

Developing a Strategic Framework for the Establishment of Mobile Payments: A Canadian Financial Institution Perspective

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Abstract— Globally, mobile phones and mobile technology are having a big impact on our daily live and our financial services. Mobile banking is becoming common and there is growing interest, from a payments industry perspective. Recent advances in smart phones and the rapid growth in personal mobile applications has made the cell phone an integral part of our daily lives. As a result, Canadian financial institutions need to be actively involved in the mobile payments industry. The purpose of this paper is to serve as a framework for senior management on establishing the direction, creating strategy, implementing the change and assessing the future performance of mobile payments.

Keywords- Mobile payment, Strategic framework, Financial institution

I. INTRODUCTION

Globally, mobile payment technology has been experiencing rapid adoption. IE Market Research Corporation's estimated that the number of mobile payment users globally exceed half a billion in 2010 and forecasted that by 2014 that number will exceed 1 billion [1]. Total sales for mobile payment transactions are expected to exceed \$1.1 trillion. The report also forecasts that Canada and US, though currently lagging Europe and Asian markets for mobile payment volumes, will "account for 25% of the world market share for Mobile Payments" [2] by 2014 and will represent a hotbed of innovation in the new technology. The two largest card associations, MasterCard (MC) Inc. and Visa Inc are actively involved in pilots and new developments around the world, anticipating that emerging mobile payment technologies will have a significant effect on consumer spending behaviour and as a result, need to be in the forefront of any industry changes. This growth competition in the cellular smart phone market and the proliferation of phone applications are making handheld devices as integral aspects of our day-to-day lives. Knowing this grow exponentially, Canadian financial institutions are now actively exploring new business models to provide their members with mobile wallets capable of making retail purchases both online and at physical merchant locations. In the Canadian payments space, the rollout of contactless payments is firmly in place. There are

millions of contactless cards in circulation with most major issuers offering contactless credit cards as standard issuance. In addition, the merchant infrastructure to support these cards is growing rapidly. Cardholder usage of contactless payments is still low, but various research publications are forecasting a dramatic increase in this form of payment in the very near future. This new contactless retail payment infrastructure will provide the platform for mobile payment acceptance and quite likely a new battleground as financial institutions, mobile operators and telecommunication providers compete for "ownership of the customer" [3]. Despite the recent economic situation, the Canadian payments environment remains competitive and very dynamic from a technology perspective. Mobile payments aside, mobility in general, is important to Canadians and innovative solutions to address this need are becoming more and more prevalent. While the current economic situation may not provide an ideal environment for large technology investments, these advances in many ways hold the key to many of the banks' present challenges: driving efficiency savings, encouraging customers to make more payments and regaining customer confidence through better consumer-centric services [4]. Recent literature/research regarding mobile payments paints a forecast that these technological advances will be game-changing. The challenge for strategic decision makers in this industry is to determine what needs to be done and when, despite the uncertainty and the substantial amount of ever-changing and potentially relevant information in the market. Furthermore, triggering activities and tracking a long-term plan through a large and diverse group of associates and management group, in an environment where one has little control over most of them, is not going to be easy. When chip cards initially entered the marketplace, the common term associated with them was 'smart cards' primarily a marketing move to spearhead consumer adoption by focusing on the future benefits of having a small 'computer' chip embedded in the plastic. However, implanting that same chip- or at least the capabilities of that chip-into a mobile device that is online and has real-time interactivity now results in a new way to interact with a consumer. The plastic payment card, which has served financial institutions for over 50 years as a payment delivery system, is about to become just one more application in a mobile device where interfacing with the real world is that phone's reason d'être.

II. BACKGROUND

Canada is on the brink of a revolution in payments. In 2007, following almost two years of planning and cooperation by financial institutions, merchant processors and the card associations (MasterCard®, Visa® and Interac®), the Canadian payments industry launched an initiative to migrate magstripe payment cards to chip. At 2010, in accordance with the Interac Association mandate [5] for the migration of magstripe payment cards to chip cards, the national deployment of chip cards in Canada is roughly two-thirds complete. Globally, what is happening in Canada is not new. Similar efforts have been underway by most countries in Europe and Asia for a number of years, leaving North America one of the last regions to migrate magstripe cards to the highly secure chip cards adopted by the global payments community. Canada's future is very much in line with changes happening in regions around the world where chip adoption has been underway for a number of years. Many foreign industries are now actively exploring ways to leverage the new chip technology and are rapidly testing and developing new innovative products as a means to further distinguish their consumer offerings. A growing number of financial institutions are offering customers the ability to access their banking accounts, pay bills and transfer funds via mobile phones. Recent advances in smart phones and the rapid growth in personal mobile applications has made the cell phone an integral part of our daily lives. An online survey conducted by Synovate, a global market research company with office in 62 countries, polled over 8000 respondents in 11 countries and found that "most people can't live without their mobiles, never leave home without them and, if given a choice, would rather lose their wallet [6]. The survey indicated that 75% of the respondents indicated their phones go with them everywhere, while more than a third indicated they couldn't live without their phone. Mobile phones have the potential to radically change the payment card industry. Phones can be used to make online purchases, or act as contactless devices themselves, a technology MC is now piloting in Korea and Canada and that leverages the secure chip infrastructure already in place for plastic payment cards. Instead of removing their payment card from their wallet or purse, consumers only have to hold up their cell phone near a merchant's cash register, make payments with their chip and go.

A. Why are Financial Institutions Interested?

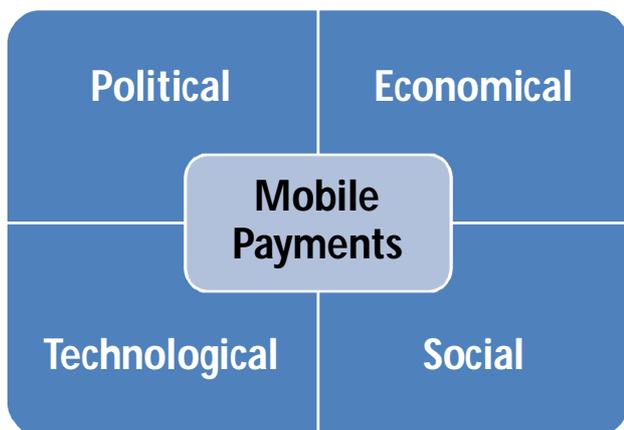
In Bank Technology Outlook 2011, predicts that "Banks have big things in store for their technology" [7]. Financial institutions over the last few years have experienced significant cuts in their IT development budgets and with economic indicators predicting better times ahead, IT investments are expected to increase as business growth again becomes a priority. That being said, in light of the economic climate of the past year, many in the banking community have reached the conclusion "that the road to future success lies in going back to basics" [4]. The Boston Consulting Group's

report 2009 "Weathering the Storm" indicates "payments account for between a third and a half of most banks' revenues" [2]. However sustaining revenue from payments is not easy. Transaction-based revenue is difficult to maintain as expenses continue to climb, primarily as a result of new rules and regulations. One possible solution is to find ways to increase the number of payments/purchases that customers make. However, just as important, financial institutions want to ensure that payments made with competitive products, including cheques and cash, are being displaced with their own product offerings. It is the primary interest of all financial institutions to maintain their role as the traditional source of the transaction account. Additionally, every card-issuing financial institution wants to ensure their cards are well-positioned in consumers' wallets – more importantly that competitor cards are actually displaced. With the introduction of Chip & PIN, there is now growing debate as to what form that 'card' will take. A chip can be placed in nearly anything, and doesn't need to be associated with a plastic card. In fact given the expanding technology of mobile phones, the general expectation is that wallets full of cash and cards will be largely replaced by cell phones with embedded chips and e-wallets containing payment applications. Supporting this belief, is the focus by many financial institutions to offer mobile banking in order to improve their customers' experience and access to products and services. Banks are already well positioned to be the consumer's trusted provider of financial services. As the capabilities of smart phones increase and consumers become more accustomed to performing tasks on their mobile devices, it is no surprise that financial institutions see this as a huge opportunity to establish stronger connections and ultimately encourage customers to do more transactions online. That being said, in Canada, mobile banking has recently been introduced by financial institutions. According to a recent Financial Post article, only 5% on Canadians regularly do their banking using mobile phones, despite that fact that 27% of Canadians own smart phones [8]. Quite possibly the value proposition for the consumer is not clear for consumers and possibly financial institutions need to bring more functionality – outside of the ability to pay bills, transfer funds and check account balances. In a recent conversation with Bank Systems & Technology, Forrester Research believes that mobile payments may very likely be "the killer app for mobile banking" but added "we are at least a couple of years away from that" [9]. The caution provided is that if financial institutions don't move forward with providing a mobile payments solution, it will be "the banks' and card networks' game to lose" [2]. Of risk for financial institutions is that mobile payments opens up the traditional payment processing environment to new processors, such as phone companies, proprietary networks and third party vendors. Any successful disintermediation could experience a transfer of point-of-sale transactions (and the associated revenues) from financial institutions to new competitors, if the banks and credit unions are unable to figure out how to play in this space.

B. Identifying the Change Agenda

In Canada, a number of card issuing financial institutions have a disadvantage in the banking space, as having entered the Canadian marketplace as US institutions; these card issuers, commonly referred to as ‘monolines’, lack a banking infrastructure and as such are not actively pursuing mobile banking applications for their members. In fact, efforts in the past to encourage their card plastic to be ‘first in wallet’ takes on a new complexity as the new e-wallets could very well be issued by their competitors. The challenge now is how do these financial institutions promote an electronic payment card that needs a competitor’s e-wallet to work? This particular complication aside, a business strategy for mobile payments needs to focus on four key elements: the goals of an organization, the nature of the products and services being offered, the value proposition and the value chain or core activities of the organization. All four of these areas need to address customer needs and create competitive advantages. The difficulty is that an environmental assessment or a review of the market forces, is required to evaluate the strategy in terms of future viability and to determine the immediacy for specific courses of action. One particular tool is the PEST analysis. PEST is an acronym for the political, economical, social and technological forces that are commonly accepted to be “early warning signals about changes in the industry” [10].

TABLE 1: PEST MODEL – MOBILE PAYMENT



1) Political Forces

The recent economic climate of 2008-09, Canada, although not as hard hit as US and others, saw the federal government initiate preventative measures to bulletproof the Canadian economy. The payment industry has been a prime focus and in May of 2010, the Department of Finance introduced a voluntary code of conduct for Canadian card issuers. The code reflected the current payment environment but the future implications are not clear and could very well have a direct impact on payment innovation. In particular two elements of the code add confusion when new technology is introduced into the payments system. Policy element 5 of the code

indicates that card associations can no longer enforce the ‘honour all cards’ rule for merchants when the branch encompasses both credit and debit. Merchants can in effect refuse to accept a scheme’s debit card offering – in preference to support Interac™ direct payment. Policy element 8 of the code does not allow credit and debit to appear on the same card. For issuers this was a big blow, as with the implementation of chip, it was conceivable that both debit and credit could reside on the same chip and in effect reduce the number of cards in consumer wallets. For mobile payments these restrictions could be an issue. A mobile wallet application on a phone could accommodate a number of payment cards, stored as applications on the phone. The debate now is the mobile phone a ‘payment card’ or a ‘wallet’. Furthermore in the not too distant future, mobile payments could extend beyond smart phones to such portable devices as e-readers. The concern becomes whether or not the Canadian government can keep pace with industry change and more importantly, if existing and future regulations will stifle innovations in the payment space.

2) Economical Forces

The move to mobile payments is probably the biggest issue the payments industry has been struggling with. Mobile payment is expected to leverage the already established infrastructure for processing retail payments. Merchants whom already support contactless payments would not require any further investment for mobile payments acceptance. All of the credit card associations establish interchange rates that are charged to the acquirers. Establishing these interchange rates is a balancing act between the willingness of the issuing bank to promote the card product based on the revenue they receive and the willingness of the payment processor to offer competitive discount rates to their members, based on the expense they are being charged. It should be noted that the agreements between the Payment Processor and the merchant typically prohibit the merchant from charging any additional fee to the cardholder to offset their expenses. The credit card companies do not take a portion of this interchange fee as revenue. Instead, annual assessment fees are charged to their members. Both the Issuing Bank and the Payment Processors must be members of the card associations in order to perform these transactions. The interchange structure that currently exists works for both normal retail and contactless payments for financial institutions, acquirers and merchants. Financial institutions are responsible for the additional costs associated with providing their cardholders with contactless payment cards and the retailers are responsible for upgrading their point-of-sale terminals to support contactless payments. As discussed previously, migrating these retail transactions to mobile payment introduces new stakeholders who want a piece of the transaction revenue. There seems to be a general agreement in the mobile payments community that no new costs will be passed on to the merchant community – that is retailers will be responsible to upgrade their point-of-sale devices to accept contactless transactions. Financial

institutions are expected to cover the costs associated with supplying their cardholder's payment card information for secure insertion into an e-wallet. This leaves the question as to how are the expenses related to the Trusted Service Manager, the e-wallet developer and the mobile phone provider covered. Are these expenses transactional or one-time setup costs? With the forecasted growth for mobile payment transactions increasing exponentially over the next few years, it is no surprise that these new players want a piece of that pie. Of concern is that adding any additional expense to the interchange model, to provide a transactional revenue stream for the new players, would only add more expense to the individual merchants – a move that could hinder mobile payment adoption.

3) Social Forces

The solution to mobile payments is for the consumer to have a Near Field Communication (NFC-enabled) mobile device. Even if that technology becomes available in 2011, it is still going to take some time before consumers have this product in their hands. But eventually, NFC capability on the mobile phone will be as ubiquitous as cameras and global positioning systems are on mobile phones today. In addition consumer adoption is going to weigh quite heavily on how easy it will be to enable mobile devices for payments. Where users have to download an application, the success of the update is much less than if the application is preloaded on the phone. This becomes an interesting scenario for financial institutions, especially when it comes to the provision of mobile e-wallets. If the payment application doesn't work as expected, chances are consumers will be reluctant to offer a second chance to the payment card provider. The risk with an e-wallet is that a payment application that doesn't work as expected or is difficult to install will likely be removed from the wallet for memory considerations whereas in the physical world, the plastic may sit dormant at the back of the wallet. Should any financial institution take the risk to develop and maintain such a tool, or should their focus be on ensuring that their products easily fit into an e-wallet slot? Like wise to those in the organization looking to evaluate a business case, is the overwhelming consensus and belief that consumers will tend to focus mobile payments on small purchases. The results from a qualitative survey conducted in 2009 as partial fulfillment for an executive MBA course indicated a possible desire for consumers to migrate away from using cash as a means of payment. It also identified that a lack of merchant acceptance locations would be an obvious barrier to consumer adoption for mobile payment transactions. In today's market, merchant acceptance for contactless transactions at the point-of-sale is growing rapidly, but the number of locations is not growing at the rate that contactless payment cards are entering the market. With a contactless card base well established in Canada, merchants implementing contactless solutions to support these cards, will be well-positioned to support mobile payments when that comes to fruition. Of particular note in the survey is the desire by respondents to restrict their own

purchases when making mobile payments. For those respondents who identified their desire to restrict purchases, many cited security as the main reason, suggesting that if their mobile phone was stolen, any purchases made would be limited. This observation requires further exploration, as it may be attractive to incorporate a "user-controlled restriction" feature in any mobile phone payments application. From a demographics perspective, a survey conducted in June 2010, by Mercatus LLC, found that "Mobile technology for banking and payments is reaching "a tipping point," with younger consumers leading the way" [11]. Concluding that rapid consumer adoption of mobile financial services is imminent, the survey identified that "over half of U.S. consumers and almost 80 % of those between the ages of 18 and 34, will use mobile financial services within five years." Consumers are also quite concerned about fraud risk and possible identify theft and as a result, have an expectation that their cardholder and transaction information associated with their accounts at both their financial institutions and their mobile provider will be secure. They will not embrace the new technology if they have any reason to suspect that this is not the case. Likewise, the merchant community is rapidly adopting support for contactless payments, with expectations of acceptance of "tap and go" technology to be quite common place – at least initially, where transactions are typically considered low dollar and consumer speed at the checkout is paramount. Financial institutions are not typically involved in the infrastructure changes required at retailers, but significant opportunity does exist to partner with specific retailers, possibly providing increased loyalty points to incent cardholders to utilize their mobile payment technology, in an effort to encourage adoption. Certain merchant segments, such as transit, fast food, and convenience stores, have been identified by the card industry as categories well positioned to support contactless payment transactions. These segments naturally lend themselves to the mobile payments space and by their nature are not typically the transaction types associated with credit card activity. Despite the alignment and value of contactless payment with particular merchant categories, from an industry adoption perspective, being successful with mobile payments is a 'chicken and egg' scenario. Consumers and Merchants are likely not to demand mobile payments functionality for their phones, if they do not have sufficient critical mass. Merchants in Canada have just undergone a significant infrastructure investment to support the nation's Chip & PIN migration. Although many Canadian merchants used this opportunity to also upgrade their point-of-sale equipment to support contactless transactions, for those merchants who did not make this additional investment, doing so again, without any added or incremental value is going to be difficult. The question for many merchants is how much access will they have to this segment of consumers and will they be able to offset the new expenses with reward incentives.

4) Technological Forces

From a technological perspective, in order to use a mobile phone to conduct a contactless transaction, the phone must have some sort of NFC capability. As an interim measure, a NFC sticker can be attached to the mobile phone (or anything, for that matter) but it does not provide the ability to use the power or additional functionalities of a smart phone. So at best, this is a transitional option. The more recent smart phones do allow the insertion of a micro-SD card that could contain NFC capability and a payment card application, but the installation of both would require some skill on the user's part. This is a much better option than the use of a sticker, but too, would also be considered a temporary solution. Ultimately, the best solution would be to have a mobile phone that has as part of its standard set of features, NFC capability. This is in fact being addressed by major mobile phone manufacturers. Applications aside, there are documented security concerns related to NFC communications. In October 2010 at the Virginia forum on Mobile Financial Services, said "mobile security and the authentication of mobile transactions are challenges the industry must address" [12]. Contactless, radio frequency communication, specifically as a result of open air communication, is more vulnerable to attack than traditional contact payment solutions. Banks and credit unions need to be aware of the risks and adequately prepare their strategies accordingly. It will be important for financial institutions to ensure that existing fraud prevention measures are enhanced to address the possible changes in behaviour, keeping in mind that any such security controls can't hinder early adoption of the new payment paradigm. Another key component is the e-wallet. Consumers can fill their physical wallets with whatever cards they want to carry. No one buys a separate wallet for each different card. To support a user-friendly adoption, an e-wallet's functions must be similar to a physical wallet. A e-wallet could be expected to have photos of family and friends, medical info, coupons, ID, secure credit/debit cards (from multiple FI's), direct access to banking accounts, eTickets and just about anything and everything. Finally, mobile phone technology provides the opportunity for two-way communication between the buyer and the seller with real-time, location-based applications. As a mobile phone user arrives at a retail location, promotional advertising can arrive on the phone. Coupons can be electronically offered/stored in the e-wallet; information on specific products can be offered up as consumers walk down the aisles and loyalty points can be provided automatically when products are purchased.

III. FUNDAMENTAL QUESTIONS TO ANSWER

To assist with establishing these internal guidelines, this section outlines a few fundamental questions that need to be asked. The realization being that any response to these questions is specific to a point in time and changing market forces will require a continual assessment. *a) How does the Mobile Marketplace look like?* Based on surveys conducted in late 2010, Canadians have been relatively slow to adopt mobile banking. But that being said, in a recent Financial Post article, Royal Bank of Canada is claiming their mobile banking application is the most popular financial download in Apple's

iTunes store, having exceeded over 500,000 downloads in the past six months [8]. If other Canadian FI's are experiencing similar results, from a consumer perspective, the infrastructure required for mobile payments could be well on its way to becoming mainstream. *b) How Secure is Mobile Payments?* From a consumer or marketers perspective, banks have traditionally served in the role as a 'trusted agent' in providing financial services. The expectation is that the bank will continue to take on the financial liabilities associated with the services and applications they offer for mobile phones – such as zero liability [13] for credit card transactions. The challenge for mobile payments is that financial institutions rely on third parties, such as the trusted service managers (TSM's) to deliver their services. The privacy of consumers and their financial information needs to be protected. Financial institutions will need to ensure that any of these third party providers take on the risks and liabilities associated with the services they provide in order that the FI's can continue to satisfy the "trusted provider" status they have with their cardholders. *c) How does the Typical Mobile Consumer look?* Tower Group reported that "mobile customers tend to have attractive demographic profiles and predominantly fall within the age range 18 to 35. They tend to be heavy users, carry more debt products and higher debt balances than non-mobile bankers [14]." On average, consumers are changing and upgrading phones every 18 months. It is also quite probable that consumers will be changing their e-wallet applications even more frequent in order to keep current and have the latest 'bells and whistles'. Financial institutions will need to determine how they are going to support these behaviours and ensure that consumers cannot only add payment functionality easily to their phones, but move that functionality easily if required. In addition, many consumers have multiple mobile phones, which could result in a desire to carry multiple credit/debit cards in all their phones and replace them often. Also, when consumers travel or move to locations not supported by their current mobile provider, they will want to be able to transfer their payment applications, financial data and any setup data easily to a new phone, quite likely without any or minimal financial institution intervention. *d) How do Telecommunication Carriers affect the Strategy?* This question emphasizes the complexity of the mobile payment ecosystem. A non-exclusive, collaborative approach necessary and will be an integral part in the development of a mobile payments strategy. A significant amount of change is still expected over the next few years, in particular the development of standards for this payment environment. Vendor selection is going to be a key activity for the financial institution, as players in this space need to be flexible and willing to change with the evolving environment. In addition, security of cardholder information and privacy will be of utmost importance in maintaining the FI's reputation with their cardholder base and has to be a critical component of any agreements with telecommunication providers. *e) With Technology Constantly Changing, how do FI's Remain Current?* Keeping close to customers is critical for current success. The question that needs to be answered is 'Is it important to be a leader or acceptable to be a follower?' There is an old management adage that goes "You can always tell who the pioneers were -

they are the ones with the arrows in their backs". In order to remain current, financial institutions will need to determine if they have the resources in place to succeed. The technology is rapidly changing and it will be imperative that certain individuals within the organization are allowed to remain in sync with those changes. In Canada, most players involved with the payment card industry belong to Advanced Card Technologies (ACT) Canada, a non-profit association committed to the advancement of card technologies. The organization works with their members "to promote the awareness, understanding and use of all advanced card technologies; including optical, smart, capacitive and emerging technologies". Information gathered from recommendations formed by this committee are made available to all ACT Canada members providing everyone with a common footing in establishing their own directions for mobile payments. There are numerous seminars and periodicals available to keep current.

IV. ASSESSING THE URGENCY AND ORGANIZATION READINESS

Adopting or making changes in the payment world takes time – especially if many of the stakeholders in this venture are likely not to be too cooperative, at least in the early stages while turfs get established. As mentioned earlier, card issuers in Canada have been actively issuing contactless cards, but their actual use as a 'tap and go' payment medium remains very small. Mostly, this is due to the lack of merchant terminals that are able to support these payments, but currently there is no immediate benefit for either the merchant or the consumer to cause a change in behaviour. With mobile payments the value proposition is expected to change. Now the payment transaction involves a smart chip with a smart phone interfacing with a smart merchant terminal. This has the potential of adding new value into the purchase experience. If a leader in the value chain emerges, the various stakeholders need to be prepared. If one technology gains mass adoption over the others, companies have to be flexible and be ready to change their business models. It is one thing to anticipate future change, but the pressure mounts if an organization fails to recognize external influences and is forced to become reactive. Financial institutions are not known for their ability to respond quickly and could experience market share erosion if any reaction takes too long. As a result, FI's need to accelerate their game plans for mobile payments. Industry stakeholders should make mobile payments a strategic priority over the next two years. If not, they do so at their own risk. Before organizations can determine if a particular strategy is viable, an internal examination is required to assess their readiness to implement/adopt new changes. Are the previously described forces influencing mobile payment adoption well understood and are there strategies in place to mitigate any potential impacts? Who within the organization will be most affected by the change and who needs to be most involved? Determining and acknowledging the urgency is key to early success. While most strategic changes, especially potentially 'disruptive' changes such as mobile payments, involve the entire organization, it is important to "isolate the individuals or

groups who will be particularly crucial at the start of the process"[15]. The management needs to be ready to lead.

V. CREATING A SPECIFIC ACTION PLAN

a) *Start with a Pilot:* A pilot project is required to understand the operational and technical impacts and make adjustments if necessary. There are three separate NFC models that could be considered. a) Sticker trial would be the simplest. Taping a 'sticker' attached to the back of a phone and taping a contactless credit card essentially provides the same purchase experience – outside of the novelty factor, when the phone is presented to a merchant for a purchase. Quite possibly, having merchants gain familiarity with customers being able to tap their phones to make a purchase is an important predecessor to merchant adoption of NFC-enabled phones. b) NFC-enabled microSD chip, introduces an e-wallet, the mobile provider and a Trusted Service Manager into the value chain. Each of these stakeholders brings in added complexity and new learnings. Given the fact that NFC-enabled phones may take some time before consumers acquire them, the microSD chips likely have a market opportunity for the next five years and as such understanding what it will take to support this segment, makes for a viable pilot. c) Utilize cardholders equipped with the new NFC-enabled phones. Learnings would be similar to that associated with the microSD chip trial, but understanding the uniqueness of this new form factor would be important from a support perspective. All pilots would be conducted with existing staff or associates. Actual clients/cardholders should be avoided until comfort is achieved with the newly operational procedures. b) *Priority Targets:* For financial institutions, the key to develop a mobile payments strategy is to simply focus on the customer. Acquisition, activation and retention, the three pillars card-issuing FI's have built their business around in the physical world, also holds true for the mobile world. The interesting, if not attractive, part of this focus is that the initial mobile payments target for FI's, is the existing client base. A wealth of information is known for existing clients. An FI may not have information as to which cardholder may have a mobile phone, but knowing mobile phone use and mobile banking trends towards a younger demographic, FI's can focus marketing efforts to that same segment in their existing cardholder database. This group can be further qualified by focusing on those cardholders who already conduct contactless payments with their existing credit cards and specifically have shopped or tend to frequent merchant categories representative of merchants who support contactless. Focusing on this group will likely not generate any significant amount of new transaction volumes, as purchases made today with contactless credit cards would just move to those same purchases being made with a NFC-enabled phone. However, this specific segment would be considered early adopters and would probably provide the least strain on operational resources within the bank, who are trying to get accustomed to new support procedures. A separate segment of the cardholder population that could then be part of a

future focus for mobile payments would be those cardholders, possibly within the same demographic, whom typically do not use their credit cards for low dollar spend. If this segment can be successfully marketed for mobile payments, transactions made with the mobile phone would likely displace cash or debit card transactions, thereby generating new volumes for the financial institution. When considering a priority target for a mobile payments strategy, the business goals of the organization should be the starting point. The questions to ask are: How can mobile payments achieve those goals and what new opportunities will be possible? Conducting surveys/focus groups will assist financial institutions to understand factors such as the likelihood of product acquisition, the desirable form factor, and any concerns raised by the new payment type (such as security, fraud/theft). Surveys should be considered for both the pilots and in the early stages of any market launch.

c) Identify the Mobile Devices that will be Supported: With the multitude of phone out there, financial institutions will have to focus on those with the best reach to their existing clients. Research in Motion® (RIM), Apple® and Google Android™ phones are the likely top contenders. What devices cardholders have would not be readily known. Additional communication efforts would be required. Specifically for e-wallets, an open platform is necessary to make mobile payment adoption feasible. The successful implementation of mobile payment is to have a payment wallet that is available to multiple financial institutions, mobile operators and handset manufacturers. This would provide the consumer with flexibility and choice in both the mobile device and the payment card to be used.

d) Match the Client Needs: By leveraging the contactless infrastructure currently being deployed at merchant locations and adding contactless payment to mobile phones, financial institutions can provide their cardholders with the same trusted payment service. This payment functionality will make it faster, more convenient to pay and increase customer loyalty. The customer would be familiar with the contactless concept having been exposed to transaction processes associated with contactless payment cards.

e) Keep it Simple: Limit choices. This results in a focused experience that cuts down the risk of your cardholders becoming confused and frustrated. From a customer service perspective, keeping the phone diversity in the participating customer base to a minimum provides for a more consistent and manageable support approach – at least

in the early or immediate timeframes. *f) Leverage Best Practices:* Card associations, both MC and VISA, have experience globally in mobile payments. ACT Canada will also be an ideal source for experiences associated with the competition and industry peers. Analyzing mobile experiences will help understand what the industry best practices are, what consumers are accustomed to and what it might take to be unique in the marketplace.

REFERENCES

- [1] IE Market Research Corp. 3Q. 2010 Global Payment Market Forecast, 2010-2014. <http://www.marketresearch.com/product/display.asp?productid=2746942>
- [2] Ibid
- [3] Technology Strategies International. Canadian Payments Forecast. A comprehensive review, analysis and forecast of payments in Canada. Oakville, ON. 2010
- [4] Jim.W. ACI World wide. Where and how will banks make money in the new era? FT.com. 2009 May 28. <http://www.proquest.com.libproxy.uregina.ca:2048;/DocumentID>
- [5] Interac Association. About Chip Technology. Toronto. <http://www.interac.ca/pdf/ChipFactSheetEN.pdf>
- [6] Miral Fahmy. People would rather lose wallet than their cellphone. <http://www.reuters.com/article/lifestyleMolt/idUSTRE58323K2009090>
- [7] Crossan, P. Bank Technology Outlook 2001. Volume 48, No.1. Big Thanks to Come. January 2011. P16.
- [8] Greenwood.J. Canadians Catching on to mobile banking. Financial Post. 2011 Mar 03. <http://www.financialpost.com/personal-finance/Canadians+catching+mobile+banking/4380103/story.html>.
- [9] Grossman.P. Bank have yet to create the killer app for mobile banking. Bank Systems and Technology. 2011 Feb 03. <http://www.banktech.com/blogs/229201117>
- [10] Crossan, R and Fry, K. Strategic analysis and action. 7th edition. Pearson Prentice Hall. Toronto, ON 2009. P68.
- [11] Eichenbaum, P. and Collins, M. AT&T, Verizon to Target Visa, MC with smartphones. Bloomberg. 2010 Aug 2. <http://www.bloomberg.com/news/2010-08-02/at-t-verizon-said-to-target-visa-MC-with-smartphones.html>
- [12] Kitten, T. Mobile Security: Jumping the IP Hurdle. Bankinfosecurity.com. 2010 Dec 13. http://www.bankinfosecurity.com/articles.php?art_id=3050
- [13] MasterCard Canada. MasterCard security-zero liability. 2010 Mar 08. http://www.MC.com/ca/personal/en/MCsecurity/zero_liability.html
- [14] Digital Transactions. What the banks have to say about mobile banking. 2010 Mar 01. <http://www.digitaltransactions.net/news/story/2950>
- [15] Crossan, R and Fry, K. Strategic analysis and action. 7th edition. Pearson Prentice Hall. Toronto, ON 2009. P225.