MobileLocalMedia

Mobile Payments: Tracking the Race to Control the Digital Wallet

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Summary: Last month BIA/Kelsey released 2011 predictions across its coverage areas. One of the biggest predictions in mobile was how emerging standards in mobile payments will accelerate innovation across the industry. This will not only apply to obvious areas like mobile shopping and commerce, but also to gaming, social networking and location-based services. There are many players competing to develop and own mobile payment standards, including carriers, tech giants, credit card companies and start-ups. This Advisory takes a closer look at where mobile payments are and where they're going.

Late last month news broke that Apple will likely integrate near field communications (NFC) in the iPhone 5, expected in June. NFC involves a chip that transmits a short range, high frequency signal to communicate with other nearby devices.

The speculation quickly escalated around areas of peer-to-peer communications and online commerce. But perhaps most clearly associated with NFC is the concept of making mobile transactions and payments in retail environments.

NFC is just one of many technologies being developed for mobile payments, but it's received the most attention lately. This is due to Apple's star power, but also the appeal of using the phone as a digital wallet in the physical world where the majority of retail spending occurs.

Google is also backing NFC, as is a new industry consortium known as ISIS. Made up of AT&T, T-Mobile and Verizon (processing via Discover and Barclays), ISIS will let users store multiple cards to make payments and manage accounts using their mobile devices.

Overseas, carriers Orange and T-Mobile have joined together for a similar effort in the United Kingdom starting in July. Barclays will handle payment processing, and more than 40,000 U.K. retail locations have signed up to work with the system.

Meanwhile, companies like Palo Alto, California-based Bling have provided an interim NFC solution that involves small decals affixed to mobile devices. These transfer PayPal funds or debit transactions via NFC to about 1,000 U.S. retailers that have signed up.

Merchants are charged 1.5 percent of transactions, which is about equal to average credit card rates but without the lengthy approval processes and monthly minimums applied by credit card companies. Merchants can also view transaction data and target offers to certain customers.

PayPal meanwhile sees mobile as a growth area. In addition to working with Bling, it is pioneering other areas such as letting its users exchange funds via SMS or by using the popular Bump technology for peer-to-peer transactions.

Other mobile payment standards include SMS to initiate and approve transactions that then appear on

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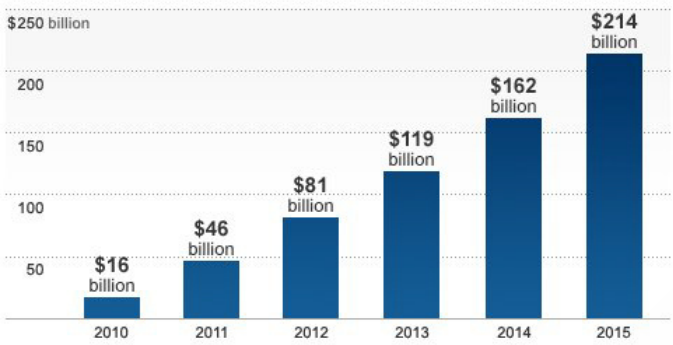
Spending via Smartphone, 2010-2015

SOURCE: AITE GROUP (2011)



cellphone bills. This involves partnerships between retailers, mobile carriers and third-party intermediaries such as Boku and Zong.

This is the most common form of mobile payments and it has the advantage of plugging into an existing and trusted form of consumer billing. But it's mostly limited to m-commerce, versus offline shopping in physical stores where, again, most retail spending occurs.

It also involves exorbitant carrier markups (between 30 percent and 40 percent), but competition around mobile payments should force carriers into more competitive pricing. NFC, and possibly other standards yet to emerge, should also outshine carrier billing eventually.

Regardless of standard, the rapid growth of smartphones — projected to reach 50 percent penetration in the United States this year — will accelerate mobile payment adoption. As a result, Aite Group projects $214 billion in mobile payment transactions by 2015.

What Comes First?

A sizable challenge for mobile payment companies is a chicken-and-egg dilemma. With NFC, for example, compatible hardware is necessary for both users and retailers. Without user ubiquity, retailers aren't compelled to adopt point of sale (POS) hardware and vice versa.

Google has been most active in countering this. Even before Apple's reported moves with NFC, Google announced that all future versions of the Android mobile OS will support it. This started in December with Samsung's Nexus S, running Android 2.3 (Gingerbread).

Near term, this translates to legions of Android users carrying around fancy NFC technology with virtually nowhere to use it. But Google's intention is to take care of the user end of the equation so retailers are compelled to adopt and install the proper POS hardware.

Why is Google doing this? If it can have some degree of ownership of the mode of transaction, it can create revenue streams through payment processing via Google Checkout. The same concept drives many of the companies entering mobile payments.

Google could also tie this into its core search business. If it can show that finished transactions resulted from paid search campaigns, a clearer ROI picture results. This translates to more advertising (97 percent of Google's nearly $30 billion in annual revenues).

Here We Go Again

But it can be argued that Apple is positioned even better than Google in the NFC picture. This becomes yet another area where Apple and Google will compete (see the July 6, 2010, Mobile Local Media Advisory, "Google and Apple: Best Frenemies Forever").

Apple's advantage partly stems from the iPhone's popularity among buying empowered and technically astute individuals who are more likely to adopt new technologies like mobile payments. But its larger opportunity is summed up in one word: iTunes.

We've long said Apple has a sleeping giant in iTunes, which has credit card relationships with more than 150 million users. As with carrier billing, systems that utilize

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existing relationships and trust (read: security) have an inherent advantage.

But in both volume and ubiquity, iTunes trumps Google's Checkout payment processing system. Though Google is a major player in most areas where it competes, Checkout is one product that has failed to appeal to users for many reasons.

This has been detrimental to Google's mobile app marketplace, forcing it to turn to other methods (like carrier billing) for users to pay for apps and for developers to make money. Apple is better positioned with iTunes as the mobile device evolves into a digital wallet.

Put this all together and Apple has an established payment processing system, existing billing relationships and a quickly growing penetration of the smartphone and tablet market. NFC also furthers its ability to sell its iTunes' bread and butter (pictures movies, music, etc.).

But that's not the monster opportunity. Consider the breadth and volume when you move beyond digital products to ones purchased in the physical world. In this light, Apple could be primed to tackle the $6.2 trillion in goods and services purchased in the United States every year.

Meanwhile, Apple's payment processing could evolve to use simpler debit transactions from users' bank accounts. This could allow it to shed credit card processing fees on the back end, similar to what PayPal has done in linking into users' bank accounts.

On the user end, this could be more attractive given pending legislation that will make debit transactions cheaper than credit. It could also grow to include loyalty cards with retailers and other ways to promote and reward purchase activity.

Add this all up and it's clear that Apple is sitting on a massive opportunity. But as we said with the prediction that Apple would eventually build or acquire an ad network, it runs counter to its branding and persona as a high-end consumer electronics developer.

Still, it's hard to argue with the numbers and how its current mix of assets positions it to jump on a new area of tremendous revenue growth. Similar to its move into advertising (but perhaps to a lesser degree), here's what we said in June 2008:

> *... As a matter of speculation, Apple sits in an interesting spot here. Though the company has created an open system for mobile application development and access (when compared with the traditional mobile environment), it remains somewhat of a closed system (versus the Web). In other words, applications still require Apple's approval for inclusion in the App Store.*
>
> *Does this put Apple in a position of leverage with respect to its terms of agreement and its potential to be a central repository for ad buying and placement throughout its universe of applications? This would be a significant departure from its traditional model and its mission to be a consumer-driven product company. One can't help but wonder, given this positioning, if it will opportunistically bolt an ad network onto its business model.*

Moving into payments is a similar concept but instead leverages Apple's positioning on the user end. Panning back further, it could do for mobile payments what iTunes did for music and what the App Store did for mobile apps.

Based on all this, it's clear Apple's next area of growth — quite possibly its largest by far — could be streamlining the $6.2 trillion in transactions we make whenever we leave the house.

Eligible Receiver

Because one gating factor to this opportunity will be POS hardware, Apple will likely subsidize or underwrite these systems to get the ball rolling. Rumors point to a prototype payment terminal for small businesses to accept NFC-based payments.

As mentioned, Google also gets points for boosting compatibility on the user side of the equation. But in this chicken-and-egg game, there are entities on the retailer (receiving) side of the equation that are

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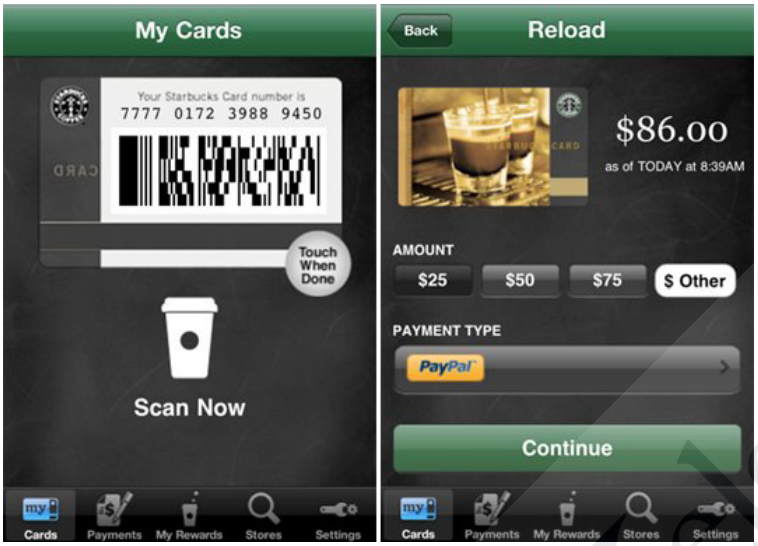
Mobile Buzz: Starbucks Card App

SOURCE: STARBUCKS (2011)



likewise moving the ball forward.

First and foremost is Starbucks. Last month it installed POS mobile payment systems at 6,800 of its U.S. locations. Though it's not technically NFC, the easy-to-use system lets users swipe their phone screens under a POS barcode scanner to execute quick transactions.

This will happen through a declining balance, which is replenished manually using a credit card or PayPal (similar to many public transit debit systems). At the onset, it will also require the free "Starbucks Card Mobile" iPhone or BlackBerry app.

Like a lot of apps, it's starting with iPhone because it represents a user segment known for its early adoption and influence. There are also correlations Starbucks has uncovered between iPhone (and BlackBerry) users and its high value/high frequency customers.

Adoption will snowball, as a company like Starbucks has the branding and physical saturation to get mobile payments on the map. That goes for consumer comfort levels, popularity, and the standards that will emerge for mobile transactions and acceptance.

From this, more and more users will become acclimated and grow to expect such systems from other retailers. Due to its similar scale and ubiquity, we predict Walmart will be the next retailer to follow down the path of either barcode-based or NFC mobile payment systems.

Where Credit Is Due

At this point, a key consideration is why credit card companies aren't already leading the way in mobile payments. They've shown public support for innovation in this area, but like incumbents in other markets, an innovator's dilemma curbs the ability to pioneer new standards.

Many start-ups in this space could be acquisition targets for credit card companies, and we project a robust M&A environment over the next 24 months. But credit card companies are likely to follow rather than lead, while reaping secondary benefits from mobile payments.

This will happen as NFC and other payment systems piggyback on credit cards' ubiquity. In other words, mobile payment companies essentially act as intermediaries to mobilize transactions. But these transactions in many cases are still credit card based.

Some of the players in this space are directly competitive with credit card companies such as those that facilitate SMS-based payments via carrier billing statements. But others, like Square (see appendix), operate mostly on credit card transactions.

Many of the NFC technologies explored above similarly mobilize and make virtual the mode of transaction. Credit cards will ultimately benefit rather than suffer from mobile payments in the coming years; the biggest difference is that we'll see less plastic.

Final Thoughts: The Catalyst

Though the chicken-and-egg dilemma is a barrier to

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growth, mobile payments will lift off the ground in the next 12 to 18 months. The efforts of Google and Apple, among others, will ensure this.

As mobile payments begin to reach full stride, they will accelerate innovation and adoption of many parallel areas of mobile development. They'll appeal to users as a function of convenience and to advertisers as a function of clearer ROI.

The latter is important, as mobile payments will be one catalyst in BIA/Kelsey's projected ad revenue growth. Advertiser interest will be driven by mobile's high levels of user engagement, commercial intent and the strong ad performance we're already seeing.

While the mobile device bridges the gap between the media and the point of sale, a last inch problem still exists. Mobile payments will bridge that last inch to the cash register, in the same way mobile in general has bridged the last mile to the store shelf.

Resulting clarity of ROI will accelerate advertiser demand and push many fence sitters into mobile marketing. This will not only be the case with mobile shopping, but also across the board with things like social networking, games and location-based services such as Foursquare.

The other end of the equation — users — will likewise face adoption barriers, but they will be alleviated with time and the standard course of technology acclimation. The latter will entail some security concerns and resulting product strategies.

Losing your mobile device in a taxicab, for example (we've all been there), comes with the prospect of losing access to modes of payment. Worse, it opens the door for theft and fraud. This is a key concern for many of the companies listed above.

Many mobile payment systems propose to store credit card or billing information in the cloud, accessed by password. As a fail-safe, information can be erased remotely from a home computer. Many claim this is more secure than credit cards.

Regardless of how secure these products are in a technical sense, it will still require a cultural learning curve. Habits are tough to break, and it will take at least the next two years before mobile payments penetrate a majority of U.S. citizens.

But as this acclimation occurs and comfort levels develop, it will carry beyond payments into other physical data we carry around with us. This means insurance cards, driver's licenses and anything else you'd find in a wallet today.

Survey data are often cited that users would stand to lose keys and wallet before the mobile device. If mobile payment trends continue, the dilemma will be avoided by their coupling. All we'll need then are mobile house keys. We have a feeling there will be an app for that too.

Appendix: Company Spotlight — Square

There are lots of companies, standards and parts of the mobile payment value chain mentioned in this report (and some that aren't). One that we'll examine closer due to its implications for BIA/Kelsey's core SMB focus is Square.

Founded by Twitter cofounder Jack Dorsey, the company ventures to enable any mobile user to accept standard forms of payment, such as credit cards. Its first target market is the roughly 15 million U.S. SMBs that aren't equipped to process credit card payments.

So unlike some of the companies mentioned above that focus first on the user, Square is focused on the retailer. Specifically, it's serving an unmet need within the SMB merchant segment — those for which credit card payments are cumbersome or cost prohibitive.

For the user, Square payments aren't that different from many merchant transactions; it simply involves swiping a credit card. The "mobile" part comes in on the merchant end, allowing them to turn any iPhone, iPod Touch or iPad into a device that accepts credit cards.

This involves a few moving parts (literally). The merchant receives a free piece of hardware that plugs into the mobile device's audio port. That syncs with the Square software (free app) to read and process credit cards.

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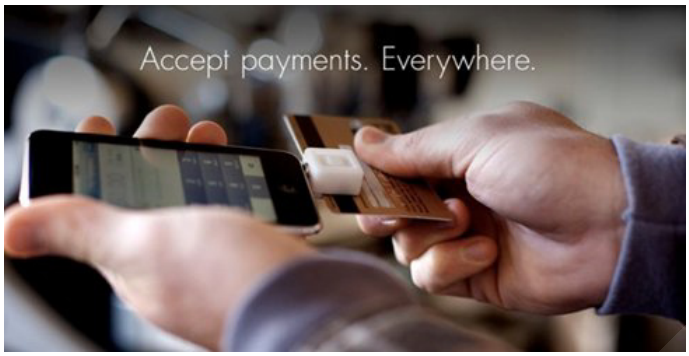
Just Swipe

SOURCE: SQUARE (2011)



After swiping a card and approving the amount entered by the merchant, the user signs the touch screen and is e-mailed or texted an electronic receipt. The value here lies in the ease of use for users and merchants.

For the latter, it frees them up from lengthy approval processes, bank relationships, monthly minimums and other traditional requisites of accepting credit cards. Instead Square provides the free hardware and software and takes 2.75 percent plus $0.15 of every transaction.

This is hoped to do for merchant credit card payments what PayPal has done for online transactions. So far it has signed up 50,000 users and processes millions of dollars each week. In addition to SMBs, it's signing up clients with sizable transaction volume such as Zappos.

Since it launched, there has been competition from larger players such as VeriFone. But simplicity and pricing make Square a competitive option. VeriFone charges a $49 activation fee, and a monthly $15 fee on top of $0.17 for each transaction.

To further differentiate, Square's long-term plans include geographic expansion and growing into other forms of payment that are either emerging or are more pervasive in certain countries (such as NFC in Japan). It also plans to extend beyond iOS to all mobile platforms.

In addition to $10 million in seed funding from Khosla Ventures and a batch of Angel investors (including Ron Conway, Esther Dyson and Dennis Crowley), it recently received $27.5 million from Sequoia Capital and Khosla valuing the company at $240 million.

It will use these funds to work toward the above goals. In the near term, this translates to ramping up engineering staff as well as sales and marketing to a larger base of users and merchants. **MLM**

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