Gauging the disruptive potential of digital wallets

Digital wallets are having a moment. The recent launch of Apple Pay and the accompanying media attention are bringing them into the mainstream. Technological and market developments have expanded their potential. Payments networks have shown a willingness to unbundle their offerings and permit non-bank players to use their tokenization protocols. EMV technology adoption in the U.S. has accelerated. And consumers are more open to adopting digital-wallet-like offerings like mobile boarding passes and Starbucks' loyalty app.

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Yet for many in the payments industry the question of whether digital wallets (see "Defining the digital wallet," page 4) will ultimately succeed is still an open one. In the U.S., PayPal and other early digital wallets attained scale through online commerce, but attempts to bring mobile payments into the physical world have had limited success.

To provide a structured perspective on how digital wallets will evolve, this article examines the market through the lens of McKinsey's six markers of payments disruption success (first described in "The future of payments: Markers for success," *McKinsey on Payments*, June 2011). The six markers are grouped in three critical areas: designing a compelling value proposition; executing a measured go-to-market strategy; and planning thoughtfully for expansion.

Design a compelling value proposition

1. Deliver significantly more customer value than rivals. Entering payment credentials when shopping online is often considered cumbersome, making convenience a long-standing consumer payments priority. In the U.S., McKinsey's annual Mobile Consumer Panel consistently identifies convenience as the leading factor in consumer adoption of mobile payments. Most digital wallets, including Apple Pay, Visa Checkout and Google Wallet, accordingly emphasize convenience in their value proposition. Until now, however, paying with smartphones offline in markets where card penetration is strong has been only slightly more convenient than existing methods.

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Defining the digital wallet

The term *digital wallet* has been applied to diverse forms of electronic payments, even some as simple as prepaid cards. In addition to money, however, traditional wallets also typically hold various forms of payment and identification that might be stored and accessed digitally. This article therefore defines the digital wallet as a software application that enables users to digitally store money, payments credentials and more, and to use these to implement various types of cashless transactions.

motivating consumers to alter their fundamental payments behavior is particularly challenging. In online commerce, PayPal initially added convenience by introducing emails and passwords. Today, Apple Pay uses its fingerprint recognition feature, Touch ID, for online shopping, which replaces passwords with biometric security. However, because consumers still perceive credit and debit cards as a major convenience for onsite transactions, digital wallets will need even stronger value propositions to displace entrenched card-based payments.

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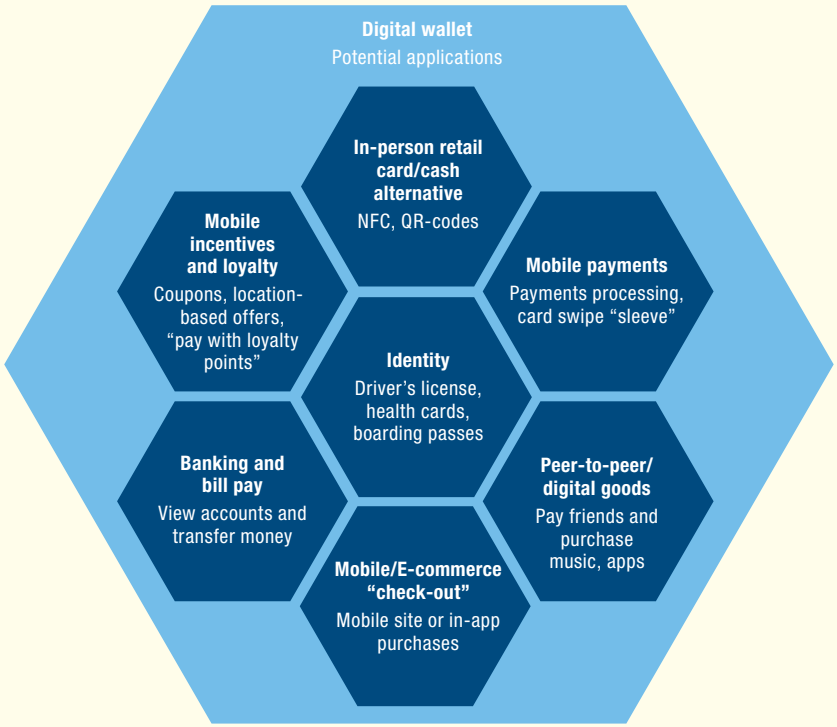
Digital wallets that demand more effort and time than currently favored payments methods are also unlikely to gain widespread adoption. For instance, requiring buyers to add devices to their phones, narrowly limiting the forms of accepted tender, or requiring manual entry of bank information could all hinder acceptance.

To significantly increase customer convenience, providers should expand wallet functionality beyond basic payments capabilities. Options include digital storage of ID cards, driver licenses and other items carried in traditional wallets (Exhibit 1). The Osaifu-Keitai wallet developed by NTT DOCOMO in Japan, for example, includes electronic money, credit cards, ID cards, loyalty cards and electronic fare collection on public transit. Digital wallets could include applications that deliver targeted offers, which could be designed to redeem automatically at the point of sale—a major convenience for value-oriented consumers. India and several other nations are even considering the issuance of personal IDs that could be stored in digital wallets.

In addition to convenience, Apple is emphasizing security and privacy in Apple Pay marketing. Other wallets, including PayPal's and Turkey's BKM Express, address these concerns by withholding payments details from merchants. Historically, consumers have considered security and privacy to be important primarily for online and mobile transactions, but recent breaches of card data at retailers suggest that value propositions containing strong security and privacy components could be effective in driving wallet adoption.

Exhibit 1

The digital wallet presents diverse commerce-related applications extending well beyond payments



Source: McKinsey Payments Practice

2. Create broader merchant value propositions. Minimizing cost is a top merchant priority in payments. The Merchant Consumer Exchange (MCX), for example, which comprises more than 60 U.S. member retailers, is establishing a digital-wallet platform designed to reduce members' costs. The platform addresses member concerns about rival digital wallets, like Apple Pay, that index heavily on credit cards and can therefore skew a merchant's payments mix toward higher-cost methods. But excessive focus on costs might also reduce consumer appeal—for example, by requiring shoppers to disclose information they are unaccustomed to providing for retail payments, such as bank account numbers in the U.S. Historically, payments disruptors that focused on cost at the expense of customer experience have failed to attain scale. So to succeed, digital wallets like MCX will need to find other ways to drive revenue growth. Possibilities include improving the customer experience, more effectively delivering offers and loyalty propositions, and collecting and sharing more consumer data with merchants.

For online and mobile commerce, payments and digital wallet innovators like PayPal's Braintree have recently gained a foothold by delivering seamless customer experiences that dramatically increase purchase conversions. Conversion is valued highly by smaller online and mobile merchants intent on winning new customers and gaining repeat business. Some digital wallets build on the shopping experience developed by retail giants like Amazon and Walmart, who ex-

pedite the checkout process by storing and auto-populating previously used payments credentials. These innovators offer this capability and conversion performance to smaller merchants who cannot develop the tools themselves. The payments processor Stripe, for example, minimizes cost while providing easy merchant integration and an uncomplicated customer experience. Extending such merchant propositions to the physical world is another way for digital wallets to offer merchants more than just cost savings.

When expanding into new markets digital-wallet providers should proceed cautiously. Markets often differ significantly in such critical aspects as card interchange economics, regulatory environment, technology penetration and consumer behavior.

Execute a measured go-to-market strategy

3. Penetrate niche market segments first. Consumers' expectations for digital wallets vary widely, so it is difficult to address them all at the outset. One approach is to initially target smaller market segments. This enables narrow tailoring of product design, partnerships and marketing, which not only improves the odds of early success and keeps customer acquisition costs manageable, but also lets the wallet provider offer merchants quick access to customer segments, which can be an important incentive.

In the early niche-market stage, issuers can also pursue smartphone users (Android users in the case of Google Wallet; iOS in the case of Apple Pay). For merchants, these might be frequent users of their proprietary mobile apps. The issuer might, for instance, create a simple link with existing-app functionality to avoid confusion between the wallet and other apps. Defining and delivering a value proposition for these customers will be critical to gaining early adoption.

4. Leverage existing ecosystem and infrastructure. The tokenization protocol developed by EMVCo (used for the first time by Apple Pay and likely to be adopted by others) illustrates this important success marker well. By using 16-digit tokens—the same format as existing credit and debit card numbers—along with other existing data fields, the protocol enables more secure routing of payments via established networks and POS infrastructure while minimizing requirements and network integration costs.

Wallet-like merchant apps, including those of Starbucks, Otto's Yapital in Germany and Target's Cartwheel in the U.S., also use existing POS infrastructure to drive consumer adoption. Because these products use QR codes, however, related apps do not require near-field-communication (NFC) terminals. By contrast, Apple Pay, Google Wallet and others use NFC to deliver a seamless customer experience that, in the U.S., has thus far come at the expense of broad merchant acceptance. But, as merchants replace older payments terminals with NFC- and EMV-enabled models, this obstacle should diminish in importance.

Plan thoughtfully for expansion

5. Adapt offerings to other markets. When expanding into new markets, digital-wallet providers should proceed cautiously. Markets often differ significantly in such critical aspects as card interchange economics, regulatory environment, technology penetration and consumer behavior. Markets with substantial economic differences, for instance, can present considerable challenges, such as lower levels of interchange. This can make charging incremental fees to issuers (such as Apple Pay's 15 bps fee) more difficult, and can also negatively affect network tokenization economics. In markets with low interchange fees, such as the EU, where credit card interchange will fall below 0.3 percent, wallet providers might need to find monetization alternatives (Exhibit 2).

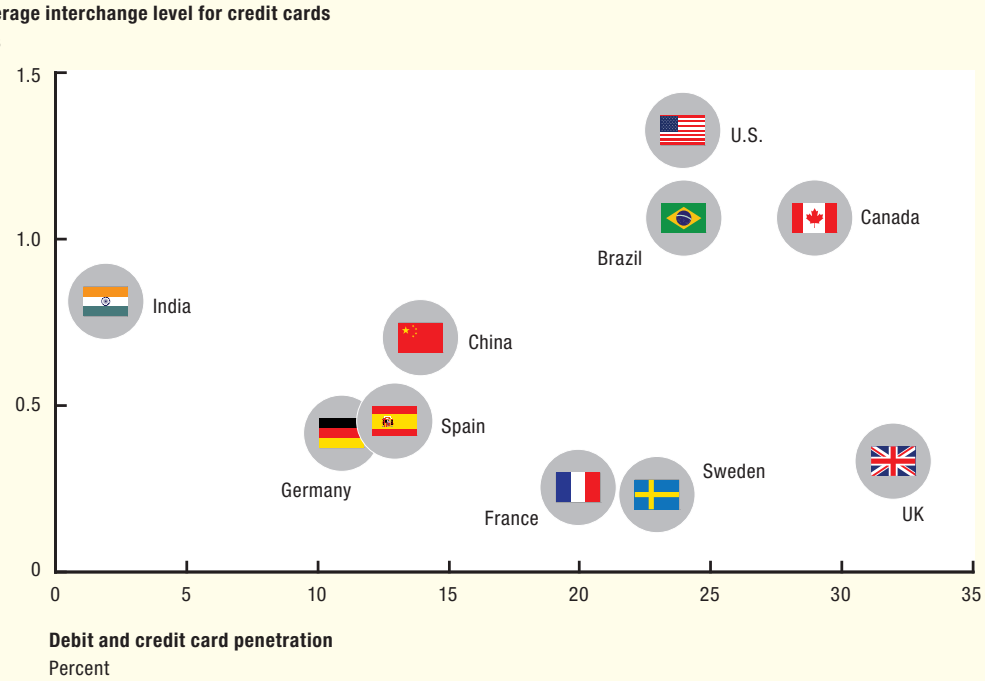
In addition to putting pressure on interchange economics, regulations can also present challenges to data-gathering efforts and analytics-based value propositions related to wallets. Apple Pay has said it will not collect payments information, but Google Wallet and others might decide to gather and use payments data, in which case they will face different security and privacy constraints in the markets they enter.

Established consumer payments preferences can also have an impact on digital-wallet success. For example, bank account-funded wallets might gain ground faster in markets like Germany and India, where non-card payments methods (including direct bank account access) are more common. Introduced in the Netherlands in 2005, the

Exhibit 2

Digital wallet business models must adapt to diverse market conditions, such as varying interchange levels

Card penetration and interchange levels by country, 2013



Source: Strategy Analytics; IDC

iDEAL wallet platform, which does not use debit or credit cards, gained acceptance at 100,000 online stores. Conversely, in European markets where rewards play a smaller role, pay-with-points wallet features would likely have less appeal.

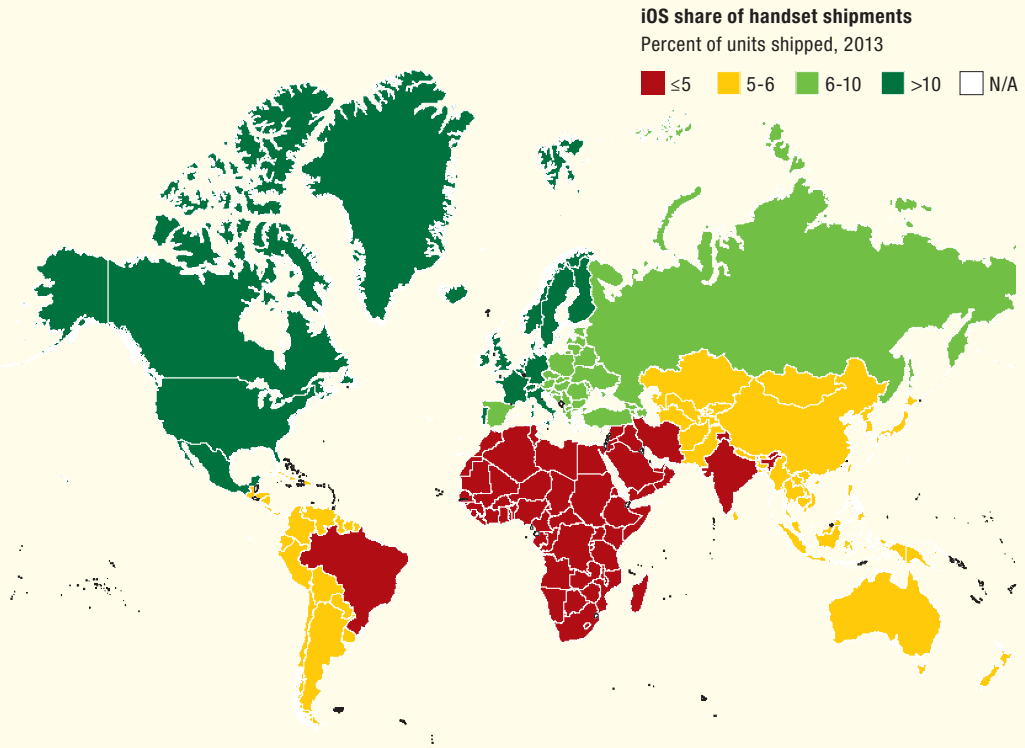
In some countries, new entrant wallet products, even those with advanced features, will have to compete with incumbent offerings already embedded in the infrastructure. In Japan, a market that is highly conducive to launching new technologies, the Osaifu-Keitai wallet has 10 years of history and is now used even for government-issued IDs. In South Korea, Bank Wallet Kakao was recently launched in partnership with 16 Korean banks, as well as the Korea Financial Telecommunications and Clearing Institute, making displacement a tall challenge.

From the technology standpoint, mobile wallet providers will also need to adapt to differences in smartphone penetration levels and merchant-acceptance technologies in different markets. Apple Pay, for instance, is likely to have a smaller presence in markets such as China, India and Korea where iOS penetration is low (Exhibit 3). Similarly, NFC wallets should gain quicker acceptance in places where that technology already has a strong presence, such as Australia and the UK.

6. Tap adjacent profit pools to differentiate offerings and add value. Convincing prospective partners to pay for wallet services solely

Exhibit 3

Apple Pay adoption could be slower in countries with lower iOS market share



Source: Strategy Analytics; IDC

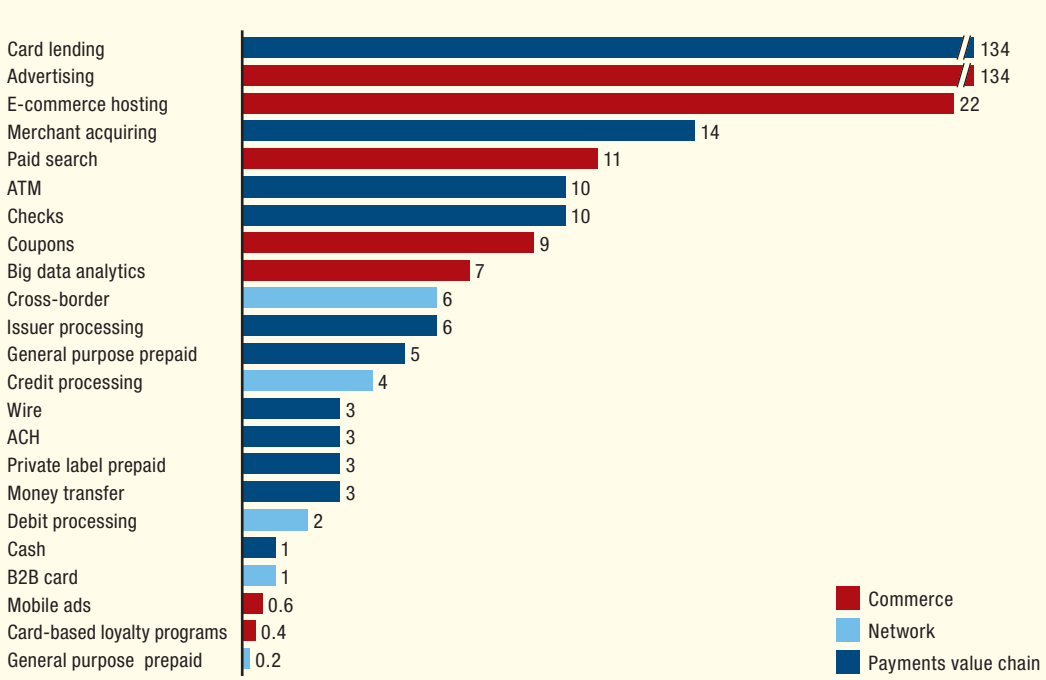
on the basis of transaction volume may generate only modest revenues because it taps a profit pool that, in many markets, is already under margin pressure. In the payments value chain, the war over endpoints (such as the consumer and merchant interfaces in the case of wallets) is already compressing margins in mature markets as providers continually offer more compelling rewards and discounts.

In mature market pockets where interchange revenues are under pressure, such as PIN and debit cards in the U.S., tokenization fees may provide a viable alternative. While these fees tap the same revenue stream, they also promise to reduce risk costs throughout the payments value chain. Wallet providers therefore might need to seek alternative revenue streams that offer more meaningful growth potential—possibly commerce-related revenue streams (Exhibit 4). Coupons and data analytics, for instance, have strong links to payments and transaction data. In fact, the line between the value chains of payments and commerce is already blurring as payments processes blend into the purchase experience—a change exemplified by Braintree and rideshare provider Uber. This could open adjacent commerce revenue streams to payments incumbents.

Given mapping capabilities at the device and customer levels, tracking the performance of digital-wallet marketing campaigns is also

Exhibit 4

Large revenue streams adjacent to payments blur the lines with commerce



Source: McKinsey Global Payments Map; McKinsey Payments Practice

easier in the offline world, facilitating the adoption of pay-for-performance models. This can become a winning situation for both merchants and wallet providers, wherein merchants pay providers based on incremental rather than absolute sales, a model which more closely aligns the incentives for both.

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The recent convergence of payments and commerce means digital wallets are here to stay. Yet, while they have established a solid foundation for growth, to truly become a payments disruption they must continue to evolve. Many providers are, in fact, becoming more thoughtful about their go-to-market strategies, particularly as these relate to initial market selection and building on existing infrastructure. However, they also need to develop more comprehensive consumer value propositions that can deliver the magnitude of user-experience improvement that widespread consumer adoption demands. Finally, players will also need to thoroughly consider what is necessary to expand successfully into other markets and revenue pools—areas that present strong promise for rapid growth, but in contexts that may be especially challenging to digital-wallet economics.

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