WHITEPAPER

Mobile - The ATM in your pocket

This whitepaper is an extract from:

Mobile Finance Services
Banking and Payment Markets
2007-2011

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Mobile ~ The ATM in Your Pocket

Introduction

There is much activity in the world of Mobile Financial Services (MFS) with representatives from key banks and vendors calling it the next new gold rush for financial institutions after the rush into eCommerce services in the 1990s. The CEO of Monitise, Alastair Lukies, said banks are now looking at mobile phones as their fifth channel to customers after branches, ATMs, internet banking and phone banking. ***"We want to be the remote control to your bank balance."*** The mobile phone is also being called the ***'fourth screen'*** for the delivery of mobile financial services.

A combination of increased user demand and a desire from all sections of the MFS ecosystem to deliver intelligent applications and services has created an atmosphere that is both creative and pragmatic. Gone are the days when mobile operators, banks and handset manufacturers went their own separate ways and developed silo services that were bound to fail.

Mobile financial services, that include both ***mobile banking*** and ***mobile payment*** applications and services are already available in most regions in a variety of formats, and where they are being adopted, either in trial or commercial mode, the user feedback has been very favourable.

This white paper introduces the reader to the main types of MFS and investigates market drivers/constraints and forecasts for them.

Mobile Financial Services (MFS) Definition

There are many forms of financial services and Juniper Research defines MFS as ***retail banking services offered to customers on their mobile phones***. There are two main categories for MFS; ***Mobile Payment*** and ***Mobile Banking***. This excludes insurance services.

Juniper Research has a simple definition of a ***mobile payment as "payment for goods or services with a mobile device".***

Our definition for ***mobile banking is "the provision of banking services to the mobile device".***

For both banking and payment services the primary method of communications will be via the mobile telephony network. However, there are some instances where the mobile telephony network is bypassed, e.g. a physical mobile payment system that uses contactless (NFC) technology.

Mobile Banking

There are four major categories for mobile banking, all of which enable the consumer to access a similar set of banking services as offered via Internet banking. The four categories are:

- Mobile Financial Information Services (includes financial messaging)
- Mobile Funds Transfer
- Mobile Bill Payment and Presentment (MBPP)
- Mobile Account Management and Customer Service

Mobile Financial Information Services

Mobile financial information services include balance enquiries, threshold-alerts for transaction limits, balance levels and stock prices, confirmation alerts on completion of placed orders.

Mobile Funds Transfer

Mobile funds transfer is when a customer transfers funds, subject to clearance and a ceiling, to another bank account.

Mobile Bill Payment and Presentment (MBPP)

Mobile bill payment and presentment (MBPP) is the mobile version of electronic bill payment and presentment (EBPP). Both MBPP and EBPP enable bills to be created, delivered, and paid over electronically. The service has applications for many industries, from financial service providers to telecommunications companies and utilities.

For the purposes of this report all bill payments made by the mobile phone user will be included, this includes, based on US banking classification, biller-direct bill to pay (where the payer uses the biller's, e.g. service provider, direct mobile internet website to make the payment), bank bill pay (bank service offering service for consumers to pay bills electronically using their mobile phone) and bank bill presentment (where the bill is presented electronically by the banks allowing the consumer to then pay the bill via electronic means).

Mobile Account Management and Customer Service

With mobile account management and customer services consumers can manage their accounts and communicate with their bank in a similar manner to walking into a local branch or ringing up a bank call centre.

Mobile Payment

Mobile payments are divided into two sub-categories:

- Remote Mobile Payment (RMP)
- Physical Mobile Payment (PMP)

The distinction between the two main methods of mobile payment is this; a remote mobile payment is when the storefront or retailer is remote to the mobile phone user, e.g. paying for digital goods or physical goods via a mobile web enabled retailer. A physical mobile payment is when the storefront or

retailer is physical, e.g. the payment is made in a physical storefront in the same way we would use cash or a plastic debit/credit card or at an unattended vending or ticketing machine.

Remote Mobile Payment (RMP)

This is currently the most popular mobile payment method and SMS is the dominant technology. There are many categories under the remote mobile payment header, and there is a high degree of overlap between each category. For instance payment to mobile phone bill is generally initiated by an SMS (Short Message Service), usually a PSMS (Premium Rate SMS), text message and P2P (Person to Person) payments also use SMS for the underlying technology. This means that a remote mobile payment method may be included in a number of categories. For this report categories include:

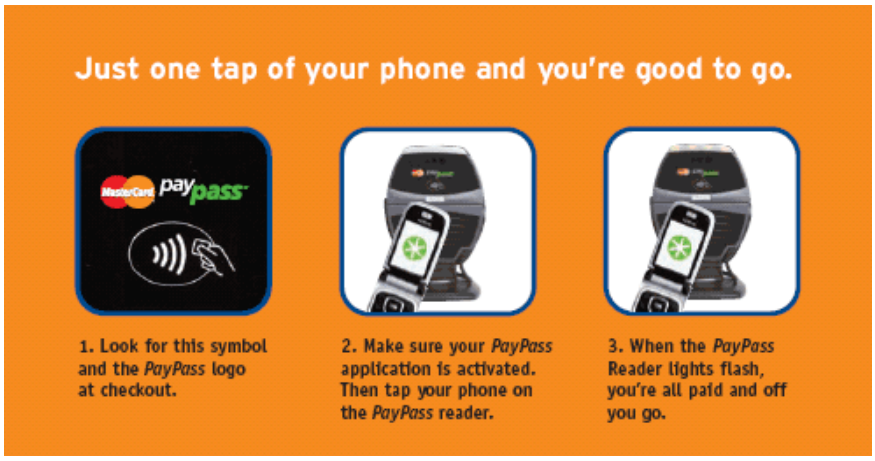
- Premium Rate SMS (PSMS)
- Mobile phone bill – "direct to bill" (D2B) payment
- Online – Payment for the Mobile Web WAP billing
- SMS payment – mobile wallet & account based payment
- Person-2-Person (P2P)

Physical Mobile Payments – PMP

Physical mobile payments are when the mobile phone is used at a physical location to make the payment. This has included trials with infrared, "point & buy" and SMS text, "text and PIN", where there is a text-based message communication between the consumer, the payment scheme operator and the retailer. The infrared schemes have not been successful as the technology is not particularly suited for use at the physical storefront; schemes in countries like South Korea have been abandoned.

There is much excitement in the industry concerning the prospects of NFC and contactless payments. There are already commercial deployments of contactless payments in Japan and South Korea using Sony FeliCa chip technology and trials using NFC-equipped phones in North America and Europe.

Figure 1: NYC NFC Trial 2007

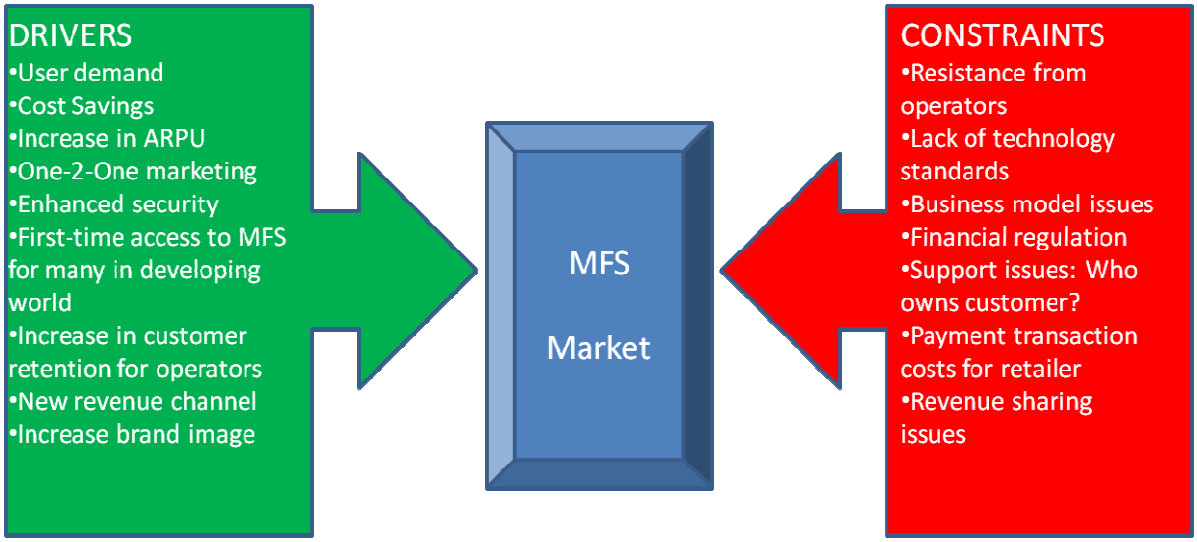


Source: MasterCard

Market Drivers & Constraints

There are compelling market drivers for the adoption of mobile financial services and equally many reasons why its adoption could be stalled. This section details the major market drivers and constraints for MFS. Figure 2 highlights these drivers and constraints.

Figure 2: Mobile Financial Services: Summary of Market Drivers & Constraints



Source: Juniper Research

Drivers

The primary drivers for the delivery and acceptance for mobile financial services include:

User demand

The mobile phone has become the tool that users will not leave home without. Surveys carried out by financial services companies, e.g. MasterCard, and service vendors, e.g. Sybase 365, tell us that users want to have the capability of using their mobile phones for banking and payment purposes.

Cost Savings

There is potential for financial institutions to reduce operational cost by using the "fourth screen", i.e. the mobile phone, as a delivery channel for financial services. There are a number of financial services that are being delivered, or being planned for delivery, to mobile devices that have significant cost benefits. For instance, the "mobile ATM" service could reduce the overhead of installing and maintaining a high-cost network of physical ATMs. Data from the USA is already pointing to the fact that there is a slow down in the physical ATM market and it cannot be helped by the deployment of intelligent mobile ATM solutions that allow mobile users to get statements, make payments and even top-up mobile prepaid via their mobile phones.

Increase in ARPU

Operators are experiencing flat total ARPU (Average Revenue Per User), or even reduced total ARPU in some cases, even though data ARPU is rising. Mobile financial services could potentially increase ARPU for the operators, with increased data traffic. This is very important to operators expanding into developing economies where ARPU is traditionally lower than the developed world. If we look at the Indian sub continent, Bangladesh in particular, we can explore possible ways in which operators can improve ARPU in a low-GDP economy. Bangladeshi operator Grameen Phones provides an "insight into how to improve market penetration by profitably targeting the untapped low-income market segments" says Anil Gajwani, CTO Indian software provider Bharti Telesoft. Grameen Phone implemented Bharti Telesoft's prepaid top-up solution, PreTUPS, in a bid to tackle the bottom of the pyramid. "The constant availability of top-up and the opportunity for micro-prepaid options ensure the sustainability of the operator's monthly

ARPU", says Gajwani[1]. "This is clearly reflected in the case of Grameen Phone, where with a 250% growth in top-up transactions, the ARPU for prepaid users was $6.30", high for a developing world country.

Increase in Customer Retention for Mobile Operators – Lower Churn

It is an unwanted expense to lose a customer after a mobile operator has invested in the original acquisition of that customer. Churn rates in the UK were around 30% in 2006. Churn creates two main problems to operators, reducing revenues as it raises the cost of customer acquisition. Research has estimated that the cost of winning a new customer could be 12% of the total lifetime revenue a customer brings in – operators are losing billions of dollars per year as a result of churn. By adding MFS applications and services to a mobile phone a customer could be less likely to replace their mobile operator with a new one; customer loyalty may increase as a result of MFS.

New Revenue Channel

Banks can charge for the convenience of offering mobile services to the phone and in doing so can open up new revenue channels for themselves.

Constraints

The primary constraints for the delivery and acceptance for mobile financial services include:

Resistance from Operators

Where do mobile operators fit into the business model for MFS and how can they generate money from it? This is a very important question that if unanswered could lead to a serious constraint for the widespread adoption of MFS.

Lack of Technology Standards

Without ratified global standards MFS and mobile payments will not be able to break out of local closed networks. The world of banking is based on standards, ISO 8583 for ATMs, and Visa and MasterCard have been successful as global payment methods partly because they are based on approved technology standards, e.g. EMV (Europay MasterCard Visa).

MFS is currently, in the main, being deployed around proprietary point solutions and this could lead to a one-bank one-solution problem.

Business Model Issues

Or who owns the customer? The MFS and payment landscape is currently dominated by central banks, credit card organisations and other financial institutions. The business model for the delivery of mobile phones to consumers is currently dominated by the mobile operator subsidised handset scheme. In order for MFS be successful, a workable business model that keeps the entire ecosystem happy is required, and this still requires some work.

Financial Regulations & Legislation

This is especially important with developed economies that have strict rules governing their financial services industry. For instance, a P2P mobile payment scheme may be difficult to deploy in the developed world where issues surround the transfer of electronic funds as a result of risks from money laundering. Legislation has a strong role to play in how new mobile payment schemes will be developed. In the EU, for instance, any new payment scheme should be implemented in line with the EU's E-Money Directive (2000/46/EU).

[1] Interview with Telecom Asia

Internal Market Commissioner Frits Bolkestein said: "Mobile phones are now used to purchase a whole range of products and services going well beyond simple telephone calls. We have to make sure that EU rules are clear, proportionate and are applied consistently throughout the 25 Member States if we are to encourage investment in the electronic communication sector and the development of new and innovative services for consumers."

Electronic money is defined in the E-Money Directive (2000/46/EU) as monetary value stored on a chip card (pre-paid card or 'electronic purse') or on a computer memory (network or software money) and which is accepted as a means of payment by undertakings other than the issuer. Under the Directive, electronic money must be redeemable for cash at equal value and issuers of electronic money are required to implement safeguards against money laundering.

Revenue Sharing Issues

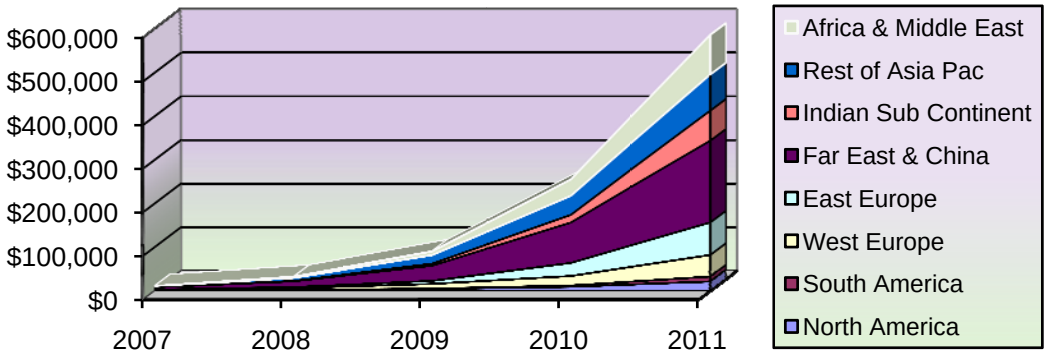
Related to the lack of a clear business model. Who gets what of the pie for a customer that is using an operator owned phone for mobile financial services?

The Market for Mobile Payments

By 2011 consumers will become more familiar with making payments, transferring funds and paying for bills through their mobile phones. An increase in user familiarity and acceptance will be coupled with the increasing availability of MFS applications and services.

The figures for the Rest of Asia Pacific region are higher than the other regions, especially for the coming years, because of the high penetration for mobile payments and remittances in countries like the Philippines. Demographic groupings such as the "Overseas Filipino Worker" (OFW) are sending a percentage of their monthly wage back home to their families from cities such as Dubai, Singapore and Hong Kong. A similar story is seen in the Africa and Middle East region, an economic region that has a current high volume of cash transfers and remittances, both international and domestic.

Figure 3: Total MFS Transaction Value ($m) - Regional Forecast 2007-2011



Source: Juniper Research

Juniper Research is confident that these forecast figures are achievable based on data recorded from around the world. For instance, In Japan we have data from NTT DoCoMo for their FeliCa enabled mobile phones that states that the average transaction value was $6.20 for 2005[2]. In the Philippines the main mobile operator, Globe Telecom, has 1.3 million subscribers for its mobile payment and remittance service G-Cash with over $100 million worth of transactions per day (equates to approx. $77 per customer per day).

[2] Source: NTT DoCoMo August 2005

By 2011 there will be over $587 billion worth of financial transactions being handled by mobile financial services around the world.

Order the Full Report

Mobile Financial Services: Banking & Payment Markets 2007-2011

This whitepaper is taken from **Mobile Financial Services: Banking & Payment Markets 2007-2011**.

In the full report, Juniper Research illustrates the current and near-future status of mobile financial services with interviews, case studies and analysis from representatives of some of the leading organisations in the booming mobile financial services industry.

This report provides five year forecasts, across eight regions of the world. Forecasts are broken down into remote and physical mobile payment sectors with combined figures for the overall mobile payment market. Each sector has projections both in terms of transaction volume and transaction values.

Key Questions the report answers:

- What is the current and future market size for MFS
- What is the strategy for financial institutions, mobile network operators, credit card networks and new entrants?
- What are the main market drivers for MFS?
- What technologies are being adopted for MFS?
- Are customers ready for the "ATM in their pocket"?
- How the developed world – the great "underbanked" are embracing MFS?
- What is NFC? Is it a key technology for enabling MFS and when will it gain traction?
- Has the previously strained relationship between financial institution and mobile network operator improved?
- Who will be the winners and losers in the MFS market?
- Are security concerns holding back MFS?

Further details can be found at www.juniperresearch.com. Alternatively please contact Michele Ince at michele.ince@juniperresearch.com, or telephone +44 (0)1256 830002.

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