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When Payments Go Abroad

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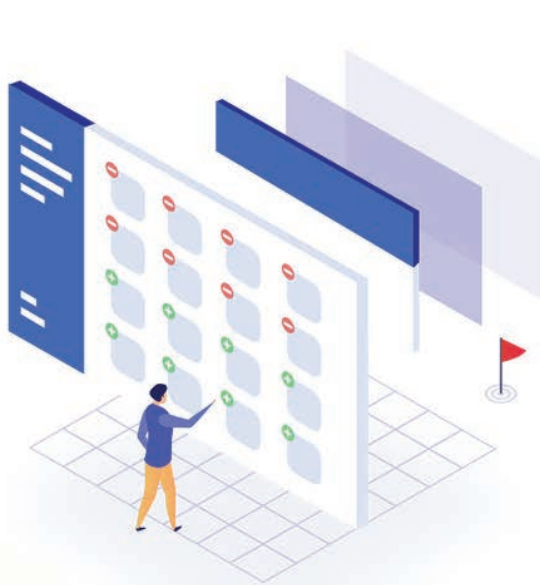
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NACHA'S MILLION-DOLLAR SOLUTION

LAST MONTH, THE U.S. automated clearing house network reported a double-digit increase year-over-year in transactions in the second quarter while dollar volume ballooned 94%. Nacha, the network operator, also said the volume of all transactions on the system reached 7.5 billion, up from 7.3 billion in the first quarter. That's a significant increase for a big number.

What accounted for the growth? Nacha credits a decision earlier this year to raise the limit on same-day transactions to \$1 million. The second quarter was the first full period with that higher limit—up by a factor of 10 from the old one. At the stroke of a pen, tens of millions of transactions became eligible for ACH processing, many of them high-dollar transfers.

As a result, while same-day transactions grew 24% to 185 million for the quarter, the total dollar volume exploded 94%, to \$486 billion. Even compared to the year's first quarter, same-day value was up by two-thirds in the April through June period.

The network has been preparing for this new dollar limit for some time, and the hard work appears to have paid off with a geyser of new volume. "The payments community asked for the \$1 million limit, and the ACH operators and financial institutions joined with Nacha to make it a reality," said Nacha president and chief executive Jane Larimer, in a statement released when the network's quarterly performance was announced. "The results show the benefits of same day to users of the ACH network."

A species of faster payment processing, same-day ACH allows transactions to clear and settle on the day they are initiated, rather than in the usual ACH clearing time of next-day settlement.

Business-to-business payments also climbed quickly in the quarter, reaching 1.5 billion, a 12.3% increase year-over-year on a large volume base.

Among the transaction types Nacha breaks out, peer-to-peer payments grew the fastest, increasing 24.2% year-over-year to 80.6 million and reversing a 12% decline in the first quarter. Payments on the Internet grew 8.2%, to 2.3 billion, while health-care transactions totaled 113.7 million, up 5.3%.

Nacha has steadily raised the dollar limit on same-day transactions since faster clearing was introduced in 2016, timing the increases as the network gained confidence in its ability to control fraud. The original cap was \$25,000. Now, with a \$1-million limit, observers expect faster payments on the ACH system to grow apace.

Larimer also expressed confidence in the ACH's ability to continue generating overall volume growth, even without the Covid-driven government stimulus payments that figured in its results early in the pandemic.

Talk of instant payments has been in the air for some time. For many, and for now, same-day results will do.

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GLOBAL PAYMENTS HANGS A \$4 BILLION PRICE TAG ON EVO

The consolidation of the payment-processing business continues apace, driven by economies of scale and the challenges of keeping up with emerging technology.

In the latest deal, which is expected to close in the first quarter of next year, Global Payments Inc. announced last month it will acquire EVO Payments Inc. in a combination that values EVO at \$4 billion.

The deal between the two publicly held Atlanta-based companies will also extend Global into yet more overseas markets, particularly in Europe. EVO, a 33-year-old company that serves merchants in such markets as Poland, Germany, Chile, and soon Greece, has for some time relied on Global as a front-end processor for its payments volume.

EVO is the 21st largest U.S.-based payments processor, according to

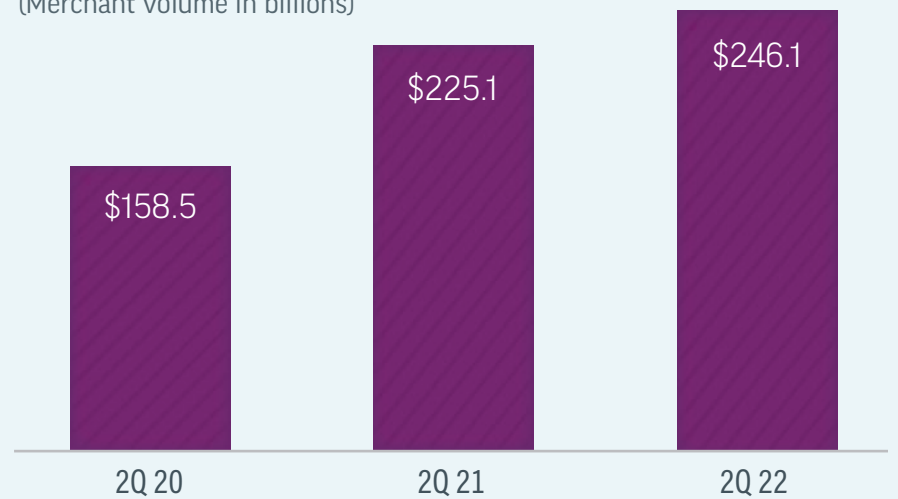
rankings by The Strawhecker Group. Even after excluding its prior acquisitions of Total System Services (TSYS) and Heartland, Global ranks 10th,

according to Strawhecker.

From EVO's standpoint, the deal will bring together complementary technology strengths, the company

GLOBAL PAYMENTS' GROWING RESULTS

(Merchant volume in billions)



Source: The company

said. "Joining EVO and Global Payments will unite highly complementary portfolios of technology-enabled products and partnerships to create an even stronger organization serving a broader customer base," noted chief executive Jim Kelly, in statement.

In the transaction, Global will pay \$34 per share for EVO's outstanding equity, which the companies say represents a 24% premium to EVO's last closing price before the announcement and a 40% premium to the company's 60-day average price, as of July 29. The deal remained subject to approval by EVO's shareholders as of mid-August.

Separately, Global reported \$2.28 billion in revenue for the quarter ended June 30, up nearly 7% from the year-ago period. For the first half of

the year, revenue totaled \$4.44 billion, a 7.5% increase over the same time last year.

"Our second-quarter performance was the best in our history and exceeded our expectations despite incremental challenges throughout the period," said Jeff Sloan, Global's chief executive, in a statement. "Our merchant and issuer businesses both exceeded our targets,"

For its part, EVO reported second-quarter revenue of \$137.7 million, a 13% increase. For the first half of the year, revenue totaled \$264.6 million, a 16% jump. Revenue from overseas processing increased 33% on a constant-currency basis, to account for 62% of the company's total revenue.

—John Stewart

DEE HOCK FORGED A NETWORK GIANT OUT OF A BUNCH OF SQUABBLING BANKS

Dee Hock, who died this summer at 93, may not have single-handedly founded the modern electronic payments industry, but he came closer than anyone else to claiming that mantle.

He is widely credited as the force that harnessed a widely varied collection of banks to start the credit card system that ultimately became Visa. He then ran Visa Inc. from its incep-

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Hock: His “bold philosophy” helped found and shape Visa.

tion in 1970 until his decision, in May 1984, to not only step down as chief executive but to leave the business world entirely.

He wasn't idle. For the next eight years he pursued a path that he himself characterized as one of “ranch owner, recluse, student, and philosopher.” By 1992 he had become concerned with what he later characterized as an “epidemic of institutional failure” among businesses and governments. That concern led to his development of a concept of institutional organization he advocated for as a speaker and writer.

This “chaordic” concept, he said, embraced the idea of a merger of chaos and order, and laid the groundwork for his idea of societal organizations that, he wrote, “more equitably distribute power and wealth and are more in harmony with the human spirit and biosphere.”

But perhaps what he will be most

remembered for is the leadership that brought order to what was, in the very early days, a chaotic start to electronic networking for everyday payments between consumers and businesses. “Dee Hock was a giant. His vision for Visa improved and continues to improve the lives of people worldwide,” says payments-industry consultant Eric Grover.

Hock started out in banking in 1949, and by 1966 he was vice president and general manager of the BankAmericard department at the Seattle-based National Bank of Commerce, as well as chairman of the National Executive Committee of the BankAmericard issuing banks.

As Hock explains on his site, deewhock.com, the National Bank of Commerce had become one of the first six U.S. banks to be licensed by Bank of America to issue what was then the BankAmericard credit card.

But trouble soon followed as failed credit controls and clearance issues plagued the system, leading to angry accusations and finger pointing among the banks, Hock recalls on his site. What the banks should have been pursuing, he writes, was a global system for “the exchange of value.”

He exerted leadership in pursuit of that concept, and by 1970 he and a group of other bankers had forged “the first part of an organization unlike any that had ever existed before.”

That organization was National BankAmericard Inc., and Hock had been appointed its president and chief executive. “Within two years, operating problems and losses were under control and the business was highly profitable, growing at the rate of 50% compounded annually,” Hock recalls on his site. By 1975, the organization had assumed the Visa name.

“More than any other individual, [Hock’s] vision and dogged pursuit of it created the open, global general-purpose bankcard payment system we all today take for granted,” Grover says.

Hock may or may not have imagined in those early days that Visa would grow into the giant payments network it is now, and has been for years. But in his obituary for Hock, posted on Visa’s site, the current chief executive makes a case that Hock’s leadership laid the groundwork for what the network has become.

“For those of us who work at Visa, Dee Hock’s legacy lives on in the work we pursue every day to extend secure digital payments across the world,” Alfred Kelly says in that post. “Our purpose today — to be the best way to pay and be paid for everyone, everywhere — draws a straight line to the bold philosophy he put forth decades ago.”

—John Stewart

MONTHLY MERCHANT METRIC

Jun'22 (Trailing-3 Months) Account Attrition and Growth

This is sourced from The Strawhecker Group's merchant datawarehouse of over 3M 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 \$5M in annual card volume.

Metric Definitions: (Only use definitions related to an individual month's release)

Account Attrition - Total attrited accounts in given period divided by total portfolio active accounts from same period of the prior year
New Accounts Added - Total new accounts in given period divided by total portfolio accounts from same period of the prior year

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PAYSAFE'S NEW CEO HAS TOUGH LOVE FOR THE COMPANY

Bruce Lowthers took over a stumbling Paysafe Ltd. back in May, and last month, with three months evaluating the company behind him, the new chief executive offered encouragement mixed with some tough talk.

Speaking particularly about product innovation, Lowthers lowered the boom, citing what he sees as an imbalance that has led to too much emphasis on innovation for merchants and too little on new products and services for consumers, such as improvements in digital wallets. “Bluntly, we have lost our way here,” he told equity analysts on a call to discuss the company’s second-quarter results.

Indeed, Lowthers’s indictment went deeper as he cited faults such as

an organizational “silo structure” that has led to needless overlap. “There are a few areas that frankly are not working well today,” he said. “The organization is still too complex.”

All in all, he summed up his recovery plan in just a few words: “It’s past time to return to our early entrepreneurial days and help merchants to grow.”

Lowthers, who arrived at Paysafe after more than 14 years of management experience at the giant processor FIS Inc., has had to contend with other issues that continue to haunt the company, including weakness in its European i-gaming business brought on by regulatory changes in Germany and the Netherlands. European i-gaming

accounts for most of Paysafe’s digital-product revenue.

Offsetting this development, though, are encouraging results in its U.S. i-gaming market, where the company is processing bets in 22 states. “We continue to roll out user-experience improvements in our wallet,” Lowthers noted. “We continue to see improvement in U.S. i-gaming. It’s a priority for us. We expect to lead the U.S. market in i-gaming.”

Paysafe offers two digital-wallet products, Skrill and Neteller, but Lowthers told the analysts the company is setting up what he called a “wallets division” to bring its products under one roof within the company’s structure.

Besides emphasizing a return to growth, Lowthers outlined a few other steps in his early strategy for the company, including recruiting new talent to help drive product innovation.

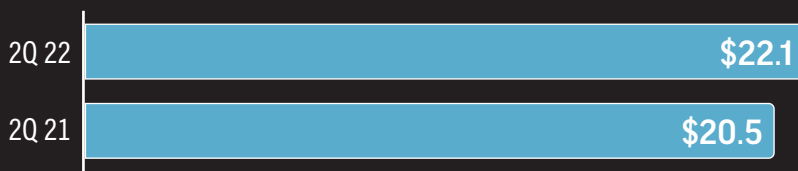
“Coming in, I had a pretty good bead on what I was stepping into,” he said. “We had some issues around product innovation and sales that we can address. We’ve got a good brand to build off of. I’m confident that the changes we make in the next few months will set us up for growth in 2023.”

For the quarter, payments volume grew 3% to \$33.4 billion, led by activity within U.S. small businesses and i-gaming. But revenue dipped 3% on a constant-currency basis to \$378.9 billion, leading to a 9% margin drop to \$103 million.

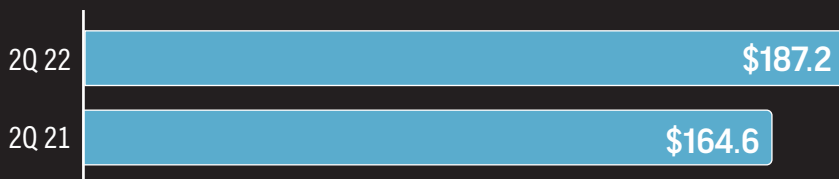
—John Stewart

PAYSAFE'S U.S. RESULTS

Payments Volume (In billions)



Revenue (In billions)




Source: The company

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AUTO-REFERENTIAL MONEY: COMING ATTRACTIONS

LIKE IT OR NOT, Ponzi scheme or otherwise, Bitcoin shook the financial world, and the waves keep rippling forth. The essential revolution here is the abstract notion of “self-referential money.”

Before Bitcoin, money was an entity that had an existence regardless of its role in monetary exchange, and indeed this existence lasted beyond its monetary function. In prisoner-of-war camps during World War II, cigarettes were passed around as currency. These cigarettes were an innovative medium, but they existed before and after they served as such. Bitcoin, by contrast, is a trading protocol that defines a currency that had no whiff of existence before the protocol was specified—and will completely vanish once this protocol stops running.

There are not going to be any ashes to bury. Bitcoin coins come to life and pass on by the protocol that defines them. This is like movie characters that are born when the first frame is beamed, and vanish when the credits are crawling up the screen.

Hold it—haven’t we all been impacted by literary heroes and imaginary characters? I for one became intrigued by the prospect of turning this absurdity into a useful tool. My sense is that this abstract notion introduced by Bitcoin—auto-referential money—is an untapped treasure box with profound social

BY
**GIDEON
SAMID**

gideon@bitmint.com



implications. Let me describe this paradox.

Imagine a public mint proposing that the public buy “vanishing dollars,” so that $1\text{US\$} = 1\text{V\$}$ (Vanishing dollars). The mint announces that the “vanishing dollars” will disappear at a date certain. Now, who in their right mind will shell out real dollars to buy vanishing dollars?

Before you laugh it off, read on. The mint lures a few sellers of merchandise to offer their goods for sale in a public auction. There is a catch, though. To bid on these items, you need to put up these newly announced vanishing dollars. The highest bidder takes home the merchandise. And what do the sellers get? The sellers divide among themselves the real dollars used to buy the vanishing dollars.

And here is the hook: Real dollars were collected from both the successful bidders and from the unsuccessful bidders. The sellers’ take-home pay is proportional to the level of participation. The more people buy the vanishing dollars, the more compensated are the sellers, maybe much more than if they had sold their merchandise straight on. And this pay is not linked to the

amount paid by a winning bidder to buy his vanishing coins.

This vanishing-coins auction may create a paradoxical situation. The seller gets paid more than the market value of his goods, while the buyer pays less than the same market value. This seeming paradox is resolved by considering the vanishing dollars bought by the losers.

This Paradox Trade (BitMintcash.com/paradox) is just one example. This novel concept of auto-referential money is a remarkable tool challenging our most advanced imagination. It looks like payment will assume a much bigger role in society than it does today (which is quite big as it is).

The technology that enables all these soon-to-arrive platforms is the technology for privacy-preserving, quantum-resistant digital currencies. This new technology has the power to bring together strangers, establishing collaborations between remote people around the globe. Hopefully, the heavy hand of the regulator will not choke off this promising future.

Come to think of it, auto-referential money bears some similarity to auto-referential “God” who is held up by believers who do great things by his name and who then, like many ancient believers, vanish. Believers and their God. As to auto-referential money, let’s focus on the great things to be done. **DT**

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FINTECH TURBULENCE SHOWS HOW DETAILS MATTER

LAST YEAR, CHIME got in trouble with the regulators for marketing itself as a bank. At the time, industry observers responded with a lot of snark about how it didn't matter to the end users whether or not Chime actually held a charter, so the regulators were being ridiculous.

This year, fintechs have started to run into trouble. And just like that, whether or not a fintech was actually a bank mattered again.

Two examples have brought this truth into sharp focus. The first is what has happened with Ahead Money, a digital wallet operated by the fintech LendUp Loans LLC of Oakland, Calif. The fintech ceased operations this year, but, based on press reports, it appears that LendUp has transferred the Ahead Money accounts to Kinly, another digital-wallet provider.

But, as Jason Mikula, a fintech consultant, reported, customers have complained that they have lost access to their funds. He wrote that his own Ahead Money account was closed without notification or a refund of his balance.

A second example is the bankruptcy of the cryptocurrency platform Voyager Digital Holdings Inc., of Toronto. Along with its cryptocurrency trading services, the company offered cash accounts to customers that were held at



BY BEN
JACKSON

bjackson@ipa.org

Metropolitan Commercial Bank. When the company filed bankruptcy, it submitted a request to the court to protect the funds held in the cash accounts from being seized by the company's creditors.

The company announced on Aug. 5 that its request had been approved and cash-account holders would soon be able to withdraw those funds.

In both instances, the deposits held at banks were insured by the Federal Deposit Insurance Corp. Customers may have believed that they were protected by the FDIC in case of a fintech failure. However, that insurance only covers customers when the bank fails. When that happens, the FDIC has procedures in place to ensure that depositors are made whole (at least up to \$250,000).

But these two cases are new territory. Test cases don't exist for reuniting depositors with their funds when the access layer of the fintech fails. This is one of the reasons the FDIC and its fellow banking regulators have been telling fintechs not to market themselves as banks unless they are. It's also why they have been pushing fintechs to be

clear about the extent of deposit-insurance coverage.

In May, the FDIC issued a final rule to explain how they would investigate claims about FDIC insurance. The rule put the industry on notice not to make false claims.

The recent failures and the FDIC rule should prompt fintechs and issuing banks to look at their contracts and make plans for what happens if something goes wrong at a fintech.

In fact, the issuing contract should contain provisions for what happens if there is a failure of the fintech, says Eli Rosenberg, an attorney with Baird Holm LLP. The banks and the fintech should discuss how depositors can access their funds and how the bank will take over providing that access. They should also have a communication plan in place that lays out continued access for customers in understandable language.

This is not only good business practice but can help to fend off some of the negative press for the issuing bank. Much of this should be made easier by the fact that, to qualify for pass-through FDIC insurance, the bank knows who the fintech's customers are and how much they have on deposit.

When things are going well, it is easy to wave away technical details. But when trouble comes, these technicalities really do matter. **DT**

acquiring

IS EVERYONE READY FOR DURBIN II?

The U.S. Senator's bill to regulate credit card costs on behalf of merchants has stirred passions not seen since... the Durbin Amendment.

BY JOHN STEWART

ALL THE MAJOR card-issuing banks must be asking themselves by now what Democratic Senator Richard Durbin of Illinois has against them. Like some old Hollywood horror-film refugee, the Senator has returned, as it were, from a frozen state of 12 years' time to press the brakes on what the big banks can earn on credit card interchange.

But, unlike Durbin's foray into the debit card market years ago, he isn't proposing this time an outright cap on the fee issuers earn on each transaction. Instead, the bipartisan bill he and Sen. Roger Marshall, R-Kan., unveiled in late July would require that all banks with

\$100 billion or more in assets offer acquirers a choice of two unrelated networks for routing.

If one network is Visa, the other can't be Mastercard. The hope is other networks, including debit card systems like Pulse or Shazam, will compete for the business, driving down transaction costs for merchants.

Merchant advocates who have long pressed for regulation of interchange profess satisfaction that the bill, known as the Credit Card Competition Act of 2022, will finally put a stop to what they see as runaway acceptance costs for credit cards. "This is a broken market. Visa and Mastercard set the bank fees...they have such large market share, they get away it," says Doug Kantor, general counsel for the National Association of Convenience Stores, an Alexandria, Va.-based trade group that has made action on interchange a top priority.

Credit card interchange rates are set by the networks and repriced by acquirers, with a markup, to merchants in what is known as the merchant discount rate. Interchange rates currently can range from a low of 1.3% up to 2.9% of the sale, depending on the network and a host of other factors.

But opponents of the bill are equally adamant it will wreak havoc, upsetting a delicate balance established by the interactions between



cardholders, merchants, acquiring processors, and card issuers. “The bill is a back-door price control,” argues Jeff Tassey, executive director of the Electronic Payments Coalition, a Washington, D.C.-based group that represents card issuers.

Tassey adds if the bill becomes law, it will threaten the ubiquity of card acceptance, on which the industry—and consumers—depend. It will also threaten the popular cardholder programs consumers have flocked to over the years, he argues. “Where are you going to get the income for rewards?” he asks, if interchange income declines.

‘MAJOR QUESTIONS’

At first glance, it might seem the bill is much ado about very little, given that it would apply only to the 33 U.S. financial institutions with assets exceeding \$100 billion (chart, page 17). But those banks issue the vast majority of cards. And though Visa and Mastercard are independent corporations, they were until only a decade ago owned by many of these same big banks.

Some critics question whether there are enough alternative networks willing to step in as a sort of “side B” choice for merchants should the bill become law. “In the real world there are major questions about how this would play out,” notes Ted Rossman, senior industry analyst at Bankrate.com. “Who would step in, who is the second, unaffiliated network? Would the juice be worth the squeeze? The fact they haven’t done it yet might be telling.”

“They” in this context typically refers to the networks that route debit card transactions originating online

and from merchant terminals. Most if not all of these systems have been offering PINless debit and signature debit services for years, leading many observers to figure they are equipped—if not eager—to step in as Sen. Durbin’s alternative network for credit card transactions.

Digital Transactions contacted several of the national electronic funds transfer networks for this story. All but Shazam, an Iowa-based network known for its independence and history of innovation, declined to talk about the pending legislation. A spokesman for the network, however, was noncommittal about the bill.

Indeed, for these networks, the controversy raised by the Durbin-Marshall legislation is almost old news. “This discussion has been floating around for at least five years. It shouldn’t be a surprise to anybody that the idea has been raised,” says a spokesman for Shazam.

And there’s some unfinished business lingering around Durbin’s first foray into payments that the spokesman says Shazam would like to see resolved before the network could address the Senator’s latest payments bill. That’s a reference to the Durbin Amendment, a 12-year-old set of debit card rules that cap interchange for issuers with more than \$10 billion in assets and mandate a choice of networks for each transaction.

Many merchants have complained for years that big acquiring processors and issuers have largely blunted the intentions of the law by, for example, automatically shuttling e-commerce transactions to Visa and Mastercard on the grounds that lesser-known networks don’t offer the same security technology, a contention the alternative networks dispute.

“Some years ago, we weren’t talking about e-commerce, tokenized transactions, Apple Pay, and so on,” the Shazam spokesman says. “So making rules that allow for innovation that has happened is important.” Tokenization is a technology that masks actual card account numbers with symbols that would be unintelligible to cyberthieves.

‘COMPETITION IS GOOD’

Meanwhile, on the larger issue of credit card routing, there could also be a divide opening between the biggest bank card issuers and smaller community banks, some of which at least aren’t entirely unsympathetic to Durbin’s latest bill. The idea of competition—a notion enshrined in the title of the bill—appeals to some top executives.

“All competition is good. That’s how I’ve grown up,” says Michael Bilski, chairman of the North American Banking Co., which has five locations in Minnesota. Bilski is also chairperson of the Faster Payments Council, which brings together merchants, bankers, processors, and technology companies. But at the same time, he adds, “I hate to say I’m in favor of any legislation that tells us what to do. I go both ways on this, I guess.”

Comments from others aren’t quite as hedged. The Durbin-Marshall bill “sounds like a big step forward in containing the control Visa and Mastercard have” over acceptance costs, notes Bob Steen, chairman of Bridge Community Bank in Mount Vernon, Iowa. “Visa and Mastercard just dominate this thing, and merchants should have the right to route [credit card payments] however they want.”

WHO'S AFFECTED?

(U.S. financial institutions with \$100 billion or more in assets, as of March 31, in millions of dollars)

JPMorgan Chase	3,476,711	Citizens Bank	191,869
Bank of America	2,513,619	First Republic Bank	187,121
Wells Fargo	1,764,272	KeyBank	179,082
Citibank	1,718,008	Huntington National Bank	176,021
US Bank	577,544	HSBC BK USA	174,720
PNC Bank	534,892	Ally Bank	174,479
Truist Bank	531,045	Northern Trust	172,118
Goldman Sachs Bank USA	474,643	BMO Harris	166,509
TD Bank	417,358	Regions Bank	163,179
Capital One NA	385,291	Mfrs & Traders Bank	149,455
Bank of NY Mellon	380,465	American Express Nat'l Bank	132,190
State Street Bank	318,494	MUFG Bank NA	125,733
Silicon Valley Bank	217,804	Capital One Bank USA NA	121,880
Fifth Third Bank	210,153	Signature Bank	121,847
Morgan Stanley Private Bank	203,508	First Citizens	108,471
Morgan Stanley Bank	201,737	Discover Bank	105,657

Source: Federal Reserve

Steen, who has long been active in the payments industry, adds that the new bill might also help to break up what he sees as an alliance between merchant processors and the two network giants. “The big processors don’t play fair,” he says. “Visa and Mastercard incent processors to route transactions their way.” Both networks maintain large operations focused on vetting and authorizing card transactions.

Digital Transactions reached out to both Visa and Mastercard for this story. A spokesperson for Visa did not respond. A Mastercard spokesperson initially responded but the contact ultimately did not lead to an interview.

A ROUTING REVOLUTION

Transaction costs aside, if the Credit

Card Competition Act ultimately wins passage, some informed observers argue it could lead to a revolution in how card payments are routed and processed. They argue the industry is much better positioned now with the technology to manage routing to third-party networks.

“We know that cross-settlement of transactions can be very useful technically, as we’ve seen with tokenization,” notes Steve Mott, a long-time payments consultant and proprietor of BetterBuyDesign, in an email message. “Moreover, we now realize that we can effectively slice-and-dice transaction flows digitally.”

Mott underscores what he hopes will be sharper competition for merchants’ card transactions. “All businesses perform better with competition, and we’ve seen that

with the Durbin Amendment’s impact on debit cards, which, contrary to howls of distress by incumbents at the outset, works much better for everyone than before,” he argues.

Opponents to the bill are optimistic they can block its passage into law. But they point out Durbin is a crafty veteran of the Senate who steered his debit card restrictions through Congress years ago and may well succeed now with his new credit card rules.

“If we do our job, I think we can block [the Credit Card Competition Act],” notes the EPC’s Tassej, but he warns the bill’s prospects could improve if it becomes part of a larger “must-pass” bill. That, he says, would make it harder to stop, particularly if the wrangling extends into December, when members simply want to put an end to debate and adjourn. DT

security

THE VALUE OF A TOKEN

As fraud grows more sophisticated, tokenization and encryption have become the foundational components of payment security at the point of sale and online.

BY KEVIN WOODWARD

WITHOUT TOKENIZATION AND encryption technology, it's a safe bet that today's ever-increasing volume of digital payments, at the point of sale and online, would not be what it is. What these technologies have helped enable is the vast and growing presence of digital payments, even as new acceptance methods beyond the venerable POS terminal abound.

Tokenization and encryption have eased merchant pain points involved in storing sensitive payment data. They have made it easier for consumers to make a payment merely by tapping a smart card or mobile phone. Technologies like tokenization

and encryption have reached such a level of usage that they have become nearly ubiquitous. Indeed, they warrant notice when coupled with payment services like the automated clearing house and burgeoning real-time payments programs.

Still, as valuable and beneficial as they are, tokenization and encryption are not the only tools that make online and face-to-face transactions safer for merchants, consumers, and acquirers.

"Both encryption and tokenization are important security steps forward for thwarting criminal access to payment," says Jamie Moles, senior technology executive at ExtraHop, a Seattle-based network detection and response services provider. "However, neither are the panacea for point-of-sale security."

Tokenization's role in helping merchants secure their payments systems has been immense. Thanks to this technology, no longer are merchants subject to storing valuable payment data without some sort of protection. Tokens replace actual payments data, and are meaningless to thieves.

"Now, [merchants] store tokens," says Maanas Godugunur, director of fraud and identity at Alpharetta, Ga.-based LexisNexis Risk Solutions. Meanwhile, tokens have "also helped create new business models, like



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mobile wallets,” he adds. Merchants gain comfort and a sense of security from tokenization because it helps prevent exposure of sensitive consumer data, he says.

The value of tokenization and encryption is immense, not only for preventing bad transactions, but monetarily. The tokenization market alone is forecast to reach \$12.7 billion in value by 2030, says P&S Intelligence in its “Tokenization Market Size, Share, Growth and Demand Forecast Report 2030,” released in July.

“Tokenization and encryption can be effective tools for mitigating potential damage of large data breaches, a few of which have been devastating in recent years,” Isaac Gurary, chief executive of New York City-based NoFraud, a fraud-mitigation provider, tells *Digital Transactions*.

‘ONE BIG HAMMER’

But the news is not all good. Gurary adds, “While these technologies are standard in most POS software and are great measures at helping keep payments information secure, they are not foolproof. Sophisticated fraudsters can hack the application that stores token keys, attach listeners, or create viruses targeting specific devices. Increased security at [the point of sale] also encourages fraudsters to turn more of their

attention to online fraud, which doesn’t bode well for [e-commerce] merchants.”

That has required online merchants to enlist countermeasures that strive to authenticate the customer. “It’s very important to not only create infrastructure and educate merchants, but to create tools like digital-identity tools,” Godugunur says.

While the payments industry has tried to keep up with fraudsters, he thinks more can be done. Adopting behavioral-identification technologies may be one component of a broader approach. Such technologies may provide details about how a consumer interacts with an online site.

“The big shift is around centralized digital identities that will likely come into play in several areas of life,” says Gergo Varga, product evangelist at SEON Technologies Ltd., a London-based fraud-prevention provider. “It’s a big bet in the sense that it tries to solve a lot of security problems with one big hammer, but we can already see that in societies that have effectively gone cashless, fraud doesn’t disappear. It just changes.”

Education is vital to the successful use of tokenization and encryption, suggests Ilyssa Papa, risk manager at Waltham, Mass.-based BlueSnap Inc., an e-commerce payments specialist. “Technology is ever-evolving, leading some consumers and merchants to become more aware

of new advances than others,” Papa says. “Education, communication, and collaboration are all vital efforts for the payments industry, which often works collusively to target a common goal or problem, as it attempts to keep up with the evolution of fraud and combat shifting attack schemes.”

But some say consumers are more educated than merchants on new point-of-sale technologies. “Security is easier from the consumer’s side as there is less access for fraud,” says Bob Vergidis, founder and chief visionary officer at Point of Sale Cloud LLC.

“It is more profitable for a bad guy to go after a merchant than a consumer because the amount of credit card data they will get will always be more,” he adds. “Also, merchants have more points of access to their systems, and it’s harder to protect them all. When it comes down to it, security is a cost center for businesses, and being that it’s quite a specialized field a lot of time organizations fail to assign a value to it until something bad has happened.”

BREACH HEADLINES

It’s these shifting attack schemes that keep merchants awake at night, especially as more consumers make their transactions online and their expectations for the availability of online payments increase.



“In societies that have effectively gone cashless, fraud doesn’t disappear. It just changes.”

“Accelerating omnichannel expansion, spinning up new interactive and personalized purchasing experiences, and migrating to public clouds are just a few ways retail is realizing digital transformation,” says ExtraHop’s Moles. “As these new initiatives roll out, an expanded attack surface increases the risk of compromise and impacts service levels, making it a challenge for the payment industry to keep up.”

Consumers may not understand the technical elements of tokenization and encryption, but they have seen the headlines on data breaches. There were 817 publicly reported breaches



“The biggest non-technology thing that an organization can do is increased awareness.”

in the first half of 2022, according to the Identity Theft Resource Center.

“They are aware that technologies to secure their data exist,” says Jessica Rosa, senior director of merchant security at Brookfield, Wis.-based Fiserv Inc. “Merchants realize encryption and tokenization are critical to securing their customers’

payment data. They also understand these solutions are best deployed in a transparent manner to help preserve trust among their customers.”

Securing payment data is essential to trust along the transaction pipeline and is especially vital as criminals adjust their attacks to take advantage of new payments models or changing

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“As ... new initiatives roll out, an expanded attack surface increases the risk of compromise.”

consumer behavior. That can mean new or enhanced methods of protecting payment data must be employed.

“Interestingly, what’s leading to the advancement of those technologies is tech companies realizing that there is money to be made by facilitating credit card information because it helps keep users on their platform,” says Point of Sale Cloud’s Vergidis.

“The other thing is the merchant’s desire to offer frictionless payments. Data has shown that consumers buy faster and they feel better about the cost of their purchases by how quick

their checkout process is,” Vergidis continues. “In the quest for a better experience, technology companies and merchants are coming up with more innovative ways that offer better protection.”

‘A DELICATE BALANCE’

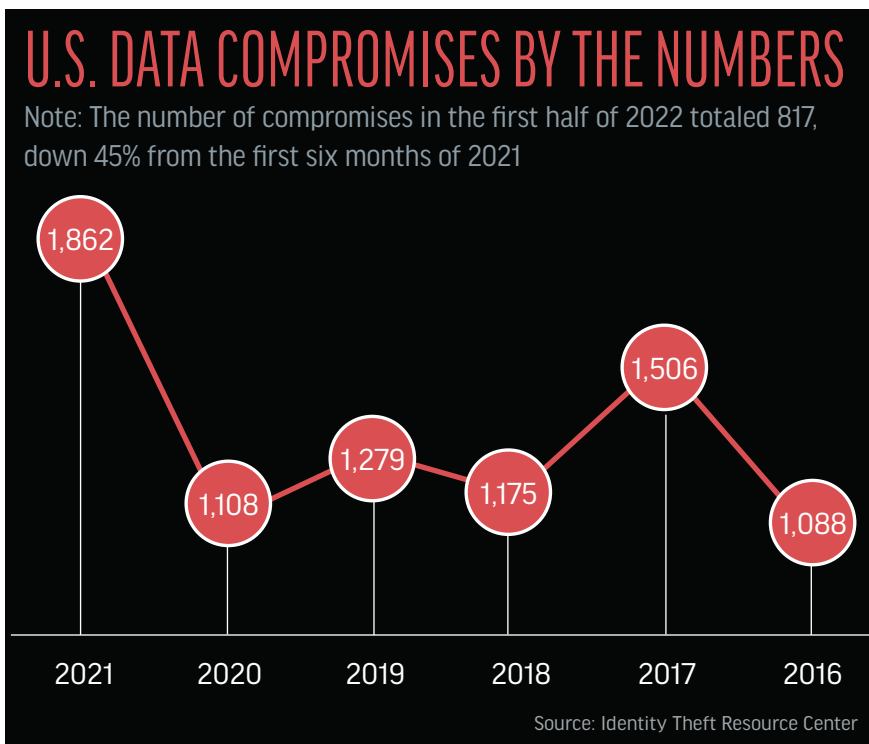
Innovation has been the operative word for payments security for a long time. Often, it comes about from addressing “vulnerabilities that fraudsters are exploiting” or from “responding to consumer-behavior shifts,” says Rosa.

In many instances, it’s a combination of factors that are the catalyst. “For instance, if consumers are adopting a new digital-payment option at a high rate, this option can often be a target for fraud as attackers try to uncover new vulnerabilities,” Rosa adds.

Even with innovation, there sometimes are non-technology methods that can supplement tokenization and encryption.

As Vergidis says, “The biggest non-technology thing that an organization can do is increased awareness. Every company should have a security policy that is shared frequently with their employees, and everyone signs off on. It’s one of the requirements for compliance and it’s actually one of the most important things an organization can do to help reduce POS fraud. As they say, knowledge is power!”

It’s this human element that’s critical, says NoFraud’s Gurary. “Software that causes too much friction during the customer journey may prevent more than just fraud,” he adds. “It will prevent conversions as well. The development of security technologies needs to account for consumer tolerance. It’s a delicate balance between protecting merchants and consumers and mitigating risk without negatively impacting customer experiences.” **DT**





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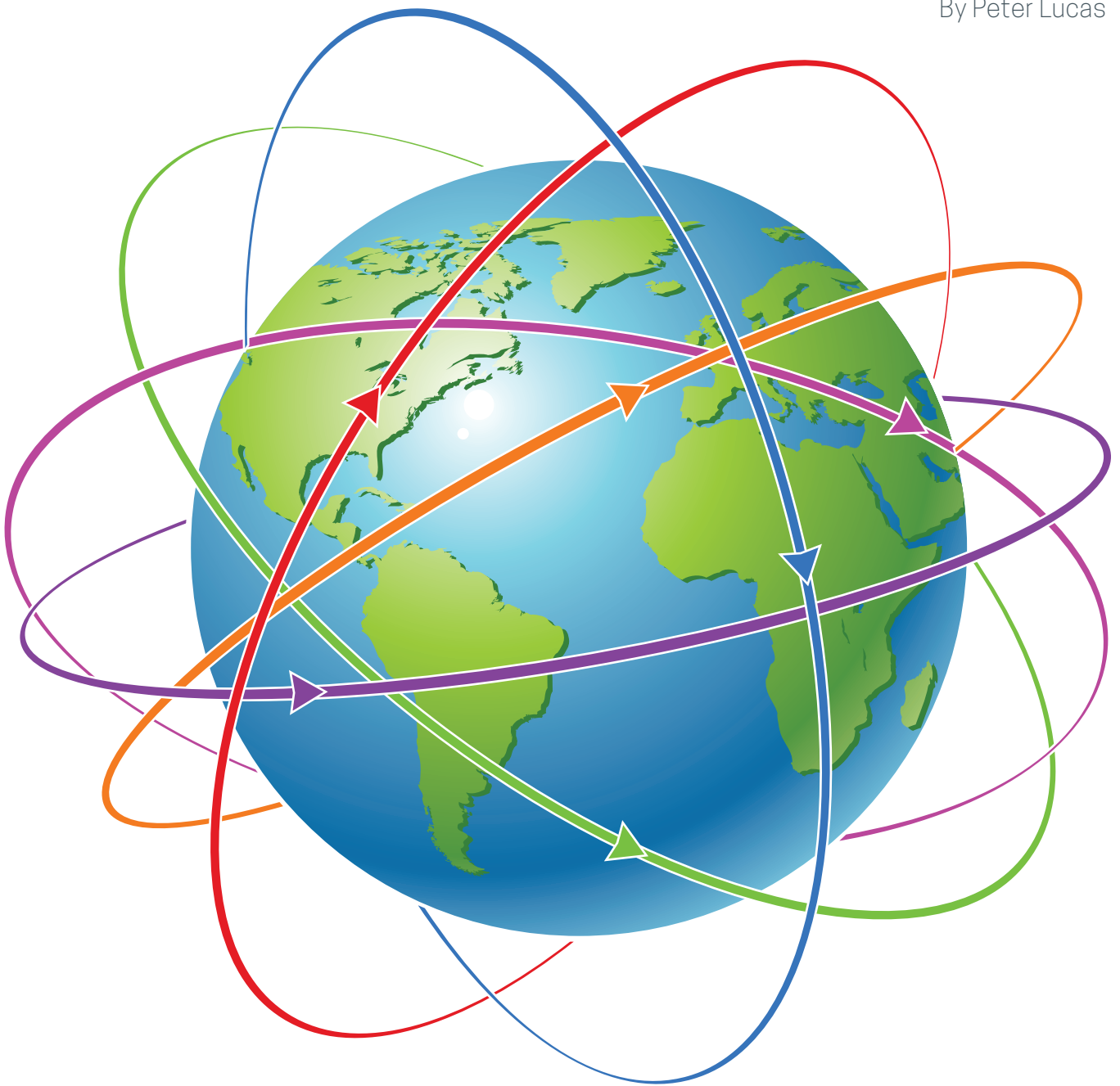
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Trends in the Electronic Exchange of Value

When Payments Go Abroad

Cross-border payments are a huge business. Here's what banks and a handful of non-bank specialists are learning from fintechs about how to get better at it.

By Peter Lucas



Whether it's a transaction initiated by an overseas worker sending money home or a business sending a payment to an out-of-country supplier, the dollar volume of cross-border payments is staggering.

When adding up consumer-to-consumer, business-to-business, business-to-consumer, and consumer-to-business payments being moved between countries, the total exceeds hundreds of trillions of dollars annually.

Citing statistics from Ernst & Young, Juniper Research projects the value of all cross-border payments will grow 5% in 2022 to more than \$155 trillion, up from more than \$148 trillion in 2021. Of that amount, business-to-business transactions will represent by far the largest amount, at a projected \$150 trillion-plus, up from \$143.5 trillion in 2021.

Cross-border consumer-to-business transactions will represent the next largest subset, totaling a projected \$2.8 trillion, up from \$2.6 trillion in 2021, Juniper says.

Despite these immense dollar values moving digitally between countries, cross-border payments have several nagging weaknesses compared to domestic digital transactions. Most notable are the lack of speed, restricted access to local international banking rails, and an absence of transparency regarding fees for initiating a transaction. In addition, it can be difficult to get the status of the payment once it has been initiated.

Given that such shortcomings have been overcome for domestic digital payments in most countries, consumers and businesses are becoming less tolerant of cross-border payments' weaknesses, payments experts say. As a result, they say, international payments are ripe for disruption from fintech providers—and have been for probably the last five to seven years.

Enter the fintechs, which see an opportunity to carve out market share and in turn put pressure on the old-line players, which include banks and non-bank stalwarts Western Union Co. and

MoneyGram International Inc. Prior to the entry of these newcomers, established players for years faced a smaller and relatively well-known roster of competitors.

Now, the pressure is on to improve the speed of transactions and the transparency of fees—pressure that has only increased since the onset of the Covid pandemic. Businesses, particularly small and mid-size ones, are becoming quite reliant on cross-border transactions to conduct such transactions as payroll, reimbursements, and bill pay.

► Out-of-Country Experience

A recent survey by American Express Co.—which in August launched a digital, cross-border payment solution for small businesses in the United States—reveals that, as of June, 64% of small and mid-size business owners and financial decision-makers in the U.S. expect their total spend with businesses outside the country to increase over the next six months.

Among the reasons cited for their growing reliance on cross-border payments, 43% of respondents said access to a wider range of products and services, while 35% cited supply-chain diversification.

Many businesses have turned to alternative suppliers out of country and have begun selling more to international buyers due to the disruption of their supply chains and sales at home as a result of the pandemic.

Mastercard Inc.'s 2022 Borderless Payments Report says 43% of businesses now do more business internationally since the pandemic struck. Some 37% said they would have been forced to shut their doors were it not for opportunities to source and sell cross-border.

As a result, 58% of businesses say they are now making and receiving more cross-border payments than they were prior to the pandemic.

At the same time, many businesses have begun hiring international employees, which creates a need to facilitate payroll using cross-border payments, says Ryan Zagone, head of partnerships for Wise, a London-based fintech specializing in cross-border payments.

On the consumer side, Mastercard found that 54% of global consumers are more reliant on cross-border payments than they were pre-pandemic. In addition, 40% of those who made cross-border payments to family and friends, say those recipients would not have been able to weather the pandemic storm financially otherwise.

► 'Frustrated Users'

This growing reliance on cross-border payments has created the need to modernize the process. That means delivering the digital payments experiences consumers and businesses have grown accustomed to domestically.

"The limitations of the existing cross-border payments model when it comes to speed, transparency, formatting, and access, has long frustrated users of the system," says Russ Waterhouse, executive vice president, product development and strategy for The Clearing House Payments Co., a New York City-based processor owned by many of the biggest U.S. banks.

"Even though fintechs ride on others' rails, they are good at developing interfaces that create better user experiences, and it is the user experience that will differentiate the modern cross-border payment model from the traditional model," Waterhouse adds.

Earlier this year, TCH announced a pilot with EBA Clearing and SWIFT SC for immediate cross-border payments through banks on both sides of the Atlantic. EBA Clearing is a provider of pan-European payment infrastructure wholly owned by major European banks. SWIFT SC, or the Society for Worldwide Interbank Financial Telecommunication, is a Belgium-based cooperative providing services for the execution of financial transactions and payments between banks worldwide.

The pilot, scheduled to begin in November, will be joined by 11 of the 24 financial institutions that have input into the development of its systems, according to Waterhouse.

A key driver behind the push for real-time cross-border payments is that, on average, cross-border payments typically take a couple of days to clear and settle. That timeline can stretch out further if the country to which the money is being sent does not have a central clearing house or if the financial institution initiating the transaction lacks a direct relationship with a local bank in the country.

In these instances, banks must rely on correspondent banks to act as a go-between for domestic and foreign banks on the sending and receiving end of the transaction.

The drawback to this scenario is that it creates multiple endpoints. The more times a cross-border transaction is handed off between banks, the longer it takes to complete the transaction and the less visibility senders and receivers have into the status of the transaction, payments experts say. It also creates a greater chance of human or technical error.

"Once you go out of the native payment rails you have to rely on correspondent banks, which reduces the predictability of the outcome of the transaction for the sender and the receiver," says Joanne Strobel, head of the CIB segment solution and advisory team, for Wells Fargo Bank. "This is a weakness of the traditional cross-border model." CIB refers to corporate and investment banking.

► 'Arcane' Fees

Another weakness within the traditional cross-border payment model is that senders are not always aware of all the fees associated with the transaction. That can create an unpleasant surprise on the receiving end if those fees are deducted from the amount sent.

"Costs are high and unpredictable, and fees build up along the payment path," says Erika Baumann, director, commercial banking and payments, for Aite-Novarica Group. "The final settlement amount can vary from the original transaction amount due to arcane fee structures during the correspondent

banking process. Plus, there is a lack of transparency in where the payment is until it has settled.”

Given the weaknesses related to transparency of fees and status of payment, cross-border payment specialist Wise sees an opportunity to differentiate itself with lower-cost transactions, more transparency regarding payments, and faster, even real-time, payments. Wise’s fees for cross-border transactions start at 0.41% of the amount being sent.

Wise has partnered with Firstbase Inc., an operating system that runs business applications on a single platform. The partnership calls for Wise to make its Platform API available to Firstbase so its customers can connect business tools and manage their finances, including cross-border payments, through a single point of entry.

As a result, Firstbase customers can move money abroad faster and at a lower cost than the traditional cross-border payment model, both companies say.

“The market has learned that the traditional cross-border payments model often has hidden

fees, so now they are looking to non-banks for lower-cost transactions and a more transparent fee structure,” says Wise’s Zagone. “They have learned to play the game.”

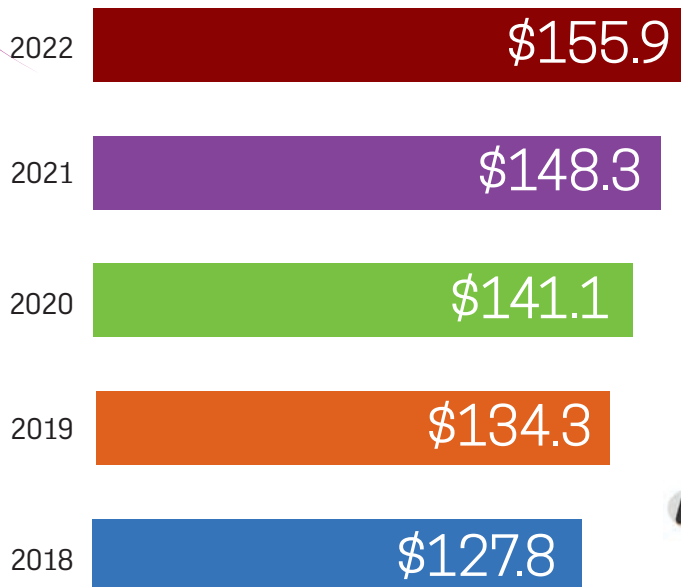
So have banks. Wells Fargo has struck partnerships with non-banks to make cross-border payments more accessible. For example, the big bank is participating in the EBA Clearing, SWIFT, and The Clearing House pilot to enable immediate cross-border payments.

The impetus to be a participant, says Wells Fargo’s Joanne Strobel, was the growing need for immediate international payments and better data concerning the transaction. The latter is particularly important for banks handling the transaction because it allows them to verify sums within the funding account. Such information is invaluable to senders because it boosts the predictability of when the transaction will be cleared and settled.

“Being able to cross-check the account against available funds removes a lot of friction from the

The Growth in Cross-Border Payments

(in trillions)



Note: Figures include consumer-to-consumer, consumer-to-business, business-to-consumer and business-to-business transactions
Source: Ernst & Young, Juniper Research

process,” Strobel says. “Another plus to instant payment is that it lets you know right away whether the transaction can be sent and will arrive. It also makes cross-border payments quicker and safer.”

Disrupt Yourself

Banks aren't the only traditional players working with fintechs on international payments. In June, MoneyGram partnered with Stellar Development Foundation, which provides an open-source, public blockchain that allows money to be tokenized and transferred globally. The partnership opens the door to initiating cross-border transactions using cryptocurrency through participating MoneyGram locations.

Settlement occurs in near real time using USD Coin, a stablecoin pegged to the U.S. dollar. To entice senders to make use of the service, which rolled out in June, MoneyGram is waiving fees for 12 months.

The deal opens the door to the use of cryptocurrency for cross-border payments, but it also allows users of Stellar's Vibrant and Lobstr digital wallets to load or cash out their cross-border payments at MoneyGram locations.

In addition, MoneyGram has lowered its fees for a cross-border transaction to 2.9%, which is below the goal set by the United Nations of reducing transaction costs for remittances to less than 3% by 2030, the company says.

Overall, MoneyGram has a digital presence in more than 100 countries and digital transactions represent 44% of its overall money transfers. India represents the remittance company's largest market for digital payments, with about 90% of cross-border transactions being received digitally. “Over the last several years, MoneyGram has continued to disrupt itself and drive innovation in the industry,” a MoneyGram spokesperson says.

Keys to Success

But one non-bank cross-border payments provider that tends to get overlooked is American Express. The card issuer, which has a long history of pro-

viding broad financial services to its customers, launched its digital cross-border payment solution for small businesses in the U.S. as a way to modernize cross-border transfers.

The result was Global Pay, a mobile, self-service platform that allows small businesses to send payments from their business bank account to suppliers in more than 40 countries and across a range of currencies.

“Our U.S. small-business card members told us they want an international payment solution, and for them, simplicity, convenience, and the chance to earn rewards are essential,” says Dean Henry, executive vice president, global commercial services at AmEx.

As a leading card issuer to small businesses in the U.S., AmEx plans to leverage those relationships to further its ambition of modernizing cross-border payments. “While larger companies have access to many cross-border payments offerings, our clients have asked for a solution more specifically designed for the needs of smaller businesses,” Henry says.

That traditional players, and even non-banks with a foothold in cross-border payments, are willing to partner with fintechs is an indication that cross-border payments are no longer a matter of David vs Goliath.

“Increasingly big financial-services brands are working together with fintechs to disrupt and improve markets,” says Rasika Raina, senior vice president for Mastercard Cross-Border Services. “Mastercard works with a variety of partners to make sure our customers can get to market faster with a compelling and competitive proposition in an increasingly dynamic category.”

Looking ahead, international-payments experts forecast continued robust growth. “It's growing [and] profitable, and that's going to attract a lot of competitors,” says The Clearing House's Waterhouse. “The three keys to success will be speed, fee transparency, and compliance to ensure access to local expertise.”

The winners, Waterhouse adds, will be the ones that create products specialized according to these criteria. 

HOW VIRTUAL CARDS ARE POWERING NEW BUSINESS MODELS

The technology of credit cards has undergone a revolution since the days of magnetic stripes.

BY KEITH AXELSEN

Keith Axelsen is vice president, commercial product management, at Corpay, a FLEETCOR Company.

THE CREDIT CARD has come a long way since Forrest and Dorothea Parry invented it in 1960. Forrest was an IBM engineer working on barcode systems and optical character readers when he came up with the idea of a plastic card with data stored on a magnetic tape strip.

He tried gluing the strip to the card, but the glue destroyed the data. His wife, Dorothea, suggested ironing it on. Her idea worked, and the system for storing, reading, transmitting, and authenticating data that IBM developed around the magstripe card revolutionized payments.

The days of that simple plastic card are behind us. Most plastic cards

today use chips, which can store and transmit more data, and also offer the ability to program custom features onto the card. And in the world of business-to-business payments, virtual cards now transmit money and data without plastic at all.

With the rise of third-party application programming interfaces and microservices, companies building digital businesses can integrate customized virtual card capabilities right into their operational processes. Think of it as virtual-card-as-a-service. I spent 15 years helping develop this technology, starting in the mid-2000s.

At the time, what we were building was targeted at helping online travel agencies (OTAs) and travel-management companies (TMCs) better service hotels. During the Great Recession, corporate or leisure travel collapsed. With business slumping, OTAs & TMCs were looking for ways to increase efficiency and cut costs—for themselves, and for the hotels they served.

Their business model, which was relatively new at the time, was to collect and aggregate data about room inventory and prices from global distribution systems (GDSs) such as Sabre, Amadeus, and Travelport. They would then publish the listings in a user-friendly platform where travelers could



book rooms directly through an API integration to the GDS, as opposed to having to call a bunch of hotels on the telephone and book directly.

In exchange for acting as a marketing and sales arm for the hotels, OTAs would earn a commission or assess a fee on room nights. For example, let's say you reserve a hotel room through an OTA for \$225. The OTA charges your card \$225 through their acquirer. They're the merchant in this scenario, so on your credit card statement you'll see a charge from the OTA or TMC for \$225.

You're done with the transaction, but the OTA still needs to pay the hotel the agreed upon amount. At the time, most OTAs were doing this part offline. Hotels could send them a detailed invoice weekly or monthly, and they would manually reconcile that with inventory sold and send a check. It was costly and inefficient for all parties.

EARLY ADOPTERS

Then as now, most travelers paid for hotel stays with credit cards, so hotels' accounts-receivable processes were and are designed around credit cards. When you give them a credit card for a specific hotel room, their AR system maps that card to a hotel stay. And when the transaction is completed, it automatically reconciles those room nights. The back-end accounting is very clean.

OTAs were looking to find a credit card issuer and a credit card processor that could use then-nascent virtual card technology to digitize the process and transmit the funds and the identifying data to the hotels' accounts-receivable departments in near real time, without the hotel

having to bill the OTA separately.

We built a tech stack to be able to issue unique virtual card numbers one at a time, at the time the traveler booked the room. The \$225 hotel room sale triggers the OTA to call a virtual card API and request a virtual card.

The issuer sends the OTA a unique 16-digit MasterCard number, with expiration date, CVC, and embedded controls that allow it to be used only for an agreed-upon amount in the merchant category code hotels. The OTA then pushes that unique card number to the GDS, which has all the data associated with your reservation, and they pass the card number and the data to the hotel.

The hotel's payment system charges that card the same way they would if the 16 digits were embossed on plastic, and the authorization request from the hotel goes back to the credit card processing platform for authorization.

The validity of the card number, the available credit, and merchant category code are confirmed. The transaction clears through the MasterCard network overnight. The hotel gets the funds immediately in its account. The transaction is posted to the processing platform, and the OTA associated with the booking sees the expected charge on their bill.

All of this is computer-to-computer, and it happens in seconds--much faster than you can read this explanation about it.

It didn't take long for other industries to understand the benefits of this system: immediate, secure payment with customizable controls to prevent fraud; ease of reconciliation; and chargeback capabilities in case of disputes. Insurance-claims management software providers were among the early adopters to integrate

virtual cards into their processes.


Once an auto-insurance claim is approved, for example, you need a mechanism to pay the auto-repair facility that contracts with the insurance company and associate the claim with the right customer and work order. Auto-repair companies also receive a lot of payments by credit card, so virtual cards fit right into their AR workflow.

THE HUMBLE CARD

Really, any digital business that needs to integrate non-invoiced, point of sale payment capabilities into their business process can take advantage of virtual card as a service. Examples include delivery apps, expense management, and distressed-airline passenger reimbursements.

This is the beauty of APIs and microservices. Developers and product leaders can focus on the core capabilities of their businesses, and connect into as-a-service offerings for capabilities such as Web site search, location data, and payment connectivity. It doesn't make sense to build these things themselves when they can integrate it as a service from a provider that has already perfected it.

The humble plastic credit card with its magstripe changed the way we pay. Although people still carry plastic in their wallets, it's been a long time since plastic was just a convenient way to pay for something. Today's credit cards are sophisticated payment tools that carry richer data and offer a broader range of capabilities.

In a data driven world, being able to integrate all of that into a wide variety of business processes is at the core of helping digital businesses scale and thrive. 

Don't think it can't
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STOPPING CYBERCRIME IN ITS TRACKS

As criminals shift to strategies that rely on psychology as much as technology, a whole new approach is necessary.

BY TONY CAROTHERS

Tony Carothers is the security systems engineer at Corpay, a FLEETCOR company.



THE REMOTE-WORK era brought on by the Covid-19 pandemic has made it even easier for criminals to execute payment-fraud attacks. For most companies, it's become a matter of when they'll face a fraud attack—not if.

New defenses are needed, because the nature of cybercrime is changing. For many years, bad actors focused on software-based attacks, such as ransomware. Vendors hadn't quite caught up to developing code secure enough to operate in the hostile environment that we know is the Internet today.

Now, vendors have hardened their systems to the point where it's inefficient for a bad actor to carry out an attack using technology alone. So, in the last year or two, we've seen a shift to schemes that use technology but ultimately rely on strategies that exploit human weakness. This is the new frontier in the battle against payment fraud.

SOPHISTICATED ATTACKS

Any effective security effort relies on technology, process, and people. Technical security efforts such as securing hardware, software, and laptops are still important. The

ability to gain unfettered access at the hardware or software level allows a bad actor to do literally anything. Organizations need to double down on educating and training people throughout the organization to recognize, report, and respond to suspicious activity.

The problem is that many organizations are still focusing on technology as the main line of defense. That's a big help to criminals, who are capitalizing on the fact that their intended victims aren't addressing the whole picture. Add to this the chaos and confusion of the pandemic, and over the past 24 months we've begun to see some pretty sophisticated cyberattacks emerge.

We saw a lot of phishing around work from home, and again around returning to the office. There was so much uncertainty, and people were so hungry for information. So they'd click on anything that appeared to offer it. The bad actors were quick to capitalize on this tendency, and so far they've been very nimble in customizing their attacks.

Here's a great example of what I'm talking about. For a long time, Microsoft was the most commonly spoofed email address used in phishing attacks. A typical attack

using this address might be a fake email from a bad actor saying you needed to update your password, or act now because you're running out of mailbox or drive space.

No longer. Now, the DHL delivery service has surpassed Microsoft as the most commonly spoofed email address because deliveries have become much more prominent in our personal and professional lives.

DEEP RECONNAISSANCE

Bad actors have also become very good at business email compromise (BEC), a key method of payment fraud. BECs are often very well designed and thought out. In these attacks, the bad actor will research an organization, their vendors, and their processes. It's actually a very deep reconnaissance effort.

Then, the criminal will use the intelligence he has gathered to pose as a vendor sending an email request to change bank accounts to one controlled by the fraudster. These emails might be constructed as long threads that contain names and information simulating the documentation

you'd expect to see if the process were genuine.

Sometimes the fraudster actually compromises the target's organization and takes control of the email of someone in accounts payable or finance to launch the attack from there. Or, the fraudster just spoofs it from another mail server.

In either case, there's no technology that's going to effectively stop that attack. That's why information security today is a counterintelligence function. You have to be aware of the information that's out there and all the ways in which bad actors might use it. And you have to communicate that to the entire organization.

THREAT BRIEFINGS

Corpay handles this function with continuous operational threat briefings. We take real-world attempted attacks that have been detected and blocked, by our organization or other organizations, and dissect them, working with the entire company. That helps people understand how attacks are happening and what they look like.

We also work very closely with business leaders to understand their processes and where there might be vulnerabilities. Working together, we can come up with very effective and secure processes.

BEYOND "CASTLE AND MOAT"

IT has historically built what we call a "castle and moat," or "egg-shell," defense. With this defense strategy, there's a well-developed, hardened exterior. But now enterprises are realizing the shortcomings of that type of architecture as attacks grow more sophisticated. Data breaches are still a constant threat, but criminals now rely more on people-centered tactics, like weaponizing email. If they can use these tactics to make it past the hard shell, things get kind of squishy.

The most effective way to protect against what's coming is to address the human element. Security is always dynamic because criminals are endlessly creative. They attack, and we defend. They study our defenses and find new ways to attack.

The ultimate defense is to create an organization-wide security mindset. It's a culture. It's a way of thinking that has to be fostered. And it's easier to do than you might think.

You do need to develop a programmatic approach, but it's really not that hard to get people to engage. What we find is that people are very interested in learning about this because they or someone they know has experienced a cyberattack in their personal lives. It's not something that's abstract or exclusively work-related. Unfortunately, it's all too relevant. DT

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