SIX MONTHS IN...

What the industry has learned about payments and commerce in the first six months of 2016 and how to apply that knowledge moving forward.

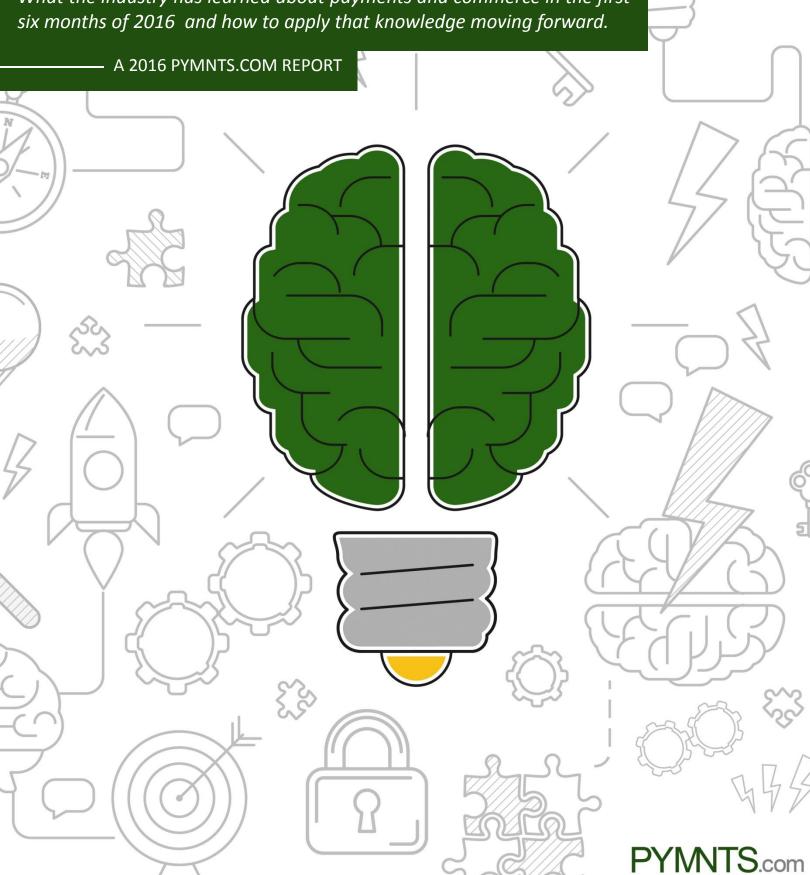




TABLE OF CONTENTS

AOC SOLUTIONS' CHIEF PRODUCT OFFICER, TODD KING...... PAGE 3

BLUESNAP'S SVP, SCOTT FITZGERALD..... PAGE 4

FLYWIRE'S CEO, MIKE MASSARO..... PAGE 5

FORTER'S CEO, MICHAEL REITBLAT..... PAGE 7

OPUS CONSULTING'S CEO, ANAND RAMAKRISHNAN...... PAGE 9

PAYVISION'S CEO AND FOUNDER, RUDOLF BOOKER...... PAGE 10

SAGE PAYMENT SOLUTIONS' CEO, PAUL BRIDGEWATER PAGE 12

VESTA'S CHIEF STRATEGY AND PAYMENTS OFFICER, CHRIS URIARTE..... PAGE 14

AOC SOLUTIONS' CHIEF PRODUCT OFFICER, TODD KING

I continue to see a lack of true digital connectivity and integration among B2B payment solutions available today. While I strongly believe innovation is alive all around us (we're constantly being introduced to new payment concepts), I would argue most of the startups in B2B payments seem very focused on niche areas; they're trying to solve just a small part of a problem rather than examining the entire payments ecosystem.



For example, data is an area where we continue to see payments technology fall short. Payments can easily become disconnected from transactions — and data is becoming more important every day. All of the data that comprises a payment is equally important for both the buyer and the supplier. Data is essential to drive control, spur automation and develop analytics-based decisions. Many payments solutions today are focused on solving problems only for the buyer, or just the supplier, or just for an AP platform, or just for an AR platform — but very few solutions address the needs and challenges of all key players.

Additionally, payments continue to be stagnant. We don't see many solutions featuring built-in artificial intelligence that helps determine the what, when and how to execute a payment. B2B solutions need the ability to evolve and determine the "best" way to make a payment and the "right" data to include with it.

I believe the only players that will survive and have any long-term viability in our industry are the ones that focus on and strategically add value to all key stakeholders in the world of B2B payments. As we move forward at AOC Solutions, we will continue to deliver new payment solutions that solve problems and overcome challenges for everyone — for buyers and suppliers, and for Accounts Payable and Accounts Receivable. We'll continue to build out a digitally connected environment that is a framework for future innovation. And we'll provide solutions that positively impact the entire payments ecosystem.

BLUESNAP'S SVP, SCOTT FITZGERALD

A subtle change has occurred as we talk to prospects. Most businesses are well into their second generation of trying to sell online. As with all technology shifts, this second generation was meant to fix the challenges they faced in Gen 1. This is not inconsequential. We are now facing a market that is all at once, more wary of the promises of eCommerce AND more aware of the size of the prize.





- Gen 1 was the "*let's try selling something online*" phase. In this phase, profitability and design were secondary to the basics of function. Optimization was primarily focused on the product being sold, not the experience of buying. In this generation, nearly any gateway solution would do, so long as it was reliable and the funds showed up as promised.
- Gen 2 was the "*let's make something beautiful so we can scale*" phase. In this phase, the buying experience came roaring to front and center. Optimization and A/B testing have been all the rage as merchants pine for the elusive "Uber-like" experience. This has reached into payments and dramatically upped the ante on the quality of Payment Gateway technologies. It has been a real boon for the proliferation of APIs and tools to help tap the rich functionality latent in the payments ecosystem.
- Gen 3 has arrived (albeit with a whisper). Gen 2 is now table stakes. Many Payment Gateways that still operate under the Gen 1 model are learning this the hard way. But, now, businesses are showing up wanting to solve a real business problem. Let's call Gen 3 the "*let's run a real business*" phase. Customers now have learned that sexy UX needs to be married with real business results. Higher payment conversions, customer retention and stemming abandonment.

As we build our second half plans, we see two major shifts:

- We can stop trying to simplify the complexity of payments when speaking to our customers. They have lived it we can now speak directly to the details and how we can help.
- We need to double down our efforts to solve checkout abandonment. This is one of the most real business
 problems plaguing online businesses, which are losing up to 40% of sales at checkout. The next year will be a
 critical period for merchants as they wake up to Gen 3. We want to be there to help.

FLYWIRE'S CEO, MIKE MASSARO

I've participated in a number of industry discussions about innovation in payments in recent months and there has been lots of debate about whether it's happening fast enough. Regardless of which side of that argument you might be on, most observers agree that it is well underway and has been for several years. Just consider P2P payments, mobile payments, cardless ATMs, bitcoin, blockchain, consumer and P2P lending, FX trading, and more.



When I think about those innovations and what has made them successful, some lessons from the past are reinforced. We've all heard these before, but for me, they are worth a reminder.

1. MAINTAIN A HEALTHY APPETITE FOR FAILURE.

An initial idea may be indicative of a market need, but capitalizing on it typically takes years to realize. More often than not, those first to market are not the ones still standing at the finish line; e.g.:

- Napster led to Pandora, Spotify and Apple Music.
- Prodigy, Compuserve and AOL led to Facebook and Snapchat.
- Newton, Palm and Blackberry led to today's ubiquitous smartphones and phablets.

These innovations required many large and small steps, but all were a result of long, evolutionary cycles spanning years and many failures along the way. We are fortunate to be operating in a startup and fintech culture that understands failure is part of the innovation process. One that recognizes the positive learning and growing that comes from it. And we all learn from those early efforts to build something better. We need to continue to embrace that.

2. LISTEN TO THE CUSTOMER

I know how painfully obvious that sounds, but I also think it's something our industry loses sight of from time to time.



FLYWIRE'S CHIEF EXECUTIVE OFFICER, MIKE MASSARO

- People don't always know what's possible, but they like to try new stuff and will adopt happily if it provides real value. Not all consumers value things the same way. For some it's their time, for others it's service, and for others it's cost. It's our job to listen and learn about what really drives value for them.
- We have to stay focused on how our customers' needs are changing and adjust to that vs. falling back on how things have been done to date.
- People are generally realistic about price and value. There is no preset requirement for being free or even cheap, but there is an importance to transparency and fairness. Consumers don't like being taken advantage of or being overcharged for a service, so striking the right balance between value, price and transparency is important.
- Consumers do not believe that special treatment should be limited to the few. They love to be treated well and embraced as unique, because they are.

3. ACT LIKE A STARTUP – EVEN IF YOU ARE NOT

Building a company is hard work. Getting the product and service right, solidifying a business model, hiring the right people and creating a successful, nurturing culture are just a few of the challenges. As Flywire grows we are dealing with all of these things and continue to put structure and process in place to manage our business. At the same time, I know that we can never lose our startup spirit – no matter how big we get. Towards that end, there are two things I am working on with my team to ensure we don't lose that edge:

- Ambitious innovation We want our people to dream big and not let other people rain on their parade. We are fortunate to have a culture and team that believes strongly in the impact we have for our customers. We can't afford to ever lose that.
- Culture and adaptive teams Related to the above. As an organization grows, you inevitably have more stakeholders and opinions to consider, but it's essential to maintain a work environment free of drama and politics.

What I've seen in the first half of 2016 reminds me that most innovation is the result of many of the same fundamentals we've all learned throughout our careers — great people in the right environment, willing and able to listen to their customers, and working hard to create a product and service experience that meets those needs.

FORTER'S CEO, MICHAEL REITBLAT

The thing that has struck me most, looking back over the last six months or so, is that retailers' attitude to fraud prevention has been shifting in a subtle but significant way, possibly in reaction to the recent spike in online fraud. When there's a 215% increase in fraud attacks in a year, as the Global Fraud Attack Index reported about 2015, merchants start paying attention.



Where once CNP fraud was a siloed problem which belonged in its own little box, its own department, merchants are now waking up to the direct impact that their fraud prevention has on their profits, not only in terms of loss prevention, but also in terms of sales growth. One of the interesting results of this is that retailers are increasingly adopting new technologies to increase approval rates by automating manual activities, and are seeking guaranteed fraud protection to hedge chargeback losses.

More broadly, retailers are considering using outsourced decisioning solutions as alternatives to rules/score-based systems and in-house manual reviews. In the recent Gartner report, "How Card Acceptors Can Protect Against the New Wave of Card Fraud," it was recommended to "consider an outsourced fraud decision service rather than extending in-house fraud services to service new markets," and that's exactly what many retailers are now doing.

Moreover, "new markets" doesn't just mean new geographical markets, though it does mean those as well. It also refers to the needs of retailers that are entering mobile commerce, or would like to be able to approve more orders than they are currently able to do, or use additional payments methods, etc. There's suddenly this realization that fraud prevention planning needs to be a part of all this, for best results.

The fraud ecosystem is already intricate and sophisticated, and with the extra complexity added when you think about the growth of mobile commerce, consumers' real-time expectations, fraudsters' developing use of automation and the sheer volume of the rising fraud attacks ... you can see how it makes sense for retailers to start thinking that they'd do better to focus on their area of expertise - retail and sales - and leave the fraud research to companies which specialize in it and can use that deep knowledge to ensure alignment with the retailer's key goals of great customer experience and incremental sales growth.



FORTER'S CEO, MICHAEL REITBLAT

I think that's connected, too, to a growing realization of the truth of Forrester's insight from a year ago that "legacy fraud management mechanisms fail in today's economy." Retailers are thinking about how to make the customer experience on their website the best that it can be and that means, among other things, fraud prevention which is scalable and invisible. Manual reviews (something 83% of retailers still use) just don't provide that, and merchants are beginning to understand this, discuss it and consider alternatives.

So what a lot of retailers are starting to do, in the attempt to find the best of both worlds, is migrate to SaaS decisioning products which optimize sales by maximizing approvals and which offer chargeback protection in the form of a 100% fraud chargeback guarantee.

OPUS CONSULTING'S CEO, ANAND RAMAKRISHNAN

We're seeing merchants and retailers working through the pain points of industry regulations, with PCI compliance and also the ongoing transition to EMV. Even though EMV implementation was mapped out by other countries, in the U.S. many firms are looking at EMV as an expense instead of as an investment, so consumers often find themselves waiting for a slow-performing EMV transaction — an annoyance in an age when everyone wants instant gratification.



This is one reason we believe that a huge transformation is still required on the retail side of the house, where the checkout experience needs to be improved. The rapid growth in the volume of online shopping speaks to the positive experience customers are having with that channel. Amazon has set this "satisfaction bar" very high for all retailers to reach. Another reason for retail transformation is the popularity of mobile payments. Last year, PayPal transactions represented 18% of eCommerce, and mobile payments on PayPal now exceed \$1 billion annually.

The adoption of mobile payments is supported by improvements in NFC technology and secure transaction processing. No question that there have been, and will continue to be, issues with early-adopter implementations and use of NFC technology. Some industry leaders and analysts argue that the benefits of, for example, Apple iPay, from a processing efficiency perspective, are minimal when compared to the familiarity and simplicity of "card swipes." However, with the addition of biometric authentication capability, NFC can offer a level of security that surpasses EMV. This provides payment service providers with a compelling financial incentive in the form of reduced losses and risks from fraud.

In response to this market need, we are putting together a bundle of solutions where we are doing everything including intelligent POS, intelligent ATM and intelligent retailer eCommerce experiences, which is all enabled by taking out the intelligence from hardware and putting it out in the form of APIs. We are one of the few companies who have actually done it. For example, last month we announced a new solution, an EMV Transaction Accelerator, with plugin components that are inserted before and after an existing payments authorization engine. It's a quick, cost-effective way for issuers, acquirers and processors to leverage existing systems to speed processing of EMV chip card transactions. Given the 2016 activity to date, we see digital payment transformation as a big vehicle for industry opportunity and IT services growth through 2020.

PAYVISION'S CEO AND FOUNDER, RUDOLF BOOKER

The main lesson learned over the past months is that PSPs need to rip up their legacy platforms and build solutions powerful enough to suit the present and adaptable enough to deal with the innovations of the future. There has never been a more exciting time for the payments industry. The omnichannel era is here, powered by millennial shoppers who are comfortable browsing and buying through a variety of devices. This represents a glut of opportunities for the ambitious payment provider.



Merchants of all sizes now have the potential to target a massive number of international consumers and they are hungry for payment solutions that support the channels and methods they need to do so. And yet, when I look at the solutions offered by even some of the biggest names in our industry, I see few that are truly up to the task.

LEGACY PLATFORMS MADE FOR DIFFERENT TIMES

The problem is not willingness or lack of knowledge. The problem is that established PSPs built their platforms years ago to suit a shopper-merchant relationship from a different century. Tied down to these bloated processes, they are now unable to craft solutions flexible enough to change with the times. The answer? PSPs need to rip up their legacy platforms and build solutions powerful enough to suit the present and adaptable enough to deal with the rapidly approaching innovations of the future. And with millennial buying power booming, disruptive new PSPs are doing just that, redesigning the payment landscape to meet the omnichannel demand.

HOW DID WE SOLVE THIS ISSUE?

In October 2015, Payvision launched Acapture – a global omnichannel PSP that specializes in maximizing revenue for merchants and marketplaces with international ambitions. With Acapture, we are not tied down to any legacy platform and so built our payment solution from scratch to suit the modern eCommerce market. We paid close attention to what today's merchants demand from their payment solutions and adapted our service to suit it. Building a state-of-the-art payment solution that suits today's global retail environment requires a great amount of knowledge, insight and experience.



PAYVISION'S CEO AND FOUNDER, RUDOLF BOOKER

Amongst the key issues to consider were:

SPLIT PAYMENTS

With marketplaces set to control 40% of online retail by 2020 and an increasingly large number of merchants acting as intermediaries between buyers and suppliers, it is simply no longer acceptable for PSPs to not support automated split settlements.

When funds need to be split between three or more parties, things get tricky. Commonly, each portion must be calculated, divided and converted into the correct currency before being transferred to the right account at the right time. In many regions, funds will need to be held in escrow until the product or service is delivered. Handling all of this manually exposes merchants to a high risk of error. This is why Acapture created our SlicePay feature. It automates the entire process, taking care of conversion and settlement in a reliable and simplified manner that meets each region's legal requirements.

LOCALIZATION

While card payments might dominate the U.S. and the U.K., most other markets will have a popular alternative. Acapture's solution offers over 60 alternative payment methods, meaning our cross-border checkouts are equipped with the right mixture of payment options to suit the target customer.

CENTRALIZED CHANNELS

Taking full advantage of omnichannel retail means more than simply allowing your shoppers to purchase via mobile, desktop or POS. It also means bringing these channels together into a single, centralized system and building a truly holistic buyer experience around it. Acapture's omnichannel payment solution allows merchants to do this. It routes each transaction to the acquirer with the best acceptance rates, while also storing shopper details so the merchant can "follow" buyers from device to device and channel to channel, encouraging repeat business and smoother conversions.

The future for the payments industry is bright. Yet it is also up for grabs. The millennials are at our digital doorstep, armed with an increasingly strong buying power and a taste for omnichannel shopping. Merchants that want to maximize their revenue will need dynamic PSPs that meet this influential demographics' extremely high payment expectations.

SAGE PAYMENT SOLUTIONS' CEO, PAUL BRIDGEWATER

In the first half of 2016, Sage conducted extensive survey-based research into what small and medium businesses of up to 100 employees want and need in their accounting, payroll and payments software. As it relates to payments, we learned that two of the top needs are bank reconciliation, and business intelligence and reporting.



In a related vein, we've also seen so far in 2016 the accelerating emergence of small and medium business owners who want to use more and better business management software. They want more data; they want to be smarter; and they want to be empowered. Payments is prominent among the functions for which these business owners want automated, robust software.

What really ties those two threads together is that business owners want their software to be integrated and have a simplicity of use. It all comes down to effectively aggregating their data and making it visible in one dashboard. Business owners don't want to have to go to several places to aggregate their data.

For example, they don't want to have to leave their payments system and go into their banking software to get the complete picture of their cash flow. They want to be able to see – one place – what's coming in and what's going out.

So, the desire for simplicity and integration in their business management software, payments definitely included, is not new. But payments is an old — let's say, established — business, and there are so many legacy systems that businesses have to contend with. We continue to see so far this year that vendors are creatively destroying the old ways and systems, and all with the goal of making things better and easier, especially for small and medium businesses. Making things better and easier for our customers guides all of our development.



SAGE PAYMENT SOLUTIONS' CHIEF EXECUTIVE OFFICER, PAUL BRIDGEWATER

At Sage, we are continuing to apply what we're learning by taking a distinct path toward giving business owners the integrated systems they want. We recognize that small businesses are a very diverse lot. That's where our focus on partnerships comes in. We believe that it's extremely difficult for any one vendor to serve most (let alone all) of the sectors out there. Construction has different needs than health care, which has different needs than retail, and so on. So we've developed a really strong network of partnerships with independent software vendors.

As opposed to acquiring specialized vendors, we've focused on developing a software architecture that enables us to connect Sage Payment Solutions products with those of our partners. For our customers, that means that they get the specialized solutions they need, but when Sage introduces new capabilities and features, those innovations are available across our products.

The new Sage Payment Center and the new banking functionality are great examples of how we're applying what we've learned and what we continue to learn. Take the Sage Payment Center, which is available now for Sage 50 and Sage 100 customers but will be available later this year as a standalone product. It provides dashboard-style insights, along with business intelligence and reporting, into everything our customers want to know about their payments, whatever the source: mobile, at their terminals, online and so on. It provides gated analytics that will help our customers better know and grow their businesses.

With the implementation of the new banking center functionality, Sage Payment Solutions will let customers see their bank accounts all on the same screen.

You're seeing not only the payments as they come in, but also the transactions in your bank accounts. It's a single view into cash flow, in and out.

To sum it all up, what we've learned in the first half of 2016 confirms for us that we're applying our knowledge in the right ways. We've confirmed that, as a whole, small and medium business owners today really want banking reconciliation and business intelligence and reporting. At the same time, those owners don't want to have to use multiple systems; they want integrated systems that are powerful but easy to use, and those systems need to be tailored to their business segment.

URBAN FT'S

EVP, ENTERPRISE GROWTH GLEN FOSSELLA

In the last six months, there is finally a sense that mobile payments are moving past the "trough of disillusionment," as research firm Gartner, Inc. calls it, and into a period of broad-scale commercialization and adoption. As Chase Pay and Walmart Pay come online later this year, mobile payments will begin reaching past digital natives to less tech-savvy consumers. Chase, Bank of America, and Wells Fargo all report mobile banking adoption growing fast, currently at 14% of all DDA customers or greater.



However, I think we are beginning to see a split in how transacting in mobile impacts different industries—in some cases, not well. If your business is built around foot traffic and routine transactions—for example convenience stores, quick-serve restaurants, or Starbucks—mobile takes the friction out of those transactions. This is beneficial to the customer and also creates opportunities to improve the experience related to your core offerings. But what if transactions are secondary to your customer value proposition—a convenience you provide as part of an overall relationship? What if your business doesn't involve frequent transactions at all?

If your business is built on trusted, consultative, personal relationships with customers—such as banks, insurance companies, and financial investment firms—moving transactions to mobile without a more complete strategy of customer engagement can reduce or even eliminate formerly consultative interactions with customers. In addition to shrinking face time, mobile can commoditize your customer proposition and open the door to disintermediation.

Taking banks as an example, migrating customers to self-service channels gets them out of the branches and cuts variable costs, but at the expense of customer engagement. Less engagement equals less product sales, which makes branches unprofitable and leads to their closure.

As more customers migrate to mobile and draw down branch activity, more branches will close, further diminishing the financial institution's ability to engage the customer. It starts to look like a death spiral with mobile as the enabler.



URBAN FT'S EVP, ENTERPRISE GROWTH GLEN FOSSELLA

So, what is the alternative—ignore the mobile channel? Of course not. But less-transactional businesses need to be asking, "How do I deploy the mobile channel in a way that attracts and retains customer relationships, while achieving my operational/cost benefit goals?" Certainly first-generation transactional capabilities will be part of the answer. But it also includes using next-generation capabilities that engage the customer in an ongoing digital discussion, thereby augmenting and strengthening the customer relationship.

This ongoing digital discussion is personalized. It is also context specific, based on where customers are, what they are trying to do, what their behaviors are, and their engagement history and preferences. Finally, the discussion is content-rich, to an extent that even enables the customer to assemble his or her own experience.

My takeaway from the last six months is that businesses considering the mobile channel to automate transactions, including payments, must think carefully and strategically before jumping on the bandwagon. And, businesses that have already committed to mobile—particularly to first-generation, transaction-focused mobile platforms—must examine whether the approach they've chosen supports their business goals over the long term. It's not about putting out mobile apps simply to put out mobile apps; it's about bringing the pieces together in ways that enhance customer engagement and drive profitability.

VESTA'S

CHIEF STRATEGY AND PAYMENTS OFFICER, CHRIS URIARTE

We've seen a lot of changes in the payments industry in the last few years, with the introduction of mobile payments and the shift to EMV technology in the United States. Yet, despite all of the money being poured into payments innovation, what's become increasingly apparent to me in the last six months is that there will always be a long road to widespread change in the payments industry.



The liability shift is the perfect example of that. I would argue that the United States is really exactly where industry experts generally expected we would be in terms of the level of adoption among merchants. And those that expected that the rollout of EMV would not go very smoothly with consumers, merchants and issuers, were indeed correct. More than seven months later, we still have a significant number of cards in the U.S. that are not chip supported, and 88 percent of merchants are still asking consumers to swipe instead of dip, including major retailers like TJX Cos. and J.C. Penney Co.

We also haven't seen the burst of card-not-present (CNP) fraud in the online space that other countries like the U.K. and Australia experienced directly after they introduced EMV.

In fact, retailers are really still bearing the brunt of fraud at the point of sale (POS) for counterfeit cards in their brick-and-mortar stores. What's changed, however, is that those retailers that haven't transitioned to EMV readers are now responsible for those fraudulent transactions, which were previously covered by card-issuing banks. That inevitably puts pressure on lagging retailers to update their POS systems to accept chipped cards as quickly as possible. Despite the lack of dramatic increase in CNP fraud in the last six months, I agree with experts in that we'll continue to see a steady transition from card-present fraud to the online version as adoption of EMV grows in tandem with rising eCommerce volumes. It's also incredibly difficult for anyone to accurately predict when the shift to EMV is going to be over, or if we should expect a major spike in online fraud in the near future.



VESTA'S CHIEF STRATEGY AND PAYMENTS OFFICER, CHRIS URIARTE

So, I would argue that retailers should use this time to really assess their fraud prevention strategy and determine if their current plan can keep pace with what will inevitably become more complex fraud at a higher volume. If the answer is no, they should consider looking for a new solution.

Consumers and merchants have also been slow to adopt mobile payments, despite the fact that we've seen major rollouts and updates from companies like Samsung and Apple in the last six months.

With less than 20 percent of consumers currently using mobile payments, we still really aren't seeing those technologies impact payments as a whole. But, these slow growth numbers do have major implications for companies that are managing or building out their mobile strategy, including how they will deal with mobile transactions on the back end.

That includes how retailers will deal with fraud via the mobile channel, including transactions around digital goods like e-tickets and online gaming, which are commonly handled via mobile devices. Retailers who deal with these kinds of instant transactions are at a high risk of suffering from "fast fraud," or when fraudsters take advantage of the immediate availability of digital goods and products purchased through mobile devices or digital download.

I think that we will only continue to see wide scale rollouts that involve consumer introduction to new payment devices struggle down a very long road before achieving widespread adoption. While many merchants may feel like they have successfully weathered the storm of the liability shift or the introduction of mobile payments, I would argue that the storm is only just beginning to gain force.

Merchants should think proactively about their fraud prevention strategy and whether or not their current solutions can not only adapt to the changing fraud landscape, but do so at increasing scale.

For many retailers, attempting to fight the rising volume and complexity of fraud in-house is an incredibly expensive and resource-intensive endeavor, which is why we see many merchants turning to third-party experts to manage their payments strategy more holistically.