CUNA
Credit Union National Association

The Future of Payment Systems for Credit Unions

A white paper commissioned by CUNA's Community Credit Union Committee

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INTRODUCTION

In 2011, the Filene Research Institute captured a snapshot of the payments ecosystem in our paper *Innovations in the Payment Ecosystem*[1]. Our research indicated that after three decades of relative stability, the system was on the verge of an inflection point. The six highly interconnected factors driving this change included:

1. The growth of mobile,
2. The emergence of an always-connected world,
3. Software developments in cloud computing and apps,
4. The availability of data for behavioral targeting,
5. Cheaper and easier data analysis, or *mashups*, and
6. Regulation that increasingly cuts off old lines of revenue.

Fast-forward to today, and we find that not a lot has substantively changed. The lack of changes in that two-year window nicely confirms the first part of a well-known Bill Gates' quote, "We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next 10."

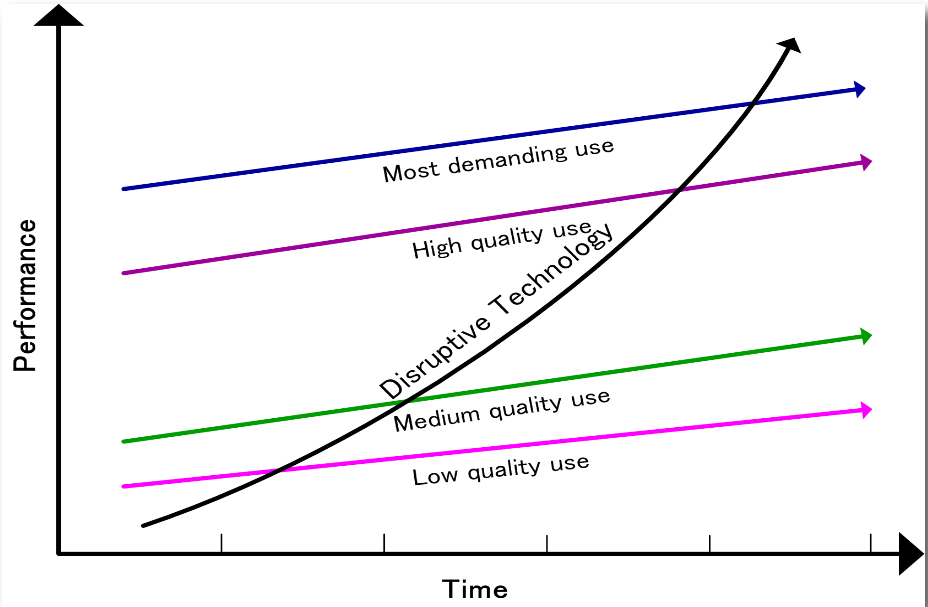
In this paper we refocus on how the future of payments relates to community chartered credit unions.

- First, we examine the definition of *disruptive innovation* and how it relates to the payments ecosystem.
- Second, we update you on the current state of payments.
- Third, we provide guidance on actions you can take today to prepare for the future of payments system.
- Finally, we present a framework that provides you with early warning signs to true disruptive innovation in the payments ecosystem.

Individual credit unions can do little to influence the trajectory of the payments ecosystem, so we provide four concise essays from the leading payments providers to give you a sense of where they are leading the credit union system's payments future. This white paper, in sum, offers a research overview, provides information, and suggests actions that credit unions can take now to avoid falling victim to the last, less-well-known part of Gates' quote: "Don't let yourself be lulled into inaction."

DISRUPTION AND HOW IT COULD CHANGE THE PAYMENTS PLAYING FIELD

The pace of actual change in the payments ecosystem is extremely slow—more about that in a moment—but it's certainly not for lack of innovation. Recent years have seen a huge interest in the payments fields from start-ups to behemoths in the worlds of finance, technology, and beyond (think Visa, Amazon, Google and Apple). A growing number of companies are working to create the next big payments thing, hoping to capture the world's imagination—and, more important, its pocketbook. By 2012, the annual investment in payments innovation was likely to pass the $1B mark.[2]



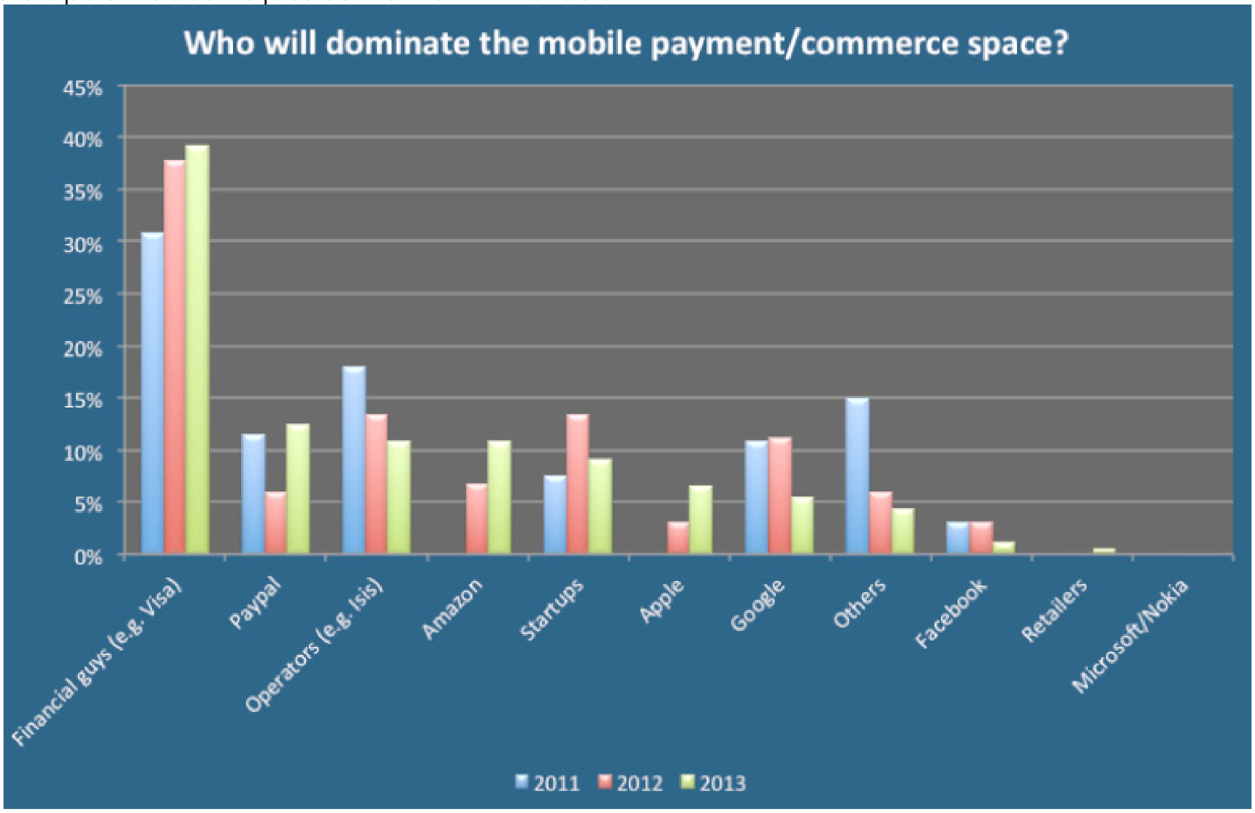
Given the interest in payments innovation, it's increasingly likely that some company will eventually achieve a true disruptive technology. Harvard Business School professor Clayton Christensen, who coined the phrase, defines disruptive innovation as: "the process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors."

For a variety of reasons, established players (such as credit unions) can be especially vulnerable to displacement through disruptive innovation. They are often more conservative, less nimble, and more bureaucratic. Established firms are also understandably reluctant to go after a potential competitor that offers a simpler, more affordable solution—especially if the established firms' existing model is to increase revenues by making their products more sophisticated and expensive. But as industries from computers to cars, retailers to doctor's offices have already discovered, those who ignore a disruptive innovator do so at their peril.

Many examples of disruptive innovation exist today in payments; one particularly good example is PayDragon. Like many other payment innovations, PayDragon focuses on a niche: foodcart vendors and the hipsters who buy lunch in such places as Austin, Texas and Portland, Oregon. According to PayDragon's website, "You can buy an item blocks away from a store and have it ready for you to pick up by the time you arrive. This saves you time and the aggravation of waiting in line just to order and pay." An accompanying video illustrates (http://vimeo.com/39081871) the (limited) utility of this innovation for a narrow segment in a narrow geographical area. While PayDragon is neat, many credit unions would look at this solution and (rightfully) poke holes in the model. As a nimble startup PayDragon (and countless other innovators) may move up the performance axis through time, and eventually disrupt payment systems … or not. The moral of the story is that established players in the payments space must keep an ear to the ground on these less-than-perfect innovations.

Christensen cautioned companies to realize that today's skill set won't necessarily help ensure their survival in a time of change. "When we teach people that they should be data-driven, fact-based, and analytical as they look into the future, in many cases we condemn them to take action when the game is over. The only way you can look into the future … is to have a good theory."[3]

It's not just a matter of going after a particular competitor. Mobile commerce itself is "a disruptive innovation, as it has the potential to revolutionize the way people discover, research, choose, purchase and repurchase products."[4] Though, recent research indicates[5] the major players in payments (or the so-called "financial guys") are still handicapped as the dominate force in coming disruptive innovations; disruption doesn't just come from innovation.



Source: Chentan Sharma Technology & Strategy Consulting

McKinsey & Co. management consultants point out, "Shocks to the payments system are coming from several sources: regulation, technology, consumer behavior, merchants and competition."[6]

To date, many potentially disruptive forces have had minimal impact because there's been limited operability from one technology to another. If the payments ecosystem gains something equivalent to the open sourcing of mobile apps—which has driven a virtuous circle of adoption and innovation, that could change things dramatically.

AN UPDATE ON THE CURRENT STATE OF PAYMENTS ECOSYSTEMS

While the last two years might not have seen fundamental changes in the payments landscape, they have provided additional insight and clarity as to what the future might hold.

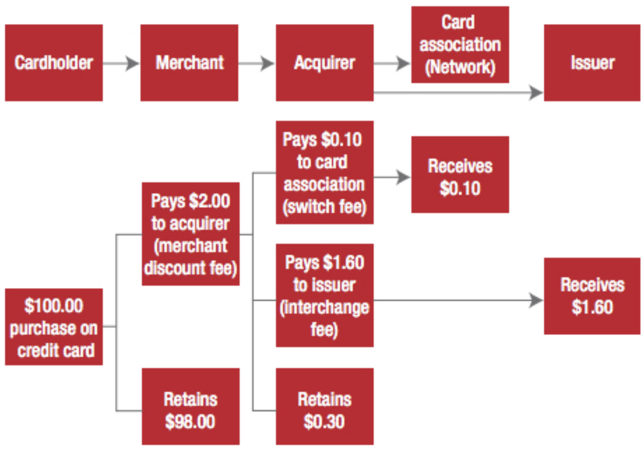
Pace of electronic payment adoption remains slow

It might seem as if technology moves at the speed of light, but in the world of payments adoption, the pace has been glacial. As noted by Karen Webster, a well-known payments guru and CEO of Market Platform Dynamic, debit cards took roughly two decades to take off and it was17 years from the time that Amazon launched its online shopping portal until it gained 5% of retail purchases.[7]

New technology is exciting and headline grabbing, but in the finance ecosystem it takes time for both infrastructure and merchant/consumer comfort levels to catch up.

Payments loop players remain unchanged—so far

When electronic payments happen via plastic card, they traditionally involve five players: the cardholder, the merchant, the acquirer (merchant's financial institution), the card association (Visa, etc.), and the card issuer. Though well entrenched, most of the players are less than happy with their current position, creating additional motivations and incentives for change.

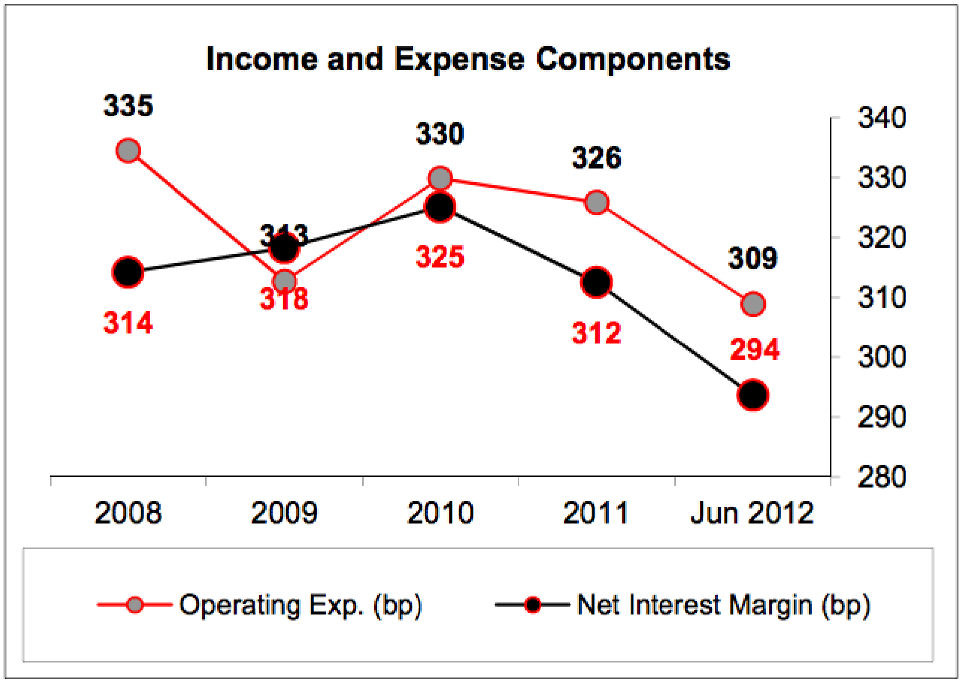


Source: Filene Research Institute

Cardholders bristle at high interest rates and will likely bristle even more as negative publicity about swipe fees increases. Merchants feel they shoulder the cost of every innovation or security threat—though they tend to overlook the increase in sales that readily available credit and debit afford them. Acquirers would like to increase their share of the transaction fee pie.

Networks are likely the most satisfied member of the ecosystem. On the other hand, card issuers find themselves in an increasingly challenging position as they battle credit card risk and the hit the Durbin Amendment has taken to their interchange income.

The weakening of the traditional lending model means that the non-interest income generated by payments activities (ATM fees, interchange, and overdraft) cards is critical to credit unions' survival. According to CUNA & Affiliates' midyear credit union profile, as of June 2012, (and for the last several years running) credit union operating expenses are often larger than net interest margins, making profitability dependent on non-interest income.



Source: [Mid-Year 2012 Summary of Credit Union Operating Results, http://www.cuna.org/research/download/uscu_profile_2q12.pdf](http://www.cuna.org/research/download/uscu_profile_2q12.pdf)

These frustrations and the huge opportunities that the $900 billion global payments field[8] offers mean that the time could be right for industry shake-ups.

Swipe continues to dominate

Roll out a laundry list of any new payment technology's benefits and the question that blows each one away continues to be: Does the new technology beat swipe?

Although there have been some well-publicized cases involving stolen magnetic card data, swipe is largely viewed as known, robust, dependable, and safe.

Plus, it uses an established point of service (POS) card reader, requires no new skills to operate, and is typically approved almost instantly.

Online sales still on the uptick

Online sales continue to rise and will continue to alter the reality of how we buy—and pay for—things. Americans spent more than $200 billion online in 2011. That number is predicted to top $327 billion in annual sales by 2016.[9] Online purchases happen quickly and seamlessly. Consumers can typically choose from a variety of payment options to complete their transaction, with PayPal, credit, or debit being the most common. Many e-commerce sites allow the customer to save their credit card information with the merchant and access it the next time they make a purchase, and Amazon takes this one step further with its One-Click feature that lets a customer complete a sale without going through the typical checkout steps.

Smartphones have hit the tipping point

Smartphone adoption has skyrocketed in recent years. July 2012 figures from Nielsen show that 55.5% of American consumers have a smartphone—a jump of 14% in roughly a year.[10] Not surprisingly, there's continued interest in how smartphones will change the payments ecosystem.

To date, smartphones' most common impact on payments is simply that they, rather than a computer, are increasingly becoming the place where an online purchase occurs. A recent survey by McKinsey consultants showed that in the U.S. 39% of smartphone users had at least occasionally used their phone to conduct mobile commerce—which McKinsey defined as both searches and payments enabled by a mobile phone—and that 24% at least occasionally used their phone to conduct remote payments.[11]

This doesn't change how the actual payment happens: In most cases, the consumer still completes the sale as they would on their computer, via a plastic card or a withdrawal from their financial institution.

It's important not to underestimate the broader role that smartphones could play in payments. There has been widespread discussion about the phone itself becoming the payment method (see the NFC analysis later in this paper) or supplanting the financial institution via services that add purchases to the mobile phone bill. Although neither of these has seen wide adoption to date, that could change.

Data mashups increasingly valuable

Data mashups are the ability to combine real-time payments and location data with behavior data. For example: Shopper A buys a latte at the mall using her debit card. Her favorite store currently has a sale on sweaters, which she was researching earlier. Recognizing that the shopper is in the mall and likely to be interested in the sweaters—and has the credit history to afford a purchase—an app sends her a message about the sale and a sweater discount coupon that needs to be used in the next hour.

The increased adoption of smartphones makes these mashups more feasible, common, and valuable.

Payment silos are a challenge

The average credit union tends to operate each category of payments in a silo. This leads to duplication of employees and duties, platforms that don't interface cleanly with each other, and fragmented payment operations that are inefficient and expensive to run. This segmentation also limits the opportunity to collect, analyze, and use payments data.

When traditional financial institutions were the only payments game in town, it was easier to be complacent. Now the payments space is rife with potential competition—and consumers who feel empowered to seek out options that better meet their needs.

Cloud continues to grow

The last few years have seen a move from physical/hardware-based data processing and storage to the cloud—i.e., the Internet. Moving these systems to the cloud offers a number of critical advantages to consumers and organizations alike:

- Overcomes infrastructure challenges—Using the cloud enables easy linking of processing platforms and POS software across payment types. Linking solves the payment silo problems and eliminates many of the chicken-and-egg infrastructure issues of new payment technologies.
- Is easy to update—Software changes happen automatically and seamlessly, and users are

always tapping into the most recent version.

- Delivers more comprehensive data in real time—Having access to data in real-time makes the information both more valuable and more readily used than in traditional information technology systems.

Concern about security remains a critical issue

Security is a huge stumbling block when it comes to convincing people to try a new technology related to their finances, but there is evidence that consumers are moving past this challenge. This is certainly true when it comes to mobile and the comfort level that consumers have using it for payments-related activities. Mobile data show that 2012 holiday shopping included individual sales on mobile devices worth thousands of dollars,[12] which seems to indicate a growing comfort level with mobile payments security.

Regulations challenge the world of payments

Already used throughout Europe, EMV (named after the companies that originally developed it: Europay, MasterCard, and Visa) is a microchip that's embedded in a plastic card and is designed to offer better data security than the magnetic stripe. Some experts argue that EMV adoption is inevitable;[13] others think it is past its prime and that other technologies will do a better job delivering the security it claims to offer.[14] The transition to EMV is estimated to have a price tag in the billions of dollars[15] and only addresses security in physical sales; online/mobile channels don't necessarily benefit from this option.

There's also the question of whether the U.S. Consumer Financial Protection Bureau (CFPB) will start to look more closely at companies that traditionally operate outside the financial services space. The CFPB's assistant director for card and payments markets, Marla Blow, made the following statement to the House Financial Services Subcommittee on Financial Institutions and Consumer Credit, "To the extent that technology companies begin to play roles traditionally performed by banking institutions, we may need to reconsider how well our existing regulations apply to a changed environment."[16]

Established players dominate

To date the significant players in the payments space are recognizable and familiar names. Some are traditional faces from the current payments system, including MasterCard, Visa, PayPal, and big retailers like Walmart. Others are nonfinancial firms, such as Apple, Google, and Amazon that are aggressively using their vast resources, infrastructure, and technology in an attempt to displace the traditional players. Look for more jockeying in this space.

The 10x rule of technology adoption

The 10x rule is attributed to Andy Grove, CEO of Intel, the world's largest (by revenue) semiconductor chipmaker. The 10x rule simply means that to be adopted, something new must be 10 times better than what exists. In a world with a lot of new mousetraps, it's obvious that most innovations don't deliver today. Think about the payments process from a consumer's perspective: reach into your wallet, pull out a card, swipe, get a receipt, and you're gone in 17 seconds. Any new payments innovation will have to beat the simplicity of the current approach with increased utility, more efficiency, or greater security.

Alternative card readers

Although the combination of swipe and traditional card readers remains the team to beat, a number of alternatives have popped up in recent years.

Square. This device doesn't sidestep swipe, but it does let small businesses into the game: It turns any smartphone into a card reader, and Square's credit requirements and fees are typically lower than traditional payment networks.

Square has enabled Girl Scout troops, piano teachers, gardeners, and other small business owners to tap into the proven benefits of accepting plastic cards. As of 2012, Square has been adopted by two million users and processes more than $6 billion in payments on an annualized basis.[17] Merchants obviously see a major improvement in Square. It is both an example of a disruptive innovation and one that brings a 10x improvement in utility to one player in the payments ecosystem.

The card reader alternative that's gotten the most press is near-field communication (NFC). With NFC technology, a smartphone becomes not only the place where a sale takes place, but the form factor—i.e., the object used to conduct the sale. The phone must possess an embedded chip that stores the user's financial information, and merchants must acquire an NFC reader. Although NFC is popular in several Asian countries, in the U.S. it's mostly been a nonstarter.

To date few phones incorporate the technology, and the latest iPhone famously (or infamously) opted not to include NFC. Even ISIS—a partnership of AT&T, T-Mobile, and Verizon that's offered strong support for NFC—appears to have largely backed away from the technology. Even if phones include NFC technology, they can't operate unless retailers spring for NFC readers, and retailers aren't likely to pay more for a technology that almost none of their customers are asking for. It's a classic chicken-and-egg challenge that shows no resolution any time soon.

A cloud alternative to NFC. There has been some move to create an NFC-like experience via the cloud. With a cloud-based system, the process happens through an app instead of a chip and doesn't require a special POS reader. This means the process is no longer at the mercy of the mobile network providers (e.g., Verizon) who subsidize the phones and the manufacturers (Apple et al.) who create them.

Consumers will only move to these options if they are easy to use, widely accepted, and easily tied to their financial institutions. Retailers will only use them if they're seen as improving the checkout experience and building business. Both parties demand security. To date, it's unlikely that anyone but an early adopter would be overly interested in these systems, today. A prime example of early-adopter innovation is Starbucks' (http://www.starbucks.com/coffeehouse/mobile-apps/square-wallet) successful payments experiments.

Mobile wallets. This phrase pops up quite a bit in the press and it's just what it sounds like: taking everything that's currently in the physical wallet and creating an electronic equivalent that lives on a smartphone.

What could be stored on a mobile wallet is almost endless:

Opportunities with 'today technologies'

While NFC is still largely a technology of the future—and one whose adoption is questionable—quick response (QR) and bar codes are technologies a business can use right now without infrastructure changes. Starbucks has created a mobile payment app that puts a barcode on the customer's phone. The phone becomes the reloadable card, and the app turns the phone into the form factor. The Starbucks clerk uses a barcode reader to complete the sale—which means that no additional equipment is needed.

all credit and debit card information, rewards programs, event tickets, insurance information, plane tickets and boarding passes, and on and on. The player that delivers this has the potential to accrue a seemingly limitless amount of power.

Aside from the obvious consumer security concerns that must be overcome, according to a McKinsey & Co. consultant,[18] a successful mobile wallet must deliver:

- A practical alternative to cash/plastic card,
- Easy ways to manage incentive/loyalty programs,
- Mobile banking and bill pay,
- Mobile and electronic commerce checkout, and
- Peer-to-peer payments.

Apple is jockeying to be the wallet provider of choice with Passbook (http://news.cnet.com/8301-13579_3-57548598-37/dont-get-apples-passbook-ios-6.1-will-explain-it-to-you/) —an app that's largely seen as a wallets prototype. Passbook lets users store boarding passes, movie tickets, gift cards, etc., and with more than 400 million iTunes customers, Passbook could put Apple in a position to negotiate with payment providers.[19]

Google Wallet (http://www.google.com/wallet/) now supports all major credit and debit cards, but requires an NFC-enabled Android device and, at the time this paper was written, only 10 phones and two tablets support it. Google Wallet doesn't support any devices purchased internationally, and the devices must be purchased from specific carriers, typically Sprint Nextel. Although it has since corrected the problem, the February 2012 version of Google Wallet allowed a thief to easily reset Google Wallet settings and spend away—no hacking required.[21] Examples like that leave the average consumer more nervous than confident about new technology.

What About P2P?

A person-to-person (P2P) payment is just what it sounds like: an electronic way to pay everyone from the coworker who spotted you a $20 at lunch to your babysitter. Although adoption numbers are low to date—and the technology for most is more cumbersome than a trip to the ATM—P2P is being touted as a growth area with one source estimating that 60 million households will use electronic P2P by 2014.[20] JP Morgan Chase offers a P2P product, Quickpay; PayPal has PayPal Access, which enables P2P payments via ATMs; and DWOLLA (discussed elsewhere in this paper) and Popmoney are P2P systems with credit union support.

To date, no one has captured what's known as the "left side" of the wallet (nonpayment data like driver's licenses, health insurance cards, etc.), but with a value estimated as high as $3 billion over the next three years,[22] It seems like an area worth pursuing.

Retailer-driven payment networks

As mentioned earlier, merchants have long felt that they occupy the least favorable position in the payments loop. A number of merchants decided to do something about it: Create their own payments network. Walmart, Target, Home Depot, and others are working to develop one, which could divert some portion of their $1.38 trillion annual revenues[23] from the traditional payments system. These big players certainly have clout, but they would need to convince consumers that there is an advantage to using an alternate payment system. An initiative that may telegraph what's on retailers' minds is the Merchant Customer Exchange (http://www.mcx.com/). This is being billed as "a versatile mobile-commerce experience" that would (eventually) deliver the functionality of a mobile payment tool plus customizable offers and could be used at participating merchants[24].

WHAT SHOULD CREDIT UNIONS DO NOW?

The credit union system has always positioned itself as a fast follower, and frankly, that's not a bad place to be given the plethora of options, the expense of jumping in, and the fact that even the big players aren't entirely sure which payment ecosystem to support next.

It may not be time to make any big bets in the payments sphere, but that doesn't mean credit unions can afford to be ambivalent. Innovations abound, and although it's impossible to know exactly which ones could become true disrupters, it's important to have a feel for the possibilities.

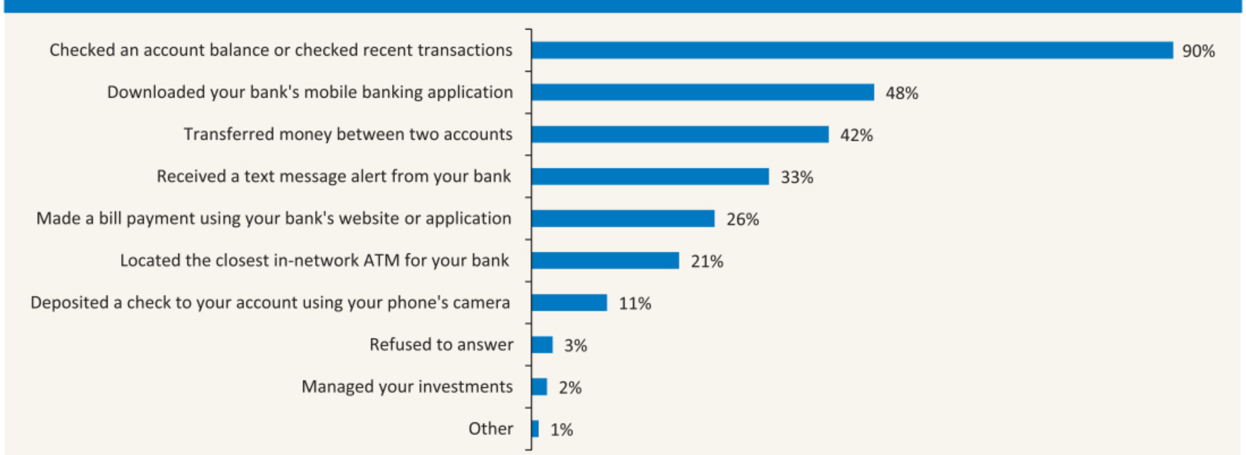
Here are some critical "musts" for credit unions now.

Understand what your members need

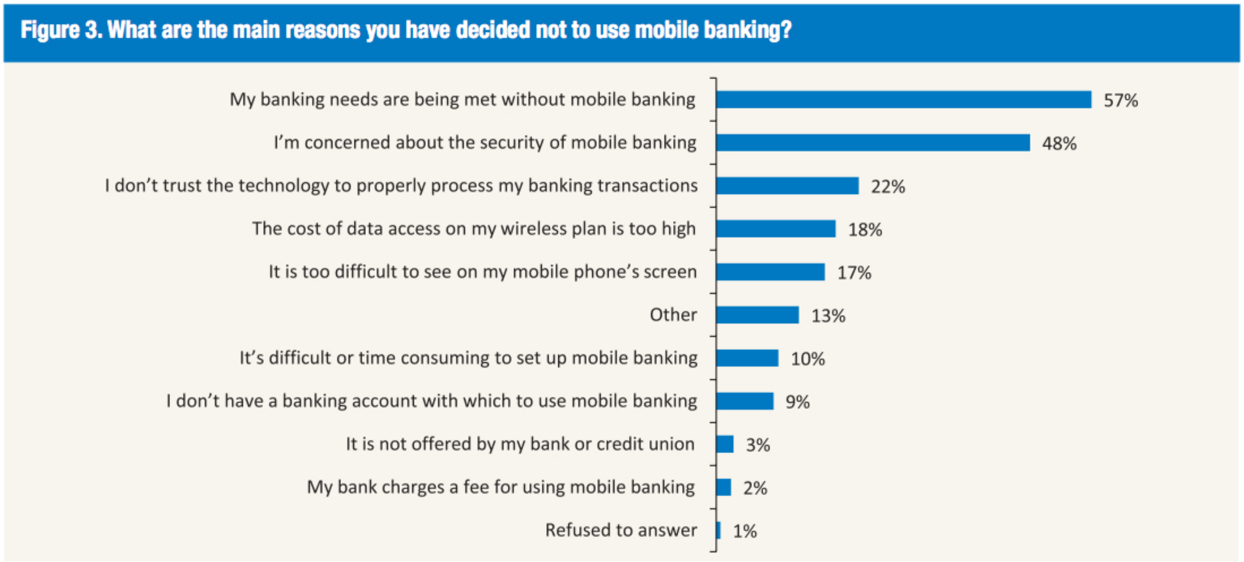
Credit unions pride themselves as being the financial services provider that's most in tune with their members' needs. What does that mean for payments?

Understand how members are using online banking. Investigate their interest in technology options: mobile apps, remote deposit capture, etc. See how you stack up against what the local competition has to offer. For many members, technology is a dealmaker—or breaker. Numerous studies provide important insights (see below[25]) on an aggregate, and you are encouraged to determine if these national trends comport with your particular credit union's member behavior. This is especially critical for community-based credit unions.

Figure 2. Using your mobile phone, have you done any of the following in the past 12 months?



Source: Board of Governors of the Federal Reserve System



Source: Board of Governors of the Federal Reserve System

Recognize that in most cases you'll need to layer on new options instead of eliminating existing ones. What can you afford to add and support? What seems to make sense for your members?

Although industry expert Webster was talking about merchants in the following quote, this sentiment can just as easily be applied to credit unions: "[Merchants can] create incentives to try to get us all over the hump to the thing that they like the most, and show us how much better things would be for us if we switched, but most of them won't draw a hard line in the sand over one method or another.[26]"

Take a holistic, collaborative approach to payments

Credit unions tend to operate their payments in silos. As discussed earlier, it's a choice that can lead to expensive duplication in employees, platforms, and marketing, and make it impossible to harness the power of payments data. If your credit cards, debit cards, mobile banking, etc., each have their own back office systems and administrative teams, it's time to take a more holistic approach.

As a recent Accenture report points out, financial institutions of all sizes and types would do well to recognize that payments services have become a utility.[27] The more collaboration and agreement in core functionality, the better off everyone will be. Credit unions can still work to differentiate themselves by how they deliver extra value to members, but competing core systems benefit no one.

Part of this extra value is the simple fact that credit unions—unlike many of the current payments challengers—can offer a complete suite of payments services. Leverage this strength.[28]

Capitalize on physical assets

The role and value of brick-and-mortar legacy assets have been a topic of huge debate in recent years. The consensus: They're not going away any time soon. So, why not make the most of them? A McKinsey & Co. report stresses that the "combination of online and physical presence creates a more dynamic, interactive customer experience … create a customer experience that encompasses branch, ATM, online and smartphone."[29]

Leverage the power of payments data

Credit unions need to look beyond the interchange income that plastic cards generate to something even more valuable: payments data.

As discussed in Filene's previous paper, credit union members conduct millions of transactions every day. Credit union can gather, mine and consolidate this data to better understand an individual credit union's membership, the movement as a whole, and could even be sold to merchants or advertisers.

When properly analyzed, credit unions can use this data to minimize irrelevant marketing offers, optimize member contacts, and spend scarce marketing dollars in the most efficient manner possible. It can also help credit unions cut better merchant deals for their members and more efficiently position themselves as member-driven resources.

To date, financial services companies haven't done a good job in the big data arena and face imminent threats from new data sources such as social media and data- and tech-savvy companies that better understand both the power of data and how to leverage it.[30]

Regardless of how the data are used, credit unions need to give top priority to member security and privacy. They must maintain the most up-to-date security systems, and members must opt in before their data can be collected/analyzed. Data can only be shared in the aggregate, and members must have the ability to opt out at any time.

Big Data and Credit Unions

Filene Research Institute recently hired a data scientist to work with a small group of credit unions in the U.S. and Canada to better understand the transaction data credit unions currently have. Initial findings indicate credit unions have unique opportunities to predict member behavior, product uptake, and profitability based on voluminous transactional data. Imagine if your credit union had the capability to observe debit card transaction information and then serve up relevant offers that your members had a high likelihood of taking up. This is the promise of big data in credit unions.

Continue to cooperate the payments aggregators

An individual credit union, or even a group of credit unions, won't have the resources or sheer numbers to drive change in the payments ecosystem. What the credit union industry should focus on is gaining the ear of payments aggregators. These companies are responsible for processing the majority of credit union payments. They have the power to ensure that the credit union voice is heard at every point along the payments loop and that credit unions maintain their influential place in the payments ecosystem. In the appendix of this research brief, some of these aggregators provide their viewpoints on the future of payments.

Experiment and collaborate

Credit unions may not be big enough to effect changes in payments on their own, but they do offer one advantage that other financial institutions don't: the ability to work together. As both large and small innovators have discovered, credit unions truly are cooperative entities that have a track record of acting collaboratively to solve problems.

In recent years, credit unions have worked together to test and offer feedback on a number of payments innovations, including [Google Wallet (http://pscu.com/media/press-room/09132012.html)](http://pscu.com/media/press-room/09132012.html),

Dwolla (https://www.dwolla.com/), and Sprig (http://www.co-opfs.org/solutions/mobilevirtual/virtual-branch/sprig/) .
Through collaboration, credit unions may also improve their ability to focus on pre- and post-payment activities, which are seen as increasingly critical to long-term relevancy. Opportunities in pre-payment services could include geolocation, targeted ads, promotions, social marketing, and services to influence a purchase; post-payment services range from remarketing, loyalty programs, and customer support; and cross-selling/upselling.[31]

CONCLUSION

Is now the time for credit unions to make a substantial bet on tomorrow's payments technologies? Probably not. But it's also not the time to stand by and hope that mobile payments and electronic transactions go away. Mobile technology is here to stay, and even if it still makes up a relatively small portion of the payments ecosystem, all evidence points to an increasing role. Being at the center of your customers' payments is essential to your credit union's sustainability, relevance, and competitiveness.[32]

To ensure credit unions are prepared for the coming inflection point in payments innovation, let's remember Clayton Christensen's disruptive innovator model, as well as Bill Gates' admonition at the beginning of this research brief. Understanding early (and sometimes weak) warning signs for disruptive innovation is the one thing credit union strategists can do today.

- Critically examine adoption of technology being implemented. The public relations departments of new payment technology firms are very busy today. Innovations abound, and credit unions must cast a critical eye at these new entrants to understand what is real and what is vapor. In addition to your payments provider, several gifted analysts have proven to be prescient in their observations. Most notably in the following locations:
    - http://www.pymnts.com/profiles/people/karen-webster/
    - http://www.pymnts.com/profiles/people/david-evans/

- Pay attention to the momentum in the payments ecosystem. Changes to the ecosystem will not occur overnight; therefore, keenly observe payments uptake by financial institutions, consumers, merchants, card associations, and processors. Traditional research tends to be late to the game on the topic of disruptive innovation, so rely on your payments provider who has an ear to the ground on these developments.

- Understand the shifts in business models even if they are small. If momentum is building in the payments ecosystem, but it is having little impact on the payment business model, sit up and pay attention. Disruptive innovation tends to come from the lower end of the market, and entrenched players often ignore developments until it is too late. Square (http://squareup.com) is a prime example of this momentum and portends potentially dramatic shifts in the business model for merchant card services.

We know changes are going to occur in the payments ecosystem sometime soon. There are no guarantees as to what those changes will be or when they will happen; however, you can educate yourself on the trends, drivers, and players that will influence this future. To quote the scientist Louis Pasteur, "Chance favors only the prepared mind." We hope this research brief prepares your mind for the coming changes.

APPENDIX

The credit union system's ability to navigate changes in payments is heavily reliant on their payments partner; therefore, we asked four major players in the credit union payments space (CO-OP Financial Services, CSCU, PSCU, and The Members Group) to reply to these prompts:

How is your organization preparing credit unions for the future of payments?
What do credit unions need to do to prepare for the future of payments systems?
What is your organization's vision of the timing and impact of future payments system changes?

Their individual responses follow >>

CO-OP FINANCIAL SERVICES

The Future of Payment Systems: P2P, Digital Wallets, and EMV
By Caroline Willard, EVP, Markets and Strategy, CO-OP Financial Services

According to BI Intelligence, in 2012 the shipment of mobile devices more than doubled that of personal computers. Mobile is clearly how we connect in what is quickly becoming the "post-PC era." When making payments, what mobile consumers are looking for is actually very straightforward. For instance, they'd like to transfer money to a friend, even if that friend has an account at another credit union. It boils down to this: mobile credit union members want to perform simple, everyday transactions in the most convenient way possible.

The needs are straightforward, but the means of addressing them come under the still- embryonic category of emerging payment systems. Let's take a look at a few of these systems, so that we can prepare for future opportunities.

P2P

Person to Person (P2P) payments are just as they sound – payments that go from one account to another. They include Me2Me transactions (between my accounts), Me2You (between my account and yours), and C2B, which moves money from a consumer's account to a business.

P2P payments work in a couple of basic ways. Some P2P applications use a prepaid debit or credit card. Some pull funds directly from an account at a financial institution. And, most P2P solutions rely on the ACH to facilitate the actual movement of the funds between the parties.

Digital Wallets

Digital wallets are account aggregators: They keep different account and merchant information in one place. Your digital wallet enables you to pay for your transactions with your preferred card, and it assembles any relevant coupons or rewards programs. To get to that level of service, though, there needs to be both account aggregation and merchant acceptance – and that's a mixed bag right now.

Currently, there is no mature, dominant wallet product. This means that your cards can participate in a variety of wallet programs, even without specific promotion. It also means that if you do promote having your members use a particular product, they'll probably be open to it.

A Word About EMV

EMV (Europay, MasterCard, and Visa) is still in its infancy. EMV-enabled cards house their own mircro-processor chips and, thus, they can do more than a traditional magnetic stripe card.

As EMV becomes standard, the infrastructure will exist for new payment innovations. MasterCard and Visa control the architecture of EMV, and CO-OP Financial Services is actively representing the interests of credit unions.

Unfortunately, there is a lack of consensus on implementation in the U.S. Resolution will require time and possibly legal or regulatory intervention, as it did in Canada. So, don't be rushed into EMV until this is resolved.

Conclusion

P2P and digital wallets constitute a familiar issue. Positioning your card for top-of-digital wallet usage is essentially the same task that credit unions face with card usage at the POS.

Converting millions of cards, processing terminals, and banking systems to EMV may take as long as a decade or more. During this time, credit unions may find themselves most appropriately in the position of managing change rather than spearheading it.

CSCU

The Future of Payments
By Bill Lehman, VP of Portfolio Consulting Services, CSCU

Staying innovative is one of the most challenging issues credit unions face today. Yet innovation is key to growth and competing effectively in the future of our industry. At CSCU, our main focus is helping credit unions prepare and adapt to the ever-changing payments arena. This means providing them with the right insight, ideas, and knowledge. For example, we look at the overall industry trends and condense only the information necessary and relevant to credit unions. Our consultants work one-on-one with credit unions to deliver the strategic guidance and solutions tailored specifically to that credit union. We also make sure they're informed about changes in the industry through webcasts, presentations, white papers, podcasts, and thought leadership. But that commitment doesn't stop with our members. With partners and industry leaders like FIS, we continue to support and push them to maintain their leadership status and focus on credit unions. So, whatever approach a credit union decides is best for them, CSCU has the ability and resources to support it.

It's just as important credit unions do their part to become more proactive in preparing themselves for the future of payments. We highly encourage our members to reach out and leverage us (and other partners such as Filene) for knowledge and expertise. After all, CSCU is your resource. It's important for credit unions to conduct ongoing internal analysis. That way they can assess the needs and wants of their members, rather than making assumptions about their membership base. The same goes for experimenting and pilot testing within target segments. This will help them determine larger roll-outs of various programs. It's also important for credit unions to establish solid foundation strategies and building blocks to help set them up for success. Overall, it comes down to credit unions' challenging themselves and establishing a commitment to adapt and evolve.

The fact of the matter is, no one can really predict the future of our industry. But at CSCU, we believe that luck favors the prepared mind. So being ready for the changes and challenges ahead is now more important than ever. We realize that, with all of the exciting innovations on the horizon, it's easy to get distracted by "tomorrow." Which is why we're here today—to help credit unions get started.

PSCU

Members' Needs Are Key to Successful Future Payments Strategies
By Michael J. Kelly, President & CEO, PSCU

Mobile changes everything. So does EMV, NFC, and the Cloud. Is America the next big target for an epic fraud compromise? Are credit unions really at risk of losing the payments relationship to PayPal and others? Will these technologies and platforms be adopted quickly, or will it roll out for years. These are the types of questions percolating in credit union boardrooms everywhere.

The market opportunities, competitive threats, and sheer diversity of technology and strategic directions available today pose challenges credit unions cannot avoid. What in the payments space is not somehow new, revolutionary, or worthy of immediate consideration to ensure ongoing relevance?

We need to simplify around a few key concepts. First, the consumer will drive. We have seen this trend over and over as technology adoption occurs. Second, the local brand will win. A credit union's strong customer relationships and local presence will be the key differentiator going forward. The future springs not from a wholesale abdication of previous payments strategies, but rather from an enlightened synthesis of past, present, and future approaches to success.

Define Your Primary Engagement Channel

The brick-and-mortar branch will endure for your legacy members. But the virtual branch is growing in importance as consumers drive for more convenience and simplicity.

Credit unions must weigh the costs of executing both physical and virtual branch delivery channels. While we can focus on the technology demanded by Gen Y and Millennials, it is important to remember that they, too, will continue to rely on traditional branches and ATMs, even as they clamor for mobile wallets, apps, and contactless chip cards.

Identify the channel through which your credit union's membership prefers to engage with you and invest your dollars accordingly.

It's Still in the Cards

The heart of any payments strategy is the time-tested credit card. Whether physically plastic or digitally virtual, this pivotal account represents a credit union's greatest revenue engine and relationship builder. How can you elevate your card programs' appeal and value?

Rewards are compelling loyalty builders for credit (and debit) cardholders, so it's smart to employ both credit-union sponsored and merchant-funded rewards. While some consumers are low-rate seekers, 80% of all credit card transactions involve rewards. Rewards are the cornerstone for activation and usage campaigns.

To EMV or Not to EMV? That is the (Good) Question

The answer rests partly in what your member needs. If you have a membership comprised of a significant number of international business travelers, foreign-based military personnel, or affluent globe-trotters, EMV cards must be issued without delay. How many of your members have been inconvenienced, for example, because their mag stripe cards didn't work at an unattended EMV-only kiosk? These are the members that need an EMV card.

However, here in America, EMV remains for many issuers a solution to a problem that has yet to emerge. Credit unions are asking, "Why should I invest in the expense of EMV cards? Show me a working EMV-enabled device that exists anywhere outside of an industry tradeshow." This is the classic chicken-egg conundrum of adoption. Who goes first: issuers or merchants?

Moreover, EMV's success as a fraud fighter abroad has made the heavily mag-striped U.S. a target for a renewed incursion of card counterfeiting. EMV is being positioned as the issuer's best hedge against the impending fraud shift.

Every credit union needs to consider the cost-benefits of EMV. But, bear in mind the "liability shift" deadline of October 1, 2015 set by Visa and MasterCard for EMV technology adoption is a lever to accelerate EMV adoption by merchants; it is not a mandate for issuers. Card issuers will continue to retain liability for fraud in situations where both parties are EMV-enabled.

Pay close attention to this new technology and be ready to make your move when the time is right for you and your members.

Think Ahead. Think Mobile.

Mobility brings transactions, alerts, banking, wallets, coupons, and payments all into a single and very portable device. The move to mobile has been swift: 22% of consumers use mobile banking. And by 2020, an estimated 60% of U.S. consumers will be banking, shopping and paying using mobile technology. Convergence will be critical to mass-market adoption of emerging payments and e-commerce.

Your credit union's mobile payments strategy begins with promoting activation and usage of an existing online banking, bill pay, and mobile banking platform. These products, when properly branded, establish awareness that your credit union can deliver the next generation of mobile payments technologies.

Segment. Analyze. Offer.

The path to relevance and prosperity for credit unions is paved with the golden bricks of member knowledge. How deeply and profoundly credit unions know their members' financial posture and transactional behaviors will determine their ability to more meaningfully meet their needs. The application of analytics to an abundance of member data gathered from disparate sources gives credit unions the insight required to make the right offer to the right member at the right time. The ability to segment and analyze data is the digital key to unlocking the vault containing what your members really want and expect from your credit union.

THE MEMBERS GROUP (TMG)

Future of Payments
By Jeff Russell, Senior Advisor, The Members Group (TMG)

When it comes to the future of payments, the future is already here, it is just unevenly distributed. As you look around at various innovations in payments, the future is popping up in many places with both traditional and non-traditional players. Starbucks is leveraging its own mobile payments application to build loyalty and move into other payments areas with its investment in Square. Traditional financial players like MasterCard and Visa are working to build out digital wallets on their existing systems that have near- universal acceptance. And non-traditional players like Google, Verizon, and Walmart are looking to build products that threaten credit unions' role as a trusted intermediary in the payments landscape.

But today there is as much noise as there is substance. There are no universal standards for digital and mobile payments. Some companies, like our partner DWOLLA, have built functioning cloud-based solutions to solve the point of sale issue. Other companies, notably Google, MasterCard, and Visa, are betting on the future of near-field communication (NFC) as the likely winner for mobile payments and are waiting for more handsets to adopt the standard. Frankly, there are as many product strategies as there are companies in the market.

So, how can a credit union plot its own future? Most credit unions know they need to be an important part of this future. But research and development budgets are not unlimited, and many credit unions are taking a wait- and- see approach to the future of payments.

Our Advice: Is That The Time Is Now to Become Actively Engaged in the Future of Payments.

Payments are such a critical component of a member relationship that credit unions cannot afford to wait until a standard has emerged and the battle is already won. In fact, the battle over the "network" that will drive the future of payments will be fought in the next three to five years. It will pit financial institution-–centric models like MasterCard and Visa, and new players like DWOLLA, against non-traditional players like Google, Apple, and Verizon. While initial product entrants from non-traditional players may leverage the card networks, make no mistake that their long-term goal is to control the flow of money and reduce the "cost" of payments that comes in the form of interchange.

If credit unions do not play an active and collaborative role in defining the future of payments, we may see a similar fate as wireless phone carriers'. Most all of the innovation that is happening in smartphone development is happening by companies like Apple and Samsung. Yet most of us buy our phones from a wireless carrier like Verizon (who heavily subsidizes the cost) and it is only useful with network service. These carriers are often seen as merely the "dial -tone" of the system – the only time we think about them is when we pay the bill or a call won't go through due to because of bad network reception. Credit unions are at risk to be the dial-tone of the payments industry – a regulated, profitless repository for a member's money that provides little perceived value.

Will that happen in 2013? Unlikely. But the time is now to learn about the marketplace and to demonstrate to your members that you are an active player in their future. Furthermore, the larger investment you will eventually make, will be better informed by your real-life experience with mobile and digital wallets and how your members interact with these types of products.

By being actively engaged, you can better understand what are the trends in payments and what is simply noise. Pay attention to how you can engage with services providers like TMG in emerging trends with MasterCard, Visa, and new entrants like DWOLLA. Understand the strategies of non-traditional players like Google, PayPal, and Verizon. Personally try out some of these new technologies as a consumer so you can understand what works and what doesn't. The future is here. Your choice is to be engaged in that future or accept the results after the fact. We think credit unions should be engaged now in offering the next generation of payment products for your members.

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McKinsey & Co. offers the most extensive (http://www.mckinsey.com/clientservice/Financial_Services/Knowledge_Highlights/Recent_Reports/Payments.aspx) and complete library on the payments topic and should be required reading for all credit union payment strategists.

A final tip of the hat goes to Vicky Franchino for her detailed eye and superior command of the English language.

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