

## **Developing a new rural payments system in China**

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China could provide itself with a rural payments system cheaply and quickly by taking advantage of an existing technology and infrastructure.

A growing middle class and a decade of annual double-digit growth in retail sales have provided a powerful magnet for businesses hoping to cash in on emerging China. Yet outside of the main cities—in the vast expanse of rural China, where around 750 million people live—the reliance on cash makes it difficult for consumers to spend and for retailers to sell.

China has just 530 point-of-sale (POS) terminals and ATMs per million people, far below the 10,000 per million found in the United States. Accordingly, cash is used in 83 percent of all payment transactions in China, compared with just 21 percent in the United States. With most of these terminals and ATMs in China's cities, practically all rural transactions are cash based.

One way to wean rural consumers off their reliance on cash might be to add more ATMs and POS terminals. However, we estimate that such an effort would cost at least \$2 billion and add just 130 terminals and ATMs per million people. Installing equipment and extending the telecommunications network in remote areas would also take a prohibitively long time.

Recognizing the need for a new rural payments system, in August 2006 the People's Bank of China directed domestic banks to devise a solution. China views the development of a low-cost, noncash payment network in rural areas as critical to increasing rural spending and closing the wealth gap with urban areas.

The good news is that mainland China can tackle the problem by using existing technology, without a hefty price tag. McKinsey research shows that the mainland's existing mobile Short Message Service network could be quickly and cheaply deployed to provide an SMS-based payment system in rural areas.

Because the most expensive parts of the infrastructure—the mobile network and millions of mobile phones—are already in place, we estimate that the cost of this solution would range from less than \$40 million to \$60 million. A payment-settlement system among merchants, banks, and mobile-phone network providers would account for the bulk of this expenditure. The initial investment would quickly be recouped through transaction commission fees and mobile-phone usage charges.

There are alternative mobile-payments solutions gaining exposure around the world, but these are not well suited to the needs of rural China. For example, Seoul and Tokyo have both introduced a system that allows a transaction to be completed using a mobile phone with a special built-in chip and an in-shop noncontact reader. However, the need to install the reader and to use special—and expensive—mobile handsets renders the solution inadequate for rural China.

An SMS-based payment system, aside from its lower cost, is versatile and ubiquitous. Users simply send an SMS message specifying the mobile-phone number of the payee and the amount to transfer, along with a personal identification number. Within seconds, the payee receives both a confirmation message by SMS and the money in the designated account. The payer receives a confirmation message.

Consumers can make retail purchases or pay for things such as utilities, use the system to receive payments like salaries and wages, or transfer money to friends and relatives. China's large migrant-labor pool would have access to a convenient, inexpensive, and secure system for sending money home. Less cash also means less chance for theft.

And consumers would not be the only beneficiaries. Banks could serve a broader base of rural merchants who are currently beyond their reach. Ease of access to funds would encourage potential rural customers to keep their money in banks rather than under the mattress. For

merchants, mobile-cash-ready customers are more likely to shop on impulse, increasing sales revenues and reducing the cost and risk associated with handling cash.

Mobile-phone network operators would be able to increase their customer base, boost data revenues, and lock in customers with additional services. The experience of the Philippines, where SMS-based payment systems have been widely adopted for some time, augurs well for China: Philippine consumers are rapidly catching on to new "mobile-wallet" systems. China is similarly well positioned to introduce such a service. Up to 15 percent of China's rural population already subscribes to a mobile-phone network; we expect penetration to reach 22 percent by 2010 and 40 percent by 2016. Around 75 percent of current mobile subscribers use SMS, suggesting that there would be few technological obstacles to the adoption of mobile payments.

There are obstacles to the adoption of a cashless payment system, but the SMS option minimizes them. For example, customers may be cautious about trusting an "invisible" system. But the involvement of big and trusted brand names—which in China include banks and mobile operators—along with marketing and consumer education efforts, should soothe such fears.

Although merchants new to cashless transactions may be concerned that payments will be mislaid, partnerships with selected merchants and an education campaign can prove that the system works. Regulatory barriers will need to be resolved, but the government has shown it is committed to developing a system for cashless transactions.

The prize will be substantial. McKinsey research shows that consumers in rural China now account for just 22 percent of the country's total retail payment transaction volumes. We predict that significant growth in rural household incomes will lift this figure to 44 percent by 2015. By teaming up, banks, mobile-phone operators, merchants, and regulators could go a long way toward unlocking more spending by Chinese consumers.

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