Mobile Money for the Unbanked

GSMA DISCUSSION PAPER

SMARTPHONES & MOBILE MONEY

The Next Generation of Digital Financial Inclusion

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Overview

Global smartphone adoption is set to ramp up massively in the coming years, particularly in developing markets. As more unbanked consumers gain access to smartphones and mobile internet services, new opportunities for mobile financial services models will arise. This GSMA Mobile Money for the Unbanked (MMU) White Paper discusses the factors at play and their significance to the evolution of mobile money.

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The Rise of Smartphones in Emerging Markets

Converging trends hold great promise for the next generation of digital financial inclusion efforts based on smartphones. Devices are getting cheaper, global alliances are advocating for affordable data access, and mobile operators are investing to develop necessary network capacity and pricing models to manage the inevitable transition from feature phones to smartphones.

The 'next billion' emerging market consumers are increasingly the focus of the latest innovations affecting the telecommunications industry. This was evident at Mobile World Congress 2014, where new low-cost handsets made headlines: the $40 Nokia 220 is today's most affordable internet-ready device in the company's portfolio and Mozilla announced that it would launch the $25 ZTE Open C, the cheapest smartphone in the world.

Additionally, international initiatives are working to overcome two major barriers to providing internet access to the remaining five billion people: infrastructure and affordability. The GSMA's own Digital Inclusion programme seeks to enable conditions to connect an additional one billion people to the mobile internet by 2020. Facebook's Internet.org aims to cut drastically the cost of delivering basic internet services on mobile phones, particularly in developing countries. The Alliance for Affordable Internet, of which the GSMA is a member, builds multi-stakeholder coalitions across developing regions to advance affordable access to Internet in developing countries.[1]

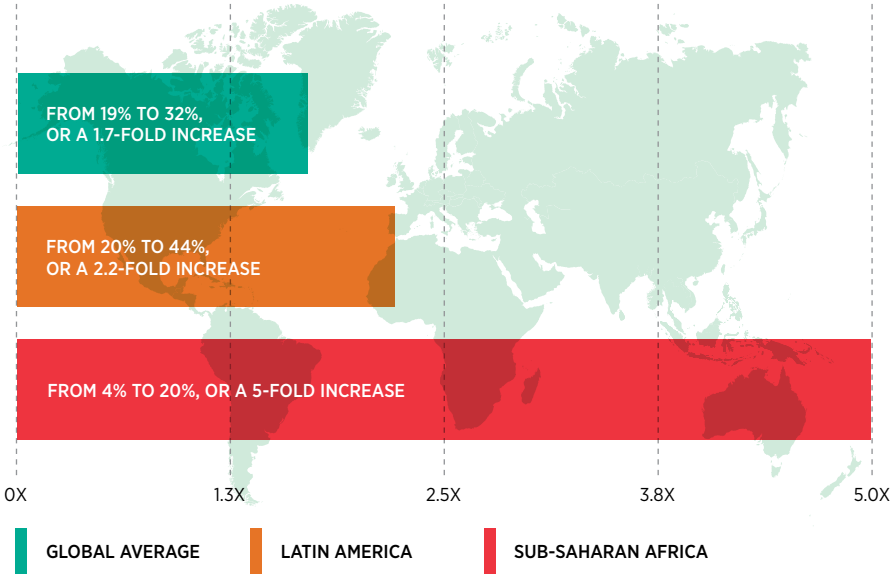
In parallel, the mobile industry is investing to develop capacity on 3G and 4G networks[2], and is introducing innovative pricing models better suited to the economic realities of a low-income consumer base. 'Sachet' data tariffs, for example, allow for prepaid users to consume data on a 'pay as you go' basis and have become increasingly popular in Asia and Latin America.[3] Due to the competitive intensity in the mobile broadband sector in Latin America, service tariffs have dropped 52% for smartphones in the last three years, increasing service affordability.[4]

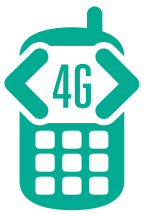
The concept of 'zero rating' mobile content is also drawing industry attention. Facebook is strongly promoting the concept, entering into partnerships with several operators in emerging markets to offer free mobile Facebook services. A variant of the zero rating model—sponsored internet—has the content provider, instead of the end-user, pay for connectivity. For example, mobile operators in Brazil recently announced that clients of Banco Bradesco can access its internet banking service from their mobile phones without incurring carrier data charges or having to use their monthly data allowance.[5]

These factors are accelerating the pace of smartphone adoption among consumers in developing countries. GSMA estimates that global smartphone penetration as a percentage of population is expected to rise from 19% in 2012 to 32% in 2017.[6] In Sub-Saharan Africa, smartphone penetration is expected to grow five-fold from 4% to 20% over that same period.[7] In Latin America, GSMA forecasts smartphone penetration will rise at a slightly stronger rate than the global average, from 20% at the end of 2013 to 44% by 2017.[8] Strikingly, six in 10 global 4G-LTE connections are predicted to come from developing regions by 2020.[9]

1. Launched in October 2013, A4AI's primary focus is to support the achievement of the UN Broadband Commission's Broadband Target of entry-level broadband services priced at less than five per cent of average monthly income
2. For the 2013-2020 period, operator capex is forecast to exceed US$ 1.7 trillion, with capex forecast to grow at a compound annual growth rate of 4.7% per annum (GSMA, The Mobile Economy 2014)
3. "Tailoring mobile internet tariffs for prepaid users—a balancing act," GSMA Intelligence, December 2013
4. GSMA Mobile Economy Report for Latin America 2013
5. "Vivo on sponsored internet," BNamericas, April 10, 2014
6. GSMA Scaling Mobile Report 2013
7. GSMA Mobile Economy Africa 2013 Report
8. GSMA Mobile Economy Report for Latin America 2013
9. Infographic: Global 4G-LTE connections forecast: 2010 to 2020, GSMA Intelligence

PROJECTED SMARTPHONE PENETRATION GROWTH (2017)[10]





6 in 10

GLOBAL 4G-LTE CONNECTIONS WILL COME FROM DEVELOPING REGIONS BY 2020

Thus, the landscape of smartphone adoption is set to change dramatically over the next five years. While far from ubiquitous smartphone penetration, adoption will further accelerate over the following five years, likely at a much faster rate than the period prior. It is also important to highlight that mobile internet access does not necessarily require smartphones, meaning mobile data penetration is much higher than smartphone penetration. [11]

10. Note: Projected growth rates cover the 2012-2017 period, with the exception of data from Latin America. Latin American growth rates cover the 2013-2017 period. Source: GSMA Intelligence, 2013
11. GSMA Intelligence estimates that 31% of mobile internet subscribers in China access mobile internet services via non-mobile broadband networks (i.e., 2G), adding up to around 155 million subscribers

Implications of Smartphones for Financial Inclusion

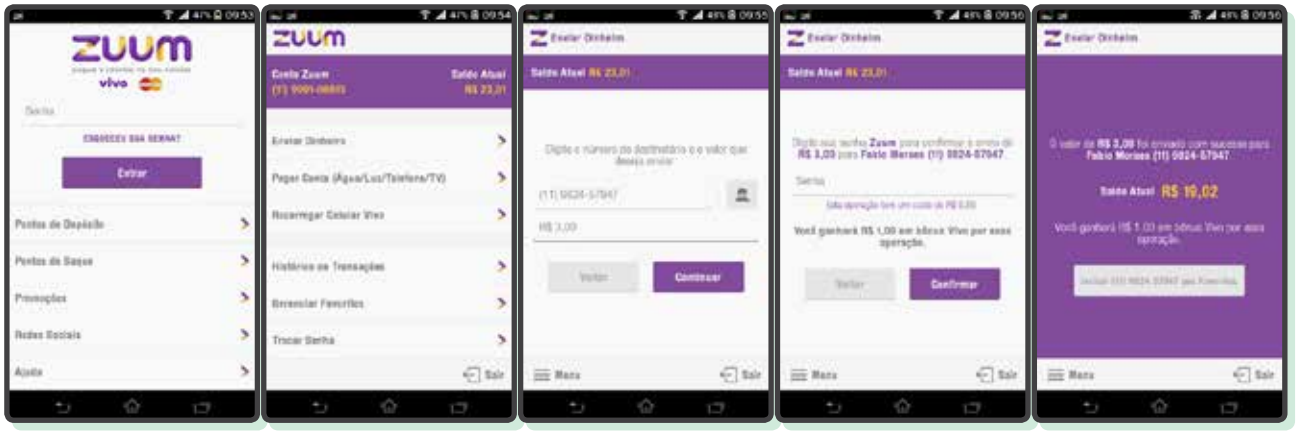
There are multiple paths by which greater mobile internet access and smartphone adoption can impact digital financial inclusion, particularly mobile money and mobile financial services. At a very basic level, the industry could expect enhanced user experiences, development of even more innovative products, and greater competition. By de-linking the SIM card from the mobile money service, smartphones can lower barriers to entry for a greater diversity of players to capitalise on the mobile money opportunity, disrupting existing models. At the same time, web-based interfaces and mobile money apps can allow telcos to increase the size of their addressable mobile money market beyond their GSM customer base. Diverse scenarios can emerge in different markets, as is further discussed in this White Paper.

Enhanced user experiences for mobile money

Mobile money providers can significantly improve their existing service offerings for smartphone users, namely by introducing apps with rich user interfaces and enhanced functionality. Mobile money providers are already heading in this direction, particularly in East Asian and Latin American markets. To highlight just two, Globe's GCash in the Philippines developed a mobile app for Android in 2012. Zuum, the Brazilian mobile money joint venture between Vivo and MasterCard, introduced an app just months after launching. For the time being, such applications are openly available to any Android smartphone user, though account opening is limited to Globe and Vivo customers, respectively.

FIGURE 1
GCASH APP SCREENSHOTS

FIGURE 2
ZUUM APP SCREENSHOTS



Smartphone applications for mobile money can potentially address some of the user-experience limitations of USSD, including session time-outs and user error. Additionally, the ability for providers to update their applications at a relatively lower cost can potentially result in continual improvements for customers.

Since smartphone operating systems offer a common platform for developers—spanning specific devices and equipment manufacturers—mobile money apps can leverage a host of other functionalities, including integration with other features like contacts, calendars and maps. Mobile money applications could also potentially be integrated as a source of payment for app store purchases, as well as other mobile commerce opportunities.

App-based mobile money could also help to address customer frustration associated with common limitations in the agent network: a lack of proximate and liquid agents. An agent locator feature, as is displayed in Figure 1, can be particularly useful for new customers. We could also conceive of features that empower customers to rate agents on customer service or liquidity metrics. From the perspective of the provider, advanced analytics from richer data could allow for greater predictability of agent liquidity needs and more effective agent management. Providers would be better equipped to improve the quality of their agent network, thus improving the customer experience.

Overall, the feature-rich interfaces and greater functionality on smartphones can offer more intuitive customer experiences, potentially easing adoption and usage.

New product development linked to mobile money accounts

Greater smartphone penetration may lead to an accelerated pace of new product development on the mobile money rails. New products can range from money management apps for existing mobile money accounts to more sophisticated mobile financial products. While this can be a vertically integrated process led by in-house product development teams within mobile money providers, we are likely to witness a move towards disaggregated value chains with third parties offering software to layer new products on existing platforms.

In Kenya, developers are already targeting M-PESA customers with smartphone apps, though primarily for money management purposes. For instance, pesaDroid and m-ledger help customers keep track of their M-PESA transactions and generate monthly statements. These new products are beginning to show the potential of apps to turbo-charge basic mobile money accounts for personal and business use.

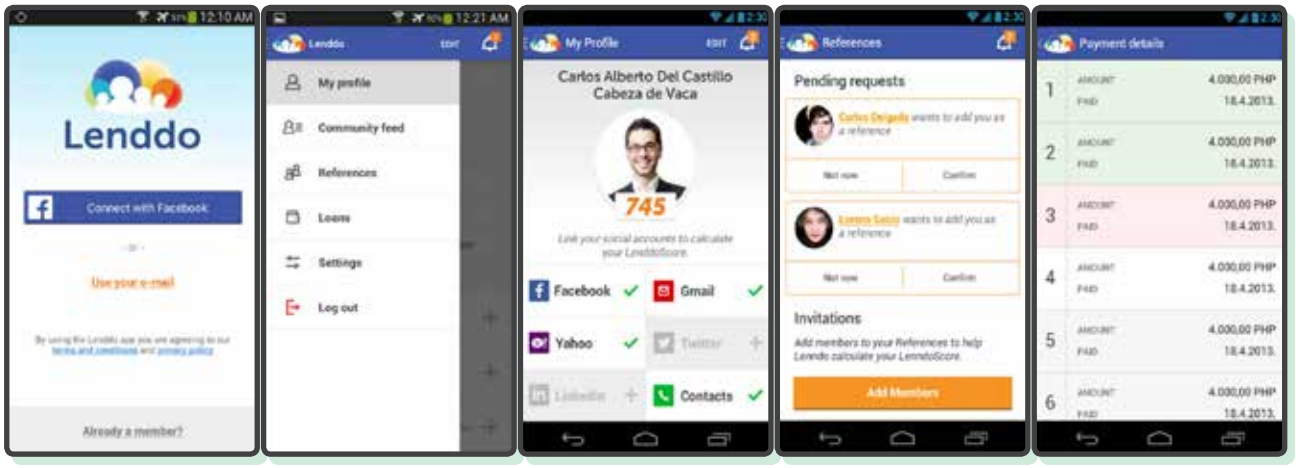
FIGURE 3
PESADROID APP SCREENSHOTS

We expect a great deal of mobile financial services product development as more mobile money users get online. The rich data trail mobile internet users leave behind can unlock a set of analytics innovations to inform new product design along with more effective marketing and risk controls. While we have yet to see this play out, existing web-based financial products can give us an indication of what to expect.

Social Money, a financial services technology company, offers a range of online savings solutions for consumers and businesses. Their white-labeled GoalSaver application for financial institutions can be integrated with banks' existing core processing platforms. It allows banks to offer their customers the ability to create multiple savings goals within a single savings account, and manage progress towards goals through data visualisation and integration with social networks. Linked to a mobile money account as a source of funds, and optimised for low-income segments, such customisable savings products can be a powerful financial tool for customers new to formal financial services.

There have also been major advances in measuring credit-worthiness for individuals with little financial history. Algorithms using alternative data sources, including airtime purchases, are already making this possible in the absence of smartphones. New mobile data streams may accelerate the development of new credit products. For example, Zestfinance uses Twitter, Facebook, Google and other online data sources to develop individual credit scores. Lenddo seeks to leverage social capital from social networking sites as collateral for loans, bringing the self-help group model online. We could conceive of similar business models applied to mobile money users with smartphones.

FIGURE 4
LENDDO APP SCREENSHOTS



Greater competition

It is undeniable that the internet can disrupt industries, enable new business models and drastically lower barriers to entry for non-traditional players. Already we are witnessing interesting developments with regards to over-the-top (OTT) players entering the mobile financial services space. Facebook recently announced that it is preparing itself to provide remittance and e-money services, potentially turning parts of its site into a mobile payments platform.[12]

As such, an important consideration for mobile financial services relates to the role of the mobile operator. Most mobile money services today rely on telco assets for authenticating customers and transmitting data, providing secure communications channels for customers to interact with their service (USSD or SIM toolkit). As more target customers have access to data-enabled smartphones, will telcos risk dis-intermediation, or capture a greater slice of an expanding pie? Who will be the winners and losers?

Multiple factors affect the risk potential for operators and other existing mobile money providers. One way to explore the dynamics at play is to evaluate different parts of the mobile money value chain and the essential assets necessary for mobile money at scale. For instance, a distribution network for cash-in and out, or the agent network, is critical for the unbanked to convert cash to electronic value and vice versa. A strong, trusted brand is also necessary since customers need to know their hard-earned money is safe. Moreover, an enabling or non-prohibitive regulatory environment is necessary for mobile money to flourish. Regulation provides restrictions on who can issue e-money and affects the business models that can be employed in a given market.

The distribution network for cash-in and out is particularly difficult and costly to build-out and manage. The shift to a cash-less society is likely to be more arduous than the transition to smartphones and it is likely that agent networks will continue to be a core pillar for mobile money for the unbanked, long after smartphones fully penetrate markets.

12. "Facebook targets financial services", FT.com, 13 April 2014

Scenarios for Smartphone-based Mobile Money

The implications discussed here point to a more complex mobile money value chain with a greater diversity of players and more interesting products for customers. Yet the evolution of mobile money in a digital era may well be path-dependent in some markets, or completely disrupted and transformed in others. We can conceive of various scenarios for the future of mobile money, not mutually exclusively or collectively exhaustive:

1. **Dominant mobile money provider grows market share.** Mobile money providers that have aggressively invested in customer acquisition and agent networks may find a greater penetration of smartphones to be a significant opportunity to expand and enhance their services. If a mobile money provider has managed to position itself at the center of the ecosystem in a low-tech world, it can theoretically capitalise on the mobile data opportunity early and retain an advantage. The mobile data opportunity may be especially attractive for mobile operators that would like to reach customers outside of their GSM customer base through mobile money apps. Mobile operators can choose to allow non-GSM customers to register for their mobile money service, thus expanding the size of the pie.
2. **Traditional financial service providers make a comeback.** Financial institutions that are serious about reaching unbanked segments eagerly await a mass adoption of smartphones. In the meantime, we see the likes of Equity Bank in Kenya and Bancolombia in Colombia acquire mobile virtual network operator (MVNO) licenses to circumvent costly and heated commercial partnerships with mobile operators in their respective markets. We will likely see players such as these reinvigorated when the communications channel is democratised.
3. **Over-the-top (OTT) players provide global payments platforms.** Global OTT players (e.g., Facebook, Google) are making headlines with announcements and speculation on their plans in the payments space. Such players could dis-intermediate existing mobile money providers, diminishing their role to a discrete and limited part of the value chain. With their international reach, OTT players could be particularly effective for cross-border remittances. However, to reach unbanked segments, these players will need to partner with existing physical distribution networks for cash-in and out, at least initially. PayPal, for example, allows unbanked customers in the U.S. to load their accounts through Green Dot's MoneyPak at large retailers. We could potentially see similar partnership models emerge in developing markets between OTT players and retail networks.
4. **Complete disruption with new virtual currencies, outside of the formal financial system.** Over the next several years, entirely different models currently difficult to imagine could emerge and transform digital financial services. Decentralised currencies such as Bitcoin, while markedly different from mobile money, can provide a means of financial exchange through necessary digital connections to the internet.[13] Regardless of Bitcoin's prospects as an alternative to national currencies, experts suggest that "its key engineering elements offer us the possibility of imagining a radically different approach for architecting electronic payment systems."[14]

As of today, no single group of stakeholders in developing countries has the assets required to offer an end-to-end proposition within a digital financial services ecosystem. Well-structured partnerships could allow players to leverage their strategic advantages more efficiently in meeting customer needs.

13. CGAP Brief: Bitcoin Versus Electronic Money, January 2014: http://www.cgap.org/sites/default/files/Brief-Bitcoin-versus-Electronic-Money-Jan-2014.pdf
14. Mas, Ignacio, "Why you Should Care about Bitcoin—Even if you don't Believe in it," April 2014: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1769124

The Road Ahead

While we are optimistic about the greater accessibility of mobile internet and smartphones in developing markets, we recognise there are considerable challenges ahead with regards to what this could mean for mobile financial services.

For one, it may be years before mobile data access and smartphones reach the 'last billion'. Material gaps remain in mobile penetration and coverage, particularly in markets where financial exclusion is most acute. According to GSMA Mobile for Development Impact, total mobile unique subscriber penetration is still less than 50% of the population on average in emerging markets, in contrast to the commonly cited, but misleading, SIM card penetration of 90%.[15] It is no surprise that rural communities are most frequently left behind. Access to shared devices at the household or community level is also common, thus limiting mobile financial services uptake.

Secondly, mobile content today lacks relevance to developing markets. The GSMA's Digital Inclusion initiative surveyed operator groups on the barriers to the take-up of mobile data in Africa, Asia and Latin America. Initial feedback suggests that the lack of availability of local content is a key barrier, along with the total cost of access and literacy.[16] The development of local content that takes into account language and local priorities, for example, will be necessary to propel the shift to more high-impact mobile financial services. Customisation is, in fact, what makes new mobile product development so exciting.

Thirdly, mobile data access does not imply mobile money will take off. Struggling mobile money deployments today would not cite technology as a top barrier to adoption. Having access to the technology is a necessary pre-condition, but is clearly not enough to suggest that a particular outcome will materialise. A compelling value proposition for consumers, a strong business case for each of the players along the value chain, and an enabling regulatory environment, at minimum, are necessary to drive mobile money uptake and usage.

Notwithstanding the challenges ahead, we will surely witness an exponential growth in demand for mobile broadband, and mobile operators are likely to benefit from this rising demand. Whether or not they can also maintain a competitive edge in mobile money provision will vary across markets. Investing in scaling mobile money today and generating the trust of customers can help providers position themselves to take advantage of tomorrow's mobile internet opportunity.

15. GSMA Mobile for Development Impact, Mobile Platform Wars, February 2014
16. Ibid

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