



Could **mobile banking** go global?

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People who have never had a bank account could enjoy basic banking facilities for the first time thanks to mobile financial services—a good reason for service providers to turn their sights to emerging markets.

If **mobile financial services** are proving a disappointment in the developed markets of Asia and Europe, the financial institutions and telephone companies that provide those services could do worse than to explore the world's emerging markets. Indeed, the providers could even find more fertile ground there.

For the fact is that one day, in most of the world's emerging markets, more people will use mobile telephones than use fixed telephone lines. Businesses that are based on mobile financial services will thus be a natural fit for these economies. What is more, there is no need to wait for the next-generation mobile networks; these businesses can be built using today's technology. But to capture this significant opportunity, financial firms and telecommunications companies will have to forge partnerships with one another and, possibly, with merchants and retail chains as well.

Emerging markets: The greater opportunity

Mobile financial services are just that: financial services delivered through the medium of mobile handsets. Users can make basic inquiries about their balances or, in a more complicated maneuver, their payments. Basic services are already widely available in developed countries and in the more sophisticated emerging markets, such as Hong Kong and South Korea. So far, though, users in these markets remain unimpressed by the services, and providers haven't been able to charge anywhere near what they cost to deliver.

But mobile devices are bound to have more impact in countries that have limited wired networks, and this probably explains why consumers seem to like data-based mobile services in those emerging markets where they are available; in the Philippines, for example, people have taken rapidly to the Short Message Service. By 2005, when there will be more mobile phones in the world than TVs, fixed-line phones, or personal computers, the lead of mobile devices over PCs will be even greater in emerging markets than in developed ones. Indeed, it is in emerging markets that mobile devices seem likely to beat PCs in the race to become the primary conduit of Internet services to the multitudes.

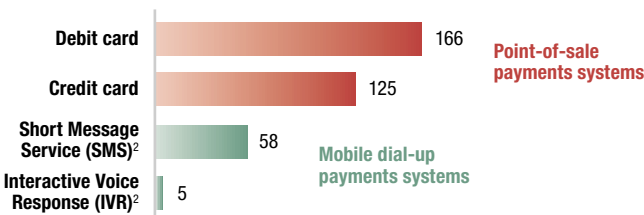
Similarly, consumers and businesses in emerging markets are likely to find mobile financial services more attractive than do their counterparts in developed markets, because they have fewer alternatives. For many remote or low-income consumers, mobile handsets and the mobile Internet could for the first time provide access to financial services such as basic banking and electronic payments; otherwise financial-services providers find such segments impossible to serve cost-effectively. Mobile networks are cheaper to build than fixed-line networks, and mobile services are generally cheaper to roll

out than their precursors (see "Connecting the unconnected," in the current issue); a mobile-payments network, for example, can cost less to create and operate than an electronic point-of-sale (POS) merchant network (Exhibit 1). This means that some countries will be able to leapfrog over inter-

EXHIBIT 1

An inexpensive alternative

Present value of investment required to install and maintain various payment systems in South Africa,¹ \$ million



¹Assumes market of 150,000 small merchants (without point-of-sale terminals) with 25% consumer penetration.

²Requires additional onetime cost of \$5 million for back-end IT systems.

mediate technologies and move directly from a paper-based payments system to a mobile one, without ever having to build an extensive wired POS or automated-teller-machine network.

We have identified eight business models for mobile financial services (*see* sidebar, “Models for mobile businesses,” on the next page), ranging from payments platforms and content services to mobile portals.¹ Which model will be most appropriate in a given market? What sort of alliance between providers would have a particular advantage there? How much value could the model create?

Offering the right service in the right market

Not all mobile services are relevant to all emerging markets: some are better suited to more financially sophisticated ones, others to the less developed. Exhibit 2 lists the characteristics that measure these markets’ degree of development. For each of the eight businesses, one characteristic is particularly important. In the case of mobile banking,

for example, the most suitable market would have many people already using the Internet as a major banking-access channel.

Consider a more detailed example. A scan-based mobile POS payments business enabling consumers to pay their bills by scanning their mobile handsets against a merchant’s POS terminal is likely to be feasible only in developed markets; in sophisticated emerging markets such as Hong Kong,

EXHIBIT 2

Market sophistication drives opportunity

	Less sophisticated markets	More sophisticated markets
Key market characteristics		
		Payments
Penetration of point-of-sale (POS) infrastructure	Mobile dial-up payments	Scan-based mobile POS payments
Concentration of consumer ‘microspending’		Remote payments
Latent demand for e-commerce, m-commerce		
		Services
Level of remote-channel usage in banking		Mobile PFS ¹
Size of population with access to banking	Low-cost banking	Personalized mobile portals
Size of on-line customer base		Mobile virtual-network operators
Spare capacity in mobile network		Bundled products
CRM ² capability and telco churn rate	Bundled products	Bundled products

¹Personal financial services.
²Customer relationship management.

¹Telecommunications and financial-services companies could also use mobile communications to deliver services more effectively in operations (by speeding the flow of information around the sales force, for example), distribution, and marketing. The savings from these internal synergies could make them as interesting to providers as building external, customer-focused mobile services.

Singapore, and South Korea; and in the affluent metropolitan areas of less developed countries—Beijing, Mexico City, and São Paulo, for instance. These places lend themselves to this type of business because in all of them a few large organizations, such as fast-food chains and local public transportation systems, capture a high proportion of the consumers’ small payments, or “microspending.” The business could therefore grow quickly by signing up just a few such merchants and entities. Moreover, consumers in these markets are already familiar with electronic payments and would value the added speed and convenience of scanning by mobile.

Models for mobile businesses

Transaction or payments businesses

1. Mobile dial-up payments substitute a mobile handset for the merchant’s point-of-sale (POS) terminal. The merchant takes the customer’s telephone number and telephones a payment request—comprising the telephone number and the amount of the transaction—into the payments platform. When the platform receives confirmation through a call or a Short Message Service (SMS) communication to the customer, the sum is transferred to the merchant’s account. To access the server that records and processes transactions, the customer needs no debit or credit card (not always available in emerging markets), only a handset loaded with his or her security-identity-module (SIM) card. The merchant’s mobile handset plays the role of POS terminal, but far more cheaply than the real thing.

2. Mobile scan payments enable customers to pay a merchant directly by scanning their mobile handsets against the merchant’s POS reader. The reader uses a radio frequency or Bluetooth (a short-distance, high-frequency radio medium) to communicate with a chip in the handset that authorizes and effects the transaction. If the amount is large, the customer gives a personal

identification number (PIN) for authentication.

The customer’s payments platform will either settle the payment from a “stored-value” account, which the customer can top up by mobile (a prepaid option), or pay on the customer’s behalf and send out regular bills (a postpaid option). The transaction time is one or two seconds without PIN authorization and four to seven seconds with it—much faster and more convenient than cash or card transactions.

3. Remote payments, using a process similar to that for mobile dial-up payments, let the customer pay without being present at the point of sale. A bank would make money from merchants using its mobile-payments system much as it does from “fixed”-payments systems. Telecom companies would gain revenue from the airtime used and from whatever share of the spoils their joint-venture agreement with the partner bank allotted to them. Their core business would also benefit from the indirect value of lower customer churn and cheaper customer acquisition costs.

Content businesses

1. Mobile personal financial services let customers use their mobile handsets to access

In less developed markets, such as India or Nigeria, a dial-up payments model would be more likely to work effectively. This approach, which relies on mobile handsets to create a cheap electronic consumer-payments system in places where none had existed before, would gradually be able to reduce the cash-handling and security costs of their merchants and providers. Meanwhile, consumers would benefit from the convenience of no longer needing to carry large amounts of cash—which would be a particular boon in a country, such as Nigeria, where huge wads of notes are still needed to carry even rather small sums of money.

services—such as banking, broking, or insurance—that resemble the on-line services available on PCs. Mobile operators make money from the airtime charges and, indirectly, from the acquisition of new customers.

2. Low-cost mobile banking makes it possible for customers to use their personal-banking SIM cards in mobile handsets belonging to general merchants, which are accredited by banks to access basic banking services such as deposits and withdrawals. The merchants, rather like franchised tellers, provide the main interface between customers and their accounts. Banks create value from this service mainly through the float on low-cost deposits, while mobile operators benefit from the airtime charges. Merchants take a fee for a deposit or a withdrawal. With sufficient volume, businesses based on this model could create attractive returns for all of the participants. Such businesses have not yet developed on a large scale in any of their potential markets, however—partly because the mobile networks are not in place in many low-income areas. But the model's potential could draw financial-services providers into investing in low-cost mobile networks in remote or low-income areas (see "Connecting the unconnected," in the current issue).

3. Bundled products offer the consumer a single package of mobile communications and financial services. Besides deriving direct benefits through airtime and transaction charges, both the communications and the financial-services providers would hope in this way to lower their customer acquisition costs, to reduce their churn rates, and to cross-sell services.

Aggregation

Portals, which own the interface between mobile users and providers of mobile data services, can be designed for use by a mass of consumers or tailored to individual preferences. Owners of portals take a commission on transactions made through them, and mobile operators gain airtime revenues too.

Access

Mobile virtual-network operators might emerge if financial-services providers bought spare network capacity from established mobile operators. The operator of the virtual network would then make use of that bandwidth in order to deliver communications and financial services to consumers who were attracted by the brand and the reputation of the operator in its core business.

Although people in emerging markets could find dial-up payments enormously useful, providers might still have difficulty persuading consumers to take up this service—or any other. History shows that customers are slow to adopt new financial services, especially new payments schemes. It took about 30 years for credit cards to catch on in the United States, and although smart cards were launched more than a decade ago, none has yet taken off. Nonetheless, mobile-payments schemes can be popularized in several ways: recruiting the merchants with the most to gain from lower cash-handling costs and faster-moving queues, allowing customers to use the system free of charge for daily transactions such as buying tickets for local public transportation, instituting fast lanes in supermarkets and fuel stations, and positioning “m-payment” as the cool way to pay among teenagers and yuppies.

Creating two kinds of value

How much value a mobile-financial-services business can create depends largely on its relevance to a given market (Exhibit 3). But in any market, a business can create value in two ways: directly, by enhancing benefits to customers or reducing costs for participants, or indirectly, by increasing cross-selling, cutting the cost of acquiring customers, or reducing customer churn. Indirect benefits are available only to the provider that comes first to market with a given service or that has assets or capabilities distinctive

enough to retain share once competitors have entered the market.

EXHIBIT 3

Value creation potential in mobile markets

Business model	Opportunity to move directly from paper-based to mobile-payments system	
	Less sophisticated markets	More sophisticated markets
Mobile dial-up payments	High	Low
Scan-based mobile POS (point-of-sale) payments	Low	High
Remote payments	Low	Moderate
Mobile personal financial services	Low	Low
Low-cost banking	High	Low
Personalized mobile portals	Low	Moderate
Mobile virtual-network operators	Low	Moderate
Bundled products	Low	Moderate

Low-cost banking and mobile payments—both scan and dial-up—create direct value in their own right. Where applicable (in the less well-off market segments of Brazil, China, India, and Indonesia, for example), low-cost banking can bring into the fold a considerable group of consumers who formerly could be served only at too high a cost. It replaces the most costly elements

of a basic banking service (ATMs and tellers) with a deposit and withdrawal process that relies on much cheaper mobile communications and “franchised” (merchant-based) tellers.

So far, as we have seen, other mobile-financial-services businesses launched in sophisticated emerging markets—mobile personal financial services, for instance, and personalized mobile portals—haven’t shown a capacity to generate value directly. Customer take-up has been low even

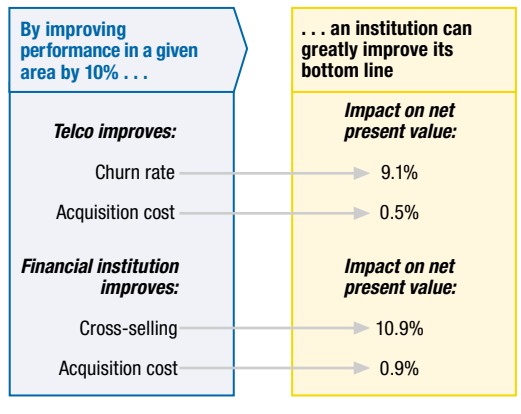
where services have been free, as they are in Brazil and Turkey. But these businesses can and do generate indirect value that can substantially affect the bottom line of the providers’ core businesses (Exhibit 4). Retaining customers, for instance, is vital to telecom companies in markets that have high rates of mobile penetration, where new customers are less valuable because all heavy users have already signed up. Such companies see any new service that increases customer “stickiness” as worthwhile provided it helps to retain more value than it costs to provide.

The problem with indirect value is that it can be short-lived. Reduced churn and cross-selling, for example, are achieved mainly at the expense of competitors, not by increasing the size and value of the market. As a result, such benefits disappear as soon as all competitors offer a matching service. A bank or a mobile operator, for instance, might attract its competitors’ customers, as well as a disproportionate share of new ones, with an offer that bundled banking and mobile communications services—but this would go on only until its competitors followed suit.

Before choosing to launch a mobile financial service that promises indirect benefits only, a provider must therefore know that it can hold on to the benefits long enough to justify the investment. Most such services will need a clear run of at least 18 months to two years. Whether a provider is able to maintain such a lead will depend on how easily competitors can replicate the services, and their replicability depends partly on the degree of competition in the market and on any distinctive assets or capabilities the first-to-market company might have. The larger its existing market share, the less distinctive its assets or capabilities need be, but since gaining and keeping a head start relies, to some extent, on speed and quality of execution, the largest player won’t necessarily win.

EXHIBIT 4

An indirect route to value



What kinds of alliances are appropriate?

If large financial institutions and mobile operators can execute their joint decisions quickly, cooperation between them will most often be the fastest way to get a mobile financial service into the market, given the size of their

The **fastest way** to create mobile services is cooperation between operators and financial institutions

combined customer base. Both parties will bring their complementary assets and capabilities into play more quickly in a partnership than they could on their own. A bank, for example, brings with it a banking license—hard for mobile operators

to acquire in some countries—credit-vetting skills, and a merchant network. A mobile operator brings a well-known brand, a mobile network, and, typically, a customer base larger than the bank's. Thus a dial-up mobile-payments business launched by a leading bank and a large telecom company would be more likely to succeed than one launched by a telecom company alone.

Alliances to create services that benefit from network effects—which make services more useful as more people use them—require special attention. Payments businesses and portals fall into this category. Theoretically, a financial institution, by allying with as many telecom companies as possible, could maximize the value of a mobile financial service with network effects. It could then market its service to all mobile users and cut out other financial institutions. The converse is true for a mobile operator. But if neither party were a monopoly, neither of these positions would lead to a deal, since a disproportionate share of the resulting value would accrue to the lone bank or telephone company.

The real choice facing both is between a system featuring one financial player and one telecommunications company and initially closed to users outside their customer bases, on the one hand, and a system open from the outset, with all telephone companies allowed to ally themselves with any financial firms, on the other (Exhibit 5). In the latter case, all parties forgo the opportunity to create large amounts of indirect value but are compensated somewhat because their new businesses grow larger, faster.

In the absence of a monopoly, closed systems will eventually dissolve: the success of some will encourage the formation of others, and the marketplace will start to fill up. Eventually, participants will see that a common standard across competing businesses would be advantageous to all. Even if they do not, authorities responsible for promoting competition will soon push them to adopt one.

But in the meantime, companies evaluating alliance options for building a portal or payments business will need to know how long they could enjoy the advantages of a closed system before competing bilateral offerings were launched. If the answer is “long enough to justify the investment,” they should choose the closed route. Having done so, one way to maintain a closed system’s lead would be to lock in big customers at the outset—by signing up the local public transportation system as a partner when you launch your mobile scan-payments system, for instance—so that latecomers can’t get at those customers. But for this approach to work, an alliance would need distinctive capabilities: the critical mass conferred by a large customer base, say, or superior operating skills.

For a large company unsure of its ability to maintain a head start in a closed system, the best partnership strategy might be to promote an open system. By going open from the beginning,

the company could capture market share that would otherwise be at risk from the closed strategy of a more effective competitor.

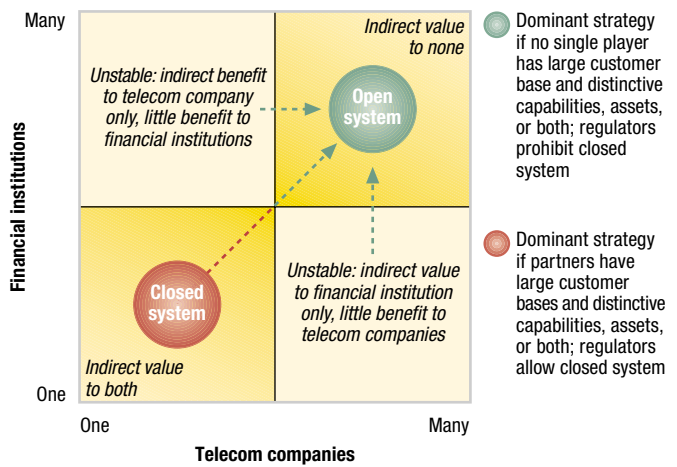
Attempts to compare the value of an open- or closed-partnership strategy for a business with network effects will clearly generate different answers for different potential partners in different markets. While there is no single rule, the outcome of the analysis is likely to be a deciding factor in shaping a chief executive officer’s mobile strategy.

Tread boldly but lightly


In choosing mobile-financial-services businesses and alliance structures for a particular market, providers should combine caution with dash. On the one hand, creating a sound combination of businesses in appropriate partnerships will be difficult, painstaking work. On the other hand, that work must not take too long. Waiting for competitors to make the first move and

EXHIBIT 5

Alliances in an evolving market



hoping to learn from their mistakes is likely to mean losing any indirect benefits the services offer.

Of course, even contenders that have chosen the right service for the right market in the right alliance face risks: they might invest in an ultimately inferior technology, for instance, or find consumers slow to adopt the service. But we think the unusual returns that could accrue to a well-prepared first mover will usually outweigh the risks. The organizational lessons a company learns while it is ahead of the pack create the distinctive capabilities that can keep it ahead and make its service hard to replicate. Fortune favors the brave or at least the brave who do their homework. 

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