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Trends in the Electronic Exchange of Value

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‘[Alipay] is a full lifestyle app. It is important to take all that information and services and put them under one identity, and we haven’t seen anybody else do that yet.’

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ILC, FDIC, OCC: When Alphabet Soup Is a Good Thing

At the end of July came an opening for nonbank payments players that, as the old expression goes, you could drive a Mack truck through. And it's our guess that we'll be hearing much more about this opening—and about how financial-technology firms and other nonbanks are exploiting it—for quite some time to come.

The new opportunity came courtesy of the Office of the Comptroller of the Currency, which on July 31 said it would start accepting applications for national-bank charters from fintechs. The big advantage in this for nonbanks is that now they can get licensed nationwide at a single stroke rather than fight their way through 50 state applications.

It wasn't long before observers' attention focused on Square Inc. The 10-year-old San Francisco firm is an obvious candidate given its strong interest in lending to the same small businesses that use its payments technology. Currently, its Square Capital operation makes hundreds of millions of dollars' worth of loans through Celtic Bank, an unaffiliated Utah industrial bank.

A directly owned banking operation with its deposit-taking function would make those loans a lot more efficient. That's why Square has already tried to set up what is called an industrial loan corporation, a type of bank, in Utah.

But the ILC effort hit a snag just three weeks before the OCC's big announcement. Banking groups like the Independent Community Bankers of America aren't too keen on ILCs, and they lobbied vigorously against Square. Early in July, the company suddenly withdrew an application it had filed in September with the Federal Deposit Insurance Corp., saying it wanted to re-file at a later date. A separate application with the Utah Department of Financial Institutions remains active.

Given its banking interest, Square could be a candidate for one of the new national charters the OCC now offers. But top officials are playing it coy for now. In answer to an analyst's question about the prospect during an earnings call last month, CEO Jack Dorsey gave a carefully modulated non-answer answer: "We're really well-positioned to broaden access to the financial system, which is our core purpose."

Our take is that it's nice to have the choice to go for a national OCC charter, especially given the headwinds the ILC application has stirred up. But if Square decides against the OCC option, we hope it follows through on its intention to re-file with the FDIC for the proposed Utah bank. These options aren't just good for Square, they're good competitively, and that should make for a better market all around—better for consumers, fintechs, innovation, and, yes, even banks.

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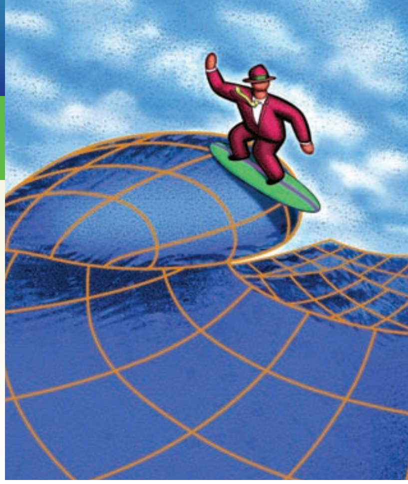

TRENDS & TACTICS

Another Big Merchant Challenges Visa Over Acceptance Costs

There's nothing payments executive love more than watching a fight pitting a leading retailer against a big payment card network over credit or debit card acceptance costs and terms. That's what they're getting with the current spat between supermarket giant The Kroger Co. and Visa Inc.

Citing what it calls high acceptance costs, Kroger's Foods Co chain on Aug. 14 began boycotting Visa credit cards as a means of customer payment at 21 supermarkets and five gas stations in San Francisco, Sacramento, and other central and northern California locations. The stores, however, continue to accept Visa debit cards as well as Mastercard, American Express, and Discover credit cards.

Foods Co signaled in late July when it announced the planned boycott that it could expand to other Kroger stores, but gave no details. Cincinnati-based Kroger, the nation's largest standalone grocer, operates nearly 2,800 stores under such banners as Kroger, Ralphs, Fry's, Fred Meyer, Roundy's, and more than 20 others.

Asked in mid-August about a possible expansion, a Kroger spokesperson said only that the issue is still "to be decided."

Visa issued a statement as the boycott commenced that it is "committed to working with Kroger to reach a reasonable solution so that Visa cardholders can resume using their credit cards at Foods Co in California. When consumer choice is limited, nobody wins."

Kroger could be following the playbook of Walmart Inc.'s Canadian unit, which, in a similar dispute over acceptance costs, first boycotted Visa credit cards in 2016 at three stores in Thunder Bay, Ontario. Visa's public response included cardholder usage incentives at grocery stores and ads reminding the local populace of the many places they could still use their Visa cards.

Walmart expanded the boycott to 16 stores in Manitoba before the two sides reached an accord six months after it began. Neither Walmart nor Visa disclosed terms.

Foods Co said in announcing the boycott that it was "discontinuing the acceptance of Visa credit cards to save on the high costs associated with the credit card company's interchange

Will Kroger, whose Cincinnati headquarters is pictured here, expand its Visa credit card boycott beyond 26 stores in California?

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rates and network fees. Visa's rates and fees are among the highest of any credit card brand. The savings will be passed along to Foods Co customers in the form of low everyday prices on the items shoppers purchase most."

Foods Co did not reveal its Visa acceptance costs. But with $122.7 billion in sales last year, parent company Kroger likely qualifies for Visa's lowest interchange rates—and it's possible Kroger already had its own interchange deal with Visa.

For credit card transactions at supermarkets, Visa's latest public interchange schedule says rates vary, depending on volume and card type, from 1.15% of the sale plus 5 cents to 2.10% plus 10 cents for high-end rewards cards.

The Minneapolis-based Merchant Advisory Group, an association of mostly large merchants concerned with payments issues, declined to comment on the Kroger-Visa spat specifically. But in an e-mailed statement, MAG chief executive Mark Horwedel said, "The payments ecosystem should be grounded in transparency, choice, and competition with balanced responsibility for payment security and delivering the best customer experience. Merchants should have the flexibility to accept different types of payments based on what makes good business sense for their companies and their customers."

Also in 2016, Kroger sued Visa in U.S. District Court in Cincinnati, accusing the payment network of thwarting its plans favoring low-cost PIN-debit transactions as it converted its stores for EMV chip card acceptance. Visa denied the allegations. The case was on hold until August, according to a recent Visa regulatory filing.

—Jim Daly

With a Push From the Government, Canada's Credit Card Interchange Is Going Down Again

Canada's finance ministry last month issued its latest merchant-friendly announcement regarding payment cards, this one disclosing agreements with Visa Inc. and Mastercard Inc. for an average 10-basis-point reduction in credit card interchange for small and mid-size businesses to take effect in 2020.

'These commitments from Visa, Mastercard, and American Express will make credit card acceptance fairer for small and medium-sized enterprises.'

–Bill Morneau, Finance Minister, Canada

The Department of Finance Canada also said American Express Co., which has a different business model than bank card issuers, made a separate agreement "that will support the government's objectives of greater fairness and transparency in the Canadian credit card market."

"The voluntary commitments announced today are good news for Canadian businesses that accept credit cards, and good news for Canadian consumers," Finance Minister Bill Morneau said in a statement. "With lower interchange fees, businesses will be able to save money that they can use to invest, grow, and create more jobs—an important part of strengthening and growing the middle class."

The Canadian government for years has lent an attentive ear to complaints from smaller merchants about card-acceptance costs and provisions in merchant acquirers' contracts.

The finance ministry came out with a "voluntary" code of conduct for the payments industry in 2010, a code developed with input from banks and retailers, and later obtained five-year commitments from Mastercard and Visa, effective in 2015, to get average interchange rates down to 1.50%.

The new commitments call for Visa and Mastercard to reduce domestic interchange to an average of 1.40% for five years from the current 1.50%, narrow the range of interchange rates charged, and obtain annual verification of rates from an independent party.

The finance ministry estimates the cuts will save small and mid-size merchants about C$250 million ($191.1 million) a year based on roughly C$250 billion in annual card purchases.

Not surprisingly, merchants hailed the news. "These new measures build on the positive momentum in improving the power balance between major card brands and smaller merchants that began with the adoption of the Code of Conduct for the Credit and Debit Card Industry in Canada," Dan Kelly, president of the Canadian Federation of Independent Business trade group, said in a statement.

The new agreements probably will have little long-term effect on Canadian payments, but they could spur a burst of account-acquisition activity by independent sales organizations, according to Adam Atlas, a Montreal attorney who works with ISOs in Canada and the U.S.

"The news becomes fuel for marketing by ISOs," Atlas says. "It's very hard to get the attention of merchants; this is a way of putting a bug in the ear of every merchant in the country to begin discussions on the topic."

Visa, Mastercard, and AmEx all issued polite statements about the coming changes. Mastercard said in a blog post that since 2015 its commitment to lower interchange "has delivered lower rates to over 700,000 businesses across the country and about $1 billion back to the business community."

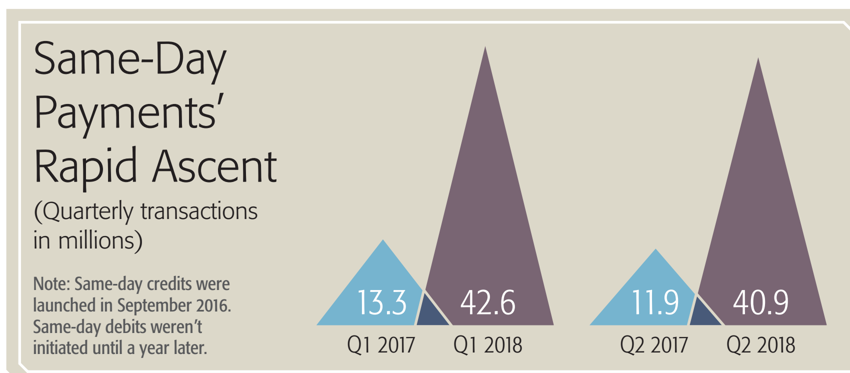
The Canadian Bankers Association, whose members receive the interchange merchants pay, issued a statement saying that "in 2016, banks took part in Finance Canada's review that culminated today in a further voluntary reduction in interchange rates by these payment card networks, the second such agreement since 2015."

—Jim Daly

The ACH Basks in a Long-Lived Growth Spurt

The massive automated clearing house network is on a growth spurt that shows no signs of slowing down.

The ACH handled 5.68 billion transactions in the quarter ended June 30, a 6.2% increase year-over-year, according to Herndon, Va.-based NACHA, the network's governing body. The network has now notched growth exceeding 5% in 12 out of the 14 quarters since the start of 2015.



Source: NACHA

Faster payments on the network, which links virtually every U.S. bank, totaled 40.9 million in the quarter, up from 11.9 million in 2017's second quarter (chart). These are ACH credits and debits processed the same day they are initiated. Under NACHA rules, banks ushered in same-day credits in September 2016, with same-day debits following a year later. Traditional transactions typically clear and settle the next day.

For the first half of 2018, same-day transactions totaled 83.5 million, up from 25.2 million same-day credits in the first half of last year, NACHA reported.

The organization has under consideration a proposal to lift the per-transaction limit on same-day transactions to $100,000 from $25,000.

Comments on this proposal closed on Feb. 23. Transactions at or under $25,000 account for approximately 98% of the total, NACHA says.

In peer-to-peer payments, the network processed 29.4 million transactions in the second quarter, a 24% increase year-over-year. P2P is a closely watched payment category these days with explosive growth at companies such as PayPal Holdings Inc., with its popular Venmo service, and Zelle, a bank-owned alternative.

P2P volume, which falls under the WEB credits NACHA code, totaled 58.1 million transfers for the first six months of the year, up 24% from the same period last year. Indeed, WEB credits is the fastest-growing ACH transaction code so far this year.

WEB debits, which include e-commerce payments, grew 14% to 1.44 billion in the quarter. These represent the second-largest ACH code in terms of transaction volume.

The largest code embraces so-called pre-arranged payments and deposits, or PPD. PPD credits, the ACH's original application, grew 4.2% year-over-year to 1.68 billion items. These refer to payroll direct deposits. Another variety, called PPD debits, routes consumer payments for recurring obligations like health-club dues, homeowner-association levies, and the like. These increased 4% to crack the 1-billion level.

Conversely, codes that cover check conversion are slowing with the long-term decline in check volume. The ARC application, which converts checks sent by consumers to billers' lockboxes, totaled 280.6 million items in the June quarter, down 8.2% year-over-year.

But the POP and BOC applications are sliding even faster, down 16.5% to 50.3 million transactions and 15.6% to 22.5 million, respectively. Both codes refer to checks presented at retail checkouts; with POP, these are converted at the register and handed back to the customer, while with BOC they are converted later in a back office.

—John Stewart

Which Fintech Is Ready To Become a Bank?

Financial-technology firms, many of which command significant positions in the payments business, can now apply to become national banks. But will Square Inc., the highest-profile candidate, take the leap?

Moving on a proposal it's had under consideration for months, the Office of the Comptroller of the Currency announced July 31 it will begin accepting bank-charter applications from fintech firms. The OCC's announcement triggered a wave of speculation about who would go first, speculation that quickly focused on the plans of merchant processor Square.

But Square is being coy.

"We're really well-positioned to broaden access to the financial system, which is our core purpose," Square chief executive Jack Dorsey said the next day in response to a stock analyst's question about the company's intentions. Dorsey ventured no further than that on the topic.

> 'Providing a path for fintech companies to become national banks can make the federal banking system stronger.'
>
> **—Joseph M. Otting**, Comptroller of the Currency, U.S. Treasury Dept.

(Photo: U.S. Treasury Dept.)

Square is a natural candidate to apply for a bank. It recently withdrew an application with the Federal Deposit Insurance Corp. in connection with a proposed Utah-based industrial loan corporation, a type of bank favored by nonbank companies. But Square is having "an ongoing dialog" with the FDIC, Dorsey said during Square's second-quarter earnings call. "We have decided to withdraw and refile," he said.

Square's decision to withdraw came in the midst of strong opposition to the application from banking groups, notably the Independent Community Bankers of America.

Comptroller of the Currency Joseph M. Otting said the decision to let fintechs into the federal banking club has much to do with encouraging innovation in financial services and expanding opportunity for businesses and consumers.

"Providing a path for fintech companies to become national banks can make the federal banking system stronger by promoting economic

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growth and opportunity, modernization and innovation, and competition," Otting said in a statement. "It also provides consumers greater choice, can promote financial inclusion, and creates a more level playing field for financial-services competition."

Under the new charter, fintechs will be subject to the same laws, regulations, reporting requirements, and supervision as traditional national banks. In return, the new banks will be subject to one set of rules, those at the federal level. Before the OCC decision, fintechs could only obtain state charters, a lengthy and arduous process that could subject a company seeking national coverage to 50 sets of regulation.

At the same time, banking functions like taking deposits and making loans can be appealing to financial-services companies looking for fresh capital and for ways to exploit the predictive and processing power of their technology. For this reason, some firms, including Square, have sought to establish special-purpose banks such as industrial loan corporations.

In addition to many bankers, some states also oppose the extension of national-bank charters to fintechs. In December, the U.S. District Court in Manhattan dismissed a lawsuit from New York's superintendent of financial services challenging the OCC's authority to grant bank charters to fintech firms.

Whether the OCC's announcement will open the floodgates for federal fintech banks remains to be seen. But some advocacy groups, including the Washington, D.C.-based Electronic Transactions Association, are celebrating the decision as a steppingstone to wider and richer opportunity for technology-centered financial-services firms.

"This type of clarity benefits everyone by ensuring that industry, customers, and regulators are operating from the same rules and expectations," ETA chief executive Jason Oxman said in a statement. "We look forward to working with the OCC on the charter to help expand financial inclusion by making services less expensive and broadly available."

—*John Stewart*

Payments Players Line Up Against Tariffs

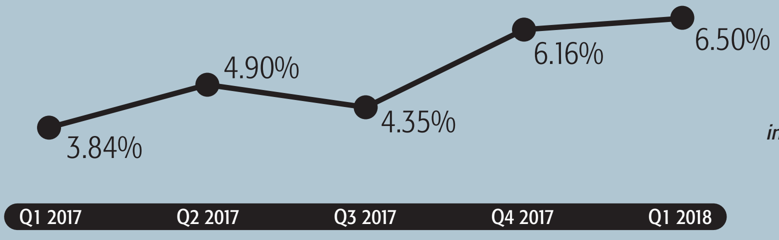
The payments industry would like to see a de-escalation of the worsening trade skirmish between the U.S. and China. Most recently, the ATM Industry Association announced its opposition to planned U.S. tariffs on Chinese goods, calling them a "threat to business."

Tente: "We support free trade."

MONTHLY MERCHANT METRIC

Growth in Same-Store Sales Year Over Year

Annual volume change/growth of retained (non-attrited) accounts for given period divided by total portfolio volume from same period of the prior year.



Note: This is sourced from The Strawhecker Group's merchant datawarehouse of over 3 million merchants in the U.S. market. The ability to understand this data is important as SMB merchants and the payments providers that serve them are key drivers of the economy.

All data is for SMB merchants defined as merchants with less than $5 million in annual card volume.

Source: The Strawhecker Group All information as available.

Payments Experts. Powerful Data. THE STRAWHECKER GROUP

ATMIA members were among those testifying at an August tariff hearing in Washington, D.C. A pending U.S. government proposal would impose duties of 25% on Chinese-made ATM parts and components, and 10% on fully-assembled machines, according to David N. Tente, executive director for the U.S. and Americas at the Sioux Falls, S.D.-based association of ATM independent sales organizations and other deployers.

Payments-industry groups and those from other industries have been monitoring the tariff situation ever since President Donald Trump began challenging China, Canada, Mexico, and the European Union earlier this year about trade policies he sees as unfair to the U.S.

The Electronic Transactions Association joined more than 100 other trade groups that sent a letter to Congress in April expressing their "deep concern" about planned tariffs. The ETA said duties could make life more expensive for merchant acquirers and others that buy point-of-sale terminals and related payment hardware from Chinese manufacturers.

Now the ATM industry is growing increasingly concerned about the Trump Administration's most recent tariff proposals. But no one has precise data on how much hardware the industry buys from China, according to Tente.

"It's a little hard to know exactly how expensive it would be," says Tente. But he adds: "It just appears the further we got into it, the greater impact there is."

It's fair to say that U.S. ATM manufacturers and related suppliers buy quite a few components from China. Only one Chinese ATM manufacturer, GRGBanking, however, sells complete machines in the United States, according to Tente. GRG's distributor is Mount Prospect, Ill.-based Cummins Allison Corp., a hardware provider to the banking industry.

Deployers of lower-cost ATMs for convenience stores and malls likely would be hit the hardest by tariffs, Tente predicts.

"We're not selectively opposing this tariff, we're opposing all tariffs," he says. "We support free trade."

The Office of United States Trade Representative (USTR), an arm of the White House that convened the August 20-23 hearing, had received nearly 1,100 comments on its proposals a week ahead of the meeting.

The Washington-based ETA said in a filing with the USTR that a range of telecommunications components and other electronic equipment used in the payments industry would be subject to new duties.

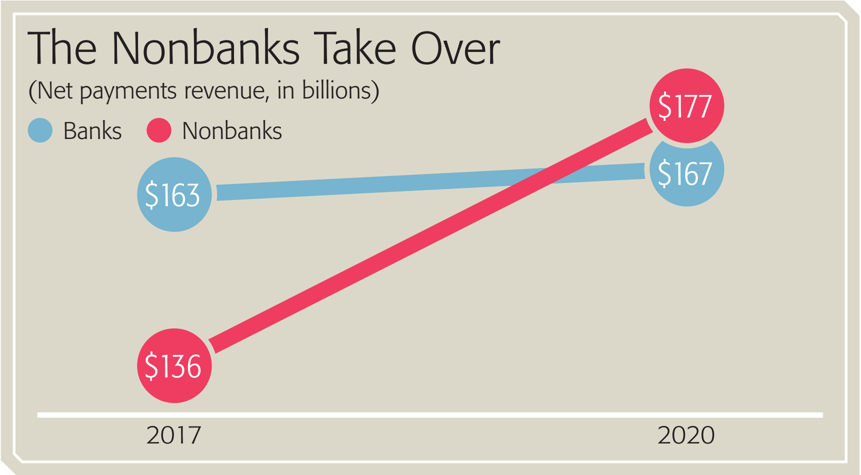
Many U.S. companies, including payments firms, have complained for years that China requires technology transfers and imposes other conditions that make it difficult for them to do business in the world's most populous country. But new tariffs "would not be practicable or effective to curb or eliminate the acts, policies, and practices of China related to technology transfer, intellectual property, and innovation" cited by the USTR, the ETA said in its filing.

—Jim Daly

Why Banks Will Soon Claim Less Than 50% of Payments Revenue

Financial institutions have been battling fast-growing fintechs and other nonbanks for payments share and revenue for years, but now new research indicates banks, which have historically controlled this crucial business, are on the cusp of slipping from that dominant perch.

In 2017, U.S. banks' total payments revenue netted out to $163 billion, with nonbanks claiming revenue of $136 billion, according to the research released recently by Accenture Payments (chart). That already meant nonbanks ranging from the likes of Apple Pay, PayPal, and Square to less well-known players claimed a 45% share of revenue last year.



Source: Accenture

But by 2020, the research projects the nonbank share will rise to $177 billion versus $167 billion for banks, tipping the balance in favor of nonbanks for the first time as they claim a 51% share. The change in nonbanks' favor will come about over the next three years as banks gain $15 billion in revenue but lose nearly $12 billion to pricing pressure and business lost to what Accenture calls "new players."

Nonbanks will sustain pricing pressure as well, which will exact a $27 billion toll. But they will reap enough new business—$69 billion worth—to more than offset the leakage to lower pricing, Accenture forecasts.

"Our analysis indicates that incremental revenues are projected to accrue primarily to nonbanks over the next few years," says Frank Martien, managing director for payments at Accenture and author of the study, in a blog post about the research. "The beneficiaries include players already in the value chain (those less exposed to customer demands, such as rewards, and with more direct access to key platform levers, like processing) and new forms of fintech, bigtech, and other third parties phasing into the market."

The change, though projected over a mere three years, can still seem gradual enough to lull bankers into a sense of complacency, Martien warns, particularly as many nonbank players are only now emerging as major factors in the market long after their launch. "As evidenced by ApplePay, it can take years for new, disruptive platforms to scale," he says in the post. "For those who are unprepared, gradual pricing pressure and value leakage may begin to erode many existing business models."

Accenture recognizes that at least some major financial institutions have moved to thwart the nonbank challenge, but wonders whether they are doing enough and acting with enough urgency, especially when it comes to new technology.

"Incumbents have already begun moving to protect their revenue base by introducing innovative solutions, such as [the peer-to-peer payments network] Zelle," says Martien's post. "Going forward, technology deployment needs to happen faster with more agile adoption and monetization of technologies, such as data analytics, blockchain, and [artificial intelligence]/machine learning." DT

—John Stewart

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Payment technology has kept pace with living technology, and thereby has kept payment as the widely accepted means for moving people to do things they otherwise would not do. In other words, humanity runs on payment. Our civil order is maintained through the ability of people to get others to serve them by paying them.

The flipside of this is the risk of disruption. If, for any reason, this bloodflow of society becomes a no-flow, society will collapse as the biological body does when the heart stops. Heart attacks happen to people who, a moment earlier, felt perfectly fine. Similarly, we should not disregard the specter of a sudden payment disruption, regardless of how smoothly payment seems to chug along.

One of the compelling arguments for the new form of money—the crypto abstraction—is that payment is carried out without vulnerability at a central control point. Bitcoin and its crypto cousins run on a non-hierarchical network that would keep operating even if large swaths of the network became incapacitated.

This so-called peer-to-peer payment idea is no doubt a big step forward in planning for payment continuity. It emerged from the Cold War, where it was a solution to a similar vulnerability of a hierarchical network. Peer-to-peer payment will operate even when much of the network is out of order.

Alas, the prevailing P2P solutions require a sufficient number of witnesses. Crypto currencies defer on how exactly the peers intervene to make the payment stick, but intervene they must. Unwitnessed payment is beyond the reach of modern crypto currencies.

For witnesses to play their role, they need a communication platform. So, while crypto payment is quite forgiving of interruption in communication, it does require a minimum baseline of communication, and will wither without it. Crypto currencies also face the risk of having "two network islands" that operate independently, and cannot reconcile when power is back on.

There are two emerging solution categories for this challenge. One is captured in U.S. Patent #9,471,906, based on a chemical-structural hybrid coin, and the other is based on a slow-growing trust index.

Long before a crisis strikes, money traders invite witnesses to observe their trade practices. Crypto tools validate this trading track record, and over a long period of time such good behavior earns a trader a much-coveted trust index. In normal times, a trust index is like a gold or platinum frequent-flier card: it has its benefits. Alas, one misstep, one attempt to cheat, and the index crashes to the ground, even to negative territory. And it will take a very long time to rebuild the index.

The longer the pre-crisis period, the higher the trust indices of the trading public. When the catastrophe happens and the network is down, these indices remain valid and may serve as a basis for unwitnessed peer-to-peer money exchange.

The particular BitMint product allows two unwitnessed traders to use their battery-operated devices to carry out a transaction in which the payer vouches for his money by flashing his or her trust index. If the payer cheats, his trust index will be wiped out when, at some point, the network is back on. A trader who is careful to be honest for a period of, say, three years, and thus achieves a commensurate trust index, is not likely to discard it by making a small false payment.

As the lights go off, people will keep trade going through their battery-operated electronic wallets (their phones), and weather the down period.

The beneficial side effect of this crisis preparation is that this trust index will also serve us during periods of normal network congestion. We are building an automatic decision software program that evaluates a situation where the network seems slow, a payment is small, and the payer projects a high trust index. In this case, the software will not wait for the network, but will accept the payment as claimed by the payer.

As more and more traders run such automatic payment-decision software programs, the load on the network will ease up and overall throughput will increase. All the while, traders are more and more prepared to weather even prolonged periods of network blackouts.

Keeping payments flowing is like keeping clean, unclogged arteries. It's a life-or-death issue. ■

A New Age for Underwriting

Kevin Woodward

Vetting a new merchant takes a lot of work, but the plethora of nontraditional data may make it a little easier.

How do you tell the difference between a bot applying for a merchant account and an actual human doing it? The answer might lie in social-media profiles and a little understanding of human nature.

Underwriting is a venerable and vital part of signing up merchants to accept payment cards. And it, too, like so many other aspects of acquiring, is changing at a record pace. The process of ensuring a merchant applicant is who she says she is is important because, without verification, bad actors can access the payment network. That can destroy revenue channels and harm the industry's reputation.

Fortunately, new underwriting methods have emerged to make the job a little more effective. In today's culture, for example, the prevalence of social-media profiles—68% of U.S. adults use Facebook and 45% use Twitter, the Pew Research Center says—is a bonus for underwriting. It can be an asset to independent sales organizations, payment facilitators, integrated payments providers, and others.

The basics—such as legal name of business, a credit-background check, site visits, and checking that the merchant applicant isn't prohibited from connecting to a payment network—are still essential, and indeed required by acquiring banks.

Other traditional types of information and methods include a merchant's history, verifying the business structure, examining prior processing statements, verifying that inventory reflects the sales volume, and operational data like average transaction amount and chargeback history.

But now this core information, coupled with the nontraditional data, informs underwriting decisions for more and more payments providers.

Some online methods, as outlined in the second edition of the Electronic Transactions Association's "Guidelines on Merchant and ISO Underwriting and Risk Monitoring," include conducting an eBay Inc. member search, reviewing message boards like Scam.com or RipoffReport.com to view consumer comments, and making a reverse phone search using Superpages.com. The ETA advises that any negative information found does not represent an attempt to discredit the merchant.

Asked And Not Asked

At PaySimple, a Denver-based payments provider, the nontraditional data can help fill in what merchants don't say. Merchants use PaySimple's Simple Sign Up online application to provide the information PaySimple needs.

This information forms the nucleus of the underwriting assessment, David Sharp, PaySimple's president, tells *Digital Transactions.* "We can get a full picture of what they provide to us and what they didn't provide to us," Sharp says. "We evaluate and score everything."

PaySimple performs the basic review of a merchant's application, such as checking out the merchant's Web site to see if it aligns with what the merchant purports to be selling. But PaySimple's underwriters, too, will examine what wasn't asked about.

"What we're not asking is what time of day did [the application] take place and if it was in the merchant's local time zone," Sharp says. "Is that out of the ordinary for the industry?"

Other considerations might be how soon the application is made after inquiring about a PaySimple account or the geolocation of the application. Does that location align with where the merchant is based? Sharp says a merchant who applies while, for example, on vacation in Europe for her U.S. business might not warrant an automatic rejection. Instead, PaySimple will ask for an explanation in most instances, he says.

All this is vital because PaySimple, with 10 years of experience using its Simple Sign Up online service, has

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"The process can't be [fully] automated yet ... it takes a human eye to check for fraud statements from fake or lying businesses looking for 'free' money."

–Alex Shvarts, chief technology officer and founder, FundKite

(Photo: FundKite)

reviewed thousands of applications. "We've mapped out the buyer's journey and what the characteristics look like," Sharp says.

One tactic that PaySimple employs is defining its ideal client profile. Each merchant application is measured against this profile. If a merchant application is below that threshold and presents peculiarities, PaySimple dismisses it.

'Extra Credentials'

This tactic of collecting data and vetting it against what the merchant says and what it doesn't knowingly reveal is vital even for value-add services sold by independent sales organizations and acquirers.

At FundKite, a merchant cash-advance company, vetting merchants is just as important as it is for a merchant-account provider, and it also relies on determining the validity of both traditional and nontraditional data.

"Everything besides business history and credit score is 'nontraditional' in the sense that it wasn't primarily used 10 years ago, but most funders in the industry use the same extra credentials," says Alex Shvarts, chief technology officer and founder of New York City-based FundKite.

In his company's case, nontraditional methods might entail calling the merchant's landlord to verify the business location, asking what the merchant wants to use the money for, considering the seasonality of the business, asking for projected revenues, making a site check, and asking about other advances the merchant might have taken.

"The merchant interview is crucial and really highlights how important underwriting is," Shvarts says. "Seeing how much a person knows about the business and the way it makes money is one of the most important things in determining if the business is profitable and will be able to pay us back."

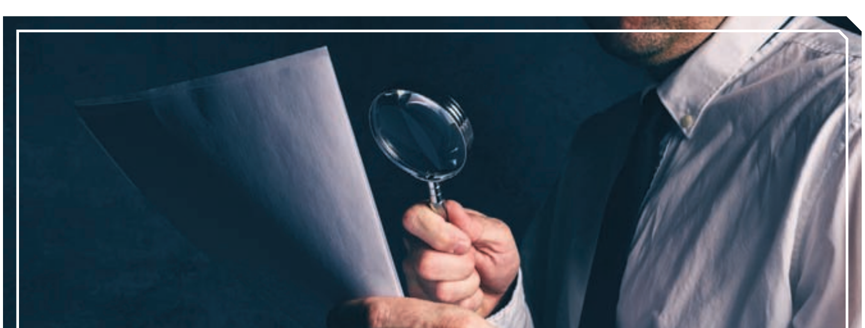
It's the combination of traditional merchant data with the nontraditional that's necessary today and has the potential to produce the best decision on the merchant's application, say both lenders and payments providers.

"While FundKite heavily factors in numbers, financial statements, bank verification, payback months, and credit score, there is so much else that needs to be looked into about the individual and the business," Shvarts says.

Catching Bots

Indeed, some merchant types aren't as easily evaluated electronically and require some atypical vetting. The cannabis industry, for example, is dominated by cash transactions because of the uncertainty surrounding the legality of accepting card payments.

These merchants would need more than bank statements and credit sales, Shvarts says. "While FundKite considers cannabis businesses to be too high-risk to fund, other alternative lenders



'We've mapped out the buyer's journey and what the characteristics look like. What we've found recently is, if [an application] looks too good to be true, it probably is.'

rely on nontraditional sources to provide that industry funding," he says.

At PaySimple, nontraditional data is growing in importance, Sharp says, not just as possibly useful fringe data but as a larger part of the decision-making process. One reason for this is that the proliferation of data, even the stolen kind that ends up on criminals' computers, presents challenges. That wasn't always the case a few years ago.

"One of the things we learned is that if it was a pristine application a few years ago it might be let go for auto approval," Sharp says. "What we've found recently is, if it looks too good to be true, it probably is."

But that doesn't necessarily mean an automatic denial. It's at this point that nontraditional sources prove their worth. PaySimple will visit the applicant's Facebook page and check that the marketing done on the social network matches with what the application says. The demographic data will also be checked and any differences noted.

Another nontraditional tactic might be to use a CAPTCHA—an acronym for Completely Automated Public Turing test to tell Computers and Humans Apart—to determine if the application is being completed by a human or a bot.

The sure sign of a CAPTCHA is the sometimes pesky dialog box that requires a person to select all the cars in the image or type in a code. "There are ways to trip up a bot," Sharp says. A simple way might be to include a hidden check box on the form. If checked, that signals further review of the application, he says.

'We can get a full picture of what [merchants being assessed for underwriting] provide to us and what they didn't provide to us. We evaluate and score everything.'

—David Sharp,
president, PaySimple

(Photo: PaySimple)

This is a special hazard to PaySimple because most of its customer-acquisition effort consists of digital marketing. "When you put out that amount of digital marketing, you encounter fraud," Sharp says.

Interestingly enough, any detected fraud is examined to see what digital marketing campaign it came from, he says. "If we detect fraud coming from a campaign, we'll adjust our campaign." Typically, PaySimple reviews its campaigns monthly, not only for potential losses but for what is working well.

'The Final Say'

It's vitally important that the vetting process be complete and accurate, especially for companies like FundKite, which can send money immediately into an approved merchant's bank account.

"Part of why the [cash-advance] industry is booming is because of how quickly funds can be transferred," Shvarts says. "With immediate money wiring and [automated clearing house] deposits, businesses can get money ASAP. The use of Docusign also allows us to fund over the Internet by having legal documents signed within minutes, no matter what state the business is in." Docusign is an electronic document-signing service.

Sometimes the nontraditional information isn't electronic. "Red flags also can come up over the phone," Shvarts says.

Interestingly, questions that may seem alarming at first blush really aren't. "Someone who asks questions about being unable to pay back or is concerned about being over-leveraged isn't a sign that their business isn't doing well, but rather that they are logically thinking about numbers and whether their business can take one."

Instead, what provokes concern is the quiet applicant. "Someone too eager for anything, asking no questions and blindly accepting funding is a sign that this deal is a risk," Shvarts says.

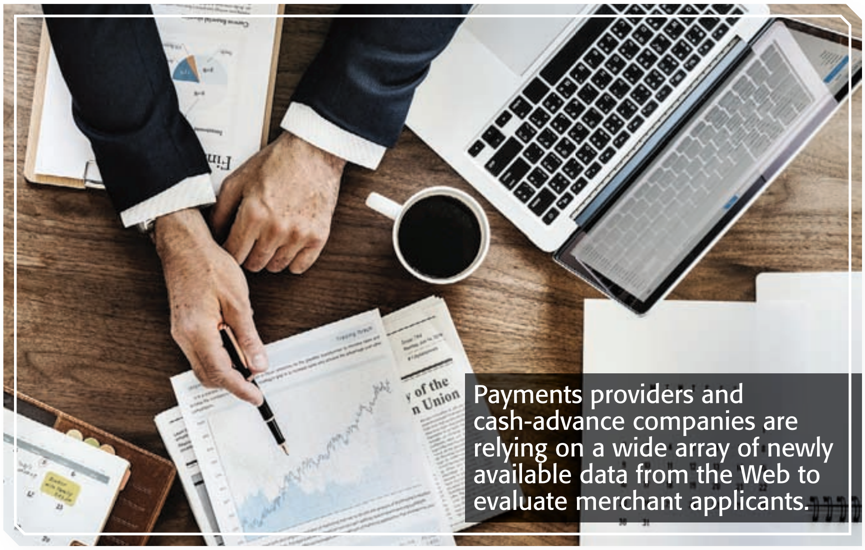
Interpreting that kind of information, as with PaySimple's efforts to determine if a bot or a human completed an application, requires human intervention. That's where the one inviolable element of the entire underwriting process reigns supreme.

'Someone too eager for anything, asking no questions and blindly accepting funding is a sign that this deal is a risk.'

"The underwriter holds a lot of power in that they have the final say," Shvarts says. "It is absolutely the most important part of funding a business."

Even with conventional underwriting data, an underwriter must review key aspects of a prospective merchant. For example, Visa Inc. wants the acquirer to verify that a merchant has credit and return policies that say how they handle this part of their business.

If it's an e-commerce business, even if the merchant already accepts cards in its brick-and-mortar store, underwriters have to ask for and review specific information. This may include verifying Web-site ownership, ensuring customer-service information is clearly visible, and checking to see that the merchant has all the necessary terms and conditions, and similar policies, on its Web site.


Payments providers and cash-advance companies are relying on a wide array of newly available data from the Web to evaluate merchant applicants.

Companies like PaySimple and FundKite automate as much of the process as feasible. But the human aspect is not going away any time soon.

"The process can't be automated yet because you can't just look at numbers, you have to factor in many other aspects to calculate the overall health of the business, and it takes a human eye to check for fraud statements from fake or lying businesses looking for 'free' money," Shvarts says. DT

Still Unsettled

Jim Daly

A divided Supreme Court says American Express Co.'s anti-steering rules for merchants don't violate antitrust law. What does that mean for card payments, especially with another big card-related court case heading for a settlement?

The U.S. Supreme Court's recent 5-4 decision upholding American Express Co.'s anti-steering rules for merchants has lots of implications, but the big takeaway is that despite the high profile of the case, not much will change for relations between merchants and the payment card networks—yet.

A likely more important issue for most merchants is just what lies ahead for their relations with the Visa Inc. and Mastercard Inc. networks. The state of those relations could be determined by the outcome of a massive case known as MDL 1720, which involves merchant challenges to Visa and Mastercard credit card interchange and card-acceptance rules. This case could be getting close its second settlement.

The litigation, which dates back to 2005 and has had countless twists and turns, including an appellate court's 2016 rejection of a $5.7 billion class-action settlement struck four years earlier, is pending in U.S. District Court in Brooklyn, N.Y. The class merchant plaintiffs are now divided into two groups. One seeks monetary damages, while another seeks changes in acceptance rules.

But many large merchants had opted out of the now-moot 2012 class settlement—merchants representing slightly more than 25% of Visa and Mastercard purchase volume—and some of them then sued the card networks on their own. These merchants are now clustered into several different groups with different lawyers, and their claims also are being adjudicated under the MDL 1720 umbrella.

Mastercard disclosed in a July regulatory filing that negotiations with merchants were moving along and that a new settlement could be reached by Sept. 30. Some reports in the financial press pegged the settlement value at possibly $6.5 billion. But as of mid-August, it was unclear to what extent each of the major groups, particularly the opt-out merchants, would be covered by any settlement.

A Wild Card

So, while the AmEx case settled some issues, MDL 1720 remains a wild card.

"I don't see the Supreme Court decision as something that gives the [bank card] networks a pass on the conduct that's been challenged, far from it," says attorney Jeffrey I. Shinder, managing partner at Constantine Cannon LLP in New York who is representing a group of 65 large opt-out merchants.

"I think the future of this industry will be determined by two broad forces," Shinder continues. "One, the outcome of these [large-merchant] cases, and the manner in which the digitization of the industry as technology changes the way people pay—how that's going to affect the prevailing paradigm."

The AmEx case, however, marks a milestone in how courts view payment card networks. The Supreme Court endorsed a view held by many economists that card markets are two-sided affairs with merchants and consumers each playing essential roles, and, more importantly, that network price increases to merchants do not necessarily harm consumers. As such, the court said AmEx's rules that ban merchants from steering customers to cheaper forms of payment do not violate antitrust law.

Retailer trade groups quickly signaled their disappointment when the high court's ruling came down June 25.

"It's certainly a setback," says Mark Horwedel, chief executive of the Merchant Advisory Group, a Minneapolis-based association of mostly large merchants concerned with payments issues. "The merchant alternatives to hold down the cost of payment cards have gotten fewer as a result of this decision."

A Big Winner

American Express clearly is a big winner in the seemingly endless legal battles between merchants, card networks, and government over payment card acceptance costs and rules.

At the direction of now-retired chief executive Kenneth I. Chenault, the travel-and-entertainment card network took a major risk in 2010 when it chose to fight the U.S. Department of Justice and 17 states that challenged the anti-steering rules of not only AmEx, but also those of Visa and Mastercard. The DoJ and the states said such rules were anti-competitive.

Rather than fight what looked to be yet another lengthy court battle, Visa and Mastercard immediately settled and changed their rules to allow steering. But AmEx insisted its so-called non-discrimination provisions were essential to its business model.

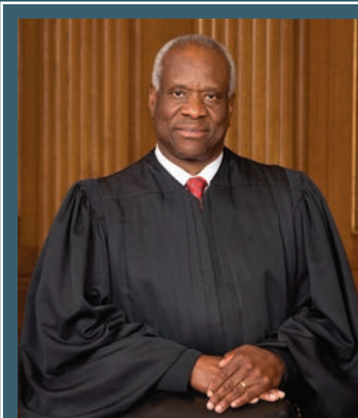
In February 2015, AmEx lost a seven-week bench trial before U.S. District Judge Nicholas G. Garaufis in the Brooklyn court, but appealed to the Second U.S. Circuit Court of Appeals in New York and won. Eight states led by Ohio then took the fight to the Supreme Court, with the DoJ no longer playing the lead but a supporting role.

Associate Justice Clarence Thomas, joined by the court's three other conservatives and swing vote Associate Justice Anthony Kennedy (who recently retired), upheld the Second Circuit's decision that AmEx's rules did not violate the Sherman Act, one of Congress's main antitrust laws. The court's four liberals dissented in an opinion written by Associate Justice Stephen G. Breyer.

"This was a long battle, but well worth the fight because important issues were at stake: consumer choice, fair market competition, and the ability to deliver innovative products and services to our customers, both consumers and merchants," Chenault's successor, AmEx chairman and CEO Stephen J. Squeri, said in a statement.

'The Optimal Balance'

In his 20-page opinion, Thomas wrote that "unlike traditional markets, two-sided platforms exhibit 'indirect network effects,' which exist where the value of the platform to one group depends on how many members of another group participate."



Visa and Mastercard 'have significant structural advantages over AmEx.'

—CLARENCE THOMAS,
ASSOCIATE JUSTICE,
U.S. SUPREME COURT

(Photo: U.S. Supreme Court)

"Two-sided platforms must take these effects into account before making a change in price on either side, or they risk creating a feedback loop of declining demand," Thomas's opinion said. "Thus, striking the optimal balance of the prices charged on each side of the platform is essential for two-sided platforms to maximize the value of their services and to compete with their rivals."

Thomas noted that AmEx's business model depends on relatively high merchant fees to fund its rich rewards programs for cardholders. In contrast, he wrote that Visa and Mastercard "have significant structural advantages over AmEx."

Most of the nation's banks belong to their networks, translating into a card base about eight times bigger than AmEx's. And, relying on 2013 numbers, he said that about 6.4 million merchants accepted Visa and Mastercard cards compared with only 3.4 million for AmEx.

The DoJ and the states failed to prove that AmEx's behavior was anti-competitive, according to Thomas. He wrote that AmEx actually spurred network competition, pointing out that AmEx inspired Visa and Mastercard issuers to come out with premium cards of their own, and that when AmEx raised merchant fees between 2005 and 2010, "some merchants chose to leave its network." Merchants' fees to accept cards have declined by about 50% since the 1950s, Thomas said.

Thomas's opinion essentially says the card market is one entity, not two separate ones comprised of merchants and consumers, respectively, and concluded that AmEx didn't have the market power to raise merchant pricing above what would be expected in a normal market.

A law professor and former DoJ attorney who worked on a high-profile earlier card case believes the Supreme Court majority made the right call.

"There's big difference between American Express and Visa and Mastercard," says Steven Semeraro, director of the Intellectual Property Fellowship Program at the Thomas Jefferson School of Law in San Diego. Merchants believe "they have no alternative" but to accept Visa and Mastercard cards, but not AmEx, he says.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‘If merchants don’t like AmEx, they can stop taking it.’

—**STEVEN SEMERARO,**
DIRECTOR OF THE INTELLECTUAL PROPERTY FELLOWSHIP PROGRAM, THOMAS JEFFERSON SCHOOL OF LAW

(Photo: Thomas Jefferson School of Law)

“From my perspective, merchants like credit cards, they just want to pay less,” says Semeraro. “They’re looking for a legal avenue that might enable them to do that, but I don’t see how this [case] hurts them. If they don’t like AmEx, they can stop taking it.”

‘Nonsensical’ Argument

Back in 1998, the DoJ sued Visa and Mastercard over their rules prohibiting their bank and credit-union members—both were financial-institution-owned associations at the time—from issuing cards on other networks such as AmEx or Discover. The DoJ also wanted to untie the governance structures of the two associations, which the feds claimed were not true competitors.

Semeraro was the DoJ’s lead attorney during the investigative phase of that case, but he left before it was adjudicated. The bans on issuer participation in other networks were overturned, and a few banks then began issuing AmEx-branded cards.

The DoJ, however, failed in its bid to unscramble network governance. But Semeraro says the DoJ ultimately “won as a practical matter” a few years later because both networks held initial public offerings and become investor-owned companies.

Payments consultant Eric Grover of Minden, Nev.-based Intrepid Ventures says “any argument that AmEx had market power was nonsensical.” He also applauded Thomas’s close attention to the interplay between the consumer and merchant sides of payment networks.

In contrast, regulators in the European Union and Australia, as well as the U.S. merchant lobby, have mostly focused on the cost of card acceptance for merchants, Grover says. “In almost every case where it’s framed that way, it [results in] some sort of regulation, price cap, or restriction on what networks can mandate around acceptance of their products,” he says.

‘Premium Business Model’

In his dissent, however, Breyer said the court majority “devotes little attention to the district court’s detailed factual findings.” It came out at trial that beginning in 2005 AmEx raised its merchant rates 20 separate times over five years, but, thanks to the non-discrimination provisions, “it did not lose the business of any large merchant,” Breyer wrote. “Nor did American Express increase benefits (or cut credit card prices) to American Express cardholders in tandem with the merchant price increases.”

Breyer also highlighted the trial court’s findings about Discover Financial Services, the youngest and smallest of the four U.S. general-purpose card networks, when it tried to attract merchants by charging them less than Visa, Mastercard, and AmEx.

“The court determined that these efforts failed because of American Express’ (and the other card companies’) ‘nondiscrimination provisions,’” Breyer wrote, quoting from Garaufis’s decision. “Because the provisions eliminated any advantage that lower prices might produce, Discover ‘abandoned its low-price business model’ and raised its merchant fees to match those of its competitors. This series of events, the court concluded, was ‘emblematic of the harm done to the competitive process’ by the ‘non-discrimination provisions.’”

For AmEx, the Supreme Court’s decision means the company can continue a policy forged when it was much more of a T&E brand whose primary cardholders were business travelers and upscale consumers.

“It preserves AmEx’s ability to preserve its premium business model,” says Thomas McCrohan, managing director and senior analyst for financial technology and payments at Mizuho Securities USA LLC in New York City.

AmEx still markets heavily to that core base of upscale consumers

Despite all the litigation, ‘the bigger merchants have learned how to navigate the interchange world, because they’ve all cut side deals.’

and merchants, but it also has been working for years to get "everyday" merchants such as discount retailers, grocery stores, and small, local merchants to accept its cards, and to broaden its cardholder base.

"This [decision] allows them to go forward with their strategy," says Semeraro. "I don't really understand it, but I guess they've been doing okay with it."

One element of AmEx's recent strategy has been a gradual reduction in its average discount rate to attract merchants, especially small ones.

'Loath To Surcharge'

While possible settlements in the MDL 1720 case could generate damage awards and potentially loosen rules for merchants over surcharging and other acceptance rules, the Supreme Court opinion in the AmEx case still could raise hurdles for merchants in future legal challenges over such rules.

"They [merchants] need to prove that consumers are being harmed by the fees merchants are paying," and that prices are higher because of those fees, says McCrohan. "How the heck do you prove that? They just can't look at it through one lens."

While the AmEx case and a final end to the lengthy MDL 1720 litigation could give merchants more clarity about what's permitted and not permitted regarding card acceptance, merchants are restrained by their overarching desire to please customers. Pleasing customers usually includes accepting whatever payment form they present. As such very few big merchants surcharge card transactions, according to the MAG's Horwedel.

"Not much of it is going on among large merchants who are very much loath to surcharge because of potential consumer backlash," he says. But he adds: "I run into it all the time at small merchants, often restaurants that have minimums to accept, or surcharges to accept, and even though they may not be operating within the rules of the networks."

Analyst McCrohan notes that despite all the litigation, "the bigger merchants have learned how to navigate the interchange world, because they've all cut side deals" with the networks. He estimates that the largest merchants are probably paying only 70 to 100 basis points (0.70% to 1%) of the transaction to accept cards. "They get a lot of value for that," he says.

And maybe when the networks and merchants can all agree on what's fair value for everybody, the court fighting will end. DT

CHINA CALLING

The mobile-payments giants Alipay and WeChat Pay are working hard to expand acceptance outside China, and the United States is a prime market.

Here's what that could mean for U.S. merchants—and for the comparatively less successful U.S. wallets.

BY JOHN STEWART


You will encounter a
Chinese mobile payment.

In the four years since its launch, Apple Inc.'s Apple Pay mobile-payment service has been adopted by 252 million users globally, or nearly one-third of the active base of iPhone users, according to estimates released last month by Loup Ventures.

Those look like impressive numbers—until you dig a little deeper. Just 38 million of those Apple Pay users are in the United States, where adoption has been slower than anyone, including tightlipped Apple, expected.

Now consider a couple of alternatives. Alipay, from Ant Financial Services Group, is a 14-year-old service that has been adopted by at least 600 million users. Its rival, Tencent Holdings Ltd.'s WeChat Pay, could be Venmo's big brother. Like PayPal Holdings Inc.'s peer-to-peer payment platform, WeChat Pay ties into a popular messaging app. In its seven-year history, WeChat Pay has scooped up users by the bushel, reaching a total of at least 800 million.

Now these two Chinese giants are on Apple Pay's home turf. Alipay has recruited 175,000 U.S. merchants that cater to Chinese travelers and has signed deals with First Data Corp. and Verifone Systems Inc. to expand their store footprint even more.

"With the Chinese middle class, the fastest-growing online consumer market in the world, slated to hit 600 million by 2022, now is the time for U.S. businesses to participate in this lucrative market," an Alipay spokesperson says.

For its part, WeChat Pay is gearing up to sign more U.S. merchants yet this year, again focusing on Chinese tourists, according to an interview a WeChat Pay cross-border payment executive gave to CNBC in July. WeChat Pay did not make an executive available to *Digital Transactions*.

But why are these payment services so fixated on serving Chinese citizens as they travel, and—as some experts wonder—will it be long before they begin signing not just popular businesses but consumers as well?

That latter prospect has the attention of U.S. payments executives. "We get a lot of calls about the Chinese payment apps," says Sarah Grotta, director of the debit and alternative products advisory service at Mercator Advisory Group, Maynard, Mass. "The first question I always get asked is, Should financial-services providers in the United States be concerned. I get a lot of that."

'THE BALL IS YET TO DROP'

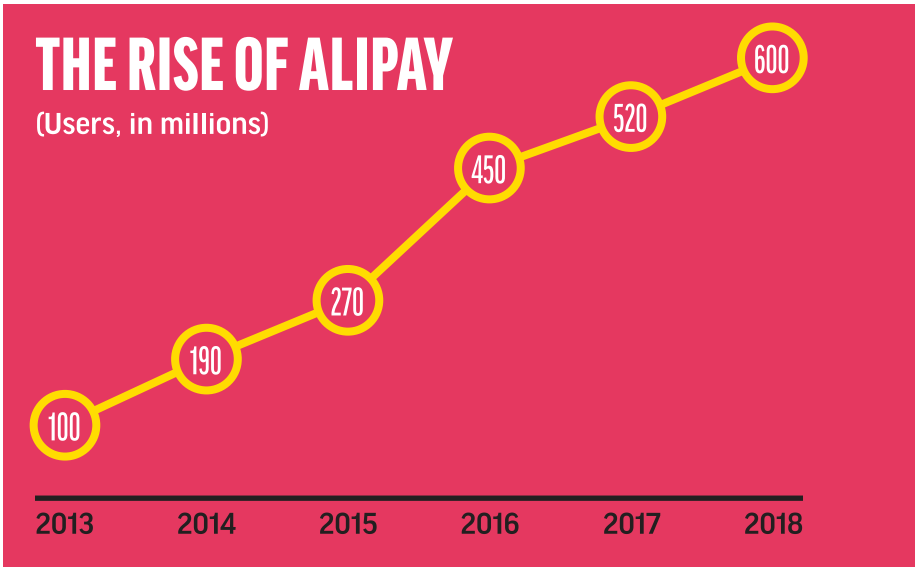
Ant Financial's abortive effort last year to acquire the well-known money-transfer company MoneyGram International Inc. may have sparked some of that concern. But the progress its mobile-payments service is making to serve Chinese visitors has also earned the close attention of payments observers.

"They're clearly selling to merchants now," says Steve Mott, a veteran payments consultant based in Stamford, Conn. "The ball is yet to drop on when they'll start marketing to [U.S.] consumers."

Working with the big merchant processor First Data Corp., Alipay has already recruited 175,000 U.S. merchant locations. And the business of wiring stores to take Alipay or WeChat Pay is attractive enough that it has drawn specialist players like Citcon USA LLC.

"I don't have any specifics, but we can't rule out the possibility to expand the consumer base beyond Chinese tourists," says Chuck Huang, a former Visa Inc. executive who is chief executive and founder of Citcon, a Santa Clara, Calif.-based company that helps merchants with the technology they need to process the quick-response (QR) codes both Alipay and WeChat Pay rely on.

UnionPay International, China's answer to Visa and Mastercard Inc., makes no bones about its ambitions to recruit U.S. cardholders, many if not most of them businesspeople who travel frequently to China. In April 2016,



Source: Techinasia; DMR; company reports

a UnionPay member bank began issuing the first credit cards to American citizens.

But whether these cards can be used to fund Alipay and WeChat Pay transactions is another story. Neither company will disclose how much of its volume stems from cards versus cash accounts, though the Alipay spokesperson says "a large portion" of transactions on its system are funded with bank or money-market accounts.

Both wallets disallowed foreign cards until early this year, when WeChat Pay made a tentative move in that direction by allowing expats living in China to link non-Chinese credit cards. To make that work, though, the app must be downloaded in mainland China, Hong Kong, Macau, or Taiwan.

'LIMITED' AMBITIONS

Still, some observers say either Alipay or WeChat Pay could work with local banks to distribute their apps in overseas markets. "It will probably require some partnerships but it's certainly believable," notes Richard Char, senior vice president of business development at Verifone, which also has an agreement to support Alipay's overseas acceptance effort.

Through a connection to its China-based gateway, the San Jose, Calif.-based maker of point-of-sale devices connects Alipay directly to special-purpose terminals in stores in Europe and the United States to cater to Chinese travelers.

Right now, though, it's these tourists only that use the service. "We're not seeing use of Alipay or WeChat Pay by locals, not even Chinese locals," says Char, who adds he tried to sign up for an Alipay wallet himself and immediately ran into obstacles. Among other things, "You have to be vouched for by other Alipay members, that was my experience," he says.

For now, the tourist trade may be quite sizable enough for Alipay and WeChat Pay. In the U.S. market, some 2.97 million Chinese tourists visited popular destinations in 2016,

UNIONPAY EX-CHINA

(Cards issued outside Mainland China, in millions)

Late 2014	33
April 2016	54
October 2017	90

Source: News releases and reports

the latest year for which numbers are available from the Commerce Department. That represented a 15% increase from 2015. Those visitors spent $33 billion, up 9%. This year, Alipay says projections indicate the Chinese tourist count will grow to 4 million.

In fact, China now sends more tourists to the United States than any other country except the United Kingdom and France. "My sense is that their ambitions have been quite limited to Chinese customers at San Francisco, New York, and other entry points for [overseas] travelers," says Zilvinas Bareisis, a senior analyst at Boston-based financial-services technology advisory firm Celent.

GROWING THE PIE

It's not hard to see why the mobile giants have been developing acceptance networks in foreign markets. Their dominance in China is such that, combined, they account for 92% of mobile-payments volume, with $15.5 trillion of total volume in 2017, according to data compiled by New York City-based investment-information service CBINsights (chart, page 36).

That's in a home market that has been, until very recently, closed to foreign competitors. Only in 2015, for example, did China allow Visa and Mastercard to seek clearing licenses for domestic payments.

Unless Alipay and WeChat Pay can grow the pie, and fast, they need either to mine more volume from bank transfers and straight-up card payments or follow Chinese citizens as they travel abroad.

Alipay in action: Cracking the code for mobile-payments success?

Photo: Verifone

The arrival of a Chinese payments service on U.S. shores is nothing new. In 2013, UnionPay had struck deals with Fidelity National Information Services Inc. and Bancorp Bank to issue prepaid cards in the United States, with Bancorp as the issuer and FIS as the program manager.

Three years later, as noted earlier, came UnionPay-branded credit cards, this time with Industrial and Commercial Bank of China, the country's biggest bank by assets, as the issuer. At the time, UnionPay had 54 million cards issued outside of China, a number that by last fall had swelled by 67% (chart, page 34).

But as big as ICBC is, few could imagine when they emerged the proportions the two nonbank mobile-payments players would assume. Alipay came first, in 2004, as a solution to a growing problem faced by Taobao, an online marketplace operated by Alibaba Group Holding Ltd., the progenitor of Ant Financial: how to make online payments possible for consumers who, for the most part, had no means of paying digitally.

With virtually no competition from credit cards, Alipay grew fast enough to be spun off in 2010 as a separate unit. Three years later came the idea of having users salt away idle escrow funds in an online money-market account that earns interest and charges no fees to move money in and out. By that time these escrow funds had already run up to billions of dollars.

In parallel with these developments, WeChat Pay emerged in 2011 as a service of WeChat, a huge messaging network created by Tencent as one of a number of Internet services, including cloud computing, social networks, digital content, and online advertising.

Seven years later, Tencent is still reporting rapid growth for its mobile-payments service, particularly in physical stores. In its earnings report for the June quarter, the company said its average daily transaction volume had risen more than 40% year-over-year. Its offline volume alone was up 280%. The report did not state the absolute figures.

'A FULL LIFESTYLE APP'

That diversity of services is a key factor in the rapid growth of both payments products. Alipay, for example, handles payment but also lets users manage mundane functions like hailing a cab and booking a hotel room. "It is a full lifestyle app," the spokesperson for the company says by email. "It is important to take all that information and services and put them under one identity, and we haven't seen anybody else do that yet."

But there was another factor contributing to the rapid growth of both services: when they emerged, there was no substantial non-cash payment alternative. In the United States, the so-called Pays—Apple Pay, Google Pay, and Samsung Pay—have to compete with a solidly established base of plastic payment cards that do the job pretty efficiently. In fact, with contactless EMV cards, payment with plastic can be just as swift and effortless as with a mobile phone.

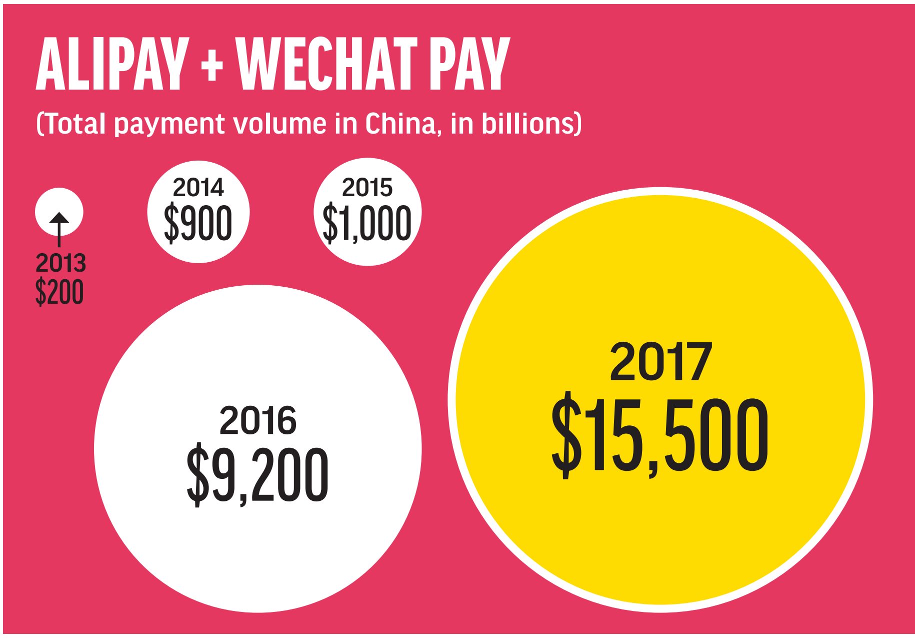
The Chinese technology companies, by contrast, introduced mobile-payment services that even the most rudimentary roadside stand could accept. All the merchant needed was a QR code that customers could scan with their phone. And that code could be printed on a sheet of paper and pinned to the front of the stall. The user simply scans the code and enters the transaction amount and a PIN.

The payment method caught on rapidly as the base of smart phones grew. But merchants were pleased, too. "QR was less investment for the merchant," says Mohammad Khan, president and cofounder of Omnyway Inc., a San Francisco-based payments-technology company that builds QR-based mobile-payments apps for merchants like Kohls Corp.

Watching the rapid growth of Alipay and WeChat Pay—as well as Paytm in India, in which Alibaba holds a 40% stake—is a bittersweet experience for Khan, formerly a top executive at ViVOtech, a now-defunct company that tried for years to sell near-field communication to banks and payment networks, with decidedly mixed results. "I worked so hard to make NFC go," he says.

All three of the Pays rely on NFC, which is a sophisticated—and, some experts argue, superior— technology for payments.

But for China's cash-based merchants, NFC could well have been overkill. And now, with both Alipay and WeChat Pay pushing to build out a U.S. merchant network, QR codes might offer the fastest route to acceptance.



Source: CBInsights, compiled from various sources

"The U.S. doesn't have a tradition of contactless payments," notes Windsor Holden, who follows mobile payments worldwide at Juniper Research, a United Kingdom-based consulting firm. "Apple Pay is doing a reasonable job, but, that said, it's a comparatively small market."

'THE LONG GAME'

Now the question is whether either Chinese wallet will make a play for U.S. consumers, and if so, how soon. Experts who see this coming say it's likely to be years away, chiefly because the hard work of building out an acceptance base will take time. Mott calls it "the long game."

Holden agrees. "I would say it's going to be a lengthy process," he says. "The first market will be Chinese tourists, the second market will be overseas workers and Chinese immigrants, then U.S. residents of Chinese extraction, then from that point you get to a wider demographic."

What could be attractive to merchants if that "wider demographic" kicks in is that UnionPay card transactions reportedly carry an advantageous interchange rate. Omnyway's Khan pegs it at roughly 70% of Visa or Mastercard rates.

That prospect—coupled with QR code technology in place of NFC—could resonate with U.S. merchant executives who view NFC and related routing issues as too much under the control of the card networks. "In the United States, merchants have strategic concerns about NFC," says Mark Horwedel, chief executive of the Merchant Advisory Group, which advocates on behalf of large retail companies in payments matters.

He says most merchants would welcome Alipay and WeChat Pay, but not unconditionally. "Large merchants understand they're paying the highest [transaction] costs in the world, and desire to encourage disruptors. But it depends on the investment and whether there's a material number of users," he says.

If that's the rub, the Chinese wallets have passed the test in their home market. And if they truly are playing "the long game" in the United States, they may have plenty of time to figure out how to do it here. DT

A Good Policy

Peter Lucas

Once a novelty, data-breach insurance has quickly become a must-have. It won't offset all the expenses associated with a cyber attack, but it can ease a lot of pain.

There is one inescapable truth for any company that handles consumer data: At some point, they will be targeted by hackers looking to steal their data. This persistent threat makes cyber-liability insurance a necessity. Without it, a company that has been attacked can be on the hook for paying damages out-of-pocket to affected consumers, in addition to fines and remediation costs.

Of those payouts, remediation can arguably be the most costly. Companies victimized by a data breach, denial-of-service, or ransomware attack must fund an ongoing public-relations campaign to regain the public's trust, mount an internal investigation to determine the weakness that was exploited, and install new technology and security features to prevent future attacks.

Globally, the average cost for companies experiencing a data breach was \$3.62 million in 2017, according to a study by Traverse City, Mich.-based Ponemon Institute. While that amount was down from \$4 million in 2016, companies experiencing breaches are seeing more records stolen or compromised than ever.

During the first six months of 2017, there were 918 data breaches affecting 1.9 billion records, more than 1.5 times the number of records exposed in 2016, according to Amsterdam, Holland-based data-security provider Gemalto.

"Data-breach insurance is becoming a necessity because of the high costs associated with the fallout from a breach," says Robert Siciliano, a Boston-based data-security expert. "The more sensitive the consumer data a company handles, the more it has to lose from a cyber event."

Spreading Out Risk

The financial damage caused by a cyber attack is so great that more transaction processors, merchants. and financial institutions of all sizes are taking out policies than ever before, according to insurance providers. Every major insurance carrier offers cyber insurance, including Chubb Ltd., The Hartford, and Travelers, as well as dozens of smaller carriers. "Any carrier offering business insurance would be foolish not to be in this market segment," Siciliano says.

While reimbursable expenses vary by carrier and policy type, most policies cover legal fees, fines, and the cost of notifying customers of a breach and monitoring their credit. Coverage can also include network security liability, breach response, financial penalties awarded from lawsuits, forensics to determine why the event occurred, data loss, and lost business revenue.

While cyber-liability insurance typically doesn't cover the entire cost of a data breach, it can significantly reduce the financial hit a victimized company incurs. For companies in the world of digital payments, that protection can make the difference between surviving an attack and being put out of business.

Equifax Inc., which suffered a major breach in 2017 that reportedly cost the credit bureau \$439 million that calendar year, reportedly had a policy covering \$125 million of those expenses. Global Payments Inc., which reported a breach in 2012, had a policy that covered \$30 million of the \$121 million in associated costs.

On average, companies taking out cyber insurance will purchase at least \$1 million in liability coverage. Many will opt for tens of millions in coverage, and some policies are written for hundreds of millions of dollars, says Tim Francis, enterprise cyber lead for Hartford, Conn.-based The Travelers Companies Inc. When a policy exceeds \$10 million in coverage, it is underwritten by multiple carriers. "That's how insurance companies spread out their risk," Francis says.

Cyber-liability coverage has evolved so far since being introduced more than a decade ago that companies can

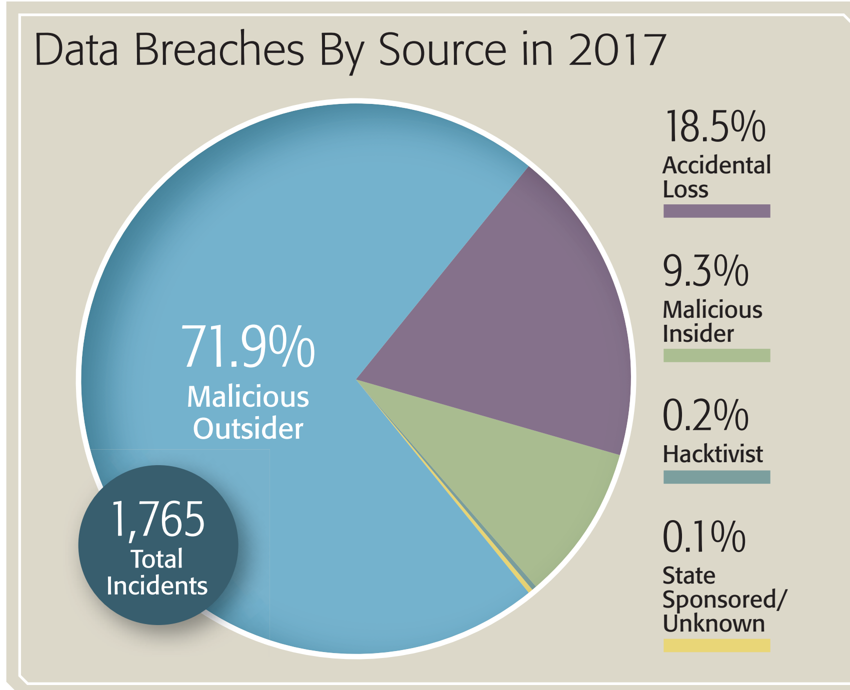
customize their policies from a menu of options that include network-security liability, breach response, losses due to business interruption, data loss, and cyber extortion.

This last hazard is becoming more common as hackers launch ransomware attacks, which hold a company's data hostage by encrypting it and then threatening to withhold the key if the ransom is not paid. In 2016, Uber Technologies Inc. reportedly paid hackers $100,000 after they accessed the names, email addresses, and phone numbers of more than 57 million customers and drivers.

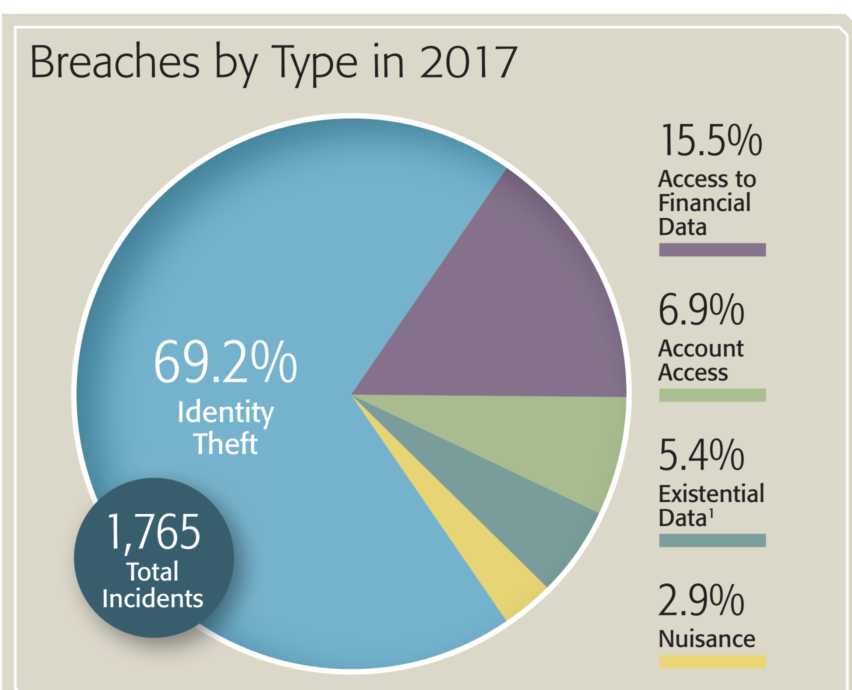
Uber paid the ransom based on a promise by the hackers they would delete the stolen information if the ransom was paid. The ridesharing company then tried to keep the incident quiet, but Bloomberg News broke the story about a year later. It is not known for certain whether Uber had cyber insurance.

When dealing with a ransomware attack, Travelers will bring in a team of experts to assess whether the hackers will free the data being held hostage and negotiate a settlement with them. "Sometimes it is determined that the data is not retrievable even if the ransom is paid," Francis says.

Indeed, some hackers will delete the data or keep copies of it to be sold on the dark Web after the ransom is paid. "Our ransomware experts determine whether the data being held hostage is retrievable before any money is paid," says Francis.



Source: Gemalto



1. Data that could threaten the survival of a company or national security.

Source: Gemalto

Less Guesswork

While the cost of a cyber-insurance policy varies based on the amount of the coverage, premiums are becoming more stable because, after writing policies for more than a decade, insurance carriers can better predict what the financial fallout will be from a cyber event.

"Loss ratios are understood much better by carriers than they were several years ago, so premiums are not as high," says Robert Halsey, a director with RGS Ltd. LLC, a Troy, Mich.-based insurance broker. "When cyber liability was first introduced, there was more guesswork about how to price it because the cost of the risks was not as well known."

As part of the underwriting process, carriers typically perform a risk assessment of a company's cyber security to not only determine what weaknesses exist, but also to create a blueprint for correcting those deficiencies before the policy is purchased.

The Hartford, for example, uses four main criteria when underwriting a policy: the data assets a company has, how those assets are being protected, and how a company identifies

SPONSORED CONTENT

ENSURING ELECTRONIC PAYMENT SECURITY FOR SPECIALTY MERCHANTS

Most merchants are in business because of their passion about a product or service, and because they are interested in making money. To succeed, business owners must be prepared for the many obstacles they can face. When it comes to electronic payment acceptance, security is one of the challenges that is best faced upfront to avoid even greater obstacles down the road.

Payment security boils down to the protection of personal data. Credit card numbers, bank account information and personal identities are some of elements that can become compromised in a data breach. That data is highly sensitive and consumers are keenly aware of existing threats, thanks in part to media coverage of major breaches. Because of this, merchants — especially those in ecommerce and specialty markets — must take measures to ensure data isn't vulnerable and customers are put at ease.

CUSTOMER PROTECTION

While any business that accepts electronic payments is a possible target, those in industries gathering a large amount of personally identifiable information require a hardened security environment. For example, an online dating merchant has the responsibility to not only protect customer data but also ensure total discretion by providing comprehensive security of all personal information, including names, addresses, email addresses and billing information.

How is this type of security ensured? Companies like Humboldt Merchant Services and gateway provider Inovio start with a rigid formula around PCI compliance.

"The objective is to make it so these merchants don't have to touch a credit card," explains Conal Cunningham, General Manager at Inovio. "In other words, tokenization happens even before a purchase gets made."

Tokenization ensures that sensitive data elements are substituted with non-sensitive equivalents that have no exploitable value. However, Inovio and Humboldt go one step further to ensure ALL personally identifiable information is managed in a similar manner as credit card data. All customer information gets handled as an "entire identity" and is accessible only on a need-to-know basis by the payment support team, limiting risk exposure and the possibility of a breach.

SPECIAL MERCHANTS REQUIRE SPECIAL ATTENTION

Knowing that merchants in certain industries are in need of extra data security — and being able to provide it through a good payment gateway — allows for a merchant services company like Humboldt to focus on the management of risk and thereby offer greater risk tolerance. Whereas some merchant services providers may decline businesses simply based on industry, Humboldt draws on years of experience and a unique set of risk tools to assess the viability of a business.

"More risk tolerance equals more approvals," says Cunningham. "With the right tools, a merchant account can be approved and stay active regardless of the level of heightened security they require."

When there is complete understanding of risk, companies like Humboldt and Inovio can offer the special attention needed for specialty merchants. Handling security and risk factors the right way from the onset allows for sustained and confident business operations.

KEY PARTNERSHIP

Missteps made during the assessment or set up of merchant accounts in ecommerce and specialty industries can lead to costly errors down the road. Put simply, data breaches can cause reputation damage that will put a merchant out of business.

This in mind, it's important to partner with trusted and proven industry experts like Inovio and Humboldt. Inovio is a revolutionary payments gateway that provides seamless integration and global scalability. Humboldt has been providing customized payment acceptance to retail, ecommerce and specialty merchants since 1992.

Cyber Liability by the Numbers

An analysis of 419 companies in 13 country or regional samples showed that

$3.62 million is the average total cost of a data breach

$141 is the average cost per lost or stolen record

27.7% is the likelihood of a recurring material data breach over the next two years

Source: Ponemon Institute

and responds to cyber threats. Applicants are then measured against peers that have been assessed using the same criteria, says Tim Marlin, head of cyber and professional liability for The Hartford.

"A company handling highly sensitive data is going to undergo a more extensive underwriting process than a company handling less sensitive data," says Marlin. "That is why there is no one-size-fits-all policy or pricing. How each policy applies to each customer is unique."

In addition to evaluating a company's security weaknesses, Travelers will also look at its security strengths, which can help lower the premium and, in some cases, raise the amount of coverage that can be purchased, Francis says. Travelers will also perform a more streamlined underwriting review before renewing a policy. Policies are in force for 12 months.

When a cyber event occurs, carriers provide policyholders with access to a variety of advisory services through third parties that help the policyholder navigate all the unforeseen issues that pop up. One of those issues is abiding by state law when a breach occurs. Each state has its own laws regulating how a company must report a breach, notify consumers whose data has been stolen, and provide access to credit-monitoring services.

Failing to comply with laws in the states where affected consumers live can bring the wrath of the state attorney general and a class-action lawsuit by affected consumers.

Says The Harford's Marlin: "We make attorneys available to policyholders to guide them through the state laws and deal with a class-action suit. Their in-house counsel does not always have the expertise to navigate these types of issues."

Carriers also make forensic experts available to assess what went

'There is no one-size-fits-all policy or pricing. How each [insurance] policy applies to each customer is unique.'

DOES YOUR POS MAKE YOU MONEY?

As payment professionals, point of sale is frequently our toughest sell. Many factors play into the merchant's purchasing decision, and price always seems to be a key influencer. It's a fine balance between making money for your business while also discerning the true value of your solution's purchase price. Does the cost of your point of sale solution position you to do both?

We frequently see POS systems with added costs for peripherals, software licenses, feature sets, service, and the list goes on. When these costs are itemized, the solution becomes expensive and creates confusion. The answer here is bundling. When all POS hardware, software and support services are included in one comprehensive package, merchants can easily understand the full value and appreciate the "one solution for all" model. They are not forced to pick and choose essential peripherals like printers and scanners based on cost, and they don't have to worry about which third-party apps that they can (or can't) afford to augment their business.

Successful selling begins with resolving a merchant's challenges, and the "bundling" model enables you to address them head-on with a variety of integrated features at one low cost. Does your POS upcharge for business-building tools such as specialty tax, the direct transmission of Scan Data reports, CRV integration, support for 3rd party delivery services, above store reporting, and back office management? Are there costs for menu/inventory builds, training, or other services? If so, these costs add up quickly and will most likely prohibit your merchant. Look for a solution like Exatouch® Point of Sale, which offers all modules and features at one low monthly cost and encourages upselling and cross selling, boosting your revenue and customer retention.

As many merchants frequently struggle with cash flow, the upfront cost is a major consideration. Does your POS make you money upfront while remaining competitive and saving your merchant money? Few successfully accomplish both and, thus, close windows of opportunity. Electronic Payments' Exatouch bundles are priced to ensure our agent partners establish a lucrative POS portfolio, starting with upfront income from sales, and still come in lower than the competition.

Regardless of cost, does your POS partner have a program in place for those merchants who do not have the capital to make the purchase? If not, you could lose the sale. Payment options that extend over a longer term, even if just a few months, could be all the merchant needs to commit and start experiencing the benefits of your services. Exatouch's three-month payment options give you greater flexibility as a sales consultant, and affords your merchants the opportunity to own their own point of sale solution in short order.

While we shouldn't tout price alone, upfront and monthly POS costs play into our conversations and overall sales story. If your prices are not transparent, or you're not sure where you stand amongst the competition, you are doing a disservice to your business and merchants. Reach out to Electronic Payments at 800-966-5520, ext. 223, to learn how Exatouch Point of Sale and our pricing structure can generate new opportunities for your ISO and establish a profitable POS business long term. With the right products, price and partner program in place, you'll walk into your next sales meeting with more tools, resources and confidence than ever before!

ElectronicPayments®

For more information, contact
Keith Ashcraft, Director of Corporate Recruiting
800-966-5520, ext. 223 | keith@electronicpayments.com

wrong and what steps need to be taken to prevent future attacks. The Hartford offers policies that provide funds for improving data security after a breach. "Our aim is to make sure a policyholder is more secure after an attack than they were before," Marlin says.

Many carriers will also write policies that provide coverage in the event a third party that has access to the breached company's network inadvertently opens the door to hackers.

Small Targets

Large financial institutions, processors, and merchants aren't the only entities in need of cyber-liability insurance. Small and mid-size merchants and independent sales organizations are also being targeted by hackers.

A joint poll from Insureon, a Chicago-based provider of cyber-liability insurance, and Manta, a Columbus, Ohio-based provider of education and marketing tools and other resources for small businesses, found that of the 34,000 cybersecurity incidents that occur daily in the United States, small and midsize companies are targeted 61% of the time.

While the same poll found that 76% of the small businesses surveyed don't keep customer data on file, it showed they still may store information that's more sensitive than they realize.

For example, a bakery accepting credit cards could be breached by hackers through its point-of-sale system if it is not properly protected, says Insureon President Jeff Somers.

"It's an unfortunate fact in modern business that no one is safe from cyber threats," Somers says. "For many small businesses, cyber-liability insurance is available as a standalone policy or as an add-on to their business insurance policies. Depending on an organization's needs, our customers choose first-party or third-party cyber-liability insurance or a combination of both types of coverage."

'A Worthless Piece of Paper'

While insurance can buy processors, merchants, and financial institutions peace of mind, data-security experts recommend they have intimate knowledge of the terms of their policy before they have to make a claim.

"Companies should know exactly what's covered in their policy and what's not so there are no loopholes that prevent coverage from kicking in when needed," says Russell Schrader, executive director for the Washington D.C.-based National Cyber Security Alliance. "Don't assume your policy can cover a specific event, such as ransomware, until you need to make a claim."

When choosing an insurance carrier, a best practice is to start with an insurance broker that can assess the company's liability needs, flesh out all the ways its network can be breached, and determine how much insurance the company needs and what kind of deductible it can afford.

Armed with that information, the broker can then match the company to an insurance carrier. In some cases, a company may need to purchase coverage from more than one carrier.

Finally, with the threat of breaches steadily rising, businesses need to be aware that just because they take out a cyber-insurance policy, they can't rest when it comes to upgrading their network security.

"The number of cyber attacks is going to keep growing," says Schrader of the National Cyber Security Alliance. "Liability coverage can be tricky to understand, and the last thing any company victimized by a hacker wants to be told is that their policy is a worthless piece of paper because they didn't follow their carrier's compliance guidelines." DT

Yes, there are still many questions to be answered about blockchain uses and governance. However, waiting for blockchain perfection could mean missing a big opportunity.

The Blockchain Is Taking Pragmatic Steps Toward Being More Than Hype

Esther Pigg is senior vice president of product strategy, banking and payments at Fidelity National Information Services (FIS), Jacksonville, Fla.

Distributed ledgers are slowly but steadily working their way into mainstream financial applications. That means the time has come to understand how blockchain works—and to take the technology more seriously, says Esther Pigg.

Despite all the hype surrounding it, blockchain—or "distributed-ledger technology" (DLT)—remains a complicated mystery to many. Here is a simple description I find helpful in explaining what blockchain is.

Imagine there is a spreadsheet (ledger) that is duplicated (distributed) thousands of times across a network of computers (nodes). The spreadsheet is constantly reconciled (by miners) and immediately updated across its thousands of instances whenever a new transaction (block) is added. The spreadsheets are permanent, public, and verifiable (proof of work).

This is notable and important because:

- All transactions are verified and approved by consensus among participants in the network, making fraud much more difficult;
- The full chronology of transactions that take place is tracked, allowing anyone to trace or audit prior transactions;
- The technology operates on a distributed platform, rather than a centralized one like those used by most countries' banks, providing more resilience to hacks or outages.

Secure by design makes blockchain potentially suitable for recording events, contracts, medical records, and other records-management activities like identity verification, transaction processing, or even voting. More broadly, blockchain technology can be applied to any multistep transaction where traceability and visibility are required.

With the global financial world getting smaller by the moment, this has great potential for generating revenue and reducing costs, particularly in the areas of cross-border payments, securities trading, and compliance.

Blockchain Projects And Proofs of Concept

For now, real-life uses of blockchain technology are still limited, but financial institutions and fintechs are exploring blockchain use cases for banking and payments. Proofs of concept, innovation-lab experiments, and controlled pilots are under way with selective back-office and customer-facing solutions. Here are some notable projects currently in play:

- **The Bank of England** plans to rebuild its Real Time Gross Settlement system so it can interface with private business and platforms using DLT;
- **HSBC** is testing blockchain suitability for trade finance. Working with ING, it issued a letter of credit to U.S. agriculture firm Cargill for a shipment of soybeans. A transaction that normally requires 10 days to clear was completed in 24 hours;
- **JPMorgan Chase's** blockchain unit tested a new application to handle financial instruments, having recently phantom-issued a $150 million, one-year, floating-rate Yankee certificate of deposit;

FROM SMALL ISO TO INTERNATIONAL POWERHOUSE

How You Can Share in the Success

NXGEN is a technology company that delivers state of the art payment solutions to merchants globally. Founded in 2002, and based in Whitefish MT, NXGEN has grown with local offices across the country and a global footprint in 30 countries.

The company has grown from the dreams of Founder/CEO, Thomas P. Nitopi, to a global leader in the payments industry with a footprint in more than 30 countries and sales volume reaching over $5 billion in 2017 and is on track to reach $7 billion in 2018.

NXGEN set itself up for double-digit growth year over year by setting its vision on the international market, through the development of software, adding payment solutions ahead of industry trends, and expanding the understanding of an ISO in today's landscape.

In 2015 NXGEN launched the WorldAccess program which allows ISOs, MSPs and Sales agents in any of 30+ countries to sell within these countries and get paid in their home currency. Agents/ISO's now have a smooth, seamless way to place merchants outside the U.S.

However, it is the vision and innovation of the NXGEN management team on current and future trends in payments that has catapulted the overall business. Technology, Partnerships and Vertical Focus have enabled NXGEN to allow many Agents/ISO's to achieve success.

Early on NXGEN recognized restaurant/retailers needs for business flexibility and insights as part of the payment process. NXGEN led the way with the testing and selling of the iPad based POS system, talech. With the new Poynt Smart terminal and integration with partners enabling EMV on legacy POS systems, NXGEN has become a key player in the restaurant/retail vertical.

NXGEN continued to push the envelope ahead of the curve by partnering with CardX to bring a true surcharging solution to the market ahead of its competitors. Surcharging is a wave of the future, but NXGEN is pioneering it now with a fully compliant, turn-key solution that enables Agents/ISO's to penetrate key vertical markets such as B2B, Auto Tow and Repair, Construction and many others.

Most recently NXGEN has turned its focus to app-based solutions such as ParkMobile and vertical market solutions such as xtraChef. ParkMobile is a parking app that integrates with our eCommerce solution to facilitate the payment aspect of the application. XtraCHEF brings the restaurant vertical a 360-degree solution to their operations with a backend invoicing and account management capability, Integrated POS offerings, and payment processing.

B2B is a relatively untapped market opportunity for Agents/ISO's. NXGEN recognizes the growth opportunity this sector represents. With our surcharging solution, Level 3 solutions, Invoicing and billing solutions and key payment services these manufacturers/wholesalers require, NXGEN has again beat the trends and set up our Agents/ISO's for success with significant volume, higher margin opportunities.

NXGEN

NXGEN's ability to look forward and anticipate stakeholder's needs has helped the company grow over the past 15 years and offers promise for future expansion. You can be part of this success. Contact us at 866-863-9977 or YourPartner@nxgen.com to discuss our partnership programs.

▶ **Mitsubishi UFJ Financial Group** is partnering with Akamai Technologies to develop its own blockchain for payments with the twin goals of processing transactions in under two seconds each and processing 1 million transactions per second;

▶ **Nasdaq** introduced its next-generation Financial Framework, which allows for blockchain integration as part of its core services, to its exchange and interchange clients. SIX Swiss Exchange is an early adopter;

▶ **SWIFT,** the Belgium-based international financial-messaging organization. successfully conducted a DLT proof of concept for Nostro accounts (a bank's account in a foreign currency in another bank) reconciliation with 34 banks. It has also conducted several other proof-of-concept experiments as part of its global payments-innovation service.

Emerging Realities

The financial industry is primarily starting with private collaborative blockchain networks to ensure customer information remains private and safe from hackers and other threats to the ecosystem. With the tremendous pressure to demonstrate regulatory compliance, secure solutions like DLT may become a crucial component in reducing compliance costs in the years ahead.

Blockchain's "distributed" technology can be useful in back-office tasks such as transaction and contract reconciliation to enable faster updating and more accurate recordkeeping. Blockchain can cut the cost of daily checking and re-checking of transactions and chains of ownership, which has the potential to save financial institutions in terms of head count and man-hours.

Banks are starting to dip their toes in these waters, and notable pilots are focused on reducing the cost and complexity of cross-border payments. These transactions are traditionally full of friction and manual processes. Banco Santander SA, for instance, is reported to be using a blockchain-based technology for its recently launched international money-transfer service One Pay FX.

Still A Ways Off

One common trend of thought is that the transition to a blockchain-driven financial-services world is imminent. The reality is that DLT is very promising but has some way to go. Visa Inc., which is often the benchmark against blockchain, can supposedly handle up to 24,000 transactions per second (TPS), while larger institutions like stock exchanges can execute up to 80,000 TPS. Currently, Bitcoin can handle seven TPS and Ripple/XRP roughly 1,000 TPS. Several blockchain projects have a goal of surpassing 1 million TPS but their ability and timetable for such scale remains unclear.

Most organizations must keep their existing infrastructures in place as they work to identify specific use cases and problems that DLT can solve. For example, by combining the best of blockchain and the best of traditional payment rails, we may be able to not only reduce friction but unlock new areas of revenue growth in cross-border payments. Several DLT projects are working to reduce the time and costs of settlement. Once those barriers are lowered enough, we can expect to see much greater payments volume and revenue as a result.

Shaping the Future

Yes, there are still many questions to be answered about blockchain uses and governance. However, waiting for blockchain perfection could mean missing an opportunity to help shape the technology.

To understand how blockchain can enable the financial industry to become more efficient, resilient, and reliable requires both continued research and real-life applications and pilots. Together, we are learning the real advantages of this new technology—and the future opportunities are constantly unfolding. DT

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