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From the Editors’ Desk

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Introduction
The ubiquity of mobile phones has changed the way we interact with each other and opened up exciting and unexplored avenues for businesses. The potential of the mobile phone is vast, as it is poised to become, with the advent of smart phones, the ultimate personal device—doubling as everything from a camera, to a personal computer to yes, a mobile wallet/ ATM/ Bank.

So, what is a mobile money transfer? A mobile money transfer is the transfer of cash/ credit from one entity to another, using a mobile device. Mobile money transfers typically involve sending money using the Short Message Service (SMS). However, there are other technologies as well. This transfer can be Customer to Customer (global remittances), Customer to Business, Business to Customer, or even Business to Business.

This article seeks to examine the drivers for the mobile money transfer business and its market segments, key stakeholders, trends, opportunities and challenges. With the increasing pervasiveness of mobile phones and the need for nontraditional channels for money transfers, the mobile money transfer business is poised for rapid growth.

The major advantages of mobile money transfers are lower costs, faster speeds and ease of access. This is especially true in third world countries, where technology sublimation has resulted in a relatively strong mobile infrastructure (as opposed to conventional infrastructure) and where services have signed up millions of users.

The World Bank estimates that in 2008, India alone was responsible for US $45 billion in mobile remittances. China added another US $40.5 billion. Immigrants all over the world are sending money back to their home countries, and vice versa. For banks, the question should be: How are they sending this money, and how will they send it in the future? Due to its ubiquity and relative ease of use, many believe the answer is mobile. This article examines mobile money transfers—the movement of money from one entity (usually an individual) to another, using a mobile device. The drivers of the mobile money transfer business, the technologies available and the primary market segments are analyzed. Additionally, the challenges and opportunities are presented—providing your bank a primer on this potentially lucrative business.

Mobile Money Transfers: Opportunities and Challenges in an Evolving Market
Furthermore, from a bank’s perspective, the Telecom dominance of mobile applications is on the wane, thanks to smartphones and application stores that make the development of mobile applications a lot easier.

However, there are significant risks. The challenges include—increasing the consumer adoption rate, handset capabilities, customer education, minimizing costs (both for the company and the end user), the lack of a common technology platform for all mobile devices, network coverage, security, and regulatory risks (implementing regulation).

With this article, a reader should be able to understand the basics of the mobile money transfer industry. The reader should be able to understand the drivers for mobile transfer, the technology behind it and how it works, the primary market segments, the opportunities in the industry, and the potential threats.

**Business Drivers**

Remote banking is not a very new topic. As a concept, it has been doing the rounds since the advent of the internet—really bursting onto the scene in the early 2000s when online banks and online share trading companies/wealth managers were available in the thousands. Nowadays, nearly every bank and financial services company has an online delivery channel.

Recently, the push has been toward the mobile channel. Mobile technology helps banks offer consumers a variety of services—such as viewing and updating their stock portfolio on their mobile phone, bill payment, purchases, and money transfer to different accounts. So, what is the advantage that businesses see when it comes to mobile money transfers?

**Global Remittances as Engines of Growth**

Despite the global economic downturn, the transfer of money and remittances will continue to occur, albeit in smaller amounts. This is especially true in cases of global remittances, which are usually immigrant driven (see Figure 1).
Wider Reach

Through mobile money transfers, because of the ubiquity of the mobile phone, financial institutions will be able to reach remote regions of the world that were previously inaccessible due to infrastructure constraints.

New Services

Mobile money transfers can serve as a platform for building a low cost, high volume, convenient service. There are huge avenues for growth in microfinance and low cost banking.

Opportunity to Leverage Existing Infrastructure

Mobile money transfers provide multi-country service providers (e.g., Vodafone and T-Mobile) an opportunity to leverage their existing infrastructure to increase revenue.

A Closer Relationship with the Customer

Various service providers declare that customers use and think about their cell phones more than they do their credit cards or banks—these "relationships" are stronger, and always "on".

Various Types of Money Transfer

The mobile money transfer market is in a fairly nascent stage. Even so, there are a variety of methods that banks are offering to consumers to enable the mobile money transfer process. A snapshot of three popular methods is provided in Figure 2.

Short Messaging Services (SMS)

SMS is a rapidly growing method of mobile money transfers. Here, the sender initiates a transfer request, using an SMS message. The money transfer agent then either applies a charge to the sender’s phone bill, or debits the sender’s mobile wallet. SMS is not without its issues—there are chances messages may get lost and may not be secure. Also, the user experience in typing messages on the keyboard is a deterrent.

An advanced form of the SMS money transfer is accomplished using Unstructured Supplementary Service Data (USSD), which is based on sessions and is more secure. User experience can be improved by creating intuitive applications, and it can be implemented independent of a wireless service provider.

Mobile wallets are typically used with the SMS transfer services. However, they can also be used with direct operator billing and the Wireless Application Protocol (WAP). As their name suggests, mobile wallets are typically used to house virtual money. Users

Three Popular Mobile Money Transfer Methods

<table>
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<th>Method</th>
<th>Description</th>
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| SMS & USSD      | - Sender initiates request using SMS  
                 - Money transfer agent either applies a charge to the sender’s mobile wallet |
| WAP             | - Users access internet using WAP from mobile phones and initiate money transfers |
| Direct Operator Billing | - Services are charged to user’s mobile bill                                   |
build up credit on their mobile wallets through credit cards, debit cards and other payment services commonly used to make payments across the internet. The users then can use this virtual money to transfer money.

A typical money transfer has the following steps (see Figure 3):

- The sender builds up credit in his mobile wallet using a payment service - like PayPal - or by using credit cards.
- Then, using the mobile wallet service provider, the sender initiates a payment with a money transfer service provider.
- The money transfer service provider receives the money in the sending currency and after deducting a fee, sends the payment to the receiving mobile wallet service provider by the due date. The transfer of money usually follows the traditional means of payment—wire, ACH, etc.
- Both the money transfer service provider and the receiving mobile wallet service provider notify the receiving customer about the transfer through the wireless network of the receiver.
- The receiver can then use the credit in his mobile wallet for payments, or he can transfer the money to his bank account.

**Direct Operator Billing**

The sender of the payment can go to a money transfer company - e.g., Western Union and MoneyGram International - and choose to pay for the transfer, using the mobile billing option. He authenticates the payment like any other credit card payment, using a pin and a password. While this is not strictly a mobile money transfer, it is an alternative method that does not use credit cards or solutions like PayPal. The sender can transfer money directly from his mobile wallet. This method is convenient and payments can be made instantaneously. It is also more secure because of the use of a pin number and password. The cost to operators is lower and the method is reliable.

**Mobile Web Payments (WAP)**

With the arrival of smart phones, this method of money transfer has really taken off. The difference with this technology is that instead of using SMS or other traditional technologies for transmitting data, this method uses WAP. The user can use the traditional means of payment, using WAP-enabled web pages, or as in the case of the latest devices, applications that run on it.

WAP is a proven technology, with infrastructure support, and payments
through WAP are quick and secure. Also, since it is similar to payments on the Internet, the learning curve is not steep.

**Market Segments**

There have been primarily three reasons for the growth of mobile money transfers in countries around the world.

1. **Restricted access to traditional financial institutions:** In developing economies—such as Africa and the Indian subcontinent—a large percentage of population does not have access to traditional banking mechanisms—like ATMs, banks, and money transfer companies. In fact, it is estimated that 2 billion people can be counted among the ranks of the unbanked.

2. **Use of mobile phones as primary communications infrastructure:** Coincidentally, these areas of the world also bypassed the traditional telecom revolution and are adopting mobile phones as the primary mode of communications. Africa, Latin America, the Indian subcontinent, South East and Middle East Asian countries have been high growth geographies. According to the International Telecommunications Union (ITU), subscribers of mobile phones worldwide topped US 4.6 billion in 2009.

3. **Recipient of international remittances:** The migrant worker population from these geographies sent billions of dollars in the form of international remittances to their home countries (e.g., per the Reserve Bank of India, India received US 40 billion in inwards remittances in 2008). Mobile money transfer has been increasingly found to be the most convenient method of initiating remittance, when workers are not able to create a relationship with traditional financial institutions.

**Stakeholder Analysis**

Following are the key stakeholders in the mobile money transfer space—all will impact the success of any business model (see Figure 3).
**Financial Institutions**

While mobile communications have vastly improved the reach of financial services that can be offered to unbanked and underbanked customers, financial institutions play a key role in the business model. Financial institutions provide many important functions which lead to the successful servicing of customers.

Banking infrastructure, Know Your Customer (KYC) norms, handling foreign exchange, clearing, settlement, and cash facilities are important contributions of financial institutions to the mobile money transfer ecosystem. Some major financial institutions already in forefront of capturing business opportunities in the mobile money transfer space are: United Bank of Africa, MasterCard, Western Union, and Money Gram.

**Regulators**

While countries and geographies have different regulatory requirements, a few key requirements are consistent across the board: Anti-Money Laundering rules, KYC norms, currency deregulation, cash handling, and regulatory reporting. Based on each country's unique requirements, the business model (under which different stakeholders operate) changes. For example, mobile operators can handle all financial instruments, if regulators grant them appropriate licenses.

**Network Operators**

Network Operators provide access to communication infrastructure, hookups with financial institutions, and support to replace cash in the “last mile”. They play a crucial role in providing access to money transfer services to millions of people that are underserved by traditional financial institutions. Network operators, in turn, benefit from increased usage revenues, new customers, and up-sell revenue opportunities. Some network operators already providing successful services are Safaricom and Celcom.

**Service Providers**

While network operators and financial institutions provide the infrastructure to support mobile money transfers, service providers play a key role in making the entire business model palatable to consumers. They provide important functions of supporting mobile wallets, mobile applications, marketing and branding efforts.
Some successful service providers are - OObpay, Mpayy, Smartmoney, Fundamo, and Trivnet.

Opportunities

1. There are opportunities available for businesses if they understand how technology can be used to transform existing business models, as well as create new ones. There is a potential for a wide range of products and services that stem from mobile banking/mobile money transfers. Some of the available opportunities are in:
   - Micro Credits
   - Insurance Payments
   - Payroll
   - Utility Bill Payments
   - Mass Transport
   - Government payments (like tax, etc.)
   - Mobile Payments

2. Mobile phone manufacturers need to consider how to provide mobile devices that suit the needs of the market, but also drive it in new directions. This can be accomplished by providing an open architecture and tools that allow new applications to be developed on their devices and platforms.

3. Providing services - like mobile wallets and money transfers - across regions may be an opportunity to tap into new revenue streams at little or no additional cost for large, multi-geography network service providers like T-Mobile and Vodafone.

Challenges

In conjunction with mobile payments, the tremendous potential for mobile money transfer as a business model has been understood for a few years now. However, due to various challenges and constraints, this sector has not been able to reach its true potential.

Convincing customers of the value proposition

While there may be early adoption in a few selected geographies, increasing usage in other areas may provide steep challenges. This can be due to many reasons, including the lack of a strong value proposition to the customers. Mobile money transfers must be easy to use and a convenient extension of a consumer's normal payment activities.

Common standards and interoperability yet to be developed

With any new technology and business model, there seems to be considerable chaos and lack of standards. GSM World is collaborating with many stakeholders to provide a common forum that might ultimately lead to common standards for mobile money transfer. When a common technology platform for all mobile devices is available, it will be easy for firms to create and launch new products and services. A common framework is essential to ensure mass adoptions and large scale implementation.

Security concerns

Legitimate security concerns do act as a deterrent to the adoption of mobile money transfer. Until mobile phones are relatively secure from hacks, security will always be an issue.

Handset capabilities

Mobile money transfer will be a non-starter, until certain technologies are available at a lower cost. While there are mobile phones with the ability to handle the features and the data required for mobile money transfers, these handsets are still expensive. It is vital, especially in developing economies, to come up with a viable and affordable handset that has the capability and the flexibility to build applications.
Improvements need to be made in providing an affordable and user-friendly technology, to provide satisfying and consistent user experience.

**Minimizing costs - both for the company and the end-user**

One of the major drawbacks of conventional modes of banking is the prohibitive cost to the financial institution in taking the services to the end consumer. While this is taken care of to a certain extent using mobile technology, the cost of developing solutions for the platform is still significant. There are also end-user costs associated with using up bandwidth.

**Network coverage**

To support industry-based implementation of mobile transfers, mobile networks need to be able to deal with large amounts of traffic at high speed. The availability of coverage is vital to the success of mobile banking. This is a challenge in developing nations, where the highest volume of money transfers takes place where the infrastructure simply doesn't support the volume of data to be transferred.

**Regulations**

Since mobile money transfers also involve third party service providers (e.g., network companies) across multiple countries, regulation becomes very complicated. As it has been stressed before in this article, it is imperative to come up with a set of standards and protocols for mobile money transfer that will provide a framework for regulatory policy making. Bad regulatory policies run the risk of killing the whole industry in one fell swoop. Though all security and financial concerns must be addressed, it is essential that the regulations are not draconian.

**Conclusion**

A large global immigrant population coupled with the rise of the mobile phone has laid the groundwork for a potentially lucrative mobile money transfer marketplace. Through the use of SMS, USSD, and WAP-based applications, consumers and businesses alike can transfer money to one another all over the world. For banks and other financial institutions, this space is brimming with potential—a range of mobile money transfer-based products and services and a built-in connection with the consumer (the mobile phone). However, the challenges are also numerous. Lack of a standard mobile platform is holding back the development of applications. Security is an issue, due to the relative ease with which mobiles can be hacked. Finally, mobile money transfers must be easy, intuitive, and cheap for consumers to use. As this space evolves, financial institutions and service providers must ensure that all stakeholders are satisfied. Only then, will mobile money transfers become as ubiquitous as the mobile itself.
### Global Presence

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<td>Brisbane, Dubai, Hongzhou, Hong Kong, Manila, Mauritius, Melbourne, Perth, Riyadh, Singapore, Shanghai, Sharjah, Sydney, Tokyo</td>
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