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A First Data White Paper

Pilot or Progress: Exploring the Possibility of Bank-Initiated Mobile Payment Solutions

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Introduction

As the penetration of smartphones across the globe grows and their usage permeates both personal and business realms, it is becoming increasingly clear that this is a genuinely disruptive technology. Not only does the smartphone change the way people interact with the world around them, it is also expediting the obsolescence of some traditional technologies. If you want an example, ask a teenager what the time is and watch them reach for their phone to tell you!

This relentless march of disruption has not gone unnoticed by the financial services industry as it endeavours to grow business in difficult times. The profusion of financial institutions now offering mobile banking solutions to their customers is a demonstration of the importance of this space. In recent months, the focus has shifted to enabling mobile devices for making and accepting payments—and this is where it gets really challenging. One problem with attempting to launch new forms of payment is that there already exists simple and ubiquitous ways to make purchases (e.g., cash and payment cards). In addition, the payments industry is responsible for assuring the highest levels of security in transactions, and replicating this in a mobile environment is not a trivial undertaking. The third problem is identifying exactly what to build to support mobile payments. Introducing a new payments ecosystem is expensive and carries no guarantees of success, as exemplified by the failed attempts to introduce a Pan European payment scheme. These factors have collectively delayed the introduction of the standardised open solution which carries the best chance of success for facilitating widespread adoption of mobile payments.

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Notably, there has been a recent surge in the number of banks seeking to gain traction in the mobile payments space without entering into potentially complex agreements with mobile network operators (MNOs). But is this approach viable? This paper will discuss the current state of mobile payments and explore several alternatives for a bank-led mobile payments revolution.

Mobile Payments in the Marketplace

For several years now, near-field communication (NFC) technology has been regarded as the simplest and most obvious way to enable mobile devices to be used as payment mechanisms at the point of sale. (This is primarily because NFC is secure and mimics existing customer payment behavior). Financial institutions and mobile carriers alike have expressed interest in supporting the migration of payments from cards to phones. Banks are attracted by the prospect of riding the wave of smartphone popularity to achieve increased transaction volume—especially in the low-value transaction category where customers continue to stubbornly use cash rather than cards. Mobile network operators are looking to make sure that they are not excluded from this potential new revenue stream, and have also made strides to ensure progress in the space.

In EMEA, despite a shared strategic focus, significant investment and the launch of multiple pilots, the potential of mobile contactless payments remains broadly untapped. The reasons for this include:

- **Complexity of building the ecosystem.** The need for market participants to engage with new partners with a wide range of solutions and capabilities—and to reach an agreement about the best way forward—has proven to be difficult.
- **Lack of clarity around business case.** As yet, it is still unclear whether the mobile payments space will be better served by a revenue-sharing approach or a SIM/Secure Element space rental approach.
- **Failure to satisfy the players in the ecosystem.** To ensure success, all parties (merchants, issuers, MNOs, acquirers, handset manufacturers, solution providers and consumers) need to understand and accept "what's in it for me."
- **Availability of technology.** Although 2012 saw a number of popular new handsets with NFC functionality, there continues to be a relatively low number of NFC handsets in the marketplace.
- **Appetite for investment.** The inherent—and persistent—uncertainty surrounding mobile payments increases the risk of failed investments, and this, in turn, reduces the players willing to participate.

The technology underlying mobile payments has been extensively tested over the last few years, including the collection of comprehensive data pertaining to usability and customer preference. On the technical side, there have been relatively few pilots that involved provisioning a card to a device remotely in real-time; most of the pilot activity has resorted to pre-loading or pre-personalising information onto devices or SIMs. This issue is notable because most card issuing platforms are batch-based, so even if the technology is deployed for real-time provisioning it is only effective if the issuing platforms are also enhanced. As such, the paradox remains that the most obvious consumer benefit of mobile payments is the ability to add, change and delete in real-time the payment application stored on a mobile device—but unfortunately, this is the most complicated and least-tested part of the value chain. (Fortunately, there are experienced providers, like First Data, that do offer real-time provisioning).

Putting the technology in place is one thing, but for mobile payments to take off there must be an open and well-defined ecosystem that will reduce the cost and risk of entering the market. This will only happen once an acceptable commercial model is defined. Looking to the United States, ISIS (a joint venture of AT&T, T-Mobile, and Verizon) and Google Wallet are examples of attempts to solve for this by offering exceptional usability to consumers at commercial scale. Both of these solutions have embraced the newest participants in the payments ecosystem (MNOs and handset manufacturers) by building a model that is reliant on their involvement. However, progress is slow and can still be derailed—as when AT&T and Verizon both blocked their customers from accessing the Google Wallet because it competes with their own products.

Similar MNO joint ventures in other regions have had mixed success. Sixpack, a planned joint venture between prominent Dutch banks and mobile carriers, recently folded amid concerns about overly complex delivery requirements and a failure to agree on an execution strategy. In the United Kingdom, a joint venture between Vodafone, O2 and Everything Everywhere (known as Project Oscar) recently received approval from the European Commission following a lengthy investigation. They then promptly announced an initial focus on delivering marketing-based solutions. If the delivery challenges can be overcome, this type of joint venture could secure the involvement of MNOs in the long-term ecosystem and provide additional consumer benefits by standardising the redemption of discounts and promotional offers at the point of sale. This project is an example of a new payment solution that offers tangible advantages over existing payment types for consumers. However, while a commercial launch may still be a long way off, financial institutions face an immediate challenge to act—within the confines of a satisfactory business case.

Challenges Facing Financial Institutions

Against a backdrop of increasing consumer demand, executive pressure for innovation, and a still-unclear commercial model, what should a financial institution do? Exploring these challenges further reveals a bit about why the market is proving slow to adopt mobile payments, as FIs juggle often conflicting challenges:

- **Innovation as a badge** – a growing trend for companies to use innovation as a way of differentiating their brands
- **Competitive pressures** – remaining competitive in the market, especially against non-traditional competition
- **Increasing revenue and the volume of electronic transactions** – cash still dominates in many markets, with convenience and consumer comfort being primary reasons
- **Improving position in the payments value chain to secure long term profitability** – traditionally, FIs focus on the transaction itself, instead of any surrounding value when building business cases—but with downward pressure on interchange fees and merchant service charges (MSC), this is becoming more challenging
- **Lack of clear 'winner' or 'silver bullet'** – in the absence of a clear standardized mobile solution, FIs must either wait or risk investing in the wrong solution
- **Cheap, quick pilots generate excessive consumer demand** – the temptation to put a quick pilot into market can backfire if it creates strong consumer demand and expectation for a solution which is not yet commercialised

Four Potential Options for Launching Mobile Payments

When addressing the challenges related to entering the emerging mobile payments market, financial institutions are faced with four potential options:

1. **Do nothing.** Wait to see what happens and react when a more clearly defined business model emerges. However, with new entrants into the marketplace and other FIs proceeding with mobile solutions, this strategy looks increasingly like it will lead to a loss of market share in the medium term. It also limits an FI's ability to influence the evolution of ecosystem, potentially excluding it from a meaningful role in "winning" solutions.

2. **Engage with other parties to launch a pilot.** Like the first option, this strategy has significant drawbacks. So much pilot activity has already been undertaken that solution providers and other ecosystem players are reluctant to engage further without a clear understanding of how the opportunity will scale. Furthermore, consumers are becoming weary of ongoing tests and trials without full scale launches in sight.
3. **Work to build an ecosystem with plans for a controlled commercial launch.** This strategy, whilst potentially challenging, offers the greatest potential return due to the first mover advantages gained by putting a genuinely scalable solution to market.
4. **Look for an alternative, interim approach with limited initial complexity.** This presents a logical route to market for FIs seeking to quickly gain some market insight and commercial momentum whilst maintaining close control of their brand.

In order to address the options above in more detail, let's discard options one and two as inadvisable due to their comparatively greater risk and limited rewards. The relative benefits and disadvantages of the remaining options are discussed below.

Building a Partnership Ecosystem

This approach entails the development of a complex ecosystem in which each participant has a mutually beneficial role to play. To achieve this requires compromises from each party—but the potential rewards are substantial. This type of solution typically requires the following participants: card issuer, mobile network operator, wallet developer, card brand and various technology providers. (A neutral entity like First Data can help coordinate this ecosystem to overcome delivery challenges). It should focus on delivering a scalable and open solution for the whole market that provides a convenient and simple consumer experience. It should primarily focus on rapid delivery, but without compromising the capacity for evolution and expansion.

Pros:

- Long-term partnership approach makes it most likely to be a scalable solution.
- Handset compatibility issues can be overcome, leading to a single solution for all.
- Products can be added and removed in real-time, enhancing the consumer experience and reducing operating costs.
- Additional products can be added into the wallet in the future, allowing for adaptation to changing technologies and demands, improving the customer experience.

Cons:

- Complicated commercial model requiring the involvement of multiple partners.
- Requires investment and time. As demonstrated by ISIS and Google, building the solution can take upwards of 12 months and requires a single entity or consortium to be prepared to invest.
- FI loses ownership of payment application storage and management. The payment application is stored on a device or SIM owned by another entity, complicating the customer ownership concept and requiring increased legal/compliance involvement

Interim Approach – MicroSD/NFC Sleeve/ Other Peripheral

This solution option allows the financial institution to move quickly by simplifying the steps to market, and to retain greater overall control by utilizing a payments-capable peripheral device inserted into or attached to the phone. Examples currently in the market include MicroSD cards and NFC-enabled handset sleeves and cases. These types of devices incorporate the hardware necessary for mobile payments (e.g., NFC equipment, secure element), removing the necessity of a payments-ready handset. This maintains the existing model of FIs owning the device on which the payment application resides (as in a credit card), and avoids the need for complicated partnerships to be put in place. However, this approach provides a short-term solution with limited scalability that relies on device availability and standardisation that cannot be guaranteed for the future.

Pros:

- Limits complexity of mobile payment launch. Minimizes the number of ecosystem participants by allowing FI to retain control of the secure element.
- Speed to market. Devices can be obtained quickly and personalised in advance, similar to plastic cards today. Because no real-time personalisation is undertaken, internal software changes are reduced.
- Potential other uses (e.g., music storage). The device can be provided for free or sold to customers, and has the potential to provide additional benefits.
- Simpler commercial model. Because the FI retains ownership of the device, the commercial model is simpler, with no need to involve third parties.
- Retained customer ownership.
- Reduced risk. Allows FI to take preliminary steps toward a more comprehensive and sustainable mobile payments strategy—without the investment required to build a payments ecosystem.

Cons:

- No single format solution. Each supported handset may require a different solution, which also requires updating as handsets and operating systems evolve.
- Potential to be left behind. By avoiding the partnership approach, it may be more difficult to adopt in the future, if necessary.
- Cost of hardware. The peripheral devices cost more than the current cost of plastic, with limited customer benefits—which may lead to challenges around building a business case.

Opportunities for Solution Providers

There are many technology companies that have invested in building mobile payment capabilities; however, these solutions rarely encompass the complete ecosystem—and instead of being true turnkey solutions, they require the prospective customer to drive the rollout. The disruptive nature of mobile, combined with an increasing consumer desire for integrated solutions (see First Data's Universal Commerce white paper) present a significant opportunity for solution providers to drive adoption. However, in order to succeed they must:

- **Maintain security** – First Data research has shown that consumers care deeply about security, and any perceived risks or vulnerabilities can limit adoption of a product. This must be borne in mind when building a solution
- **Allow standardization, and even drive its adoption** – by driving standards, not differences, solution providers can ease market confusion
- **Create solutions which can interact and evolve to improve the consumer experience** – in the long term, widespread adoption will be driven by solutions which can evolve to solve consumer problems, so open, flexible solutions will be more attractive
- **Encourage innovation and collaboration across the industry** – it is important for existing companies in the payments market to help drive innovation, which will help them to secure their own future success

- No speed of issuance benefits. The devices typically cannot be personalised remotely or in real-time. Whilst this keeps the initial barriers to entry lower, it removes some customer benefits.
- Short-term measure. Helps avoid the do-nothing approach without committing to large upfront expenditures—but lacks scalability and does not offer the technical robustness and capabilities of an "on-device solution."

Conclusion

Either of these approaches can be successful for an institution seeking to participate in the mobile payment space, depending on its capabilities and objectives. Mobile payments' success will ultimately depend on availability, benefits to consumers and merchants, economically-viable revenue models, and overall demand. This does not mean that solutions which don't satisfy all of these needs should be discarded or avoided—but this should be understood at the outset. Whilst the approach of building a partner ecosystem remains the most likely long term path to success, alternative solutions may well gain scale in the short term, and that momentum could have an important part to play.

Clearly, the challenge of mobile payments for financial institutions is determining the best way to capture a share of an emerging market with such an uncertain design and commercial structure. In itself, this should not dissuade participation—but certain tenets are important to keep in mind:

- Launching any viable solution into the market is positive, as it helps to demonstrate the overall proposition and raise consumer awareness
- Don't look at proximity payments in isolation – this document has focused on proximity payments, but any approach should also fit with a comprehensive and integrated mobile strategy, including account servicing, loyalty and remote payments
- Approach depends on each market and institution – there is no single clear solution or way forward, and each possible path has its own merits. Having a clear corporate strategy that aligns with the organisation's capabilities and priorities is important.

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