PYMNTS.com 2018

Mid-Year

CHECKPOINT



How The First 6 Months Will Shape The Next 6 Months

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PETER SPEE

VP Strategy & Corporate Development

Digital Transformation FOR SMBS

Digital transformation is just as compelling for SMB merchants as it is for the biggest banks. The concept of a single-function card terminal is an anachronism in an era of cloud services and rapidly evolving consumer expectations.

The recent decision by Wells Fargo to simplify the overly complex pricing schemes for payment services is a wakeup call to fundamental changes ahead. For too long, merchants have found themselves locked into narrow solutions based on proprietary card terminals. Many have had to wait too long for their devices to be provisioned. Integration of payment with other applications has been difficult.

Merchants, many no doubt savvy users of smartphones and apps, are looking for more value from their payment solutions. In the second half of 2018, innovation in payments will be focused on creating payment ecosystems that integrate the POS payment application with a multitude of apps and services that enable merchants to shape new customer services and expand their revenue generation opportunities.

Most merchants won't have the time or patience to experiment with hundreds of apps to create their own integrated business suites. They will be looking to banks, acquirers and ISOs to help them make sense of these newfound capabilities. Instead of selling plastic payment boxes, these service providers must evolve their roles to that of trusted business consultants able to curate a suite of value-added business apps and services that solve everyday problems for merchants.

For many merchants those problems are multiplying: they need to be able to provide consumers with shopping experiences as frictionless as those provided by ecommerce competitors; many want to be able to offer their own eServices, ranging from online ordering, marketing and reservations to bill payment. In addition, they want to manage their own point of sale as effectively as large retailers, with smooth integration of payments, purchases and inventory management

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data. Why shouldn't they have ready access to analytics and reporting from the same platform on which they do everything else?

It's no secret that financial technology (FinTech) investors see the brick-and-mortar merchant segment as ripe for disruption. According to a recent report by Accenture, more than $100 billion has been invested in FinTech ventures since 2010, with the U.S. market accounting for 54 percent of the total, and payments and lending the dominant sectors soaking up the funds.

Internet sales channels and commodity hardware, primarily based on Android, undercut much of the traditional costs of doing business in merchant payments. Software developers able to turn on a dime are constantly churning out new apps aimed at exploiting inefficiencies in traditional ways of doing business. With relatively low market barriers, the allure of the SMB merchant market is attracting scores of would-be solution providers.

But, as anyone who deals with SMB merchants knows, there is no one-size-fits-all approach to success in this market. There are many vertical slices to the SMB merchant pie: convenience stores, tailors, hairstylists, hospitality and entertainment, transportation, and so on. Regional and local market attributes have long befuddled technology firms that thought they could go "down market" to smaller-size businesses.

Traditional service providers have unique abilities and insights that give them an edge for success against upstart competitors. The ability to put "feet on the street" to interface with merchants directly is something that can't be replicated through internet sales channels. With knowledge of a particular customer, it can be relatively easy to solve a technology misunderstanding that would befuddle a remote help desk located hundreds or even thousands of miles away.

In the past, providers of merchant payment services have been hampered by the narrow confines of proprietary payment terminals. That has limited their ability to provide flexibility and choice to merchant customers. But payment platforms based on open standards makes it possible to leverage the same apps and services on different types of hardware from different vendors.

With this newfound flexibility and freedom to run apps across a range of vendor hardware, payment service providers will be able to more readily tailor solutions to meet the unique needs of individual merchants and expand deeper into vertical markets or enter new ones. Access to an open, centralized payment platform and an apps-and-services ecosystem enables service providers to focus on creating market-oriented business solutions that leverage their unique expertise and grab hold of the opportunities created by digital transformation.

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agreement EXPRESS

MIKE GARDNER

CEO

The New Era of Mergers and **ACQUISITIONS**

In 2018 I have seen the trend of mergers and acquisitions continue, but with a new driving purpose. Where in prior years the purpose was to broadly gain as much processing volume as possible, today the focus is on developing specific value propositions. This is because of a change in the competitive landscape, driven by the success of specialized payment platforms.

For a long time, scale was the most important thing in payments, especially for merchant acquirers. The largest players enjoyed cost advantages, supported large underwriting and risk management teams, employed vast sales forces, and maintained processing platforms. Technology has reduced the need for scale. Being larger no longer means being more competitive.

The challenge with continuing to focus on volume is specialization. New entrants started to provide unique offerings to specific segments of customers. These market players parceled out specific groups and developed products, functionality and platforms specifically for them. As a result, they started winning market share. We now see a large number of small players winning customers from a small number of large players.

In part, this can be attributed to new customer expectations due to the digital disruption happening in every industry. As Amazon delivers goods to our doors within a day, Uber removes friction from taking a cab and movies are streamed instantly to our laptops, we have begun to expect real-time service, enabled by digital channels, with product offerings tailored to our needs.

Today, using technology and digital channels to provide services has become commonplace, but the industry's largest companies are still far behind. Without digital platforms for their products, payments companies have stopped growing organically.

In the meantime, segment-focused payment platforms are succeeding. They conduct business activities automatically and immediately, such as onboarding, know your customer (KYC), underwriting,

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and chargeback management, so customers can forget about payments and focus on building their businesses.

As the year continues we'll see the largest players in our industry deliver or acquire similar product strategies. The second important aspect of product strategy we will see this year is a move to provide more services on payment platforms. FIs are working with partners and making acquisitions to increase the functionality they provide, and in turn their "stickiness." The key to this is segmented product offerings on one platform.

Customers are attracted to bundled offerings that meet their unique needs. Think of how compelling Netflix's recommendations are about what you should consume next based on your previous activity, compared to the hefty cable package with channels you never watch. When payments offerings are bundled by segment type, customers can avoid paying for products or services they don't need and get a more personalized experience.

Very soon, being a "general" payments company will be too broad. It will be difficult to articulate their value against market participants who are able to demonstrate very real, specific value to their targeted segments. Firms will need to provide a broader set of capabilities on their platform than they do today. Rather than offering these together as a whole, however, they must package these capabilities for the appropriate, specific needs of the target segments within their portfolio.

This year we have already seen the trend of acquisitions shift to focusing on highly attractive market segments. PayPal's acquisition of iZettle and Hyperwallet indicate its shift in focus. The firm's customer will benefit from a familiar partner with more to offer on a single platform.

For the remainder of 2018, we will continue to see more acquisitions and product developments leading the formation of targeted payments platforms. The segmentation will provide faster, more convenient customer experiences across a growing set of complex offerings. I expect that payments companies will leverage new technology and partner relationships to create their own integrated ecosystems, capable of producing sticky product offerings and keeping their customers within one revenue stream.

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Amaryllis

MARK BISHOPP

CEO

Setting the Acquisition **PACE**

In my opinion, the start of 2018 has shown that mergers between financial institutions (FIs) and FinTech are not slowing anytime soon. Acquirers are looking into ways of breaking into higher growth areas like third party payments (marketplaces, PFs, ISOs, ISV/VARs etc.) and how best to provide those models more than just transaction support. Acquirers realize that they are slower than the disrupters that continue to emerge (Stripe, Square, Braintree, Amazon, Alipay etc.) as most have antiquated risk/legal departments that are not evolving as fast as the market. This significantly handicaps them if they want to move as fast as what buyers and sellers are demanding. Today most acquirers are looked at simply as a necessary entity a merchant must work with to accept credit cards and as such are treated as a commodity play. Some acquirers recognize this and are now trying to do something about it.

We are witnessing all the major acquirers either buying or building tools to support third party payment models and are also coming up with creative new departments like "Integrated Payments" or "Digital Strategy." Acquirers must start to look at being trusted advisors to their clients and not simply sell product. What the market needs to be aware of though, through the rest of 2018 and beyond, is the fact that these acquirers are trying to source these new roles with existing staff who do not understand these models fully. A serious internal view of their talent and experience combined with a view on how to compensate the true "trusted advisors" is needed before any of these "mergers" will truly bear fruit.

All this merger activity means that the timing is right to pay attention to those FinTech plays that are related to payments in some form. The days of building custom solutions to accept payments are falling behind quickly as each of the over 2,000 global third party models that are out there have only built their solutions to meet the minimum standards set by the card brands, regulators and financial institutions. Now payment platforms are being established that are far more robust in terms of operating a business in ways never before considered, are far

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more secure and provide better visibility to the same oversight group that caused the third party payment model to create a custom solution in the first place. Financial Institutions have recognized this and now want to get in on the game!

Developing or buying tools to service the vast, multi-trillion-dollar industry of third party payments (any model bringing buyers and sellers together) is a great start, but the proof will be in whether they have the talent and experience to gain enough street cred to truly provide the value the market is looking for.

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CLEARENT™
INTELLIGENT PROCESSING

JEFF ZIMMERMAN
COO

The Inevitable Collision of Payments and SOFTWARE

If there's anything we've learned from 2018 so far, it's that payments and software are starting to collide. This trend makes sense. Seamlessly integrated payment processing has evolved from being merely an add-on to being a critical feature for software vendors and business owners alike. When done correctly, built-in payment processing gives software vendors the opportunity to offer businesses what they most need to stay competitive: the ability to accept payments anywhere and provide a seamless customer experience.

The checkout process has been front and center this year. Why? Because consumers want the ability to buy and pay from anywhere, on any device, and more are paying for goods and services with their phones. According to Business Insider's Mobile Payments Report from June 2016, the number of mobile payments users is projected to reach 150 million by 2020. In-store mobile payments are expected to surpass $500 billion by 2020.

Consumers aren't just paying for goods and services with their mobile devices. They're also paying friends, family members, co-workers and more. P2P payment services like Venmo and Zelle introduced an easy, convenient way to transfer money between bank accounts. Now consumers don't need to worry about carrying cash to split the bill or repay a friend for an evening out.

Consumers are also changing how they shop. They may start shopping on one device or in one channel, and then finish in another. For example, they may order an item online and then pick it up in the store. A great example of this is the Starbucks mobile app. We're also seeing an increase in AI-powered payments as consumers are starting to make purchases through smart home devices, like Amazon Echo and Google Home. As ownership of these devices grows, AI-powered payments will likely grow in 2018 and beyond.

These trends place increased pressure on the payments ecosystem and the retailers who need to provide a seamless omni-channel experience, while also adhering to the tightest security standards so they can protect sensitive cardholder information.

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EMV has also slowed down the checkout process. As a result, Quick Chip-enabled devices, which reduce chip card transactions to two seconds or less, are becoming a standard. These machines also allow business to welcome contactless payments and more customers are loading their payment cards into their smartphones.

This increased push toward mobile commerce is changing the way processors, Independent Software Vendors (ISVs) and Independent Sales Organizations (ISOs) are doing business. All stakeholders in the payments industry are recognizing that they need to adopt a mobile strategy to stay ahead of the curve. As a result, processors, card brands, banks, ISVs and ISOs are trying to become part of the new API-integrated payment ecosystem that utilizes mobile SDKs.

In addition to the convergence of software and payments, 2018 has been a year of convergence for ISVs and ISOs. Software vendors want to generate additional revenue by selling payments, effectively becoming ISOs. Conversely, ISOs want to get into the software and POS game, effectively becoming ISVs. In the process, the lines between ISVs and ISOs have blurred significantly, and over time, it's going to become more and more difficult to distinguish between the two.

Based on what we've observed in 2018 so far, it's clear that the tech customer of 2020 won't look like today's tech customer. Future tech customers will expect solutions that meet a broader range of their demands in less time — something only those companies with an agile mindset and that own their own technology will be able to deliver. Payment processors, ISVs, and ISOs who aren't already using agile methodologies will need to start rethinking their strategy to keep up with the changes in 2018 and beyond.

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FINANCIAL SERVICES

NICK CALCANES

COO

Six Fintech Trends to Watch This Year AND BEYOND

1. FIs Will Accelerate Partnerships With FinTechs

According to E-Scan, over 52.3 million U.S. internet users will go online exclusively via a mobile device by 2021. And innovators like PayPal and Square are rapidly spreading adoption of real-time mobile transactions. Consider also that 25 percent of consumers use voice assistants today, and 20 percent are open to moving some of their banking to them.

From the Internet of Payments to robotic process automation, the future of financial services will very quickly look quite different than it does today. All of which will find financial institutions partnering with FinTechs to up their payments game.

2. Some Regulatory Relief, but Uncertainties Remain

The "Economic Growth, Regulatory Relief and Consumer Protection Act," known as S. 2155, has been signed into law, providing regulatory relief to smaller banks and credit unions from many burdensome rules.

For one, the new law raises the threshold for which a bank can be considered too big to fail from $50 billion to $250 billion, easing restrictions and federal oversight for smaller FIs. It also introduces new more flexible rules around lending and consumer protections.

The new S. 2155 act isn't the only regulatory change making waves. In May, the General Data Protection Regulation (GDPR) went into effect. As reported by Financial Executives International, "GDPR has an international reach, affecting any organization that handles the personal data of European Union (EU) residents, regardless of where it is processed. This includes the United States."

My company, CO-OP Financial Services, is currently evaluating whether or not our U.S.-based client credit unions will need to comply. But, certainly, all financial institutions need to become students of GDPR and how it might impact their own organizations.

3. Leveraging Data to Benefit Both Security and Customer Experience

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Companies face increasing cyberthreats from hackers trying to commit cyberwarfare or industrial sabotage. However, the same security, risk and privacy teams battling these hackers frequently encounter pushback internally because security measures negatively impact customer experiences.

Forrester is predicting that this dynamic will soon change – and that this year we'll start to see what the consultancy calls "security for profit" measures, whereby security and marketing teams are drawn together by a common objective: leveraging data.

After all, they have similar data requirements. Security teams need to know exactly who is accessing their systems and data, and they need to resolve identities across entry points. Marketing teams can use that same data to personalize products, services and offers – transforming a security mandate into a better customer experience.

4. FinTech Innovation Increasingly on the Fast Track

In January, the Revised Payment Services Directive (PSD2) was adopted by the European Union, bringing with it sweeping changes to our industry.

According to The Financial Brand, "2018 will be a turning point for banking as the EU countries are obliged to incorporate PSD2 into national law." Open Banking is, in fact, a revolutionary concept that calls on financial institutions to share data universally through an open API model. This new technological approach will enable third parties to more rapidly bring new products and services to market and promises to fast track fintech innovation.

5. AI Revolution to Fight Fraud, Enhance Experience, Increase Efficiency

According to Teradata, 80 percent of enterprises are investing today in AI. McKinsey projects that FIs along with the high-tech and telecommunications industries will be the leading sectors in adopting AI over the next three years. Here's how CO-OP Financial Services intends to apply it on behalf of credit union clients:

To fight fraud: AI excels at fighting fraud, and especially cybercrime, by predicting, preventing and adapting to complex fraud patterns behind the scenes in ways that are completely transparent to the consumer.

To enhance customer experiences: The real magic of AI lies in its ability to use volumes of data to anticipate customer preferences, and customers value this. They celebrate brands that understand their journeys, demographics, purchasing histories and routines – and bring them personalized offers accordingly.

To become more efficient: AI is rapidly being deployed within back-end systems to handle repetitive tasks – and it is delivering massive efficiencies. Nowhere is this better illustrated than with JPMorgan Chase's recently introduced Contract Intelligence (COiN) platform. This AI-driven system is designed to "analyze legal documents and extract important data points and clauses." According to Techemergence, while manual review of 12,000 annual commercial credit agreements requires about 360,000 hours, results from an initial implementation of COiN showed that the same volume of agreements can be reviewed in seconds.

6. As Technology Marches On, the Human Touch is More Important Than Ever

Our industry is changing, and fast. While technologies quickly grow and morph across the landscape, consumers share one common time-tested value: great customer service.

In fact, PwC just produced a study identifying the gaps between what customers expect and their satisfaction with brands. Not surprisingly, 50 percent surveyed named friendly welcoming service as the defining factor for successful customer experiences. To thrive going forward, FIs must pay attention to the human side of their business, embedding the best technologies within memorable, engaging touchpoints that enrich experiences and relationships at every turn.

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corcentric

MATT CLARK

President & COO

Procure to Pay: THE NEW P2P

Looking back at the first six months of 2018, there has been increased penetration of procure to pay solutions across the board, both in terms of interest and adoption. Corporate buyers are more commonly turning to third-party providers to facilitate a more holistic procure to pay process. The effort to simplify multiple, complex aspects of B2B transactions has been a longtime focus of FinTech innovation, and the driving force of this trend really originates from the well-known fact that B2B transactions are a primary source for potential friction within a company.

In general, interconnecting financial processes is a monumental feat for a company of any size to achieve independently. Organizations are even more reluctant to face the hassle of initiating an internal IT project to process orders, invoice and payments and then attempting to integrate the process into their supplier's existing system (a feat that costs millions of dollars and may result in a fully-developed product that does not interface with what their supplier developed).

Companies are increasingly understanding the necessity of connecting functions in the procure to pay process for a seamless experience, rather than addressing each area in isolation. As such, procure to pay solutions have been called upon to implement processes that connect the dots between each player in the B2B transaction and balance the contradictory needs of suppliers, who want to be paid faster, and buyers, who want to hold on to capital longer, or be rewarded for paying their suppliers early.

In the first half of 2018, the focus on this two-party system of supplier and buyer has gone a little out of balance, with the focus being on the buyer side of the equation to facilitate more streamlined and efficient processes, when not enough energy has gone into the supply side of the equation. In the remainder of 2018, it is going to be critically important to think about the supply side of procure to pay solutions, and discuss potential ways to optimize integral supplier processes.

When a corporate buyer has strong alignment with its suppliers, pricing is

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more efficient, transactions are more streamlined, and the data is of better quality – which all contribute to the front-end of the process for companies to refine their supplier sourcing strategies. Procure to pay solutions must pay attention to the connections between supplier sourcing, procurement-to-payments, and reconciliation to understand not only the B2B transaction itself, but also how the process demonstrates the relationship between the procurement and finance space. Building this bridge between procurement and finance will create a more holistic strategy and much healthier ecosystem, converging the buyer, supplier, and vendor.

As a result of continued conversions of payables and procurement functions, and a more holistic view of the lifecycle of B2B transactions, the nature of payables is shifting from a reactionary and tactical function to a more strategic one. Looking ahead, that strategic approach, which places emphasis on the engagement factor, will help procure to pay solution providers execute payments to suppliers both from a modality perspective as well as a payment timing perspective to drive even more value to that relationship.

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MIKE LAWRENCE

Executive Vice President & Chief Information Officer

Instant Payments and the Shaping of Business **PRIORITIES**

One of the most influential outcomes from 2018 to date relates to the market expectation for faster, "instant" payments.

We first started to see this in the consumer space with products like Venmo's Instant Transfer functionality. It's a trend payment processors can ill afford to ignore. ACH funding is still a core component of the merchant acquirer business model, and that is being seriously challenged.

To be competitive, we have to assess this new normal and decide how we will implement it, all in a rather rapid timeframe.

That alone impacts a lot of standard processes and IT spending priorities. If I can find the mechanisms to quickly deploy this new technology to merchants, I must also be able to support it with stringent risk protocols and the related integration that would entail. This accounts for an entire backdrop of IT business processes.

We are also hearing a larger conversation at play, driven by the questions our merchants are now asking: "How can you help me pull these specific payment methods in?" versus "Here are the technologies I want to push out to customers." Collectively, business owners are showing greater savvy in understanding and adapting to the purchasing behavior of their customers. They know what they want, and they are aligning themselves with partners who can do these two things very well:

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1) Deploy newer payment technology quickly;

2) Pivot as necessary to be in lockstep with consumer demand.

Take all the mobile Pays, for example. What was new in 2014 is now a consumer expectation. We are well beyond the acceptance threshold, with even the most conservative business owners now interested in contactless payments. We are helping business owners map out how

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they will implement this technology and accept these types of payments across a wide swath of scenarios.

We're also keeping an eye on what some predicted would be a flash in the pan – distributed ledger technology.

Far from fading out, blockchain and its associated cryptocurrencies continue to grow. From a payment perspective, processors must pay attention to how we will operate in that space. You are seeing more and more use cases of distributed ledger technology within the nonprofit world. We are watching these developments carefully and keeping in front of it on behalf of our merchant base. Should blockchain evolve on a broad scale, this wouldn't be the first time that a seemingly far-flung idea went mainstream.

From a regulatory perspective, we are fully entrenched in GDPR compliance. If the first half of 2018 focused on being deadline-ready, the last half will see additional clarity in the areas of implementation and regulatory enforcement.

One of those areas involves GDPR language related to passwords, most often advising organizations to do what is "appropriate." Even if that direction is vague at best, an organization poised to stand up to auditor scrutiny can't claim lack of specificity as an excuse for noncompliance — particularly since there are significant advancements happening right now with regard to authentication technologies.

At a minimum, organizations should evaluate where two-factor authentication is appropriate within their respective systems, implementing not only that but generally upping their processes for account validation and access across the board. This mirrors what we already experience in our lives as consumers (think of the text message you receive with a unique code before logging into a secure website, for example).

With the drivers of security, data privacy, and convenience at play, the remainder of 2018 will no doubt see increased collaboration throughout the payments ecosystem.

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BRUCE LOWTHERS
COO

New Era of **CHANGE**

From the U.S Supreme Court's ruling on credit card rewards to regulatory reform and blurring lines between big tech and financial services, the first half of 2018 brought a number of pivotal events that will shape the future of our industry the second half of the year, and beyond.

Here are three key events of the first half of 2018 that will usher financial institutions and payments providers into a new era of change that's full of opportunity.

Supreme Court ruling will refuel rewards program innovation

The recent U.S. Supreme Court ruling that American Express may continue to contractually prohibit merchants from encouraging customers to pay using a different card issuer (in an attempt to lower the merchant's exposure to fees) will fuel creativity in credit card rewards programs. While some experts argue that the ruling is to the detriment of retailers, whose revenue may be impacted by credit card "swipe fees," the ruling will stimulate new rewards innovations that work to benefit card issuers, retailers and cardholders alike.

FIS has already proven that the boundaries of a traditional rewards program can be expanded with our loyalty innovation Premium Payback; it empowers retailers to "surprise and delight" customers with the option to apply credit card rewards directly at the point of sale. The program has provided retailers benefits like brand differentiation, loyalty benefits and a means to tap into the billions of credit card rewards points that go otherwise unredeemed each year. The AMEX ruling will accelerate more exciting innovations like this in the months (and years) to come.

Regulatory reform will strengthen community and regional banks

Given the revisions to the Dodd-Frank Act that have taken place so far in 2018, such as exemption from the Comprehensive Capital Analysis and Review for banks with assets ranging from $50 billion to $250 billion, large regionals and small to midsize banks are now free of some

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of the most cost-prohibitive aspects of past regulations that made it difficult to compete against the largest banks.

While 10 community bank customers who responded to the FIS 2018 PACE survey were generally more satisfied with their bank compared to customers of the top 50 banks, 59 percent of community bank customers said they've used alternative service providers for conveniences like person-to-person payment capabilities. Banks that opt to invest the money they now save as a result of regulatory reform into IT, digital and mobile capabilities can differentiate their brands, better engage customers and execute aggressive growth strategies. I expect we'll also see many pursue mergers and acquisitions to better compete with larger banks.

The Lines Between Tech, Social Commerce and Finance Will Blur

The first half of 2018 brought clear indications that Big Tech is serious about disrupting financial services. Amazon will offer checking accounts (or a similar product), cobranded business cards and, likely, home loans. Google has advanced the functionality of its digital wallet. Facebook began testing payments through its Messenger app in India, along with expanded capabilities like person-to-person payments.

All financial institutions and payments providers must take notice of the influence that data, artificial intelligence (AI) and open APIs will continue to have on financial and payments industry, and determine how to put these assets to use. In 2017, FIS launched Code Connect to provide access to more than 300 APIs, and we've seen increased involvement by the developer community since that time.

I predict we'll see significant changes in the coming months, fueled by increased adoption of open APIs, use of data and AI in areas spanning payments, credit-risk determination, fraud prevention and customer experience, but it's just another opportunity for financial providers who embrace these times of exciting change.

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JORGE DIAZ

Vice Chairman, Strategy and Business Development, Billing and Payments Group

Fit the Bill: Consumer Expectations and EXPERIENCES

Life moves fast in our digital and increasingly interconnected world, and people want technology solutions that are in step with the way they live and work today. Consumers expect greater flexibility, improved experiences and bank-grade security in the ways they choose to receive, manage and pay their bills. Billers of all kinds — utilities, telcos, lending organizations, insurance companies and many others — are under immense pressure to respond to evolving consumer expectations, and bill pay must adapt and respond.

For the remainder of the year, the watchword will be "customer experience." This is evident in the wide array of options consumers have: evolving bill presentment options, shifting payment types and diverse payment channels. Consumers have been "trained" to live their digital lives by the likes of Amazon, Google, Netflix, Apple and Uber, and expect similar content-rich, frictionless experiences in every bill-pay interaction. Failure to keep pace with preferences and expectations poses a risk of consumers going elsewhere, and organizations will continue to concentrate their efforts for the second half of the year and beyond on offering customers a seamless experience across all billing and payment touchpoints.

Fiserv research underscores this trend. Majorities of online and mobile banking users are also using bill pay services, suggesting increased comfort with the available technology. Three quarters of online banking users said they used the service to receive and/or pay bills. Among mobile banking users, 41 percent reported paying bills through a financial organization's bill pay service. Consumers still use traditional payment methods such as mail, phone and in-person payments to pay bills, but online and mobile payments (either through the financial organization or through the biller) now make up the majority of payments.

The reasons people use bill pay services don't differ significantly whether it is through their financial institution or through billers directly. For example, speed and convenience tend to be important factors in people's use of these services,

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regardless of the platform they choose. However, as compared to bill pay through their financial organizations, consumers place greater value on the ability of billers to deliver their payments quickly (31 percent and 24 percent respectively). In addition, 33 percent cite the ability to pay multiple bills simultaneously as a reason to pay through their financial institution.

Secure, actionable, intelligent, real-time experiences required

Keeping in mind that how consumers move their money on any given day largely depends on what makes the most sense for an individual at the time, there are several ways in which billers and financial institutions can meet people wherever, whenever and however they want with intelligent, intuitive experiences.

Security remains of paramount importance as consumers want to know their money is going where it is meant to go as quickly as possible, and also as safely as possible. Mitigating risk and enhancing the consumer experience is a balancing act, so to maintain a frictionless experience billers are likely to turn more often to Application Programming Interfaces (APIs) that enable promoting the experience they want to deliver while letting a third party maintain security.

Relying on email notifications and letters that are not actionable or accessible is no longer enough — the key is to put messages in consumers' hands immediately, so they can take prompt action. A consumer who is traveling and forgot to pay a bill may not have the opportunity to check emails. This is an example where push notifications are preferable, reminding them the bill is due and also allowing them to pay it immediately with a tap. Providing the ability for consumers to receive and pay bills through their phones improves the experience, strengthens consumer engagement and, by extension, boosts loyalty.

Consumers are also accustomed to providers anticipating the next step and offering to automate the process. Many online retailers understand that a certain product will be used regularly by a consumer (for instance a medical prescription) and so a recurring payment can be set up. Therefore, if a consumer regularly pays a set amount, an automatic transfer can even be set up on the user's behalf.

Consumers also expect immediacy in their everyday lives. When it comes to paying bills, this means leveraging data and alerting them to any pertinent information. For example, a financial institution knows a consumer has $1,200 in their checking account and a $400 payment is scheduled for midnight. When the consumer attempts to schedule another payment for $1,000 to be deducted at the same time, it should be possible to alert the consumer in real time to the potential overdraft. Better still, they are prompted to transfer funds from a savings account, for instance by voice command from an intelligent digital personal assistant.

Achieve top billing with consumers

People have more options than ever for how they receive and pay bills, and they will use the way that is most convenient and secure for them in any given circumstance. Financial institutions and billers can distinguish themselves as the primary channel for how consumers pay bills by giving them intelligent, intuitive, hassle-free experiences that deepen loyalty and drive satisfaction.

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GEOBRIDGE
JASON WAY
CTO

The Evolution Of The PAYMENT CARD

The Payment Card Industry is currently in the midst of preparing to adopt quite possibly the most pervasive regulatory update ever. A known vulnerability to double length Triple DES cryptographic keys was published in 2004, fourteen years ago now. This regulatory update is so expansive, the industry has accommodated and allowed for the existence of this vulnerability for all these years. Fortunately for the industry and the economy, there is no shortage of other technology vulnerabilities available for exploit. These other vulnerabilities are far easier and less expensive to exploit than the double length Triple DES vulnerability.

PCI PIN V2 (2014) 18-3 originally mandated a new key management technique which required all symmetric keys to be managed in structures called bundles. The key itself must be cryptographically bound to its intended usage. This was initially set to be enforced by January 1, 2018. Although proprietary key bundling techniques have been in the market for well over a decade, and published interoperable techniques have been available since 2010, the industry as a whole was still unprepared to adopt this mandate by January 2018.

Why Is This So Hard?

In order to answer this question, it's important to understand what makes the utilization of cryptography in payments, so much more challenging than the utilization of cryptography in most other verticals. In most other verticals, when the need for encryption arises, the data is encrypted and stored. In the payment industry, we must share encrypted data millions of times per day. When sharing that encrypted data, we also share keys millions of times per day. When we share this data and these keys, we must do so without allowing the data or the keys to be compromised. Millions of keys, shared daily, traverse hundreds if not thousands of applications, systems, and personnel. Simply put, interoperability is the single greatest challenge to the deployment and enforcement of the requirement to bundle a key with its intended usage. In fact, satisfying the basic requirement to bundle is rather simple, with many compliant

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alternatives to choose from. But, if a key is bundled at the first hop, but the second hop bundles keys differently, nothing will work. So, without interoperability, there is little point in bundling at all.

Moving the Line in the Sand Further Away; a Blessing or a Curse?

As a consequence of the lacking preparedness, in June 2017, PCI further amended this requirement in apparent recognition of these challenges. To summarize, the mandate is now as follows:

- June 2019
  All keys at rest must be bundled
- June 2021
  All keys used for exchange must be bundled
- June 2023
  All keys at endpoints must be bundled

On the surface, this PCI concession enables all entities to avoid interoperability requirements for three more years. This is the only result of the concession that could be viewed as a blessing. Everything else is most definitely a curse. First, a basic tenet of cryptographic key management is that you do not use a weaker key to protect a stronger key. If a Key is bundled at rest, why would you un-bundle it to send it into the wild? Managing a status quo cryptographic key inventory is challenging enough, but now all entities will have to manage two distinct versions of their cryptographic key inventory. Entities will manage keys that are bundled and they will use legacy key management to manage keys that are not bundled. For any entities that go through the trouble to satisfy the basic requirement in a proprietary manner, without consideration for interoperability, they will suffer through this major overhaul project twice in three years when they go back to address interoperability.

Preparing For Interoperability

In 2010, the American National Standards Institute (ANSI) published the first version of TR-31, Interoperable Secure Key Exchange Key Block Specification. The Accredited Standards Committee X9-F6 produced, continues to maintain, and has since updated this specification as recently as April of 2018. This latest update now accounts for the utilization of the AES algorithm, in addition to Triple DES. This is yet another future-proofing interoperability consideration that entities must consider. New master key structures and associated hierarchies must be prepared to support the strongest keys allowable, by way of AES 256-Bit. Failure to consider this, will also cause project teams to repeat these endeavors more times than are necessary as the industry and manufacturers are also now supporting these stronger algorithms and key strengths, in accordance with the recent release of ANSI X9.24 Part 3 which describes the implementation of AES DUKPT.

Good, bad, or otherwise, the standards bodies or governing entities are not in a position to demand interoperability for the sake of compliance. Nevertheless, the standards bodies are publishing techniques that will provide for interoperability. As the industry takes on the most pervasive regulatory update ever, entities would be wise to follow the standards sooner rather than later.

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HYPERWALLET

TOMAS LIKAR

SVP of Strategy

Fintech

TRUCE

Until now, 2018 has been marked by an evident shift in the relationship between incumbents and the disruptors in the fintech space. They've started viewing each other as partners rather than rivals, and that change has been driven (in part) by major regulatory challenges that require both the nimbleness of a startup and the infrastructure of a well-established organization to address. The growth of new business models, such as marketplaces and on-demand economies, has also helped bring together the synergies of the two entities—the robustness of the incumbents and the user experience offered by the startups.

From a regulatory perspective, the implementation of PSD2 means that two-sided marketplaces now need to completely revamp their flow of funds and payment systems. Moreover, PSD2 has had broad reaching implications for not only these marketplace businesses, but also the surrounding financial ecosystem—banks, payment providers, and so on. As a pertinent example, despite the global nature of digital platforms like Uber, Airbnb and Amazon, these fast-growth enterprises pride themselves on maintaining hyper-local operations in Europe. Without FX as a major revenue stream for payment providers, they will have to evolve their business models to meet this new reality.

It's only a matter of time before increased regulatory oversight impacts the payment flows of US marketplaces and digital platforms as well. Regulators are taking the identify theft, fraud, and money laundering aspect seriously and want to ensure that the marketplace customers are safeguarded to the greatest extent possible. PSD2 has provided them with a good framework to ensure this comes to fruition.

Going forward this year, we'll see more use cases (specifically revolving around cross-border payments and faster payments) in which banks and fintechs collaborate closely. The age-old system of correspondent network banking is being challenged by the end users of Venmo/Paypal transactions for three primary reasons: cost, timing, and transparency. A closer relationship between banks and

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fintechs will allow the latter to harness the existing financial relationships and customer bases of financial institutions, while the former will get access to cleaner interfaces built on the latest technology and integrations.

Regarding payment speed, the introduction of the same-day ACH will need to be seamless and without any glaring errors in order for consumer confidence to be reinforced in the incumbent banks. Zelle, for example, has to be commended as a prime example of the big banks' willingness to evolve with the times (though some would argue five or six years too late). Despite a big marketing push, though, Zelle still lags behind other digital transaction methods. Same-day ACH is another opportunity for the banks to showcase that they can revise their methods to adapt to customer requirements.

By the end of this year, cryptocurrencies will no longer be the main topic of discussion. It is simply too early to believe that this system stands a real shot at replacing fiat currency. However, blockchain will find other use cases which are more pertinent and ripe for targeting. With the increasing number of online and digital transactions, identity verification to comply with regulations is becoming a problem of scale. Blockchain-based solutions can fix that problem, and also lay down the marker for efficacy of the technology.

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PEG JOHNSON

EVP

A Better Match: Payments and Commerce INNOVATION

Reflecting on this year's industry trends, what strikes me the most is the tremendous momentum around payments functionality being embedded seamlessly in an array of business processes and new business models across different platforms and industries. Whether it's autonomous cars, Amazon Go, Facebook, or Bank of America's new AI-powered virtual assistant Erica, the lines are blurring between payments and new product and service offerings spanning a number of industries.

The unbundling of financial services, new business models, and product-level innovation have consumers expecting excellent product experiences that are meaningful, easy-to-use, and remove friction in how they manage their finances. People today have a lot of options when it comes to how they pay, and they are presented with new ones what seems like every day. In the competition for consumers, the winners will be those that can offer superior customer experiences that include frictionless and secure ways to pay.

Companies looking to capitalize on this trend will need to create new applications and services that tap into a broad set of cross-functional features and services across different systems. This involves more than just a front-end application. Spinning up new capabilities and programs that marry comprehensive payments functionality and new business processes requires a flexible application programming interface (API) framework.

Though the number of applications supported by APIs continues to grow, the standard APIs available now are inflexible and are limiting innovation. They offer little control to product designers looking to deliver a superior payments and commerce experience. They don't accommodate new or different applications, nor can they be aggregated to create more sophisticated functionality. A new class of APIs, like those created by i2c, allows developers to build commerce solutions and banking products that leverage a wide range of pre-programmed payments processing functionality and business workflow via a single interface, reducing costs and time to market. They

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provide FIs, FinTechs and Alternative Service Providers with an easier way to enable top-tier commerce solutions that work in concert with front-end applications.

Many of i2c's clients around the world are bringing to market a new class of credit, debit and prepaid payment solutions that use complex API implementations to solve a myriad of business challenges and create new product experiences. Examples include a digital shopping service that uses virtual cards and manages cash back rewards in a mobile wallet, a FinTech that provides SMBs an innovative spend-management platform and a retail bank that offers a multi-currency travel card with integrated foreign exchange functionality.

The year 2018 has demonstrated that for players in the payments ecosystem, there is a pressing need to continue to innovate during the rapid evolution taking place both inside and outside our own industry. Any exchange of value in any business process presents a new opportunity to create better experiences. A new API framework can help FIs, issuers and other payments providers create and scale to market superior customer experiences that keep customers engaged and transacting.

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ICBA
BANCARD
& TCM BANK®
TINA GIORGIO
President & CEO

AI: Making The Impossible POSSIBLE

Through the Digital Looking Glass: The Wonder of AI Technology

There's a well-known scene in Alice in Wonderland where Alice cries out in frustration to the Mad Hatter, "This is impossible!" His response? "Only if you believe it is."

Where artificial intelligence (AI) is concerned, I think we've entered this alternative realm where impossibility meets reality. From scientific studies showing how Google's technology can out-predict hospitals in determining in-patient mortality rates to Elon Musk's cautionary tales of robot dictators, developments with AI have permeated the news for the first half of the year.

That trend continues in financial services. It seems like not a day goes by where we don't hear of one bank or another embracing AI for a better customer experience or to enhance internal processes. AI is being used to expedite loan applications and determine the right loan for the customer. Chatbots, or computer programs designed to simulate simple conversations with humans over the Internet, are being used for password resets and account inquiries. For the most part, right now these announcements predominantly come from the largest financial institutions, but that, too, is rapidly changing.

In January I predicted 2018 would be the year of the community bank, touting, as one reason, the role of AI in the technological boom that will level the financial services' playing field. I see more and more evidence of that happening. From accelerators popping up to bank/fintech partnerships, AI factors into community banks' ongoing business strategies.

Take Mercantile Bank of Michigan, a $3.27 billion-asset institution in Grand Rapids, Mich. They recently formed a partnership with Abe AI to launch a "conversational banking engine," stemming from AI technology. Then there's Carter Bank & Trust, a $4.3 billion-asset bank headquartered in Martinsville, Va., who leveraged an AI solution to expedite its

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staff onboarding processes. Let's not overlook NBKC Bank a $619-million-asset institution in Kansas City, Mo., who is launching a financial technology accelerator, which is certain to touch on AI.

More and more community banks are getting into the AI game—and with just cause. Accenture reports that banks that invest in AI and human-machine collaboration at the same rate as top-performing businesses could boost their revenue by an average 34 percent by 2022.

Outside strict revenue gains, AI makes community banks more competitive. When they offer advanced technological services that meet their customers' needs, community banks stay in sync with the digital curve. Customers are looking for their bank experience to mirror their daily retail experiences, which is why leveraging AI makes strategic sense. For example, if a bank taps into Alexa or Google Assistant, it not only simplifies a customer's interactions, but it also means their bank "gets" the technology that powers their day-to-day. They don't look to alternative providers if their community bank serves what they need.

Finally, at the core of AI is data, and community banks sit on mountains of it. While we all struggle with how to use the information at our fingertips, I challenge community banks to look at it from a relationship standpoint. Instead of trying to swallow the ocean, what if community banks adopt the perspective that this data acts as virtual information that tells the customer's story?

Consider this: When a customer comes into the branch and chats with the team, they share a snapshot of his or her life. His or her data can tell a similar story, including things like spending habits, payment cycles, and cash flow, giving the bank knowledge to better support that customer. Working with the right financial technology partner to institute a machine learning or AI solution can help the bank uncover information that extends the relationship to the digital plane. It means the community bank can help the customer by offering services that directly meet his or her needs.

Whatever the use case, it's clear that AI is here to stay in banking. The last six months have unveiled report after report with expectations of explosive growth. There's tangible evidence of the opportunity for community banks to embrace this new reality and grow their offerings, services, and relationships in the process. Community banks are beginning to determine how they will leverage AI—a big business decision but one that it's time to tackle.

And as community banks look at the role AI can play in their forward-looking plans, I encourage them to explore the impossible, even if it seems a little out of their comfort zone.

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DREW EDWARDS

CEO

Transforming The LAST MILE

One of the most important changes in the first six months of 2018 has been the accelerated digital transformation of the last mile of payments.

The turn of the calendar year saw key early adopters in specific verticals like lending and insurance embrace the idea of push payments for corporate disbursements. But the speed at which that transformation has recently pushed throughout industries and expanded into new verticals signals the faster-than-anticipated arrival of the instant money economy.

Driven by consumer demand, the instant money economy first took root in the consumer P2P market through smartphone apps. Informed by this experience with P2P and their expectations that everything conform to life at web speed, consumers then let it be known they wanted companies to pay them in the same fast, convenient way they paid those companies.

In response, early adopters like ADP, OnDeck and PayPal turned to push payment technology. This approach essentially reverses a debit transaction, enabling instant, fully guaranteed funds to be deposited in the same card accounts or wallets that consumers already use and trust. Think loan proceeds instantly sent to a small business debit card or an insurance claims payment to a PayPal account.

The market for these corporate disbursements is much larger than debit transactions. In fact, it's 4x larger than debit, globally.

The transformation of the last mile in corporate disbursements is key to building consumer loyalty and satisfaction as well as eliminating the cost and time delays of paper check and ACH processing.

Consumers value the convenience, certainty and choice of these payments. The ability to direct money to nearly any financial account, and to take payment of guaranteed funds 24/7 – even on weekends and holidays – is far superior to either paper check or ACH. In turn,

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consumers reward companies with repeat business and high marks for satisfaction.

At the same time, studies have shown that it can cost companies up to $10 per paper check issued. Moving to a digital platform with 99.4% first-time guaranteed delivery success that is predicated on consumer convenience and self-service contributes mightily to the company bottom line.

By early 2018, more companies were moving to this digital option with obvious verticals like consumer and small business lending as well as travel reimbursements and insurance. But as the value proposition became undeniable and word of mouth spreads about the mix of consumer and company benefits, new applications and verticals began to rapidly emerge.

One of the more interesting sectors to embrace push payments and instant money has been Treasury Banks. They understand that their corporate customers across industries want the benefits of instant money, but do not want to build their own solutions or search for vendors. Using a platform like Ingo Money, these banks can seamlessly integrate push payments into their Treasury offerings so that clients have a simple activation option for instant disbursements. This helps cement long term client relationships while adding new lines of revenue.

Another has been the rise of Same Day Settlement for merchant transactions. By deploying push payments in service to merchant customers, leading processors like Paysafe can close the traditional two-day transaction settlement window for transaction receipts. This puts money into the pockets of merchants immediately and provides them with a competitive advantage.

All in all, this adoption within verticals and expansion into new applications and industries will continue to accelerate over the course of 2018. We have truly turned the corner on real-time payments and the Instant Money Economy, making this the year we finally #KilltheCheck.

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modo

BRUCE PARKER

Founder & CEO

The Future Fissures IN FINTECH

Maybe, just maybe, the glacier that is payments infrastructure is shifting. Even possibly … calving!

A long, long time ago when banks were created they were built into siloed systems on legacy platforms. And that worked! Well! For a while. A very long while, it has turned out. Now, we are seeing the difficulties of working with these closed systems as more folks try to increase the number of methods of payments to add to the checkout (as made obvious by the PYMNTS Checkout Conversion Index™), or want to connect corporations to digital payments systems for payouts like BAML is doing with PayPal. As we crest the hump of 2018, we as an industry are making great strides in realizing the need to collaborate and share data (whether that realization came by force from regulation or by the desire to innovate). There has been a major shift in becoming more "Open" in payments. One might even say it's a push for interoperability. And that's something I am very, very excited to see as a provider of interoperability.

There are three major ways I've seen the shift to Open in the past six months:

1) Open Banking, like our friends in Europe doing PSD2

2) Payments moving to the cloud, because EVERYTHING else is moving to the cloud

3) Digital networks creating new payment features, that facilitate commercial exchange

Although initiated by regulation, Open Banking has opened everyone's eyes to the value and necessity of sharing data in order to create better user experiences. Third Party Providers (TPPs) are finding the niche in the market to aggregate information or enable ways for banks to connect to one another. Countries all around the globe are now working towards creating Open Banking standards following PSD1 and PSD2. But, the opportunities

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of Open Banking don't end with giving customers more exposure to the multiple accounts that hold their financial assets and liabilities. With better insights into customer behavior and connections between banks, merchants, corporations and consumers, we can give customers (of each type) a more customized experience wherever they may be. We can allow them to pay how they want, where they want, and when they want. That will unlock even better innovations between banks, corporations and merchants.

In the past few months, there has been a broader acceptance of moving payments data and services into the public cloud by banks and corporations. Getting software to the cloud means that you get the benefits of all the most modern enhancements and improvements in technology without having to manage the operating systems, security techniques and data management yourself. Not only is that a huge efficiency point, but as we become more Open across the board, we will need more shared connections for data. Being in the cloud democratizes those connections and allows us to begin to function more like a network of networks (similar to the internet). We're still geeking out about getting our clients to accept the cloud as the basis for our services, including Alliance Data, Bank of America, FIS, Mastercard and Klarna. It's a thing.

Lastly, digital networks like Facebook and Alibaba have an enormous amount of data about their customers lives and they are constantly looking for new ways to create connections between them. Every payment requires a connection, so it only makes sense that the social networks are seeking to enable payments between users of networks. We have seen this with Alibaba creating the very successful and growing Alipay along with a multitude of other networks now offering payments features like WeChat's WeChat Pay and WhatsApp's new payment feature. More recently, Google Pay has announced an open and interoperable approach to checkouts. Payments don't have to be traditional services of just banks anymore. And in more and more cases, they aren't. As an industry we have to focus on creating interoperability between systems in order to stay relevant in the ever changing payments landscape.

Modo is totally loving this new age of Open because we enable interoperability between payment systems. As companies realize the need to quickly connect to the different payment systems becoming available, they also realize how difficult it can be to connect new systems with legacy systems. And vice versa. That's where Modo shines, playing it both ways. We are dedicated to reducing the friction in payments, and we make it simple to create new innovative payments experiences leveraging the payments systems we have and the payment systems that folks are building. We're looking forward to the collaboration to come!

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ANDREW BYRNE
COO

The Continued Rise Of ECOMMERCE

With June 30 just around the corner, myPOS is looking back at the events that took place in this first half and then trying to predict what H2 2018 has in store for all of us.

We can definitely say that so far 2018 was an exciting one. Just look around and see how much things have changed in the past six months. Clearly, the striking trend of this period was the number of initial public offerings (IPOs) and acquisitions, led by the Swedish fintech company iZettle and the Netherlands-based payment services provider Adyen. Although initially intending to go public, iZettle was eventually acquired by PayPal for the massive sum of 2.2 billion US dollars. Soon after, Adyen announced IPO aiming to cash in nearly $1 billion.

At the same time, we have observed a continuous shift to e-commerce. The indicators are easy to see – there has been an increase in the number of mobile and online payment services, as well as a decrease in the footfall at brick-n-mortar stores, which now strive to offer more and more online shopping options to keep sales high. The gig economy has also gained ground with more people than ever working as their own contractors on short-term projects. To us, this is great news since more and more people, and especially outdoor merchants, will increasingly rely on mobile payment terminals also known as mPOS. The picture can be finished with the arrival of the important EU GDPR and PSD2 regulations, which impose stricter rules when handling personal information and allow for more freedom in payments, accordingly, and the introduction of stricter rules over client onboarding and money laundering.

What do we expect for the remainder of 2018? Well, a lot of things.

First, we believe that the socialization of e-commerce will continue to grow as consumers spend more and more time in social networks and make purchases there. Adding Pay buttons on Instagram or Facebook will help brands sell directly on the social platforms, without the need

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to have the buyer register or go to an additional page.

The rise of mobile wallets will also continue due to the undeniable convenience of online accounts and contactless (NFC) payments via the mobile device. We will also see increased usage of Smart POS devices that combine card payments and business applications as well as further development of platforms for POS applications (AppMarket). Usage of instant (p2p) payments will grow, especially in Europe, helped by the recent introduction of SEPA Instant credit transfers which enables individual and business users to send amounts in up to 15,000 Euro in 10 seconds to 34 markets. Yet, payment service providers will continue to offer localization via physical stores and in an effort to come closer to their consumers. Finally, there will likely be more IPOs by companies, which want to raise money for further growth.

One thing is clear – there is a lot of time until the end of the year and we will definitely see new developments in the payments market. We are excited for sure! Are you?

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nanopay

AMIR SUNDERJI

Chief Risk Officer

Inventive, Innovative and REGULATORY

The first half of 2018 saw tremendous movement in the financial and payments space, from cryptocurrency regulation that caused reverberations throughout the market to open banking policies that spark innovation. The financial industry sits on the forefront of a payment revolution, with fintech providers ready to change the status quo and provide solutions that can keep up with the fast-paced world we live in today.

In the last six months, and even in the late months of 2017, cryptocurrencies and the initial coin offerings (ICOs) that often accompany them, became more commonplace in the marketplace. Because of their unpredictable nature and limited scalability, cryptocurrencies can be unreliable, and investments made in them and through them caught the attention of regulators both domestically and abroad, including the Securities and Exchange Commission (SEC). Recently, the SEC ruled that ICOs must be registered and licensed, marking a shift in mentality for the regulatory group, which previously kept a hands-off attitude toward ICOs.

The implementation of stricter regulation on cryptocurrencies makes its universal adoption challenging. As the world moves closer to becoming a cashless society, the need for a digital currency that addresses the short-comings of cryptocurrencies becomes abundantly clear. In the next six months, we can expect to see further adoption of digital payment platforms that are both fiat-based and scalable, two characteristics that hold cryptocurrencies back.

nanopay's solutions, for example, are built around the core technology of MintChip, which was developed by and for a central bank, the Royal Canadian Mint. Conceptualized by the very industry it is meant to disrupt, it is regulator-friendly and easily integrated into banks or financial institutions. It is also highly scalable, with the ability to complete up to 30,000 transactions per second.

The growing adoption of open banking is another example of how developments in the last six months will influence innovation for the next six months in the financial industry. Essentially, open

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banking provides an opportunity for fintech solutions, as third-party providers to be integrated into banking services. Open APIs change how consumers access accounts, allowing multiple accounts to be accessed through a singular service, and can even improve the payment process, making it quicker and more cost-effective. Open banking will become more prevalent in central banking institutions, and fintech solutions will continue to become a part of banking services.

Each day, businesses working on a global scale increasingly become the standard. With a surprisingly large percentage of businesses still using physical checks as a payment method, the demand for quick and secure cross-border and B2B payment solutions will drive further adoption of fintech solutions in the next six months. Communication with clients and partners based around the world happens at an instant, and companies will expect the same from their payment solutions. Digital cash with nanopay's platform can be issued in multiple currencies and reduces the need for liquidity capital. Not to mention, cross-border payments made through the nanopay platform settle instantly.

Finally, one of the biggest regulatory changes from the last six months was the EU's General Data Protection Regulation (GDPR), which came into effect on May 25, 2018. While the regulation may not directly impact payment processes, the regulation set a precedent for the careful handling of personal data. Individuals will start to expect transparency in all aspects of their digital lives, including payments and finance. Because of this, we'll see payment platforms, like nanopay, that provide transparency in their processes become the new standard. With nanopay, there is no "middleman" when payments are sent, and the payment cost, time and data is transparent to all parties involved.

The last six months were marked by inventive and innovative fintech advancements, and this trend will only continue. Our world continues to be more interconnected, and the financial industry will be compelled to evolve and use fintech solutions to provide services on a global scale.

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NOVOPAYMENT

ANABEL PEREZ

Co-Founder & CEO

Open Banking Isn't Waiting for **MANDATES**

As new open banking and API rules have rolled out in Europe, Asia, Mexico and elsewhere, one might have thought that companies would wait to see what happens before kicking off any new initiatives. But, if this year's heightened interest in FinTech-bank collaborations is any indication, financial institutions in the Americas will not be waiting for government mandates – and they shouldn't. Halfway into the year, there seems to be a recognition that open banking is about taking the necessary steps now to learn and adopt the methods and protocols that will likely dominate financial services for the next decade.

Around Latin America and the Caribbean, we've already seen several financial institutions that have started, or are narrowing down projects and partners to deliver API-powered proofs of concepts, and quick wins. At first glance, these projects may not scream open banking, but if they involve APIs, FIs or banks collaborating with third parties to deliver financial services, they're open banking in our book.

The reason is simple. These projects are about embracing collaboration. They are helping to illustrate and ground abstract ideas into concrete experience, and rallying people in ways that will be critical to staying relevant. They are turning skeptics into informed, engaged and active partners. And, the more urgency they receive from leaders who have bought into a "trial and test" way of thinking, the more likely they are to move quickly and succeed.

From our company's point of view, we prefer and recommend projects that have a clear potential to scale rapidly, that can be piloted with an existing client base and that clearly fall into current rules. By nature, these tend to be B2B-oriented services (though not always) like digital account origination, real-time payments, mass disbursements and B2B2C plays like digital lending, to name a few.

As an example, gig economy and other digital platform companies are providing a clinic on how real-time systems have the ability to dynamically pull financial services and rapidly scale volumes via

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bank and fintech APIs, with little need for human intervention or traditional bank delivery models. Anecdotally, we're seeing deposits in similar use cases growing at a rate of CAGR +2,000 percent. As partners have started to see that kind of traction, internal and external conversations about open banking projects have started to take on a decidedly different tone and sense of urgency.

This contrasts with projects that still face resistance within organizations that incorrectly interpret them as complicated or competing with other efforts or resources. Today's API enabled approaches are actually pretty straightforward once participants get used to the idea of sharing roles to create winning set-plays — never mind the fact that these technologies are proving their ability to cut the costs of opening accounts and cash-in cash-out services by 50 percent or more.

As we head into the second half of 2018, we see that the most promising initiatives will combine sponsoring leaders willing to experiment with high-value opportunities, participants having clearly defined roles from the beginning, powerful APIs, and partners with the proven ability to bring together and orchestrate all the pieces. The takeaway for the remainder of the year is clear: pick a project and a partner that you like, map out the roles and requirements and get off the fence.

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DONALD FRIEDEN

Founder & CEO

The Retail REVOLUTION

In the late 1990s, internet retail was booming. Prognosticators described a New Economy that was going to upend the retail business and knock down brick and mortars. Billions of investment dollars flowed into the space only to see countless internet retail businesses go under as the New Economy fizzled with low online shopping adoption and perennially unprofitable businesses. Although many factors spelled the demise of internet retail businesses, one of the primary causes was consumers' hesitation to abandon traditional shopping habits for new ones.

Fast forward to present day, when we are finally seeing brick and mortar companies folding under the pressure from online retail. In the first quarter of 2018, there was a record high of retail bankruptcies according to Moody's investment firm. Consumers prefer the convenience of online retail, and shopping habits have transitioned to a blend of on and offline.

Online shopping and the desire for greater convenience continues to grow, with mobile payment services proving to be the next step in the progression. Consumers this time around are finding the transition to mobile shopping less arduous and the convenience payoff is immediate. Retailers are busily developing mobile commerce strategies with innovators such as Starbucks shining the light on what's possible.

One area of retail that is embracing mobile commerce is the convenience industry. Convenience stores generated $601.1B in 2017 sales accounting for over 3% of the U.S. gross domestic product according to the 2017 NACS State of the Industry Report. Convenience stores have not taken a hit like their brick-and-mortar relatives because of their ability serve immediate needs. But technological improvements must be made to continue avoiding the retail downturn. Fortunately, the convenience industry is staying true to its name with a quick adjustment to easy-to-use mobile commerce technology.

The benefits of adopting mobile commerce in convenience retail are significant. First, ever since pay at the pump was launched, retailers have struggled getting consumers

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into the store where the highest profit centers exist. The emergence of fresh foods and other concepts has certainly helped, but mobile commerce presents a new opportunity. Now, retailers can offer targeted instore offers and promotions directly to their very own branded phone application. Those offers can come from the convenience retailers themselves or from oil and consumer packaged goods companies. With digital offer capabilities, each company gains a more direct connection to the consumer and has the ability to generate convenient commerce moments. Ultimately, greater instore traffic means bigger sales and more frequent purchases.

Fraud has always been an issue for retail. Convenience stores in particular face a growing concern with credit card skimming at the pump. Skimmers have developed hardware that is almost indistinguishable from pump equipment, making it all the more difficult to protect credit card information. Mobile payments mean avoiding credit card swipes that can lead to fraud, which brings peace of mind to shoppers and retailers alike.

The consumer experience must be frictionless to gain mobile commerce adoption and frequent use. The trick to winning for the convenience store industry is stitching together the multitude of payment methods, POS systems, fuel pump controllers, and even connected cars. It is exactly what oil companies and convenience retailers such as Philips 66, Shell, Sinclair, Gulf, and Liberty have done. They are leading the way by demonstrating what the future of mobile commerce will be in the convenience store industry.

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paya™

GREG COHEN

President

Defined Lanes Become An Open Swimming **POOL**

2018 has started off with a bang in payments for sure. We've seen GDPR go into effect, the Visa network go down in the EU, the massive Adyen IPO, Ant's record $14B Series C round, Real-Time payments expansion, Card Network push for contactless and massive M&A continuing to take headlines (iZettle, Weebly, iPayment, HyperWallet, etc, etc). Whew! It is without a doubt the start to one of the craziest and most exciting years in payments.

As I look out over the rest of the year nothing seems more impactful than the continued arms race for growth-oriented assets that will help incumbents shift into emerging growth segments, enhance technology and shift their business strategies for the future. In a low interest rate environment where the major tech and payments players have cash stockpiles that are growing even larger with lower tax rates and cash generating business models, I would expect to see even more acquisition and investment activity. The market is demanding these companies put that cash to good use and build in emerging, growth oriented directions. Future growth is critical for the institutional players and they will continue to leverage their heavy cash positions and balance sheets as they positioning for growth in emerging markets, sectors and/or technologies.

This is great news for the smaller growth oriented companies building scalable technologies and distribution capabilities in growth sectors. It also plays out positively for the larger entities looking for growth, new technologies and/or synergistic merger-like opportunities.

Everyone wants to go "where the puck is going" and sometimes there is no better way to get there than buy your way there. Interestingly, this flurry of M&A will set new courses for many players and truly change the landscape of the payments ecosystem from what was once a very basic 4-party very defined business model. What used to be very well defined "swim lanes" of players will morph into one big "open swimming pool." Just make sure when the market changes you aren't in the deep end!

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PPRO
the payment professionals

SIMON BLACK

CEO

The Keys to Growth in Cross-Border SELLING

The tremendous ongoing disruption that's happened in the FinTech industry thus far in 2018 shows no signs of slowing over the second half of the year.

Specifically, eCommerce businesses seeking to establish or expand their global footprint outside of their home countries must make simple and user-friendly local payment methods (LPMs) available to consumers in every country where they want to do online transactions.

Local payment methods creating more versatility

Merchants are doing more than ever to accommodate consumers in international markets.

The credit card is the most popular payment method among U.S. consumers, but that's not always the case in the rest of the world. For example, consumers in China use e-wallets such as Alipay or WeChatPay. Combined, these two payment methods have more than 700 million users.

In Mexico, paying with cash remains popular, so payment acceptance has evolved at common Mexican retailers such as OXXO. The customer makes a purchase online, selects one of the cash-payment methods and receives an invoice that is printed or retained on a mobile device. At the store, the customer presents the barcoded invoice and makes the payment with cash, which sends a notice to the merchant that the transaction is complete.

Consumers in many countries within Europe are accustomed to paying via bank transfer. More unified banking rails and tighter integration in these geographies mean that bank transfers are both fast and inexpensive.

The larger point is that the payments industry is becoming much more versatile in adapting to the local payment options preferred in other countries. Consumers now have more innovative and convenient ways to make payments easily, wherever and however they shop.

Online payment preferences should align with the customer experience

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As the payment landscape evolves, the number of alternative payment methods used in a particular country will vary widely, and shoppers tend to be loyal to the payment methods they're familiar with. It is important that merchants are in sync with the customer's online experience.

Global consumers use thousands of alternative payment methods, but only 350 or so have gained any prominence and are made for online shopping. It may not be necessary for a merchant to offer every payment method in a particular geography. Instead, the merchant should offer those that cover the majority of the market. In some markets, two or three payment methods should suffice. Other markets may require double (or triple) that number.

Ultimately, savvy merchants should respect the differing payment cultures in the countries they are selling into, offering the preferred local payment methods that consumers want to use. A customer-centric attitude may be more important to successful sales than product and service quality or a robust internet presence.

Taking steps to combat cyber crime

An evolving development for payment service providers will help them fight fraud and strengthen data security. Machine learning, in combination with robotic process automation, will lower the costs that PSPs pay on fraudulent transactions and make it quicker and easier to detect a fraud.

Merchants, regardless of geography, need to recognize that cross-border sales are increasingly common. Shoppers want to pay with their preferred local payment methods, so merchants should work with their payment service provider to ensure that preferred payment methods are available to consumers.

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Rambus

DAVID WORTHINGTON

Head of Payments

Catch Me IF YOU CAN

The payments industry is in a constant game of cat and mouse with fraudsters.

2018 has been no different. We have seen advances promising additional security for the card-based payment space, but at the same time the growth of real-time payments (RTP) and the cryptocurrency boom is creating new, vulnerable targets.

It is apparent, however, that hard-earned lessons and proven technologies can be transferred to emerging fraud scenarios across payments and beyond.

Finding the path of least resistance

For a long-time, fraudsters have focused their efforts on trying to compromise payment card credentials.

In response, measures like EMV® chip and EMV 3-D Secure have been introduced and have proven effective in mitigating card fraud.

In particular, payment tokenization has been highly successful in safeguarding card-based payments in-store and online by replacing the consumer's primary account number (PAN) with a unique payment token that is restricted in its usage, for example, to a specific device, merchant, transaction type or channel.

2018 has brought further security advances in the card-based payment space, with initiatives like EMV Secure Remote Commerce promising to bolster security.

Of course, payment card fraud is not going to disappear. But with the card-based payments ecosystem set to become increasingly robust, fraudsters are turning their attention elsewhere.

Real-time payments: The next target

For various reasons, Demand Deposit Account (DDA) credentials, which relate to current, savings or checking accounts that are used for direct credit transactions through automated clearing house (ACH) processing, are an increasingly attractive prospect.

DDA credentials are vulnerable as they are stored in raw form across various

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locations. This includes e-commerce websites, mobile and P2P wallets, invoices and payroll, meaning they are easily accessible to committed fraudsters.

The frequency and public awareness of ACH fraud may be much lower than credit and debit compromises, but the impact can be significant.

The average value of unauthorized ACH transactions is much higher, creating the potential for very large value frauds and even systemic attacks against national payment systems.

It is the proliferation of real-time payment schemes across the world, however, that create huge opportunities for fraudsters.

Tokenization and real-time payments

2018 has been a pivotal year in the development of a global RTP infrastructure, with schemes in Australia, Europe and the United States all going live. There are now 35 countries with RTP schemes either in operation or under development.

With RTP gathering momentum, it is being brought into sharp focus that many financial institutions are still playing catch-up when it comes to security. Banks have seconds rather than days to identify a suspicious transaction, and this places enormous pressure on existing fraud measures.

For example, manually checking payment mandates and unusual account activity remains a mainstay of the traditional clearance process, but is simply not compatible with RTP.

In comparison, fraudsters are sophisticated, prepared and organised. Consequently, the implementation of RTP usually leads to a sharp spike in fraud. For example, online banking fraud losses increased by 270% following the introduction of faster payments in the UK in 2008.

By removing account numbers from the transaction process entirely, tokenization can significantly reduce the risk and impact of account-based fraud and play an important role in securing RTP. Importantly, tokenization is complementary to other anti-fraud measures and is easily compatible with existing systems to support a layered approach to security.

Making secure cryptocurrency trading a reality

We have also seen cryptocurrencies emerge as a low-risk, high-reward target for fraudsters in 2018.

In the past six months alone, $1.1 billion has been lost in cryptocurrency-related theft. The year began with a hack on Japanese exchange Coincheck resulting in over $530 million being stolen. Since then, attacks have reached epidemic proportions, creating extreme market volatility and slashing value as spooked investors cut and run.

There are various drivers at play here.

The portability of cryptocurrencies means they are widespread, accessible and easily spent. The market boom also means they are now highly valuable.

This is compounded by the fact that the security of the exchanges, most of which have grown rapidly recently and lack sufficient resource and expertise, is inherently weak. It is estimated that one third of all exchanges have been hacked at some point, and attacks are on the rise.

As we move further into 2018 and beyond, the security challenges will only become greater as more sophisticated and advanced hackers turn their attention away from traditional targets, such as banks, and towards the vulnerable exchanges.

For cryptocurrencies to be viable long-term, the underlying infrastructure needs to catch-up. And fast. Proven, field-deployed technologies such as tokenization have the potential to deliver a secure, encrypted model for cryptocurrency trading and storage.

Towards a tokenized future

Of course, the challenge of protecting and securing data is a universal concern, and not just limited to the payments industry. Indeed, the introduction of regulations

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such as GDPR means the stakes have never been higher.

Similarly, the benefits of tokenization should not just be limited to the payments industry.

The healthcare sector, for example, is plagued by data breaches. Tokenized patient records would ensure sensitive data can be protected as it is transferred, or rendered useless if it fell into the wrong hands.

Crucially, the power of tokenization can not only mitigate the impact of data breaches, but also solve the problems created by data breaches. The wide availability of personally identifiable information means that it is relatively easy to claim identities and fraudulently access services. But by linking authoritative documentation and information to a tokenized credential, for example, consumers can prove their identity, without the risk of the credential being intercepted or stolen.

The list of potential applications goes on, and we can expect to see expanded use-cases for tokenization technology throughout the rest of 2018 and beyond.

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RenovITe
Transforming payments

JIM TOMANEY
COO

Out with the **LEGACY**

The first half of 2018 has taught us a lot in the payments industry. Fast moving FinTechs and challenger banks continue to snap at the heels of the big players, and many of those big players have seen their legacy technology platforms fail them in very public outages – VISA EU, TSB in the U.K.; CBA in Australia and TD Bank in Canada, to name a few. These outages have undermined consumer trust in market-leading banking brands, and at the same time, they undermine the payments market's trust in legacy technology providers. The "too big to fail" label attached to both banks and their technology providers has been proved wrong. We've seen an emerging willingness for big financial institutions to consider new approaches as they work to bridge the gap between their 20th century technologies in the face of 21st century change.

Although the cloud was still relatively new in 2015, we believed it would be significant, but for it to be exploited, a product would need to be "cloud native." The rush by legacy providers to prepare their non-cloud products for deployment on a cloud-hosted infrastructure appears to have vindicated our strategy. Of course, deploying a legacy product in a VM hosted by a cloud provider is a world away from the delivery of a truly cloud-native payment system that takes full advantage of the elasticity and auto-scaling capabilities of the cloud. Even more surprising than the rush of legacy providers to stick a cloud sticker on the outside of their legacy products is the growing willingness of major payments processors to consider true cloud deployments. The speed with which this willingness has emerged has been a key trend of 2018.

The other accelerating trend of 2018 is the desire of ATM deployers to climb off the Windows Upgrade treadmill. Banks and deployers tired of the Microsoft gravy train perpetuated by the dominant OEM ATM manufacturers are actively seeking alternative solutions for their ATM software stacks, and those alternatives are extending to the operating system itself.

These trends can be characterized as evidence that the payments processing

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industry has turned a corner in the first half of 2018, leaving behind much of the previously unchallenged orthodoxy of legacy solution providers. Now they can see the future opportunities presented by 21st century solutions from modern providers and they are embracing that change.

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Tipalti

CHEN AMIT

Co-Founder & CEO

Regulatory ADAPTION

Fraud, email hacking, GDPR, FATCA tax penalties, OFAC violations, global trade disputes, and other regulatory issues have really dominated the headlines. Virtually every single one of those items impact the payments and commerce world considerably. It goes without saying that Fintech and payments technologies need to be robust from a security, privacy, performance, fraud, and regulatory perspective.

More notably, its clear that the Fintech and Regtech worlds are merging. Customers are rightfully demanding that technology vendors not only expedite and enhance commerce execution, such as sending cross-border payments, but also want them to ease and simplify their burden around managing all of these risks. Finance and payments teams need to comply with payment, tax, and other regulatory requirements while eliminating fraud, security violations, and tax and regulatory penalties but they want to do so without staffing up and building new manual processes. They increasingly expect that their global payments technology partners will simplify these requirements for them.

As businesses grow and scale, these risks grow with them. As a company transitions from a domestic-only business to managing a global partner base, the risks of OFAC, SDN, FATCA, and other penalties escalate. As an enterprise opens new geographic subsidiaries, creates new brands, or acquires new product lines, new processes and reporting requirements must be layered on to prevent fraud, prepare for audits, and ensure accurate financial reporting. As brand awareness grows for that business, they increasingly become targets for fraudsters. As an example, the constant email breaches in the news have made it pretty event that legacy processes such as capturing and communicating sensitive payee payment details and tax ID information via email is no safe or acceptable and because of this, finance departments are now moving toward secure self-service supplier portals for the collection and validation of supplier payment and tax details.

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Generally, manual processes increase the odds of errors and risks. As importantly, they slow growth and become a drag on finance and payment organization's productivity, holding those teams back from driving true innovation to their businesses. For this reason, businesses are adopting process automation technologies at a faster and faster pace. Growth-oriented companies who can't afford to decrease their competitiveness, speed, and global expansion plans are embracing payments automation solutions aggressively and this will likely only accelerate throughout the remainder of 2018.

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TOKENEX

ALEX PEZOLD

Co-founder & CEO

Securing CONNECTIVITY

At TokenEx we're continuing to see accelerated frustration on behalf of our customers and prospects from the consolidation taking place in the payments platform space. Concerns and fears about long-term agreements with little wiggle room, the forced and manual management of multiple integrations, and the constant barrage of required updates are leaving many professionals in our industry nervously juggling their most valuable and fragile assets – sensitive data.

Make no mistake, this is a big letdown which, if allowed to continue without objection, will only further devalue a commoditized industry. Similar to the airline industry, there will soon only be a few payment platforms with little variance in offerings where everyone is forced to pick the best of the worst to process their payments. Continuing with the airline analogy, the only refreshing upside are the smaller, more customer-focused and feature-rich, private jet experiences everyone wants with the few visionary payment gateways who "get it."

Yet, successful data security practices are not built on a one-size-fits-all philosophy. This is true for any technology, and the most successful tech companies are the ones who embrace customization, personalization, and a variety of options. Doomed are the ones who rely on inconvenience and monopolization to fuel their sales cycles and line their pockets.

I feel we're nearing a critical mass where, much like the blockchain and crypto hype of early 2018, the power of choice will soon be reclaimed by a market hungry for options and ease of access. In a free market, the best solutions survive. And unless we're missing something, we have yet to see the best solutions emerge in our space.

What do you foresee for the remainder of 2018?

Connectivity will be the next major evolution in the payments space. At the risk of exhausting the airlines analogy, we've found ourselves in a world where the companies running the airlines have also built the airports and the highways

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that connect them. It should be no surprise that they've been designed without the commuter's needs in mind to move effortlessly and efficiently between them.

Connectivity is a simple concept, but a disruptive one. It's easier said than done. But achieving full processor agnosticism and open integration is on the very near horizon. We're seeing the freedom to flow between currencies in crypto, devices in IoT, and information through search engines and customized news feeds. Connectivity is the reason Bitcoin surpassed Visa's $8.9 trillion market cap. It is the reason Amazon, Apple, and Google have a combined market value of $2.5 trillion (at time of writing) – enough to buy all 33 oil and gas in the S&P 500, with $1 trillion left to spare. These technologies are built on the concept that while inconvenience may be profitable today, accessibility is even more profitable tomorrow.

Contrary to popular opinion, the fact is that transparency, availability, and freedom of choice are not incongruent with security and compliance. The only question is who will get there first.

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ISABELLE NOBLANC

VP and General Manager, Identity Management & Security

Bringing the Background To The FOREGROUND

2018 is a year when we're finally seeing some of the big changes that have been worked on 'in the background' coming out into the light. PCI have released their Software PIN on COTS standard, which is helping to drive new thinking around exactly what constitutes a 'Point of Sale' system. Online payments are also gaining new methods for security as EMVCo continues to develop and release standards such as EMV® 3-D Secure and Secure Remote Commerce.

It is no longer just about liability and interchange fees, but more about information. Privacy, GDPR & PSD2 to some extent have been trying to regulate the collection of information, and what we see is a focus around giving back value to those providing information. We notice the consumer being willing to trade it's privacy for more convenience under one condition: trust. And this concept is finally catching on in 2018.

More so, we see a big trend in machine learning used in order to manage risk based on the data collected and AI offering predictive visibility to the users.

The bartering of information between the different actors is steered towards improving convenience and providing secure identity management using data risk management. Making data the new currency.

Over the remaining part of 2018, we can expect the pace of change to continue with more new standards to evolve and be released. It's a time of change in the payment industry, driven by the Fintech revolution and the continuing maturity of the EMV roll-out in the US. Payments itself is becoming both more widespread, as well as less visible. Consumers don't expect to experience the payment, they expect the payment itself to be invisible and to only experience the purchase. This is a side effect of growth, of maturity. Payments is becoming commoditized, and this is a good thing – it shows our industry is growing up. But it also brings challenges.

This will be felt the most by the incumbent methods and assumptions – expect increased challenges around new methods of authentication, from risk based through

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to CDCVM; expect further adoption of software based security methods in place of hardware, but also a 'resurgence' of hardware through the consumer devices themselves; expect for the focus on 'payment' to continue to decrease, as we shift the focus on the verticals that sit on top of what are increasingly commoditized payment rails; expect those traditional rails to face more challenges as things like PSD2 and real-time payments start to bite at the heels of the incumbents; expect payments everywhere, with increased focus on IoT and 'smart speaker' payments.

Just don't expect Bitcoin to be back at $20k per coin by the end of the year.

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wirecard

SUSANNE STEIDL

Executive Board Member, Executive Vice President of Issuing Services & Chief Product Officer

Constant ANTICIPATION

We know the cliché: The only constant is change. This is why leadership requires astute judgement, knowing when to adjust to change and when to stick with your vision. And in general, it is better to anticipate customer needs than to be reactionary.

When we see developments in security regulations; important mergers, purchases, IPOs and divestments and consolidation in our industry; and the many competing statistics attempting to tell the story about the best way to do payments, of course we take note of them. They can only inform and improve our products. They validate our vision of leveraging technology to build a new payments landscape for the future — one that is convenient, borderless, efficient and fully digital across the entire financial supply and commerce chain.

The overarching trend we see is the desire on the part of consumers for a completely connected payment experience. This means that our industry must stay ahead of technology to ensure not only convenience for the consumer but, equally important, efficiencies for the retailer and security at every touchpoint.

In today's commerce, every point – in time and in place – holds the possibility for businesses to connect with consumers and to convert those connections into points of sale. Our Q2 survey of several hundred American consumers found that they shop in-store and online equally and express a strong interest in adopting new technologies, as long as they offer more convenient, personalized service.

Therefore, retailers are highly motivated to develop payment ecosystems that integrate the opportunity-rich mobile, social, e-commerce environment into the in-store experience. The route there is artificial intelligence and other advanced digital technologies that add value and convenience to the customer experience.

Today, just 15 percent of enterprises are using new technologies rooted in AI, smart data, and the Internet of Things. But 31 percent have it on their agenda for the next year, suggesting that such cutting-edge services will only continue to grow. At the

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forefront of this trend globally, Wirecard has partnered with SES Imagotag to build an Electronic Shelf Label model that allows customers to walk in, pick up and scan their selections with their phones, and walk out. Freedom from the checkout line improves convenience, customer service, and flexibility for both consumers and merchants.

To our North American survey respondents, high-tech features and gadgets can radically change the physical experience of making purchases, integrating into a payment ecosystem that consumers prefer. Of our participants ages 18 to 24, 40 percent said they would let a robot or other automated technology shop for them, provided it understood their preferences. Such a robot would combine smart data analytics, natural language processing and other features into a consumer experience that is convenient and reliable.

Further, tech-driven payment ecosystems are more secure than those that aren't. In 2012 AI startup funding was a little less than $600 million; in 2016 it was $5.021 billion. Smart data has enormous leverage potential in payments, particularly in managing risk and security. We can apply algorithms to payments that can create additional insights and actionable data for merchants, accelerate payment for loyal customers, and block suspected fraud in real time. The additional revenues, cost savings and efficiencies make these considerable investments more than worthwhile.

The accelerated rate of tech development, consumer demand, and the ever-evolving banking and regulatory picture – especially around GDPR – have driven many changes in payments in 2018 thus far. We can expect the same in the next six months, and in the years to come. To stay ahead of change depends on AI-assisted payments. This is how we will understand and interact with consumers and work toward the highest levels of efficiency and security risk for businesses and consumers alike.

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STEPHEN GOODRICH

CEO

Customer-Centric PAYMENT

The concept of payment as part of a seamless, enjoyable shopping experience continues to be at the center of innovation in the payments industry. Consumers are looking for pleasurable buying experiences defined by simplicity and speed.

Customers may not define their favorite brand experiences as removing boundaries or melding the steps required in purchasing. But those merchants who are succeeding in creating loyal customers are those who cross traditional boundaries and integrate steps to provide the ultimate in easy and rewarding buying experiences.

Consumer-brand relationships are expanding to include more of the purchasing cycle, creating new and more natural types of engagement. Interactions beyond store walls include everything from online orders to payments at gas pumps that require no further interaction, asking Alexa to order your usual from Starbucks and voice-assisted orders for restaurant pick-up or delivery.

As merchants look for ways to differentiate their stores and build brand loyalty, merging traditional checkpoints in purchasing is one obvious approach. Combining payment and rewards, for instance, is delivering on the promise of a more positive consumer experience. One-swipe shopping that debits consumer checking accounts and provides instant meaningful rewards at the same time has been shown to create purchase lift while fostering brand loyalty.

Private label debit employs only a flat, per-transaction fee structure. The discretionary margin created can be used to drive consumer engagement. Retailers can now monetize incentives and rewards that truly drive loyalty. Reward programs associated with private label debit encourage customers to sign up for merchant programs. Once signed on, consumers continue to use these programs, so merchants see increased sales and business growth.

The key here is nurturing the emotional connection between the merchant and the customer. Personalized rewards are

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integral to this connection, which drives brand loyalty. Behind-the-scenes data collection about purchasing habits allows merchants to provide targeted, meaningful rewards that surprise and delight their customers. Generalized discounts simply can't compete with rewards tailored to individuals. The feeling that a brand knows and values us enough to offer us products or services we really want feeds the emotions that encourage loyalty.

I believe the remainder of this year holds great promise and excitement for the payments industry. We've begun to unlock the secrets to consumer loyalty. And we're finding that payment, when delivered in the most accessible and streamlined way, can be an integral part of the merchant-consumer connection that leads to loyalty.

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