

# Will Apple Pay Upset the Payments Apple Cart?

Will The Introduction of Apple Pay Change the Landscape for Mobile Payments?



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When Apple announced the release of its iPhone 6, it captured public interest not just for the larger phone size and the highly anticipated Apple Watch, but also for its Apple Pay payments platform. CEOs of major financial institutions—JPMorgan Chase, Bank of America, and Citi among others—personally announced they will be joining the Apple Pay ecosystem. According to Apple, companies representing over 83% of U.S. card volume have signed up to participate in Apple Pay in some form, including a number of major retailers and Quick Serve Restaurants (QSRs), such as McDonald's, Macy's, Panera, and Bloomingdale's.

In many ways, Apple's announcement raised more questions than it answered. Some of these key questions are:

- How truly novel is the Apple Pay platform?
- What does Apple bring to the party that others have not?
- Is this truly going to change how consumers pay in an omni-channel retail environment?
- What is the Apple Pay platform missing?

## How truly novel is the Apple Pay platform?

Apple Pay combines a number of technologies, none of which are actually new. In fact, they have been available and in use in the U.S. in various forms over the past decade. The three most commonly discussed components of Apple Pay are:

- A **Near Field Communication (NFC)** chip inside the phone that allows for a contactless payment at the point of sale (POS).
- A **Secure Element** that ensures a consumer's credit or debit card information is not revealed during a transaction. Instead, using a process of "tokenization," a one-use number is created for each transaction. Once used, the number becomes useless for future transactions, making it of no value to cyber thieves. The phones themselves do not even contain users' card information, which adds another layer of security.

- **Touch ID** technology that replaces the traditional PIN with fingerprint authentication and can make the POS transaction faster and more convenient—if properly implemented. Combining it with one-use tokens increases both the security and convenience of mobile transactions. Consumers have long had opportunities to use NFC, first with cards from the likes of Citi and Chase, and more recently with smartphone technology from Mobile Network Operators (MNOs) including Softcard (formerly ISIS) and Google.

Initial marketing campaigns and retailer acceptance—at chains including CVS, 7-Eleven, and ShopRite—offered promise. Consumers no longer needed to sign for or enter a PIN for small-ticket purchases. However, consumers did not respond by using "tap-and-go" in large numbers. Issuer and merchant interest remained limited, as did the number of NFC-compatible POS systems. The result: a typical chicken-and-egg standstill.

The surging popularity of smartphones revealed a potential tipping point, but industry efforts to embed NFC chips into the phones could not overcome the squeezed margins and legacy economics of the payments industry. This promising approach was therefore consigned to a perpetual state of limbo.

In the end, issuers ceded the cause to other players, all of which have so far achieved lackluster results. Merchants remain mostly unimpressed with NFC, and less than 10% of all POS terminals in the U.S. have NFC capability. The cost of maintaining the terminals is a key hindrance to adoption, a fact BestBuy cited when switching off its NFC-enabled terminals.

**Tokenization** of card numbers is not an original concept either. Discover has long promoted Single Use Numbers for online purchases. However, the added cost and low uptake eventually forced it to discontinue the program twice, first in 2011 and again in February 2014. The concept has only recently begun to attract increased levels of consumer and merchant interest, with the likes of Stripe offering fully integrated tokenization capabilities to all merchants utilizing its platform.



Biometric security via finger printing in lieu of a PIN or passcode to authenticate a user has also been tested for many years. For example, laptop manufacturers Dell, Toshiba, and Fujitsu all used fingerprint technologies, but frustrations with the technology led to its de-emphasis.

So, Apple's solution leverages three technologies that were used quite extensively in the past, but with limited success, which brings us to the second question:

## What does Apple bring to the party that others have not?

With respect to NFC, tokenization (Secure Element), and fingerprinting (Touch ID), Apple does offer unique features and capabilities.

Apple potentially resolves the long-standing chicken-and-egg conundrum related to NFC. Tens of millions of iPhone 6 units were sold in the first weeks since its launch—all of them with an NFC chip. When launching its S5 phone, Samsung did not emphasize the device's embedded NFC capability, but the manufacturer is now proudly stating its phones have included NFC chips all along. Taken together, these events create a significant base of NFC-enabled users. Even Google and Softcard may be beneficiaries, if not winners, as consumers may soon view their NFC-equipped phones as payment vehicles.

Perhaps more importantly though, is that over 400 million iPhone users already have a credit or a debit card registered with Apple via iTunes, which eliminates the need to load card information onto the platform. To placate banks, Apple will allow consumers to link multiple cards and select which card they use for any particular transaction. This feature excites tech pundits and consumer research groups and is already being leveraged successfully by the likes of Coin, a hybrid physical and digital wallet.

Despite the friction remaining in NFC uptake, Apple Pay appeals to retailers, especially in the aftermath of the Target breach and the coming fraud liability shift from banks to retailers, which is now less than a year away. The market is abuzz with talk about migrating to chip-and-pin transactions and exploring even better options such as tokenization.

Tokenization has many variations, but at its core, it replaces the 16-digit credit card number with a random 16-digit number that meets the formatting requirements for card payments. This feature both eliminates the need to update legacy systems that expect a credit card number and protects real card numbers. Tokens can even be tailored to a particular merchant, making them useless elsewhere. Still, consumers and merchants undoubtedly continue to have doubts about Apple's security. Yes, Apple's timing was nearly perfect in offering a solution to retailers that went beyond chip-and-pin. No, Apple Pay does not store card data in the cloud, but the celebrity hacking scandal did remind the public of the vulnerability of their private data.

Questions also remain about just how well Touch ID will work in real life. If it works as advertised, it could significantly enhance the POS mobile payments experience by expediting transactions. However, Visa, MasterCard, and American Express would have to allow Touch ID to replace a PIN on all transactions for it to become an effective substitute authentication measure. Transit networks and QSRs, which process mostly small-value transactions, would be delighted with faster transaction speeds.

In summary, Apple Pay is built on evolutionary upgrades to existing solutions, but it presents them to the market in a massive and nearly instantaneous way that greatly improves the possibility of uptake. It remains to be seen whether consumers will accept Apple Pay and, if so, how quickly. Nevertheless, Apple's size, determination, and desire to succeed where others have failed are well known and give everyone an added impetus to pay attention.

Regardless of the technologies it uses, the most important question about Apple Pay is whether it will change the way consumers pay for things.

Apple will undoubtedly invest significantly in signing up additional merchants. It seems safe to assume that Visa, MasterCard, and American Express have agreed to help recruit more merchants as part of their agreement with Apple, with QSRs and transportation systems taking priority. Advertisements for Apple Pay will likely stress both convenience and security, features that consumers will find compelling.



These efforts may be enough to carve Apple a piece of the payment pie, but that may not be enough to change the payments landscape. Convenience, particularly for small-ticket items, is an appealing factor, but the average credit card transaction already takes fewer than three seconds to complete and is not susceptible to battery failures and software upgrade lags. Buyers do not have to worry about upgrading their credit cards, and 70% of cardholders worldwide (i.e., a good chunk of Apple's card database) only own one card and use it fewer than ten times a month.

## Is this truly going to change how consumers pay in an omni-channel retail environment?

A conspicuous set of features is missing from Apple's press releases. Principal among them is a consumer loyalty or incentive scheme. Regardless of how simple, such a program would play an important role in convincing iPhone and Apple Watch users to use Apple Pay. The absence of such a feature may keep consumers reaching for their wallets instead, particularly for large-ticket items. Prior technology rollouts, including earlier implementations of NFC, lacked substantial incentives to change deeply ingrained payment habits. For Apple Pay to succeed, Silicon Valley's technocrats cannot be the only enthusiastic users.

Then there is the question of economic benefit to merchants. Although Apple Pay will benefit from the growing presence of EMV-compliant POS systems, which include NFC readers, it could face challenges in getting merchants to actually turn on the readers. Until the economics of the Apple Pay platform are formally announced, it will remain unclear whether merchants have any incentive to participate. They could simply ask customers to pay by traditional means instead.

Just getting NFC readers into shops is another challenge. At about \$500 (the current price for Revel's NFC add-on) a single NFC reader is a considerable stand-alone investment for micro-merchant and a hefty aggregate cost for large merchants with many POS. Square and similar dongle-based providers who target micro-

## What is the Apple Pay platform missing?

merchants are not currently NFC capable, and becoming so implies significantly increasing hardware costs. Many large merchants are holding out against NFC altogether, or as Walmart did, stating that they will not support Apple Pay. Amazon, eBay, Alibaba, and Dell are all examples of merchants with vested interests in not accepting Apple Pay, which cuts off some of the fastest growing sales channels with higher ticket items. Some merchants have gone as far as blocking Apple Pay and adopting the Merchant Customer Exchange's (MCX) competing mobile wallet, CurrentC, instead. If Apple Pay lacks a broad merchant base spanning both the higher and lower ends of the retail ecosystem, its convenience factor begins to fade.

Details are sparse regarding how Apple will make money on each transaction. Initial reports suggest issuers will pay Apple 15 basis points per transaction in exchange for the guarantee of a fraud-free transaction. With the average value for an NFC transaction close to \$10 and the average cost for an app or song lying between \$1 and \$3.50, Apple will have to rely on significant volume to move the needle. This strategy runs counter to strong prevailing forces in a mature industry with razor-thin margins. Other market players are instead looking to mine transaction data to improve services for consumers and create retail intelligence solutions for merchants. The expectation is that processors may eventually price payment processing at cost, or give it away for free, in order to mine the data in aggregate and sell the resulting insights. To the extent this expectation becomes reality, Apple could find itself catching a falling knife.

In the short term, Apple Pay is unlikely to drastically change consumers' shopping habits. Instead, it will likely contribute significantly to Apple's revenue without substantially upsetting the market or even any particular player. With online and mobile payments set to grow over the next decade, though, September 2014 may prove to be the date that Apple planted the seed of change in payments.

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