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The Regulatory Implications of Mobile and Financial Services Convergence*

Ivan Mortimer-Schutts†

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† Associate Researcher, Groupe d'Economie Mondiale (GEM).

Executive Summary

The long awaited integration of mobile telephone and retail financial services is beginning to emerge—in developing markets. To enhance the potential benefits from innovations in this domain, governments need to make complementary adjustments to domestic banking regulation and strengthen frameworks for international cooperation. In particular, as a highly regulated activity, deposit taking is insufficiently contestable for mobile operators to break into the market with enough independence from incumbent banks to stimulate valuable competition and innovation in payment networks. The success of mobile banking will also depend on the willingness and capacity of regulators to accommodate increasing international trade in retail financial services, new forms of distribution and customer due diligence rules that are more appropriate to less traditional markets. The paper provides an analysis of the relation between existing regulatory frameworks and the rise of mobile banking. And it outlines policy changes that governments should pursue in order to foster this form of innovation and target the benefits that it can bring, especially to consumers on the margins or excluded from modern financial services.

The Regulatory Implications of Mobile and Financial Services Convergence

Ivan Mortimer-Schutts

I. Introduction

The long awaited integration of mobile telephone and banking services is beginning to make an appearance - in emerging and developing markets. It has the potential to generate significant economic benefits, extending access to financial services and perhaps stimulating more fundamental changes and increased competition in the sector. Where the costs of traditional retail banking have been too high, or where their distribution arrangements are inappropriate to serve low income clients, mobiles are enabling new business models that could extend access to financial services in these markets. Regulatory reform may also enable mobile banks as a group to foster the rise of new, more efficient international retail settlement networks of particular relevance to the growing population of immigrants and their demand for cross-border banking services.

But these transformations may be constrained by financial and other regulatory frameworks. There are many formal barriers to the provision of payment and transaction services by non-banks. In the short term, current regulatory frameworks may also favour the inappropriate use of pre-paid accounts as substitutes for deposit accounts that provide consumers with greater protection. Added to these complications are formal and informal trade barriers that apply to cross-border services. Without adjustments to regulation at the domestic and international level, valuable legal, operational and organisational innovations important for the success of mobile banking will be impossible or too risky to implement.

Public authorities should be trying to ensure that they facilitate innovations in this area because of the potential benefits for financial sector development. Regulators cannot sit on the fence, waiting to see what happens. In particular, regulators should ease entry for a class of 'transaction banks' while reinforcing rules and monitoring regarding the use of depositors' funds. Equally, they should capitalise on structural changes that the private sector may trigger in order to improve the ways in which they seek to preserve stability, protect consumers and stimulate innovation. And particularly where financial service innovations are emerging outside of the traditional scope of responsibility of financial market regulators, it is at a higher level of domestic and international governance that policy makers will need to conduct a fresh, sober review of how these objectives can most effectively be achieved. Governments that adhere to a cost/benefit approach must realise that a decision to leave regulation unchanged is equivalent to a decision to increase the real economic cost of it.

There is also a certain degree of urgency. The network structure emerging from convergence between payments, retail banking and telecommunications will be difficult to alter once established. Hence it is all the more important that regulatory and institutional frameworks set the right incentives early on in the process of innovation to capture the full benefits that may be generated through the development of m-banking and payments.

The rest of this paper is structured as follows. The next section provides relevant background on the key components of retail payment and related financial services. This clarifies some of the business model choices that mobile banks will face. Then follows the main discussion of the regulatory implications of mobile banking. The last section concludes with policy recommendations.

II. The Building Blocks of Retail Payments

The structure of retail payment services determines business model choices that mobile operators make, the areas in which innovations by them may be valuable, and the regulatory aspects of their decisions. Most importantly, payment providers are intermediaries which settle financial claims between certain types of transaction counter-parties. Secondary characteristics of payment services include the kinds of transactions they support, the ease of use of their payment instruments and the costs, risks and speed associated with settlement arrangements. The value of the payment service depends on the way a provider combines these features.

Box 1: Money and Payments: what are they?

In its most general form, a payment is the **transfer of ownership of assets**, generally, but not necessarily **money**, to be accepted as a form of settlement of a claim.

Money is a particular kind of asset that has the important features of being (1) a stable store of value and (2) a unit of account that (3) is widely accepted as a means to settle claims. In most economies, money is **currency** issued by a government mandated authority, such as the central bank, and has no intrinsic value itself, but acts as a placeholder for value and is by law defined as a valid asset in which to settle claims. But it is possible to have other instruments (and issuers) that are sufficiently stable and widely accepted to act as money. There are many instances of private institutions issuing claims accepted for payment in limited contexts: corporations issue stocks and bonds, retailers issue gift certificates, airlines issue air-miles, etc.

Currency often takes the form of physical notes and coins. But it is increasingly held as a claim on a commercial bank (or script) at which clients hold accounts and from which they can effect payments. These claims on banks are generally backed up by deposit insurance and currency reserves held by the deposit taking institution with the central bank. The solvency of such banks is important for ensuring that deposits held with them remain a good store of value and can be exchanged for other assets.

Establishing Ownership: Currency, like other assets, is of little use without the ability to unambiguously attribute ownership of it. Banknotes and coins are 'bearer instruments': ownership is generally based simply on possession. But the ownership of value held with banks is established by a complex set of rules, contracts and conventions as well as mechanisms to ensure compliance with them.

Transfer Processes: Lastly, having ownership of an asset (or a claim thereto) is of little use if owners do not dispose of means to exchange them for other assets, goods or services. Beyond the simple physical process of exchanging notes and coins, institutions have developed a wide variety of accepted processes for transferring assets in the form of money. Most prominent is a bank-to-bank transfer of units from one account to another, often held with a separate banking institution. This can often be achieved using payments instruments or media (e.g. cheques, debit or credit cards, chips embedded in mobiles) issued by a depositors bank. In some cases, private issuers have experimented with true digital, encrypted cash (or e-money) that can be stored on a smart card and transferred to other cards with the help of specialised card readers[1]. The specific process by which transfers are conducted include a whole variety of checks and balances, confirming amounts, accounts, availability of funds, the identities of the counter-parties, dates for transfer and the units of account being used as well as the possibility of conversion from one unit of account to another (e.g. foreign exchange).

Mobile based innovations only apply directly to some of these functions of payments. They have the potential in principle to generate improvements in efficiency. But in practice businesses may be unable to reap their full benefits without making adjustments to complementary processes, systems and market structures[2]. The most important business strategy and regulatory issues mobile banks have to confront will arise precisely from

[1] One early example of e-money is that developed by Mondex. There are however many other instances of payment services erroneously being referred to as e-money, in the sense of stored value. The fundamental difference between remotely held deposits and e-money, as a substitute for cash, should be that e-money is a 'bearer instrument' – i.e. it embodies a claim that can be exchanged by its holder without the intervention or authorisation (visible or not) of a third party.

[2] This is a common feature: airplanes are of little value without airports, the internet would have little value without widespread use of personal computers, high speed train technology is of little use without improvements to tracks and stations along them for passengers, etc.

attempts to make adjustments to these kinds of complementary processes and structures in order to enhance the overall value of mobiles in payment and retail financial services.

This section discusses four pertinent features of retail payments. 1) *Distribution:* retail payments require a punctual or on-going relationship with individual users of the service. 2) *The role of deposit taking:* the way in which a payment intermediary facilitates transactions depends on the kinds of assets in which it supports transactions and the rights it has to act as a *custodian of clients' assets* for settlement or other purposes. 3) *Settlement networks:* an intermediary needs to establish arrangements for settling claims (on behalf of clients) with other counter-parties. 4) *Economies of scope:* the extent to which these exist between payment and other financial services will influence the longer term prospects for mobile banking and hence the longer term regulatory approach.

II.A. Distribution: acquiring and serving the retail client

The first essential component of payment services encompasses the client relationship: This includes the ability to cost effectively contact, profile and acquire clients and thereafter to equip them with the means to initiate (or receive) regular payments or conduct other banking operations. This is the area of payments in which the role of mobiles and mobile operators are (for the casual observer) most prominent: in several countries, customers are already using mobiles to transmit and receive payment instructions[3].

Three specific elements of distribution are of particular importance in terms of business and regulatory challenges facing aspiring mobile banks: Client acquisition, Access to payment facilities and information exchange.

Mobile operators may be able build on existing client bases to acquire clients at lower cost. This is key to any new service. A business has to find effective ways to make potential clients aware of and interested in the service. Given their broad penetration, relative to banking services, mobile phone operators in developing countries have the potential to acquire banking clients at a relatively low cost. The lower the costs are, the further down the income scale payment providers and banks will be able to extend their services profitably.

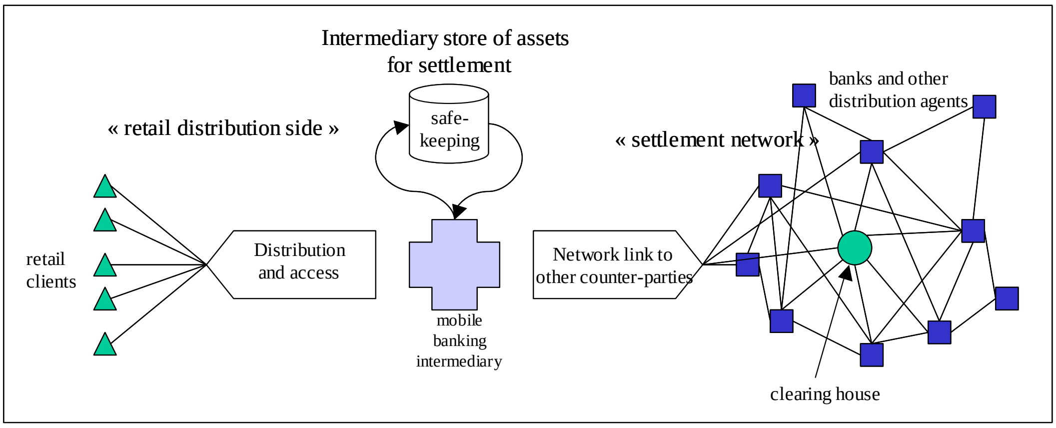
But some physical presence may be necessary in order to fulfil business and regulatory requirements. Some form of contractual agreement may need to be established and clients need to be issued with instruments or formalities necessary to use the payment service (e.g. a payment card, internet login and password, cheque book, etc.). They also need to be

[3] Mobile users can send and receive SMS payment instructions, wave their phones in front of 'contactless card' reading systems and (of course) even call their bank directly to pass instructions to them verbally.

'identified' insofar as legally imposed client due diligence rules apply. Mobile operators need to find ways of fulfilling these requirements in a cost effective manner. The establishment of branches may be prohibitively expensive. To complete their business chain, mobile operators may increasingly turn towards independent or franchised agents. In this case important changes will also need to be made to regulations governing client due diligence and measure to combat money laundering or terrorist financing. Legacy processes have often been enshrined in law, leaving little room for new methods to emerge.

Secondly, once a client has been 'acquired', they must be provided with easy, and preferably low-cost means for on-going use of the payment service. Until the day when mobiles can either print and destroy cash or cash simply disappears from daily use, mobile banks will need to complete their payment services with other means to facilitate cash deposits and withdrawals: ATMs, branches, or retailers that provide a similar service. The potential to bring down total distribution costs and enhance access therefore depends critically on how mobile operators arrange for cash in out , including conversion between cash and electronic currency units, and physical cash management processes.

Figure 1: the primary components of retail payment intermediation



Mobile banks are therefore seeking to outsource important functions to non-bank retailers. These agents can earn supplementary revenue by providing distribution functions to mobile banks. And if cash deposits exceed withdrawals, they can also potentially profit from earning interest. They can also thereby reduce the risk of theft of 'cash in the till'[4]. The emergence of banking models in which these and other distribution functions are provided almost exclusively through agents (such as airtime resellers) is unique[5]. This aspect of mobile

[4] In developing markets with poor transport infrastructure and law enforcement, the costs and risks associated with physical cash distribution can be very significant.
[5] There are countries such as the UK, where the distribution of investment products is characterised by large numbers of independent agents or advisors.

banking models therefore raises the prospect of operational risks with which regulators are unfamiliar.

Box 2: Examples of non face-to-face account opening procedures

PostIdent process (Germany): To open accounts at remote institutions, applicants can complete a form and have their identity validated by personnel at the Post Office. The applicant must present him or herself at the Post Office with the application and a valid form of identification and to sign the application in the presence of the postal worker who forwards the forms to the financial institution.

Electoral rolle (United Kingdom): For the opening of internet based accounts, operators in the UK have been permitted to validate an applicant's identity by checking the data submitted to them (name, address) against information available electronically on the electoral rolle.

Wizzit (South Africa): is a mobile based bank that has introduced the use of 'Wizzkids' to complete the necessary identification process. These generally young employees are sent out to check the identity of applicants and collect photocopies of relevant identity papers.

Lastly, mobile banks will have to design efficient means to gather information about their (prospective) clients and target product and sales to their individual profiles. Information about consumers is important in order to inform commercial decisions, estimate credit risks and shed light on client demand features. Historically, much of this information has come from costly long term investments in relationships. But where available, consumer and market statistics can substitute for relationship based information. Where they are not available, or are scarce or unreliable – such as in developing markets - mobile banks may need to revert to developing relationship based sources of information, especially if they are interested in expanding beyond basic payment services. Similarly, whereby many financial products are marketed and sold remotely in mature markets, low financial literacy and immature product standards in developing markets may make mobile banks more reliant on proximity based sales strategies than the advent of mobile communication might suggest. Face-to-face relations could be more important than in sophisticated markets and mobile banks may therefore need to develop a greater local presence, through partners or branches of their own, than they at first expect. Insofar as knowledge gathering of this kind remains expensive, mobile banks will curtail services to the poorest sections of society and seek to share costs with relevant partners.

II.B. Currencies and the right to take deposit in them

Payments service providers need to process monies that clients want to hold. Providers may try to issue their own money, but must in that case ensure some form of conversion with more widely accepted assets. More generally payment providers will choose to subscribe to existing currency systems. National currencies are likely to be a first choice. These have the advantage, both by convention and law[6], of being widely accepted as a means of settling claims. But they also come with constraints. In particular this means working within established rules and institutional structures that support them. Currency convertibility and the taking of deposits in foreign monies may be limited. Sources of liquidity – critical for settlement providers – will be limited by the issuer (i.e. the central bank) to a select number of banking institutions. And for each currency, settlement networks and providers will be limited. Mobile banks may have little choice between different exchange venues.

Processing currencies in a dematerialised form requires the intervention of institutions authorised to take deposits. Whereby anybody can hold bank notes and coins denominated in a national currency, issuing claims to it, such as in the form of a commercial bank deposit (also denominated in national currency), requires the help of an intermediary that has the vocation of safekeeping of such assets[7]. In this form of commercial bank script[8], currency has the advantages of being both immaterial and an instrument for which legal and operational frameworks for the transfer of ownership are well established and accepted. By participating in the use of these network goods (and payment media) a new payment provider (such as a mobile bank) can quickly achieve the scope necessary to settle claims for its clients. But to take advantage of these features, a payment provider needs either to seek authorisation to take deposits itself or to work with an institution that is already authorised. As further discussion will demonstrate, this constraint can have important strategic consequences for mobile bank's business models.

'Deposit taking' is of particular importance for mobile banks serving low income clients in developing economies. The arrangements that intermediaries use for settlement between clients and their counter-parties not only influence the commercial viability of their service but also determine the risks to which different participants can be exposed. If an intermediary settles its client's claim with the final counter-party before having ensured receipt of the client's funds, they expose themselves to the risk of non-payment. The clients of mobile banks operating in emerging and developing markets are likely to be poor, some of

[6] National currencies are often declared as 'legal tender' for transactions, implying that counter-parties cannot refuse them by law as a media with which to settle claims.
[7] Up until very recently it was possible to hold some stocks and bonds independently of intermediaries, in paper certificates. In the UK some such certificates still exist. But most markets have now moved towards full dematerialisation.
[8] This is a term for money held with banks, denominated in national currency, but in principle a claim on the issuing commercial bank. The safety of these deposits is based on the reserves held by such banks with the central bank and issuer or national currency.

them ‘unbanked’ and many without stable incomes or legal title to property. Mobile (as well as other) banks will be less inclined to extend credit to them, even for settlement of small payments, unless they earn fees thereby that compensate for these risks. Hence all the more important it will be for mobile payment providers to take deposits or process transactions for institutions that do. It is in this context that licensing restrictions on ‘deposit taking’ weigh particularly heavily on the provision of payment services to the poor.

II.C. Settlement Networks: achieving the right commercial configuration

The last step in the payments chain requires direct or indirect links to settle claims with a relevant set of transaction counter-parties. The value of the service expands more than proportionately with the scope of this network: the more persons with which transactions can be completed the greater the benefit of the payment service. Together, mobile banks could have the potential to introduce significant innovations to settlement networks of great benefit to consumers and the un-banked. But their actual scope and incentives to do so are currently constrained by barriers to deposit taking and by the dominance of existing settlement and inter-bank networks and the regulatory structures that support them.

New mobile banks and payment providers face strategic choices regarding how they facilitate settlement for their clients with third parties. There are three basic, non-exclusive options. Transactions can be processed by a partnering (wholesale) bank. Such a service provider will be able to make use of its own extensive links and high volume to process smaller firms’ payments at low cost. Secondly, a bank may seek to settle claims through direct membership of a multi-lateral clearing house. These are central hubs within dense networks where members settle claims between each other on behalf of clients at regular intervals. Most clearing houses are domestic in scope[9]. Lastly, the bank may operate a number of correspondent banking relationships, particularly to support settlement in foreign markets. Payment providers need to balance the costs of individual links against the volume and commercial value of transactions that can be handled by them, as maintaining a number of international correspondent banking relationships can be prohibitively expensive, especially if transaction volumes are low.

New entrants, such as mobile banks, will find that existing settlement networks are useful for gaining quick access to counter-parties, and therefore achieving sufficient scope,

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[9] International retail clearing systems are only just beginning to evolve. The European Banking Association (EBA) operates a set of pan-European clearing solutions (STEP 1, STEP 2) that are gaining in volume. And in the wholesale markets, large international banks have created a purpose built vehicle for real time international currency clearing called CLS. Lastly, to some extent the postal networks (such as Eurogiro) and Western Union’s proprietary system can be considered as forms of international clearing systems.

but could constrain their potential to innovate in future. In developing markets, existing domestic retail clearing systems may actually provide very poor scope and efficiency[10]. As member-based and owned institutions, clearing houses are often well designed to get members to cooperate. But it can be very difficult to initiate change. Members will have ample scope to reject or hinder developments that are of disproportionate advantage to new entrants. For instance, the scope and scale of mobile banks supporting remittances may be too small to warrant investments or innovations by international banks with large existing correspondent networks.

Solitary innovators stand little chance of transforming existing networks, but there may be scope for fruitful collaboration between mobile banking providers. Together they may be able to establish alternative settlement networks that not only serve their interests but benefit a wider range of stake holders through enhanced competition with incumbent networks[11]. Whether can occur will depend on (1) the extent to which a critical mass of mobile banks with similar interests emerges at one time, independent of the constraints of strategic partnerships with incumbent banks; (2) the capacity of mobile banks to apply advances in technology to facilitate more secure and rapid settlement, (3) the ability to develop lower cost services in areas such as international remittances for which existing inter-bank systems are generally inappropriate[12].

[10] Where domestic retail settlement infrastructure only captures a small portion of the population, the benefits from participation in them by mobile banks may be quite limited. It is in such countries that the role of mobile banks may be particularly valuable as a substitute to existing structures.

[11] Familiar examples include not only the competition between internet, mobile and fixed line telephone companies but also historically, in transport, between canals and rail, rail and automobile, ships and airlines, etc.. Each mode operates within its own network but can entail competition between firms within it as well as between the network as a whole and other networks. Is important to note in each case the role that inter-modal transport facilities (exchanges) have played in making networks complementary.

[12] The BIS/World Bank report on General principles for international remittances highlights existing international correspondent banking networks are not well adapted to low value retail flows.

Box 3: Remittances and the international stepping stone for non-banks

International remittance services are an important area for the application of mobile led payment and banking services and a potential spring-board to wider development. The remittance market it is poorly served by existing banking services and settlement structures. But as a growing market it offers increasing revenue potential for new entrants. Moreover, where mobile banks are more adept than incumbents, it can provide them with a solid foothold on an important future market and point of entry for domestic markets.

But as an international financial service, remittance and related banking services inevitably confront a more complex regulatory and policy framework than purely domestic services. Mobile operators may face operational constraints due to (a) restrictions on cross border trade in retail financial services, (b) currency convertibility and (c) differences between national legislative and regulatory frameworks that erode opportunities for economies of scale to be achieved a cross-borders environment[13]. Moreover it is in this cross-border context that authorities are most concerned to stem money laundering and terrorist financing and hence most strictly apply customer due diligence rules.

Although the hurdles to facilitating cross-border remittance and banking services may seem high, the benefits that could derive from the necessary policy changes are also large. There are an estimated 175 million international migrants with multiple family members. Moreover, the remittance market provides a bridge from developed economies into emerging and less advanced economies that could enhance access to finance.

II.D. Economies of scope with other financial services

The strength of economies of scope between payments and other financial services will influence the investments that mobile banks will make. Large scale, profit-oriented investment in the sector will depend on the longer term opportunities to grow the business that economies of scope support. Most existing business models in mobile led banking rely on taking only small deposits from clients, often outside the framework of traditional retail account structures. But deposit taking is often just a first step towards other revenue sources. Insofar as there are synergies between limited deposit taking and broader banking services (loans, savings, investments), successful mobile-led banks may increasingly seek to expand their activities into domains which warrant greater regulatory scrutiny.

Yet mobile banks may develop strategies that do not rely on economies of scope between deposit taking and lending**.** Many banking industry observers believe that the sector is tending towards an increasing diversity of business models in which universal banks will sit along side more specialised institutions[14]. One type of institution that could become more prominent is a *transaction bank* that concentrates on providing payment services, receiving and disbursing funds on behalf of its clients but not itself ‘producing’ balance sheet based financial products that put client’s deposits at significant risk. Such an institution would hold

[13] Recent work, led by the BIS and World Bank , is helping to establish General Principles for International Remittance Services that should contribute to a reduction in unnecessary policy divergence.
[14] See for instance Padoa-Schioppa, Llewellyn and Geiger regarding structural change in the industry.

these funds in low risk assets and act as an introducing agent for the purchase of more specialised credit, savings or investment products.

Whether or not mobile banks can cost effectively experiment with these kinds of business models will depend on regulations. Traditional legal frameworks have evolved around business models that suggest strong economies of scope between deposit taking and lending business. If you are licensed to take deposits you can make loans; but an institution that makes loans does not automatically have a license to take deposits[15]. The results of mobile banks' experimentation will not only feed policy debate on where the boundaries of regulation should lie but also of course determine the nature of regulation to which mobile banks are ultimately exposed.

III. Regulatory Constraints and Implications

The discussion so far has highlighted a number of issues that should be of concern to both policy makers and potential mobile banks. If governments are to facilitate mobile banking innovations while remaining faithful to the aims of effective regulation, they need to understand the ways in which authorities could not only reduce constraints on innovation them but also enhance financial sector stability and development. Although regulation can benefit consumers and the wider economy by fostering stability and correcting market failures, this is often at the risk of disproportionately curtailing competition and innovation – and the benefits that they can generate.

Three particular issues are discussed in this section:

- Entry restrictions on deposit taking and consequences for settlement networks.
- Regulatory constraints on distribution models
- Regulatory constraints on demand

[15] Consumer lending is a relevant area in which non-depositor takers have been increasing market share.

Box 4: Relevant elements of banking system regulation

Banking and payment services are subject to a wide range of regulatory and supervisory practices. This table provides a brief overview of objectives and instruments relevant to the development of mobile banking.

Area of Regulation	Objectives	Representative Instruments
Systemic regulation	Preserve stability of the overall sector and guard against the transmission of failures throughout the system.	Limits on entry and risk taking, reporting requirements, enforcement
Prudential regulation	Guard against excessive risk taking by depository institutions or fraud; small retail clients are considered to be ill placed to assess and monitor the health and good conduct of institutions, to the public sector may have a role in fulfilling this role.	Authorisation requirements such as management experience, base capital, controls, operational standards; reserve requirements and risk concentration limits.
Payment system supervision	Preserve the stability of payment systems, forestall contagion, ensure public confidence in retail systems	Minimum operational and technical standards for membership; financial requirements for members.
Consumer protection	Protect consumers from fraud or exploitation by providers with significant market power; ensure minimum disclosure and quality standards for clients; support confidence in the financial system.	Conduct of business rules, competition policy, ombudsman schemes, minimum disclosure and contracting standards, consumer education, surveillance and enforcement measures.
Financial integrity	Prevent use of the financial system for the laundering of money, criminal activity and terrorist funding.	Customer due diligence rules, transaction reporting requirements (e.g. suspicious transactions).

III.A. Deposit taking

Probably the single most important regulatory issue pertaining to mobile banking concerns deposit taking. Some limitations and conditions on the taking of deposits from the public are generally justified - and in any case very unlikely to disappear[16]. But they may unnecessarily limit the benefits of mobile banking. By restricting the business of deposit taking, current regimes effectively encourage mobile operators to adapt billing arrangements to payments instead of proposing more efficient and well protected deposit facilities to their customers. Secondly, regulation reinforces aspiring mobile banks strategic dependence on incumbent financial institutions. Subsequently, this reduces the chances that mobile banks will emerge in sufficient numbers and with sufficient independence from incumbents to lead innovations in retail settlement networks. It is in this last domain, that the unique market position of mobile operators can make their biggest contribution, by providing the means to improve the dynamic efficiency of the payments market.

Non-cash payments require the participation of an institution authorised to act as a custodian of depositors' funds. Put another way, non-cash payments need to start from or end

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[16] Although there is a case for so-called free banking and the intervention for example of private deposit insurance, this is a situation which for political reasons is very unlikely to arise (if ever) during the timeframe relevant to the development of mobile banking.

in an account held with a bank. New entrants in payment services, such as mobile operators, must either have the right themselves to act within a defined scope as custodians of depositors' funds or work with banking institutions that have authorisation.

In the absence of a banking license, mobile operators (and other non-banks) seeking to provide payment and banking services will be reliant on partnering banks. This deposit taking institution 'owns' a significant part of the client relationship and has an influence on the emergence and evolution of new payment service providers[17]. Of course contracting can be arranged to ensure that the branding and distribution channels for these clients remain linked to the mobile operator. But in the event that a change of banking partner is sought, the mobile operator may be legally unable to take its clients with it. Moreover, the partnership is likely to be a long term investment, entailing strategic limitations on the mobile operator's future prospects.

What are the essential elements of regulation?

a) A widely - accepted need for public sector regulation: Limitations on deposit taking are justified on the grounds that deposit holders may be poorly placed to judge the safety of their bank or to monitor its activities that may put its stability – *and their funds* - at risk. Regulation has a role to play in preventing inexperienced or potentially dishonest firms from entering the market enforcing limits on the risks that banks take. But ideally it should aim to do so in a manner that constrains as little as necessary enterprises' potential to innovate and compete.

b) Entry restrictions on deposit taking: To take deposits – for safekeeping or the settlement of claims with third parties - an operator will in most circumstances require a banking license. The process to apply for a banking license can be ill defined, lengthy, conditions to fulfil costly and approval uncertain. Moreover, in many jurisdictions, mobile operators may be formally prohibited by various laws from obtaining a banking license or owning a bank. Some jurisdictions do not allow banks to be owned by non-financial enterprises (e.g. in the US[18]). In others there may be restrictions on the maximum share that any one (non-bank) investor may hold in the equity of a given bank. Interestingly, the reverse is less often true: Banks frequently own important or even controlling stakes in commercial enterprises. Additionally, ownership of domestic banks by foreign institutions may be

[17] Of course, this decision continues to be a function of solutions available in the market.
[18] The issue of non-bank ownership of financial institutions is currently a topic of debate in the US, where this is restricted, due to attempts by Walmart to acquire a specific kind of banking institution (an Industrial Loan Corporation) and, as competitors fear, perhaps expand into retail payments and banking services. See for example the recent commentary by Wallison (2006).

prohibited, strictly limited or subject to additional constraints[19]. Beyond these measures to vet new applicants, regulators subsequently monitor and control the risks that authorised institutions take and to which they expose depositors' funds.

Some exceptions to traditional frameworks for deposit taking are emerging. First, for limited types of purchases, mobile operators can use pre-paid (or post paid) accounts as a means to settle retail transactions. This allows them to use existing processes for payments, but provides depositors with less legal clarity and protection than with bank deposits. Informal arrangements have also allowed mobile operators engaged in low value funds transfers to take retail deposits on condition that the funds are subsequently held in highly liquid assets with regulated institutions[20].

What are the potential benefits from relaxing deposit taking restrictions further?

The greatest benefits from mobile banking may lie not in the simple application of mobile telephones to payment processes but from the emergence of a new class of financial institution. The easing of entry restrictions will render retail deposit taking a more contestable activity. Secondly, it may generate scope for the emergence of new retail clearing and settlement networks.

Innovations in inter-institutional payments are difficult to achieve. As a network service they require significant coordination between users/operators. Introducing changes requires a similar degree of alignment between members' interests and capacities. Once arrangements are in place, such as in existing clearing houses, their dominance is often very difficult to displace. New systems face an uphill battle to establish themselves. Facilitating innovation and competition in these networks is notoriously difficult[21]. Although regulatory investigations have almost invariably concluded that there is indeed a lack of competition in these networks[22], there is little consensus regarding practical regulatory solutions to stimulate competition.

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[19] Banks may need to employ local directors, there may be restrictions on opening new branches or local shareholders / partners may be required. They must also fulfil minimum requirements regarding capital, management experience, systems and operations; all of these impose costs on start-ups. The World Bank Database on regulation provides further examples.

[20] In the Philippines, GLOBE has obtained exemptions from general licensing requirements from the public authorities, enabling them to take limited deposits from customers for transfers and retail payments. More formal arrangements have been put in place in the European Union where 'e-money' institutions are similarly allowed to receive low value deposits from the public for the purpose of settling payment, under the condition that depositors' funds are held at a regulated commercial bank or in specified assets money market funds, such as government bonds or high interest term deposits.

[21] The challenges of achieving an integrated European retail settlement structure are well known within the industry. Progress has been painfully slow and there is still no guarantee that public sector intervention and regulation will really produce the desired results.

[22] See for instance the much cited Cruickshank report on the UK wholesale banking market.

Mobile operators may be able to lead the rise of new payment networks that compete with existing arrangements. As new entrants seeking to develop financial services, they have incentives to develop new structures and little to loose by working around legacy systems. Whether this potential comes to fruition will depend on a number of conditions. Mobile banks will need to emerge in sufficient numbers, with complementary networks and payment volumes and with significant independence from incumbent banks. Alternatively, if too many mobile banks enter the market, coordination between them may become too difficult to agree on new arrangements[23]. Compatibility with existing inter-bank payments systems will also be required at some level. This may be an issue for competition authorities. If these conditions are fulfilled, aspiring mobile banks may be able to create parallel settlement structures that contribute to the dynamic efficiency of the sector[24].

There are three particular areas in which mobile banks might be able to address deficits in current arrangements.

(1) International payments: Infrastructure is not efficient for international retail (P2P) business. Although demand for cross-border retail payments remains low, international trade, migration and cross-border investment should lead it to increase[25]. Given the foot hold that mobile banks already have in the remittance markets, they may be well placed to lead the development of an international clearing house, facilitating inter-operability between mobile banks and related financial service providers[26].

(2) Real-time P2P transfers: Customers appear to appreciate real time P2P transfers. Although currently only supported within closed networks, this service feature could be a focus for mobile operators to expand. Indeed, the long delays during which funds are often unavailable to senders or receivers (using bank to bank transfers) are a frequent subject of consumer complaints[27].

(3) Domestic payment systems in developing markets. In many of the markets which mobile banks are targeting, domestic clearing systems are limited in scope and performance. Mobile banks may face less formidable competition, in them and find

[23] More research is warranted into the conditions under which new inter-mobile bank settlement arrangements are likely to be most valuable and most likely to arise.

[24] Other examples of parallel network competition include the rise of credit cards in the US as an alternative to slow, costly multi-lateral payment arrangements, such as cheque clearing systems.

[25] See analysis and comments by Geiger on future challenges in payments for banking industry.

[26] A recent announcement by the GSMA and Mastercard suggests that mobile operators may indeed seek to develop their own multi-lateral financial settlement arrangements.

[27] See for instance comments in consumer surveys and responses to consultations conducted by the European Commission in the context of formulating new European payments legislation.(e.g. Qualitative Study Among Cross-Border Buyers of Financial Services In the European Union. Report produced by OPTEM, December 2003). Similar concerns have been cited in investigations in the US and Canadian retail banking markets.

new systems easier to establish. Where mobile banks and other private sector institutions can profitably extend networks to this under-served client base, they will also enhance the overall reach and quality of domestic retail payment systems[28].

Table 1: Indicative domestic and international retail payment volumes

	Transaction volumes, in thousands, 2004			SWIFT MT100 transfers sent to (tsd, 2004): (selected countries)				
	dometic[1] credit transfers	int'l SWIFT messages[2]	int'l as % of domestic	Brazil	India	Kenya	Turkey	South Africa
Germany	984000	77092	8%	112	171	18	620	128
Spain	256000	15558	6%	41	50	4	225	37
France	1737000	31315	2%	38	17	1	22	14
Sweden	313000	6573	2%	7	16	3	35	15
UK	2012000	51580	3%	51	483	49	455	468

notes

1: reference domestic figures are for countries countries shown are based on the following clearing systems:
Germany: RPS; Spain: SNCE; France: SIT; Sweden:Bankgirot; UK:BACS

2: includes all non-domestic MT100 type messages sent to or received from indicated countries in 2004 worldwide

SWIFT messages give an indication of bank-to-bank retail transfers via interbank networks but do not reflect total retail transfer volumes

What then is the impact of the existing regulatory framework?

Deposit taking regulation constrains the strategic options open to mobile operators interested in developing banking services. They may also in the short run favour use of pre-paid accounts that both constrain mobile operators' commercial freedoms and provide less protection to consumers. By making it difficult and costly at an early stage of their development to take deposits from clients, regulation favours (1) business models in which mobile operators partner with banks, not just as wholesale services providers but also as retail account holders, and (2) closed network payment services similar to those used by the retail industry. These restrictions have consequences on business model evolution. They are likely to reduce the number of independent mobile banks and, subsequently, the chances that they create efficient settlement arrangements between themselves, outside the constraints of established inter-bank settlement networks[29].

The effect is best demonstrated in more detail through a simplified outline of options available.

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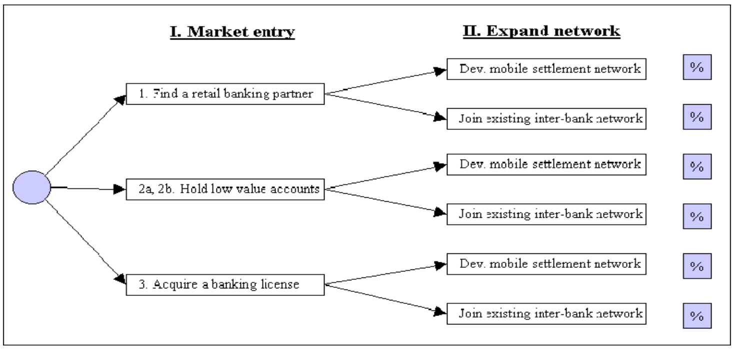
28 International institutions have dedicated considerable resources of late towards improving payment systems in developing countries (See for example projects funded through the multi-lateral fund for financial sector development called FIRST Initiative (www.firstinitiative.org) as well as reviews of payments systems produced by the Bank for International Settlements (www.bis.org)). But the modernisation of systems alone cannot extend access to them for the unbanked.

29 It is important to remember that at some level, perhaps wholesale payments, inter-operability between new mobile banking networks and existing retail banks will be necessary for long term growth.



At a first stage, each aspiring mobile bank is faced with a decision regarding how to develop the initial service and acquire some clients. There are three alternatives:

I. Initial market entry strategy

1. Find a banking partner: partner with an existing bank capable of opening and operating the relevant retail client accounts and introducing their existing clients to the new mobile facilities.

   advantages: The regulatory and legal framework will raise few if any barriers and the banking partner will bring valuable experience, network interfaces and technology to the partnership.

   disadvantages: The strategic and financial interests of both parties may not be well aligned. Existing retail banks have less incentive to invest in lower income clients to whom they can market fewer add-on products; pricing appropriate for these clients may undermine or conflict with pricing/profitability of services to existing clients. For the mobile partner, client ownership may be legally under the control of the deposit taker, even if branding from the mobile operator remains prominent.

2. Hold low value accounts in an ambiguous or restrained legal framework: Legislation permitting, the mobile operator may: a), take low value deposits from individual clients for use in a broad range of low value payments, or b) allow ‘pre-paid’ sums for communication services to be used to settle transactions for a wider range of products and services, the providers of which agree to process payments via the mobile operator. Both options require the services of a wholesale bank to link to the inter-bank market.

   advantages: Under both (a) and (b), the client relationship remains legally and in terms of branding closely linked to the mobile operator.

   disadvantages: Under both (a) and (b), the regulatory structure may prove to be restrict expansion beyond low value deposits into broader and more profitable services. Moreover, as ad-hoc regulatory 'solutions' to market pressures, these frameworks will inevitably be revised. Subsequent evolution may require costly or awkward changes.

3. Acquire a banking license: The operator may, where permitted, seek to obtain a banking license. This could be done through a new application to licensing authorities or the acquisition of an existing bank.

   advantages: With its own banking license, the mobile operator has well defined scope to develop payment and financial services and retains the full legal client relationship.

   disadvantages: The acquisition of a banking license can be expensive in terms of time and money, with success uncertain. The acquisition of a banking license by purchasing an existing bank is also subject to well-recognised strategic and operational risks. A take-over can also be prohibited by the banking authority.

A mobile operator which has entered the market through one of the paths outlined above is faced with subsequent choices as to how to expand the depth and scope of their settlement network. New entrants will base their settlement network on some mixture of the two types of arrangements outlined below:

II. Mobile banks seek to expand the scope and reach of their network

1. Settle retail claims directly with other mobile banks (and other new entrants):

   advantages: A new structure for international retail settlement would help to consolidate the position of mobile operators in the remittance market and could allow operators to develop new era settlement systems that support real time, lower cost settlement between individuals.

   disadvantages: The value of a parallel structure for settlement between this new kind of bank will depend on the number and distribution of appropriate new entrants and the extent to which their respective clients have matching demands for inter-operability.

2. Settle retail claims via existing banking partners and their domestic and international inter-bank settlement structures.

   advantages: It is relatively easy to plug into existing domestic and inter-banks settlement structures which, through their links can provide rapid access to settlement with virtually any other counter-parties.

disadvantages: The international settlement processes can be long and expensive. And the dependency on existing banking structures can sap potential for more efficient mobile led solutions, particularly in high cost markets.

At stage one: Existing regulatory frameworks favour option 1.

Initially, mobile operators have favoured option 2b as a means to experiment with distribution–like services, enabling mobile customers to purchase virtual goods and either debiting amounts from their pre-paid accounts or adding them to their monthly bills. But these developments have not expanded into broader banking services.

For mobile operators with broader ambitions, regulation favours option I.1., a partnership with an existing bank. It allows quick time to market and avoids many regulatory risks and uncertainties. But looking towards future development many mobile operators have a preference for options that provide them with greater control over client relationships[30]. Some have therefore chosen option I.2a (where it exists). Yet, as stated above, this option has its own limitations (will caps on deposits be removed? Will the regulator continue to respect the exemption? Where does future growth come from?) and is from a regulatory perspective a matter of working in a grey area that in the long run must be revised. So far the author is aware of only two instances of operators choosing to pursue the third option, but neither has used it (yet) as a means to subsequently expand into domestic banking[31].

At stage two: Mobile banks that have maintained independence will have a greater propensity to collaborate with other independent mobile banks.

First stage market entry strategies chosen by mobile banks affect their second stage choices. Critically, decisions at stage two also depend on the choices made by competitors and other aspiring mobile banks. The important assumption is that mobile operators that have chosen to enter the market in partnership with an existing retail bank (option I.1.) are less likely to pursue the development of new mobile settlement arrangements than mobile banks that have maintained greater independence (e.g. through market entry option I.2. or I.3.). The partnering banks will already have a payment infrastructure and network which stands to gain by increased volume. Investing in new structures will be costly. And mobile banks would risk

[30] GLOBE and M-Pesa in particular have tried to develop service models in which they maintain full client relationships on the retail side by holding client funds in pooled nostro accounts with one or more commercial banks, instead of opening inidividual retail accounts for them with a designated banking partner.

[31] A1 Bank, a subsidiary of the Austrian mobile operator A1, acquired a domestic banking license in 2002. They are the first mobile operator worldwide to acquire a full banking license . Vodafone has a banking license in Albania.

having to write-off significant sunk costs if they decided to exit the partnership or substantially modify its structure.

It should be clear that regulatory changes that make it easier for mobile operators to enter the market without heavy reliance on an incumbent partner bank, subsequently increase the likelihood of mobile banks pursuing new settlement arrangements. This could be achieved for instance by making it easier and more economically viable for mobile banks to take deposits from clients (expanding the attraction of options I.2 or I.3), at least for the purpose of facilitating retail payments.

Regulators will probably want to have better estimates of the benefits that they could generate. Although there is merit to gathering more information, this is a misguided approach to the dilemma that will inevitably lead to policy paralysis. It does not take account of the experimentation that mobile operators might engage in if they were in a better position to take deposits for the purpose of settling retail payments. It is this enhanced freedom to experiment which itself creates value for the economy, regardless of the specific innovations that it produces. The benefits of change must be seen equally in terms of the reductions in unnecessary constraints on operational freedoms. From this perspective, regulators should continually seek less intrusive means of pursuing their key objectives.

III.B. Distribution models

Outsourcing: a commercial and regulatory concern

As a low cost and high proximity ‘payment gateway’, mobiles facilitate the development of lower cost retail banking distribution and payment facilities. But the mobile by itself can only fulfil certain functions. Where bank branches and ATMs do not exist or are too expensive to set up, mobile banks are increasingly seeking to outsource account opening, cash based and other activities dependent on proximity to non-bank agents or partners.

Distribution remains one of the last frontiers for outsourcing in classical retail banking. Primary concerns that motivate guidelines for outsourcing are:

- Reliability: Concern may be expressed regarding the ability of banks to ensure the quality of procedures outsourced to agents (e.g. account opening, client identity validation); there may also be concerns about control over or trustworthiness of staff.
- Security: For cash is concerned, banks and agents must ensure that funds are sufficiently protected from theft. Servicing remote agents with wholesale cash services (including the transport of banknotes) can be very risky and costly.

- Continuity: Where agents may go out of business or terminate distribution agreements with mobile banks, clients in their catchment area will need to be provided with alternative means to access their funds and other services from the bank.
- Competence: Banks outsourcing account opening and advice functions to external staff will have difficulty ensuring their level of training and competence.

Many of these risks are likely to be of as much concern to the operators as the regulators, especially in a competitive market. So far authorities have taken a very constructive approach to the use of agents by mobile banks. But a lack of certainty may also be impeding further development and as the market evolves, problems may arise that regulators could act now to forestall.

Customer due diligence and financial security

Money laundering legislation obliges financial institutions to take care in verifying the identity of prospective clients. This is also good business practice: you want to know with whom you are doing business. But where rules are too restrictive or applied with little flexibility to accommodate different means of identification, potential clients can be excluded. Moreover it is arguable that overly strict identification procedures to help stop terrorist financing and money laundering measures can drive actors to use informal channels which escape the oversight of regulators.

For mobile banks targeting in particular the poor, the un-banked or migrant communities, traditional rules in this domain can be prohibitively expensive or even impossible to implement. Many potential clients do not have access to the kinds of documents prescribed and even if they do, it may be too costly to present them in the proper context and time frame. Moreover, suspicion of banks, illiteracy and immigrants' fear of exposing themselves to the scrutiny of host country authorities may all dissuade potential clients from even trying to open accounts.

The strengthening of rules has in principle been done to help stem the flow of terrorist financing and money laundering. These are very important objectives, but it is likely that a primary effect of such strengthening is to push more transactions into the informal sector where controls and reporting are likely to be absent and hence about which authorities are less likely to have any information at all. Lighter rules that encourage more transactions to be made via the formal sector would give authorities a chance to learn something about them, their senders and receivers.

Rules appropriate to a pro-poor financial sector development agenda should apply a risk adjusted approach to different markets and client segments. Authorities realise the importance of this. The European Commission proposal for a Regulation of money transfers (July 2005) highlighted the need to avoid "driving transactions underground", suggesting that obligations should be applied on a risk sensitive basis for lower value transfers[32].

Retail market access and competition

Without retailers to act as agents, branchless mobile banks would either have to curtail their distribution networks - or invest in their own branches. Regulations that affect the retail distribution sector can therefore have important indirect effects on the emergence of mobile banking. In particular, policies in emerging and developing markets may constrain competition in the retail sector, with subsequent consequences for the variety, stability and capacities of potential agents.

In many economies, not just emerging markets, the retail trade is heavily regulated. Often there are restrictions on zoning, foreign market entry, opening hours and pricing policies[33]. Policies often aim to strike a balance between the benefits from large chains and the interest of diversity and small, local retailers[34]. But it is precisely such retailers with a wide yet standardised distribution network that can be attractive agents for branchless banks. Where regulation places limits on their potential for expansion there will a consequent effect on the capacity of new banks to find appropriate distribution partners.

III.C. Consumer protection:

Elements of consumer protection can limit service and product variations that may be necessary for the viability of new business models. Standardisation can enhance transparency, the capacity for consumers to compare offers and enforce minimum levels of quality. But mobile operators may find that existing product forms enshrined in banking codes are somehow not adapted to their mode of supply or the demands of consumers that they serve. Familiar limits include caps on interest rates, restrictions on product cross-subsidisation, and pricing policies. Operators and regulators together need to review limitations in their jurisdictions that may pose unnecessary constraints.

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[32] See the Regulation of the European Parliament and the Council on Information on the payer accompanying transfers of funds, 2005/0138

[33] For an overview of retail distribution regulation, readers may refer to cross-country comparisons by Boylaud and Nicoletti., OECD.

[34] Regulations of this kind can have negative welfare effects on the bulk of consumers because large retailers generally have extensive, efficient sourcing and distribution networks which generate competitive advantages. Hence there is a fear that they have the power to squeeze out small competitors.

Incomplete contracting standards can also be a problem for the development of new service models. This is likely to be the case for banks using remote agents and mobile phones as alternatives to face-to-face relationships. Agents will generally not have the power to approve client applications, but may be required to validate the authenticity of documents or signatures. The legal status of agents in this context may be ambiguous. Authorisation or validation of payments via remote mobile tools may not be recognised by existing laws. And legal frameworks applicable to mobile telephone payments may be insufficiently defined to allocate rights and obligations clearly between clients and their mobile operator/bank in the event of operational errors, incidents of theft or fraud or other unforeseen problems. Moreover, poor and remote clients are likely to be at a disadvantage to identify, communicate and pursue incidents for which their mobile operator may hold responsibility. The level at which laws and guidelines may need to be amended to provide a more stable legal framework for mobile banking will inevitably vary according to the specific legal and regulatory structure in any one jurisdiction.

Consumer protection is a key component of any strategy to build confidence in mobile banking services. This is especially the case where consumers have entrenched reservations about the banking community in their country. Surveys have suggested that many in developing countries have a strong distrust of banks and are likely to be sceptical at first about giving up physical bank notes for electronic based accounts. There is no one solution to building confidence among consumers, educating them and creating feedback mechanisms to minimise abuse. Regulators and mobile operators need to search the environment around them in each case to find existing assets that can be put to good use to promote and warrant consumer confidence.

The challenge is particularly important for early innovators. If consumer protection measures are too weak, potential first stage entrants may be dissuaded from investing in the market at all. Changing consumer habits and perceptions can be very expensive. Early stage mobile banks may fear that their efforts will implicitly subsidise second round entrants. And as the market develops, it is inevitable that dishonest actors will also be attracted to the sector, with the result not only that some potential clients will become victims of fraud but that these firms' activities may damage confidence in honest firms. So it is essential that regulators and operators work together on this front to prepare the market and balance incentives in a way that encourages first stage development.

National regulators may have to develop ways of acting beyond their conventional scope of intervention. A promising avenue for developing consumer confidence may be to build on the structure of remittance services. This market provides a natural bridge between different social and economic zones, both of which can be used to promote confidence, enforce standards and educate consumers. For example, if regulators work effectively with each other across borders, recipient countries may be able to enhance local consumer protection by acting through supervisory structures in sending countries.[35] Migrant workers may also be one of the more effective channels for educating consumers of financial services back home. In both cases, national regulators will need to enhance cooperation with other authorities at different levels of government – local and international.

III.D. Disincentives to using formal sector financial services

Beyond the scope of the financial sector, business regulation and fiscal policy can create disincentives to 'joining the formal sector'[36]. Much of the interest in mobile led banking stems from its anticipated potential to extend access to formal sector financial services. But the use of formal sector finance can expose participants currently operating in the informal economy to perceived and real costs: regulation, taxes or, in corrupt economies, exploitation by local officials who see banking activity as a signal of wealth that can be tapped.

Table 2: The size of the shadow economy (selected countries)

	country	shadow economy (in % of GDP)[1] 1999/00	2001/02	2002/03
Africa	Congo (DRC)	48	49	50
	Kenya	34	35	36
	Morocco	36	37	38
	Senegal	45	47	48
	South Africa	28	29	30
	Zimbabwe	59	61	63
Asia	Bangladesh	36	37	38
	India	23	24	26
	Philippines	43	45	46
Latin America	Ecuador	34	35	37
	Guatemala	52	52	52
	Peru	60	60	61

1: using the DYMIMIC and Currency Demand Method;
Source: Schneider, Friedrich CESIfo Working Paper No. 1806 2006

The direct effect of these perceived and real costs is to suppress demand for formal sector banking services. Mobile banking could fail to fulfil its potential not because of supply problems but because demand for services is unnecessarily depressed. To the extent that joining the formal sector opens up new markets and financing mechanisms to firms and

[35] Remittance services providers clearly recognise that they can optimise marketing expenses and measures to build confidence in their brand by addressing both senders and recipients of funds. Senders may be better educated and familiar with modern banking tools, and hence in a better position to chose quality services and reassure family members back home about providers and how to use their products.
[36] Relevant literature includes high profile research by Hernando De Soto and the World Bank on the costs of doing business in different countries.

incites them to operate more efficiently, this may be a real missed opportunity to stimulate growth and formal sector employment.

The issue is far from trivial. In many emerging and developing economies, the shadow economy represents an important proportion of overall economic activity. Recent cross-country estimates from Schneider (2006) suggest that it represents on average about 40% of official GDP in most African countries, but can be as high as 60%. Governments need to combine the opportunities from extended banking service with initiatives to reduce the costs (both perceived and real) to joining the formal sector.

IV. A Policy Agenda

The challenge is not what *to do but* how.

There should be little disagreement in principle that the rise of mobile banking has the potential to generate economic and social benefits, by extending access to financial services and fostering growth in sector liquidity. Governments and regulators, in advanced as well as less developed economies, should therefore be seeking to facilitate the entry of these new providers and the development of their financial service business models. But if authorities are to continue to pursue the important objectives of financial sector regulation, changes to legislation and organisation will be necessary.

The challenges lie in identifying specific, pragmatic policies and instruments that can be applied effectively within existing structures and without putting at risk the stability or integrity of the market and its legal systems. Moreover, public authorities need to be prepared not just to introduce one-off changes in legislation or supervisory practices but to spur and accompany a longer term, dynamic transformation that mobile businesses may trigger, both at home and in coordination with authorities abroad.

This section sets out the key objectives that governments should adopt in support of pro-poor mobile banking and provides some initial ideas on how to go about pursuing them.

IV.A. Facilitate entry and growth in the volume and variety of supply

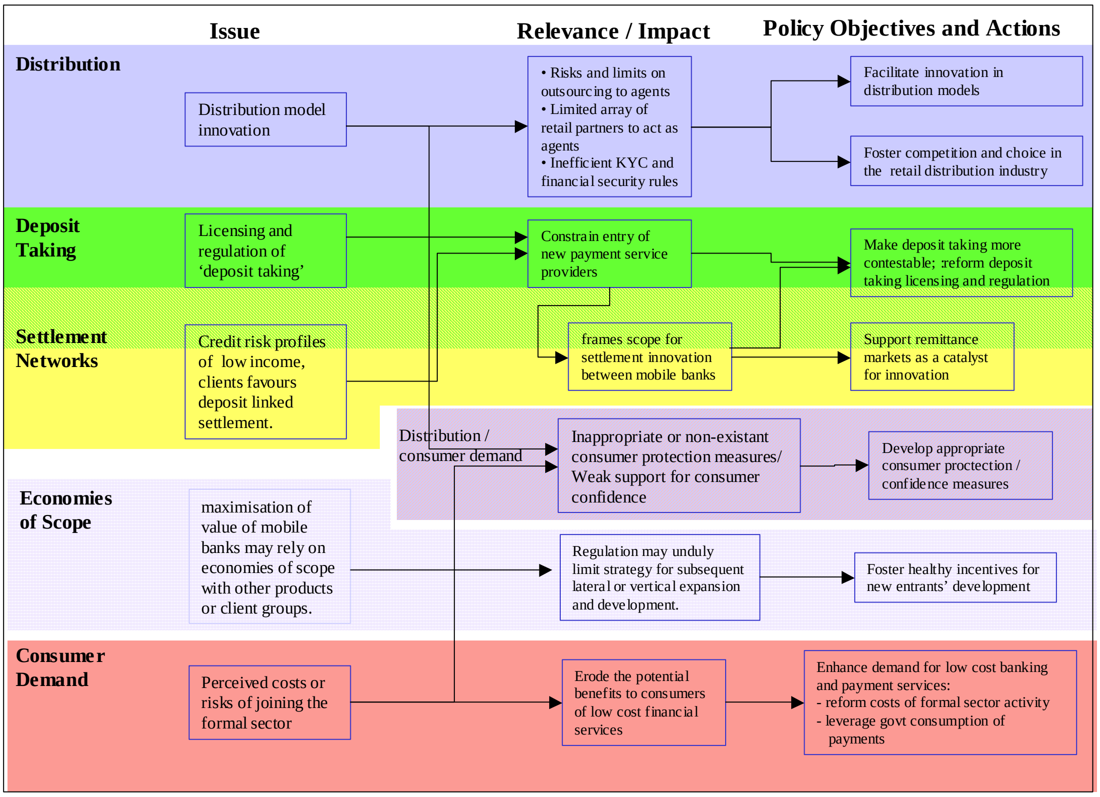
Lower barriers to ‘deposit taking’ for transaction banks.

At least during an initial phase of development, regulators should reduce the up-front fixed cost barriers to deposit taking for institutions that aim to act as payment or transaction banks. To mitigate against a subsequent increase in risk, clear and strict rules should be imposed on the use of these funds (the types of assets in which they could be stored) and compliance with them monitored.

Carefully select the asset classes in which transaction banks can place depositors' funds.

The rules limiting the use of clients' funds by mobile banks will be very important as means to limit risk taking by these more lightly regulated institutions. More broadly, the choice of eligible assets will indirectly channel financing to 'favoured' recipients. Although there may be a temptation to limit the scope of assets to local government bonds this would not only create an unwarranted subsidy to governments but waste an opportunity to enhance market liquidity and asset diversity. Equally, authorities should resist calls to coerce savers to fund domestic 'development projects'[37]. Low risk corporate assets or international bonds could provide significant risk diversification opportunities and help boost local sector activity.

Box 5: An overview of policy issues and recommended objectives



Create international regulatory structures that facilitate cross-border services and provide a degree regulatory competition.

International cooperation between regulatory authorities is necessary to facilitate mobile banking in remittance markets. The creation of regional or international authorities

[37] In particular with regards to remittances, there have been suggestions that 'money sent home' could be tapped to support local development projects. But regulatory attempts to channel foreign funds in this manner is likely to backfire, directing funds to favoured projects and probably persuading senders to remit less and save more in their host country where a greater choice of investments may be available.

may provide a degree of regulatory competition necessary to promote greater opportunities for trade and guard against intransigence or simple abuse of power by national regulators.

Consider scope for telecoms regulators to act.

In the likely event that bureaucratic inertia slows reforms by banking regulators, an interim means to incite change may be charging telecoms regulators with some responsibility for licensing mobile banks and encouraging them to play a role in consumer protection. Faced with this unorthodox mode of regulatory competition, bureaucratic inertia may be easier to overcome. Banking experts would need to be seconded to telecom regulators for a period of time, but existing expertise and contacts for consumer protection of mobile customers could be a useful basis on which to start.

Set review clauses on reforms, evaluate and adjust.

It is important to build in review processes and even a sun-set clause. These are good practices and could help to ease negotiations with sceptics worried about the prospect of a permanent relaxation of licensing requirements. Insofar as potential new entrants see this as a limited window of opportunity during which to gain lower risk entry to the market, it may increase the chances of multiple mobile banks entering the market in parallel. Thid may be a pragmatic way to enhance the likelihood of coordination between mobile operators.

Some authorities already appear to have taken a fairly liberal approach to ‘small’ deposits being held by mobile or other institutions for purposes of making and receiving payments[38]. Greater clarity would aid competition at this early stage.

IV.B. Foster healthy incentives for new entrants

Regulators also need to keep in mind that facilitating entry is of little value if potential profits from developing the market are too low to actually attract new entrants. Licenses for new style institutions can quickly become empty shells if they limit rights and obligations in ways that severely delimit earnings potential over the long run[39]. The costs of regulatory change can easily exceed potential benefits they are meant to generate. Regulation needs to allow new entrants early access to earnings potential as well as longer term growth prospects.

Protect access to central payment infrastructure.

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[38] M-Pesa, Globe and Crandy all have acquired formal or ad-hoc authorisation to take small deposits from the public for the purpose of making payments; for these small amounts, they are also subject to less strict KYC rules (that aim to limit money laundering and terrorist financing).

[39] Restrictions on sources of earning may also have undesirable results for consumers. For instance, in the absence of potential to earn revenue from FX fees, interest spreads or lending, money transfer agents may charge more through transfer fees. It is also possible that the relatively weak demand for e-money licenses in the EU is also a case of regulatory shells leaving insufficient room for profitable development by the business.

New payment providers must be able to gain cost effective access to inter-bank settlement structures, such as domestic clearing houses, in order to provide main stream transaction services. But such clearing houses are often owned by incumbents in the retail banking industry with incentives to limit the growth potential of new competitors such as mobile banks. Competition authorities and regulators need to review relevant clearing house membership rules, technology and fees.

Facilitate the development of economies of scale across borders.

International payments are perhaps the least well developed segment of financial markets, both for consumer and business transactions. It may therefore be an area of market demand, such as for remittances, in which mobile banks find greatest potential for initial, profitable commercial developments. But as an intrinsically dispersed international market, achieving economies of scale will require cross-border activities that may conflict with formal and informal restrictions on financial services trade (as well as on input services). Reductions in these trade barriers may be essential for mobile banks to find the scale necessary to propose low cost services, especially in smaller economies.

Allow for up-market and cross market expansion.

Investments by mobile banks will depend on opportunities to expand into new products. And it would be unrealistic to expect them to ignore revenue potential from serving higher income clients. Similarly, their attention will also turn towards improving the earnings potential from customer deposits. Insofar as regulation only allows them to provide payments to the poor and the unbanked, mobile banking may fail to reach the critical mass necessary to bring down marginal costs of banking services for the wider population. Moreover, regulations that severely limit mobile banks to serving only the unbanked may give rise to undesirable divisions between poor and advanced financial services – a sort of *financial sector apartheid*. There should be transparent and fair processes open to mobile banks that decide at a later stage to develop these sides of the business.

Guard against anti-competitive behaviour by incumbents.

As in other concentrated, network based industries, incumbents may find numerous ways to guard against competition from new entrants. The capacity of competition authorities to monitor and assess market developments will need to be enhanced in many markets. Tools to address anti-competitive behaviour need to be reviewed and strengthened. Measures may need to be taken to support compatibility between payment networks.

IV.C. Render operational innovation easier and less risky.

Mobile banking operators are using their cost advantages and distribution networks to reach out to lower income clients, many of whom are active in the informal sector. To facilitate this, they are stretching the boundaries of traditional client acquisition and distribution processes. Policy makers should be seeking to adjust guidelines and develop instruments that support these innovations yet enable authorities to continue to pursue their objectives.

Regulators should revise outsourcing rules.

This applies in particular to guidelines for client account opening, cash deposit/withdrawal and other services provided through non-bank distribution partners (or agents). In many economies there has already been significant growth in agent based banking and in some jurisdictions regulatory frameworks are beginning to take shape. Elsewhere regulators should be reassuring new or potential entrants about their willingness to support this form of outsourcing. In those jurisdictions with initial experience, multi-stakeholder groups should be conducting reviews and drafting improved guidance.

Customer due diligence guidelines need to be adjusted.

To facilitate the acquisition of clients remotely, and those without standard documentation, regulators need to devise more appropriate and proportionate KYC rules that facilitate business with these types of clients but still allow governments to combat money laundering and terrorist financing.

First, authorities should be sure that alternatives to traditional identification means have been explored to minimise exclusion. Secondly, rules should be applied in ways that are proportionate to the risks posed by transaction and client types. Not all users, locations or sums represent the same risks. Mobile operators may even be able to support surveillance by contributing new data (e.g. call patterns) to statistical profiling.

Retail sector regulation and competition should be reviewed.

Banking regulators should work together with government authorities responsible for retail sector policy in order to enhance the health of the sector and its potential role as a complement to retail financial services providers. It is in the interest of both consumers and these types of banking institutions that potential retail agents are stable, operate in a secure legal environment and in a market place with sufficient variety and competition to improve alternatives to mobile banks seeking agents and, indirectly, to the end client.

IV.D. Enhance demand for low cost banking and payment services

Rebalance the costs of formal sector participation.

Disincentives to formal sector participation and the perceived costs or threats from holding a bank account need to be reduced. Governments need to investigate:

(1) The extent which these kinds of disincentives exist and to whom they apply: e.g. What are the real and perceived costs of doing business in the formal sector? Do small traders really fear public scrutiny from using a formal banking service? Are these fears justified?; and,

(2) Design remedies that can be simply implemented: e.g. Is there a role for tax amnesties and exemptions? Can consumers be assured of confidentiality and data protection? Can formal sector registration costs and processes be simplified?

Benefit from the public sector's role as a consumer of payment services.

Another area in which demand can be enhanced is in the use of mobile banking services by governments to distribute social and other benefits. Where these distribution processes can be achieved more efficiently using bank transfers and use of funds influenced more effectively, by for instance limiting validity to specific services (e.g. health), governments can play an important role in providing incentives to the unbanked to gain initial access to the financial sector by opening a mobile (or other appropriate) bank account.

IV.E. Devise appropriate consumer protection measures

As discussed above, existing consumer protection measures will probably need to be adjusted to mobile banking and new measures will need to be devised in order to support consumer confidence in these potential banking innovations. Some initiatives that regulators and mobile operators may want to investigate include:

- Ombudsmen schemes: An independent and respected person in the community can be a representative for receiving and acting upon client complaints. They can help to enhance real and perceived market integrity. But these persons position may also be liable to abuse or be devoid of actual influence.
- Self regulation: Where a sufficient number of new entrants develop the market together, there may be significant scope for regulators to place responsibilities upon them to collectively set common standards and operate their own operational controls to protect market integrity.

- Private monitoring and certification: Independent consumer or financial services firms may be able to play a role in assessing and monitoring the quality of mobile banks and their operations. In low income markets the costs of their operations may be too high to be sustained without some form of public subsidy.
- Joint education programmes: Mobile banks could, beyond the scope of self regulation, engage in programmes to enhance financial awareness and education.

IV.F. Facilitate innovation via the remittance markets

As a key market in which mobile banks are already working, remittance services should be a priority area for public policy action. By expanding opportunities in this domain for firms to develop cross-border economies of scale and more lucrative products, regulators can help to increase the incentives for mobile operators to invest and experiment. A number of steps could be taken to achieve this goal[40]:

- *Permit cross-border provision of retail financial service.* This should include the marketing of deposit accounts, credit products and transfers. Some important examples of these cross-border services have been developed[41]. Their potential as a conduit for lower cost financing should be investigated.
- *Facilitate off-shore accounts for remittance recipients.* International payments are expensive because accounts and banking structures are aligned with national and currency boundaries. If banks were at greater liberty to offer multi-currency offshore accounts, incentives to improve cross-border retail payment structures may rise.
- *Develop mutual recognition of legal and regulatory frameworks.* In particular for specialised lending products in high volume corridors, regulatory coordination is important. Cross-border products are difficult to promote if they remain tied to home country legal systems.
- *Facilitate cross border participation in domestic retail clearing systems.* International access may improve competition in the market for international wholesale liquidity and payment services.

[40] Other useful proposals are included in the BIS/World Bank General Principles for remittance services.
[41] A notable example concerns cross border mortgages supported by the Caja Madrid and Banco Solidario in Ecuador.

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