

Toward Mobile Payments



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Pop quiz: Where are consumers more likely to use their smartphones for making payments at the checkout aisle—the United States or Kenya?

Surprise! It's Kenya, but that may change as U.S. financial services providers catch up with the rest of the world.

The concept of mobile payments is new enough to require some explanation. First, there's a difference between mobile payments and mobile banking.

Mobile banking services allow you to do things like monitor account balances, transfer funds, and receive alerts—pretty much anything you can do with a web browser from your computer. Mobile payments, on the other hand, let your smartphone double as a debit or credit card.

Although they still sound like the stuff of science fiction to many Americans, mobile payments may be commonplace sooner than most people think. Just as ATMs took off and paper checks all but vanished, mobile payments could spread like wildfire. It's partly a matter of getting the infrastructure and operating agreements in place. For its part, the Federal Reserve is working to ensure that when mobile payments do arrive *en masse*, they will operate in an environment as safe and secure as other payment channels.

Just two years ago, the Federal Reserve—led by the Atlanta and Boston Reserve Banks—convened a working group to share knowledge about mobile payments and banking developments in the United States. The idea was to organize a meeting of industry stakeholders in the emerging mobile financial services industry and discuss some of the barriers to U.S. adoption of the mobile channel.

Clearly, U.S. mobile *banking* services were gaining traction. Banks large and small quickly recognized the need to add value and convenience to their products and compete with banks already offering mobile services.

But U.S. mobile *payments* services weren't yet catching on. For example, one form, the *mobile proximity payment*, remains a rare transaction in the U.S. It enables you to use a mobile handset at the merchant's point-of-sale terminal to purchase goods and services. In effect, the mobile phone substitutes for swiping a credit or debit card through the card slot on the terminal. The buyer simply waves the phone in front of a device at the pay station. Once the payment information from the phone enters the device, it rides the same payment rails as a debit or credit card.

A few developing countries have been the real hotbed of mobile payments. In those nations where people tend to rely on basic mechanisms of exchange, such as cash, mobile telephony has enabled consumers to leapfrog a generation of payment instruments like checks and credit cards. They use their mobile phones as a substitute for

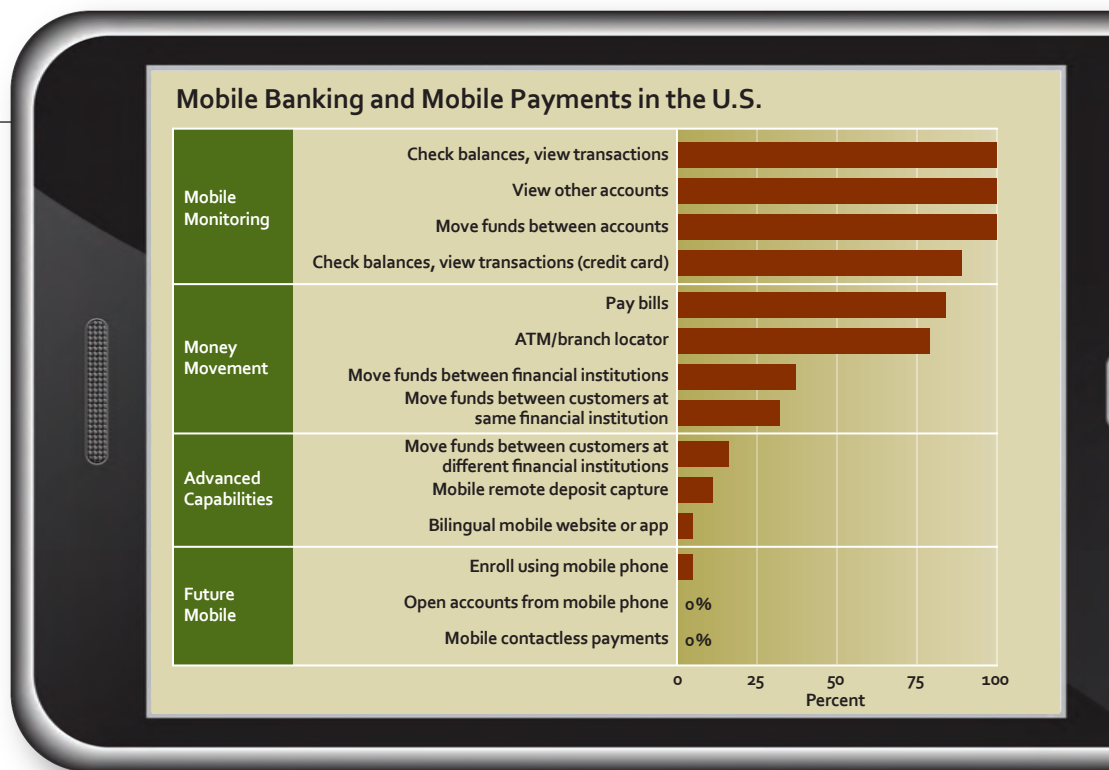
bank branches and ATMs, which don't exist in most rural areas. By doing so, they achieve a more secure, accessible banking and payments environment than was possible before. Kenya and South Africa are among the countries where mobile payments are drawing previously unbanked people into the modern banking system.

But why not here in America? We already have advanced payments systems, which are safe and secure and complicate the business case for mobile payments. Moreover, so many players are involved here that coordination is difficult. That's not true in many emerging countries, where a single telecom provider may serve the entire nation, and there may be only a handful of banks.

A Change in the Landscape

Still, a number of new payment service rollouts and trials are emerging in the United States. Telecom carriers, banks, and technology service providers are partnering in new ventures to offer mobile wallet applications by Google, PayPal, and Isis. On the person-to-person payments front—in which parents, for example, can pay babysitters through their mobile phones—three of the nation's largest banks have announced a payment transfer service that will enable customers to move money from their checking accounts by using either an email address or a phone number.

In August, Visa announced its intention to encourage chip technology for credit card payments. That means cards will be equipped with microchips that can be read by point-of-sale devices, replacing the magnetic stripe technology now



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Sources: Javelin Strategy and Research; Federal Reserve Bank of Boston.

used by most merchants. The next generation of point-of-sale devices will accommodate chip-embedded cards as well as mobile phone payments.

So where does the Federal Reserve fit in? Broadly speaking, the Fed's role is to help ensure that the U.S. mobile payments system is safe and secure. With consumers adopting mobile payments, the Fed has an interest in keeping the system as efficient and orderly as before while providing access to as many users as possible.

What Next?

Ubiquitous mobile payments are not only possible but almost inevitable. As the landscape changes, the industry is moving to create a secure, interoperable, and universal channel for mobile payments. Many questions remain as handset and chip manufacturers, telecom companies, card networks, financial institutions, and

software providers all try to get a foothold in mobile payments. Some of the questions are smaller—how will consumers know who to call when they encounter a problem? Some are larger—how exactly will the different players come together to smoothly handle mobile payments through electronic channels? The Federal Reserve's Mobile Payments Industry Workgroup continues to sort through challenges like these. ■

More on mobile payments



Follow the latest developments from the Federal Reserve's Mobile Payments Industry Workgroup at www.bostonfed.org/bankinginfo/firo and at <http://portalsandrails.frbatlanta.org>, the Atlanta Fed's payments and mobile initiatives blog, Portals and Rails.