MicroSave Briefing Note # 52

Issues in Mobile Banking 2: Regulatory and Technical Issues

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Introduction

Regulation requirements – or in some cases the lack of understanding/interest of the central banks – remain one of the key barriers to implementing mobile banking by financial institutions. In addition, many financial institutions struggle with technology issues around selecting appropriate systems and delivery channels. This Briefing Note seeks to shed some light on these issues.

Access to Payments Systems

In some countries such as South Africa, only a bank can participate in the national payments system and all instructions to make payments on behalf of a customer are deemed to be acceptance of deposits and can therefore only be undertaken by a bank. If this is the case then a non banking operator will need to either obtain their own banking license or else form an alliance with a bank so that deposits or 'the business of a bank' will be done within a division of that bank. One option that may be available in some countries, to avoid the need for a bank license, would be to use an electronic purse, which can be differentiated from a bank account as the source of transactions, although the float account itself would still need to be housed in a bank. Finally, it may be possible to make use of legislation (where it exists) governing electronic money to avoid the need for a banking license. In South Africa e-money can only be issued by a regulated bank and there remains a lack of clarity in many other countries. This ambiguity may in itself be regarded, as an unacceptable business risk and make a relationship with a bank seem more attractive.

Anti Money Laundering

Mobile banking offers increased advantages to the customer and the provider as the number of services, which can be offered from the handset increases. Transacting from a mobile phone reduces the costs to the provider and makes the banking experience more convenient and more cost effective to the customer. However anti money laundering regulations increasingly require greater face-to-face interaction between financial institution and customer in terms of identifying customers, so called Know Your Customer requirements. The service provider will have to establish the best ways to open accounts and to monitor transactions subsequently. Some countries do provide for reduced authentication requirements for account holders, which are regarded as low risk, but there is usually still a requirement for some face-to-face interaction either with employees of the financial institution or its agents. Both the United Kingdom and South Africa have introduced the ability to open accounts without the face-to-face interaction as long as the risk of identity fraud can be mitigated in other ways. The cost of effectively monitoring ongoing transactions remains.

Using Agents

The selection and management of agents will be restricted to those who can meet the specific regulatory requirements for the taking of deposits and management of documentation in the country of operation and this may add significantly to costs. Furthermore, regulation may be a factor in the services that can be offered by an agent and the ability to manage operational and reputational risks.

Agencies for Accessibility: Agents enable service providers to interact with large numbers of customers. The ability to offer services such as basic training, physical information materials (manuals and leaflets), physical identity authentication, documentation verification, replacement cards, etc. depends firstly on the ability to either own one's own distribution channels or to find agents such as retailers, community groups, NGOs etc. The Safaricom M-Pesa model in Kenya uses airtime resellers and these agents are required to keep a cash float.

Customer Service and Information Sources: A multi lingual call centre can provide assistance with some transactions and technical information but there are some services that do require physical interaction. However the centralized nature of a call centre means that the business is better able to control performance. Call centres can themselves be an expensive solution depending on the extent to which costs are fixed or variable and the problems of needing flexibility and a high level of service.

Costs and Commissions: The costs of agents needs to be carefully managed since the commission required will need to be comparable with the opportunity cost of their core business or other agency business. Agents who are paid to open accounts can be paid either on a per account basis up front, or based on a transactional or usage

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model (as for airtime usage with cell phones) or for a combination of the two. There will be a trade off between risk and cost since many people, at least initially, will open an account but the number of transactions may remain low for some time. However ongoing commission would be more expensive in the long run if the business becomes successful.

Systems

Implementing a mobile banking system requires decisions to be made regarding the choice of systems. This covers:

- the platform or computer system to be used,
- the enabling technologies such as the SIM (such as the SIM toolkit or a browser) or the handset,
- the interactive technologies such as WAP, SIMToolkit and Java,
- the transport or bearer channels on the GSM or CDMA mobile network such as voice/touch tone dialing (IVR), SMS or USSD.

Decisions will be driven by various factors including:

- The regulatory environment - this includes the security requirements of the card associations if the offering is to include branded plastic cards and/or the requirements of a national payments system and the Central Bank.
- The level of functionality required by the market, for example whether the system merely offers information such as a balance enquiry or will it be required to make person to person payments.
- The availability of secure infrastructure such as SIM toolkit and SAT allowing greater risks to be taken.
- The availability of features on handsets such as WAP, Java or the Simtoolkit GSM 03.48 (which allows the SIM to 'give instructions' to the handset). This impacts on the customer experience such as the level of interaction with a menu.
- The level of risk of transactions for example based on the value and/or the type of customer transacting will drive the level of security required or the processes used to open an account.
- The sophistication of the market and its preferred method of interfacing with the service e.g. SMS, USSD strings, voice etc.
- Affordability for the customer and the business case of the provider, relating for example to the average size and frequency of transactions expected.

The process will be iterative and multi dimensional as choices impact on other choices both technically and financially. The business and its compliance officers will need to work closely with the technical experts. There will always be risks in technology based applications and the business needs to decide whether to manage this through its business practices or in the technology itself, recognizing that the choices around technology will ultimately determine the size of the potential market.

Patents and Legal Risk: There are various patents relating to the use of mobile telephones in banking which may restrict or increase the costs of any business in this domain.

SMS and USSD: There is a debate regarding which channel is preferable but the final choice will depend on many of the issues raised above such as perceived level of risk of the transaction as well as market preferences and sophistication. For example, using the USSD string requires the customer to enter a string of numbers and/or letters, which will often result in errors as opposed to the use of structured commands or a menu. However USSD commands can be used by virtually any handset and would be very appropriate for simple requests for information such as balance enquiries which could be saved onto the phone. USSD phase 2 does allow for a menu function. However risk management practices will determine whether USSD or SMS toolkit or WIG/WAP is necessary or not.

Interactive Voice Recognition (IVR): Depending on the culture and respective pricing of each channel, in some countries it may be worth looking at the use of IVR. Vodafone has used this successfully in Egypt. This however places a higher traffic load on the network and depending on whether the customer is charged for the time that they are active may affect the attraction and viability of the service.