Demand Institute

# THE END OF COLD, HARD CASH

AND

# THE GLOBAL SHIFT TOWARD CASHLESS CONSUMER PAYMENTS

AUGUST 2016

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# KEY CONCLUSIONS

CONSUMER DEMAND FOR CASHLESS PAYMENT METHODS IS GROWING, driving a global movement toward financial inclusion. For the 2 billion unbanked consumers around the world, cashless payments offer a way to participate in the modern, connected consumer economy—including basic financial services.

THE TECHNOLOGY THAT ENABLES DIGITAL STORAGE AND EXCHANGE OF MONEY becomes increasingly relevant with the exploding global growth in internet access and penetration of mobile devices. The Demand Institute projects that in the next five years, 1.2 billion consumers will gain access to the internet for the first time.

IN CHINA ALONE, WE ESTIMATE THAT GROWTH IN ACCESS TO CASHLESS PAYMENTS will lead to $170 billion in additional consumer spending over the next decade. Globally, we project that contribution will be as much as $10 trillion—almost as much as U.S. consumers spend in a year.

FOR CONSUMERS WHO ALREADY HAVE ACCESS TO FINANCIAL SERVICES, new forms of cashless payment will enhance their experience of shopping across all channels, especially e-commerce, and will enable businesses to offer them products and services more closely based on their personal preferences and needs. Such forms of payment will also make it easier for consumers to manage their spending and borrowing.

THE CASHLESS-PAYMENTS INDUSTRY IS IN A STATE OF DISRUPTION and has become extremely complex. There is tremendous regional variation in its levels of development and in the major players. We have identified three market segments: Core Providers, Adjacent Participants and New Entrants. Each segment has strengths and challenges, and it is too soon to say which will succeed.

WHICHEVER SEGMENT PREVAILS, WE PROJECT THAT THE BUSINESS MODEL FOR THE PAYMENTS INDUSTRY WILL CHANGE in three fundamental ways:

- Revenue earned per transaction will decline.
- The number of transactions will rise, while average transaction size will decline.
- Indirect revenue opportunities will increase.

CONSUMER-FACING BUSINESSES OUTSIDE THE PAYMENTS INDUSTRY, especially retailers, will also be significantly affected by the shift to cashless payments. Consumers will increasingly seek connection between cashless payments and the shopping and purchase process across all channels, allowing them to personalize and diversify their shopping patterns. Brands can act now to provide consumer access across devices and payment types, allowing movement between online and offline shopping and connection across borders.

PAYMENT ACTIVITIES AND PLATFORMS WILL MERGE not only with shopping but also with all forms of consumer digital engagement, including the use of financial services, social media and entertainment. New consumer measurement opportunities will offer a holistic understanding of consumers, which can serve as a basis for personalized offers and reward systems. There will also be many new ways to engage with consumers through marketing and services that will benefit consumers and lead to new growth for consumer-facing companies around the world.

# THE DRIVERS OF A GLOBAL SHIFT TO CASHLESS PAYMENTS

Money facilitates trade. For thousands of years, money was physically held and exchanged as cash, but in the modern world, more and more people rely on noncash forms of exchange. Credit cards and myriad other forms of payment have for decades enabled ever-growing demand for products and services to be satisfied. Now the technology-led advance of new forms of cashless payments is opening even more ways to fulfill that demand, including uncovering latent demand that consumers may not yet recognize. When they do, and when consumer-facing companies having found ways to meet the uncovered demand, huge growth will be unleashed.

In the process, the cashless-payments industry is being disrupted, with different types of companies battling for market share and the prominent players facing fundamental changes to their business models. The ramifications will be widely felt. Cashless-payment technology has for some time enabled consumer businesses to gather information about consumers' behavior, needs and preferences. But as new forms of payment alter the path to purchase, the potential to collect data expands exponentially. For retailers, for example, cashless payments will influence which retail channels grow and how they intersect. All businesses will find new ways of marketing to consumers, engaging with them and measuring their behavior. Better information about consumer behavior and needs will feed even into strategic business decisions relating to growth priorities and product and service innovations.

Consumers will benefit from all of this. From their perspective, it is part of a move toward financial inclusion that will draw the world's "unbanked" population into the modern consumer economy. Access to cashless payments will enhance consumers' experience of shopping across all channels, enable them to have products and services better suited to their preferences and needs, and help them manage their spending and borrowing more effectively. It will enable the integration of all aspects of their experience across marketing, advertising, shopping, social media, entertainment and financial services.

A platform capable of delivering all of this does not yet exist, but hints of what it will look like—and who might provide it—are emerging. Social-media companies may be particularly well placed to offer this varied engagement. In China, for example, Tencent's WeChat has a payments service and is launching an online bank, WeBank.[1] Elsewhere, Facebook is moving to equip its Messenger service with payment and other consumer services.[2]

We have identified four main drivers of this accelerating demand for cashless payments: growth in household access to mobile technology, global economic growth and the rise in household income, the push toward financial inclusion supported both by development policy leaders and individual consumers, and the consumer need for safe storage and exchange of money—particularly in countries with high rates of theft. We discuss each in turn.

### 1. MOBILE TECHNOLOGY

Ever-increasing internet penetration and the explosion in mobile and digital technologies are digitizing all aspects of consumers' lives. Globally, about 3.2 billion people have internet access, compared with 1 billion only 10 years ago. Internet penetration still varies widely, from almost 90% in the United States to about 50% in China and 22% in Ghana. In China, The Demand Institute projects, internet penetration will grow to 68% by 2020—bringing 300 million more people online in that market alone. Worldwide, we project that an additional 1.2 billion people will come online by 2020, making a total of 4.4 billion.

More and more of these consumers, especially in emerging and developing markets, are accessing the internet through mobile devices. In India, 54% of the population has a mobile phone, and in China, more than 70% (compared with 81% in the United States). In Nigeria, the share is just above 40%. Mobile phone penetration worldwide is almost 61%, with close to 4.3 billion users in 2016, according to e-marketer.[3] It projects this number to exceed 4.7 billion by 2018.

The rise in internet access in emerging markets is expanding consumers' horizons and fueling their demand for new ways to pay for the products and services of the modern economy. What happens when a consumer accesses the internet is similar to what happens when a baby starts to walk: A whole world of exploration opens up. Internet access enables new shopping patterns, including online purchases. This is true in any market, but especially in emerging markets where consumers are highly digitally engaged and where the lack of transport, distribution and retail infrastructure has until recently restricted access to goods and services.

Internet access is necessary—but not sufficient—to enable online purchases, however. Even with internet access, consumers in remote areas of emerging markets still struggle to receive goods and services bought online. And without some method of exchanging money for goods, online purchasing cannot occur.

### 2. GLOBAL GDP GROWTH

The Conference Board projects that mature economies will grow by just over 2% a year between 2016 and 2020, while emerging markets and developing economies are projected to grow by 4% a year over that period. GDP growth will translate into similar rates of household income growth, which in turn will translate into consumption growth.

Much of this additional consumption will be fueled by a consumer segment that The Demand Institute has introduced elsewhere[4] and that we call Connected Spenders: consumers who are highly engaged in the consumer economy, have internet access, and have the capacity and willingness to

1 Rick Carew and Juro Osawa, "China's Tencent-Backed WeBank Raising Funds at $5.5 Billion Valuation," Wall Street Journal, January 27, 2016, http://www.wsj.com/articles/chinas-tencent-backed-webank-raising-funds-at-5-5-billion-valuation-1453892057.

2 Parmy Olson, "Report: Facebook Is Turning Messenger into a Mobile Wallet," Forbes, March 29, 2016, http://www.forbes.com/sites/parmyolson/2016/03/29/facebook-messenger-businesses-payments/#4c49d68f200d.

3 e-marketer, "Worldwide internet and mobile users: e-marketer estimates for 2016," April 1, 2016.

4 The Demand Institute, "No More Tiers: Navigating the Future of Consumer Demand across China's Cities," November 17, 2015, http://demandinstitute.org/no-more-tiers/.

spend beyond their basic needs. These consumers, who can be found in all countries to varying degrees, will drive global spending growth across a wide range of categories. In China alone, we expect them to account for 80% of consumer spending growth over the next decade. The size and spending power of this segment of consumers will continue to expand, and these consumers will increasingly seek seamless digital methods of paying for goods.

### 3. FINANCIAL INCLUSION

The World Bank recently estimated the global unbanked population to be about 2 billion. To be unbanked is to be without an account at a formal financial institution. In mature markets such as the United States and Europe, estimates of the number of unbanked vary, although they are thought to account for between 20% and 25% of the adult population. Mostly, the unbanked are to be found in emerging markets, and many seek to participate in the modern consumer economy. Indeed, as our findings on Connected Spenders confirm, unbanked, lower-income people from emerging markets can be among the most engaged consumers, aspiring to basic goods and household financial services while lacking the financial infrastructure to acquire them.

New payment options will connect these would-be consumers to the economy, enabling them to engage in e- and m-commerce and consumer credit markets, and will facilitate peer-to-peer payments and remittances. The possibilities go well beyond increased credit card penetration to mobile-enabled payment methods similar to those pioneered by m-pesa in Kenya and bKash in Bangladesh (see the sidebar *"New Entrants increase access"*). The companies that can engage with the unbanked by devising basic methods of cashless exchange such as these will have innumerable opportunities to serve these consumers, to everyone's advantage. In China alone, we estimate that growth in access to cashless payments will lead to $170 billion in additional consumer spending over the next decade. Globally, that contribution could be as much as $10 trillion—almost as much as U.S. consumers spend in a year.

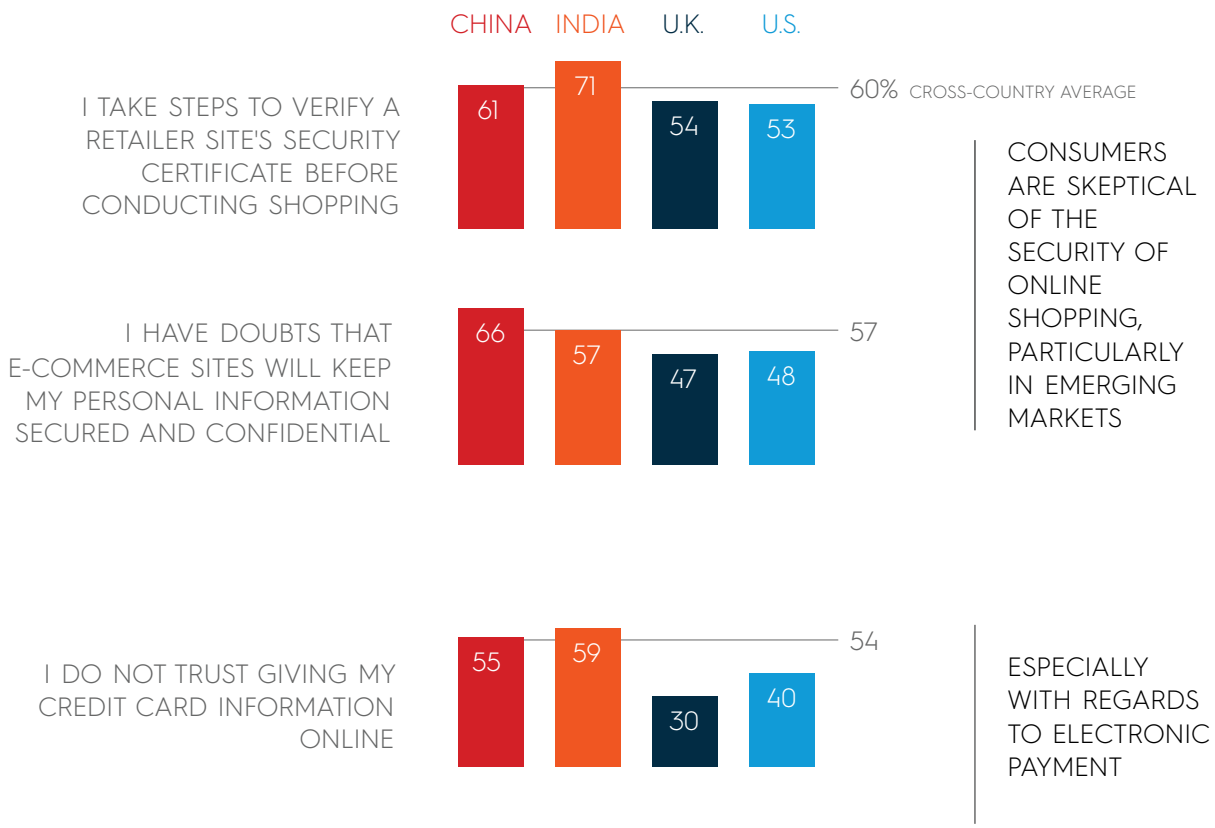
### 4. SECURITY

Security of funds, and even personal security, is driving demand for cashless payments. In many parts of the world, carrying cash about the person is not safe. The danger of theft is understood to be a key motivation for consumers in developing markets to use mobile storage and exchange services, once they become available. Convenience is secondary.

Digital payments are not without security risks, of course, especially as information is shared with third parties in online and offline transactions. And as more and more is measured and known about different aspects of consumer behavior, consumers are increasingly concerned about protecting their privacy and security when using cashless-payment vehicles. Being able to trust that cashless payments are safe and will not lead to theft or identity fraud is vital for consumers. It is still the case that many people—even if they have credit cards—will not use them for online payments *(Figure 1)*. This is particularly so in emerging markets.

## FIGURE 1

SHARE OF CONSUMERS REPORTING BARRIER TO **ONLINE SHOPPING**




Survey was conducted online across 24 countries, with a sample of ~500 respondents per country.
Source: Nielsen Connected Commerce Survey (2015).

## *Payment types*

The cashless-payments landscape is complex and becoming more so, partly because of consumer behavior. Connected Spenders lead the way with new shopping behaviors that are enabled by and driving demand for cashless payments. In particular, there has been an expansion in the ways consumers shop across channels. Take grocery shopping. In this category, online shopping exists, but consumer participation is still evolving. Thus, the eventual role of online shopping—and of cashless payments—is uncertain in this segment. As *Figure 2* shows, in all markets, online shoppers in grocery categories make their purchases using a wide range of devices. While the PC and laptop are the most commonly used, consumers in emerging markets such as China and India are also heavy users of mobile phones. Once a mobile phone is used for purchasing, the seamless connection of the cashless payment to the shopping process becomes a natural consumer demand.

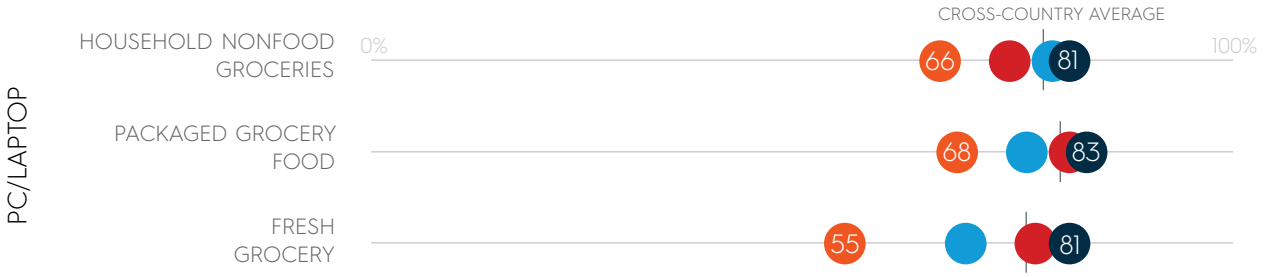
The forms of cashless payment sought by consumers will depend on what they use today, which also varies widely (*Figure 3*). The debit card is prevalent in the United Kingdom, and the credit card is most popular in the United States, so consumers in these countries are likely to continue using them. But credit card and bank account penetration is lower in most emerging and developing markets, so consumers seek and use other forms of cashless payment—and are likely to be the most immediately interested in mobile platforms that do not require a bank or credit card account. In China—where the World Bank estimates that only 16% of consumers have a credit card and we found that, even among high-income urban consumers with some kind of financial account, only 64% have a credit card—digital payment systems such as AliPay are most common. In India, meanwhile, cash on delivery remains the most popular method of payment.

## FIGURE 2

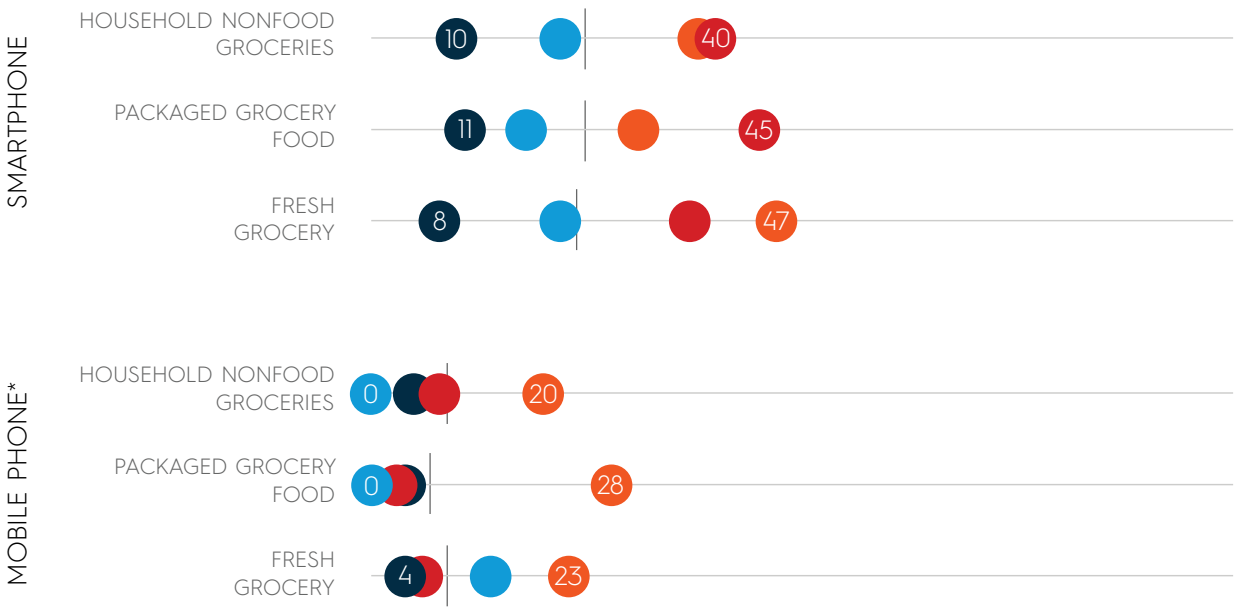
DEVICES USED FOR **ONLINE GROCERY PURCHASES**, BY MARKET

CHINA INDIA U.K. U.S.

PERSONAL COMPUTERS AND LAPTOPS ARE MOST COMMONLY USED ACROSS MARKETS...



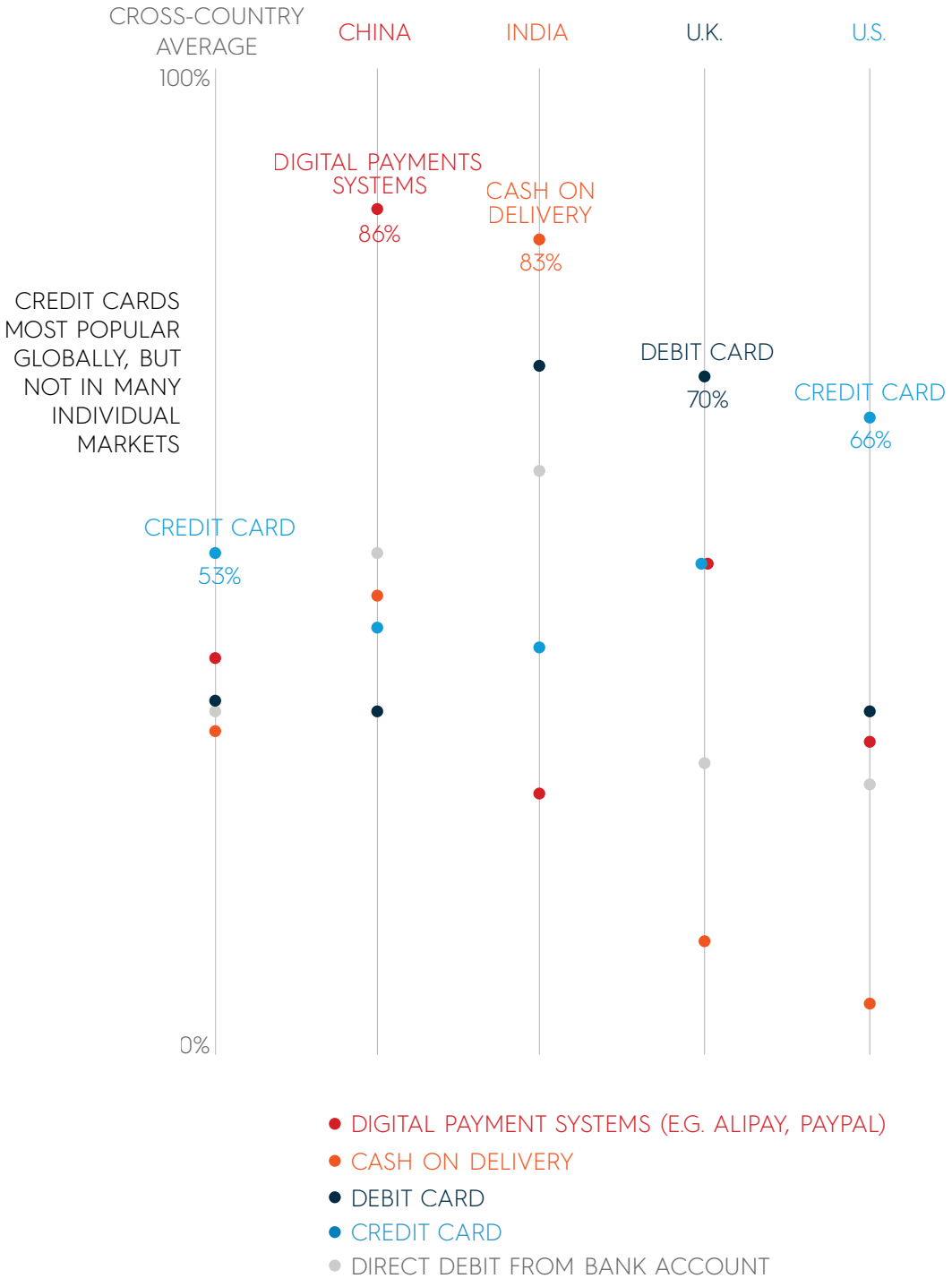

BUT SMARTPHONES AND MOBILE PHONES ARE PROMINENT IN EMERGING MARKETS




Mobile phone with advanced features.
Survey was conducted online acrorss 24 countries, with a sample of ~500 respondents per country.
This chart represents incidence among those who have purchased groceries online in the past 6 months, by device used and grocery category.
Source: Nielsen Connected Commerce Survey (2015).

FIGURE 3

INCIDENCE OF PAYMENT METHODS USED FOR **ONLINE PURCHASES** IN PAST 6 MONTHS




Survey was conducted online acrorss 24 countries, with a sample of ~500 respondents per country.
Source: Nielsen Connected Commerce Survey (2015).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# PAYMENT INDUSTRY DISRUPTION

The cashless-payments industry is in a state of disruption, with different types of companies battling for market share, using different business models in different parts of the world, against a backdrop of varying financial services infrastructure and market regulations. Take the rules governing retail banks. In most developed countries, regulation makes entry into certain types of banking activities difficult and costly, so there have been fewer entrants there than in emerging markets. Emerging markets, meanwhile, tend to have less well-developed infrastructure to enable either retail banking or electronic point-of-sale payments in retail stores. The banking models that emerge to take account of all these factors are likely to be very different from those that exist today. Likewise for the financial services companies that process payments and the merchants that accept payments.

The coming period of innovation presents opportunities and challenges to all and will touch almost all aspects of the consumer economy. The goal will be to come up with a standard digital payment platform that retailers and consumers know to be safe but that improves upon the conventional experience of using a physical wallet of cash and cards.

To illustrate how the industry will evolve in response to demand for cashless payments, we describe three different types of companies currently operating, as well as the market advantages and objectives for each in the coming years. These are summarized in *Figure 4.*

FIGURE 4 GLOBAL PAYMENTS LANDSCAPE


ROLES

| CORE PROVIDERS | ADJACENT PARTICIPANTS | NEW ENTRANTS |
|---|---|---|
| PAYMENT SERVICE PROVIDERS<br><br>RETAIL BANKS<br><br>REMITTANCES PROVIDERS | RETAILERS<br><br>CLOSED-LOOP STORED-VALUE CARDS | TECHNOLOGY COMPANIES<br><br>TELECOM CARRIERS AND DEVICE MAKERS |

CENTRAL OBJECTIVES

| CORE PROVIDERS | ADJACENT PARTICIPANTS | NEW ENTRANTS |
|---|---|---|
| MAINTAIN PROMINENCE IN EXISTING MARKETS<br><br>EXPAND INTO LESS PENETRATED REGIONS<br><br>LEVERAGE TECHNOLOGY IN NEW WAYS | CUT TRANSACTION COSTS OF PAYMENTS<br><br>DRIVE LOYALTY OF CONSUMERS<br><br>EXPAND CASHLESS PAYMENTS TO MORE SHOPPING OCCASIONS | INCREASE FINANCIAL INCLUSION GLOBALLY<br><br>CONNECT PAYMENTS AND THE REST OF CONSUMERS' LIVES<br><br>EXPAND CURRENCY EXCHANGE AND STORAGE TO ADDRESS CONSUMER NEEDS |

CONSUMER DEMAND ADVANTAGES

| CORE PROVIDERS | ADJACENT PARTICIPANTS | NEW ENTRANTS |
|---|---|---|
| CONNECTION TO OTHER FINANCIAL SERVICES | CONNECTION TO OTHER PARTS OF THE SHOPPING EXPERIENCE | MOBILE AND ONLINE CONNECTION TO DIGITAL PAYMENTS AND OTHER SERVICES |

## Core Providers

Core Providers derive most of their revenues from the processing of payments. The principal companies in this group are big retail banks and payment network providers that focus on business-to-consumer transactions, although other types of companies, such as remittance providers, are growing in importance. Many have had strong brands in payments for decades. Others, such as China UnionPay and RuPay in India, are newer but operate similar business models and have the same primary objective: to maintain their prominence in the industry with debit and credit cards. The sidebar *"The many roles of Core Providers"* describes in detail the role of these companies and their aims.

Core Providers operate globally but are more common in mature markets where credit and debit card transactions are routine. The retail bank branches, ATM networks and point-of-sale terminals required for most cashless payments in mature markets are either provided by or supported by Core Providers. This established infrastructure gives Core Providers a distinct competitive advantage in supplying payment services. On the demand side, their advantage lies in their ability to connect their payment services to other financial services they offer, such as banking, loans, wealth management and budget management. This gives them an understanding of consumer payment patterns and positions them to embed cashless payments within a complete range of services. For example, a company might detect changing spending patterns in a household as a result of a life event, such as the purchase of a home or the birth of a baby, enabling it to offer that household tailored cashless-payment options or real-time financial-planning recommendations.

Core Providers have three key objectives. The first is to maintain their role in cashless payments in mature markets, especially among consumers who have access to the banking system. To succeed in this, they will need to understand the unmet consumer needs that new payment technologies can fulfill and the benefits they deliver. "Mobile wallets," for example, are services aimed at providing consumers with the same range of payment options as a physical wallet, such as access to credit, debit or prepaid cards, minus the physical cash and potentially with new payment options beyond those offered by the Core Providers. The sidebar *"Core Providers maintain position"* discusses the steps some are taking.

Their second goal is to expand into less penetrated markets and to engage with the unbanked. It is possible that the greatest innovations in cashless payments will occur in emerging markets in response to demand from this group. These could then start to provide credible alternatives to credit and debit cards—and thus threaten the Core Providers' market share in mature markets. So Core Providers must themselves innovate. The sidebar *"Core Providers increase penetration"* describes some of the newest offerings in emerging markets.

The third goal relates to the focus among less established companies in this category on using technology to further the adoption of cashless payments in all markets. Companies such as RuPay in India and PayPal in the United States have the business models of conventional Core Providers but use their technology in different ways. In this, they too could present a threat to established Core Providers by leapfrogging them with technology that better addresses consumer needs (see sidebar *"Core Providers leverage technology"*).

It is clear that even if Core Providers and their models for providing cashless payments survive, the particular companies that dominate the market could change shape significantly.

## THE MANY ROLES OF CORE PROVIDERS

The banks that offer payment services through credit, debit and prepaid cards are divided into two groups: issuing banks and acquiring banks. Issuing banks work on the consumer side of a transaction, issuing cards. Acquiring banks work on the merchant side of the transaction, collecting funds from the issuer. For each transaction, the issuing bank is responsible for authorizing the purchase by verifying available funds for debit card or prepaid transactions—for which it receives a small fee—or available credit for credit card transactions—for which it receives a somewhat larger fee, as it bears the consumer's credit risk. The acquiring bank is responsible for verifying the transaction at the point of sale with the merchant and routing the information to the appropriate card network. It also collects a small fee for each transaction.

Payment network providers, such as Visa and MasterCard, sit between the two banks and are responsible for relaying information. The providers' infrastructure allows for near-instantaneous authorization decisions at point-of-sale terminals, and it is they who set the fees and processes for using the networks.

Remittance providers also belong to the group of Core Providers. Focused on peer-to-peer payments, often across borders, they have attracted less attention in respect of cashless payments than retail banks and network providers. The World Bank, though, estimates that personal remittances amounted to more than $460 billion in 2013. Remittance providers will play a large role in the global transition to cashless payments, especially as the line between peer-to-peer and business-to-consumer transactions becomes more blurred. This is because some payment platforms initially created for one type of transaction also easily allow for the other. PayPal, for example, which has focused on providing a payment platform for small businesses using credit and debit cards or bank transfers, can use the same process to permit peer-to-peer transfers between bank accounts.

## CORE PROVIDERS MAINTAIN POSITION

Credit cards, which provide a way for consumers to buy now and pay later, have been an important source of revenue for issuing banks charging interest on loans. But the number of consumers who settle their card balance each month—a group known as transactors—has been growing. According to a recent report from the American Bankers Association, 30% of credit card accounts in the United States in 2014 were transactor accounts.[5]

Enter the rewards card. To attract more transactors—who still provide revenue on each transaction even if they yield no interest—and convert more transactions from cash to credit card payments, issuing banks introduced rewards cards, which in addition to providing credit lines, "reward" consumers by returning to them a portion of their transaction fees, usually in the form of airline miles, retailer loyalty points or cash. For consumers using these cards, issuing banks are willing to accept a lower net transaction fee in exchange for a higher volume of transactions. They also gain bargaining power with retailers over their acceptance of cards and the fees charged for using them, because rewards cards expand the user base.

Total spending on rewards cards in the United States rose from $580 billion in 2007 to $1,145 billion in 2014, while spending on nonrewards cards fell from $672 billion to $470 billion.[6] We expect the connection between payments and rewards to strengthen in all markets and for payment options to be increasingly linked directly to a rewards scheme. The link provides a reason for consumers to convert from one payment form to another and to carry out more transactions using that form; it is widely thought to be one reason for the success of Starbucks Reward, for example. Of course, proliferation of rewards programs can eventually make differentiation difficult, as happened with credit cards in developed markets and in other areas such as airline rewards.

5 Danielle Kurtzleben, "Americans Increasingly Paying Off Their Credit Cards," U.S. News & World Report, December 17, 2013, http://www.usnews.com/news/articles/2013/12/17/charts-americans-increasingly-paying-off-their-credit-cards.

6 Fred O. Williams, "Study Reveals Rewards Cards' Boom in Popularity," CreditCards.com, September 30, 2014, http://www.creditcards.com/credit-card-news/rewards-cards-rise-aba-study-1276.php.

## CORE PROVIDERS INCREASE PENETRATION

Core Providers are making attempts to move into new markets. For example, in 2014, MasterCard announced a partnership with the Nigerian government to provide National Identity Smart Cards, which combine a government ID card with prepaid debit card facilities. Aigboje Aig-Imoukhuede, CEO of Access Bank in Nigeria, described the card thus: "The new identity card will revolutionize the Nigerian economic landscape, breaking down one of the most significant barriers to financial inclusion—proof of identity—while simultaneously providing Nigerians with a world-class payment solution."[7] It was expected that more than 100 million Nigerians would have access to cashless payments once the rollout of the card is complete.

Many other governments in emerging markets have an interest in converting consumers away from cash, not least because of the cost of issuing and maintaining the physical currency. Companies have emerged to help in the task. For example, China UnionPay, for the time being a state-sponsored monopoly, is the largest card network in China. It issues mainly debit cards, although credit card growth is estimated to be higher. Already, China UnionPay accounts for more than half of the world's credit and debit cards and has a total transaction volume that is reported to be higher than that of Visa.[8] It is now expanding overseas in order to serve Chinese tourists, and its cards are accepted by a growing list of retailers worldwide. In turn, there are indications that the Chinese government is set to surrender its monopoly power and allow foreign competition into China.

In India, a new debit card network aimed at addressing the needs of unbanked consumers already has 230 million users and handles 20% of domestic transactions.[9] RuPay was devised by the Reserve Bank of India as a way of consolidating various payment systems into one standard offering tailored to the Indian market, with a focus on reduced transaction costs. It was launched by the National Payments Corporation of India, a private company, and is promoted by 10 large private banks and issued by 277 banks in total.[10] Some people who might not otherwise are able to obtain RuPay cards under the Pradhan Mantri Jan-Dhan Yojana (PMJDY) program, a government-sponsored initiative to promote financial inclusion of the unbanked. In addition, a RuPay credit card is due to be launched in 2016, expanding the borrowing and spending capacity of cardholders and helping to capture the large growth potential of the Indian economy.

The growth in international remittances, to $460 billion in 2013, also presents opportunities for some Core Providers to increase their market penetration. In the global economy, families are increasingly scattered, and sending money to family members abroad can still be a challenge. Western Union, long the market leader in processing the world's remittances, has entered a partnership with the Bank of China to introduce a service enabling Chinese consumers to send and receive international remittances via their bank accounts at more than 10,000 bank locations around the country,[11] addressing a previously unmet need and expanding Western Union's business in this rapidly emerging market.

7 MasterCard, "MasterCard to Power Nigerian Identity Card Program," news release, May 8, 2013, http://newsroom.mastercard.com/press-releases/mastercard-to-power-nigerian-identity-card-program/.

8 "China's UnionPay Exceeds VISA in Combined Transaction Volume," Let's Talk Payments, June 26, 2015, http://letstalkpayments.com/chinas-unionpay-exceeds-visa-in-combined-transaction-volume/.

9 Rachel Chitra, "RuPay Excellent Product, No Visibility: Industry," Times of India, January 23, 2016, http://timesofindia.indiatimes.com/business/india-business/RuPay-excellent-product-no-visibility-Industry/articleshow/50697967.cms.

10 National Payments Corporation of India, "Benefits of RuPay Card," n.d., http://www.npci.org.in/RuPayBenefits.aspx.

11 Western Union, "Bank of China to Offer Western Union Money Transfer® Service," news release, December 9, 2014, http://ir.westernunion.com/News/Press-Releases/Press-Release-Details/2014/Bank-of-China-to-Offer-Western-Union-Money-Transfer-Service/default.aspx.

## CORE PROVIDERS LEVERAGE TECHNOLOGY

Since the start of the e-commerce revolution, PayPal has been an innovator, shaping payment models and spawning competitors. In the United States the most notable of these is Square. Today, PayPal and Square are essentially acquiring banks, providing merchant services to retailers, using a fairly conventional Core Provider model. But they distinguish themselves from traditional acquiring banks by providing unique technological capabilities to their customers at low prices. In particular, they are focused on small businesses that need a mobile solution for accepting credit and debit cards. In mature markets, usage occasions where traditional point-of-sale terminals are unavailable are among the last types of transaction to convert to cashless payment systems. For them, PayPal and Square have developed card readers with corresponding applications that enable merchants to accept payments on their smartphones. PayPal has recently announced a strategy to connect mobile and commerce across all retail channels, with the intent to be at the hub of engagement between their growing networks of merchants and consumers.

Technological advances are also driving growth in the remittances market. Core Providers such as Western Union are facing competition from start-up businesses such as WorldRemit, which enables remittances to be processed using smartphones and for a smaller fee than traditional remittance services charge. Customers have the benefit of being able to select from a variety of delivery options, including a deposit into a traditional bank account, cash pickup at available partnering locations, and deposits into a mobile money account. WorldRemit already processes more than 250,000 transactions a month, and its most recent round of funding valued the company at more than $500 million.[12] Innovations such as WorldRemit has launched will continue to shape the business models of Core Providers and have the potential to broaden their payment platforms.

12 Ingrid Lunden, "WorldRemit Raises $100M to Take On Western Union in Money Transfers," TechCrunch, February 17, 2015, http://techcrunch.com/2015/02/17/worldremit/.

## Adjacent Participants

Adjacent Participants are the second group of companies in the payments business. Retailers belong to this group. So do providers of closed-loop payment systems, which were set up to handle payments for the use of transportation systems: Consumers buy a payment device, such as a token or transit card, which can be used only within the system (although increasingly the devices are accepted as payment outside the system for other sorts of purchases). Both types of business share the desire to reduce the transaction fees they incur when accepting card payments and to increase loyalty by offering new benefits via their payment platforms.

To this end, and especially in mature markets, Adjacent Participants are pitting themselves against the experience and infrastructure advantages of Core Providers. Companies in this group have some advantages of their own, however, notably their ability to incorporate new payment methods into consumers' purchasing experience, as Starbucks demonstrates. Its reward program allows customers to make payments at its stores using a prepaid account; no bank account or credit card is needed to participate. Many other aspects of today's shopping experience—shopping lists, product reviews and personalized recommendations and offers—are enabled or enhanced by digital technology, and Adjacent Participants are well placed to integrate cashless-payment options into this experience. They also have the ability to address the needs of unbanked consumers, particularly in emerging markets, by extending the use of stored-value cards, such as those issued by closed-loop systems, into other types of cashless payment.

The potential material benefits to consumers are the enhanced convenience of making payments, new services that personalize their shopping experiences, and in some cases, increased access to goods and services because the consumers at last have ways to pay for them. These benefits are the holy grail for cashless payments, and Adjacent Participants and others are experimenting to look for a solution that will attract consumers in droves and become the new standard in the consumer payments industry.

Even if that magic bullet remains elusive, Adjacent Participants have three broad objectives. First is the need to reduce transaction costs, which affect earnings and make interactions with customers less efficient. Using cash is more cumbersome, and the process of taking cash and giving change more prone to error, than using a card or mobile application. It also does not enable retailers and their customers to track purchase histories in ways that allow for conveniences such as easy returns and tailored offerings. Credit and debit cards, meanwhile, incur significant costs for each use. The growth of modern trade channels (especially e-commerce) and greater use of public transportation systems in line with urbanization will see a sharp increase in the number of transactions processed by this group of companies, creating a greater imperative to keep costs down (see sidebar *"Adjacent Participants lower costs"*).

The second objective is to increase revenues by encouraging customer loyalty. Innovations being implemented to reduce transaction costs could also create new opportunities to engage with consumers by connecting the payments process with the overall shopping process. For example, a retailer-provided application, like that of the U.S. grocer Stop and Shop, enables a customer to create shopping lists, track purchase histories, take notes on products, read reviews and product information, and choose from pickup or delivery options if shopping online, as well as pay for items. This application provides an opportunity for retailers to contact consumers at several points along the path to purchase. The sidebar *"Adjacent Participants integrate the path to purchase"* discusses how retailers are already using their digital and bricks-and-mortar stores to integrate payment options and provide a seamless shopping process, as well as introducing applications that offer new shopping benefits.

The third objective involves extending digital-payment options to those without access to traditional cashless options. Providers of closed-loop payment systems are already working to that end, as described in the sidebar *"Adjacent Participants open the loop on cashless payments."*

Sometimes Adjacent Participants will find themselves pursuing their objectives in competition with Core Providers. At other times, they might find themselves partnering with them, as in the recently announced collaboration between the retailer-driven Merchant Customer Exchange and Chase Pay. The eventual success of these experiments will depend largely on the extent to which consumers see value in new ways of making payments compared with the cost of switching from their existing methods.

## ADJACENT PARTICIPANTS LOWER COSTS

We estimate that Wal-Mart, the world's largest retailer, pays some $3 billion a year in fees on credit and debit card transactions. No wonder it is striving to reduce them.

As an alternative to the networks run by Visa, MasterCard and others, Wal-Mart has partnered with selected retailers to form the Merchant Customer Exchange, a cashless-payment option known as CurrentC that began piloting in late 2015. Consumers use a smartphone application to link their CurrentC account to a checking account, with payments being processed over the same automated clearinghouse networks used by banks for clearing checks but at a much lower cost than that charged by traditional credit and debit card networks.

Since CurrentC is a retailer-driven payment system, it will link each consumer's account to participating retailers' loyalty programs. Shoppers will receive coupons and personalized promotions directly to their smartphones. And if they do not have a checking account, they can deposit cash into their CurrentC account in the store of any participating retailer.

Linking payments to the whole shopping experience is novel and differentiates CurrentC from other cashless-payment options already on the market, but it remains to be seen how popular it will become. CurrentC got off to a rocky start with several security breaches, and some have questioned how user-friendly it is compared with other mobile-payment options. More recently, some of the original supporting retailers, including Wal-Mart, have moved forward with their own mobile-wallet applications, bringing CurrentC's long run level of support into doubt. That said, retailers will continue to look for ways to reduce transactions fees on cashless payments with new and innovative offerings, and CurrentC is an important example of one attempt.

## ADJACENT PARTICIPANTS INTEGRATE THE PATH TO PURCHASE

Throughout most of retailing's history, the mechanics of marketing and advertising to shoppers have been separate business activities from the making of payments by shoppers at the cash register. The distinction started to blur with the introduction of store cards such as the Sears card and then with retailer loyalty programs. Recent innovations signal the end of the separation.

Take the sophisticated marketing tactics of U.K. grocery retailer Sainsbury's and the U.S.-based Stop and Shop that transform the in-store grocery-shopping experience. Both retailers have developed smartphone applications that enable a customer to create a shopping list before entering a store, guide the customer around the store to find each item and then record each item as it is placed in the shopping cart. When the list is complete, the payment is automatically processed by the application, so the customer can skip the checkout line. In short, the in-store shopping experience is integrated with mobile payment processing.

In the future, these and other retailers may develop similar applications that can keep track of consumers' likes and dislikes, provide personalized menu and recipe recommendations, automatically compile the appropriate shopping list, and link with smart refrigerators to keep track of items that might be needed.

The e-commerce payment service AliPay provides another example of the integration of the shopping experience with the payments process. AliPay is an escrow service sitting between buyer and seller within the Chinese e-commerce retail platform Alibaba. Launched in 2004, it was intended to address the lack of consumer protection laws in China, where consumers have little recourse against merchants when transactions do not go as planned or when the delivered product is not as promised. When a consumer completes a transaction, payment is sent to AliPay, where it remains until the consumer receives the product. Once the consumer is able to verify that the product is what it was supposed to be, AliPay sends the payment to the seller. This seemingly simple innovation has proved wildly popular. AliPay has an estimated 350 million registered users,[13] and it has no doubt been an important driver of Alibaba's explosive growth.

13 Leena Rao, "Alipay's U.S. Chief Talks Expansion, Uber China Partnership and More," Fortune, June 19, 2015, http://fortune.com/2015/06/19/alipay-china-uber-alibaba/.

## ADJACENT PARTICIPANTS OPEN THE LOOP ON CASHLESS PAYMENTS

A natural way for a provider of a closed-loop payment system to expand its business is to open the loop.

The Hong Kong mass-transit system did this with its Octopus card, launched as a closed-loop payment system in 1997. Octopus is a stored-value card that enables transit riders to deposit money on to their card at terminals and stations and then use the card each time they enter the transit system. They can also manage their account online and refill the card automatically when the balance drops below a certain level. According to Octopus, virtually all of Hong Kong's working-age population has an Octopus card. But today it is more than a ticket to ride. It can also be used in a wide range of retailing channels and for items at a wide range of prices—even the smallest goods that were once paid for only with cash.

Similar examples exist in other countries, enabling unbanked consumers to gain access to cashless payments. What makes Octopus unusual is that it has undertaken this expansion without the help of a Core Provider.

## New Entrants

The final group of players in the cashless-payments industry is the New Entrants. Some members are established companies in industries outside payments, including telecommunications and the technology sector, and some are small start-ups. Whatever their origin, they are the companies most likely to disrupt the payments industry with new cashless offerings. Many operating today will not survive, but those that do could form the next generation of major players in consumer payments.

The advantages these companies have in mature markets are agility and mobile-technology prowess, attributes that will enable them to address changing consumer payment needs. Some focus on the benefits of convenience and security. Some are discovering new ways to link cashless payments with other aspects of consumption and shopping, emulating the Adjacent Participants. And some connect payments to other parts of consumers' digital lives, such as social media.

Most New Entrants focus on emerging markets, attracted by the opportunities to devise new payment options—and thereby vastly improve consumers' ability to access goods and services—inherent in the idea of financial inclusion. Here they use technology in ways the Core Providers are unable or unwilling to attempt. New Entrants take the Core Providers' model—consisting of a card issuer, an acquiring bank (or related institution) acting on the merchant's behalf, and a payment network provider—and often go completely around it, potentially playing all three roles. They might offer a payment service via a preexisting consumer relationship that at first seems unrelated to payments, such as being a mobile-phone provider, or gain a toehold by offering a nonpayment product such as a social-media application before adding payment services on top. It is a business model that could be replicated to serve the unbanked populations of mature markets, and perhaps the banked, too, posing a considerable threat to Core Providers. A New Entrant may be able to convert the massive user bases of established social-media applications to new cashless payment services, as Facebook is starting to do.

New Entrants will have three key priorities. The first will be to increase the use of cashless-payment options around the world, probably using new business models. In many mature markets, credit and debit card payments have dominated online shopping because they were the main form of cashless payment when online shopping began. But in emerging markets, many consumers do not have credit or debit cards, or are wary of using them for online purchases. Hence the door is open for New Entrants to become the preferred providers of online and offline cashless payments if their models deliver the right benefits. And if they can deliver those benefits at a lower cost per transaction, since emerging-market transactions are likely to be smaller on average than those of mature markets, they will be able to serve that burgeoning market profitably.

The sidebar *"New Entrants increase access"* describes how companies are reaching unbanked but mobile-connected consumers in emerging markets. They offer services similar to those of some Core Providers but, importantly, are not as tied to existing business models.

New Entrants' second area of focus will be to apply the connective power of social networks to promote the use of cashless payments. The sidebar *"New Entrants connect digital lives"* describes examples of the progress some are making.

Their third area of focus will be using their technological advantage to meet specific consumer payment needs, such as greater convenience and security. Some of these innovations may be merely evolutionary in that they build on existing cashless payment systems. Others will seek to replace the existing systems. Either way, they signal a real advance in the benefits of cashless payments to consumers, as described in the sidebar *"New Entrants raise the bar."*

## NEW ENTRANTS INCREASE ACCESS

High mobile-phone penetration in many emerging markets has enabled an array of start-up companies to offer cashless-payment options to consumers who previously had none. Perhaps the best known is m-pesa, a mobile-payment service launched by Vodafone in 2007 in Kenya and Tanzania and now operating in Afghanistan, India, South Africa and parts of Eastern Europe. This is essentially a branchless banking service whereby users "deposit" money on to a smartphone and make payments to other users via secure text messages. The recipients can then "withdraw" the money from their phone. Deposits and withdrawals are made in person at outlets such as retail stores and mobile-phone shops, and users pay a small fee for each transaction. In addition to this service, they have access to a broad range of microfinancing products.

The success of m-pesa has spawned similar ventures. In the Philippines, GCash, launched by Globe Telecom in 2004, offers products including a GCash MasterCard. Users can also send and receive international remittances. In Bangladesh, bKash offers a payment service via mobile phone, microfinancing lines of credit and some more traditional banking services to many previously unbanked Bangladeshis. bKash also engages in a social mission to extend "convenient, affordable, and reliable" financial services to low-income and rural communities in Bangladesh through a scalable mobile platform. To this end, it receives financial support from the World Bank and the Bill and Melinda Gates Foundation. Regulation of mobile financial services by the Bangladeshi central bank has allowed bKash to operate a new business model as a bank subsidiary.

In India, Paytm is a large m-commerce platform that enables consumers to shop across a broad range of categories and pay bills such as utilities via prepaid or postpaid mobile payments through a wireless carrier.[14] Another start-up, PayU, which operates in 16 countries including Brazil, India, Russia and South Africa, essentially serves as an acquiring bank similar to PayPal and enables consumers to make payments to retailers by submitting their credit or debit card or bank account details to PayU. They can also prepay and store money in a virtual wallet with PayU if they do not have a credit card.

Even in Somalia, ravaged by civil war for 20 years, more than half of the population has a mobile phone, and 40% have mobile money accounts,[15] owing to the mobile money transfer options offered by various telecommunications companies in a country where using digital money is considered safer than using cash.

Elsewhere in Africa, most online shopping is still done on PCs and paid for with cash on delivery, despite relatively high levels of mobile penetration. Cash-on-delivery payment options allow retailers to reach underbanked consumers, but they are subject to considerable costs in their own right. Shoppers may not be able to pay when the delivery arrives, and when they do pay, the cash is handled by a third party and subject to a high risk of theft. Jumia, an online retailer in Nigeria, found a solution by partnering with local telecommunications companies. Shoppers can deposit money to be stored in their mobile accounts ahead of time, as in the m-pesa model. During checkout, they use their mobile phone to generate a mobile money payment code, which they then enter on the retailer's website to complete the purchase.

14 Other New Entrants in India include Mobikwik, Oxigen Wallet and Citrus Pay.

15 Tonny Onyulo, "More Phones, Few Banks and Years of Instability Are Transforming Somalia to a Cashless Society," Quartz, February 26, 2016, http://qz.com/625258/more-phones-few-banks-and-years-of-instability-are-transforming-somalia-to-a-cashless-society/.

## NEW ENTRANTS CONNECT DIGITAL LIVES

Peer-to-peer cashless payments have been much slower to take hold in mature markets than in emerging economies. But this looks set to change as companies rooted in technology, rather than payments, use their social-media platforms to expand into payments.

WeChat, a mobile messaging service launched in China in 2011, began by enabling users to exchange text and multimedia messages and to share pictures and location information. In early 2013, users became able to link their WeChat accounts to their checking accounts and to send payments to one another. By 2015, the service was reported to have 600 million users a month.[16]

The business model is being extended to merchant payments. Using WeChat, for example, a company can create an account and offer products for sale that consumers purchase online or in-store using WeChat payments. Likewise, large social networks such as Twitter and Facebook are working on ways for consumers to connect with companies and purchase products over their networks.

Companies in the payments industry are also recognizing the potential of social networks. PayPal's parent company recently purchased start-up company Venmo, which layers peer-to-peer payment capabilities on top of a user's existing social network, such as Facebook.

16 Steven Millward, "WeChat Rockets to 600M Monthly Users," Tech in Asia, August 12, 2015, https://www.techinasia.com/wechat-monthly-active-users-q2-2015.

## NEW ENTRANTS RAISE THE BAR

In the United States in 2014, Apple released Apple Pay, essentially a convenient alternative to the traditional swipe-and-sign or newer chip-and-PIN process of paying a retailer with a credit or debit card. Rather than carrying a wallet containing various cards, Apple Pay users need only their iPhone (continuing the consolidation of devices).

Apple Pay also offers greater security at a time when several major retailers have reported breaches of their networks, leading to the theft of millions of credit and debit card numbers. It does so in two ways. First, a shopper's identity is verified via a process based on a fingerprint, preventing anyone else from making a purchase with the phone. Second, each transaction is processed using what is known as near-field communication (NFC), with a unique encryption key. This means that a user's true credit card information is never transmitted over a retailer's network.

In an attempt to provide a similar service for its Android phone users, Samsung recently purchased an Apple Pay competitor named Loop Pay. Google, meanwhile, relaunched Google Wallet in late 2015 after buying Softcard, a company providing tap-and-pay technology for use on smartphones that was originally a joint venture between wireless carriers. It now allows not only peer-to-peer payments and in-store payments using NFC terminals, but also mobile-phone payments via a link to a bank account or debit card such as those provided by Square Cash (a service launched by Square) and Venmo. While these use slightly different technologies, the goal is the same: to replace the traditional swipe-and-sign process with one that consumers deem more convenient. What exactly it will take for them to switch en masse from swiping to mobile payments is still unclear.

These are all examples of the way New Entrants are essentially making improvements to existing payments systems. But some companies are more ambitious, seeking to replace today's proprietary payment networks with open, internet-based versions and, in some cases, even introducing new, digital currencies. They do so using "block-chain" technologies. These come in many forms, but block chains are essentially public ledgers, available to all users at all times, that keep track of all transactions on a given network. Since everyone has access to the entire transaction history, no one entity can forge past transactions, and all participants can observe the balance of accounts held by all others. In this way, each payment is authorized and processed by the other members of the network. There is no need for the traditional intermediary network operator to verify transactions or for an issuing bank to authorize available funds. Processing fees are, essentially, zero.

Bitcoin is the most popular currency traded using block chains, and many new companies are now using it to capture growing demand for cashless payments. BitFury is the world's largest private transaction processor—the digital-currency equivalent of Visa. It operates thousands of computers around the world to authorize transactions (an activity known as Bitcoin "mining") and is rewarded with a small sum of newly minted Bitcoin for each transaction processed, in lieu of fees from either party. Another company, BitNet, is essentially mimicking acquiring banks by providing merchants with solutions for accepting Bitcoin payments. Abra, meanwhile, is building an Uber-like network of human ATMs—called "Abra Tellers"—using the Bitcoin network. The app matches tellers with users in the same way that Uber matches drivers with passengers. A user can "deposit" cash by giving it to the teller, after which the user's mobile account is credited with the amount of the deposit. In the background, the teller sends a Bitcoin payment to the user and keeps a small fee, but the user only sees a credit on the account and does not have to interact with the Bitcoin network directly. The user can then use his or her account to send money to someone else—a process that also is handled on the Bitcoin network—or "withdraw" it from a different teller later in the same way it was deposited.

Block-chain technology is still in its infancy and unlikely to have a significant impact on the payments industry in the short term. In the longer term, however, its huge disruptive potential means that developments will need to be closely monitored.

# IMPLICATIONS FOR THE CONSUMER PAYMENTS INDUSTRY AND BEYOND

As the global economy becomes increasingly cashless, driven by the forces outlined in this report, so too will the structure of the cashless-payments industry be transformed. Core Providers, their territory already threatened by a number of companies, will have to adapt or die as new operators and payment platforms emerge.

We expect three main factors to shape the future business model of the payments industry. The first two are the result of the shift toward financial inclusion. The third is driven by the shift toward payments integration.

### REVENUE EARNED PER TRANSACTION WILL DECLINE.

When the transition to a cashless economy is complete, the revenue earned per transaction by those facilitating and processing payments will be lower than it is today. That is because transactions carried out over cellular networks using methods developed to increase access for the unbanked in emerging markets will be cheaper to process than transactions using traditional payment networks. In addition, retailers and other consumer-facing businesses will continue to seek ways to reduce their direct costs from processing payments, especially given the fierce price competition within many categories of e-commerce. The greater security promised by new payment technologies will help them, given that fraud currently accounts for a large portion of costs. All of these forces will combine to favor payment platforms and providers that rely on lower-cost, mobile technologies.

### THE NUMBER OF TRANSACTIONS WILL RISE, WHILE AVERAGE TRANSACTION SIZE WILL DECLINE.

Most of the increase in transaction volume will be the result of innovations aimed at increasing financial inclusion in emerging markets. Billions of new consumers will eventually have access to cashless payments, while those already using cashless options will use them for a greater proportion of their purchases. The effect will be a fall in the average size of transactions. New Entrants are well placed to capture the increase in volume, as they are leading the innovations that are driving it and their business model already supports the making of smaller transactions. Core Providers and Adjacent Participants still have an opportunity to react, however.

### INDIRECT REVENUE OPPORTUNITIES WILL INCREASE.

The transition to cashless payments presents opportunities for companies beyond the payments industry. Innovations that affect the shopping experience, such as those that help to combine online and in-store shopping, will make identifying shopping habits across channels more efficient. And as cashless payment methods become better integrated into the rest of consumers' financial and digital lives, the ability to measure consumer behavior and interactions will grow. Consumer-facing businesses will be able to offer more personalized and relevant products and promotions than ever before, and at a lower cost. Retailers, for example, will have opportunities to increase loyalty with their shoppers. Financial-services companies will gain deeper insights into how consumers use payment services in conjunction with other financial products, which will enable them to launch new services to help consumers understand and manage their finances. And technology companies will be able to connect payments activity to other parts of consumers' digital lives, leading to increased revenue through new services and greater engagement with them.

## *The challenges for retailers and manufacturers—and actions to take*

We have covered the broad implications for retailers, financial services and other consumer-facing businesses of the accelerating use of cashless payments. The resulting changes in shopping habits have specific implications—representing significant challenges—for retailers and manufacturers.

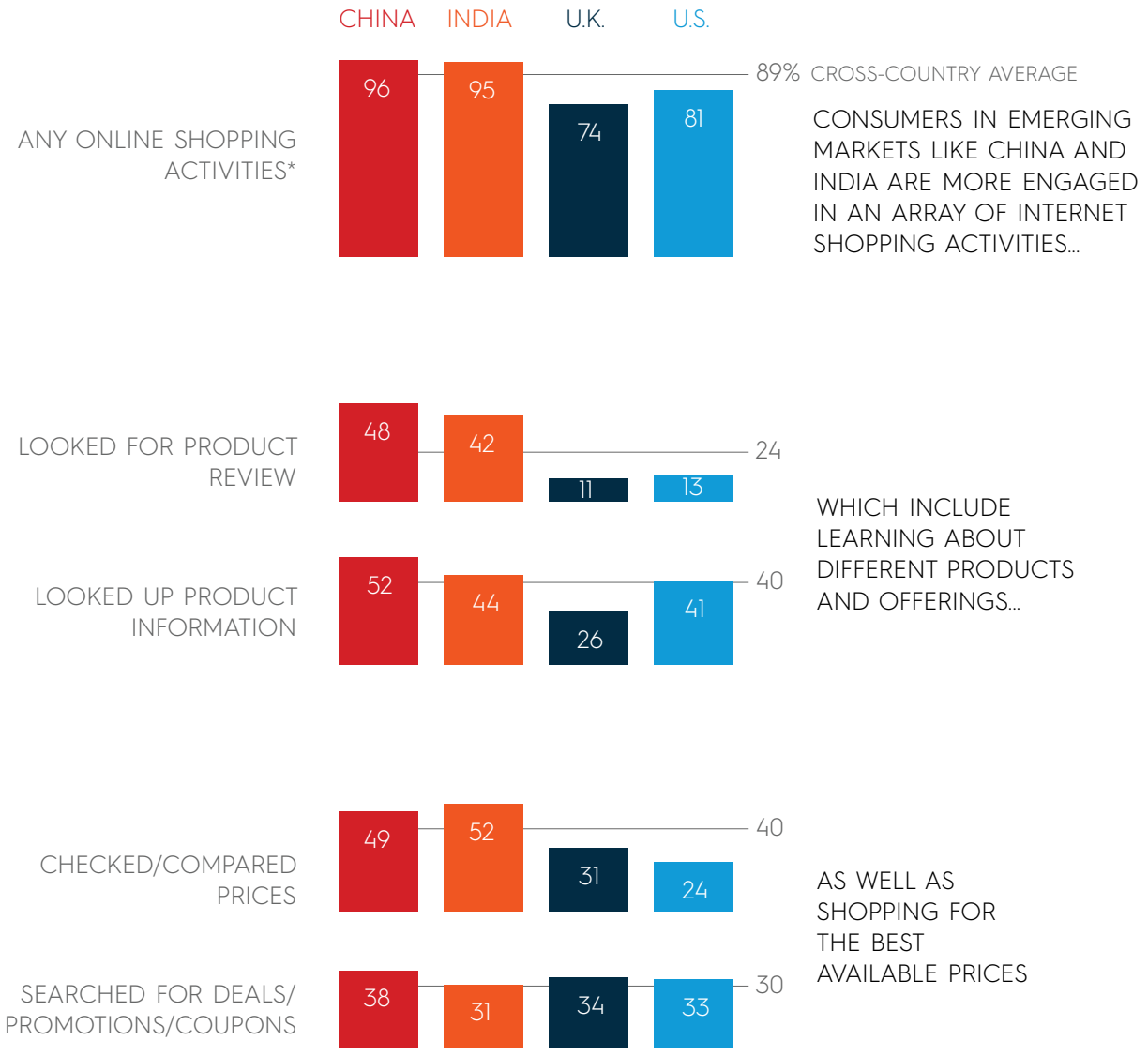
First, we expect smaller, local and specialty retailers to flourish. Cashless payments help online shopping channels expand, but they also help traditional small stores. In many markets, these remain the biggest—and even fastest-growing—channels. But many are in locations where distribution logistics are difficult and the infrastructure to accept noncash payments has been, until recently, almost non-existent. Digital payment technology enables these retailers to order, pay for and manage their inventory at the same time as reducing their operating costs—all of which will benefit consumers. In respect of specialty retailers, in China, for example, niche categories such as baby care and sports goods are on the rise. This fragmentation, encouraged by cashless payments, challenges consumer goods manufacturers and larger retailers to adapt their product development, distribution, pricing and assortment, and marketing strategies to a different retail environment. Cashless payments will uncover latent demand. The question is whether manufacturers and larger retailers will be able to meet it and whether the retailers will be able to do so in ways that distinguish them from smaller retailers.

Second, consumers will display more "omnichannel" behaviors as a result of cashless payments, so they expect brands to offer them an omnichannel experience. Whether shopping in a physical store or online, they will come to want the experience to be consistent across every medium. And because consumers are using the same payment mechanisms across channels, they are likely to demand in return more customized, convenient and cost-saving options, such as discounted online subscription ordering for products they might otherwise buy regularly in brick-and-mortar stores. There is already evidence in the grocery sector, where offline shopping has long been the largest channel, that consumers are moving across online and offline channels, as indicated in *Figure 5*. The challenge for manufacturers lies in the fact that the product and the experience of the product will become increasingly intertwined as payment methods create digital links between manufacturer and consumer—perhaps via a retailer, perhaps directly—that permit continued engagement. This might mean that the manufacturer will become a retailer also, or that it will leverage the payment platforms used by the retailers to which it distributes, or both. Examples of this type of interaction include those offered by the Dollar Shave Club in the United States and the Three Squirrels brand of nuts in China, both of which sell highly niche products online, and Everlane.com, which sells apparel online and also organizes occasional pop-up store events.

Third, we expect cross-border consumer trade to expand and demand increasingly to be shaped by international influences. Cashless payments will enable this trend. Already, a majority of online shoppers in 24 countries report purchasing from overseas online retailers *(Figure 6)*, and 25% of those consumers report buying 20% or more of their online purchases from overseas. The United States, given its wide range of domestic sites, is an outlier in this, with only 29% of shoppers reporting purchases from overseas websites. Retailers and manufacturers will need to respond by devising multicountry strategies that take account of international competition and consumer demand.

FIGURE 5

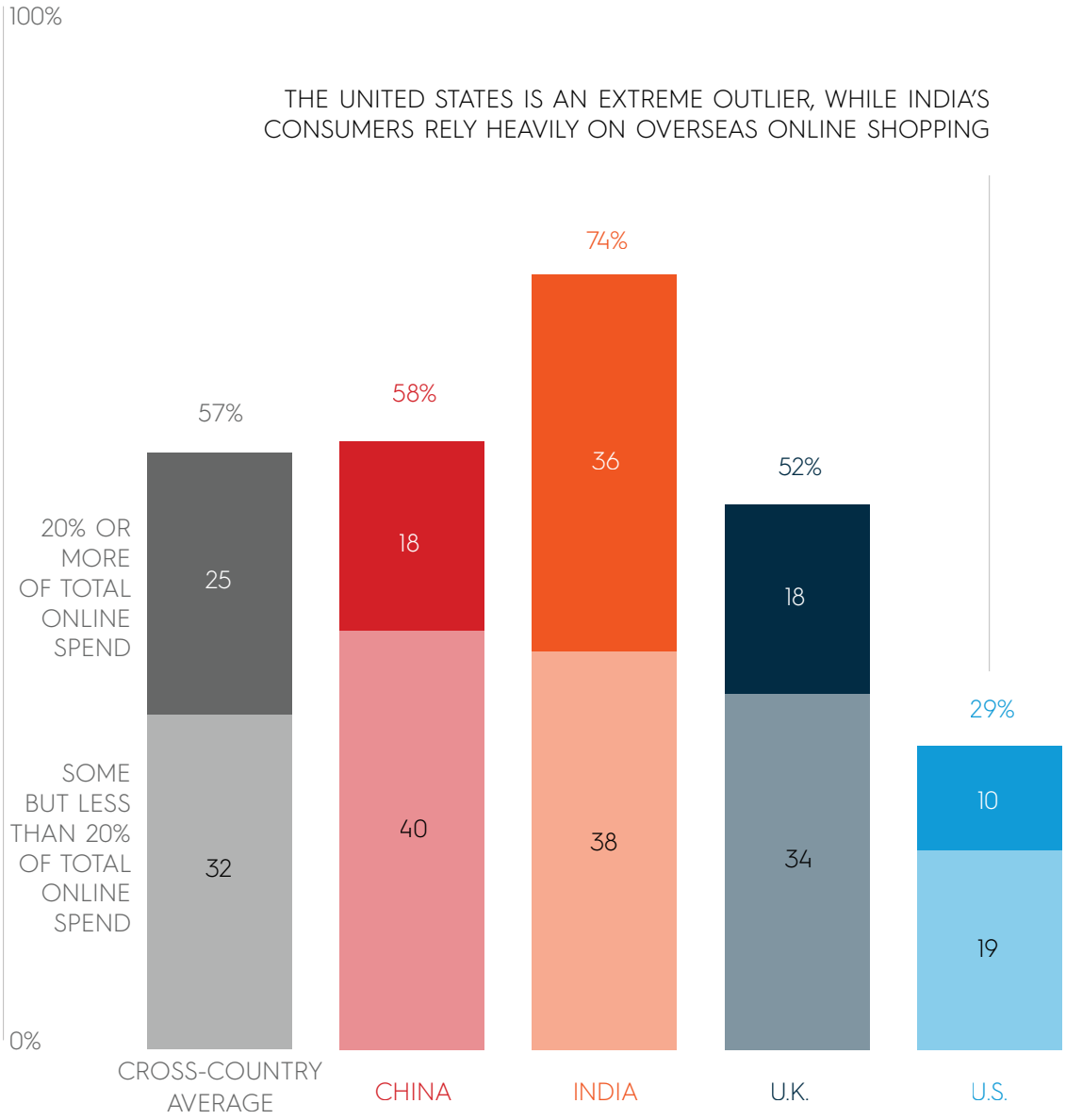
INCIDENCE OF DIGITAL SHOPPING ACTIVITIES IN **PACKAGED GROCERY FOOD**




Any digital activities among those shopping in the packaged grocery food category, including the 4 options above and: checked stock availability, clicked an online ad, clicked an email ad, subscribed to product/store emailes liked/tweeted/commented on a product.
Survey was conducted across 24 countries, with a sample of ~500 respondents per country.
Source: Nielsen Connected Commerce Survey (2015).

FIGURE 6

SHARE PURCHASING LAST 6 MONTHS FROM AN **OVERSEAS WEBSITE**




Survey was conducted online acrorss 24 countries, with a sample of ~500 respondents per country.
Source: Nielsen Connected Commerce Survey (2015).

These challenges are not insurmountable, and retailers and manufacturers can do much, even in this period of flux, to benefit in the near term from the trend toward cashless payments while simultaneously preparing for whatever lies ahead as the payments industry takes shape. We recommend three interconnected actions.

The first is to view the payment process from consumers' point of view in order to identify ways that technologies and platforms that support cashless payments can benefit consumers and hence fuel demand. This might seem a simple step, but when technology, costs and the competitive landscape are changing rapidly, companies can forget to focus on what consumers want. Retailers and manufacturers must therefore identify and monitor unmet consumer needs that new payment options could fulfill, and ways these vary across regions, consumer segments, and product and service categories.

The second action is to test and learn how payment platforms can provide data that enables a business to measure and improve its performance, learn more about customers and create new ways to engage with them. Companies should monitor how consumers are paying for goods and services in their own industries and others, as well as explore ways to advertise and market to consumers on payment platforms, including with payment-related services that strengthen the connection with consumers. These might include offers for subscriptions, loyalty programs, financing options and incentives to try a product or service, make a repeat purchase or recommend a product or service to others. With payment platforms that are big enough, these offers could be tailored to consumers based on a deep understanding of their purchase history on the payment platform across a range of merchants.

The third action is to explore alliances and partnerships that would help launch these new methods of payment and engagement, while enabling mutual learning in a fast-changing and uncertain environment. These could be with companies in different businesses or in niche sectors, or even with competitors. Companies that own payments platforms have the potential to be at the hub of alliances of multiple consumer-facing companies that seek to market and advertise to consumers, both because they have the technology to do so and because they have a network of merchants, consumers or both to measure and with which to communicate. The payments provider would benefit from new ways to engage with consumers. For example, an acquiring bank might create an alliance with a group of manufacturers to generate new ways of marketing to consumers. Or a group of retailers might create an alliance to create a new payments system, as was attempted with CurrentC.


PAYMENT
+ New
CASH
EXT. PRICE
$1
$2
$20

# CONCLUSION

In all countries, particularly emerging ones, increased demand for cashless payments is driven by the need for financial inclusion and supported by the growth in internet penetration and online shopping. Estimates suggest the effect could be $10 trillion in additional consumer spending over the next 10 years. The scope of the opportunity is bigger still, though, because cashless-payment platforms sit at the heart of a transformation in the way consumers shop that will bring about new connections between consumer activities, between consumers and between consumers and brands.

Many different players have a direct stake in this transformation. We have described three groups: Core Providers, Adjacent Participants, and New Entrants. Collaboration within and between these groups will engender larger and faster-growing payment networks. In the consumer payments industry, two networks of providers and users are being created: those paying and those being paid. The larger these networks become, and the more seamlessly connected, the greater the benefits to all participants. Consumers can make payments more conveniently, while payment network providers, retailers, financial services companies, and other consumer-facing industries will profit as a standardized payment platform emerges, enabling them to reach and serve consumers more efficiently and with optimal offerings.

And collaboration is likely to be the key word. From the VHS-versus-Betamax war of the 1980s to Blockbuster's more recent refusal to parley with Netflix, history suggests that competition over innovations leads to costly battles for businesses and less-than-optimal outcomes for consumers. By contrast, collaboration has already given birth to new payment options as varied as CurrentC, m-pesa and Softcard, to the benefit of all parties. There is plenty of space for more.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