to take advantage of different coverage strengths, different tariff packages (i.e., one may be a 'work' phone and one may be a 'social' phone), or simply because of particular value-added services. Many people have a phone subscription with an on-network tariff plan ('family and friends'-style packages) – this has been a particular focus for the smaller carriers, some of whom offer free on-network calls to induce new subscribers to take a second 'cheap' phone service for family use. The recent rapid proliferation of Blackberries (and other 'smart' devices) has meant that many high-end subscribers have a phone they use for email and social networking<sup>1</sup> as well as their normal,

<sup>1</sup>Indonesia is one of the highest users of mobile social networking services such as Facebook in the region. By late 2009, Indonesia was the third largest market in the Asia-Pacific for Facebook and the fastest growing Twitter market in the world.

alternate, phone subscription. Also at issue is the fact that a number of the telcos do not have a mobile license, but rather a fixed-mobile license (exploiting a loophole in the regulatory structure) and so have been limited to a few specific localities, thereby requiring their subscribers who travel to carry more than one SIM.

Estimates of the number of SIMs per subscriber were disproportionately high from interviewees in Jakarta, illustrating that greater Jakarta itself is something of a statistical anomaly, with one respondent suggesting that many people had “up to 10 SIMs”, and that therefore overall phone subscriber numbers were far far lower than the officially cited figures. Elsewhere estimates ranged down to 1.2 SIMs per sub (an MNO).

- (ii) Level of active SIM cards in the market: Exactly when a SIM card is deactivated and repooled (for number reallocation) varies between carriers (and sometimes even within a carrier’s own policies). While there is a generally accepted framework for activating and deactivating pre-paid SIM cards<sup>2</sup>, it differs by top-up value and the various amounts can differ by up to six months between carriers.<sup>3</sup>
- (iii) Churn: Mobile subscriber churn rates, although a relatively peripheral issue to mobile banking at first glance, could have an impact, strategically, on the transition to offering such services, particularly if m-banking and m-payment services are viewed as increasing consumer ‘stickiness’.

Within Jakarta, the carriers all believe churn to be a significant issue (and all appear at a loss as to how to address it). Commonly accepted figures for churn range from eight percent to 12 percent and higher.<sup>4</sup> Yet all agree that a person’s mobile number appears to be very important to subscribers, and that subscribers don’t like to change their primary number (a finding very strongly borne out in our focus group discussion results – see Chapter 4). With no mobile number portability (MNP) in Indonesia the drive for churn would therefore be expected to be muted. Thus, rather than high churn rates, what the market is likely to be experiencing is the result of aggressive price competition and ongoing customer acquisition programs, with new

subscribers experimenting with new packages and latest offers from the carriers, before settling on a service provider. As a result, there has been an emerging focus on providing new services – including m-payments – *tied to a phone number*, as a way of increasing customer ‘stickiness’. What needs to be recognized here is that the focus is on providing value-added services for customer retention rather than any interest in extending access to the unbanked.

- (iv) One final (minor) point that came up in interviews was the perception that one leading MNO in particular floods the market with SIM cards, thereby distorting the overall base: “every month [it] pumps 10 million SIMs into the market... with the hope that 10 percent will become customers.”

### 2.1.2 NETWORK COVERAGE

Issues of market coverage are in some ways more contentious than those around SIMs per subscriber. Partly this has to do with the dominance of the Big 3 (Telkomsel, Indosat and Excel) and the government’s expectations for national coverage incentivising the carriers to stretch their claims for coverage as far as possible. Partly it has to do with market competition with smaller providers in the urban centers incenting the carriers to focus their resources on higher-end subscriber acquisition in key markets, rather than spending capex on less profitable customers in outlying areas.

Between the Big 3, estimates in interviews for actual population coverage ranged from 70 percent to 100 percent – albeit this latter estimate was caveated as being for “populated areas of Jakarta, Sumatra, and Kalimantan”. According to the same interviewee, the company’s network overall “covers 95 percent of the population”. Standing in between these two, the other of the Big 3 claimed to “cover 80-90 percent of the total population, 80-90 percent of towns in Java and Sumatra, and 60-70 percent of towns in Sulawesi and Kalimantan”.

Outside observers suggested that the 95 percent coverage claims commonly made were unlikely to be met as the focus for the carriers remains Java, Bali, and some key parts of

<sup>2</sup>According to the President of the Indonesian Cellular Association, a standard process would be: Activate – up to 30 days; Suspend – after no use for 30 days; Disable – after a further 30 days of no use; Repool – 5 days after disabling. However, these periods are not mandated and they vary by pre-paid denomination (categories range from IDR10,000 to IDR20,000 to IDR50,000 to IDR100,000 to IDR500,000) and by carrier.

<sup>3</sup>For example, the activation period (ie, the durability of the ‘starter pack’) for one MNO is 30 days, for another it is 2 months, and for third it is 6-8 months.

<sup>4</sup>Flaming, Prochaska and Staschen, June 2009 (CGAP)

Sumatra and Kalimantan. The emerging gap between revenues and capex requirements currently being experienced by most carriers means that it is “difficult, if not impossible, to recover deployment costs off-Java”. Through 2008/9 the market explicitly recognized this with a series of infrastructure sharing deals amongst various carriers.<sup>5</sup>

The Big 3 however do appear to be *following* the traffic in outlying rural areas, extending capacity and network reach when they can see calls being made into, or out from, their existing network. This, it should be noted, is a very different strategy from the ‘build it and they will come’ urban approach.

### 2.1.3 M-BANKING

As CGAP has pointed out, leveraging the deployed base of mobile phones has to translate into cost savings. Excluding costs associated with connection to the payment system and switching costs, “we expect to see in at least one case the costs decline from approximately USD70,000 for a branch to USD1,140 for agents using cell phones”.<sup>6</sup> This is one of the key drivers for mobile banking but it requires a strategic tie-up between carrier and bank.

In Indonesia currently, however, while mobile banking appears to be a focus for all the carriers (certainly for all interviewed), as a standalone service, it is not a core – or enthusiastic – focus for any of them. (This changes somewhat when mobile banking is extended to encompass m-payments, remittance, e-money, etc – see below.)

The one exception to this statement is Axis who is focused on using a telecom network to target branchless banking and provide financial access services – thus they want to enable banking and financial access/services and *not* compete with the banks. The focus for Axis is on the bottom-of-the-pyramid. In reality, however, they see Indonesia as a diamond rather than a pyramid with their strategy as follows: “given there are comparatively few people at the apex (Category A), and the

very bottom (Category E), the trick is to go after the fat middle layer (Category C – the comparatively underbanked and/ or Apex institutions), and thereby begin to tap into the Category D’s (underbanked and a few of the unbanked), and perhaps influence some of the Category B’s (through convenience/ social networks).”

Axis’s approach is to extend the ‘product-in-a-box’ approach of SIM card registration to m-banking. Thus they are able to sign up m-banking customers in a single interaction wherever they encounter a potential customer.<sup>7</sup> This contrasts with the banks who require potential customers to enrol and authenticate identity in a multiple step process at a branch office.<sup>8</sup> Axis additionally provide off-net fees for cross-bank transactions, lowering cost (and therefore acquisition cost), providing for economies of both scale and scope.

At the other end of the spectrum, another small MNO is “interested” in mobile banking, but not really sure where the benefit to the MNO lies. They have simple m-banking services in place with 10 banks, and their position is that if a bank wants to provide m-banking via their network, they are happy to comply. (This is for very simple balance checking and transfers.) The question they have is: *where is the incentive to go further?* They can’t charge significantly for such a VAS (the market is too competitive); m-banking and remittances can certainly help to increase traffic – which is good – but the traffic increases are small, particularly compared to the education and marketing efforts required to drive m-banking take-up. And attempting anything would appear to require them to take on far greater levels of financial responsibility, and “why would we ever want to do that?”

M-banking services tend to break down into Java-based (menu-driven) services, on the one hand, and SMS-based services on the other. Both the banks and MNOs talk of SMS-based services being less secure. However, all are very conscious of the difficulty in promoting Java-based services widely because of the limitations of cheaper phones, prevalent across much of Indonesia. SMS-based services can be further segmented into premium-services and standard SMS services.

<sup>5</sup>Smaller cellco Axis dramatically extended its footprint in November 2009 when it signed a national roaming MoU with rival carrier Excel, gaining full access to Excel’s network in Sumatra, Kalimantan and Sulawesi. The agreement is the first of its kind in Asia.

<sup>6</sup>Mas and Kabir, June 2008 (CGAP Focus Note 48)

<sup>7</sup>Axis believes that their registration process complies with KYC.

<sup>8</sup>However, as CGAP has noted, there are both regulatory and business model realities that may well block significant reach into the unbanked population, e.g., KYC regulations limit how much a nonbank partner like Axis can do to acquire customers, and customer acquisition costs are likely to climb as the partnership reaches further into the market for new customers.



The Big 3 have all adopted – or perhaps more correctly, facilitated – a number of m-banking initiatives with the banks. Telkomsel is working with 38 banks, mostly using premium SMS services. The charges associated with premium SMS can be expected to act as an inhibitor to lower income groups adopting the service. This will be particularly true outside Jakarta.

Indosat is working with more than 23 banks in providing m-banking services. Transaction fees are IDR500-1,000 and, again, the service is mostly taken up by higher income segments. Excel first adopted their service with BCA, who put a private key on each SIM, a practice they subsequently adopted with all other carriers (see below). An ATM PIN is used to withdraw or transfer cash.<sup>9</sup> For each of the Big 3, m-banking is used mostly for top-ups and transfers; cash is still preferred for transactions.

#### 2.1.4 E-MONEY/ M-PAYMENTS/ M-WALLET

For the carriers (and third party providers looking to work with the carriers), the m-payments and remittance opportunities appear to be far more attractive than the m-banking opportunity. This results from both regulatory restrictions (on cash in/cash out and agent networks) *and* tensions in working with the banks (customer ownership and contrasting business models). The key differences are:

- (i) m-payments looks to be a service that can capitalise on the carrier's already existing and extensive networks (particularly the reseller networks) and/ or through relationships with merchants. (Ie, they can potentially extend already existing services/relationships rather than having to forge working relationships with the banks.)
- (ii) remittance appears to be emerging as a potentially lucrative and comparatively easier target opportunity.

The recent introduction of new e-money regulations by BI have been widely seen as a positive step in opening the payments market to such initiatives. However, they are also seen to be more stringent in the initial licensing requirements and there remains confusion as to how they will be interpreted in practice.<sup>10</sup> As a result, a number of existing or nascent initiatives were either delayed or rolled back following the introduction of the e-money regulations.<sup>11</sup>

Telkomsel's T-Cash claims to have 500,000 registered users, but payments are currently available only for post-paid subscribers, and actual usage (i.e., 'active users') is far less ("maybe less than 100,000"). Telkomsel is planning on launching other utility services as part of the access, and have a P2P licence but have been "awaiting the green light from BI to activate the service". They are working with some of the rural banks (including BPR-KS – see below) on establishing an international and domestic remittance solution. For the moment the system is to remain a closed system; "open systems will only be looked at when the market matures".<sup>12</sup>

Indosat's Dompot Pulsa service was soft-launched in Jakarta, Bandung and Surabaya in mid-2009 with a target to have four million active subscribers on the service by Q4 2012. As of September 2009, they had some 2,000 subscribers, generating IDR100 million in transaction value. No charges were being levied. Indosat's primary objective with the service is to reduce churn, although they spoke also of targeting the 'unbanked' and low-middle income groups. When the system goes into commercial launch they will employ standard SMS charges with no fees to or from banks, with IDR1,000 going to Indosat if the bank connects directly to the customer, and a 50:50 split with content providers. The major uses are seen to be merchant payments (working with APPSI), and bill payments (top-up and post-paid in the case of the telco).

In terms of remittance, Excel works with BNI on the Hong Kong and Malaysia corridors providing 'data settlement' and SMS

<sup>9</sup>Permata Bank has adopted a slight security variation on the theme by asking for only select digits from the customer's secret PIN – known as PIN challenge – thereby not requiring the full PIN to be input at any given time.

<sup>10</sup>According to BI, e-money remittances are now limited to IDR5 million for subscribers registered with the issuer, otherwise the limit is IDR1 million. P2P licences are also required to conduct remittance. As of November 2009, e-money licences had been issued to 5 banks (BCA, Mandiri, Mega, DKI, BNI), 3 telcos (Indosat, Telkom, Telkomsel), and 1 non-telco (Skye Sab).

<sup>11</sup>PonselPay, for example, was about to launch its service (with Permata Bank) when the e-money regulations came out and ended up delaying the launch of its service.

<sup>12</sup>Their Flexi service will also be incorporated at a later date.

notification and cash-in via Celcom in Malaysia.<sup>13</sup> Telkomsel is also working on solutions for the Malaysian and Hong Kong corridors. BPR-KS, for example, is in talks with Telkomsel to promote T-Cash/ Flexi-Cash along with Telkomsel's remittance payments services.<sup>14</sup> Indosat's remittance licence (P2P and overseas) was expected to come through before the end of 2009.

At USD4-5 billion a year remittances constitute about one percent of GDP. While these figures significantly underestimate the true scale due to issues with data collection, and the fact that the majority of international remittance is not declared in any way, Indonesia's remittance market is not yet of the scale of India, Turkey or Mexico, and does not represent the proportion of GDP of some African and small island states. However, in Indonesia, migration for work and the associated remittance transfers occurs in pockets with the majority of migrants coming from Kalimantan, Lombok and East and West Java. In East Flores and Eastern Java, remittance inflows far exceed regional government budgets, and in 2004, for example, the contribution of remittances to Gross Regional Domestic Product in the East Javanese regions of Madang, Tulungagung and Blitar was 42 percent, 23 percent and 13 percent respectively.<sup>15</sup>

### 2.1.5 CASH-IN/CASH-OUT

Cash-in/cash-out remains the key practical issue to resolve for mobile banking to be able to flourish. As Excel pointed out, if dealers could be cash-in/cash-out agents then Excel would have a 4,000 agent network overnight! However the requirements of the banks and the MNOs differ sharply in this regard and given that any movement in this area brings the telecom carriers under the regulatory watch of BI, none have been too aggressive in moving into the area so far. Excel noted that BCA had been in discussions with the carrier about introducing a mobile-wallet, but special machines would still be required for cash-in making the solution problematic.

Indosat's m-wallet solution is loaded via Alfamart and Kop Indosat chain-stores (selling top-up vouchers), as well as at around 200 Indosat 'galleries' (outlets), but it is expensive to open new outlets so the focus is on the approximately 25,000

ATMs and 200,000 Electronic Data Capture machines (EDC) already in the market. The focus is on transfers via top ups so as to minimise problems in terms of dealer/ reseller commissions, but this approach is awaiting BI approval. Indosat is also awaiting a licence from BI for cash-out and is working with several banks (eg, BCA, Danamon, Mandiri, Permata); currently both registered and unregistered customers can cash-out at Indosat Galleries

Telkomsel's T-Cash top-up is conducted through the retail merchant's T-Cash accounts.<sup>16</sup> Given that it will take time to integrate a large number of dealers and retailers, the current focus is on larger merchants

PonselPay's solution is to tie in with the rural banks cash-in via EDC machines to PonselPay by pre-registered users, thereby utilising the existing infrastructure – how well this solution will work requiring, as it does, tie up between the commercial banks, rural banks and a third party service party, remains to be seen.

Axis, as already noted above, is skirting the edge of BI's regulatory framework by developing its own network of dealer agents (in the more traditional telecom mould), and having these agents work as proxies for its banking partners. This is an innovative approach which could end up being more widely copied depending on how BI ends up interpreting the service and how successfully Axis's marketing efforts are.

## 2.2 Banks

### 2.2.1 BANK NETWORKS

Indonesia's banking sector is largely dominated by commercial banks, which control 97 percent of total deposits and assets. It is also highly concentrated: the three top institutions (Bank Mandiri, BCA and BRI) represent 35 percent of the total assets while the top five institutions represent 50 percent of total assets. However, with a total of some 11,000 bank offices, commercial banks are currently providing access to financial services to less than 20 percent of the population and face some fairly overt limitations in their reach.

<sup>13</sup>Telekom Malaysia, part of "Axiata", are a shareholder in Excel.

<sup>14</sup>BPR-KS believe that poorer customers avoid T-Cash because of the cash-in charges.

<sup>15</sup>See Barnes 2007.

<sup>16</sup>H The float is banked.

Over recent years the *number* of banks – both commercial and rural – has fallen,<sup>17</sup> but their *reach* in the provision of services has increased significantly. Between 2000 and 2008, the number of bank branches increased by 70 percent and the number of ATMs tripled. The greatest expansion was by institutions serving lower income groups, i.e., the cooperatives and pawnshop branches. Nevertheless, access is still limited, particularly in remote places. As Aiaze has noted, although the current number of branches per capita is high at one branch per 22,000 people, the majority of branches are primarily concentrated in remote places.<sup>18</sup> Notably, the banks have been looking to expand by low cost means, such as ATMs, so as to change the cost structure in delivering service to the provinces and enable extending access.

The People's Credit Banks, or BPRs, *should* offer considerable opportunity for wider access to finance for poorer households and MSMEs, because they are relatively low-cost operations and because they have better local knowledge than regular commercial banks. However, while regulated as Banks, BPRs operate within a far more limited scope. BPRs are only permitted to mobilize funds from the public in the form of deposits (time deposits, savings and/or other equivalent form of deposits), extend credit and place funds in a number of permitted financial instruments. BPRs are not permitted to participate in the payments system, engage in equity participation and conduct business in foreign currencies or insurance. The operational radius for the offices of a BPR is restricted to one province. This is an important restriction as it significantly limits the access that can be provided to customers (i.e., a customer at a BPR from one region cannot access their funds in a different region), significantly undermining their attractiveness.<sup>19</sup> As a result, the BPRs are tiny compared to the commercial banks; as of end-2008, loans outstanding of rural banks were less than two percent of those for commercial banks.<sup>20</sup> Moreover, CGAP estimates that the vast majority of the approximately 750 rural banks need an IT overhaul or major upgrade to participate competitively in the financial system.<sup>21</sup>

A further issue is that the BPRs are mandated to serve low-income segments, making it difficult for commercial banks to downscale their business under their current business model. In a bid to address this issue and the lack of investment and technology going into the BPR core banking systems, the central bank, Bank Indonesia, began a 'linkage program' between commercial banks and BPRs, which was expected to enable micro and small businesses to benefit from increased access to finance through a combination of an increase in the available volume of funding and a corresponding increase in the number of borrowers as well as a reduction in interest rates charged to the end customer. However, the linkage program has so far had limited success for a number of reasons. First, the BPRs which would actually require loans from commercial banks in order to expand their loan portfolio to small business customers do not appear to be the BPRs which the commercial banks are targeting as potential customers: the commercial banks prefer to lend to the larger BPRs which do not actually require additional funding (according to the IFC, on average 50 percent of commercial bank loans to these BPRs are unutilized). Second, commercial banks increasingly prefer to lend directly to the end customer as opposed to lending to small businesses through BPRs. Finally, there is a chronic lack of information available to commercial banks. The availability of more comprehensive information (either from Bank Indonesia or from a specialized independent rating agency) would greatly facilitate their credit approval processes with regard to lending to BPRs. Without this information, commercial banks risk expending considerable time and effort in seeking out those BPRs to which they could provide loans, time and effort which, in many cases, may not result in an actual loan being made.

As of late 2008, BRI had over 5,200 branches.<sup>22</sup> The next largest, **Bank Danamon**, had around 1,175 (including its smaller, regional (DSP) outlets). The others with large networks are: Bank Mandiri (almost 1,000); BNI (962); and BCA (819). BCA made its network push several years ago with the roll out of its ATM infrastructure across the country, giving it a

<sup>17</sup>From 2001-06, 352 BPRs merged into 31.

<sup>18</sup>Aiaze 2009 (GTZ).

<sup>19</sup>In interviews, the leadership of Perbarindo were of the strong sentiment that the BPRs needed to be tiered by the government with the larger and more stable BPRs able to function more like banks and therefore compete adequately for customer accounts.

<sup>20</sup>As of Dec 2008, rural banks had approx USD3.2 billion in assets, with 2.7 million credit accounts and 7.3 million savings accounts. The rural bank network consisted of 1,772 mostly rural institutions.

<sup>21</sup>Ivatury and Mas 2008 (CGAP Focus Note 46)

<sup>22</sup>BRI's Unit Desa is Indonesia's premier micro-finance provider and, with some 6000 branches, its client base is among the largest in the world. However, its reach is still limited and only 1,500 BRI branches are online.

substantive edge. More recently, and as part of the government's 'linkage program' push,<sup>23</sup> Mandiri and Bank Danamon have made a concerted push into the low tier market with low-cost subsidiary arms, focused on the SME market in the peri-urban and semi-rural markets. For Bank Danamon this means 470 'Yellow' branches and 1,200 micro-banking 'Green' branches (DSP) nationwide as of mid-2009. The Green branches have some 200,000-300,000 customers, with Green used to distinguish them from yellow Bank Danamon. Danamon has around 825 ATMs.

**Bank Sinar Harapan**, a Bali-based bank acquired by Bank Mandiri in 2008, is part of Mandiri's strategy for extending its network/ reach, and focusing on the micro-finance markets.<sup>24</sup> The bank has 75,000 customers (60,000 of whom are only savings customers), 13 branches (including four in Denpasar) and 82 'outlets' such as cash-out facilities. It also employs 200 'collectors', representing 33 percent of total employees, who's job is to collect and disperse bank funds from customers spread around the island. The collectors currently cover over 50 percent of the island's geography on foot, collecting IDR2 million per month. It is this which really represents the focus of the bank (and this segment of the 'rural' banking market). The strength here is in the 'personal touch' that can be provided, as well as having an opportunity for existing cash-in options. The weakness that this labour-intensive approach represents is the limit on growth.<sup>25</sup>

BCA's competitive advantage lies in its ATM infrastructure, with more than 5000 ATMs already across Indonesia. However, one of the challenges the bank faces is that there are still all too often long queues at ATMs. One of the issues that BCA is therefore looking at is how to migrate ATM users to m-banking? (A further challenge they face in such a migration is that their remote banking system architecture requires the use of a token, which presents technical limitations for mobile adoption.<sup>26</sup>) In addition to its ATM infrastructure, BCA has around 80,000 EDC machines in use across Indonesia. The bank has around eight million customers.

By contrast, **Bank Muamalat**, has no physical branches, relying upon alliances to sell its Shari-e service with, for example, (i) the Post Office (ii) MFIs (alliances with 2,600 nationwide); (iii) direct selling through agents; and (iv) BMTs (Islamic co-operatives). Muamalat's business model is to enable people to buy a IDR125,000 card 'package' which includes a Shari-e account worth IDR100,000. Registration takes five minutes – unlike a normal bank account, but similar to the Axis approach – no minimum account is required, with Muamalat's revenue being made from the float.

Muamalat launched its Shar-e card in January 2005. Shar-e is a full banking services card that can be used as a savings account (has no limit on wallet size) and functions as an ATM and debit card. Essentially, it is a virtual bank account. As of 2007, the number of Shar-e card holders had reached 1.2 million with average deposit per customer of around IDR700,000 (USD70). Shar-e customers need to go to a post office or Shar-e agent, and complete a KYC form and present identification. It costs IDR125,000 (USD12.5) to open an account and the card holder receives an instant IDR100,000 (USD10) credit.

The Shar-e card holder needs to activate his/her account by contacting the Muamalat call center in order for the card to be used in ATMs. Shar-e card holders are expected to conduct transactions via phone banking, post offices, retail agents, or ATMs. In 2007, Bank Muamalat worked with 1,800 post offices throughout the country and planned to add 500 more in 2008.

There are no fees for deposits/ withdrawals, and cash-in is through one of its partner networks (e.g., the Post Office). There are no payments for on-net transfers (ATM). For other transactions (such as purchasing or bill payment) the card holder is charged between IDR2,000-4,000 (20-40 US cents).<sup>27</sup>

In terms of network and reach, it is worth also including here responses from **the Post Office (PT POS)**. POS currently has two principal banking relationships: Bank Negara and Bank

<sup>23</sup>According to Perbarindo, there is IDR3 trillion currently in "linkage programs" between the commercial banks and the rural banks. I.e., loans from the commercial banks to the BPRs.

<sup>24</sup>They provide three kinds of savings account, with two having administrative charges of IDR3000 per month and one being IDR4000 per month.

<sup>25</sup>Bank Sinar Harapan and BPD, the local government-owned bank, were recently voted Best Service Banks by Indonesia's InfoBank magazine.

<sup>26</sup>However, "we feel more comfortable with a token."

<sup>27</sup>Notably, many Shar-e card holders are not Moslems, for example, in Papua and North Sulawesi. Users cited convenience and access through many ATMs as the reason for using Shar-e. Customers can also use a Shar-e card in 2000 ATMs in Malaysia.

Muamalat (see below); other banks are simply corresponding banks. PT POS has some 4,000 offices across the country, as well as 1,000 mobile point of service ‘stations’, 7,000 mailmen and 17,000 agencies mostly engaged in distribution/collection of letters and distribution of remittance *information*.

POS provides both payment collection and payment distribution through outlets (post offices), their agent relationships, and through collectors; they also provide/ enable pension distribution/ bill payments.<sup>28</sup> In terms of trust, they claim to be a far more trusted institution than the banks *outside major cities*, but suggest that they are probably a less-trusted (“or less-valued”) institution *in the cities*; they readily admit that they have been aided by government programs in helping to build local trust.

*This issue of trust – and self-perceived position within the market – is obviously an important issue in the take up of new services such as mobile banking. PT POS has extensive reach across the country, and its agent network may provide a more comfortable position for government agencies to begin to work with, particularly as a trusted community institution. (This is an issue that was tested in focus group discussions, see Chapter 4.)*

Bank Perkreditan Rakyat Karyajatnika Sadaya (BPR-KS) claims to be the largest rural bank in Indonesia as a result of its apex relationship with other rural banks. The bank itself has more than 200,000 customers, and some 32 offices across West Java, including 17 branches, 14 cash outlets, and the bank’s headquarters. It has deployed 50 ATMs and 10 cash deposit outlets.<sup>29</sup> Of significance, however, 700 BPRs have a ‘merchant account’ with BPR-KS, placing it in quite an influential position. Most of these related BPRs are in Java, with one in Kalimantan, and one in Sumatra. The reason for this is the limitation on BPRs that they are not allowed to open offices outside their own geographic area but *can* open a ‘merchant account’ in any area (see also Bank Andara below). BPR-KS reports monthly

to BI. In 2009 BPR-KS opened three more branches and four cash outlets – BI restricts new BPR branches to one every three months); thus one of the key wishes from BPR-KS is to have a loosening on this restriction as they claim to foresee a further 50 branches and 50-100 cash outlets. BPR-KS reports to BI each month.

The main difference with commercial banks, other than regulatory limitations, is loan size. For example, the maximum loan from BPR-KS is around IDR9 million<sup>30</sup>, while Bank Sinar has a maximum loan of IDR25 million.

According to **Perbarindo** (the Indonesian Micro Banks Association) there are 1,760 rural banks (BPRs) in Indonesia, of which 1,700 are members of Perbarindo. (Membership is voluntary.) Across the 1700 rural banks in Perbarindo, there are approximately 10 million rural customers and seven million savings accounts.

For the BPRs the challenge is not just technological, but also regulatory: the BPRs are not allowed to conduct real time clearance, nor to conduct inter-bank transfers.<sup>31</sup> The two key ways around these restrictions are: (i) the BPR hosts an account in a commercial bank and via *that* account it can conduct clearing; (ii) BPRs linked together in some form of business relationship can effectively become a single entity, and can transfer between themselves (or enable account holders to make transfers to other related BPR accounts). This appears to exist in a grey regulatory area. The confusing issue here for BPRs – which will be compounded by m-banking – is that BPRs are limited by geography, i.e., a BPR cannot be larger than – cannot solicit accounts across – a single geographical jurisdiction.

One objective of Perbarindo as an organization is to help facilitate back-end system development for the rural banks. However, this does not extend to pushing for a nationwide rural banking back end system. Indeed, from their perspective, “one CBS cannot possibly address all banks, and all their concerns”.<sup>32</sup>

<sup>28</sup>PT Pos processes 20 million money transfers a month on behalf of its 38 bank partners, and processes 10 million transfers through its proprietary money transfer service. PT Pos also claims to have the highest traffic of any Western Union agent in Asia.

<sup>29</sup>BPR-KS also has 4500 EDC units and 500 Internet banking subscribers. The EDC machines being used cost -USD400 per unit. Net banking has similar constraints to card limits (eg, IDR25 million or IDR10 million daily limits).

<sup>30</sup>This foresees a monthly repayment of IDR500,000 – 1 million.

<sup>31</sup>The limitation on clearance was put in place to protect liquidity in the rural banks.

<sup>32</sup>As an industry body, Perbarindo “can see the need for access to wholesale banking services” (e.g., an apex bank), but they are “not sure that Bank Andara is up to this job”.

**Bank Andara** is potentially an important initiative in fostering access to the unbanked. Originally a small Bali-based bank, it was acquired by MercyCorps, with a view to creating a wholesale bank (or 'bank of banks') to supply core banking facilities for Indonesian banks, especially the BPR segment. As yet, however, its core banking system has not been put in place and its corresponding relationships have yet to be formed.

### 2.2.2 MOBILE BANKING AND MOBILE PAYMENTS

Elsewhere, the banking sector has generally played a role in the development of m-banking services through the provision of *additional* channels to *existing* customers. Indonesia is no exception. Of the approximately 126 commercial banks, almost half have been involved in some m-banking initiative, almost all focused on customer retention.

Between 30-40 percent of **Bank Mandiri's** eight million customers already use SMS m-banking across all networks (50 percent are estimated to come from just one carrier). This is mostly GSM-SMS driven, but there is also some CDMA-menu driven traffic. ("Lower income customers use SMS; upper income segment use the Internet.") The most popular function is balance checking with more than 50 percent of all usage consisting of simple balance checks. Nevertheless, transactions have grown 100 percent over the past year albeit off a very small base.

The big incentive for the bank is the cost savings which can accrue from mobile banking, with the cost per transaction being roughly IDR200, as compared to IDR3000 for an ATM transaction and IDR8000 for branch banking. The more customers who can be migrated to use mobile banking therefore, even for very simple transactions, the more the bank can cut down on costs. Customers are charged IDR500 for premium SMS – which the bank claims customers perceive as too expensive. As for mobile payments, the focus remains on top-up. There are as yet no domestic or overseas remittance services.

It took **Bank Sinar Harapan** some three months to overcome customer resistance to, and working knowledge of, the new integrated banking systems following their acquisition by Bank Mandiri and this makes them cautious about new electronic money services. They are currently looking at remittance services as a first step in new service offerings. The bank handles only 20-35 remittance transactions per day but see this as a big opportunity because of the increased convenience for all parties.

**BCA** has had mobile banking since 2000, utilising both STK- and SMS-based services. Notably, they explicitly target two different market segments with the two types of services. SMS m-banking is used only for balance checking (no transactions), as they believe that there is limited security with SMS banking. STK m-banking enables any type of transaction (except withdrawal). The key problem with STK is the customer has to change their SIM card to be able to enable it. However, since 2000 all new SIMs have had the module built in.

For BCA m-banking, the user registers their phone at the nearest ATM and is then able to use the service. The SMS m-banking service employs premium SMS with the customer subject to telco charges, but not bank charges. As of August 2009, BCA had two million registered mobile banking customers, however only 50 percent were active. To spur uptake, BCA was in the process of launching a mass media campaign on the benefits of m-banking which was scheduled to begin in August. One reason for this is that uptake has not spread far beyond the three cities of Jakarta, Bandung, and Surabaya, and even within those cities, the vast majority of the service is "within very small circles – 80 percent of customer transfers are to other BCA customers."

**Danamon Bank** has been running mobile banking services since 2004, but having just launched its iBanking platform in June 2009, it is in the process of building a new operator agnostic m-banking platform for relaunch in 2010. The existing m-banking service uses both SMS and STK (menu-driven) systems, with the SMS-based system by far the most highly used (70 percent of all customers). The benefit with the SMS system is that it is open to all major operators; the drawback is that the customer needs to remember parameters (codes to enter). The STK system is limited to better handsets (i.e., Java-enabled) and users effectively need to also be customer of Telkom's 'Halo' service). As a result, the service is mostly used by merchants and traders, with top-ups the most popular use of the system, and top-ups being used in combination with funds transfers for simple transactions, both business-to-business and business-to-consumer. This take-up is almost exclusively limited to the Greater Jakarta area, despite some recognition of the potential for such a service amongst SMEs and merchants in the smaller cities and towns.

For **BNI's** m-banking service, the sender but not the receiver needs to have a BNI account. The sender is required to cash-in at a bank branch, with the recipient getting an SMS notification (for which they pay – the revenue shared between the bank and the MNO) and needs to produce ID at a BNI branch. BNI is already using m-banking for international remittance

services, however they have found no particular evidence that receivers are more likely to open a bank account<sup>33</sup>: “they arrive with all their family and take the cash immediately... after a long distance to travel they don’t want to incur the time and distance again”. What this points to, of course, is that bank branch access is often far from convenient for this segment of the market. What BNI have also found is that a big incentive to opening a bank account is ATM access – remittance recipients cannot use ATMs without an account, so in many cases it is the prospect of ATM access that is being noticed as the driver for account activation.

Notably, BNI has never considered the idea of collaborating with rural co-operatives or local MFIs (“the challenges of the existing system are sufficient!”). To this end, they are very interested in using mobile phones for access and believe it to be a good solution if the infrastructure is affordable, “but not if an EDC is also required”. BNI would also like to see the use of agents facilitating cash-out, but would have to trust the MNO before using their agents.

**Bank Muamalat** soft launched its m-banking service in the first half of 2009, with commercial launch in July. Currently users can only transfer money between Muamalat accounts, other banks will be added in as the system develops. Most of the banks m-banking users are in Java and the bank have “no idea” of the breakdown between urban and rural users – perhaps not surprising given the virtual nature of the bank’s innovative approach. Once again the decision was taken that text messaging would be “too risky”, and thus Maumalat’s solution requires the user to download the application (made by a local vendor).

As of September 2009, **BPR-KS** had around 2,000 m-banking customers (1,000 registered for top-ups; 1,000 registered for transfers). Users were mostly upper- and middle-income subscribers despite this being a rural bank (“the poor don’t use m-banking because of SMS charges). In terms of a preference between SMS and STK systems the issue was quite simply one of cost followed by ease-of-use for the customer (“everything depends on cost... then ease of usage”). For BPR-KS, the big issue with m-banking outside of cost is the lack of a receipt. The big contrast here, particularly in terms of potentially ‘low-hanging fruit’ like bill payments and remittance is that EDC services give receipts.

**Bank Andara** is currently in the process of looking for an m-banking platform to complement the core banking system services that they are preparing to offer to BPRs and BMTs in Java and Bali. (This will be as part of Andara Link.) The aim is to provide ‘one-stop solutions’ to banks working with Andara who are looking for the most appropriate platform. The initial target is focused upon facilitating remittance services, which Andara believes to be a big market. Because Andara is too small in capital to successfully qualify for a forex licence for international remittance, they are encouraging BPRs to partner with commercial banks for settlement, with Andara focusing upon the domestic remittance segment.

According to **Perbarindo** the current demand within rural banks for m-banking services encompasses:

- transactions between account holders
- transactions between different bank’s different account holders
- remittance
- buying things with micro-amounts.

Currently, putting money into savings accounts is not so attractive for many people because of limitations to access. Convenience in access would prompt more people to have accounts and would prompt greater amounts of savings from those with accounts, as they would be able to access money in a more immediate fashion. This in turn would improve the scale of position of the BPR, which in turn would bring down their costs, which in turn would attract more customers. Perbarindo strongly believes that m-banking has a positive role to play in fostering this virtuous cycle.

From the BPRs perspective, m-banking would also help to increase the loyalty of customers (i.e., increase their competitiveness with commercial banks.) Currently, “many customers will get their loans from a BPR, but they will do most of their transactions with a commercial bank”.

**PT POS** see the prospects for remittance as a good entry point to broader based m-banking service take-up. PT POS already claims to be the No.1 partner for Western Union in Asia Pacific, transacting some USD3 billion. POS receives USD2.5-3 per transaction for remittance. Beyond remittance,

<sup>33</sup>The major barrier is the cost of the savings product – an IDR500,000 minimum account balance. Anything below this level carries a penalty.

they see the prospects for mobile payments to be utility bill payments and micro-finance services (small credit), but are not clear on the level of demand nor the means driving such a business. Moreover they are currently looking at purchasing and deploying EDC machines, as they believe that customers require (demand) a tangible record of their transactions.

In terms of reach and demand, it is also worth noting that one EDC vendor has deployed more than 11,000 Electronic Data Capture/ Point-Of-Sale (EDC/POS) terminals across Indonesia. These units cost USD1500 per unit (for 1000+ units – high end (biometric) models); USD700-1000 per unit for 1000+ units for lower end models.<sup>34</sup> The banks currently using these systems are conducting up to 40 transactions per day.

### 2.2.3 UNBANKED

Commercial banks dominate the Indonesian financial sector but they serve a relatively small proportion of households and their financial services are heavily skewed towards urban areas. According to the World Bank, about 40 percent of the unbanked poor are creditworthy by MFI standards. Of the unbanked poor who seek credit, about half are deemed to be too small to be commercially viable even for BRI, given that bank's current commercial standards.

Thus, while dominant, Indonesia's commercial banks are "opportunistic, profit-oriented institutions that will move aggressively into new, commercially viable markets. They have quite a wide regional reach, but they do not reach deeply into the poorer strata of Indonesian society. Virtually all of them seem to aim at the more lucrative middle income and above segments".<sup>35</sup>

Thus, **one major commercial bank** sees "little measurable demand at this point in time", for services to the unbanked, but their savings account business is focused on extending services to the unbanked (more to aggregate funds than to gain network effects at this stage). They have established a microfinance unit to leverage off collaboration with local banks. The major barrier they foresee is the monthly administration fee, with the lowest being IDR9,500, which is greater than the interest received on deposits.<sup>36</sup>

From the bank's perspective there are three conditions necessary for the unbanked to be brought in: (i) transaction costs and administration fees need to be lower, (ii) the issue of cash-in<sup>37</sup>; (iii) lower interest rates on loans. All need to be addressed before the unbanked segment can successfully be addressed – but this leaves the question as to the actual level of demand for the services offered by the bank.

**Bank Sinar Harapan**, Bank Mandiri's local subsidiary focused on the microfinance business estimates that 50 percent of the population of Bali is 'unbanked'. (This estimate appears to include the passive or 'under-banked' population, and not solely the unbanked.) The main reasons for people to remain unbanked: (i) too little money, (ii) a lack of trust of banks.

For **BPR-KS** the focus of their EDC and Internet banking services is already on the underbanked and unbanked. They are also looking to extend bill payment and top-up services to the unbanked, as well as to underbanked (or underserved) merchants. From BPR-KS's perspective the demand is certainly there – to the extent that it is hard for them to keep up with servicing it.

*This would seem to point to a strong gap in both the perceptions of the commercial banks vs. the local banks, and the service portfolios being offered by the commercial banks.*

<sup>34</sup>Rental costs are IDR20,000 per month per unit (min. 500 units); battery life for the terminals is 300 transactions/ up to a week.

<sup>35</sup>World Bank 2009

<sup>36</sup>BI is forcing the large commercial banks to offer savings accounts with no administration fee.

<sup>37</sup>The bank is planning the introduction of more machines, but business comes mostly from the payroll business.



# 3. Working Hypotheses

Out of the background research and on-the-ground interviews, a set of ‘working hypotheses’ was distilled for testing within focus group discussions (and for follow up interviews). These hypotheses are summarised in this chapter, and their application to the focus group discussions is detailed in the following chapter.

## 3.1 Evolutionary rather than transformational mobile banking

Mobile banking is likely to be an evolutionary – or iterative – success story, rather than one that enables a ‘leapfrogging’ of delivery – and take-up – of services straight to the unbanked.

This hypothesis has a number of aspects to it:

- The initial demand for mobile banking services – certainly demand that is identifiable and quantifiable by service providers – appears most likely to be from those who are underbanked or underserved rather than the segment who are clearly unbanked. There appears to be relatively clear segments of the population who have accounts, or have had accounts, which they don’t otherwise get to utilise because of constraints such as time, distance or immediacy of funds. In other words, the obvious initial targets are those for whom access is an immediate impediment.
- The bottom of the pyramid (BOP) concept, which drives much of the conceptualisation of delivering services to the unbanked, may need to be revised for the Indonesian mobile banking/ payments markets. A more appropriate representation may be that of a diamond – comparatively

few people at the apex (Category A) and the bottom (Category E) of the structure, but with a comparatively fat middle layer (Category C – the majority population who are not wealthy, but are working (or living in working households) with spendable income), and substantive segments either side (the wealthier Category B’s and borderline Category D’s). By focusing on the *underbanked* (Category C) a network path is opened up to begin to tap into Category D (underbanked and some of the unbanked), and perhaps influence some of the Category B’s (through convenience/ social networks).

A further issue here is that trust comes as much from other people (networks) as it does from institutions. Neighbours using services provide an incentive as well as a degree of assurance.

## 3.2 The need for market segmentation

A corollary of 3.1 is that *specific* services likely need to be targeted at specific demographics, specific market segments or specific locations, rather than attempting to foster mass delivery, at least in the first instance.

This is not to say that there won’t be significant overlap in demand across such market segments over time. However specific products – e.g., remittance, funds transfer, and bill payment – may will likely enjoy faster uptake by specific groups in specific areas.

In this regard, it is also important to recognize that there are different m-banking/m-payment *products*, and that different consumer groups are interested in different products: for

example, SMS-based vs. STK- (or menu-) driven products. Remittance and bill payment services for example, if targeted at lower income demographics, will likely need to be SMS-based services, both because of the types of (older) phones in use across the majority of these users, and because they are going to be uncomfortable having to learn new behaviours. For successful adoption, service providers need to tap into existing needs and behaviour patterns – and these will differ across the market.

On this point, remittance via mobile payment services would appear to be able to be delivered very cost-competitively with existing market offerings if done via SMS and combined with either an account of some sort or a cash-out facility. It would also be far more convenient than current market offerings and would align closely with existing behavioural patterns (i.e., sending a communication via SMS when a remittance payment is made).<sup>38</sup>

### 3.3 The need for product alignment (supply meeting demand)

Many of the key players in the market, particularly on the commercial banking side, apparently remain unconvinced of substantive (revenue-producing) demand for m-banking services to the un- and under-banked. Part of this can be attributed to their competitive commercial focus on the urban growth markets in Indonesia. However, part of the reason also appears due to a disconnection between existing financial products and the products that lower income groups demand for.

In other words, the banks (and the MNOs) have *not targeted* the lower income tiers of the market for m-banking services because their business models do not enable them to do so, and that in turn results from the products that they are offering not being seen to be of value.

### 3.4 The cost of banking services remains prohibitive

A subset of 3.3 is that cost, specifically, remains a major inhibitor to take up, and may need to be addressed very differently for the underbanked and unbanked than it is for the banks' existing customer bases.

One of the reasons that mobile telephony has grown so rapidly in recent years is that it is an important, valued, service that has been made extremely affordable through price competition.<sup>39</sup> Because the MNOs believe in the network benefits of large subscriber bases they are currently in subscriber acquisition mode and that means cutting prices to attract, and hopefully maintain, new subscribers. The commercial banks in Indonesia have no such driver and are not looking at the network benefits of large subscriber bases across the country, but instead are focused on the wealthier segments of the urban markets and, as a result, keep their administrative and service fees high.

Interestingly, BCA broke an earlier mold when it decided to run a proprietary ATM network out across much of the country at significant cost. This move proved so successful that the other banks were forced into competing consortia of ATM networks so as to maintain and grow their existing customer accounts. It does not appear too far fetched to believe that a similar dynamic could well take place with simple mobile banking services and that a significant first mover advantage could accrue to the bank looking to develop scalable network benefits.

### 3.5 Agent networks remain a crucial precondition for leveraging the strengths of the mobile network

The attraction of m-banking is that it ties together the access that mobile telephony networks provide with existing banking and financial services. Currently however, it is not clear that

<sup>38</sup>Moreover, MNOs can make money from e-money P2P remittances (domestic and international) – and the Indonesia's recent e-money regulations allow this.

<sup>39</sup>Some would say that price competition in the mobile market has gone too far.

either banks or MNOs can use agents to deliver financial services.<sup>40</sup>

And in this regard, it is not apparent that enough thought has yet been given to developing the agent networks necessary for cash in/ cash out, and thus being able to leverage the reach that mobile networks may provide. In addition to cash in/ cash out, the issues of registration procedures (KYC), money handling, and security (e.g., AML) will need to have a viable framework developed.

*Notably, these restrictions on mobile banking services do not automatically pertain to mobile payments services.*

### 3.6 The critical importance of *trust and ease of use*

Even where products are matched to market demand and market segments, the greatest inhibitor to uptake may simply be that of trust. Anecdotally, trust and ease of use of service come back time and again as of critical importance.

For example, how do users feel about providing their money (cash-in) to MNOs and MNO agents? Short of physical transfer, do users have experience in over-the-air (OTA) top ups (i.e., nascent e-money), and if so, do they see a big step from OTA top-ups to m-transfers and other forms of mobile banking?

These are all issues that we sought to answer through focus group discussions as detailed in the following chapter.

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<sup>40</sup>CGAP notes that there is no provision in the Banking Act that would prohibit the use of agents for distributing rather than collection funds. They also point out that even “though banks cannot use agents to deliver financial services, BI has created a quasi-tiered system of branches for both commercial and rural banks that seems to recognize the need for leaner and possibly mobile channels to reach remote rural populations.”

## 4. Focus Group Discussions

A total of 16 focus group discussions were conducted in eight locations, with areas selected from various provinces throughout Indonesia. Half of these were urban areas and half were rural. A deliberate attempt was made to return to locations used in the World Bank Access to Finance survey so as to be able to build on earlier results and analysis, with the only exception being Pontianak in West Kalimantan.

Focus group discussion (FGD) locations:

- i. Denpasar (Bali, urban)
- ii. Banda Aceh (Aceh, urban, WB survey).
- iii. Manado (North Sulawesi, urban, WB survey).
- iv. Pontianak (West Kalimantan, urban).
- v. Sukabumi (West Java, rural, WB survey)
- vi. Wonosobo (Central Java, rural, WB survey)
- vii. Malang (East Java, rural, WB survey)
- viii. Lombok Timur (West Nusa Tenggara, rural, WB survey)

FGDs were conducted with the assistance of the Regional Economic Development Institute (REDI), which had earlier helped to conduct the World Bank Access to Finance survey, and which assisted in recruiting some of the participants of this earlier survey for the purposes of this study.

The main pre-requisite for participants was ownership of a mobile phone, to eliminate issues of mobile phone adoption, which is outside the scope of the study, and also to study the attitudes of the participants relating to mobiles and mobile operators. The FGDs were therefore based upon quota sampling.

In each location two groups were identified:

- a. an “unbanked/under-banked” group selected from people who either did not have bank accounts, or had accounts which were relatively under-utilized;<sup>41</sup>
- b. a “banked” group consisting of people who actively used bank accounts.

A discussion group size of 10-12 was targeted, with most of the groups having 12 participants, the exception being the Malang and Bali unbanked groups, which had 9 and 10 participants respectively, while the Manado unbanked group and Malang banked group each had 13 participants.

FGDs were trialled in late-July and early August and then run in early- and mid- September 2009. The purpose in running these discussion groups was to gain feedback on each of the key issues and to test working hypotheses that had emerged during the first phase of literature research and interviews. This included soliciting feedback on areas such as ownership and usage of mobile phones, access to – and barriers to access to – banking services, the supply of banking services, and on gaps between the supply of banking services and the demand for such services among the un- and under-banked. We also wished to test the understanding of, experiences with, and predisposition towards, the use of m-banking and m-payments.

FGDs were run for 2-4 hours each in a semi-structured interview format whereby a facilitator introduced each section, outlined the questions, explained the issue(s) as necessary, and then encouraged discussion around the topic to solicit the group’s views. In so doing we were looking to achieve two objectives:

<sup>41</sup>Under-utilized in the sense that the account was infrequently used, deposits were of short duration, and/or of small amounts.

*First, a statistical basis for comparison. While the groups were neither randomly selected nor large enough to be statistically significant and the structure was not a survey, by taking each group through the same topics, organized around the same questions, we were looking to develop broad areas of comparisons to draw conclusions for further follow up;*

*Second, a set of rich of anecdotal information that provided insights into behavioural patterns, including contradictory behaviour and perceptions of the services under discussion, rather than simply a set of statistical results.*

Each section of the discussion built on the previous section. The first set of questions was based around mobile phone ownership and usage, as well as the participants experiences with network operators and the amount that they tended to spend on monthly

mobile bills. Section 2 of the discussion looked at how they topped those accounts up and what other mobile services they used including their existing familiarity with mobile wallet and mobile payments services. The following section moved on to their access to and usage of banking services. In particular, who they banked with, if they did, and how convenient the various banking institutions were to both their location and their life. Having focused on issues of convenience, we concluded the section by asking if they could do their banking with a phone, would that encourage them to open, or further use, a bank account. This enabled us to transition to a focus upon mobile banking experiences and perceptions (Section 4). The final section, Section 5, then examined the practical drivers and inhibitors to m-banking adoption, including issues of trust. A snapshot of how the different locations responded to these issues overall is provided in Table 1.

**TABLE 4.1: FGD DISPOSITION TOWARDS M-BANKING ADOPTION, SCORED BY LOCATION**

		Mobile phone – ownership & usage		M-payment – experience & intention		Bank accounts – access by phone		M-banking – interest		Total
Bali	U	3	8	1	4	3	3	2	5	20
	B	5		3		0		3		
Banda Aceh	U	3	6	2	6	3	7	3	6	25
	B	3		4		4		3		
Lombok	U	5	8	4	6	5	10	3	6	30
	B	3		2		5		3		
Manado	U	2	5	3	6	2	3	5	9	23
	B	3		3		1		4		
Sukabumi	U	2	6	4	8	1	6	4	7	27
	B	4		4		5		3		
Wonosobo	U	2	4	5	10	4	9	3	7	30
	B	2		5		5		4		
Malang	U	4	9	3	8	4	8	3	8	33
	B	5		5		4		5		
Pontianak	U	3	6	3	7	5	8	3	6	27
	B	3		4		3		3		

Table 4.1 takes one of the key factors from each of the sections in the FGDs – mobile phone: numbers of phones and amount of usage; m-payments: experience and prevalence; bank accounts: expressed interest in doing banking via their phone; and m-banking: interest in adopting specific services – and assigns the responses from each of the locale’s banked and unbanked groups a comparative score out of 5. The end rankings are simply the cumulative tallies of those results.

This approach, while certainly not statistically sound, shows at a glance the differences in degrees of interest between localities, so that while the vast majority of participants showed strong interest in the prospect of paying their bills with their phone, those in Malang were very strongly predisposed to the use of m-banking overall, while those in Denpasar remained quite wary.

## 4.1 FGD Demographics

A total of 189 respondents, comprising 135 males (71.4%) and 54 females (28.6%) participated in the 16 focus group discussions (FGDs). Representation was similar throughout the groups, with only the Malang unbanked and Lombok banked groups consisting entirely of males (Table 4.2).

TABLE 4.2: FGD PARTICIPANTS BY GENDER

Location		Male	Female	Total
Denpasar	Unbanked	8	2	10
	Banked	8	4	12
Banda Aceh	Unbanked	8	4	12
	Banked	8	4	12
Manado	Unbanked	10	3	13
	Banked	7	5	12
Pontianak	Unbanked	7	5	12
	Banked	7	5	12
Sukabumi	Unbanked	10	2	12
	Banked	8	4	12
Wonosobo	Unbanked	7	5	12
	Banked	10	2	12
Malang	Unbanked	9	0	9
	Banked	8	5	13
Lombok Timur	Unbanked	8	4	12
	Banked	12	0	12
		135	54	189

## INCOME LEVELS

Income levels of participants were compared against minimum wage levels (as stipulated by the local government in each area),<sup>42</sup> and then classified as **low** (below minimum wage), **medium** (above minimum) or **high** (way above minimum).

For the FGDs as a whole, 60.1 percent of participants fell into the low-income

category, with 29.8 percent in the medium income and 10.1 percent in the high income groups. When segmented by banked or unbanked group, differences in income levels become more apparent (Table 4.3).

TABLE 4.3: INCOME SEGMENTATION BY FGD, BANKED VS. UNBANKED

Income Levels:	Low	Med	High
Unbanked	80.4%	19.6%	0
Banked	40.6%	39.6.2%	19.8%

In four locations the unbanked group was made up entirely of low-income participants. In other locations the number of middle-income earners was higher in the banked group, with the exception of Banda Aceh, where the reverse was true. The high-income participants in the study came from three banked groups: Bali, Malang, and Pontianak (Table 4.4).

<sup>42</sup>This ranged from IDR630,000 in Sukabumi to IDR1,000,000 in Banda Aceh.

TABLE 4.4: INCOME LEVEL BY LOCATION

Unbanked				Banked			
Location	Low	Med	High	Location	Low	Med	High
Bali	10	0	0	Bali	0	2	10
B.Aceh	6	6	0	B.Aceh	8	4	0
Lombok	12	0	0	Lombok	4	8	0
Manado	13	0	0	Manado	5	5	0
Sukabumi	12	0	0	Sukabumi	7	5	0
Wonosobo	9	3	0	Wonosobo	5	7	0
Malang	2	7	0	Malang	0	5	9
Pontianak	10	2	0	Pontianak	10	2	0

A range of occupations were encompassed in the various groups: farmers, teachers and lecturers, small business owners, entrepreneurs, construction workers, social workers, bank employee, street vendors, vegetable traders and grocery staff, taxi and ojek (motorcycle taxi) drivers, state employees, university students, housewives, and even a handful of people making their living from reselling mobile airtime (see below).

## 4.2 Mobiles & SIMs

The first set of questions focused on participants use of mobile phones and their basic interactions with the operators: e.g., how many phones they use (and why), why they chose the operator they were with and if they had changed operators, how frequently they topped up their mobile account. We also used these questions to get a sense of how important the mobile phone *is* to the average Indonesian today and what it is being used for by encouraging discussions on whether they were happy to change mobile phone numbers and what types of handsets they had acquired. This led to discussions in the following section on whether they used their handset for music downloads, game playing and other such services, as well as mobile payment and mobile wallet services.

### MOBILE PHONES

Overall, 77 percent of participants had only one mobile phone, while only 2.6 percent had more than two phones. Of those using two or more phones, less than a third were un- or under-banked. For the banked groups, it was still the case that well over two-thirds of all participants – 69.1 percent – had only one phone, while only 5.1 percent had more than two phones.

As regards SIM card use, there was an average 1.26 SIMs per participant – even lower than we had anticipated. Furthermore, there were only two groups (out of 16) where people with two or more SIMs outnumbered those with one SIM: the Bali and Malang banked groups, also the two groups with high income participants. This seems to bear out our hypothesis that multiple SIM use per subscriber falls away outside of the key cities (such as Jakarta and Denpasar), and if we make the assumption that a person's mobile phone *number* becomes an important part of their identity (as seems to be the case from both interviews and the FGDs), then these results suggest that the mobile phone does indeed provide a strong potential channel for rapidly broadening access out across Indonesia. And, as became apparent through interviews, if statistical anomalies such as greater Jakarta and Denpasar are removed, the penetration of the market quickly falls back to a more measurable level (i.e., closer to 1:1 – see Section 5).

Single SIM card holders tend to be wary of the cost of SIM usage, as they think “more SIM cards means more spending”. Participants who had more than one SIM card (i.e., more than one phone) tended to use one for work and the other for personal use. Other reasons to have more than one SIM card are the *cost* and the “network effect” – i.e., participants chose the network with cheaper rates, and also chose the network their friends or family use, *thereby reducing their overall call costs*, a message that the mobile industry appears to be not as successfully propagating out beyond the major cities.

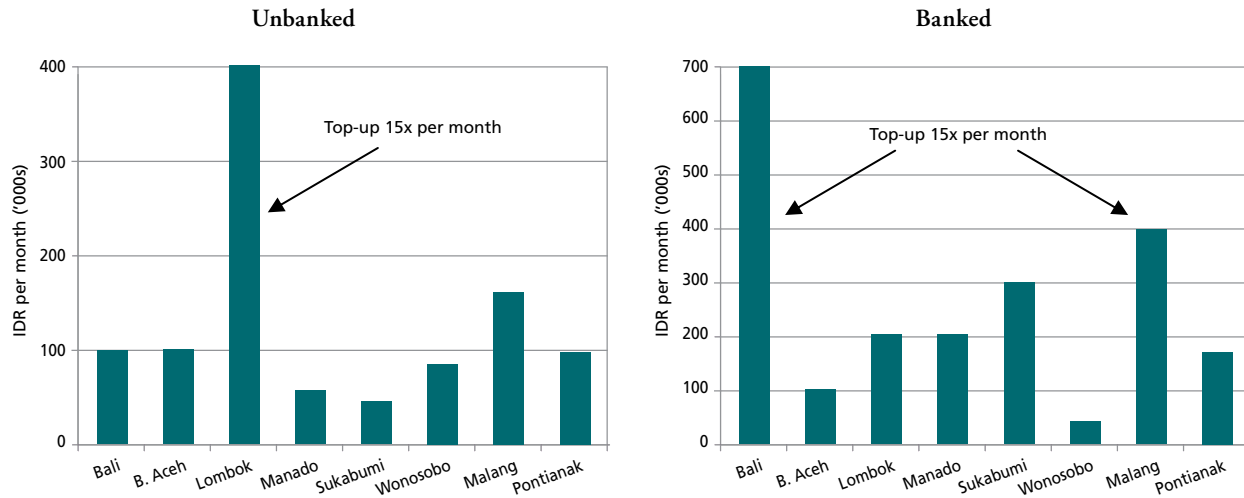
**MOBILE SPEND**

The average frequency of top-up is about seven times a month – there are participants from Lombok who even top up once every day – but if we remove the outliers the average drops to 3.4. Somewhat more interestingly are the amounts being spent which range from IDR10,000 through to IDR750,000 per month, with the average top-up being IDR30,000 per month on the low end, and almost IDR200,000 per month on the high end. When separated out by unbanked and banked (Figure 4.1) this range becomes, respectively, IDR29,000 – 128,000 per month (unbanked) and IDR31,000 – IDR269,000 per month, demonstrating the relatively stronger spending power at the top end, but also suggesting a substantial base of top-up at the low end.

Interestingly, a number of correlations also begin to stand out. Firstly, the outliers in top-up units (IDR750,000 per month in the Bali banked group and IDR400,000 per month in the Malang banked group) match directly with the two groups who had more multiple phone users than single phone users. Similarly, the outliers in top-up times, Malang – both unbanked (15 times per month) and banked (30 times per month!) – represents the other outlier in top-up amounts and is the one group where the unbanked *spent more* on monthly phone bills than the banked group.

There is perhaps nothing profound in finding that greater phone access/ use leads to higher consumption. However, these groups show neither a greater use of bank accounts *nor* a particular predisposition to mobile-banking than other locations. This seems to suggest that these segments *are* being captured by the MNOs and not by the banks, and that there is therefore very likely savings power and potential demand for financial inclusion which is not being addressed by the banks but is already exploited by the telcos.

**FIGURE 4.1: MOBILE MONTHLY TOP-UP AMOUNTS BY LOCATION**





## NUMBERS, OPERATORS AND CHANGE

More than 90 percent of participants consider their mobile number to be important to them, as their number is known by friends, families, and other important contacts. (A participant from Wonosobo, for example, using the same number since 1998: “No matter what, I will keep that number”). *Only nine percent of participants said ‘no’ when asked whether changing mobile numbers mattered to them.*<sup>43</sup>

About 25 percent of participants have changed mobile operators, mainly due to the network quality and price competition. In some areas the dominance of a particular network – for example, where one network is said to have the strongest signal in the area – appeared to be the decisive factor. There was quite some regional variation on this point, including carrier strengths in some areas, and bad experiences due to immature networks in others. Discussions seemed to suggest that network quality and coverage were initially the compelling features in a location, but once competition has properly emerged, price sensitivity increases and tends to take over. It is therefore in a carrier’s interest to capture subscribers early, as the network effect (friends and family) becomes very important. From a mobile banking perspective two questions become apparent:

- (i) First, will the network dynamic emerge with mobile banking users? In which case first mover advantage could be *very* important;
- (ii) Second, does mobile banking provide a service by which carriers could capture or retain customers?

The number of operators seems to match the number of phones closely. About 19 percent of participants use two mobile operators, with four percent using three operators at the same time (The percentage of people using more than two operators is close to, but less than, the percentage of people who have changed operators, suggesting they are either more price sensitive on average or may be driven by business needs). The reasons are about the same as using more than one SIM cards – cost and quality of service. Participants choose operators who provide better offers in terms of tariff and network coverage, as well as because of the “network effect”.

<sup>43</sup>Apart from reasons of being familiar with the number, poor experiences with changing numbers (eg. strange calls) were cited. For example, in a Manado FGD one participant had received an SMS from an unknown recipient, “hello darling, let’s meet”, which he believed was unlikely to do his marriage much good. While perhaps apocryphal, the story points to the importance of security measures for any deployment of mobile banking – once numbers are deactivated and repooled, the possibility emerges of a bank account tied to a mobile phone number being made available to a different customer.

When testing the price importance in choosing mobile operators, there appears to be higher price sensitivity in the unbanked groups than the banked groups. Banked groups tend to put quality of services as a priority. Banked groups in four locations displayed lower price sensitivity: Pontianak, Malang, Wonosobo and Manado. Interestingly, the banked group in Banda Aceh associated “low tariff with poor services quality”.

## 4.3 Mobile Payments

This section of the discussion was designed to uncover attitudes of participants to mobile payments and their experiences, if any. Mobile payments is far broader in concept than m-banking, encompassing issues of mobile wallets (stored value) and mobile transfers, and excluding the need to be directly linked to a bank account, or even in many cases to be dealing with physical legal tender. As such, it was expected that attitudes may be more open to m-payments than to m-banking.

### CURRENT USE

For almost all participants the closest experience to an e-money/m-wallet account is the use of over-the-air (OTA) top-up facilities. In several cases participants said they did not have any knowledge of e-money accounts, *but almost all turned out to be using OTA top-ups*, with the common reasons being: (i) convenience; (ii) cost savings; (iii) choice and ease of use.

Significantly, *three-quarters of the focus groups had at least one OTA top-up reseller amongst them*. Of the 16 focus groups, 9 had at least one reseller earning money from mobile transfers of credit (Table 4.5). This is important as it indicates not only a significant level of demand for such services, but pre-existing (and developing) usage of e-money services – even when the user does not realise that they are working with e-money. As described by participants, reselling involves the depositing of money into an account with a dealer, after which they are allowed to sell top-up value until the deposit is depleted. Besides reselling top-up for commercial gain, there was broad usage among participants in transferring air-time to friends or family.

TABLE 4.5: CURRENT USAGE OF M-WALLET SERVICES

Location	Airtime Transfer	Games/ Ringtone	OTA Reselling	OTA
<i>Unbanked</i>				
Bali		X		
Banda Aceh	X			all
Lombok Timur		X	x	all
Manado			x	all
Sukabumi		X	x	all
Wonosobo	X	X	x	all
Malang	X	X		all
Pontianak	X	X		all
<i>Banked</i>				
Bali	X	X		all
Banda Aceh	X		x	all
Lombok Timur		X		all
Manado	X	X		all
Sukabumi		X	x	all
Wonosobo	X	X	x	all
Malang	X	X	x	all
Pontianak	X		x	all

*x = few individuals used; X = many individuals used*

By contrast, the number of people *paying for* and downloading ringtones, games, and other such value added services were surprisingly few, with the majority claiming to have done it just to try the experience. This is at odds with much of the information coming back from interviews with the MNOs and third party providers prior to the FGDs, and may have something to do with admitting to services seen to be frivolous and, in some cases, not completely legitimate, particularly when these issues were clearly not the central focus of the discussions. Nevertheless, the responses were fairly consistent across the groups and should give pause to both the MNOs expecting broad take-up of such services (and increasing ARPUs), and to the banks and MNOs wishing to promote menu-based m-banking services rather than SMS-based services: *one aspect of this feedback is quite clearly, to achieve take-up at lower strata of society, keep the service simple, intuitive, and directly relevant to the user's needs.* In the unbanked group from Manado, participants went as far as to say that downloading music and games was “a waste of money”. The one exception was Lombok

Timor, where three people in the banked group and four in the unbanked group had downloaded ringtones, and three among the unbanked had downloaded games.

### INTEREST LEVEL

Overall there is certainly a strong level of apparent interest in m-payments and m-wallet solutions, with take-up being constrained by issues such as a lack of trust in MNOs handling the customer's money, the acceptance of m-payments by merchants, and a lack of information or understanding of the specifics of the services.

Besides OTA top-ups (which are already being used), bill payments, in particular utility bill payments, were of very strong and widespread interest, coming up as the second most popular m-payment service in almost all focus groups (13 groups), with convenience as the main reason (Table 4.6).

TABLE 4.6: INTEREST IN USING M-PAYMENTS SERVICES

Location	OTA	Cash-in services	Transfers	Bill payment
<i>Unbanked</i>				
Bali	X	X	x	X
Banda Aceh	X	X		
Lombok Timur	X	X	x	X
Manado	X		x	X
Sukabumi	X	X	x	X
Wonosobo	X	X		X
Malang	X	X	x	X
Pontianak		X	x	X
<i>Banked</i>				
Bali	X		x	X
Banda Aceh	X			X
Lombok Timur	X		x	X
Manado	X	X	x	X
Sukabumi	X		x	X
Wonosobo		X	x	
Malang	X	X		
Pontianak	X			X

*x* = few individuals within group expressed interest;

*X* = many individuals within group expressed interest

There was also interest in remittance and mobile transfers (11 groups), and for payments when shopping (7 groups). For example, both Lombok Timor groups welcomed some form of money transfer services as they would save time and cost compared to using bank transfers. One point that the tabular representation illustrates is the particularly strong expression of interest from the unbanked groups even in comparison to both those from the banked groups and those who are already using certain services. This again emphasizes the point about convenience – for many of the unbanked participants, the convenience being offered is measurably greater than for the banked participants, since in many cases it is their only potential form of alternative access.

There are some doubts however, regarding cash-in, with some participants (e.g., the Manado banked group, and the Bali unbanked group) preferring to deposit their money with a bank rather than mobile operator, saying they would only be interested in using the service if it were secure and if there was a representative to help in case of problems. In another instance (the Manado unbanked group) participants were specifically worried that their money would be lost.

Other doubts raised include cost (with respect to remittance/ transfers and bill payment services) and also a general lack of knowledge about how some of the services would work.

#### 4.4 Bank Accounts

This part of the discussion was the one area that became quite distinct for the banked and unbanked groups, as it separated out much of the discussion based on whether the participants had an account or not. For the banked groups we were looking to see who they predominantly banked with, i.e., a commercial bank or another type of institution. One of the key points to come out of the existing literature, and one that was reinforced in interviews with those involved with the un-banked and under-banked (e.g., BPR-KS, Perbarindo, MGN) is that many of the underbanked *don't want to conduct their savings with anyone but the commercial banks*. For example, Perbarindo remarked, "...many customers will get their loans from a BPR, but they will do most of their transactions with a commercial bank".<sup>44</sup> In other words, they will take out loans (or conduct specific transactions) with the more local institutions, but will "do their banking" with the commercial bank.

For the unbanked we wanted to get a sense of why they didn't have accounts and what could induce them to want an account. This is an important question because in *offering* mobile banking services, the provider will need to know what issue they are addressing. It may not be enough to simply build the service and expect that the users will come; to induce take-up the service provider may need to be addressing a specific need. Within the literature there is a lot of confusion around this point:

- (i) If access to banking services is increased, will that in itself induce people to take up bank accounts? The World Bank found that, relatively speaking, the Indonesian population considers banks to already be "very convenient."
- (ii) Is the issue therefore one of lack of money? If people genuinely have no surplus income it won't matter what inducements they are offered, they simply do not have the capacity to save.

<sup>44</sup>It should be noted that in the same context, Perbarindo stated that: "From the BPR's perspective, m-banking would help increase the loyalty of customers – i.e., increase their competitiveness with commercial banks." From Perbarindo's perspective: "Currently, putting money into savings accounts is not so attractive for many people because of limitations to access. Convenience in access would prompt more people to have accounts and would prompt greater amounts of savings from those with accounts, as they would be able to access money in a more immediate fashion. This in turn would "improve the scale of position" of the BPR, which in turn would bring down their costs, which in turn would attract more customers."

(iii) However, if that same point – a lack of *surplus* income – is really one of requiring more immediate access to cash or capital – i.e., because of business requirements or household finances the person believes that they need to have immediate *access* to their money and not have to schedule time on the next working day (or next week) to get into town, stand in line, and get their money – would they then *want* the benefits and security that comes with a bank account?

(iv) Or is the issue a reflection of an existing banking business model that does not work for 'rural' Indonesians? I.e., the administrative charges that the bank believes it needs to leverage on each customer are simply too high for a bank account to be attractive to most Indonesians? If that is the case, and technology offers a way for the business model to be revisited – i.e., mobile banking lowers access costs and these savings can be passed on to the customer in the form of reduced administration charges – will this result in greater savings?<sup>45</sup>

In this regard then, mapping out current bank participation of the members of our focus groups is quite telling. Table 4.7 includes participation from the banked groups and those who were part of the unbanked groups but had an account because they were considered to be 'under-banked'. For the banked groups, every one of them has at least one account – and often more – in commercial banks, with some also having accounts in other institutions, e.g., cooperatives (2 from Bali, 1 from Sukabumi, 1 from Malang), Lembaga Pengkreditan Desa (1 from Bali), and micro credit or insurance agencies (1 from Wonosobo).<sup>46</sup> From the unbanked groups, 16 participants had a bank account with a commercial bank (7 from Bali, 8 from Lombok Timur, 1 from Pontianak), with most not using these accounts due to a lack of funds, and therefore considered 'under-banked'.

<sup>45</sup>The World Bank found that under the current situation, administration charges are in fact rather price inelastic, indicating that it was not in the banks' interest to lower fees. So we are talking about a wholesale reshaping of the existing business model and this may require the government to be more closely involved in pursuing what is also a social agenda of greater financial inclusion.

<sup>46</sup>In some cases (e.g., the Manado group) the BRI state-owned bank was preferred over commercial banks due to trust and good service experiences.

TABLE 4.7: NUMBERS OF BANK ACCOUNTS BY INSTITUTION.

	Bali	Banda Aceh	Lombok Timur	Manado	Sukabumi	Wonosobo	Malang	Pontianak
Commercial Bank	19	12	20	12	11	16	13	13
BPR						1		
Cooperative	4				2		4	
Commercial Association								
LPD	1							
Money Lender				1				
Islamic Bank					1	1	1	
Micro-credit						1		
Village credit							2	
Leasing company							1	

Even more striking than the overwhelming participation with commercial banks was the almost complete exclusion of BPRs. In some cases, there were specific reasons. In Lombok Timur, for example, participants chose commercial banks because the alternatives had restricted networks and no ATM support making access difficult and hence an account comparatively unattractive. But more broadly these specific circumstances, interest in BPR participation registered as extremely limited at best. Viewed through the lens of mobile banking, this obviously presents both a challenge and quite a strong opportunity. But it should challenge perceptions of BPRs offering an easy alternative channel.

## CONVENIENCE

So, how determining a factor is convenience? Participants were asked about the level of convenience in accessing bank branch services, ATMs and post offices, in terms of time, distance and cost (Table 4.8). As noted above, the World Bank found that bank branches and bank facilities are widely seen to be comparatively convenient in terms of distance, and within the parameters established by the World Bank study (e.g., within around 10km) those same conclusions were borne out here: most areas have facilities within a comparatively short distance.

Nevertheless, despite facilities being within 2-10km, participants from Lombok, Wonosobo and Sukabumi all raised the issue of distance as a problem and as a deterrent for having a bank account. And so while they are still seen to be *relatively* conveniently located, only one of 12 participants in the Sukabumi unbanked group had ever been to a bank. Additionally, the Lombok participants pointed out that while the location was relatively convenient, opening hours (and queuing) made the bank less so, and they would, where possible, conduct their banking via an ATM even though the average distance to an ATM was twice that of a bank branch. Interestingly, Manado participants were wary of using an ATM to conduct their banking believing that an “ATM will make [their] savings run out due to admin costs”.

In many cases the inconvenience factor was less to do with time and distance than with waiting times versus ‘always available’ services. (In Malang and Pontianak participants complained that bank opening hours were short. Elsewhere the complaints focused time *in* the bank, either queuing or dealing with tellers.) As a result, even when banks, ATMs and POS are in close proximity, there remains a sharp interest in mobile payments/ banking. In a few cases home visits take place and are generally preferred (Malang), but there was at least one case of security concerns (Manado: “are they genuine officials?”) The post office is generally not seen to be used for financial services; participants from the Wonosobo banked group, for example, emphasized that they were more comfortable conducting financial transactions at a bank than the post office.

TABLE 4.8: CONVENIENCE RANKINGS, BY LOCATION AND SERVICE

	Bali	Banda Aceh	Lombok Timur	Manado	Sukabumi	Wonosobo	Malang	Patianak
Bank branch	●	●	●	●		●	●	●
ATM	●	●	○	○	○		●	●
PT Pos	●	●	●		○	●	●	●

● = convenient access; ● = not very convenient; - = inconvenient access.

### UN-BANKED: WHY?

The main reasons cited for *not* having a bank account are a lack of funds or a lack of fixed income. For those with some savings, the high administration fees and difficulty in maintaining an adequate saving level (and not incurring bank penalties) are the most common complaints and key deterrents (e.g., in Manado, Sukabumi, Wonosobo, Malang), though they do consider the bank a safe place for keeping their money. Some remarked on the need to reinvest any extra money back into their business (e.g., Wonosobo) illustrating how the current bank model is not addressing their needs even when they are certainly bank worthy. On a side note, participants from Malang and Manado preferred to access loans from other sources, such as money lenders, village credit organisations, leasing companies or cooperatives, where they consider “the process is easier, easy on collateral, and [they] can get the cash quickly”.

Interestingly, incentives such as vouchers and lotteries only appealed to a minority of participants (e.g., Lombok, females from Manado, Pontianak). Incentives such as access to cheap loans or micro-loans, or the provision of better interest rates tended to resonate more strongly with business people and traders. (This included one Sukabumi participant who is an OTA reseller). Although, as already noted, many of these were conscious of ploughing their money directly back into their

business (Sukabumi, Wonosobo, Malang). At the individual level there remained a distinct preference for loans from family and friends (Malang, Pontianak).

Nevertheless, there is some consistent evidence that if they did have savings, and if the rate of interest was high enough, participants were attracted to the security of the bank; this is particularly the case in Wonosobo, where 10 out of 12 participants would save in bank if they had the money (although they continued to emphasize a preference for low administration fees from the bank). Gold is also a powerful alternative and easily resold, and was seen in a number of cases as an alternative to the banks (Wonosobo, Malang, Pontianak) – again pointing to the issue of tangible immediate access.

### FROM PHONES TO BANK ACCOUNTS

When asked whether m-banking services would be a key facilitating factor to opening a bank account – or increasing usage – there was strong and widespread interest (Table 4.9), although it needs to be borne in mind that this remains a hypothetical response. Notably, participants in *all* of the unbanked groups were interested in the services, suggesting that they could foresee the services to be “time and cost saving”, “flexible”, “faster” and “easier (for) payment”.

TABLE 4.9: WOULD M-BANKING ENCOURAGE ACCOUNT OPENING/ USE?

Location	Yes/ No	Issues
<i>Unbanked</i>		
Bali	Yes – all	Security concerns.
Banda Aceh	Yes – some	Convenience and curiosity. Concerns about charges.
Lombok Timur	Yes – all	Convenience.
Manado	Yes – some	Provides access. Limited need and concerns about charges
Sukabumi	(Maybe)	Limited income
Wonosobo	Yes – most	Convenience, particularly bill payment. Some info concerns.
Malang	Yes – most	Convenience.
Pontianak	Yes – all	Convenience.
<i>Banked</i>		
Bali	No – all	Lack of familiarity/ information. (Bank already offers.)
Banda Aceh	Yes – all	Convenience. Reputation of bank still important.
Lombok Timur	Yes – all	Convenience. Minimizes risk.
Manado	No – most	Existing bank services fine. <i>Trader keen on m-transfers.</i>
Sukabumi	Yes – all	Very enthusiastic to try.
Wonosobo	Yes – all	Very enthusiastic; convenience.
Malang	Yes – most	Convenience, although not urgent. <i>Two already using.</i>
Pontianak	Yes – most	Need to align with existing account.

Nevertheless there is a general lack of understanding of what the services can do, how they would work and what the charges may be, that causes hesitance among them. These worries included security issues (Bali unbanked group), a lack of familiarity with using such services (the Bali banked group, even though they were aware of the services). By contrast, interest from the Manado unbanked group was muted because they weren't sure that it would change their existing position of too little income and, as with many other participants, remained concerned about the possible bank charges on such a service.

It is telling that the expressions of interest were stronger from the unbanked groups than the banked groups, presumably reflecting the interest in an alternative access channel, where the current options were failing them. This then provides positive feedback for the promotion of mobile banking services as a means of broadening out the banked base of customers and extending access to the unbanked.

## 4.5 Mobile Banking

The mobile-banking questions were asked to solicit how frequently people with bank accounts would – or do – use mobile banking services; the kinds of m-banking services users would potentially be interested in embracing (whether they currently had a bank account or not); and to look at what kind of incentives (for example a free phone) may help to foster interest in the service.

### CURRENT MOBILE BANKING

As expected, current usage is low with only 6.1 percent of participants using m-banking services. Those users came from three locations: Bali, Malang and Pontianak. Current users engaged in a limited amount of account balance checking and money transfers.

Many of the participants were unaware that m-banking services were currently on offer. And in some cases, for example in both Pontianak and Bali, while they were aware of m-banking services generically, they had not been clear on how the services operated or how they stood to benefit, and this lack of information had deterred them from any interest in the service. One respondent from Banda Aceh had heard of the services being offered, but had also heard from a friend claiming to have had bad experiences with unexpectedly high service charges and so remained uninterested.

For those who were unaware or unknowledgeable of m-banking services, a majority showed significant interest in trying the services and exploring the benefits to be gained having listened to, and discussed, the explanations around balance checking, money transfers, cash-in and cash-out, payments and loans (Table 4.10). Interest in m-banking was prominent amongst the unbanked groups; they welcomed the potential for almost all services discussed, particularly utility bill payments, which appeared as convenient almost without exception to unbanked participants.

TABLE 4.10: INTEREST IN ADOPTING SPECIFIC M-BANKING SERVICES, BY LOCALITY

Location	Account Checking	Cash-in	Transactions/ Transfers	Pay Utility Bills	Apply for Loan
<i>Unbanked</i>					
Bali	X		X		
Banda Aceh	X		X	X	
Lombok Timur	X	X	X		
Manado	X	X	X	X	X
Sukabumi	X	X	X	X	
Wonosobo	X		X	X	
Malang		X	X	X	
Pontianak	X		X	X	
<i>Banked</i>					
Bali	X		X		
Banda Aceh	X		X	X	
Lombok Timur	X	X	X		
Manado	X		X	X	X
Sukabumi	X	X	X		
Wonosobo	X	X	X	X	
Malang	X	X	X	X	X
Pontianak	X	X	X		

*X = many individuals within group expressed interest*

Another significant finding was the savings in cost and time in terms of transportation to banks or post offices and queuing for payment, that participants foresee with mobile banking. Even where travelling time to a bank was not seen as inconvenient, or such inconvenience was an accepted part of a location, the prospect of instant access raised interest across all groups and the majority of participants.



## CASH IN/CASH OUT

Using m-banking for cash-in and cash-out, however, was one of the services that did not generate majority support from participants. For three groups – those from Banda Aceh, Bali, and Pontianak – a lack of trust of the MNOs, particularly in terms of handling money, was cited. In addition, cost concerns were an issue, even for those who were willing to use the service – they preferred not to have to incur charges when using m-banking for cash-in and cash-out, and in many cases assumed they would. This is a particularly interesting finding that deserves further attention, as very little connection was made with the widespread interest in OTA top-ups, and the fact that such channels have served to lower the end-user's charges.<sup>47</sup> The instinctive belief appears to be that a new technology will automatically be expensive (despite the prevalence of mobile phone usage), and/or that any new service associated with a bank will automatically incur a further charge.

While there was a minority in Manado, Lombok and Sukabumi who would consider using m-banking for loan applications, most of the unbanked respondents would still prefer to go to banks directly, as they doubted that loan procedures could be done via a phone channel.

When asked whether a free mobile phone would encourage them to open a bank account (so as to use a new m-banking service), there was surprisingly widespread scepticism, with questions about hidden fees, or the need or motivation to offer the free phone in the first place. Those who didn't directly express some doubts toward the motivation of the incentive – and this was a majority of participants – were willing to accept the offer as an inducement, although it didn't necessarily appear to translate into a causal inducement that they would take up an account. In other words, the response appeared to be that *if* they were already intending to try an m-banking service then they would be quite willing to accept the free gift, but the free gift was not a reason to take and use the service.

Respondents in Malang expressed concern in that they did not carry their phone with them all the time complicating the manner in which they would conduct banking. Acceptance of the offer appeared to be secondary to considerations on cost, security and quality of service, terms and conditions from banks and the ease of use of the m-banking service itself.

Indeed, the feedback was quite strongly along the lines of significant interest in these services as long fees are reasonable, the chance of failed transactions is low, there are no burdensome rules and regulations from the banks and related parties, and the services themselves are simple. (Respondents from Manado and Wonosobo suggested that having the free mobile phone pre-set for m-banking service functions so that they could easily begin using would certainly be an inducement.) For those who were not interested to take up the free phone offer, they were either the existing m-banking users who did not want to change to another bank or their current phone, or they thought there is no need for them to use m-banking services, indicating that it is likely not the key factor here.

In conclusion, the lack of information of m-banking services appears to be the main inhibiting issue. For users who are aware of m-banking services and understand the advantages made possible, cost and ease of use issues remain the predominant concerns regardless of income level and whether they are banked or unbanked. Put simply, they do not want to pay more and spend more time on transactions using m-banking – i.e., the issues which they struggle now when using or considering current bank services.

## 4.6 Transition Issues

Given all of the above – and there is a distinct level of interest in m-banking and m-payments services, and obvious issues around access, cost and convenience – what would it take to have participants actually move to taking up an m-banking service? This was the focus of the final section of questions. What would motivate participants to activate an m-banking account (and would they prefer to use m-banking or m-payments)? What would deter them from taking such a step? And what would help establish the necessary *trust* for services to gain traction beyond interest?

When asked what would motivate them to take up m-banking or m-payments, participants placed an emphasis on time savings, with time saved queuing appearing to be as important as travel time – participants from Bali, with a bank account, noted that they often spent more than an hour in travel and queuing time combined. In other words, despite broad recognition that bank branch access is often quite good, convenience appears to be a key driver for people to consider adopting m-banking services, including those who are otherwise not banked.

<sup>47</sup>Most electronic top-ups come with a certain period of free time, because it has been in the MNO's cost-cutting interests to move users over to OTA top-up, rather than scratch cards, which are extremely expensive to distribute and manage.

Cost savings in terms of travel were also widely mentioned. For example, unbanked participants from the Banda Aceh group often spent more than IDR10,000 to get to a bank or ATM. In the Sukabumi banked group, one participant noted: “We [would] not have to ride [a] public motorcycle to [get to] the bank!”

Participants who already had experience in m-banking or m-payments emphasised both ease-of-use and familiarity as key motivators (both for others to take up the service and for their own take up of further services). A Malang participant, for example, spoke of only needing to send an SMS to a number provided by the bank, with the bank requesting the user’s PIN to complete and then confirm the transaction. The familiarity and ease of use of SMS are hence the key advantages.

Notification of transactions was in fact a common requirement from participants as a feature that would be needed to build trust in the service. This was particularly true for participants who foresaw using the service for business purposes, as there would additionally be potential productivity gains with incoming payments and transfers known without the need to go to an ATM or bank.

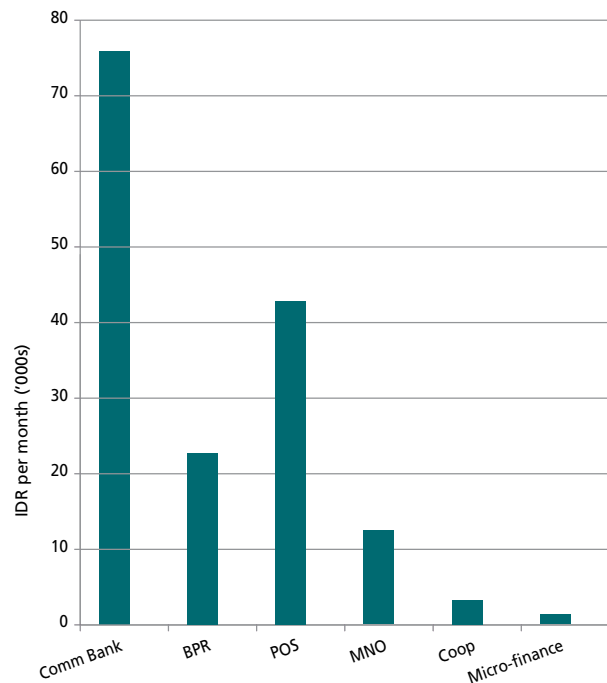
The unknown is a deterrent to m-banking and m-payment. Where participants were not sure how the procedure would work (e.g., in Sukabumi, Wonosobo, Malang) or whether their mobile phones were applicable (Manado), they remained sceptical. Procedural concerns such as keying in the wrong PIN or transaction failures led to worries about security, and extended their lack of trust in mobile network operators. Some participants also associated failed and fraudulent SMS experiences to the potential for failed transactions (e.g., in Bali, Banda Aceh, Manado, Malang and Pontianak). The costs involved are also a concern, which again comes down to a lack of information.

Other security concerns voiced included worries about account information being exposed, complications arising from too many parties being involved and account misuse in the case of losing a phone.

## TRUST

When it comes to the issue of trust, the mobile network operators are clearly not the preferred choice for handling money (Figure 4.2). Particular doubts were raised about the larger carriers although this may simply reflect the prevalence of those operators over the others. A number of participants across different groups stressed that they felt this way because they believed “the main business of the MNO is telecommunications, not financial services”.

FIGURE 4.2: TRUST RANKINGS FOR M-BANKING INSTITUTIONS<sup>48</sup>



Interestingly, participants from the Banda Aceh unbanked group trust mobile network operators more than banks, a result which seems to arise from having had more experience with the mobile carriers than the banks, particularly in terms of buying electronic top-ups which usually run well with few problems. Once again this seems to indicate an issue of familiarity and behavioural acceptance – customers will tend to trust what they have experience with and have been shown to work. This suggests that the hurdle to adoption may be lower than otherwise anticipated.

<sup>48</sup>Institutions were given a score based on where they were ranked by participants – ranked first they received 5 points, second – 4 points, and so on. If the group expressed active distrust for an institution it was given -1. Scores were then tallied to provide an overall ‘ranking’.

When it comes to banks, the large commercial banks, and particularly the state-backed banks (e.g. BRI) are especially trusted among participants (Table 4.11). Quite notably, the rural banks very often did not figure in the experience or perceptions of participants. Where they did, they tended to command a reasonable degree of trust, whereas the cooperatives did not. Taken together these results would throw doubt on the potential change agent role of these latter institutions, at least in

terms of mobile banking. The post office was trusted although not particularly highly, which appears to be at striking odds with the self-image that the post office has of itself as a most trusted organization in rural areas. Once again this might be related to participants' perception or their experiences in using post office services, and it should be noted that where participants collected remittances from post offices, or paid bills, they appeared to be satisfied with the results.

TABLE 4.11: PARTICIPANT PERCEPTIONS TO INSTITUTIONS, INTEREST IN ADOPTING M-BANKING

	Trust (Top 2) <sup>1, 2</sup>	Convenience (Access) <sup>3, 4</sup>	M-pay or m-banking
Bali	CB, POS [MNO]	B: ●; ATM: ●; POS: ●	M-banking
	CB, POS [MNO]	B: ●; ATM: ●; POS: ●	M-banking
Banda Aceh	MNO, CB	B: ●; ATM: ●; POS: ●	M-payments
	CB, POS	B: ●; ATM: ●; POS: ●	M-banking
Lombok Timur	CB, MNO	B: ○; ATM: -; POS: -	M-payments
	CB, POS	B: ○; ATM: ○; POS: ○	M-payments
Manado	CB, MNO [Coop]	B: ○; ATM: ●; POS: -	M-banking
	CB, POS [Coop, MNO]	B: ○; ATM: -; POS: -	M-banking
Sukabumi	CB, POS [MNO]	B: -; ATM: -; POS: -	M-banking
	CB, BPR [MNO]	B: -; ATM: ○; POS: ○	M-banking
Wonosobo	CB, Micro-finance [MNO]	B: -; ATM: -; POS: ●	M-banking
	CB, BPR [MNO]	B: ●; ATM: -; POS: -	M-banking
Malang	CB, MNO	B: ●; ATM: ●; POS: ●	M-banking
	CB, BPR	B: ●; ATM: ●; POS: ●	M-banking
Pontianak	CB, POS [MNO]	B: ○; ATM: ●; POS: ○	Both
	CB, MNO	B: ●; ATM: ●; POS: ○	M-banking

<sup>1</sup> CB = Commercial Bank; POS = post office; MNO = mobile operator; Coop = cooperative;

<sup>2</sup> [in brackets] = expressed distrust;

<sup>3</sup> B = Bank branch;

<sup>4</sup> ● = convenient access; ○ = not very convenient; - = inconvenient access.

### M-BANKING VS. M-PAYMENTS?

When participants were asked whether they would prefer to try m-payments before m-banking, most chose m-banking over m-payment (Table 11). (This despite the prevalence of OTA top-ups and reselling taking place!) Apparently, because m-banking involves banks whom they trust more with money, this led to a perceived preference for m-banking over m-payments. Another issue was that participants, particularly those with bank accounts, could see channels for immediate feedback to when problems occur in the case of banks. The fact that most participants believed that the state guaranteed the savings that they had in a bank also contributed.

Not unexpectedly, participants who preferred m-payments tended to have had experience with certain services such as transfers, remittances, and downloads (particularly the case in Bali and Lombok). Somewhat surprisingly only 3.7 percent of participants had had any experience in remittance, a remarkably

low number given the demographics. Where participants had not encountered problems in those services, they assumed that further m-payments would likely be as simple and easy. For those who were unbanked and less interested in having a bank account, m-payment was the only option.

### PROOF OF TRANSACTION

Print receipts seem to be the popular choice, as participants preferred in tangible proofs of transaction. Some were willing to accept SMS as receipts, judging from their top-up and remittance experience (Sukabumi unbanked group, Wonosobo banked group, Pontianak banked group). Although support for printed receipts seems overwhelming, it is also possibly based upon lack of experience on m-payments, so issues such as trust and security must loom large.

# 5. Conclusions

The research conducted for this report provides *indicators* for the demand for mobile banking and mobile payments services in Indonesia – particularly for the prospects for using mobile phones to extend financial services to the unbanked and underbanked. We have broken these conclusions out below based upon demand and supply criteria. We strongly believe that further research needs to be undertaken to verify the identified demand and establish models for the positive exploitation and development of the market.

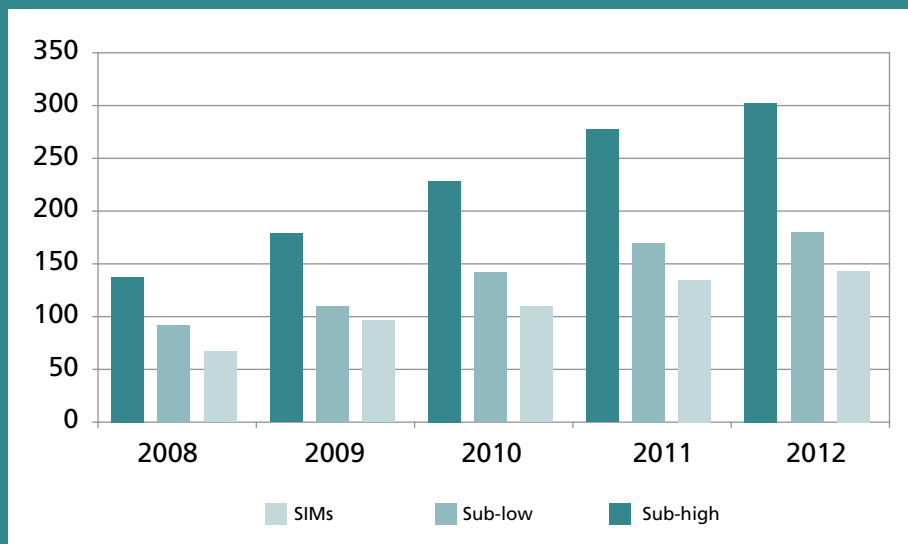
## 5.1 Market Potential

According to BRTI, there were some 137.1 million active SIM cards in Indonesia at the end of 2008, with the overall base

growing at 30-40 percent per annum over the last few years. Based on the interviews and field research conducted we estimate that the ratio of subscribers to SIM cards was in the range 1:1.45-1.75 and that this lengthened out to 1:1.55-1.85 over the course of 2009, giving a subscriber base by the end of 2009 of somewhere between 96.3 million and 114.9 million actual subscribers,<sup>49</sup> up from around 80 million at the end of 2008.

Over the next few years we expect that the SIM card base will keep growing, albeit more slowly, and the proliferation of multiple SIM cards will continue to rise as the carriers begin focusing further out from the major metropolitan areas giving a subscriber base conservatively estimated at between 133 million and 179.9 million subscribers by 2013 (Figure 5.1).

FIGURE 5.1: SIM CARD AND MOBILE SUBSCRIBER GROWTH, 2008-2012



<sup>49</sup>We believe it to be at the lower end of this range.

By 2009 there were around 60 million households in Indonesia (growing by 1.5 million per year). According to the World Bank approximately half of those households held an account in a formal financial institution, with another 18 percent holding accounts in non-formal institutions. With access highly skewed to urban areas, only 20–34 percent of rural households were estimated to have access to banking services.

It was estimated that officially there were some 87–88 million savings accounts in Indonesia.<sup>50</sup> However, as with the estimates for mobile phone penetration, a portion of these accounts will be multiple accounts for a single account holder, reducing the overall number of accounts by a quarter to a third.<sup>51</sup> In other words, there were perhaps 60–66 million savings accounts, and these may need to be further reduced to take account of inactive or dormant accounts. And, as we have seen in Chapter 2, the base of bank subscribers is increasing at a far slower rate than the population of mobile phone subscribers. Thus, we estimate that there are some 20–30 million people with phones, but without bank accounts and perhaps another 20–30 million with phones and accounts, but who are marginal financial participants at best. And that this gap is increasing.

## 5.2 Market Segmentation<sup>52</sup>

The unbanked and underbanked can then be split into the following market segments:

- (a) **Unbankable** (20–30%): Those who either have no money to save or have no interest in participating in the state financial sector. Half the Indonesian population is rural and some 46 percent live on less than USD2 a day, making them very difficult to bank.
- (b) **Borderline bankworthy** (10–20%): Those who are above basic subsistence, but do not have significant expendable income, and who cannot risk – or do not feel comfortable – having immediate access to their savings. *Providing immediate access to their savings – e.g., through mobile banking – would transform these people into ‘bankworthy’.*
- (c) **Bankworthy but remote** (20–30%): These people range from being barely bankworthy through to having substantive savings in some cases, but because of distance or time factors find the formal banking system to be inconvenient to access. *If conditions were right these Indonesians would readily move their savings out of the informal sector and into the formal financial system.*
- (d) **Migrant workers** (and other ‘Apex’ individuals) (30%): The World Bank found that in 55 percent of migrant households, at least one household member maintained a savings account at a bank, MFI or savings and loans group. However, there were very few tailored products for migrant workers. With banks mainly operating at the district level they have limited remittance-related products to service this group, their families or the ancillary businesses that grow around these individuals.
- (e) **MSMEs**: This group encompasses a diverse range of individuals – everyone from farmers and small entrepreneurs, through small industrialists, motorcycles distributors, through to becak drivers and massage ladies – and, as such overlaps with some of the segments above. It is one of the most approachable and still under-served segments for savings, loans, credit and other financial services. That said, the business of lending to micro- and small enterprises has become more competitive in recent years, with a number of the commercial banks having developed small business banking units, specifically to serve customers in business and commercial centres.

## 5.3 Access and Usage

In terms of savings, according to the World Bank, one-third of Indonesians *don’t save at all*, less than half save at banks and, of those who do save at banks, two-thirds also save at some other type of service provider, such as a cooperative, pawnshop or rural agency. As a result, informal financial institutions service more savers than do the commercial banks.

<sup>50</sup>World Bank numbers for 2009 break the numbers down thus: 47 million in formal financial institutions, 7.3 million in rural banks, around 28 million cooperative accounts, 17 million pawnshop accounts

<sup>51</sup>According to CSLA data, nationwide 1.7 percent of accounts controlled 77 percent of total deposits.

<sup>52</sup>The proportions in this section are based on our reading of existing literature and extrapolations from the FGD results in Chapter 4. It should be noted that the information gathered in our FGDs was not enough to undertake a detailed income correlation and this is one area where we would strongly recommend further research.

In terms of credit, a mere 17 percent of Indonesians borrow from banks, about one-third as many as borrow from the informal sector. In other words, roughly 40 percent of the population is excluded from the formal credit channels.

A *part* of the reason is access. Although the World Bank found that for “the vast majority (95%) of Indonesians, accessibility to banks is rated as convenient”, both the World Bank’s survey work and the research for this report find that access in many cases is simply not convenient *enough* to be bringing the excluded or underbanked into the formal financial system. To be realistically able to enjoy a savings account many within the micro-finance segments need more immediate access to their funds.

The more serious impediments to access arise from high monthly fees and high minimum account balances. Monthly administration fees can overwhelm interest paid on small deposits. The monthly fee on one bank’s account, for example, varies between IDR2,000-5,000, depending upon the size of the account. At another bank the monthly administration fee is IDR5,000 for basic accounts. Most banks intentionally structure their interest payments on deposits and monthly fees in a way that discourages small deposits.<sup>53</sup> Indeed, the pricing structure usually ensures that the balance eventually falls to zero. One bank’s account, for example, has an implicit breakeven point of IDR3 million; above this amount the balance will increase because interest paid exceeds charges. But below IDR3 million, the account will eventually drop-off to zero because administration charges exceed interest paid. Banks do this because small accounts are a costly, administrative nuisance, and because unilaterally closing a non-zero dormant account entails (contingent) financial liabilities.

Another factor not always given necessary consideration is that many low-income users find the large commercial banks to be intimidating. In terms of opening new channels for access though, many users remain sceptical of technology, including the Internet, and applications considered alien such mobile-banking. And, Indonesia, like any other emerging country, is a cash-based society. Developing the necessary trust to reach out to people in rural areas is a key aspect of any financial institution’s strategy and a real challenge.

That said, the aspiration to participate in the formal financial sector remains profound. CSLA surveys found that 50 percent of people interviewed intended to open a commercial bank account. And, as shown above, our field research showed similar conclusions. Again, according to CSLA statistics, the average Indonesian family spends around IDR1.1 million (USD118) a month, with 85 percent of households spending less than USD185 per month.<sup>54</sup> Almost half of the average household budget is spent on food, beverages and cigarettes. Including housing, 70 percent of spending goes on basic consumer items, with around six percent of household spending directed to education, sport and holidays. Consumption expenditure implies payments in exchange for goods and services, and utility bills are, for example, part of household expenditure. Our focus group discussion findings give strong *prima facie* support to the view that a bank facility to pay bills using a mobile phone is an attractive idea to many of the unbanked. This suggests there is a demand potential for mobile banking.

Yet one of the problems facing banks is uncertainty over demand. From Chapter 2 it is evident that mobile banking is not well developed even among those with active savings accounts, especially outside of Jakarta and to some extent Bandung and Surabaya, and growth in take-up is quite slow. There are some identifiable obstacles, such as the quality of handsets and a limited ability in the market to support Java applications, but the banks themselves, while having an incentive to spread mobile banking to cut costs and widen reach, are not yet placing any special emphasis on mobile banking. The evidence also suggests they are not familiar with, and are not taking steps to explore, demand potential among the under-banked and unbanked for m-banking services.

A partial exception is the interest of some of the banks in remittances, for example using m-banking for international remittance services. But as also explained in Chapter 2, once these funds reach the destination bank branch the receivers of the remittance tend to withdraw all the money during one visit to the bank, mainly for household consumption. Given a potential demand for using bank accounts in conjunction with a mobile phone for bill payments, as noted above, there would seem to be a possible opportunity here for banks.

<sup>53</sup>Minimum balances and monthly administration fees at BPRs are quite low – roughly half than commercial banks, and some have no fee (e.g., for student savings accounts).

<sup>54</sup>Only three percent spend more than USD340 per month.

## 5.4 Market Demand

Economic reasons remain the most factor for a lack of savings – simply put, people believe they don't have enough money *to make good use of a bank account*. It is worth re-emphasising that this does not always mean not having enough money, but will also be the case if the money is hard to access (takes time [commercial bank], or can only be accessed at a specific location [BPR]) or costs more than is seen to be of value (high administration fees).

The same issues are true on the credit side. Thus, while 60 percent of Indonesians borrow, the great majority borrow from informal sources, with a mere 17 percent borrowing from a bank.

Demand for mobile banking services, transformational or otherwise, can be ranked in the following order:

1. Top-up
2. Bill payments
3. Transfers
4. Remittance
5. Transactions

These services can be potentially viewed as an iterative progression, with over-the-air top up already prevalent throughout the market. Bill payments are overwhelmingly of interest, most particularly for the un- and under-banked, and could be seen as the point of market entry. Transfers tend to make more sense to those who have already had some experience with mobile money services or who can see a specific need to address. Remittance has a natural constituency among migrant workers, and while this group is large, it also tends to be quite geographically specific in Indonesia, with some towns disproportionately home to migrants, and others being devoid of migrant workers. (This, in part, is due to the recruitment policies of the agencies sourcing migrant workers.) Remittance is also a subset of transfers, and so depending on the strengths of the service provider, these two could be reversed in order.

Transactions are likely to be adopted in the upper segments of the market, and by the emerging digital natives who come to market without the same technology inhibitions as their forebears.

It is worth also noting that each of the above can be done with or without an attached savings account, so the demand for these services does not necessarily translate into savings accounts.

However, as already noted, all else being equal the overall desire is the demand is for inclusion in the formal financial sector, and the trust certainly appears to reside more substantially with the banks the higher up the order.

The results of the FGDs need to be treated with caution based as they are on quota sampling. Ideally, larger scale randomly selected samples are needed to test for the general validity of the findings of this report. With that important caveat in mind, this report has unearthed a perhaps surprisingly strong interest among the unbanked in m-payments and m-banking services. Using m-banking *for* m-payments seems especially desirable on the grounds of convenience (anytime, anywhere) and savings in travel costs, travel time and in particular in the time spent in queuing at banks or at ATM machines. As noted in Chapter 3, despite findings by the World Bank that bank branches and ATMs are not very long distances away for the majority of users, for the unbanked in rural areas the distances and travel costs are significant, and for most of the FGD participants waiting times are considered an inconvenience.

The main reasons why the unbanked would be interested in adopting m-banking are more or less defined by the reasons stopping them. These divide into three reasons which we can call (i) economics, (ii) information, and (iii) network effects. On the economics side, the administrative costs associated with banking, the minimum balance required to keep an account open, and the low rates on interest paid on savings are deterrents. On the information side, there is uncertainty about how much m-banking would cost, about the security of a transaction, especially where there is no available receipt of transaction available, and more basically about how m-banking and m-payments using a bank account associated with a mobile phone would work. On the network effects side, there is concern that merchants would not accept m-payments, and there is a preference to stay with the same mobile operator (and keep the same mobile number) used to family, friends and business associates which means their mobile operator would need to support m-banking with the bank of their choice.

Underlying most of these issues is the question of 'who do you trust' to keep your money secure and to transfer it safely. The answer is overwhelmingly the commercial banks, but how much of this comes down to experience and expectations? The reasons given most frequently for greater trust in the commercial banks than in either banks or mobile operators are (i) they are more experienced and professional in dealing with money, and (ii) the state acts as their lender of last resort. From this we may infer that clearly defined regulation and state support for m-banking initiatives will be an important facilitator of m-banking in its early years of adoption.



# 6. Recommendations and Next Steps

In light of the above we have a number of suggestions for next steps based on this research. In brief, these are:

## 1. Workshops on m-banking models

Currently the focus in Indonesia appears to be bank-centric versus telco-centric models of mobile banking. This largely ignores a third model, which of the third party service provider. As we have noted above, Indonesia could well be uniquely suited to benefit from such a model.

As such we would recommend a series of workshops around the possible m-banking models for key player participation with presentations by a number of experts and a selection of third party m-banking service providers currently providing services in Asia.

## 2. Running a *location-specific* remittance trial

As noted, remittance tends to be quite location specific in Indonesia with certain areas being notable for the numbers of overseas foreign workers that are dispatched. The same is often true with domestic migration, with certain areas known for the numbers of laborers, or domestic staff, or hospitality workers that they produce.

Also noted has been the growing interest in and focus on mobile-based remittance services. For the IFC and/ or BI to sponsor a remittance trial could help focus attention and resources on both the possibilities and issues to be resolved in this area. This would presumably be a trial run in cooperation with the larger commercial banks and/ or MNOs.

## 3. Sponsor a utility payments trial

As detailed in Chapter 5 in the FGDs, the interest in adopting mobile payments to enable bill payments appears extraordinarily high, making this a potential low-hanging fruit for first deployment.

Whereas a trial remittance service would likely focus on the banks and MNOs, a bill payment trial could be run with the BPRs, where their local expertise and local touch would have significant benefits, including encouraging take-up,

building trust, answering and responding to any problems and facilitating word-of-mouth.

Each of the above trials would allow for an assessment of issues surrounding agent networks to be made – perhaps *the* crucial issue in developing a framework for m-banking in Indonesia. There are three key issues with agent networks that need addressing: (i) registration and compliance with KYC; (ii) enabling some form of cash-in/ cash-out; (iii) focusing on merchant acceptance – the development of 2-sided models.

Certainly for m-banking to provide *transformational banking*, the development or exploitation of agent networks appears crucial.

## 4. Detailed costing analysis for the delivery of m-banking

For all of the focus on take up and acceptance, the principal driver for the commercial banks to adopt mobile banking will be the lowering of unit cost. Currently, delivering financial access to the majority of Indonesians does not appear to be economically viable to the major banks. That mobile banking changes the cost structure is broadly appreciated, but the scale of saving and the impact on their network economics appears to be lacking. Given how successful ATM networks have proven to be this is surprising.

Simply put, however, *nobody appears to have undertaken a detailed cost analysis of the benefits to be gained from a mobile banking network and this appears to be a crucial part of the business case for m-banking delivery in Indonesia.*

# APPENDICES

<b>A. Reviewed Papers</b> .....	<b>X</b>
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# A. Literature

## IFC Provided Papers

According to the terms of this study,

*“In the past year, there have been a number of comprehensive studies undertaken in Indonesia that have direct bearing on this assignment. These include:*

- *World Bank’s Household Financial Survey – the World Bank interviewed close to 3,500 people across the social-economic strata in Indonesia to understand needs related to financial services. A wealth of knowledge about market segmentation, usage patterns and needs now exists. There is even preliminary information related to mobile money in the results.*
- *Mercy Corp – conducted a number of market studies related to the needs of microfinance customers, the most current is just being concluded, as well as key vendors operating in the space. Their research results can shed light on the perspectives that unbanked customers have about banks, the types of financial services desired, and explanations for usage/non-usage.*
- *CGAP/IFC/GTZ – recently concluded a comprehensive survey of the branchless banking regulatory environment in Indonesia. As part of this work, banks, MNOs, and payment service providers that are interested in providing mobile money solutions were identified.*

*All of these results will be made available to the successful candidates. Thus, this research does not need to start from scratch. Rather it will extract the most relevant data from an analysis of existing material...”*

Indeed, in the end some 20 papers were provided by the IFC as the framework material for this study. These papers are listed below:

1. **World Bank** (June 2009), “Access to Financial Services”, unpublished draft.

We have not yet been able to obtain the full World Bank study due to it’s not being publicly released. However, we have been able to access information from the results of the survey and the study on an as-needs basis, when we have asked specific questions. We will return to this study, in particular, once the results from our own focus group discussions come in.

2. **Flaming, Mark, Klaus Prochaska and Stefan Staschen** (June 2009), “Diagnostic Report on the Legal and Regulatory Environment for Branchless Banking in Indonesia,” **CGAP** (in cooperation with IFC and GTZ).
3. **Wright, Graham A.N., Monica Brand, Zan Northrip, Monique Cohen, Michael McCord and Brigit Helms**, “Key Questions That Should Precede New Product Development,” **MicroSave Briefing Note #9**.
4. **Kiswanti, Delima and Herman Abels** (Feb 2008), “Microfinance Country Overview: Indonesia,” **Microned**.
5. **GTZ** (Aug 2006), “Microinsurance: Demand and Market Prospects, Indonesia,” commissioned by Allianz AG and UNDP.

6. IFC (July 2005), "Commercial Bank Financing and Other Credit Issues for BPRs," IFC-PENSA, Jakarta.
7. **Microensure Newsletter**, "Micro Insurance Matters", Jan-Mar, 2009.
8. Barnes, Frances (2007), "Indonesia Country Report," **AUSAID, Government of Australia**
9. **MICRA** (June 2008), "Promoting Female Migrant Workers' Access to Finance," Powerpoint Presentation.
10. Barnes, Frances (Dec 2007), "Leveraging Remittances with Microfinance: Indonesia Country Report," The Foundation for Development Cooperation (FDC): Jakarta.
11. Cashmore, Nick and Amar Gill (Autumn 2007), "Mr & Mrs Indonesia," **CLSA**.
12. **Owens, John and Anna Bantug-Herrera** (2006), "Catching the Technology Wave: Mobile Phone Banking and Text-a-Payment in the Philippines," Chemonics International: Washington D.C.
13. Ivatury, Gautam and Ignacio Mas (Apr 2008), "The Early Experience with Branchless Banking," **CGAP: No.46**.
14. Mas, Ignacio and Kabir Kumar (June 2008), "Banking on Mobiles: Why, How, For Whom?" **CGAP: No.48**.
15. Bezuidenhout, Johann, James Hokans and David Porteous (April 2009), "Phase 1 Report: Inteim Strategic Market Assessment related to Branchless Banking in the Philippines and Bank Andara in Indonesia," Bankable Frontier Associates (commissioned by MAXIS program of **Mercy Corps**).
16. Mitha, Aiaze (March 2009), "M-Banking Options for the BPR Industry," **GTZ**.
17. **Gunawan, Eric** (???), "ATM: A Potential Technology for BPR" (powerpoint presentation in Indonesian).
18. Hernandez, Roberto and Yerina Mugica (Aug 2003), "What Works: Prodem FFP's Multilingual Smart ATMs for Microfinance," **World Resources Institute**.
19. Burhan, Stephen (Sept 2008), "MFIs Assessment Report: Five IT Products Assessment," **Mercy Corps**
20. "Indonesia – Telecommunications Infrastructure," Paul Budde Communications (Sept 2008).

## Additional Papers

Further papers provided by the IFC or otherwise included in the literature survey included:

- (i) The **Asian Banker** (May 2006), "Indonesia Banking Industry: Outlook and Opportunities Assessment 2006-07," [www.theasianbanker.com](http://www.theasianbanker.com)
- (ii) Cloninger, Jane (Mar 2009), "Realizing the Full Potential of Mobile Commerce: Orchestrating Mobile Payments and Money Transfers," **Edgar Dunn & Company**
- (iii) **Bank Indonesia**, (12 Dec 2007), "Risk Management in the Use of Information Technology by Commercial Banks," Circular No. 9/30/DPNP.
- (iv) Kang, Juhee (July 2009), "ASEAN-ITU Mobile Commerce Forum 2009 Background Paper," Paper prepared for the ASEAN-ITU Mobile Commerce Forum July 2009: Jakarta, Indonesia.
- (v) Sutadi, Heru (Sept 2009), "Spectrum and Licensing Policies To Stimulate Broadband Access Towards Economic Growth," presentation (by **BRTI**) to LTE Asia 2009 forum, Hong Kong.
- (vi) **CGAP** (2008, April) 'Are We Overestimating Demand for Microloans?' *Brief April* <http://www.cgap.org/p/site/c/template.rc/1.9.2724>
- (vii) **CGAP** (2008, FN50) 'Realizing the Potential of Branchless Banking: Challenges Ahead' *Focus Note 50*, October [http://www.microfinancegateway.org/files/53857\\_file\\_FocusNote50.pdf](http://www.microfinancegateway.org/files/53857_file_FocusNote50.pdf)
- (viii) **CGAP** (2008, FN 43) 'Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance' *Focus Note 43*, January [http://www.cgap.org/gm/document-1.9.2583/FocusNote\\_43.pdf](http://www.cgap.org/gm/document-1.9.2583/FocusNote_43.pdf)
- (ix) **CGAP** (2006, FN38) 'Use of Agents in Branchless Banking for the Poor: Rewards, Risks and Regulation' *Focus Note 38*, October [http://www.microfinancegateway.org/files/36551\\_file\\_05.pdf](http://www.microfinancegateway.org/files/36551_file_05.pdf)
- (x) **CGAP** (1997) 'State-owned Development Banks in Microfinance' *Focus Note 10*, August [http://www.cgap.org/gm/document-1.9.2555/FocusNote\\_10.pdf](http://www.cgap.org/gm/document-1.9.2555/FocusNote_10.pdf)
- (xi) Don Johnston Jr and Jonathon Morduch (2007) 'The Unbanked: Evidence from Indonesia' FAI/ NYU Wagner, March [http://financialaccess.org/sites/default/files/D12\\_FA\\_TheUnbanked\\_0.pdf](http://financialaccess.org/sites/default/files/D12_FA_TheUnbanked_0.pdf)

- (xii) Shawn Cole, Thomas Sampson and Bilal Zia (2008) 'Can Financial Education Change Behaviour? A Randomised Evaluation in Indonesia' powerpoint presentation <http://www.oecd.org/dataoecd/25/47/41629081.pdf>
- (xiii) Shawn Cole, Thomas Sampson and Bilal Zia (2009) 'Financial Literacy, Financial Decisions, and the Demand for Financial Services: Evidence from India and Indonesia' **Harvard Business School Working Paper** #09-117. <http://www.hbs.edu/research/pdf/09-117.pdf>
- (Also see Shawn Cole 'Alternative Approaches to Financial Literacy' p.3 <http://www.retirementsecurityproject.org/pubs/File/ShawnCole.AlternateApproachestoFinancialLiteracy.pdf>)
- (xiv) **Bank Dunia/World Bank** (2006) 'Indonesia Fact Sheet: Migration, Remittance and Female Migrant Workers' [http://siteresources.worldbank.org/INTINDONESIA/Resources/fact\\_sheet-migrant\\_workers\\_en\\_jan06.pdf](http://siteresources.worldbank.org/INTINDONESIA/Resources/fact_sheet-migrant_workers_en_jan06.pdf)
- (xv) **World Bank** (2008) *The Malaysia-Indonesia Remittance Corridor*, Working Paper No.149, <http://go.worldbank.org/SGUUZYEEC1>
- (xvi) **Asia Development Bank** (2006) *Workers' Remittances Flow in South East Asia* <http://www.adb.org/Documents/Reports/workers-remittance/workers-remittance.pdf>
- (xvii) **InfoDev** (2006) *Micropayment Systems and their Application to Mobile Networks*, with IFC and GSM Association: [http://www.gsmworld.com/documents/services/micro\\_payment.pdf](http://www.gsmworld.com/documents/services/micro_payment.pdf) ; **IMF** (2007) *Philippines: Selected Issues, Country Report No.7/131*, March. <http://www.imf.org/external/pubs/ft/scr/2007/cr07131.pdf>

## B. INTERVIEWEES

Over the course of the first six weeks well in excess of 30 interviews were conducted with institutional and key players. These were conducted in a semi-structured interview manner, primarily focusing on the banks and mobile network operators (MNOs). The key interviewees are listed below. (The framework questionnaire used for the interviews is provided in Appendix C.)

### Telcos

1. **Excelcomindo:** Dony Yuliardi, 17 July.
2. **IndoSat:** Indra Lestiadi; Florentinus Triyanto, 22 July.
3. **Indosat:** Ichwansyah Putra, 24 July.
4. **Telkomsel:** Bambang Supriogo, Ms. Fellya Agustin, 30 July.
5. **Axis:** Ben Soppitt, Achmad Nusjirwan Sugondo, Bondan Margono, 22 July.
6. **Mobile 8:** Merza Fachys, Sukaca Purwokardjono, 11 August.
7. **Bakrie Telecom:** Erik Meijer, Ridzki Kramadibrata, 11 August.

### Banks

8. **Mandiri Bank:** Ms. Widhayati Darmawan, 21 July
9. **BNI:** Idi Priadi, Jeffry A.M.Dendeng, 29 July.
10. **Muamalat:** Anang Rachmadi Agus Kamf Hendrawan, 29 July.
11. **Permata Bank:** Joseph Georgino Godong, 30 July.
12. **Bank Danamon:** William Gomulia, Juni Rachmat Mancanegara, 22 July.
13. **BPR-KS:** Christine Widythia, Ryan Sumadihardja, 24 July.
14. **Bank Sinar Harapan:** Pak Alit Asmara Jaya, Pak Ketut Suarsa, Ibu Ida Ayu Kade Karuni, 31 July.
15. **Bank Andara:** Irianto Kusumadjaja, Paulus Wiranata, 31 July.

16. **BCA:** Ina Suwandi, Fera Agustina, 27 August.

17. **BPR Nova:** Suardi, Julieta Fauzia, 27 August.

### Others

18. **World Bank:** Yoko Doi, 21 July.
19. **MV Commerce – PonselPay:** Hendra Sutandinata, 21 July
20. **Bank Indonesia:** Aribowo, Puji Atmoko, Siti Hidayati, 22 July.
21. **Teleconsult:** Lord John Shazell, Harya Wirasma, 22 July.
22. **PT Buana Media Teknologi:** Harya Wirasma [Chm IMOCA (Indonesian Mobile & Online Content Provider Association)], 23 July.
23. **MercyCorps:** Leesa Wilson Shrader, 24 July.
24. **BISPRO Consulting:** John Grygorcewicz, 29 July.
25. **Kartuku:** Niki Luhur, Thomas Mack, 21 July.
26. **PT POS:** San Herib, Hertadi Iman. S, 22 July.
27. **Perbarindo (The Indonesian Micro Banks Association):** Joko Suyanto, Sawaluddin, 28 August.
28. **BRTI (Badan Regulasi Telekomunikasi Indonesia):** Dr Ir. Iwan Krisnadi, Commissioner, M.Ridwan Effendi, Commissioner, 26 November

# C. INSTITUTIONAL QUESTIONNAIRE

## Questions for MNOs

### EXISTING MARKET

#### A: FACTUAL

1. Actual network coverage by geography (map if possible)
2. Usage/actual subscriber numbers by geography if available – how does MNO make this estimation?
3. What is the estimate of the number of subscribers who hold 2 or more SIM cards?
4. What evidence is there that mobile phones are shared between members of a household, especially in low-income households urban or rural?
5. What proportion is pre-paid?
6. What are the prices of access (e.g. handsets, pre-paid cards) and usage (e.g. airtime)? – how affordable are they to low income households?
7. Does the MNO offer remittance services of any kind? If so, in any of the following high-remittance areas:
  - a. West Java – Sukabumi, Cianjur, Indramayu
  - b. Central Java – Cilacap, Wonosobo
  - c. Yogya – Kulon Progo
  - d. East Java – Malang, Kediri, Ponorogo
  - e. East Nusa Tenggara
  - f. West Nusa Tenggara
  - g. South Sulawesi
  - h. Lampung

8. Does the MNO see any close correspondence between high remittance areas and the take up of mobile phones and mobile services? If yes,
  - a. What and how strong is that relationship?
  - b. Typically, what services are correlated?
9. Are the models of handsets able to support m-payments/m-banking functions?
10. Does the MNO operate any form of m-payments? If yes
  - a. What m-payment services and since when?
  - b. Who are the partners/agents?
  - c. What is the take-up among subscribers from low-income households?
11. Does the MNO operate any form of m-banking? If yes
  - a. Who are the partner banks?
  - b. What is the take up among subscribers from low-income households?

### MARKET EXTENSION

#### B: BUSINESS DEVELOPMENT

12. What would be the incentive to the MNO to offer m-banking to the unbanked?

13. What regulatory restrictions need to be lifted in order to encourage MNOs to market m-banking to the unbanked?
  - a. In urban areas?
  - b. In rural areas?
14. What would be the principal costs compared to the main benefits to the MNO of offering m-banking?
  - a. In urban areas?
  - b. In rural areas?
15. What would be the principal *business obstacles* to collaborating with banks to offer m-banking services to:
  - a. The banked – i.e. those already using a range of banking services
  - b. The under-banked – i.e. those with bank accounts but using them infrequently and mostly to withdraw money from receivables (such as the sale of goods) deposited in their accounts.
  - c. The unbanked
16. What would be the principal *business obstacles* to collaborating with other MNOs to offer m-banking services?
  - a. Interoperable payment facilities, such as cash-in and cash-out?
  - b. Sharing a network of agents?
  - c. Others?

### C: OPERATIONAL ISSUES

17. What would be the principal *technical challenges (including security)* to offering m-banking services to the unbanked?
18. What would be the principal *technical (including security)* obstacles to collaborating with banks to offer m-banking services?
19. What would be the principal *technical (including security)* obstacles to collaborating with other MNOs to offer
  - a. Inter-operable m-banking services and banking services

- b. Services that share the same networks of MNOs
- c. Services that share the same network of agents?

## Questions for Banks

### EXISTING MARKET

#### A: FACTUAL

- 1 Actual branch bank coverage by geography (map if possible)
- 2 Any coverage by branchless banking?
- 3 Customer numbers and local percentages by geography if available
- 4 What are the percentages of customers in different provinces (is this the appropriate level?) with net worth
  - a. Below Rp X (poverty line) – what % of total hshds in each area?
  - b. >Rp X < Rp XX (low income) – what % of total hshds in each area?
- 5 What are the percentages of customers in the following provinces with net worth below the poverty line and above the poverty line but ‘low income’?
  - a. West Java – Sukabumi, Cianjur, Indramayu
  - b. Central Java – Cilacap, Wonosobo
  - c. Yogya – Kulon Progo
  - d. East Java – Malang, Kediri, Ponorogo
  - e. East Nusa Tenggara
  - f. West Nusa Tenggara
  - g. South Sulawesi
  - h. Lampung
- 6 Does the bank operate any form of m-banking? If yes
  - a. Who is the partner MNO?
  - b. What is the take up among subscribers from low-income households?



## MARKET EXTENSION

### B: BUSINESS DEVELOPMENT

- 7 What would be the incentive to the bank to offer m-banking to the unbanked?
- 8 What regulatory restrictions need to be lifted in order to encourage banks to market m-banking to the unbanked?
  - a. In urban areas?
  - b. In rural areas?
- 9 What would be the principal costs compared to the main benefits to the bank of offering m-banking?
  - a. In urban areas?
  - b. In rural areas?
- 10 What would be the principal *business obstacles* to collaborating with MNOs to offer m-banking services to:
  - a. The banked – i.e. those already using a range of banking services
  - b. The under-banked – i.e. those with bank accounts but using them infrequently and mostly to withdraw money from receivables (such as the sale of goods) deposited in their accounts.
  - c. The unbanked
- 11 What would be the principal *business obstacles* to collaborating with other banks to offer m-banking services?
  - a. Interoperable payment facilities, such as cash-in and cash-out?
  - b. Sharing a network of agents?
  - c. Others?

### C: OPERATIONAL ISSUES

- 12 What would be the principal *technical challenges (including security)* to offering m-banking services to the unbanked?
- 13 What would be the principal *technical (including security)* obstacles to collaborating with MNOs to offer m-banking services?
- 14 What would be the principal *technical (including security)* obstacles to collaborating with other banks to offer
  - a. Inter-operable m-banking services and banking services
  - b. Services that share the same networks of banks?
  - c. Services that share the same network of agents?
  - d. Others?

# D. FOCUS GROUP DISCUSSION QUESTIONNAIRE

## Focus Group Discussions – Questionnaire

From the preceding sets of issues, a framework questionnaire was created for a series of focus group discussions (FGDs) across both rural and urban areas in select parts of Indonesia to further tease out empirical and anecdotal evidence and to test some of our working hypotheses.

The FGDs are being run as in-depth sessions for 2-4 hours each in 8 different locations across Indonesia. In each location 2 separate sessions will be run – one focusing on the banked (i.e., those with both a mobile phone and a bank account), one focusing on the unbanked or underbanked (i.e., those with a mobile phone, but either no bank account or a not frequently used account).

The nature of the FGDs necessarily that some areas are covered in greater detail in some sessions, and some areas perhaps not at all. Thus the below set of ‘questions’ are indicative rather than determinative, as they are being used as a guideline for discussion, rather than a set of questions to be responded too.

In this section we provide the framework outline used by the FGD facilitators, and in the following section a list of the locations in which the FGDs are to be run.

## Questionnaire<sup>55</sup>

*The following is a guide. Try to ask all the questions below in the order given, but it is more important to maintain the flow of discussion. Try to encourage participation of all group members in the conversation.*

Team and participants introduction:

- *Members of the research team introduce themselves and describe each of their roles, followed by each participant.*
- *The facilitators should explain briefly why the FGD is being conducted and the objectives of the FGD as well.*

Start by explaining the ground rules as follows:

- *Before we start, I would like to remind you that there are no right or wrong answers in this discussion. We are interested in knowing what each of you think, so please feel free to be frank and to share your point of view, regardless of whether you agree or disagree with what you hear. It is very important that we hear all your opinions.*
- *Prior to starting the facilitators should define explain: mobile banking, mobile payments, remittance, and SIM cards*
  - o **Mobile Banking:** the use of a mobile phone with a bank account to perform inquiries and transactions, for example, to check the balance, to authorize a payment, etc.
  - o **Mobile Payments:** the use of a mobile phone with a stored-value account to perform cash-in to the account, cash-out from the account, transfer of funds from your account to another account as a remittance (P2P) or as a payment to a merchant, etc. The stored value account does NOT have to be at a bank. It could be administered by the

<sup>55</sup>Questions differ depending on whether the participants are banked or unbanked.

mobile operator or by a trusted third party, for example the POS. It functions like a direct debit card, and in some cases could be used to withdraw cash from an ATM.

- o **Remittance:** a transfer of value (money, airtime, etc.) from one person to another, either from overseas or from within Indonesia. Sometimes referred to as P2P. A mobile phone can be used to send an SMS text message confirming the transfer and with an authorization number to collect the money from a bank or POS, etc., or a mobile phone account could be used to transfer the value directly to your m-wallet.
- o **SIM** (“Subscriber Identity Module”): the card from the mobile operator which you insert into your mobile phone (GSM 2G, GPRS and 3G phones, but not used in 2G CDMA phones) that gives you your number and airtime. (Show them a SIM card)

### 1. MOBILE PHONES AND SIM CARDS

- a. How many mobile phones do you each have? Are they GSM or CDMA phones? Can you show them to us?
- b. How many SIM cards do you usually have at any one time? Why?
- c. How often do you change or top-up your SIM card?
- d. How much, on average, do you top-up?
- e. Is your phone number important to you? Does it matter if you change your phone number? Why/ Why not?
- f. Have you changed mobile operator? What were the reasons for changing?
- g. How many different mobile operators (MNOs) do you use frequently (once every month)? Why?
- h. How important are mobile charges (cost plan) when choosing a mobile operator?

### 2. MOBILE PAYMENTS

- a. How many of you use your mobile phones to cash-in to an electronic money (e-money) account (NOT a bank account)? Which mobile wallet (m-wallet) service do you use? Why?
- b. Which m-payment services would you use if you had the chance?

- i. Over-the-air (OTA) top-up?
- ii. Cash-in to your e-money/m-wallet account?
- iii. Make or receive transfers from family and friends overseas (remittances) or within Indonesia (domestic P2P)?
- iv. Make or receive payments for goods or services, including utility bills?

### 3. BANK ACCOUNT

- a. How many of you have an account (savings, deposit, loan, etc) with
  - i. A commercial bank?
  - ii. A rural bank?
  - iii. A cooperative?
  - iv. A community savings and loans society?
  - v. Other?
- b. Of those of you without a bank account, why not use a bank?
  - i. Would you like to have a bank account? Why/ Why not?
- c. If you had sufficient money, what would encourage you to open a bank account?
  - i. Low administrative charges
  - ii. Access to cheap (low interest) loans
  - iii. Access to very small loans
  - iv. A money voucher to buy goods or a free gift
  - v. An free entry ticket into a lottery
  - vi. Higher interest payments on your savings
  - vii. Other banking services, such as insurance, accounting advice for your business, stocks and shares, foreign exchange, etc.
- d. In terms of (a) time, (b) distance, and (c) money, how convenient or inconvenient is it to use
  - i. A bank branch?
  - ii. An ATM machine?
  - iii. A post office
  - iv. An agent of the bank or POS who calls at your home or village?

- e. If you could do your banking using your phone, would this encourage you to open a bank account?

#### 4. MOBILE BANKING

- a. If you have a bank account, how many of you use your mobile phone to cash-in, or check your account or to initiate a transaction?
- b. If you do not have a bank account but planned to open one, and use m-banking services, which m-banking services would you use
- i. Checking your account?
  - ii. Making cash-in payments?
  - iii. Initiating transactions (transfers and payments)
  - iv. Applying for loans
- c. If a bank offered you a mobile phone to open a bank account and use m-banking, would you agree? Would you use the account if you opened it?

#### 5. TRANSITION

- a. What would most likely drive you to use a mobile phone for m-payments or m-banking?
- i. Save time travelling to a bank or ATM?
  - ii. Save money travelling to a bank or ATM?
  - iii. Ease of use
  - iv. Being able to receive notification of payments or remittance transfers coming in
  - v. Other

- b. What would deter you from using a mobile phone for m-payments or m-banking?

- i. Fees
- ii. Too difficult
- iii. No money
- iv. Do not trust the MNO to keep my money safe
- v. Do not trust the mobile network to always work and let my transaction go through successfully
- vi. Other

- c. Which do you trust more and which do you trust less with your money?

- i. An MNO
- ii. A commercial bank
- iii. A rural bank
- iv. POS
- v. A cooperative

#### 6. WOULD YOU WANT TO TRY M-PAYMENTS (M-WALLET) BEFORE M-BANKING?

#### 7. IF YOU RECEIVE SMS MESSAGES TO CONFIRM THE ARRIVAL OF REMITTANCES, ARE YOU MORE CONFIDENT TO USE YOUR MOBILE PHONE FOR PAYMENTS?

# E. FOCUS GROUP DISCUSSION LOCALES

Locations for the eight focus group discussion (FGD) locations were initially chosen based on the earlier work conducted by REDI for the World Bank's Access to Finance surveys and interviews.

These were adapted after early conversations with the IFC on preferred targets and additional issues to be addressed (including the requests to include Kalimantan and Denpasar).

The locations for FGDs therefore became:

1. Mataram – West Nusa Tenggara province
2. Pontianak – West Kalimantan province
3. Manado – North Sulawesi province
4. Banda Aceh – Aceh province
5. Bandung – West Java province
6. Semarang – Central Java province
7. Surabaya – East Java province
8. Denpasar – Bali province

Following an initial set of trial FGDs, and a review of the early interview material, several imperatives had begun to emerge; of particular importance was to be able to assess the difference in rural and urban. A second issue of increasingly importance was the differences in trust (potentially across regions [ie, rural/urban respondents], and across demographics).

The revised plan for FGDs therefore became:

1. **Sukabumi** – West Java province. (Rural, location of A2F survey).
  - a. This was switched from Bandung.
2. **Wonosobo** – Central Java province. (Rural, location of A2F survey).
  - a. This was switched from Semarang.
3. **Malang** – East Java province. (Rural, location of A2F survey).
  - a. This was switched from Malang City.
4. **East Lombok** – West Nusa Tenggara province. (Rural, location of A2F survey).
  - a. This was switched from Mataram.
5. **Banda Aceh** – Aceh province. (Urban, location of A2F survey).
6. **Pontianak** – West Kalimantan province. (Urban, *not* A2F survey location).
7. **Manado** – North Sulawesi province. (Urban, location of A2F survey).
8. **Denpasar** – Bali province. (Urban, location of A2F survey.)

### Contact Information

Indonesia Stock Exchange Building  
Tower 2, 9th Floor  
Jl. Jend. Sudirman Kav. 52-53

Jakarta 12190 Indonesia  
Tuimisi, ED 00000  
T: +62 21 2994-8001  
F: +62 21 2994-8002  
[www.ifc.org/indonesia](http://www.ifc.org/indonesia)



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