

# Mobile Money Interoperability: Outlook and Implications

## International developments will drive domestic interoperability

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### SUMMARY

#### In a nutshell

Interoperability is critical to connecting the multitude of mobile money services around the world, and furthering the development of the mobile money market. While the technical challenges related to interoperability can be overcome, there is still uncertainty surrounding the business considerations of mobile money providers, which continue to emphasize the exclusivity of their services. Ovum expects that the increasing requirement for interoperability for international mobile remittances will drive the adoption of domestic interoperability from 2013.

#### Ovum view

Interoperability between mobile money services will accelerate in the next two years. Most existing mobile money services are not interoperable, meaning that users cannot send or receive money from customers using other mobile money services. There are a number of technical and business reasons for the current lack of interoperability. While solving the technical issues involves dealing with complex flows of transactional data and money between disparate mobile operators, banks, systems, and currencies, they can be overcome. However, a more significant barrier to increased interoperability is the desire of mobile money providers to retain the exclusivity of their services.

Belgacom International Carrier Services (BICS), Ericsson, and Visa have developed interoperability solutions that demonstrate that the technical challenges to interoperability can be overcome, even in the more challenging international mobile remittances segment. As a result,

business considerations are proving to be more significant barriers to the wider adoption of interoperability. Most operators believe that the exclusivity of mobile money services is crucial in gaining an advantage over their competitors at this early stage of market development. Ovum believes that this attitude displays a lack of foresight as the adoption of interoperability will lead to rapid market growth and greater revenues in the long term. Any market that does not introduce mobile money interoperability will be limited in its long-term prospects unless a single player has a dominant market share, such as Safaricom's 75% share of the Kenyan mobile money market.

Ovum believes that the increasing focus on international mobile remittances will drive the adoption of domestic interoperability. In the short term, we expect operators to continue to focus on interoperability in the lucrative international remittances segment as it will not interfere with domestic exclusivity. However, domestic interoperability will begin to emerge from 2013 as the number of mobile money services increases, operators better understand the technical challenges, and users demand that operators provide interoperability.

BICS, Visa, and Ericsson's services indicate that the hub model, where a third party stands as an intermediary to switching transactions, will be the most likely approach adopted for domestic and international interoperability. However, rather than a single hub, we expect the number of domestic and international hubs to grow and connect to each other. The competition between the different hubs will lower commissions and further drive the adoption of mobile money interoperability.

## ANALYSIS

### The importance of interoperability

#### Strong growth but services are isolated

Mobile money services continue to generate considerable interest, activity, and investments from service providers, banks, vendors, regulators, and non-government organizations. As outlined in Ovum's report *Mobile Money in Emerging Markets: 2010–15 Outlook*, there are now a considerable number of mobile money deployments and subscribers. According to the GSMA Deployment Tracker, there were 124 mobile money deployments at the end of 2011. Ovum estimates that there are currently approximately 100 million mobile money subscribers around the world.

The unbanked segment in Africa and Asia-Pacific have been the key drivers of growth, with services such as M-Pesa in Kenya, Smart in the Philippines, and True in Thailand reporting impressive results. The entry of payment heavyweights such as Visa, Mastercard, and eBay (PayPal) as well as other major players such as Google, Ericsson, and Nokia mean that the adoption of mobile money services will also increase in mature markets. Despite the significant penetration of banking and payment services in these markets, the growing penetration of smartphones and the increasing prevalence of near-field communications will create opportunities for a number of payment applications.

There is currently little or no interoperability between different mobile money services, with most offerings currently operating as isolated service islands. With the exception of international remittances between some of the more successful services, most users cannot send or receive money from users affiliated with other mobile money services.

#### Interoperability will lead to rapid growth

In the same way that SMS interoperability stimulated massive volume growth in the late 1990s, Ovum believes that mobile money interoperability will lead to a considerable increase in the number of mobile payment transactions. Transaction volumes in any network are driven by the number of interconnections possible between subscribers. In turn, the number of possible interconnections is roughly equal to the square of connected users. This relationship is commonly referred to as "Metcalfe's Law".

An illustration of the application of Metcalfe's Law in mobile money services is outlined in Table 1. Without interoperability mobile money users can only conduct transactions with other users on the

same mobile money service. As shown in Table 1, Player C has 2 million subscribers, which means that it has 4 billion possible connections within its network. However, if Player C adopted interoperability with all the other networks in its markets, it would have 100 billion possible connections. While interoperability is of greater benefit to smaller players, larger players can also benefit from its introduction. In our example, Player A, which is the largest player in the market, can enable four times more transactions by establishing interoperability with other operators in the market. The ability to drastically increase the number of potential mobile money interconnections is the key reason why mobile money operators should look to introduce interoperability as soon as possible.

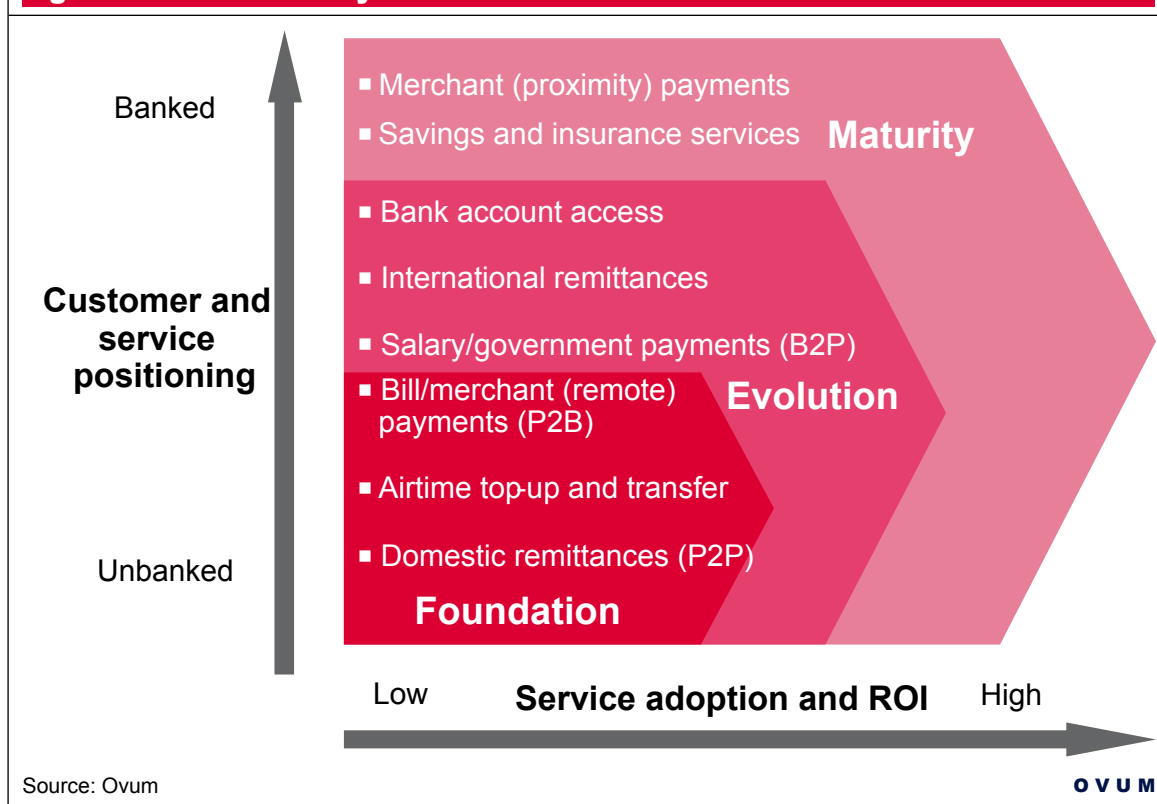
**Table 1: The impact of interoperability on mobile money interconnections**

	Market share (%)	Subscribers (000s)	Interconnections without interoperability (000s)	Interconnections with interoperability (000s)	Increase in interconnections with interoperability (No. of times)
<b>Player A</b>	50	5,000	25,000,000	100,000,000	4
<b>Player B</b>	30	3,000	9,000,000	100,000,000	11
<b>Player C</b>	20	2,000	4,000,000	100,000,000	25
<b>Total</b>	100	10,000	38,000,000	100,000,000	2.6

Source: Ovum

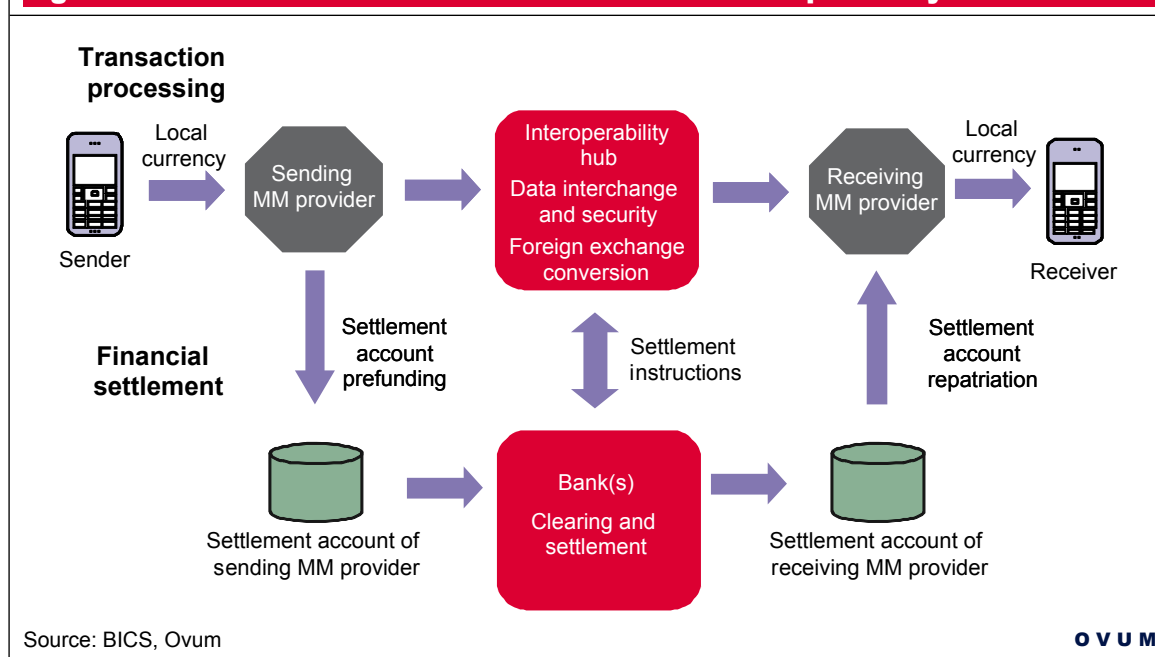
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As outlined in Figure 1, interoperability is important for domestic and international mobile remittances, but is less relevant to other mobile money services such as bill and merchant payments. As a result, emerging market players that have focused on bill payments as their foundation service have fewer incentives to introduce interoperability than those that focused on remittances. However, remittances have become such an important part of the entire mobile money ecosystem that they have elevated the issue of interoperability to the center of mobile money proposition development.

**Figure 1: Mobile money service and feature set**

### The challenges of interoperability

The technical complexities associated with mobile money interoperability are one of the major reasons why operators have not made more efforts to introduce it. As Figure 2 shows, there are complex flows of transactional data and funds that need to be coordinated and managed across disparate mobile operators, banks, systems, and currencies. Ensuring that data interchange, data integrity, and effective clearing and settlement are managed correctly is not a simple task, particularly for players without financial expertise. However, company's such as BICS, Ericsson, and Visa are beginning to address and resolve these issues in smaller scale implementations.

**Figure 2: Transaction and financial flows in an interoperability scenario**

While technical complexities have been a major barrier to the greater adoption of interoperability, there are a number of business considerations that are playing a more important role in operators' hesitancy to adopt the solution. Most operators state that interoperability will be an important and necessary step, but that it is not a key issue at the moment. Many operators believe that having exclusivity is more important in gaining an advantage over their competitors at this early stage of market development. This is demonstrated by the fact that operators have only seriously focused on enabling international interoperability. In domestic markets, most operators and banks are still trying to gain an edge over their competitors with their mobile money offerings.

## Approaches to interoperability

### Three players staking an early claim

In the past two years, BICS, Ericsson, and Visa have all made moves to position themselves as hubs for mobile money interoperability. These players have focused on the international remittances market, where transaction volumes, amounts, and margins are high, and there is limited operator resistance. BICS has the most advanced interoperability solution of the three companies, having launched its solution in early 2010. Ericsson and Visa entered the market in 2011. Ericsson and Visa have combined their interoperability solutions with technology platforms

and retail mobile services. However, the potential for these elements to compete with existing mobile money services could cause concern among some mobile money operators.

## **BICS**

BICS' HomeSend has emerged as a leading hub for international mobile money remittances. It launched in early 2010 through an agreement with Globe Telecom's G-Exchange, the operator of G-Cash. Since then, HomeSend has added a number of mobile money operators to its customer list, including MTN, Maroc Telecom, VNPT, Smart, and a number of banks. As of late 2011, BICS claimed that its ecosystem connected a total of 300 million mobile money customers.

HomeSend is based on a platform from eServGlobal, and uses BICS international clearing network. It is exclusively focused on international mobile money remittances, with BICS acting as a hub for transaction processing and foreign exchange conversion. BICS also orchestrates the financial settlements, which are done between the sending and receiving operators' banks.

Unlike some players, BICS provides a transparent view of HomeSend's business model and revenue sharing arrangements. The commissions charged by HomeSend typically range from 4.5–6.5% of the amount sent. By setting its commissions at this level, BICS is looking to undercut alternatives such as Western Union, which charges commissions of 10–20%. HomeSend typically keeps 1.5% of the commissions, with the rest shared between the sending/receiving mobile money operators and their agents.

BICS has utilized its first-mover advantage to gain considerable traction with large mobile money operators in emerging markets. As other more experienced players such as Visa enter the market, it will be interesting to see whether BICS can maintain its momentum. Visa has a broader platform focus than BICS, and is already establishing relationships with some of BICS existing customers.

## **Ericsson**

Ericsson entered the mobile money interconnection market in early 2011 with the launch of Ericsson Money. Besides providing interoperability services, Ericsson Money includes mobile money technology and integration solutions for operators, and a consumer mobile wallet service.

Ericsson's interconnection solution – which is modeled in a similar way to BICS' HomeSend service – is designed to combine the two other elements of its proposition. It includes standard services such as transaction processing, foreign currency exchange, and clearing and settlement services between sending and receiving parties.

The uptake of Ericsson's interconnection service among operators and banks is unclear. So far, Ericsson has announced agreements with Filipino operators Globe and Smart to connect their mobile money services with its consumer offering. Ericsson has also announced a deal to provide mobile payment services to the social networking site Badoo in the UK.

## **Visa**

Visa entered the mobile money interoperability market in November 2011 with the announcement of its Mobile Prepaid product. Visa had signaled its intention to enter the mobile money space in May 2011 when it acquired Fundamo, the leading mobile money platform in emerging markets.

Mobile Prepaid is essentially a Visa prepaid account that is linked to an existing mobile money account rather than a plastic card. The service uses Visa's existing payment network, VisaNet, and Visa accredited merchants and ATMs to settle international remittances and payment transactions.

Visa has positioned its Mobile Prepaid service as a credible platform that can stand at the center of transaction authorization, clearing, and settlement services in the mobile money environment. Visa has particularly emphasized its advanced risk processing capabilities, and its ability to combine them with authentication features on mobile devices through Fundamo.

At launch, Visa announced that it had partnered with the MTN Group, a longtime Fundamo customer. MTN initially plans to introduce Visa's Mobile Prepaid product in Nigeria and Uganda, before expanding it to the other 10 markets where its MobileMoney mobile banking service operates. Several dozen emerging market operators and banks use Fundamo's platform for their mobile money services. There is little doubt that Visa and Fundamo will work hard to encourage these customers to adopt Mobile Prepaid as part of their offerings.

The commissions that Visa will charge mobile operators and banks that use its platform to clear and settle mobile-initiated transactions are still unknown. However, Ovum expects that these will not be significantly different to Visa's current commission structure for card payments.

## **Future outlook**

### **International developments will drive the adoption of domestic interoperability**

In the next 12 months, Ovum expects that mobile money operators and interoperability platform providers will continue to focus on international remittances to benefit from the large number of transactions and significant margins driven by regional migration flows. The international remittances segment will also be the less sensitive with mobile money operators that are looking to retain their competitive advantage over domestic competitors.



We expect that domestic interoperability will begin to gain traction from 2013. This will be driven by the increasing development of international operability, the growing number of mobile money deployments, operators better understanding the associated technical challenges, and users demanding that operators provide interoperability solutions. We believe that by 2013, these factors will outweigh the exclusivity and competitive advantage arguments that currently prevail among mobile money providers.

Ovum expects that the hub model will be the dominant approach of achieving interoperability at both domestic and international levels. However, rather than a single hub, we expect that multiple hubs will operate and interconnect with other hubs at a domestic and international level.

It is still too early to predict which player will emerge as the leading provider of a mobile money interoperability solution. While BICS has gained a strong early lead, the entry of Visa will be a significant challenger to all existing and future entrants in the market. We expect that other players will enter the market in the next 12 months as existing payment networks, banks, and vendors look to exploit the opportunity presented by interoperability hubs.

## APPENDIX

### Methodology

This brief was written following in-depth discussions with CellPay, Ericsson, Fundamo (Visa), Obopay, and extensive secondary research. It also utilized Ovum's ongoing research into the telecoms industry in emerging markets.

### Further reading

*Making Money from Mobile Money in Emerging Markets*. OT00030-011 (August 2011)

*Mobile Money in Emerging Markets: 2010–15 Outlook*. OVUM052840 (December 2010)

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