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MERCATOR ADVISORY GROUP

THE STATE OF DIGITAL AND MOBILE COMMERCE

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Introduction

U.S. E-commerce Takes Off

In just the past few years, the U.S. digital economy has generated seismic waves throughout the payments landscape. E-commerce activity now thrives due to market forces, including the popularity of Amazon, the improving ease of electronic payment, and the ubiquity of the smartphone. Both old and new providers of technology to facilitate electronic payments are competing and collaborating. Established payments vendors, including the merchant acquirers, payments processors, card networks, and card issuers, are adapting to digital commerce—the new normal. In addition, new payments industry participants have emerged that are focused on enabling digital commerce. Among these are gateways, financial technology (fintech) companies, alternative payment providers, and value-added resellers (VARs).

The resulting payments ecosystem is complex. Rapidly evolving technology combined with disruptive influences have facilitated the exponential rise of U.S. digital commerce. Many applications and systems designed to enable digital commerce have been launched in just the past three years. In this research brief, attention is given to the stakeholders on the front lines of the e-commerce action. Merchants and their customers drive the demand for online and mobile transactions. Online merchants fueled the rapid rise of e-commerce, catching "brick-and-mortar" retailers by surprise and leading to the demise of many. Highlighted here are some merchants who have succeeded on both the digital and the physical sides of e-commerce and the reasons for their success. Not to be omitted from the discussion are consumers, whose digital wallets and smartphone apps payment vendors are fighting over. This paper features recent consumer research by Mercator Advisory Group that provides insight into U.S. adults' mobile payments use and preferences.

What the U.S. government has traditionally called "e-commerce" has expanded greatly, and so new definitions are required. Mercator Advisory Group uses the term "digital commerce" to denote all transactions performed over the internet. The term covers a large variety of solutions utilized to purchase goods or services. These include interactive voice response (IVR) systems used by call centers, chat bots, and voice recognition as well as traditional web, mobile web, mobile apps, person-to-person (P2P) payment solutions, and remote payments made on the behalf of the consumer by "internet of things" devices such as cars and appliances. The majority of digital commerce is conducted over the branded payment networks such as Discover, MasterCard, and Visa, but this definition and Mercator's market forecast also includes transactions made using closed-loop prepaid cards.

Mobile Payments Go Mainstream

U.S. consumers now have a long list of mobile payment options they can use on desktop and mobile browsers, in app, and on their smartphones. The list of players in the mobile payments arena continues to expand. Universal mobile pay apps, which are offered by smartphone companies, bank issuers, and card networks, are widely accepted by merchants. Smartphone companies now command a great deal of the market by signing up smartphone purchasers for mobile payment service. Apple Pay launched in 2014, followed soon by Android Pay and Samsung Pay in 2015. Growing as well are single-merchant mobile payment apps such as Starbucks, Dunkin'

Donuts, Kohl's, Walmart, and CVS. While these mobile payment brands offer much promise and opportunity for merchants and customers alike, early estimates indicate that consumer adoption has been slow. Reasons so far for the low adoption include not enough terminals equipped with Near Field Communication (NFC) technology for contactless payments, insufficient value proposition to overcome existing cardholder behavior, and consumers' concerns about the security of mobile payments. Basically, shoppers still are wedded to their plastic credit and debit cards, and it's hard to break long-standing habits.

As Starbucks has demonstrated however, build an integrated mobile payment app with incentives, and customers will come. The quick service chain reports that 27% of its point-of-sale (POS) transactions are via the Starbucks mobile app, something that other merchants can only dream of achieving right now. But this will change in due time since other mobile players are improving their offerings.

U.S. Consumers' Mobile Payments Preferences: Results from CMSS 2016 Survey

Consumers represent the ultimate test of e-commerce payment systems' adoption. In the United States, they now have wide access to mobile apps and payments as smartphones are in use by the vast majority of adults. Data from the June 2016 Payments Survey in Mercator Advisory Group's CustomerMonitor Survey Series (CMSS) indicates that nearly 80% of adults in the United States own smartphones. By segment, the percentage of ownership is highest in the younger age groups, but results show that smartphone ownership is widespread even among older adults and lower-income earners. This data is supported by Nielsen Mobile Insights,[i] which states that in the third quarter of 2016, U.S. smartphone penetration increased to 88%.

Payment providers and merchants need to understand their customers' transaction habits and preferences. The 2016 Mercator CMSS online survey of 3,009 U.S. adults aged 18 and older has very granular information regarding payment behavior, preferred payment types, and the merchants and services purchased, selections of which are shown in the next section of this research brief. The large variations in growth rates year over year shown in the chart are the result of the introduction of new smartphone models by the major suppliers, including Apple and Samsung, and will likely show an additional jump in 2017 based on adoption of the new Pixel Google phone.

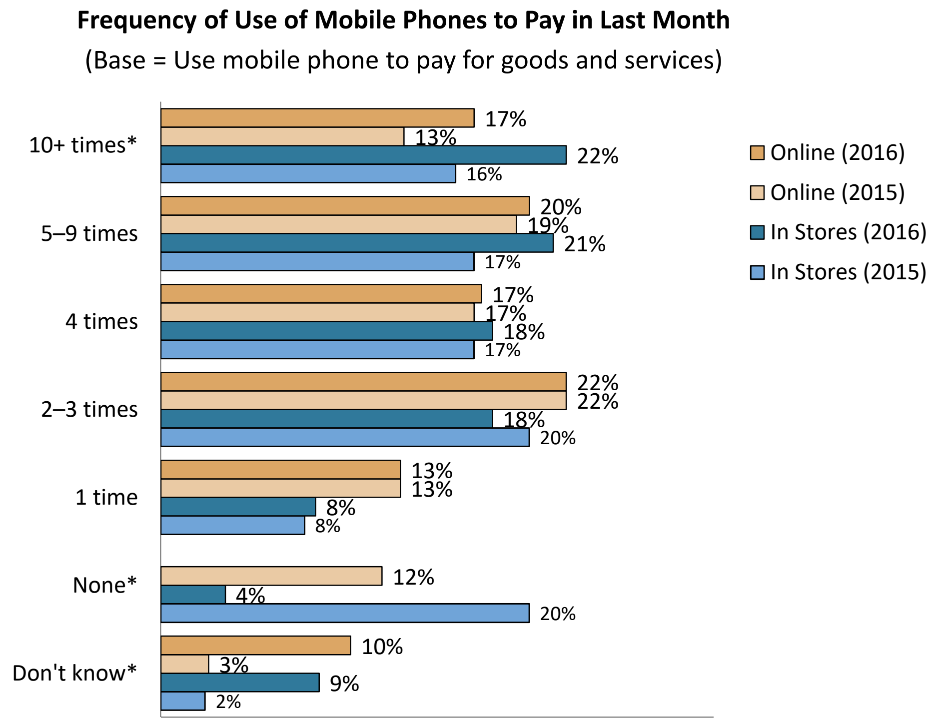
U.S. Consumers Have Many Choices for Mobile Payments

Overall, 53% of smartphone owners in the U.S. had made mobile payments within the year preceding Mercator's June 2016 survey, including 49% in-store and 39% online or in-app. Mercator tracks consumers' use of two kinds of payments apps across segments: open-loop, "universal" payment apps or mobile wallets like Apple Pay or Android Pay, and closed-loop, single-merchant payment apps like Starbucks' or Dunkin' Donuts app. The survey finds that a single-merchant, closed-loop app, Starbucks, is the most popular app for making mobile payments, which confirms Starbucks' report of 27% of its customers paying via the app. Among the smartphone makers' and banks' open-loop mobile wallet programs, the survey data shows that Chase Pay and Apple Pay have the most usage with 17% and 14% respectively. Overall, the good news is that consumers have an ever-expanding choice of mobile pay apps; the bad news is that usage rates show that, at best, roughly 1 in 5 mobile payments users are regularly making use the capability.

Frequent Use of Mobile Payment Is Slow to Catch On

Less than half of smartphone owners make an in-store mobile payment more than once per week on average. As Figure 1 shows, usage rates increased from 2015 to 2016, but the growth rate is moderate at best

Figure 1: Mobile Payments Frequency of Use



*Statistically significant difference 2015–2016 at the 95% level.

Source: Mercator Advisory Group CustomerMonitor Survey Series, Payments, 2015, 2016, Question 21a

In-store customers are still in the habit of pulling out a plastic card to pay for a purchase. Further, many in-app processes are lengthy or not properly designed or optimized for smartphones. The challenge for smartphone apps for point-of-sale payment is that most shoppers do not see the advantage of paying with a mobile phone compared with paying with a plastic card. There need to be other reasons and incentives. Why is it that 27% of Starbucks' customers are using Starbucks Mobile Pay at the point of sale? It is because of the integrated features, incentives, and a high level of customer engagement offered by that Starbucks® app for iPhone® and Android™. Typically, the most frequent usage mobile payment occurs with the most integrated mobile apps, as evidenced by the highly refined Starbucks app. Mercator Advisory Group's predictions on the mobile payment market (in the next section) have factored in slow consumer adoption.

Mobile Devices and Evolving Consumer Behavior

In 2011, 80% of U.S. consumers surveyed by Mercator Advisory Group stated that they distrusted mobile devices for banking, and yet 27% used their mobile devices to communicate with their bank. Fast forward five years to 2016, when only 55% stated they do not trust the security of their mobile devices for accessing their bank and 60% say they are using the devices to do exactly that. Consumers change their attitudes and positions as they are influenced by family, friends, and trusted business entities. As banks increasingly provide online access and mobile applications, the consumer slowly comes around to trust the device. As the consumer uses the device for an increasing number of daily activities, trust is lifted higher. Over time, the added security of tokenized mobile payments transactions compared to magnetic-stripe transactions will also have a positive effect on consumers' perceptions of the security of mobile payments. While consumers may be timid today, they will become adopters as more smartphones, more applications, and more businesses begin to rely on the technology.

Market Outlook for E-commerce and Mobile Payments

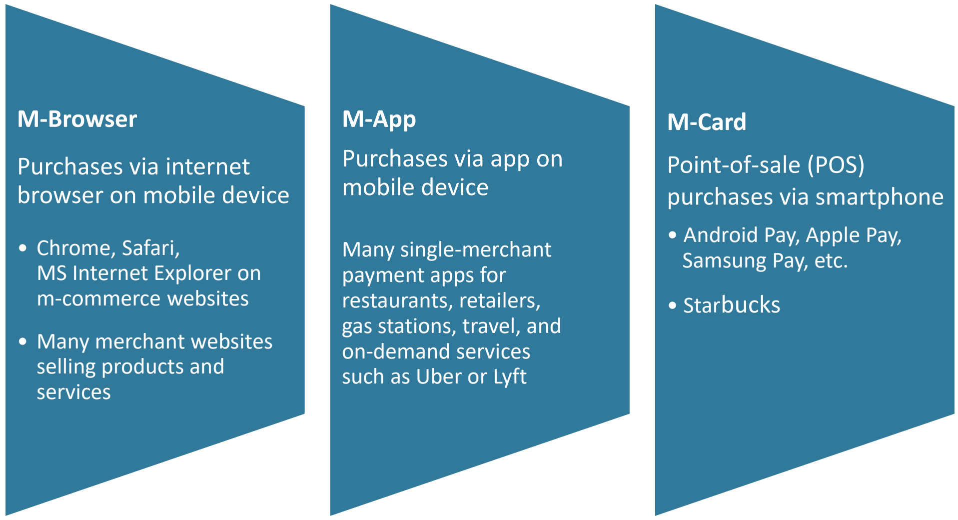
Mercator Advisory Group's latest e-commerce and mobile payment market estimates are categorized by e-commerce, m-browser/m-app, m-card, and total mobile payment volume, as shown in Figure 2 and defined as follows:

E-commerce. Total online retail e-commerce as recorded by U.S. Census Department, plus online travel transactions.

M-browser/m-app. For products and services, including travel, purchased through a browser or app via the internet by a mobile device (smartphone or tablet) using any payment method, including network-branded cards, closed-loop gift cards, and on-demand payments. These transactions are part of the e-commerce category identified above.

M-card. POS payment transactions made using a smartphone (not a tablet) by scanning, tapping, swiping, or logging in at the point of sale based on any payment method, including network-branded cards and closed-loop prepaid gift cards. These transactions are included in the U.S. commerce category above and are not included in the e-commerce category.

Figure 2: Widely Used Mobile Payment Methods



Source: Mercator Advisory Group

Mercator's mobile payment market projections through 2025 are as follows:

- **Total U.S. E-commerce volume** is estimated to be approximately $1 trillion by year-end 2017, rising to $3.5 trillion by 2025, driven by rising online shopping from both mobile and desktop users. These estimates include online travel purchases.
- **U.S. M-browser/m-app volume** is expected to rise from about $200 billion in 2017 to $615 billion in 2025.
- **U.S. M-card volume** is dominated by open-loop mobile transactions. Closed-loop volume is primarily Starbucks Mobile Pay now and for the next several years. Current m-card volume now and for next several years is somewhat constrained by low consumer adoption because contactless payment via NFC technology is not widely available at POS terminals as well as because of habitual user behavior and perceptions. Mercator expects m-card volume to reach nearly $19 billion in 2017 and nearly $465 billion by 2025, with strongest growth between 2020 and 2025, when consumer use of mobile card payments will have achieved widespread acceptance.

The smartphone market is certainly mature and heavily penetrated among U.S. adults, about 78% in 2016. Additionally, the array of mobile payment methods and apps usable in browsers, in-app, and for POS proximity payments continues to increase. But right now, consumers remain hesitant to use mobile payments primarily because of convenience considerations and concerns about security. Mobile pay will show robust growth when individuals use it several times a week, not simply the few times a month that most surveys currently show. Usage will increase as biometric identification of the user becomes the norm and mobile pay functionality evolves beyond transactional to become integrated with merchant offerings such as loyalty, marketing promotions, and mobile ordering.

Shrinking Limitations Create Opportunities for Mobile Payments

Mobile payments technology has rapidly advanced in the last few years although consumer adoption has not kept pace in the U.S. However, mobile payments stakeholders believe that most limitations to enabling mobile payments have been mitigated and now it's up to U.S. consumers to pull out their smartphones instead of their payment cards when it's time to pay. This belief may underestimate the power of consumers' muscle memory and unwillingness to stop using plastic cards, though. Smartphone use at the point of sale does require shopper authentication every time, whereas most plastic card transactions do not. If mobile phone pay apps worked more like plastic cards and also had more integrated payment-related features, perhaps consumers would be more motivated to try them and increasingly use them at checkout.

Key trends in favor of greater mobile payment utilization include a mature smartphone market, the added security of tokenized mobile payment transactions, and more integrated in-app features. The convenience of mobile payments will converge with an expanded NFC acceptance footprint and biometric authentication, which will overcome security concerns and drive widespread use by 2020, then strong growth through 2025.

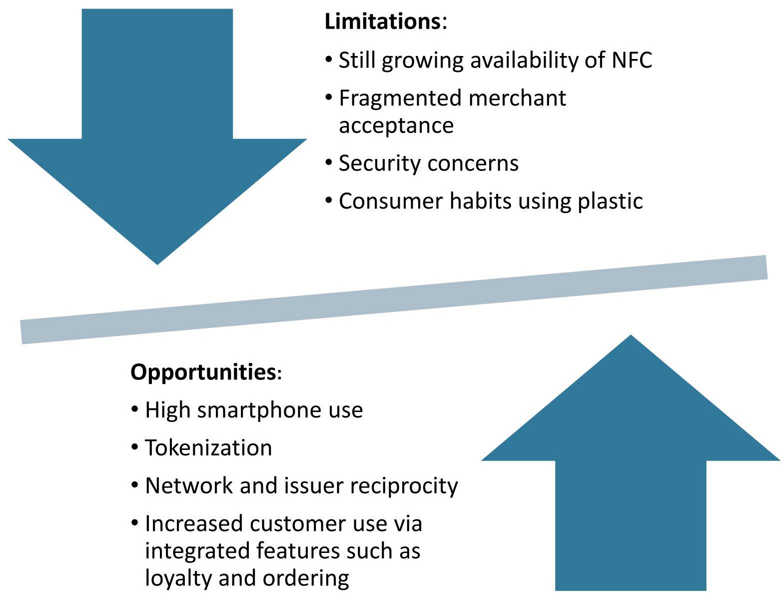
Overcoming Obstacles to Mobile Pay Adoption

Tokenization improves the security of mobile payments. U.S. consumers' top reason for not using mobile payments is lack of confidence in the security of mobile payment methods, as indicated by 40% of Apple Pay users and 44% of Android operating systems users surveyed. The next most common reasons given are "no benefit to use" and "fear of losing phone." The enhanced security of tokenized mobile transactions is not widely understood.

Mobile app credit/debit account controls are growing in popularity. Sixty-four percent of U.S. smartphone owners say they receive alerts to warn them of potential fraudulent use of their payment cards. Checking their payment card balances, checking transaction history, and coupon offers are other reasons consumers frequently give for activating mobile app controls. Mobile-accessed account controls for credit and debit cards will increasingly provide consumers assurance that their accounts are in good order.

More POS terminals will be upgraded to accept NFC proximity payments. Integration of Near Field Communication technology in the POS terminals necessary for acceptance of mobile payments has not been not the first priority for U.S. merchants while they have been converting their terminals to accept EMV chip cards. Installation of more sophisticated software and functionality like NFC has lagged while merchants converted their terminals to the EMV standard. Catch-up will begin in 2017 as more merchants complete conversion to EMV, which often includes an upgrade to NFC technology as well. This will result in more widespread acceptance of NFC proximity payments in stores via payment apps like Apple Pay and Android Pay.

Figure 3: Limitations and Opportunities for Consumer Mobile Payments Adoption



Source: Mercator Advisory Group

Mobile payment acceptance needs to be broadened and supported and customers educated about it. Large-scale merchants and "big box" stores have been the earliest adopters of NFC-enabled terminals for mobile payments. Adoption has moved more slowly among medium and small merchants than desired by providers of NFC-compatible-mobile payment apps such as Android Pay and Apple Pay. But even those retailers that have enabled mobile payments at checkout often neglect to train staff how to this payment method. Payment providers are also remiss about educating consumers on new mobile payment methods and providing technical support to their merchant customers

Issuers and merchants must let consumers know that security measures have been enhanced. News reports of stolen cardholder data scare consumers and reduce their trust in using mobile devices for shopping and payments. Many consumers have been personally affected by card data theft or notices from the card issuers that their records may have been compromised. Not so widely publicized as the data breaches, unfortunately, is the fact that anti-fraud security measures have become more effective. Consumers' consequent lack of understanding of NFC and tokenization represents a missed opportunity for issuers and merchants to convey good news of a positive security development.

Entrenched use of plastic. Shoppers will not easily break their habits of paying with plastic cards. They have grown accustomed to the tried and true methods of credit and debit card payments and need more than just new technology to change their behavior. Mobile vendors must give consumers more value-added reasons to use mobile pay. Starbucks and Dunkin' Donuts prove that customers will respond to mobile pay when they are given an integrated set of features and are given the proper incentive to go beyond simply making a payment transaction.

Conclusions

It is easy to forget that mobile payments are still in their infancy. But e-commerce now exceeds half a trillion dollars in annual sales, and the rapid growth of smartphone and their resident commerce apps both remind us how quickly consumer digital commerce is evolving. The "last mile" of consumer interaction at the point of sale is often the most arduous, but momentum is clearly building as obstacles to mobile payments fall one by one.

Endnotes

http://www.nielsen.com/us/en/insights/news/2016/millennials-are-top-smartphone-users.html

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