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In her role as Kroger's senior director of enterprise payments, Kathy Hanna is recognized this year as one of the Most Influential Women in Payments.



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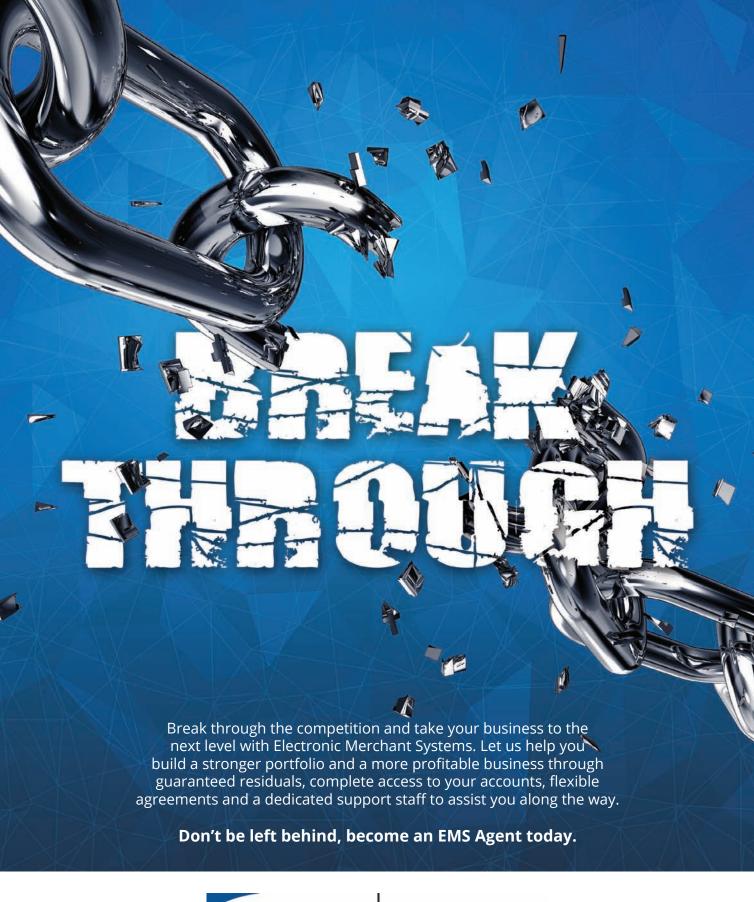
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Editor's Letter



DANIEL WOLFE Editor

The Value of Diversity

EVERY YEAR, THE EDITORS OF ISO&AGENT AND PAYMENTS SOURCE

recognize the most influential women in our industries, and every year I learn something new from the experiences these honorees share.

One thing that stands out is the importance of having a diversity of perspectives in the top ranks of any company. Whether it's a diversity of gender, ages or cultural backgrounds, each new insight these individuals bring has the potential to change the course of a company and open new markets that a less diverse executive team would not have seen.

In this year's profiles — a selection of which are published in this very issue — our honorees share how their newer colleagues have challenged their own viewpoints and opened their eyes to new possibilities. In such a dynamic market as the payments industry, every person's voice can be vital to staying at the cutting edge of innovation. ISO

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RISK: E-COMMERCE

A New Approach to Chargebacks

E-commerce merchants are more concerned than ever about the potential for payment fraud and chargebacks. But added vetting could make the process worse. BY AUTUMN CAFIERO GIUSTI

hen e-commerce fraud spikes, it can be tempting for merchants to pile on more controls and risk turning away otherwise legitimate transactions that appear to be fraudulent. The alternative is often to shut off these controls altogether and leave themselves vulnerable to criminals.

Neither extreme is ideal, and acquirers say merchants need to start taking a more systematic approach when setting fraud controls to avoid this dilemma.

"Though extremely effective when methodically applied, fraud control parameters can be absolute and unforgiving when set inappropriately and can unintentionally defeat legitimate transactions," says Marcus Smith, senior vice president of risk management for merchant acquirer iPayment Inc.

Smith points to one of his clients, a large online sporting goods retailer, as one example of how the all-or-nothing approach to fraud controls resulted in a nearly 14% decrease in the merchant's sales volume - just before the holiday shopping season.

The merchant attempted to address a spike in fraud and chargebacks without understanding the root of the problem; it set the address verification service filters to only allow transactions with an exact match on numerical address and zip code. But in doing so, the merchant prevented the system from making



partial matches, with the unintended consequence being that the system would block transactions processed whenever the address verification system was offline or unsupported by the card issuer.

After enabling these fraud controls, the merchant noticed that chargebacks continued unabated. With more legitimate sales being blocked, the chargebacks-to-sales ratio actually increased. The merchant then responded by disabling all fraud controls, further exacerbating the problem.

Upon closer examination of the fraud and chargeback patterns, the merchant was able to come up with a more effective approach to tweak the fraud control

Once the merchant reconfigured its filters, sales volume losses dropped from 14% to less than 2%, and chargeback ratios fell back in line.

Not having the proper fraud controls in place could be fueling an ongoing trend in sales losses, as false positives are taking a chunk out of revenues. Among digital goods merchants, 34% of their customers' declined transactions are believed to be legitimate, according to an October report by Javelin Strategy & Research. ISO

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Mastercard's Not-So-Simple Rule

A straightforward rule from Mastercard is causing a lot of confusion among merchants and acquirers. What should be a simple software upgrade is seen by some as a directive to put new devices in place. BY KATE FITZGERALD



housands of U.S. merchants are still holding out against EMV because they see no immediate threat from counterfeit card fraud, and business goes on. But a less obvious change in payment card acceptance may finally force them to upgrade.

As Mastercard expands to its new 2-series card account numbers this year, some merchants are hearing from their vendors that they must upgrade equipment or lose support for card

payments, citing the Mastercard rule.

There is already confusion in the market over whether this upgrade requires new hardware or only new software. The answer will vary from merchant to merchant, and the clock is ticking: Mastercard set a deadline of June 30, 2017 for merchants to be able to accept 2-series cards, and if they don't comply their acquirers could be subject to fines of up to \$25,000 per month, the company said. Mastercard says it would not require the merchant to stop accepting payments.

The push for the new 2-series BIN (bank identification number) cards began years ago, and this year Mastercard began introducing card account numbers beginning with "2," joining its existing range of account numbers beginning with "5" to accommodate explosive card account number growth in recent years. (The original compliance deadline for merchants was Jan. 1, 2017, but Mastercard last year extended it by six months, to June of this year.)



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Acquirers are bearing most of the burden of readying merchants to accept 2-series cards, which requires a software update sent to terminals, said Chiro Aikat, Mastercard's senior vice president of product delivery.

For the vast majority of U.S. merchants, the switch to accept 2-series cards will be seamless, but Aikat acknowledged that some terminals may be too old to handle the necessary software updates.

"Terminals that are 15 or 20 years old will probably require replacement, and it's hard to know the exact numbers of those," Aikat said.

But even merchants with newer terminals are being told by their merchant services providers that Mastercard's 2-series initiative will require them to replace their hardware this year.

Raleigh, N.C.-based First Citizens Bank notified a merchant in Scottsdale, Ariz., who declined to be identified, that his single Verifone VX510 payment terminal, which was new in December 2011, will no longer accept cards acceptance after June 30, 2017 because it's not equipped to receive the 2-series software update. A replacement terminal—which includes EMV and software update support—will cost \$250.

According to Verifone, this terminal model is capable of receiving software updates. It is a manual process, not an automated one, handled through the acquirer.

Other small businesses could face similar challenges, and the scope of this group is unknown.

"There's still a segment of the smalland midsize business market that's using legacy payment equipment, and in this case (requires) a terminal replacement, but we've seen this to be the exception," explained Marc Castrechini, vice president of product management at Cayan.

Analysts say payment terminals typically have a lifespan of five to seven years, but many merchants keep their hardware operational well past that range.

"There are lots of terminals out there that are discontinued and should have already been replaced, which have no software support," said Rick Oglesby, a principal with AZ Payments Group. Common payment terminal models like the VX510 may technically be capable of handling a software update, Oglesby added, but acquirers are no longer providing software for them.

It costs a lot for acquirers to create terminal updates and distribute them, so reducing the number of terminals supported helps reduce costs, added Tim Sloane, vice president of payment innovation at Mercator Advisory Group.

"Just because a payment terminal could be updated with software doesn't mean it will be," Sloane said. In most cases, acquirers will contact merchants with equipment too old to easily support software updates and discuss new terminal options, which may or may not cost extra, Sloane predicts.

Acquirers that can support the 2-series BINs through a software update are working to meet Mastercard's deadline.

Cayan has made changes within its gateway and cloud-based platform to drive updates to merchant customers so they will automatically be able to process 2-series card numbers, and it's testing the system throughout its network now. "We are using education, awareness and increased support and research to make sure there are no disruptions in authorization," Cayan's Castrechini said.

The Electronic Transactions Association also has been working closely with Mastercard for several months to ensure a smooth transition to the 2-series account introduction, said Amy Zirkle, the ETA's vice president of industry affairs. "We've conducted webinars and had discussions with senior executive groups to get the word out and make sure merchants are ready," she said.

Mastercard said it's unlikely it will need to levy fines on merchants in connection with the 2-series introduction.

"Noncompliance doesn't always result in a direct fine," Mastercard's Aikat said, adding that "it is hard to predict" the level of effort that will be required by acquirers and merchants to complete the transition to the 2-series.

Mastercard recently began a "mystery shopping" process to gauge how many merchants are ready to accept the 2-series cards and it's too early to draw any conclusions.

"We had to respond to a shortage of card account numbers that's been exacerbated by tokenization and other market forces," Aikat said, noting that growth of mobile wallets and e-commerce are driving rapid consumption of 16-digit account numbers as more merchants use tokens, or replacement account numbers, to guard sensitive payment card data.

"We're also seeing more card growth in general, from the rise of financial inclusion in emerging markets and prepaid cards, which means we need more capacity for account numbers."

Visa, American Express and Discover face similar challenges but each is tackling the problem differently, Aikat said, including expanding account numbers within their existing BIN ranges.

"We felt that expanding account numbers within existing BIN ranges was a stop-gap measure, so Mastercard had the foresight years ago to reserve a new range of BINs in anticipation of reaching the point now where we need them now," he said.

Merchant services providers have several options for exploring the potential effect of the 2-series push on their customer base, experts say.

Mastercard offers 2-series test cards to show if terminals can process the new BIN range, said Xavier Ayala, CEO of Eureka, Calif.-based OneSource Business Advisors. ISO



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Reflecting on the Point of Sale

When is a cash register not a cash register? Oak Labs takes its technology through the looking glass in an effort to change the way people pay for clothes. BY KATE FITZGERALD

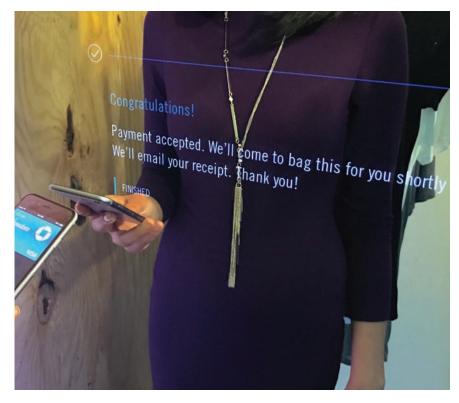
uying clothes can be a tedious process of waiting in lines to get into the dressing room, and then waiting in line again to make a purchase. As it turns out, eliminating the second half of this process can also reduce the first half.

The San Francisco startup Oak Labs is introducing its Oak Checkout concept, building on an interactive fitting-room system based on mirrors that's been in development since 2015 at stores from designers including Ralph Lauren and Rebecca Minkoff. The new version adds Near Field Communication technology to accept payments from within each dressing room booth.

Founded by former eBay executive Healey Cypher and colleagues, Oak Labs aims to wipe out the pain points that still exist in physical retail stores. Its interactive mirror serves as a live merchandise catalog, improving stores' efficiency and reducing shoppers' various frustrations, according to Cypher.

In addition to handling payments, the mirror can also allow shoppers to pick different sizes and styles, just as they would be able to when shopping online; the system can then signal the shopper's choice to a store associate. In doing so, Oak Mirror reduces the average time spent in a fitting room by 40%, cutting overall waiting time for fitting rooms, Cypher said.

"The typical experience in a fitting



room isn't a good one," Cypher said. "You're in there with your pants off and you need another size, but you have no easy way to signal you need help from busy store associates."

Through its app, Oak Labs supports a system for merchants to equip products with an RFID tag containing detailed product information, which appears in condensed form on the mirror when a customer wears it in a fitting room.

Shoppers can tap the product in-

formation displayed on the mirror to browse different sizes or styles, and to request help. Store personnel receive notifications through the Oak Labs app on their mobile device and can signal they're on the way back to the fitting room with information or additional merchandise.

"We're at the beginning of the next wave of retail, kind of the post-Amazon era, where retailers are competing now on the experience," he said. ISO



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RISK: PAYMENT PROCESSING

Lessons from Amsterdam

The inconsistent legalization of marijuana sales in the U.S. is raising many questions about risk management and compliance. Perhaps the answers can be found from a region with a much more mature legal cannabis market. BY BAILEY REUTZEL

hen there's talk of Amsterdam, many people immediately conjure up the skunky smell of marijuana emanating from coffeeshops. And they wouldn't be wrong.

The Dutch city is known for its lax laws surrounding soft drugs like cannabis and psychedelic mushrooms. And it's been that way for several decades. But even still, cannabis companies have trouble landing banking relationships, much like similar businesses in the US.

"It's quite a complex issue just the same as in the States," said Oliver Margerison, director at Amsterdam Genetics, a producer of cannabis products that are then sold to coffeeshops and dispensaries. "Every cannabis-related company in the Netherlands has or has had issues with banking facilities."

How much contention with financial institutions is dependent on the sector the business falls in, and whether or not it can be fully honest about its operations, said Margerison.

For instance, coffeeshops which also sell food and drink are categorized as horeca businesses, a sector that also includes restaurants that don't sell cannabis.

"If you say to the bank you are a coffeeshop, there is no way you will acquire a bank account or any other facilities," said Margerison. "If you say to a bank you are a horeca company and they do



Barney's Coffeeshop is one of the legal marijuana sellers operating in The Netherlands.

not delve deeper, you most likely will acquire the facilities and once you have received the facilities, it is very difficult for the bank to then retract the facilities if they have not done a full investigation into the company in the first instance."

This legal loophole allows some

cannabis companies to secure bank accounts and accept PIN debit transactions.

Seed companies can fall under several business categories and so, according to Margerison, don't have many problems acquiring banking services. The biggest hurdle comes when these seed companies want to accept online payment mechanisms such as Visa, MasterCard and PayPal, Margerison said. Online payment providers will not provide services to such companies.

While there are ways to get around this blockade—setting up dummy websites, using middlemen that take high fees or finding unscrupulous companies in China—none of the options are very reliable. Amsterdam Genetics recently dealt with the latter, having set up a partnership with a company in Hong Kong that promised service provision but payment never came, Margerison said.

"It's very frustrating; we want to run a professional, open and transparent business but brick walls are put up at every turn," he said.

While Margerison says banks and bureaucrats are the ones holding back the cannabis industry, Dave Birch, director at Consult Hyperion, wrote in a Jan. 10 blog post about pushback from the industry to accepting cards. coffeeshops seemed fine with the move, but other stakeholders such as backend distributors were worried, according to Birch.

And that's because laws in the Netherlands regarding the cannabis industry are a bit inconsistent.

One of the biggest issues hindering the cannabis industry in Holland is the front door/back door regulatory mess. Since 1976, the sale and consumption (the front door) of marijuana in the country has been regulated; it's illegal but law enforcement is tolerant of it. But the production and cultivation (the back door) of cannabis is completely unregulated and illegal. To Margerison, this makes the industry seem too shady for financial institutions to do business with.

But "the whole industry has been professionalizing over the past few years," he said. "I really think most shops would accept all cards without question."

Amsterdam Genetics is currently trying to acquire payment provision through banking institutions in European countries that have relaxed laws in recent years. But this is difficult unless the company has a headquarters in the country. **ISO**



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RISK: P-TO-P PAYMENTS

Fraudsters Target P-to-P Security

As person-to-person payment systems are finding more use in mobile wallets and e-commerce, fraudsters are eager to tap into this flow of cash.

raudsters are licking their chops at the thought of infiltrating person-to-person payment systems and enabling a never-ending flow of small-value transactions — with the potential to strike bigger accounts.

After all, they have to adjust their targets significantly in the wake of EMV chip card technology shoring up security at the point of sale and renewed emphasis on deterring fraud from shifting to card-not-present payments.

"We are watching P-to-P risk exposure closely because the small-value, high-volume formula is something fraudsters are looking at," said Sasi Mudigonda, head of financial crime and compliance for Oracle Financial Services.

As a way to control risk, banks can limit P-to-P use by transaction size or by protecting it behind the same authentication layers applied to online and mobile banking. But as the payment method expands to other platforms, as it has in some countries, keeping transactions safe will call for more advanced machine-learning security measures, Mudigonda said.

P-to-P can be a lucrative hunting ground for fraudsters, considering some South American and African markets already rely on P-to-P for a major portion of money transfers, payments and even payroll delivery. Accounting departments at banks and businesses



are increasingly relying on the speed of P-to-P methods to pay vendors and suppliers.

In the U.S., nonbanks such as Facebook and Snapchat have already added payments to their messaging platforms, which many users stay connected to perpetually.

Oracle is monitoring digital payment advancements in India in the wake of that country's recent moves to spur the use of electronic payments and reduce reliance on cash, Mudigonda said. Criminals looking to breach digital payment networks are equally focused on what's happening in those markets, he added.

By comparison, the U.S. is in the early stages of P-to-P advancements and adoption, even though the country's large banks are getting behind the Zelle network, and various third-party providers such as PayPal's Venmo are establishing strong user bases.

Still, the task of securing P-to-P reg-

istration methods is not lost on financial executives.

"The risk associated with P-to-P is a product set that has long kept many payments execs up at night," said Julie Conroy, research director and fraud expert with Boston-based Aite Group. "That's one of the reasons why we've historically seen it tightly controlled with rigorous registration procedures, as well as rules and velocities once a new user is registered."

To more closely monitor P-to-P payment activity, banks use directory, or look-up, services that can verify a customer's account number or correlate a confirmed account number to a proxy such as a mobile phone number, Conroy added.

"While some of the directory services will alleviate some of those issues, I think a lot of fraud execs are still concerned that the bad guys will find the loopholes before the good guys can seal them up," Conroy said. "I think analytics are one of a variety of services that will help mitigate the risk."

Banks are keenly aware of how fraudsters like to hijack a P-to-P money

transfer service to send funds from a compromised bank account to a "mule" account the fraudster controls. But any sort of P-to-P payment is fair game as fraudsters worm their way onto mobile commerce platforms.

Though P-to-P payments differ in some ways from other mobile or remote commerce transactions, the increase in fraud in those areas indicates fraudsters' intent.

The mobile channel experienced an increase of 40% in successful fraud with debit cards in 2016, compared to 24% in 2015, while staying at a level of 45% both years in successful credit card fraud transactions, according to a 2016 fraud cost report from risk solution provider LexisNexis.

P-to-P payments are positioned to benefit from more extensive machinelearning or Artificial Intelligence screening, mainly because of the high volume moving along P-to-P rails.

"In emerging markets, banks are quicker to adopt P-to-P technology and are seeking ways to monitor the activity in an account," Mudigonda said. "The high volume makes it ripe for AI because there is enough data to learn from."

Some payment forms, including wire transfers, don't have enough volume or data to allow banks to benefit from machine-learning algorithms.

"We have a lot of information on card data about user spending patterns and lifestyles and there are many things we can do with machine-learning from card data," Mudigonda said. "Much of that sophistication is not available in the P-to-P arena, but there is data that can be gathered through high volume."

Oracle provides software to its bank clients that provides machine learning and building of security techniques to protect financial transactions, including the P-to-P options.

Five years ago, Oracle supported rules-based risk management tools, but has since concentrated on building machine learning into its platform.

There's a big reason for that.

"Card-not-present fraud is higher than P-to-P fraud right now and probably will be for some time," Mudigonda said. "But I am certain that P-to-P fraud will catch up." **ISO**

PAYPAL INVESTS IN THE UNDERBANKED VIA ACQUISITION, PARTNERS

PayPal has agreed to acquire TIO Networks, which sells software that powers bill payment processing, particularly for underbanked consumers.

PayPal will pay \$2.56 per share in cash, or about \$233 million, based on TIO's stock price on Jan 9, 2017 when it entered into negotiations with PayPal.

^aWorldwide, more than 2 billion people do not have affordable access to basic financial services, making it difficult and expensive for consumers to carry out basic financial tasks, including bill payment. TIO's digital platform, and physical network of agent locations make paying bills simpler, faster, and more affordable, said Dan Schulman, president and CEO of PayPal, in a release.

TIO is based in Vancouver and is one of North America's largest multi-channel processors, handling more than \$7 billion in consumer bill payments in fiscal 2016. It serves more than 14 million consumer bill pay accounts with a focus on financially underserved consumers.

It has a network of more than 10,000 billers, enabling TIO to process transactions such as telecom, wireless, cable and utility bill payments.

Its network got a boost through an acquisition of ChangeSmart from Verifone in 2014.

The company's consumers typically access the service at more than 900 self-service kiosk, 65,000 retail walk-in locations and mobile and online sites.

PayPal's efforts to reach underserved markets also include a collaboration with venture capital firm Village Capital.

Village Capital supports and mentors seed-stage entrepreneurs focused on financial inclusion through its startup development program, which grants at least \$50,000 of investment capital to the top two graduates.

Through its partnership with PayPal, it aims to help about 40 startups focused on improving financial access to low-wealth individuals, families and small businesses through technology and innovation. PayPal employees in each market will act as their mentors and advisors.

PayPal has worked for the past several years to improve its ability to spot and foster new payments technology from third party developers, an effort that has included an expansion of its Blueprint program.

Kroger payments chief
Kathy Hanna, one of
2017's Most Influential
Women in Payments,
is bringing the grocery store
to the connected consumer

BUILDING THE DIGITAL SUPERMA

an a grocery store operate with no cashiers?

The concept isn't completely outlandish — many stores already have a few self-checkout lanes, and the Amazon Go concept demonstrates how to operate a whole store this way — but grocery stores serve a wide range of consumers who are very much set in their habits. This means balancing the needs of traditional, check-writing shoppers with those of impatient, digitally savvy customers.

Many retailers are watching Amazon Go as a test case for their own innovations. But from the perspective of Kroger payments chief Kathy Hanna, it's Amazon that can learn from her.

"It's a very interesting idea," said Hanna, senior director of Enterprise Payments & Store Support for the Cincinnatibased grocery chain and one of PaymentsSource's 2017 Most Influential Women in Payments. "They're all trying to do what we are already doing, which is using digital to make it faster

By John Adams

Photograph by Clay Cook



Kathy Hanna Senior Director of Enterprise Payments & Store Support Kroger, Cincinnati

2017 MOST INFLUENTIAL WOMEN IN PAYMENTS

and easier to shop. They're just taking a different approach."

Kroger's been adding online tools at a rapid pace over the past year. The company's Kroger ClickList enables people to order groceries online, choose a pickup time and retrieve items at the store. But it's not skimping on the personal touch. A store employee greets the shopper and helps load the groceries.

"ClickList makes it easier for customers to engage with us," Hanna said. "They are extremely busy and have children and parents, jobs, etc. The digital platform helps make the grocery experience a lot easier."

Consumers pay at the point of pickup, though Hanna said Kroger is developing an online payment option, which is already active in a few stores. ClickList is live at more than 300 stores, with more expansion coming each week and expected throughout the next year. "We want to make that smooth as it ties to our loyalty program," Hanna said.

And there you have it: The cashierfree grocery shopping experience.

The process gives Kroger an ecommerce feel at a time when grocery stores are accelerating their move online. The bigger threat from Amazon isn't Amazon Go but AmazonFresh, the e-commerce giant's online grocery service. AmazonFresh launched near Seattle in 2007 and has been picking up steam, adding Boston, Northern Virginia, Baltimore, Chicago, Dallas and London in the past year. It's also available in Los Angeles, San Francisco, San Diego, New York, Philadelphia and Sacramento.

Other online grocers are encroaching on the traditional market, including FreshDirect, a New York-area online supermarket that last year partnered with Samsung to embed grocery shopping into the tech company's webconnected Family Hub line of refrigerators. ShopRite, another traditional supermarket chain, is also embedding online ordering into Samsung's refrigerators. Samsung has additionally signed Mastercard to power payments for its web refrigerators.

The hook of most of these initiatives is the repeat order and memory. things Kroger, a knowledge fed by "The Kroger Story," a book about the life of Barney Kroger, the chain's founder. Kroger's "humble beginnings" are an inspiration for Hanna.

"I spent five years in the stores, when

"With such a large market share in the U.S., [Kroger] can't afford to fall behind."

-David Livingston, supermarket industry analyst

Consumers tend to order many of the same items each week, so the online order is saved and can also be paired with coupons or suggestions for other purchases.

As payments and grocery shopping give way to omnichannel order memory, the pressure's on for Kroger to stay ahead of the pace of innovation.

"Kroger is following what its competitors are doing," said David Livingston, a supermarket industry analyst. "With such a large market share in the U.S. they can't afford to fall behind too long."

Kroger's online service also stores and tracks orders to make repeat shopping easier and embeds with marketing programs for expanded sales and service, making it a dynamic app, according to Hanna.

"It's still early on with ordering groceries from web connected appliances to know how that's going to turn out," Hanna said of how Kroger will ultimately mix with 'Internet of Things' initiatives. "We've seen washers and dryers and now refrigerators, we're not sure what's going to take hold."

Hanna's ties to Kroger couldn't be deeper. She's been in her current job for seven years, but that's just part of her story. Hanna worked in accounting and treasury posts for years, and has held other jobs at Kroger dating to the early 1980s.

These experiences have given her a deep history and knowledge of all

I first started my career at Kroger," said Hanna, who graduated from Tennessee Technological University in 1986 with a degree in business and accounting. She also holds a Doctorate of Jurisprudence, Law from the Nashville School of Law. "I worked as a bagger [and] a cashier, learning the operations of the store. Then I spent many years in the accounting department."

At each stop, there were professionals who mentored her and put her in position to help Kroger meet the challenge she faces today as the grocery industry and Kroger embrace the change brought about by mobile apps, digital payments and omnichannel shopping. And leading her staff through the changes as well.

"The pace of change is sometimes too fast and other times too slow," Hanna said, adding either way can lead to unexpected consequences that can negatively affect customers' experience or associates' work. "My younger colleagues have an aptitude for change and even a desire for rapid change at times that far exceeds our more established teammates. While I think that is normal, I've found that it helps me as a leader to encourage my organization to move more quickly to meet their needs."

Visit our website for the full listing of Most Influential Women in Payments Honorees. A selection of profiles begins next page.



KAMILA CHYTILMoneyGram
Chief Global Operations Officer

MoneyGram's Kamila Chytil is assuming a new position at the company amid major changes.

This year for MoneyGram could not be more dynamic. The company's about to play a key role in the expansion plans of one of the world's largest e-

commerce companies — Alibaba's Ant Financial — and the money transfer industry could soon bear little resemblance to what it looked like just a few years ago.

Kamila Chytil, one of PaymentsSource's Most Influential Women in Payments for 2017, will be at the center of it all. Named MoneyGram's chief global operations officer in May, she'll be responsible for tasks as varied as global servicing, partner integrations, financial paper products, contact centers and strategic operations.

Alongside Chytil's own changing role, MoneyGram is poised to become a part of Ant Financial, the payments af-

filiate of Chinese e-commerce giant Alibaba and the operator of Alipay. Ant has announced plans to acquire Money Gram for \$880 million.

"The combined company will have an expanded global footprint and offer a suite of hybrid solutions that will provide more people around the world access to a reliable financial connection to loved ones," Chytil said. "Together, we will provide greater access, security and simplicity for users around the world."

As big as that sounds, there's more than meets the eye. The deal could wind up in the political crossfire, given Alibaba head Jack Ma's stature in China and the country's potential rivalry with U.S. President Donald Trump, who has promised a trade war with the nation.

Even without the drama, Ant's deal is its first major foray into the U.S. market—most earlier moves by Chinese payment players such as Ant and UnionPay to extend beyond China's borders have been focused on short-term travelers who shop at airports.

MoneyGram was already facing major challenges from startups using emerging technology like blockchain to disrupt the transfer market, with companies like Ripple making a splash.

ARCHANA "ARCHIE" PURI

Senior Product Manager, Payments and Platform Products Braintree

Throughout her payments technology career, colleagues have pointed to the steady hand of Archana "Archie" Puri as one of her key traits.

As the senior product manager for payments and platform products at PayPal's Braintree, Puri has needed that consistency in her work to stand out. It's more than a metaphor.

"During the summer between high school and college, I taught myself calligraphy," Puri said. "It's a skill that I became good at and it required a very steady hand."

Puri was able to take the focus needed to "create something truly beautiful and consistent, like calligraphy" into her professional career at Braintree since 2012 and previously at Yahoo for nearly eight years as a senior product manager and program manager.

"It taught me to look at all the little pieces that go into making a big project successful," Puri added. "Every small detail in calligraphy requires a steady hand and requires the same amount of focus for each stroke to make sure it's perfect and beautiful."



She thinks of that discipline when she gets tired, as "if you let go of your focus, the project can turn out entirely different."

From a more technical standpoint, she more easily learned how to work with databases. "It's helped me with my job at Braintree by giving me the freedom to not depend on engineers to do something for me," Puri said.

Puri has been in her current role at Braintree since November of 2016, but was product leader for payments and card processing at the San Francisco-based company the three previous years.

The admiration of her co-workers was apparent when a sheet of paper stating "You're Awesome" turned up on her desk after an especially rugged week of work punctuated by numerous meetings.

"Despite not knowing where that message came from, it came at a time when I needed a little bit of extra motivation," Puri said. "To this day, that note still sits on my desk."

2017 MOST INFLUENTIAL WOMEN IN PAYMENTS



JENNIFER ROBERTS President of Strategic Alliances and Loyalty Solutions JPMorgan Chase

For one of her bank's largest and most important forays into digital transaction technology, JPMorgan Chase's Jennifer Roberts turned to the people most in tune with the next era

of financial services.

"It was very important to get input and feedback from our younger colleagues as we developed Chase Pay," said Roberts, president of strategic alliances and loyalty solutions for JPMorgan Chase and one of PaymentsSource's Most Influential Women in Payments for 2017. "Digital solutions are second nature to the millennial generation, so it's important we listen."

A lot is riding on Chase Pay's success. It's a big play for the financial services giant, as it seeks to fill the void in the merchant-focused mobile wallet market left by the Merchant Customer Exchange's suspended CurrentC mobile payment system.

JPMorgan Chase has put years of work into Chase Pay, dating to an earlier merchant services initiative with Visa called ChaseNet. As Chase Pay's development progressed, the input from younger staff was accompanied by an investment in LevelUp, a mobile payment company with youthful leadership.

"With my tenure in the industry, it's great to get fresh perspectives from younger colleagues, both at JPMorgan Chase and our partners. A great example is our partner Seth Priebatsch from LevelUp," said Roberts. Priebatsch is LevelUp's CEO — or, as he prefers to be called, Chief Ninja.

Roberts' faith and openness to new ideas from new people is apparent beyond the Chase Pay initiative. Given the constant state of flux in the payments industry, fresh perspectives are vital to her leadership style. She says it's refreshing to spend time with people who aren't bogged down by thinking about how far we've come and bring new energy to inventing the future.

"The payments industry is going through tremendous change now, with even greater innovation on the near horizon," said Roberts, a graduate of Towson University who holds an MBA from the University of North Texas.

KARA KAZAZEAN

Director of Payment Services Walmart

For Walmart's Kara Kazazean the sound of success is very much like that of a clarinet.

"While it is a skill completely removed from the payments industry, the fact that I can play the clarinet is a skill with a tremendous impact on my career," said Kazazean, one of PaymentsSource's 2017 Most Influential Women in Payments honorees.

In high school, Kazazean joined the marching band and competed to be a leader for the clarinet section. As part of the selection process, aspiring section leaders participated in a rigorous leadership training program.

"This was my first exposure to servant leadership, and the concept that leaders don't win unless those around them are successful," said Kazazean, who has been at Walmart for six years.

Kazazean has carried those clarinet leadership skills to her payments career.

"The early leadership lessons also put me in situations that developed my ability to be agile and adaptable to changing



priorities — a necessity in our ever evolving industry," she said.

It has all given her a better understanding of "servant leadership" and how to lead in situations where a leader has accountability, but not formal authority, in today's "matrixed organizations," she added.

After joining Walmart in 2011 and serving as the company's global gift card manager for two

years, Kazazean took on her current role at a time when EMV was approaching and mobile wallets were joining the payments landscape. She has spent the last year involved in helping the retailer develop its Walmart Pay mobile app, the first in what figures to be more moves into omnichannel offerings for Walmart customers.

Prior to joining Walmart, Kazazean deployed point of sale devices for Radiant Systems, which is now a part of NCR. She also spent eight years at RaceTrac Petroleum, leading the company's electronic payments team and overseeing its Triple-DES ATM upgrades.



AMY PARSONSSVP of Global Commerce
Discover

As senior vice president of global commerce for Discover, it is no surprise that Amy Parsons says "my desk is in whatever country I happen to be in."

Her workspace is more digital than physical: Parsons makes ex-

tensive use of her phone to communicate with others around the world, takes photos of new innovations she encounters and, mostly, tries out the various new mobile wallets and payment platforms.

"It helps me to speak to our business partners and understand their concerns and excitement about the changes in the way consumers are paying for items," said Parsons, who is being recognized as one of PaymentsSource's Most Influential Women in Payments in 2017.

"Whenever I hear about a new application that facilitates a part of the payments process, I download it and immediately begin exploring it," Parsons added. "This is how I can experience my job, allowing me to more effectively communicate across the industry."

That sort of experience and interest in new technology has helped Parsons cultivate her communication skills throughout her 13-year career at Discover.

Parsons has been in her current role nearly two years, but in that time she has overseen the formation of a business development team, the integration of the Pulse debit network, and widened global acceptance and global commerce for the card brand.

She has been an executive in strategic merchant services relations, head of global acceptance and a senior vice president for Pulse's global expansion.



Contact us today to find out how Payworks can work for you!

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MOST INFLUENTIAL WOMEN IN PAYMENTS



CHRISTINE LARSENEVP and COO
First Data

Curiosity may not be the best approach for a cat, but Christine Larsen finds it to be a lifesaver in her role as executive vice president and chief operations officer for First Data.

"I have always been a very

curious person," said Larsen, one of PaymentsSource's 2017 Most Influential Women in Payments honorees. "In my job you have to take what appears to be negative or adversarial and dig into what is going on."

Combining that natural drive with a keen ear for listening to clients always helps obtain all of the essential facts needed to solve an issue in a business situation, Larsen said.

Since coming to First Data nearly four years ago, the company has essentially transformed from a payment processor to a technology innovator. In that time, listening and asking a lot of questions are skills that have served Larsen well.

Larsen was part of the management team that took First

Data through its initial public offering in October of 2015, helping establish an infusion of new equity into the company.

"I am very proud to be a part of an incredible team that is dedicated to constant improvement for its clients, partners, investors and employees," said Larsen, who calls a commemorative baseball bat from First Data's IPO "the most valuable thing on my desk" because it represents the \$2.8 billion that was raised during the IPO and company's ongoing transformation.

"The IPO was a terrific milestone on our journey and the bat is a constant reminder of the work we are doing and what we have already accomplished," Larsen added.

She says it is an exciting time to be in the payments industry because of the many technological concepts being formulated. But there is such a thing as too much excitement.

"What frustrates me the most is there isn't enough time in the day to act on all of the fabulous ideas that could be implemented for our clients in the industry," Larsen said. "Of course, we prioritize and get to the biggest ones first, but there is so much to evaluate and keep track of, and so many great ideas coming to fruition."

Larsen oversees 13,000 employees in her roles as the leader of the company's global operations.

SERENA SMITH

SVP, Head of International Payments, CAO FIS

Serena Smith isn't sure if her personality trait of "never taking no for an answer" is a skill to take pride in.

But the senior vice president, head of international payments and chief administrative officer at FIS is certain about one thing: "It does demonstrate my passion and perseverance when faced with obstacles that need overcoming."

That sort of drive has helped Smith earn a spot on PaymentsSource's 2017 Most Influential Women in Payments list.

"It is very scary early in your career to step out on that often narrow branch and be the sole voice that is pushing back and asking to move forward when the popular answer is to stop," said Smith, who has been in her current role at FIS for a year and part of the company's executive team for 14 years.

"I have found that over the years, this trait helped me to sharpen my skills in negotiation as well as boost my confidence in my capabilities, which have led to the roles that I have been fortunate to be a part of," Smith said.

Those roles include nearly four years as chief client officer,



overseeing delivery of FIS financial services software products with the company's large Global Retail Payments division. She also spent five and a half years managing the company's electronic funds transfer platform, becoming a lead figure in the formation of the EFT Advisory Council. Since joining FIS in the Dallas-Fort Worth area in 2003, Smith has carried the title of a

senior vice president.

Smith is a proponent of having things done faster because she knows FIS clients and consumers are pushing for payments and fund transfers to be quicker and more efficient. But it's not about being faster just for faster's sake.

"Faster as in yesterday — and with quality and polish," Smith said of services delivery and data gathering. "We have to continue to challenge the norm and push for new efficiencies and greater availability and ease of use of the data. Nothing frustrates me more than knowing we can get the information we need, but that it will take us days to get it."



JANET ESTEP President and CEO **NACHA**

Janet Estep has been one of the most visible figures in the faster payments movement, battling for years to get reluctant banks on board with this vision.

Estep, the president and CEO of the electronic payments association Nacha and one of

PaymentsSource's Most Influential Women in Payments for 2017, scored a major breakthrough in that battle last year. The Fed set its same-day ACH plans to match Nacha's, in effect making "faster payments" a reality after years of stagnation in the U.S.

But Estep, who has frequently spoken and written about

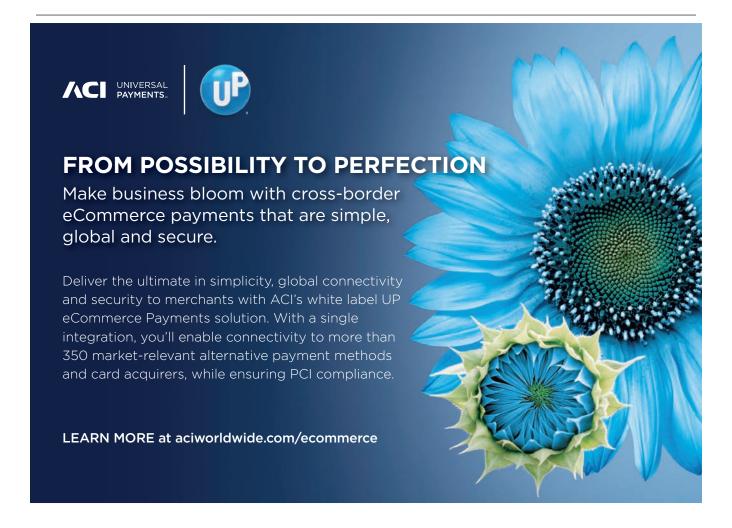
the banking industry's global migration toward faster payment processing, also possesses a keen sense of balance, knowing that a faster society also brings new challenges.

"Frustration is caused by wanting to read and absorb everything, and simply not having the time to do that," Estep said.

"The best lesson I've learned from a younger colleague is to practice patience. Patience, combined with close listening, can actually help an individual take action more rapidly than if patience is not practiced."

Patience is, in fact, not an enemy of speed and can actually help move projects forward, according to Estep.

"Patience truly allows for good listening, which is essential to understand all sides of an issue or to gain knowledge of facts required to answer a question," Estep said. "With the acquired background and information, decisions can be made to move the industry forward or to make solid decisions required of a leader."



2017 MOST INFLUENTIAL WOMEN IN PAYMENTS



PAM JOSEPH President and COO

For decades, the payment processor TSYS had been nothing if not a rock of stability, touting a senior management team dating to the 1970s, a reliable processing record and years of steady growth.

But the age of mobility has turned the entire industry on its

head, requiring a nimble response in a world where transaction processing and scale have become commoditized. It's a world that required TSYS to make fast and meaningful changes. It's spent billions of dollars on acquiring Trans-First and Netspend, and perhaps more importantly, made substantial adjustments to its management team to accommodate retirements.

It also lured longtime U.S. Bank exec Pam Joseph out of retirement to help steer the company's evolving business strategy as it morphs into a multi-channel merchant

services provider.

"I feel that I've learned more in the last five years than I did in my first 20, and it's all because my younger colleagues have been able to successfully keep pace with the rate of change," said Joseph, TSYS' president and COO, and one of this year's Most Influential Women in Payments. "Moore's law (which states that computing power doubles every two years) has opened our eyes to the exponential growth and progress we're going to see from technology."

Joseph has also been a repeated honoree for Payments-Source's Most Influential Women in Payments and American Banker's Most Powerful Women in Banking.

TSYS CEO M. Troy Woods recruited Joseph to TSYS last year, bringing someone with a unique mix of talent and experience to address the challenges TSYS faces. Joseph had been head of U.S. Bank's Elavon processing arm for a decade and was responsible for electronic payment lines and card types, just the type of skills needed as TSYS diversifies.

As TSYS, Joseph is responsible for improving speed to market, and guiding a new generation of payment experts.

"My younger colleagues...[have] an entirely new perspective compared with someone like me who still primarily uses my iPhone as, well, a phone."

REETIKA GREWAL

Head of Payments Strategy and Solutions Silicon Valley Bank

Executives in the payments industry know the key to future technological advances rests solely in the hands of the consumer. Without consumer adoption, advances in payments quickly collect dust.

Reetika Grewal understands this reality particularly well, because of her background in consumer research that has been a major driver in her job as the head of payments strategy and solutions at Silicon Valley Bank the past four years.

"One of my first jobs out of college was as a user-centered design consultant at a boutique consulting firm that was focused on leveraging ethnographic research to help design products and services," said Grewal, who has been named a 2017 Most Influential Women in Payments honoree by PaymentsSource for the third time.

"Our research process entailed observing and interviewing consumers in their most intimate environments to understand the drivers behind their behaviors," she added. "This approach allowed me to develop a deep and holistic understanding of the customer."

This was not just the conventional method of asking custom-



ers a few questions. Grewal would interview customers and study hours of tape of consumers in action to fully understand their mindsets.

"This intense focus on the customer and understanding their experience has really helped to shape my approach to product design and development," said Grewal, who has a payments industry career spanning 15 years.

Prior to joining Silicon Valley Bank, Grewal worked as a vice president of payment strategy at JPMorgan Chase for nearly two years, and was involved in product strategy and business development at Clairmail for nearly four years. A short stint at the biometric payment company Pay By Touch in 2007 came after nearly five years as vice president of online payments product management at Wells Fargo.

At Silicon Valley Bank, Grewal helped launch Commerce. Innovated in 2015, an accelerator jointly run by MasterCard.



LOU ANNE ALEXANDER

Group President, Payments Early Warning

In a financial services career that dates back to 1983. Lou Anne Alexander has experienced upheavals of the status quo of payment technology.

But few have had more meaning for the group president of

payments at Early Warning than her current focus on younger consumers.

"One of the most valuable lessons I've learned revolves around the preferences our vounger generation have for technology experiences," said Alexander, who has been named one of PaymentsSource's 2017 Most Influential Women in Payments. "Growing up digital, they expect fast,

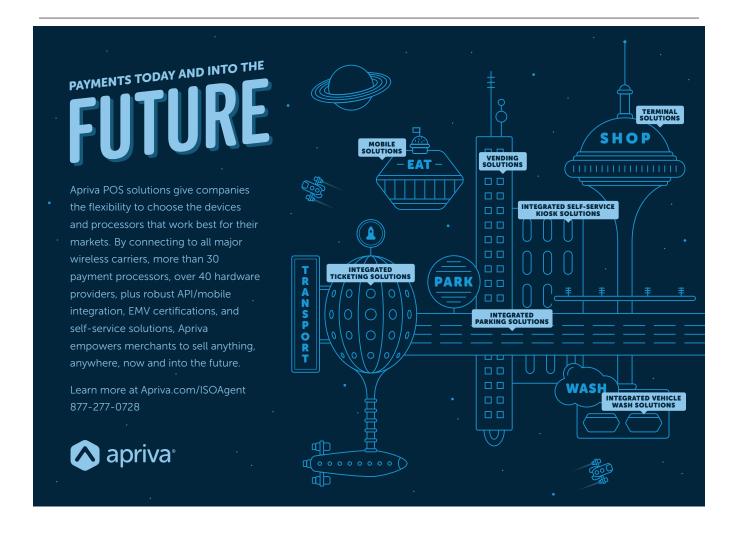
simple and safe solutions."

Studying the likes and dislikes of younger consumers has helped Alexander and her team shape major payments products.

"We've done so much more user testing to best apply these lessons to our experience design for huge initiatives, such as Zelle," Alexander said of the venture that Early Warning obtained through its acquisition of clearXchange, a bankbacked person-to-person payments network.

Zelle has been positioned in the industry as the banks' answer to third-party P-to-P payment options that have been piquing the interest of younger consumers, but with less emphasis on social media sharing and more focus on trusted bank brands and keeping payments private.

"It's this fresh approach to thinking about how technology can blend seamlessly into your life that I've come to appreciate from all the younger colleagues I work with," said Alexander.



First Data in the Age of Amazon

When the very nature of retail is changing, how can traditional payment companies keep up?

mazon and other e-commerce disruptors are turning long-held retail models upside down, but in doing so they create a lifeline for retailers who see them as an opportunity rather than a threat.

There really is no reason for retailers to defend their current point of sale setup when Amazon and its peers are demonstrating the flaws in that model. If anything, merchants can view projects like the Amazon Go checkout-free store as free demonstrations of what they could do with newer technology.

"Some savvy merchants will adapt accordingly, and we're training our sales force on that. This is what their pitch needs to be," said Glenn Fodor, First Data's senior vice president of strategic intelligence in an interview that followed a First Data webcast on payment industry trends on Wednesday.

Mobile payments, new marketing and other staples of startups are applicable to traditional retail, Fodor said, while adding not all merchants may respond to that message. "That is the ultimate outcome...you will have the haves and have nots."

During First Data's presentation, which also touched on issues such as the increased collaboration among payment companies and the winding down of the EMV migration, Fodor noted stores are struggling, closing locations and suffering poor quarterly earnings.



Amazon has grown to substantial size, accounting for 60% of e-commerce growth, and only 17% of U.S. households don't use Amazon, Fodor said.

"Retailers will have to experiment and grow sales in ways that may not be considered core," Fodor said during the event.

Amazon has wandered from its traditional core, experimenting with new delivery methods and retail environments. The Amazon Go store will spur other retailers to accelerate development of omnichannel strategies, Fodor said, predicting retailers will recast larger stores as distribution centers, where people shop and later have goods delivered. And the sheer size of Amazon, which is bigger than most of the largest brick-and-mortar retailers combined, pressures the traditional retail industry.

Retailers must additionally respond to connected commerce innovations, such as bots, which allow selling through social sites such as Facebook, Fodor said, adding connected devices such as in-car computers are also advancing at a rapid pace.

"These experiences are out there to be had now and will evolve quickly," Fodor said.

Merchants will play a key role in this as they reach consumers through these new channels, Fodor said, noting Alexa's introduction to CVS as an example of a personalized digital shopping experience (Alexa is the name of Amazon's digital assistant, typically accessed through its Echo and Fire consumer devices).

First Data is upgrading its technology to accommodate the expansion of digital commerce and how that will

transform the retail environment. It has opened its Clover point of sale system to external developers and has partnered with Silicon Valley Bank to boost its visibility into the technology industry.

The rate of change in payments is accelerating and the space is becoming more complex, said Thad Peterson, a senior analyst at Aite Group, adding consumers are driving merchants to deliver seamless omni-channel experiences and the number of competitors in nearly every category is increasing.

"To maintain share and stay competitive, processors much offer capabilities that their customers need. It's not a differentiation play, it's a 'keeping up with the Joneses' play," Peterson said.

The added technology acceleration

for processors comes from an increasingly fast moving e-commerce and mobile environment, coupled with the incredibly fast growth of some of the emerging payment companies such as Adyen, Stripe, Braintree and others, said Rick Oglesby, president of AZ Payments Group.

"Not only is e-commerce growth dramatically outpacing that of retail, but the companies that have got it right are growing at a pace that is dramatically faster than that of established processors," Oglesby said.

"So the processors are seeing ecommerce as both a threat and an opportunity," he added. "Sitting on their laurels and doing what they have always done doesn't make much sense." **ISO**



An App Strategy for ISOs

Could an app strategy be all that ISOs need to take their marketing to the next level?

SOs and agents have a firm hold on selling payment terminals, but that's not where the real action is. Today, merchant acquiring is about tying payments to things such as advertising, marketing and loyalty programs.

It's a challenge for an industry that's not regarded as being robust adopters of new technology, but Aevi hopes the app store concept and a series of collaborations can help merchant acquirers embrace innovation.

"A merchant should be able to select apps on their phone that they see value in," said Jeff Dumbrell, general manager of the Americas Region for Aevi, a German unit of Diebold Nixdorf that operates a cloud-based white label B-to-B app store called Global Marketplace and a tablet based point of sale system called "Albert." Aevi just announced its expansion into North America.

The app store is designed to use open development to create a suite of business apps that acquirers offer to merchants. These apps include products such as Alldox, a business document storage app; Epos now, a retail and hospitality data reporting app; Appointedd, a booking tool; and dozens of others.

"It's kind of like a buffet for third party apps," Dumbrell said.

Aevi's North American expansion comes as it enters into a collaboration with Smart Engine International to add loyalty and advertising apps to Aevi's



app store. Aimed primarily at retail and hospitality merchants, Smart Engine enables acquirers to build point-based marketing and advertising campaigns that operate across a network of payment terminals, creating an ecosystem of interactive advertisements and offerbased marketing.

For example, the ads can include connections with tailored real-time offers at associated stores within a network of participating retailers, based on a consumer's payment history.

Acquirers can use these campaigns to

build bundles for merchants, including a marketing or advertising program with sales performance or human resources—all tasks that are beyond payment processing, according to Dumbrell.

"An acquirer that specializes in restaurants can create a restaurant bundle, with gift cards, a loyalty app, payroll and customer satisfaction surveys, for example," Dumbrell said.

Before its entry into North America, Aevi entered into other partnerships to add breadth to its app store. Last spring, the company allied with Wirecard, Evo and Fime to support contactless payments, compliance and processing. Aevi has also partnered with Commonwealth Bank of Australia to boost acquiring technology.

Aevi hopes the expanding app store can convince merchant acquirers that targeted advertising, cross-merchant loyalty, inventory management and human resources tied to the point of sale system are not a threat from disruptive startups, but an opportunity for traditional merchants.

"I come from a background of working with closed ecosystems and closed operating systems and payment terminals," Dumbrell said. "What we're doing is opening the ecosystem where merchants can add services that make sense to them."

Aevi's operating in a competitive market, where the established payment processors are already adding merchant service apps to web-connected payment terminals. First Data is using technology from its acquisition of Spree Commerce to add flexibility to its Clover tablet point of sale system.

And Leaf deployed an app store for merchants years ago, in advance of Heartland's acquisition of the company. Poynt and Verifone's Carbon are also designed to bring elements of mobile commerce to merchant acquisition.

Given the mix of technology solutions available, it's possible for merchants to

be overwhelmed.

"The technology may be getting a bit ahead of the implementation," said Thad Peterson, a senior analyst at Aite Group. "In loyalty and promotion it's essential to have clear objectives and a solid economic model to track performance."

New tools like real-time couponing and point of sale loyalty are powerful if they support the merchant's overall business objectives, Peterson said, adding Kohl's integration of promotion, loyalty and payment into its app simplifies things for the consumer and the employee.

"If on the other hand a new application requires significant behaviour change by the consumer or doesn't fully meet the needs of the merchant, then it's entirely possible for the program to fail," Peterson said.

The Kohl's example is one that tries to marry several existing areas of in-store marketing and payments under a thin layer of new technology.

The Kohl's Pay app is based on the retailer's strengths in getting consumers to use its private-label card and redeem rewards. The store emphasizes the ability to earn rewards by using its wallet app rather than carrying a separate loyalty or payment card.

But it doesn't block out other payment methods; the retailer also supports Apple Pay and enables customers to link their Kohl's card as a funding source within Apple's mobile wallet. **ISO**



COMPLIANCE: HIGH-RISK PAYMENTS

A High-Risk Role Model

New markets such as legal cannabis aren't exactly uncharted territory. They can learn a lot from how payments have been handled in other high-risk industries. BY CHERYL WINDKUR MUNK



The recently confirmed pick for Attorney General, Alabama's Jeff Sessions, has a history of speaking out against marijuana.

ayment companies thinking about a future in the cannabis market have much to learn from the past experiences of other high-risk industries. First off, this up-and-coming market—which is still illegal under federal law—requires payment companies to

have exceptionally strong underwriting, due diligence and risk-management practices. They also need a thorough understanding of applicable laws, regulations and card brand rules. Additionally, it's critical that they advocate for cannabis merchants proactively and reactively, if issues arise.

"This is how the other high-risk industries have managed to thrive in a high-risk space," says Anthony L. Ogden, an attorney in Beverly Hills, California, who runs BankCardLaw. com, a provider of legal and consulting services to the payments industry.

Certainly, banks and payment com-

panies operating in, or considering, the cannabis space have special considerations. A lot rides on what stance the Trump administration takes. Despite the substance's illegal status under federal law, the Obama administration decided not to interfere with state laws legalizing cannabis. However, that's subject to change under a new president who has strongly criticized illegal drug use. Also notable is that Trump's recently confirmed pick for attorney general is Alabama Sen. Jeff Sessions, a politician with a history of anti-marijuana statements.

"Payment companies are operating in a legal gray area that extends from the Obama administration," Ogden says.

Given the uncertainty and the stigma of marijuana, many payment providers and banks are still hesitant to work with cannabis merchants.

There are, however, a growing number of companies focusing on or looking to enter the market. Some are taking a back-door approach by classifying transactions under improper MCC codes, but others are more forthcoming about their efforts.

"The key to high-risk areas and

banking relationships is to have a strong compliance program and transparency," says Braden Perry, a partner at Kennyhertz Perry LLC in Kansas City, Missouri, and a former federal enforcement attorney.

He also recommends payments players arrange for independent compliance audits of their legalized cannabis businesses.

Lamine Zarrad, chief executive and founder of Tokken, a Denver-based company that extends payments and banking services to high-risk businesses, says knowing your customers is critical in the cannabis space.

"KYC is a major tenant in doing work with cannabis—just like it is in gambling, adult entertainment, pawn shops, liquor stores and so forth," says Zarrad, a former federal bank examiner. "You also have to know about the business and the baseline of its activities."

Payments companies should be prepared to demonstrate that their merchants are compliant at the state level. "This might provide some protection against legal action," says Tanya Hoke, founder and managing director of Galen Diligence, a Cambridge, Massachusettsbased company that provides expert investigative due diligence services for potential investors and businesses in the cannabis industry.

Payments providers also need to be able to identify which accounts are linked with marijuana businesses—so they can be monitored appropriately in the event of increased federal scrutiny, she savs.

Even with these efforts, however, the cannabis space remains a dangerous business proposition, says Theodore F. Monroe, a Los Angeles attorney whose clients include payments and processing businesses.

He points to Operation Choke Point, an initiative that turned the screws on banks and third parties that did business with controversial—yet legal—industries such as ammunition sales, escort services, get-quick-rich schemes and online gambling.

Something similar could happen in the emerging cannabis space, he predicts.

"There's only so much [payment companies] can do to protect themselves," Monroe says. "They need to be careful who they do business with." ISO

INDIA'S BHARAT OR LAUNCHES WITH PAYMENTS INDUSTRY SUPPORT

India's latest government-supported payments initiative, Bharat QR, has officially launched, aiming to provide an interoperable mobile payments platform linking small merchants and consumers across channels via several major card payment networks.

Bharat QR, led by the Reserve Bank of India and the Indian Banks Association, will roll out in phases with the goal of eventually connecting 57 million of India's smallest merchants for broadly accessible mobile payments, according to a press release from Mastercard.

The paymen't card networks will play a key role in Bharat QR's development, alongside India's National Payment Corp. (NPC), which operates RuPay, the nation's domestic

payment card network. Mastercard is supporting Bharat QR via Masterpass QR,

a payments method developed in India; Visa will link to the new platform via mVisa, its own QR code-based approach; and American Express is developing a similar QR code-based approach for its cardholders, Mastercard explained in the

February press release announcing the launch.

To pay with Bharat QR, consumers open their bank app or third-party mobile wallet and scan a participating merchant's QR code, opting to make the payment directly from their bank account or a linked payment card, according to the press release.

^aWe are looking forward to leveraging our technology backbone and partnering with the government and the industry to create a robust, safe and secure digital payments ecosystem, said Porush Singh, Mastercard's corporate country officer for India. in the release.

Fourteen banks in India already have pledged to support Bharat QR, including HDFC Bank Ltd., ICICI Bank, Yes Bank, State Bank of India, Union Bank of India, Axis Bank, Bank of Baroda, Bank of India, Citi Union Bank and DCB Bank Ltd., among others.

In Bharat QR's static mode, users must enter the purchase amount, in addition to scanning the merchant's QR code and entering a PIN.



The State of Post-EMV Web Fraud

Merchants expected that fraud would shift online after EMV chip security came to the point of sale. But did their advance knowledge actually help deter fraud? BY BAILEY REUTZEL



ou'd think financial institutions and retailers in the U.S., with a long list of EMV migration examples to look to in other countries, would have been prepared for fraudsters shifting their attention to e-commerce after security improved at the point of sale.

But according to late 2016 data from fraud prevention company iovation and research firm Aite Group, there's been a 35% increase in online credit card fraud since the EMV shift in the third

quarter of 2015. So what's happening?

According to industry experts, most of the card-not-present fraud is likely targeting smaller merchants and financial institutions that don't have as many resources available to start securing digital channels.

Smaller institutions "may not have as many people in the fraud strategy and prevention roles ... and may not have the development, technical resources and funding to implement those solutions," said Mike Lynch, chief strategy

officer at InAuth, an online and mobile device security company that works with four of the five top banks and nearly 50 merchants.

Despite this clear trend, InAuth hasn't seen a spike in new clients stemming from the EMV transition, Lynch said. Most of its clients are larger companies that were prepared for EMV, but smaller merchants may not have the funding to catch up.

According to Julie Conroy, retail banking research director at Aite Group, this makes sense. A huge doubling of security investments is unlikely. Instead, only incremental investments will be made as retailers and financial institutions figure out how to protect all channels most effectively, she said.

This confluence of channels is one of the factors causing a fair amount of pain.

"Merchants want to engage customers in an omnichannel way yet their fraud systems aren't prepared to keep up with that omnichannel environment," Conrov said, offering an illustration. If a fraudster with a stolen credit card loads \$100 into a merchant's mobile app then goes into the store and buys five \$20 gift cards, it could take days for the consumer whose card was stolen to notice and alert the bank, who then

alerts the merchant, by which time the fraudster is long gone with the fraudulent gift cards.

Even seeing a rise in card-not-present fraud, some merchants are hesitant to deploy tighter security, namely because added steps in the checkout process could lead to cart abandonment.

These merchants "do understand the risk, but see this as a necessary evil in working in the digital space," said Lynch.

Although, that doesn't mean the industry isn't investing at all.

"Currently merchants are trying to find the right balance between the best customer experience and keeping fraud levels flat," said Lynch.

Big merchants are also vulnerable,

said Conroy, who has seen a number of large merchants lose significant money to online fraud, mainly those that do most of its business via brick-and-mortar locations and don't invest as much into digital channels.

Another reason larger enterprises are still getting hit is because fraudsters' techniques are becoming more sophisticated, said Lynch, who used to work on Bank of America's authentication and fraud strategy before joining InAuth.

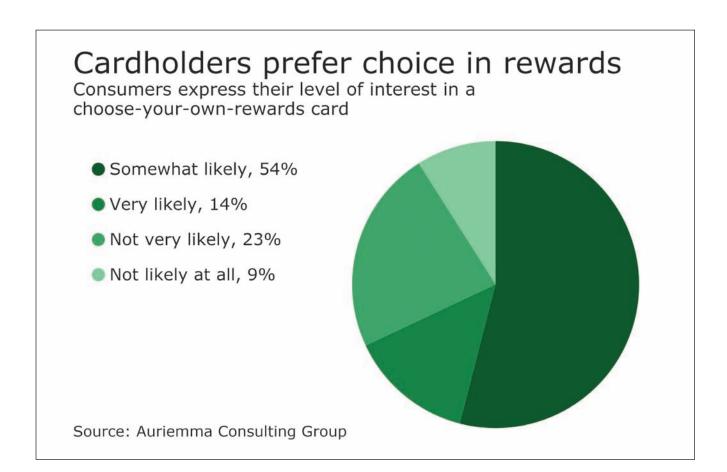
For instance, he said, botnet attacks where one master source distributes malware to many unsuspecting computers that then continually create logins or accounts have been on the rise. "Distributed architecture is a lot harder to defend against," Lynch said. ISO



Opportunity for DIY Rewards

For ages, merchants have devised new and inventive ways to entice consumers to participate in their loyalty programs. But why not give consumers control over which rewards they earn?

BY DAVID HEUN



hile cash back remains a popular reward, consumers would like to see a rewards card in which they would have a choice to establish a program they consider most relevant.

"We've tackled rewards preferences from a variety of angles over the past year, and we increasingly see cardholders express a desire for choice," Jaclyn Holmes, senior manager of payments insights for Auriemma Consulting Group.

Auriemma conducted a web-based survey of 800 adult cardholders in the

U.S. during December of 2016 to determine rewards card preferences and provide issuers with data to consider for better positioning those cards not currently at top-of-wallet for consumers.

Nearly 70% of respondents said they would accept an offer from a credit card issuer that gave them the option to select

from which categories they could earn rewards. Millennials were even more enthusiastic, with 75% expressing an interest in such an offer, according to the Auriemma study.

"We know not all cardholders are the same, and therefore shouldn't be treated the same," Holmes said. "Some gravitate towards co-brand cards, willing to save over a longer period of time for sizeable redemption, while others tend to look for everyday savings in their wallet."

Offering a program that allows customers to choose their rewards categories holds appeal for a large cross-section of consumers, Holmes added. "I don't believe any programs currently offer an open-ended rewards selection, beyond selecting rotating quarterly rewards."

Card issuers should find that feed-back valuable when deploying digital and mobile technology to enhance plastic card features. Mobile technology has actually accelerated some of the popular features of plastic cards, particularly in the rewards arena, where consumers are increasingly able to earn and monitor points and cash them in through mobile transactions.

Some aspects of the relationship between consumers and their rewards cards have not wavered much — 81% say they own such a card and the majority, at 58%, prefer cash back as a main feature.

Just more than half of consumers surveyed said they have more than one rewards card in their wallet, while 92% indicated they use a rewards card most frequently.

Still, 32% of rewards cardholders said they don't hold a card that offers rewards in their preferred categories. They cited the top reason, at 43%, as having too many cards already to add another, though 21% said it was because they had not been offered that type of card.

It is not surprising that cash-back features remain popular with cardholders, but the high average monthly spend on cash-back cards is surprising, Holmes said.

Average monthly spend on all cash-back rewards cards combined in a wallet was \$1,452, not far behind the highest average for airline/frequent flier rewards cards at \$1,725.

"Spend on airline is almost always high due to the nature of those purchases and flight redemption, but cash-back spend seems particularly strong," she added. "This may be a testament to the recent enriching of cash-back rewards programs and something we will be keeping our eye on moving forward."

In addition to a growing interest in being able to choose a rewards program for a card, consumers are also expressing a desire to redeem card rewards at the point of sale, Holmes said. "This is already an option for some cards programs, but I would expect it to become more an expectation and norm over time."

Consumers on occasion transfer their rewards points to another program, with 38% of those who have done so citing the need to supplement points for a specific redemption offer.

This should alert issuers that by offering the option to roll over or transfer points, they can increase cardholder spend and loyalty, while possibly giving a secondary card in a wallet a boost in usage, the report noted.

Nearly 50% of rewards cardholders said they keep an infrequently used account open in case they need additional credit, while 34% said they fear that canceling a card could negatively affect their credit score.

But 22% said they keep the account open in hopes that the issuer or co-brand partner will make favorable changes to the rewards program. **ISO**

MASTERCARD BETS ON THE ALLURE OF FREE WIFI AS A CARD REWARD

Mastercard is adding a new perk for elite customers by extending free airport and in-flight WiFi around the world for customers with certain cards targeting high-end global travelers.

Through a partnership with WiFi services provider Boingo Wireless, Mastercard is providing wireless access at more than 1 million global hotspots, including onboard thousands of flights, Mastercard said.

HŠBC is the first card issuer to sign on for the service for its HSBC Premier World Mastercard in Argentina, China, Hong Kong, Malaysia, Singapore, the United Arab Emirates and the U.K., according to the release.

Providing free WiFi is a key convenience for travelers, said Marti Beller, Mastercard's senior vice president of loyalty solutions, global products and platforms.

"Consumers increasingly rely on digital experiences

everywhere they go, and they have a very strong need to access WiFi to stay connected wherever they go," Beller said, noting she expects other Mastercard issuers to adopt its Boingo services soon for elite-level travel cards.

In the U.S., the HSBC Premier World Mastercard requires a minimum deposit of \$100,000, though the card carries no annual fee.

Boingo typically costs about \$9.95 per month if purchased separately.

Mastercard isn't the first to dangle WiFi as a perk to cardholders. American Express Co. provides customers with its \$450-a-year Platinum card with 10 free WiFi passes per year from GoGo, another provider of in-flight and airport WiFi services. The Expedia+ Voyager credit card from Citi provides customers with a \$100 credit that may be applied toward travel fees, including WiFi.

Bankers AttackApple at its Core

Apple Pay has steadily spread across the globe with little pushback on its terms from merchants and card issuers. But a handful of banks in Australia may change things for everyone.

BY JOHN ADAMS

he group of Australian banks that want to collectively bargain with Apple over terms of its Apple Pay app have sharpened their focus to Apple's smartphone technology policy, an area the technology giant is likely to defend fiercely.

The four banks, Bendigo and Adelaide Bank, Commonwealth Bank of Australia, National Australia and Westpac, have narrowed their application to Australian regulators to focus solely on access to Near Field Communication (NFC) as terms of collective bargaining with Apple. Previously their arguments also addressed the fees Apple charges to Apple Pay issuers.

The NFC argument is vital because whoever controls the NFC hardware controls which other parties can access it.

This played out most openly years ago when three U.S. carriers refused Google access to the NFC secure element on any handset on their networks, effectively blocking the NFC Google Wallet app until the tech giant could come up with a software-based work-around. The carriers only backed down after their own mobile wallet venture failed, selling the assets of that venture to Google in 2015.

Apple's approach is little different from what the U.S. carriers implemented. To execute transactions, Apple places encrypted payment credentials on the iPhone, and does not provide access



to other mobile contactless payment providers, creating a closed system. The Australian banks want Apple to be more open, enabling other apps to work alongside Apple Pay on smartphones.

"By locking out any independent access to the NFC function on iOS devices, apple is seeking for itself the exclusive use of Australia's existing NFC terminal infrastructure for the making of integrated mobile payments using iOS devices," said Lance Blockley,

a spokesperson for the four banks in the Australian/Apple dispute. "Yet this infrastructure was built and paid for by the Australian banks and merchants for the benefit of all Australians."

Apple Pay launched in Australia in 2015, with American Express as its initial partner, though some credit unions and community banks now support the app. Since launch, the larger banks have tried to pool their leverage to combat some of the issues that have

made banks and merchants in other parts of the world angry about Apple Pay, such as the closed NFC access.

Apple would seem to have the upper hand, since Australian regulators have already issued a preliminary ruling preventing the banks from collective bargaining with Apple, citing potential harm to competition. The ruling is not final, however, and both sides have continued to make their case. A final ruling is expected in March.

An authorization from the government would provide protection from court action for conduct that might otherwise raise concerns under the competition provisions of the Competition and Consumer Act 2010, said Duncan Harrod, a spokesperson for the Australian Competition and Consumer Commission, the regulator overseeing the Apple/Australian bank dispute.

"Broadly, the ACCC may grant an authorization when it is satisfied that the public benefit resulting from the conduct outweighs any public detriment," Harrod said.

The Australian banks didn't directly state that their narrow focus on NFC access was in response to the ACCC's earlier unfavorable draft ruling regarding fees. But it's clear their hope is by tying the dispute to technology "openness" rather than transaction income, they're more likely to win a favorable outcome next month.

"[The banks] would like the opportunity to have their wallets compete alongside Apple Wallet on iPhone, and for the consumers to decide which is best and most convenient," Blockley said. "This does not mean locking out or preventing Apple Wallet from operating here in Australia, just allowing competition side by side."

Apple did not return a request for comment. Apple and the Australian banks have been battling for months, with the banks accusing Apple of trying to limit competition and Apple contending its policy is based on security, at one point using the word "cartel" to describe the Australian banks' position, and accusing the banks of being the party trying to extract extra fees from transactions.

The Australian banks aren't the first organization to oppose Apple's policies. In November, George Throckmorton, managing director of the Payments Innovation Alliance, called on Apple to take a more option posture toward NFC access. And access to iPhones has caused squabbles and even merchantled shutdowns since the early days of Apple Pay.

It's also not unusual for a new mobile payment app to have a staggered deployment, launching on one operating system months before the other because of the differences in policies between Apple and Android. Ever since Google began supporting Host Card Emulation as an alternative to accessing the NFC secure element, banks and retailers have used the same technology to bring their own wallet apps to market.

For example, Capital One and Wells Fargo have contactless wallet apps on Android, but support Apple Pay as a separate service for iPhone users. Banks around the world have also complained about Apple Pay's fees. Though generally not confirmed by Apple, these fees are known to be between 10 and 15 basis points per transaction, which eats into the interchange fees banks charge merchants. **ISO**



Biometrics vs. Cart Abandonment

Biometric technology is often marketed as a security tool. But now that consumers are more comfortable with sharing their fingerprints and other traits, can biometrics address other pain points?

BY TANAYA MACHEEL

ew York-based security company Hypr Corp. is working to use biometric authentication as a glue for the currently fragmented state of mobile and online payments.

Online shopping suffers from a number of concerns right now. Beyond the high level of credit card fraud (which accounts for \$7.6 billion in annual losses to U.S. card issuers, according to LexisNexis), many checkouts are slowed down by the need to type in account numbers, passwords and PIN codes that shoppers may not have committed to memory. Biometric authentication can address all of these pain points, Hypr says.

"We're moving towards a more convenient, cashless ecosystem whether we like it or not," said Hypr chief executive George Avetisov. "The easiest way to get there: remove PINs and passwords."

Once older authentication methods are replaced, older payment methods will likely go with them. "People won't be walking around with plastic in 10 years," he added.

Other companies are taking a similar approach to replacing passwords with biometric authentication, including Mastercard. The card networks' Identity Check, commonly known as Selfie Pay, enables card issuers that support SecureCode (Mastercard's version of 3D Secure) to prompt for facial recogni-



tion during the merchant's checkout.

Hypr's offering differentiates itself by letting the retailer choose which traits to authenticate and how many to use at once. For example, a retailer may require customers authenticate with a fingerprint for a \$50 purchase, fingerprint and face for a \$1,000-purchase or a combination of five biometric traits for a higher-value purchase.

For desktop shoppers, the process is an omnichannel biometric shopping

experience. When they arrive and the checkout screen, they receive a notification on their mobile device prompting them to authorize the payment, rather than inputting their password in the browser.

The user's biometric traits, once registered, never leave the device. Hypr's authentication system turns the user's biometric data into a token that is used to confirm payments instead of storing traits on a server. **ISO**





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Can AI Improve Credit Scores?

To many, credit scores are a mysterious and misunderstood number. Artificial Intelligence can change the status quo, but will it make scores clearer or more opaque?

BY PENNY CROSMAN

consumer's credit score used to be a commonly understood number—the time-honored FICO score—that banks all used in their underwriting. But banks increasingly are relying on dozens of scores that reflect a variety of data sources, analytics and use of artificial intelligence technology.

The use of AI offers lenders the ability to get a precise look into someone's creditworthiness and score those previously deemed unscorable.

But such scoring techniques also bring uncertainty: What it will take to convince regulators that AI-based credit scores are not a black box? How do you get a system trained to look at the interactions of many variables, to produce one clear reason for declining credit? Data scientists at credit bureaus and banks are working to find answers to questions like these.

The benefits of AI credit scores

There are two main reasons to use artificial intelligence to derive a credit score. One is to assess creditworthiness more precisely. The other is to be able to consider people who might not have been able to get a credit score in the past, or who may have been too hastily rejected by a traditional logistic regression-based score. In other words, a method that looks at certain data points from consumers'

credit history to calculate the odds that they will repay.

Machine learning can take a more nuanced look at consumer behavior.

"A neural network more closely mimics the way humans think and reason, whereas linear models are more dogmatic — you're imposing structure on data as opposed to letting the data talk to you," said Eric VonDohlen, chief analytics officer at the online lender Elevate. The more complex reasoning

of artificial intelligence can find things in the data that wouldn't be apparent otherwise.

And instead of considering one variable at a time, an artificial intelligence engine can look at interactions between multiple variables.

"It's harder for the workhorse, logistic regression, to do that," said Dr. Stephen Coggeshall, chief analytics and science officer at ID Analytics. "You have to do a lot of data preprocessing

using expert knowledge to even attempt to find those nonlinear interactions."

Consumers with several chargeoffs in their histories would most likely be considered high-risk borrowers by most traditional models. But an AI engine might perceive mitigating variables; though the consumers might have skipped payments on three debts in the past 24 months, they have paid on time consistently for the past year and have successfully obtained new lines of credit.

"It looks like that bad performance or bad history is in your past," Von-Dohlen said. "That would be a simple example of how an AI world might help cast data in a more positive and more accurate light." AI-based credit scoring models let Elevate make sharper predictions of credit risk, approve the right people and offer better pricing to people who deserve it, VonDohlen said.

Elevate is deploying its new, AI-based models gradually, starting with 1% of potential borrowers, testing the results, and gradually applying them to more people.

Credit bureaus are starting to adopt AI in their credit scores, too.

Equifax calls the machine-learning software that it uses in credit scores NeuroDecision Technology.

Technologies like Hadoop, which allow massive amounts of data to be stored and analyzed quickly, are making AI-based credit scores possible, said Peter Maynard, senior vice president of global analytics at Equifax.

"Before, if you gave me a million observations, it would take a week to sort through it," Maynard said.

ID Analytics uses what it calls "convolutional neural nets," a flavor of deep learning, in its fraud and credit scores, Coggeshall said. For its Credit Optics Full Spectrum credit score, AI engines look at consumer payment data from wireless, utility and marketplace loan providers, to score consumers who have "thin" or no credit bureau files, including young people and new credit seekers.

FICO also offers a score called XD that's based on telephone and utility bill payments and property records. It



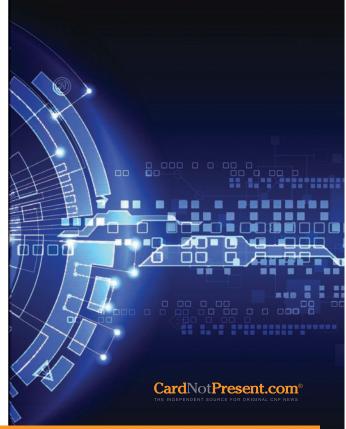
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gives high marks to people who have faithfully paid their phone, oil and gas bills and who have not moved around too much.

Experian is taking a more cautious approach. It uses traditional logistic regression methods for its credit scores, but in its labs it experiments with machine learning.

When the technology seems to make a significant difference in performance, the company will provide credit scores based on machine learning, said Eric Haller, executive vice president of Experian's Global DataLabs. For now, he sees machine learning giving only a nominal lift in results.

"The opportunity is not building the next VantageScore, because believe it or not, those scores work really well," he said.

To let clients experiment with machine learning, Experian offers an analytical sandbox with its credit data loaded into it.

"They can load their own data in and we'll sync it up with historical credit archive data, and we've overlaid it with a set of machine-learning tools," Haller said. Most large financial institutions are using the sandbox today, he said.

TransUnion, the other major credit rating agency, did not respond to requests for an interview.

Now for the confusing part

The cons of AI-enhanced credit scores include the risk that the full underwriting process will be hidden from consumers and that the practice would raise transparency questions among regulators.

Last month, the Consumer Financial Protection Bureau imposed \$23 million in fines to TransUnion and Equifax, noting they claim banks use their scores to determine creditworthiness, when that isn't always the case.

"In their advertising, TransUnion and Equifax falsely represented that the credit scores they marketed and provided to consumers were the same scores lenders typically use to make credit decisions," the CFPB said in a press release announcing the fines. "In fact, the scores sold by TransUnion and Equifax were not typically used by lenders to make those decisions."

Some say the regulator was misguided. "Both scores being sold by TransUnion and Equifax, VantageScore and the Equifax RiskScore, are real credit scores that are Equal Credit Opportunity Act compliant, are commercially available to lenders and are, in fact, used by lenders," said credit expert John Ulzheimer.

Equifax says it ran all of its AI-based scoring technology past the OCC, Fed

and CFPB and got a positive response. ID Analytics said it worked closely with lawyers, compliance officers and regulators to assure the technology complied with various lending rules.

Another challenge to using artificial intelligence, specifically neural networks, in credit scores and models, is that it's harder to provide the needed "reason code" to borrowers — the explanation of why they were denied.

Concerns about the reason code are the main reason many businesses don't use nonlinear machine-learning models for credit scores yet.

"A lot of the confusion and heartburn is around, 'How do you boil an extremely data-rich learning process into a marginal rationale for declining a loan?' " VonDohlen said.

However, neural networks, which are essentially designed to think like a brain, can also be used to help find the one variable that represents the greatest risk.

"It's almost never the case that you would decline someone for a rat's nest of variable relationships," VonDohlen said. The reasons for credit denial, he said, "are almost always very clear."

Equifax has developed a proprietary algorithm that can generate reason codes for consumers. Maynard said.

Experian is also working on techniques that would make AI credit-based score decisions more explainable and auditor friendly.

"We're not operating under any assumption that a black box credit scoring model would even work or be accepted in the market," Haller said. "We are 100% focused on how do we bridge the gap such that we can bring better performance to models, but still maintain the same integrity, where they can be explained to the OCC and our clients are comfortable with understanding how the models are working and the results they're getting." **ISO**

Two faces of AI-based credit scores

Credit score providers and banks are taking a cautious approach to artificial-intelligence-based credit scores, with good reason

	Pros	
More precise scores, through more nuanced evaluations of data		Ability to consider consumers that linear models would reject
	Cons	
Risk that regulators will consider the score a"black box"		Challenge of providing one clear reason for credit denial

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An Opportunity from China

As more global travelers bring their money into and out of China, a new market emerges for handling their payments.

BY JOHN ADAMS

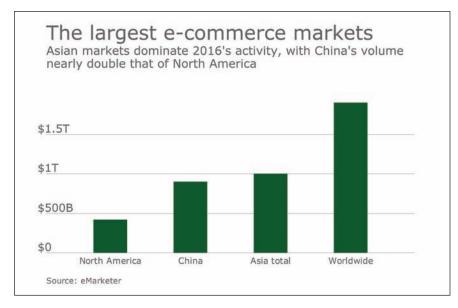
he growing number of Chinese consumers traveling to the U.S. and other countries is becoming a two-for-one opportunity for payment companies. The market's gigantic and growing — and it has a lot of trouble executing transactions.

For many Chinese travelers today, "transactions redirect to a hosted payment system that's in China," said Paul Levine, a senior vice president at Planet Payment. "That comes with a lot of issues."

Removing friction from the payment transaction trail for Chinese travelers, particularly for card not present transactions, has almost become a category in and of itself. Planet Payment has entered a collaboration with UnionPay International and United Airlines to handle reservations and other ticketing purchases either online or through call centers.

The integration allows travelers to use UnionPay to book directly with United, avoiding the workaround to execute cross-border payments between China and the U.S. That helps reduce transaction abandonment by improving the user experience, Levine said.

"In addition to the rerouting, there are also browser issues with the Chinese internet firewall, so there's an abandonment problem," Levine said. "By the time the consumer selects a flight, chooses a seat and tries to make a payment—but



fails because their browser crashes—it's a frustration for the user."

Through an existing integration with UnionPay, Planet Payment offers merchants access to UnionPay's SMS-based authentication and online processing systems. Cardholders enter details into the payment page with a PIN to authorize the cross-currency transaction.

The Chinese consumer pays in Chinese renminbi, while the merchant receives U.S. dollars.

The United partnership is starting with UnionPay credit cards, and debit cards will be added at a later date. Planet Payment hopes that by luring travelers to online payments without a redirect

for both credit and debit cards, it can attract U.S. merchants and Chinese consumers to broader shopping scenarios that don't involve travel.

"We want to enable more e-commerce transactions from merchants outside of China to consumers that are inside the mainland," Levine said.

Planet Payment is working with UnionPay on further enhancements that will allow it to reach a broader base of retailers and consumers, Levine added.

"The travel vertical is the early test bed for digital," said Andy Schmidt, an executive advisor at CEB, adding resolving deployment issues for travel payments can help expand to other categories later. **ISO**

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A Hub for the Internet of Things

The Internet of Things is a growing collection of disparate high-tech devices. To enable commerce, these products may need a central hub. BY KATE FITZGERALD

odoPayments is fresh off a string of new customer implementations with COIN, its payment "hub" approach for merchants and banks, and it's already looking ahead to bigger prospects with the emerging Internet of Things (IoT).

"COIN acts like a bridge, handling payments from the accounting and settlement to encryption and compliance, freeing companies up to work on their business processes without having to worry about deeply integrating payments into core functions," said Bruce Parker, a payments industry veteran who previously held senior executive roles at Fidelity National Information Systems (FIS) and ACI Worldwide, before launching ModoPayments in 2010.

It took many twists and turns for ModoPayments to hit on its current concept, Parker admits. The company was originally focused on developing broad mobile payment solutions, but two years ago Parker decided merchants' needs were too varied to corral in a single payments app.

The cautionary tale was the Merchant Customer Exchange, a multi-retailer venture with the backing of Walmart. Target and others. The MCX merchants wanted to build a one-size-fits-all mobile payment platform called CurrentC, but the app never made it past the pilot phase.



"When I saw MCX's CurrentC app fizzle, I realized that if the U.S.'s biggest merchants couldn't find common ground for a one-size-fits-all mobile payments app, there was little hope for us to succeed at anything similar," he said.

ModoPayments shifted gears to devise COIN, a digital payments hub that aims to transfer monetary value to a destination that could be within the same room or across the world, without requiring either partner to modify their systems, according to Parker.

One of ModoPayments' first big deals with COIN was a strategic relationship announced late last year with Bank of America Merrill Lynch, enabling the bank to support cross-border corporate disbursements. BofAML sees many distinct uses for the implementation, such as enabling businesses to more easily pay freelancers and contractors in different countries.

Last year Sweden's Klarna also adopted COIN to enable faster e-commerce checkouts; and earlier this year Verifone and FIS rolled out Verifone Points Redemption, an app that uses COIN to connect payment terminals and merchant data, allowing consumers to pay with accumulated points from merchant loyalty programs.

Parker is now eyeing the IoT as a potential new frontier for COIN.

"The IoT presents a huge opportunity for us because it's going to involve a lot of objects-vehicles, appliances, equipment—that typically have no payment terminal or card-swipe mechanism, ideal for a payments hub," he said. ISO



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