



## ***Pulling Open the Curtains on the Payment System: Merchant Advisory Group Recommendations on the Mobile Transformation Opportunity***

A full decade into the 21<sup>st</sup> century, the growing chorus of excitement about the mobile payments opportunity is having the unexpected effect of casting light on the potential for comprehensive reform of the broader electronic payments industry. And for the first time in decades, the voice of the merchant in payment needs and options is finally getting heard.

By themselves, mobile payments offer unprecedented utility, convenience and efficiency — plus the ability to take advantage of one-to-one, location-specific, real-time capabilities between buyers and sellers. A number of these breakthroughs in the retail value proposition — where the technology deployed to make payments actually *enhances* the buyer experience — are chronicled in detail in the *Mobile Retailing Blueprint*, published in May 2010 by the National Retail Federation.<sup>1</sup>

But as the most promising manifestation yet of the powers of digital technology to make transacting both safe and efficient, the mobile “transformation” is buoying a broader move in Washington and beyond to escape the albatross of the magnetic-stripe, signature-based card paradigm in favor of new, more secure payment options such as EMV Chip+PIN. Harnessing this transformational technology sooner rather than later thus affords the retail industry the opportunity to achieve unprecedented levels of cost effectiveness, security *and* gratification in transacting.

Such an opportunity was largely missed with the inception and build-out of eCommerce, led by the banking industry’s “retro” approach to leveraging its existing physical-world infrastructure and payment products in that new digital venue. The resulting misfit saddled merchants with extraordinary costs and risk management responsibilities — all to maintain the status quo in payments. It is the retail community’s intent *not* to miss this new opportunity with mobile commerce.

Moreover, the merchant community represented is not content to just publicize its preferences; it also feels compelled to urge responsible and long-term planning for the evolution of mobile payments technology. Stakeholders should resist the temptation to embrace and squander precious financial capital on transitional and/or temporary “fixes,” and instead invest monolithically in where most analysts project the U.S. market will be in the future: EMV-compatible, open payment wallet, full-NFC enabled, mobile/contactless transacting.

Only minimal investments should be made in selective venues for issuance and acceptance of EMV contact cards, for example, in order to accommodate travelers; even EMV Chip+PIN countries with contact cards are concertedly moving to mobile/contactless. The new generation of so-called “end-to-end-encryption” and “tokenization” technologies might reduce the scope of PCI compliance, but without chip-based protection of the account credentials at the point of presentation (to a POS terminal), the dangers of breaches don’t go away. So planning and investments should be channeled to where the market *is going to be in the foreseeable future* — not where it is today.

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<sup>1</sup> Mobile Retailing Blueprint: A Comprehensive Guide for Navigating the Mobile Landscape; A Joint White Paper Sponsored by the National Retail Federation-5/21/2010.

## Mobile Transformation of Payments Won't Happen on Its Own

It's still early enough in the mobile transformation to impact decisions that will affect the infrastructure build-out and impact planning and investments for the future. The merchant sector believes three collective actions are necessary to ensure that all stakeholders in the mobile "ecosystem" work together to make the promised benefits happen:

- All payments industry stakeholders need to **coordinate on timing and planning** for the future of payments in the U.S., including decisions on EMV Chip+PIN and mobile deployment. Such coordination should include not only historical payments framework builders such as banks and payment brands, but also merchants and acquirers, with appropriate input from the public sector. *Timeframes and plans should be publicized and shared so that everyone can move together toward the same targets, minimizing redundant and wasteful investments in old or transitional technology.*
- An **industry-wide list of issues, concerns and options** to consider in moving the marketplace forward **should be created** that need to be address/settled on a prioritized basis. *This initiative should be driven by one or more federal agencies, and should include generation of a regulatory roadmap, along with a jointly-comprised (with other members of the mobile payments ecosystem) deployment plan to coordinate investments and activities.*
- The innumerable **independent mobile work-streams** aimed at maximizing individual stakeholder positions are **bogging down progress and fostering uncertainty** about investments; retailers face too many options — even on aspects of security and interoperability, which should not be competitive. *These efforts should be coordinated by a centralized, deliberative body charged with setting common directions and rationalizing investments in non-competitive, shared infrastructure that benefits the entire ecosystem.<sup>2</sup>*

## Shift in the Payments Paradigm/New Ecosystem

It is imperative that all the industries in the mobile payment ecosystem (retailers, banks, carriers, handset makers, application developers, technology providers, etc.) deal with the need for and opportunities to improve on the status quo, and be willing to embrace and commit to bold moves to harness digital, mobile technology to solve long-standing problems:

- **Stop Thinking Small.** Small, interim initiatives (such as trying out a myriad of complex technology "tweaks" in an attempt to make the mag-stripe secure) squander capital and attention while the rest of the world leaves us behind. By clinging to the mag-stripe, the U.S. is now guilty of "exporting" fraud to countries deploying the smart-card based, and superior, EMV Chip+PIN.<sup>3</sup> Coupled with the rising tide of PCI compliance efforts and costs, which for the most part are proving futile, such "retro" investments distract from commitments and capital that can be better spent on contact or NFC-based smart cards. To date, tens of billions of dollars have been spent on PCI and transitional technologies such as encryption and tokenization for the

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<sup>2</sup> The Federal Reserve Bank of Atlanta's Emerging Payments department, in conjunction with the Boston Fed, has sponsored and supported frank and collaborative deliberations by an ad hoc, diverse cross-industry working group examining what role, if any, the Fed should play in fostering mobile NFC payments.

<sup>3</sup> EMV stands for Europay (now part of MasterCard), MasterCard, and Visa, which produced the original specifications and protocols for credit, debit and purse (stored value) applications on chip-based "smart cards." The standard is maintained by EMVCo, whose membership has been broadening over the years as more countries have replaced mag-stripe card use.

purpose of propping up the flawed mag-stripe. *Instead, merchants support opening up the EMV “wallet” functions (currently bank credit, debit and stored value), and pushing EMVCO to become a standards organization more broadly representative of an open and inclusive global payments industry.*

- **Focus on Contactless.** Contactless (tap-and-go) payments employing computer chip security and near-field communications (NFC, or radio wave) technology via mobile devices represent the future of payments in the U.S. But proprietary specifications and deployments are proliferating, and payment options on today’s contactless cards and fobs are predominantly limited to high-cost signature-based bank card accounts. *Merchants bear much of the costs for a shift to contact and contactless chip-based payments, so multiple, proprietary NFC protocols with incompatible specifications, software, readers and devices should be avoided; instead, the nation should move to conformance with open, EMV contactless standards when those global specifications are ready at the end of 2010.*
- **Seek New Business Models for Payments.** The emerging payments ecosystem should be built around different economic models that are more equitable and negotiable, and based on actual costs and risk. *Mobile payments should shift liabilities back to banks, in much the same way most EMV Chip+PIN countries have accomplished; once mag-stripe is gone, fraud and prevention costs should drop dramatically, enabling low-cost, efficient payments.*
- **Embrace EMV.** Some are deterred by the prospect of the new payments paradigm being managed by the perpetrators of the old. While there should be a collaborative effort by all stakeholders to determine the best direction for payments in the U.S., including a roadmap for all to follow jointly, EMVCO appears to be the de facto global choice. *The chip in the mobile devices needs to be EMV-based, as no other contender is in prospect. So the payment brands need to align behind a single, consistently applied set of global standards that global merchants can build to/invest in without risk or waste, and ensure that their customers to enjoy a seamless experience worldwide synonymous with mag-stripe cards today.*
- **Move Quickly and Decisively to Mobile NFC Under EMV.** There is an urgent need to reduce the burgeoning costs and unproductive distractions of further investments in the mag-stripe paradigm, such as the theoretically futile attempt to be PCI-DSS compliant (where merchants must essentially reimburse bank card issuers for data breach fraud for mag-stripe use), and still-unproven and likely transitional deployments of end-to-end encryption and tokenization for both offline and online transactions. *Therefore, a deliberate “forced march” to EMV-based mobile NFC payments would be supported by many merchants — even though they shoulder a significant portion of deployment and conversion costs at the point of sale and in the back office. The U.S. payments system should “mobilize” to get behind an aggressive, five-year plan to eradicate mag-stripe use as quickly as possible — just as Canada and other countries have done.*

### Ideal Implementation Scenarios

While the marketplace will ultimately decide the specific technologies that will emerge as winner or losers, certain functionalities and related policies with respect to mobile NFC payments must be a core part of the technical deployment scenario:

- **Fully Open Payment Options in Mobile “Wallets.”** Nearly all contactless card/fob deployments, as well as certain non-bank mobile NFC implementations planned, offer only highly constrained

payment options. Typically, these options are conducted at transaction fees that reflect none of the efficiencies and lower risks that mobile payments should afford. As such, they appear to perpetuate the “old” payment paradigm and status quo — which forces merchants to subsidize payment providers disproportionately to the value they provide, and limit consumer choice and utility. *While traditional credit and debit card payments should continue to be supported, interim and future deployments of mobile “wallets” and the NFC transactional infrastructure overall should be as open as possible, in order to foster provision of a broad set of consumer payment choices (especially PIN-debit and prepaid), as well as merchant-oriented options.*

- Explore ACH as a Mobile Payment Option for Mobile. Secure use of the ACH system as a default payment network, particularly for low-value/digital content transactions, but also for small business and B2B use, is a concept being explored by the Fed and NACHA. Given the ubiquity of the ACH network, this option is likely to be critical for supporting smaller merchants and banks in the mobile payments ecosystem which have neither the means nor the established access to integrate to multiple payment networks and configurations. *The ACH should embrace and test a separate Standard Entry Code (SEC) designation for mobile-specific payments in order to support mobile NFC/EMV roll-outs, and gain the ability to conduct comprehensive monitoring and risk management capabilities that can sustain the expected surge in mobile hacker-attacks.*
- Share Security and Other Non-Competitive Infrastructure. Synonymous use of shared security is viewed as the safest and most cost-effective “base-case” scenario for mobile NFC/EMV payments, just as it is worldwide for smart cards. It makes no sense for this nascent industry to compete on the basis of security (or other elements of interoperability); rather these functions constitute the primary functions of Trusted Service Managers (TSMs), which house the necessary components of shared infrastructure, manage functions across the ecosystem, and institute rules and policies that foster an equitable and efficient business system. *Mobile NFC/EMV TSMs should be designed to be industry- and provider-neutral, and should incorporate as many non-competitive business-facilitating functions to be shared among all participants as possible. Competition on the basis of security, or operability, should be discouraged.*

### Change in Behavior/Philosophy Needed

In the view of many, the payments industry can be characterized as arcane, convoluted, and often out-of-sync with the rest of the economy and society overall. A system that requires raising prices to compete without accounting for the beneficial impacts of digital transmission and processing technologies is counter-intuitive.

Merchants have clearly been under-served by this necessary but overly expensive cost-of-doing-business; but so have consumers — which accounts for a lot of the regulatory backlash that surfaced in 2009 and 2010 to correct excesses in costs and practices of conventional, bank-provided payment products.

Yet it is the retail sector that is relied upon continually to finance most of the payments infrastructure and pay the “freight” of transacting (at great profit to banks). Moreover, merchants provide and promote the opportunities to promulgate innovations, as is the case with the mobile transformation. It is this fundamental “disconnect” between the role and rewards of retail payments that needs to be transformed, which leads to a few observations on the changes needed in behavior and philosophy of the payments industry going forward:

- Public Sector Involvement is Critical. This does not mean governmental “control”; in fact permanent governmental oversight would be bad in the long run. Market forces need to determine winners and losers, as always — especially when it comes to innovations that have been all too rare in the payments business. The private sector does need, however, some level of help and/or partnership from the public sector to begin moving in consensual, consolidate direction with a discrete time-line and adherence to mutually beneficial objectives. *In particular, with respect to mobile transacting, this means providing coordination up-front among the various regulatory agencies (e.g., the Fed, FCC, FTC, etc.) to create and endorse a regulatory road-map. This will be essential to ensuring that up-front investments will not be obviated or squandered by limitations or constraints that otherwise might emerge down the road.*
- Getting Consumer Buy-in on Responsibility. Unlike what has unfolded with eCommerce, where “zero liability” policies by the primary card brands has produced a flood of repudiated transactions and so-called “friendly-fraud” (along with a lively black market in stolen mag-stripe card credentials often fed by irresponsible cardholder behavior), the mobile venue needs to be *better*. That is, consumers need to buy-into their role in ensuring a secure, private and efficient payment system and correct the bad habits they have developed thus far online. *Consumer education about use and protections will be essential, and should be coordinated, supported and enforced among the mobile ecosystem entities. This educational process should endeavor to help users upgrade to more secure handsets and employ best practices for usage in order to protect the entire mobile ecosystem.*
- Merchant Needs Must Now be Taken Seriously. Merchants actually drive the process of payments innovation — bearing a significant portion of the cost of transition to mobile NFC/EMV, and have always paid for most of the costs of the payment system overall. While the retail community is now benefiting from the huge shift of public opinion (and Congressional actions) to change the relationship banks have to society, this foundational role in payments needs to be reflected in how mobile transacting evolves. *To that end, merchants will insist that their needs and views be heard, and where solutions fail to address their requirements, objections from the retail sector will be voiced, and — if/as necessary — more appropriate solutions might be pursued independently.*

As portrayed in many aspects of the Mobile Retailing Blueprint, the upside for upgrading the buyer-seller gratification with mobile NFC/EMV is far too compelling to sit back, as occurred with eCommerce in the mid-1990s, and let the status quo dictate the future. Mobile transacting and marketing could, in a very short period, infuse a level and breadth of innovation that eclipses anything and everything the conventional payments business has ever produced for the retail experience. This transformation opportunity will *not* be missed!

*Author’s note: Steve Mott, of BetterBuyDesign, made significant contributions to this publication.*