DIGITAL TRANSACTIONS®

Trends in the Electronic Exchange of Value

A MIXED PAYOFF FOR THE MEGAMERGERS

When six powerful payments companies separately merged into three organizations in 2019, it signaled that one end of the payments spectrum had dramatically shifted. But some results seem to have been inconsistent.

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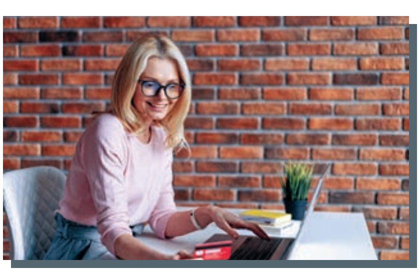

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the gimlet eye

CONFRONTING THE CFPB QUESTION

A FEDERAL APPEALS-court ruling handed down in October rattled advocates of the Consumer Financial Protection Bureau, and they haven't stopped quivering since. That's because the decision from the U.S. Court of Appeals for the Fifth Circuit does what years of detractors' objections and arguments have failed to do—it strikes at the legitimacy of the Bureau itself. That big question mark continues to hang over the Bureau, casting a shadow on its every movement.

We won't rehearse all the details of the decision, which the Bureau in November petitioned the Supreme Court to review. What really matters is that the court ruled the CFPB is unconstitutional because of the way it is funded. That is, it derives its funding from the Federal Reserve, which itself is not directly supported by Congress. That insulation from the people's legislature, in the court's opinion, cannot pass muster in light of how arms of the federal government are meant to be responsive to the people's will as mediated through their representatives.

This is the most radical threat the Bureau has faced since its founding nearly a dozen years ago—radical in the sense that it strikes at the Bureau's very roots. But the matter isn't settled. The Bureau could have appealed to the entire 17-member Fifth Circuit, as payments consultant Eric Grover points out, but instead, as we noted, it took its case to the Supreme Court.

And it's not as if the Bureau is pulling in its horns. In December, it fined Wells Fargo $3.7 billion--$2 billion fines and $1.7 billion in redress to consumers—for what the agency said were incorrect charges on mortgages and auto loans, and other alleged misbehavior. That same month, it asked for public comment on a so-called violator registry to keep track of state and local enforcement actions. And, in October, it said it planned to regulate open banking through a set of rules governing data sharing.

The question is whether the CFPB should be reformed—as the Fifth Circuit ruling seems to suggest—or abolished altogether. The reform choice is most likely the better one and also the one more likely to win support politically. It also would correct a big mistake, which was the move to try to insulate the Bureau from Congress's control in the first place.

The CFPB must be responsive to the people's representatives. "When [the CFPB] was created, people said this [insulation from Congress] could be a problem, but in the absence of a lawsuit there was no way to test it," our Payments 3.0 columnist, Ben Jackson, told us in October. Now the moment has arrived.

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Trends in the Electronic Exchange of Value

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trends & tactics

WHY THE FTC SINGLED OUT MASTERCARD

The Federal Trade Commission announced two days before Christmas it had leveled a preliminary consent order against Mastercard Inc. The order—issued to correct what the agency saw as roadblocks the card company had erected against routing online debit transactions to competing networks—may have surprised at least some observers. That's because it omitted Visa Inc., Mastercard's main rival and a company the Commission had identified only two months earlier as a fellow actor in blocking debit routing to other networks.

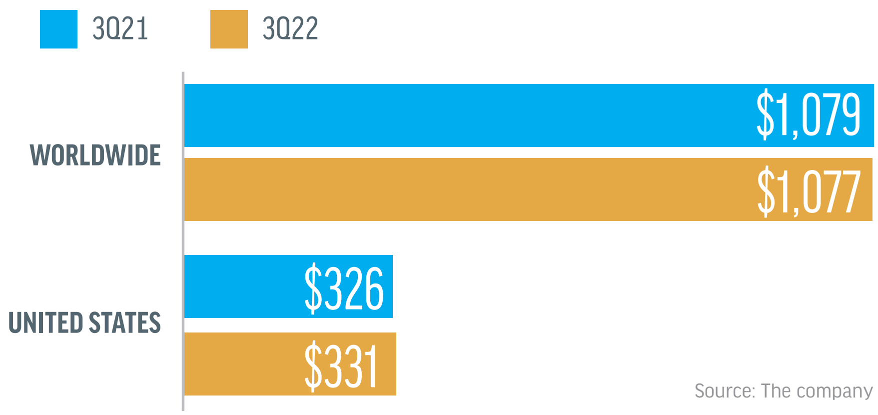
Now it appears the FTC's decision to go after Mastercard alone may have stemmed from facts the Commission learned in the weeks following the news it was targeting both network giants.

Like Mastercard, Visa protects transactions against fraud by using digital tokens in place of actual account numbers. But Visa in 2018 began detokenizing transactions on its network so the payments can be shipped to another network for processing if the alternative network was designated by an online merchant.

Many details about the process, known as a callout service, aren't well-known, but the consequence is that Visa apparently escaped further action by the FTC. "Mastercard was refusing to do anything" about

MASTERCARD'S DEBIT BUSINESS

(Total dollar volume in billions)



Source: The company

detokenizing its transactions, says one informed observer who spoke to *Digital Transactions News* on condition of anonymity. "Visa makes it difficult but not impossible. It made sense for the FTC to go after egregious violations first."

Visa's callout service does not levy fees and requires no separate agreement from users, according to sources, who add the FTC is aware of the service. Visa did not respond to a request for comment from *Digital Transactions*.

The 2010 Durbin Amendment to the Dodd-Frank Act mandates that merchants have a choice of networks in routing their debit card transactions. That mandate became somewhat cloudy in the ensuing years as online activity, including transactions arising from mobile apps, became commonplace, leading merchants to object that the two global networks were effectively blocking their network choice. A rising volume of complaints to the Federal Reserve led the regulator last year to require that the Durbin rule be observed with online traffic.

An FTC spokesman refused to comment when queried about the Commission's decision to isolate Mastercard. But observers say the regulator is now likely to pursue its order aggressively. "For the FTC to understand the issue at this level of granularity, it strikes me that they must be listening and following up on what they are being told by the lobbyists representing the merchant community," says an observer who commented on condition of anonymity.

For its part, Mastercard defends its tokenization practices but insists it will abide by the FTC's order. "We believe that our existing routing practices are lawful and have always provided choice to merchants. We will continue the work to update our processes to comply with the consent order and provide even greater choice," says a spokesman in an official statement.

The FTC commissioners voted 4-0 to issue the order, which was set to be published for public comment. After that, the agency will decide whether to make the order final.

—*John Stewart*

PROCESSOR CONSOLIDATION'S LATEST BIG MOVE

Nine days into January, the ongoing wave of processor consolidation rolled further with the announcement that Nuvei Corp. has agreed to acquire Atlanta-based processor Paya Holdings Inc. in a deal valued at $1.3 billion.

The transaction would bring to Montreal-based Nuvei a processor with deep roots in payments for municipalities and small businesses and comes just two years after Paya's move to go public via a merger with a special purpose acquisition company.

The deal positions Paya at a 25% premium to its closing price on Jan. 6. Its stock shot up 25% to $9.70 per share during early trading Jan. 9, as GTCR LLC, which holds 34% of Paya's equity, agreed to tender its shares, according to Dow Jones Newswires.

For its part, Nuvei says it will fund the acquisition with a combination of cash on hand, an existing credit facility, and a new $600-million first lien secured credit facility. Bank of Montreal and Royal Bank of Canada have committed to financing Nuvei's bid.

Nuvei, which was known until October 2018 as Pivotal Payments, projected in October it would report total payments volume of $121 billion for 2022, up 27% over its volume in 2021, a year in which the company reversed several straight years of net losses with $107 million in net income.

Its processing volume in the third quarter of 2022 came to $28 billion, up 30% year-over-year. As with processors such as Paysafe Group Holdings Ltd., Shift4 Inc., and other processors, Nuvei has been actively cultivating transactions in newer markets, including sports betting and other facets of legalized gambling.

Paya reported third-quarter volume of $12.6 billion, generating revenue of $71.4 million, with approximately 85% of its volume stemming from card-not-present transactions. Just over one-third of its volume stemmed from business-to-business transactions, with the remainder coming from education, health care, and government entities and utilities.

Paya works to distinguish itself as a provider of a single platform for card-based and automated clearing house transactions. ACH alone accounted for 15% of the company's revenue in the nine months through September.

Paya's strengths in these markets apparently drew Nuvei's attention. "The proposed acquisition of Paya is a powerful next step in the evolution of Nuvei, creating a preeminent payment technology provider with strong positions in global e-commerce, integrated payments, and business-to-business," said Philip Fayer, Nuvei's chairman and chief executive, in a statement.

The deal, which the parties intend to close by the end of March, follows what has become a familiar pattern for mergers among payments providers, observers say.

"There are three key drivers going on," notes Thad Peterson, an analyst who follows payments at Aite Group. These, he says, include efficiencies from adding processing scale, "value-added services beyond transaction flow," and the urge to avoid "being trapped by legacy platforms that can't perform at the same level as newer entrants."

Nuvei's move to acquire Paya comes after processor consolidation took on giant proportions in 2019 with the mergers of Fiserv and First Data, FIS and Worldpay, and Global Payments and TSYS. These combinations and the several that have followed—including Global Payments' $4-billion bid for EVO Payments Inc., which is expected to close by March—increased pressure on players in the market to add scale and expand into new markets.

—John Stewart

HOW NUVEI AND PAYA STACK UP

(Quarterly results ended Sept. 30)

	REVENUE	TOTAL VOLUME
NUVEI	$197 million	$28 billion
PAYA	$71.4 million	$12.6 billion

Source: The companies

HOW P2P IS KEY TO FINANCIAL INSTITUTIONS' PAYMENT STRATEGIES

As financial institutions look to revamp their payment strategies, peer-to-peer payments are expected to play a key role, says a recent report from Cornerstone Advisors.

Over the past three years, nearly 30% of community-based financial institutions have replaced their P2P services or selected new ones, and about one in five intended to replace their existing P2P payments system in 2022, the report says. In many cases, the P2P service selected was Zelle, according to the report.

"Many banks and credit unions are re-evaluating their P2P services due to consumer demand, as many smaller players in this space are becoming less relevant," says Sean Loosli, head of consumer and small-business payments for Zelle.

Cornerstone surveyed 3,112 consumers in the United States, a sample it says is representative of the U.S. adult population in terms of age, gender, and race. The study was commissioned by Early Warning Systems LLC, operator of the Zelle network.

To many consumers, P2P payments are table stakes for financial institutions. When asked what action they would take if the institution that holds their primary checking account stopped offering P2P payments, 30% of respondents said they would use a checking account with a different financial institution more frequently, 24% said they would close their account, and 23% said they would open an account with another financial institution.

Other actions cited include using the checking account at their primary financial institution less frequently (18%), not recommending the financial institution (17%), lodging a complaint (14%), and doing nothing (23%). Respondents could cite more than one action.

How the institution deploys Zelle is also important, the study showed. "Our research says that consumers will choose a financial institution based on how it uses Zelle, such as the limits it sets for sending money or whether they allow payments to be sent to small and medium businesses," Loosli says.

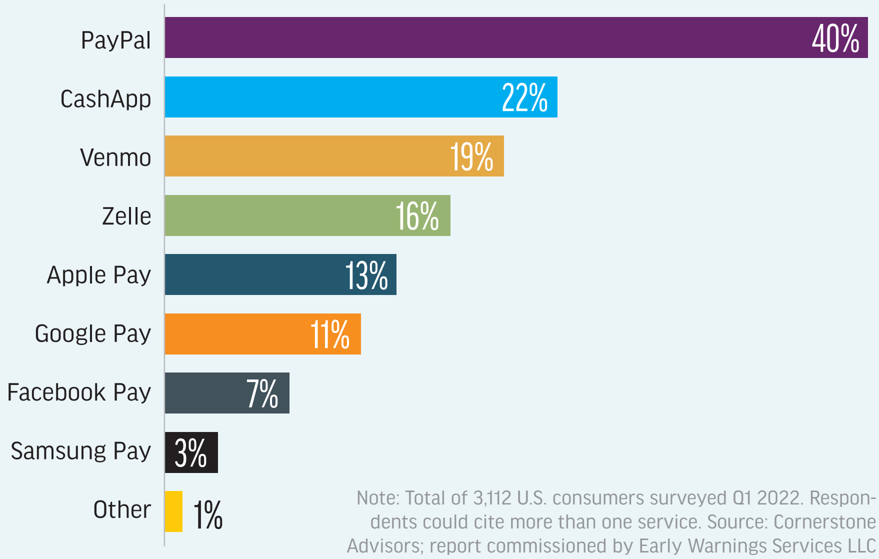
P2P payments have become so common that consumers don't rely solely on their financial institutions to facilitate these transfers (chart).

Sums totaling $250 or less each month were the most common transfers. Consumers that send $100 to $250 per month accounted for 20% of respondents, while 28% send $50 to $100 per month, and 22% send less than $50 per month. Consumers sending $250 to $500 a month accounted for 16% of respondents, while 9% send $500 to $1,000 a month, and 4% send $1,000 to $2,500 per month. Consumers sending $2,500 to $5,000 per month and those sending more than $5,000 per month each totaled 1% of respondents.

When it comes to frequency, 7% say they send daily or almost daily, 25% send weekly, 34% send about once a month, 26% send a few times a year,

SERVICES CONSUMERS USE THE MOST

(Percentage citing each P2P network)



Note: Total of 3,112 U.S. consumers surveyed Q1 2022. Respondents could cite more than one service. Source: Cornerstone Advisors; report commissioned by Early Warnings Services LLC and 8% never send a P2P payment.

Since March 2020, 56% of P2P payment users said they have sent money using digital-payments tools more frequently than they did before the pandemic, while 16% said they send money less frequently than they did pre-pandemic.

The most frequently cited reason for why consumers use P2P payments are convenience (61%), followed by speed of payment (51%), a safer way to pay (44%), staying in touch with others (24%), and because it's a less expensive payment option (17%). Respondents could cite more than one reason.

Regarding recent headlines about P2P fraud and scams, one in four P2P payments users said they have been a victim of fraud or scams involving digital payments, according to the report. In addition, more than seven in 10 respondents impacted by digital payment fraud or scams said the incident was resolved to their satisfaction by their bank or digital payments provider.

—Peter Lucas

THE CRUCIAL ROLE OF CHECKOUT AND PAYMENTS

Checkout is gaining a higher profile in payments, and that's influencing customer retention as well as a merchant's ability to attract new customers, says a new study from Paysafe Ltd. That means modernizing checkout should be at the top of brick-and-mortar merchants' to-do list in 2023, the study adds.

Overall, 86% of respondents in the Paysafe study, "Lost in Transaction: The U.S. In-Store Business Payments Outlook for 2023," say payments and the checkout experience are important for retaining existing customers, and 82% agree it helps in attracting new customers.

As a result, 70% of respondents say it's a priority for them to integrate new payments technology in-store, and 69% agree they would like to reduce the time their customers spend at checkout.

Other overarching trends to emerge from the study: 55% of respondents say their payment options are in line with customer expectations, while 41% say there could be room for improvement in the payment methods they offer.

The latter result is an acknowledgment by some merchants that they've missed out on sales by not offering consumers' preferred payment methods, the report says. In addition, 5% say they don't offer all the payment methods their customers want, and that their business would benefit from accepting more types of payment.

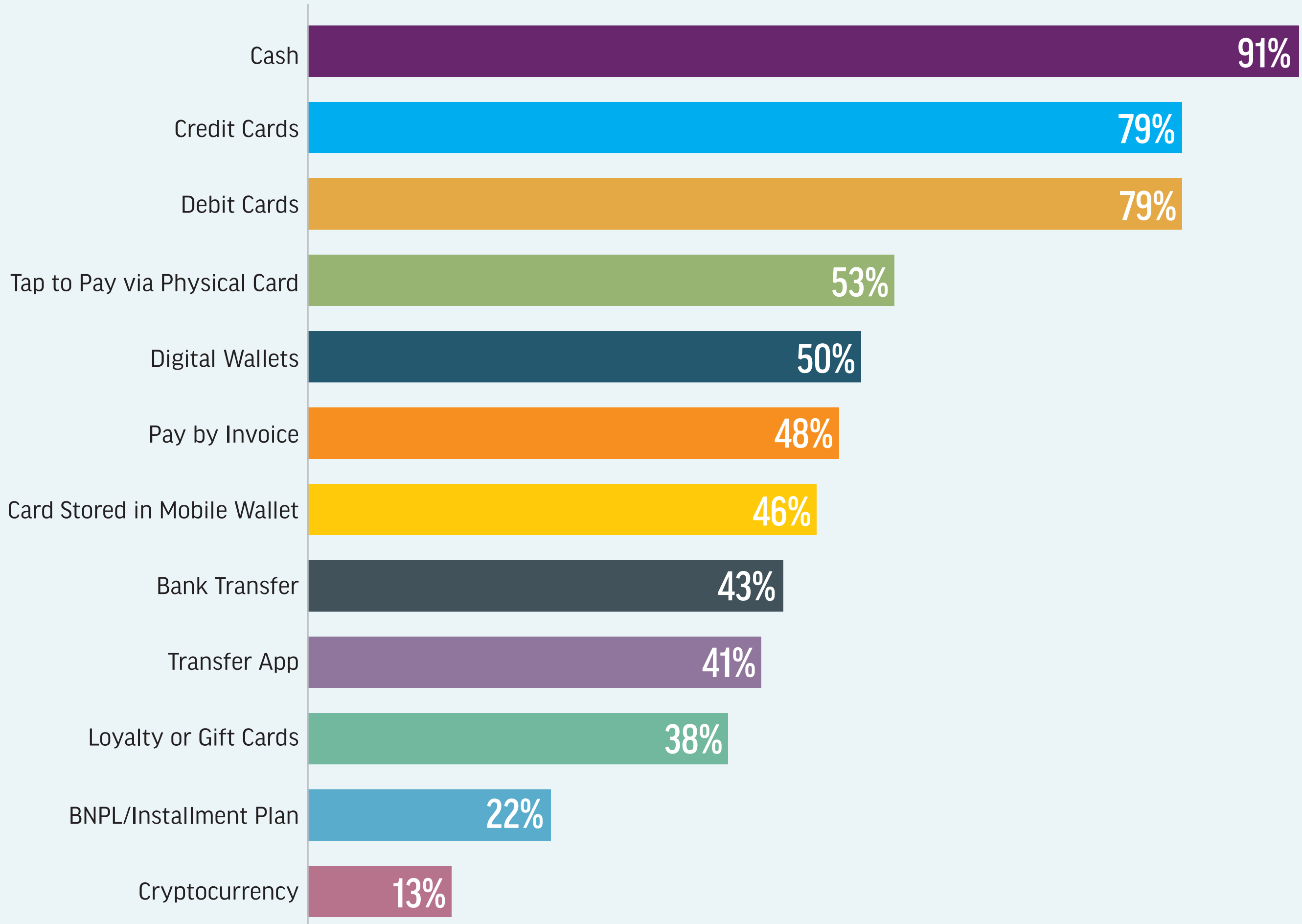
Paysafe in October surveyed 200 small and medium-size brick-and-mortar businesses based in the United States to map payment trends and gauge merchants' appetite for new technologies. The company, a major payments provider in the U.S. and European markets, conducts the survey annually.

A key starting point for modernizing the checkout is to add more digital-payment options, according to the study. While fixed-terminal card readers are now used by 65% of respondents, up from 59% in 2021, some 49% of respondents want to offer smart phone-driven solutions within the next two years. These include QR codes, which allow customers to scan and pay for items on-site using their phones.

Contactless payment readers are another checkout technology small and medium-size merchants

TOP PAYMENT METHODS OFFERED NOW

(Percentage of merchants enabling each method)



Source: Paysafe Ltd. survey of 200 physical sellers

are using, with 54% of respondents deploying the technology, up from 47% in 2021. And some 53% of respondents are offering tap-to-pay capability to modernize their checkouts.

Digital and mobile wallets are also being adopted by a substantial percentage of merchants, with 50% and 46% of respondents, respectively, saying they have installed those payment options.

Still, cash acceptance remains highly popular, with 91% of respondents accepting cash, up from 89% in 2021. Of the companies that accept cash payments, 85% say they plan to continue accepting it over the next one to two years. Increasing the popularity of cash among consumers is that 24% of merchants give discounts for cash payments.

Nevertheless, 19% of merchants indicated they've been moving toward not accepting cash, and 19% agree they can offer a better experience by eliminating cash altogether, as the move would reduce the risk of theft of cash stored on premise.

—Peter Lucas

CORRECTIONS

In "Contactless: Far From Tapped Out," in the December issue, the surname for Holly Worst at FIS Inc. was misstated.

In "The Rise of Embedded Payments," in the January issue, the title for Todd Ablowitz, co-chief executive and co-founder of Infinicept, was misstated.

Digital Transactions regrets the errors.

DIGITAL MONEY AS A PRIVACY TOOL

BY
GIDEON SAMID
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AFTER PANICKING WHEN Bitcoin surged, central banks reconsidered the new technology of money and ostensibly figured out how to fashion it into the most powerful population-control tool ever— a means for fine-tuned surveillance of subjects and citizens alike, and a weapon to monitor people and steer them according to their government's wishes. A new era of population control loomed. Right?

Not so fast. The same technology that could give enormous power to governments will also empower non-government entities to mint coins and run an economy that can't be controlled by government.

Bitcoin has proved that a global currency needs only public trust to run on. Bitcoin runs on empty and keeps running, cutting through all the fiat currencies in the world. Trust in an algorithm does not shield that algorithm from a better mathematician developing a cracking algorithm. But it does shield it from the law—you can't sue an algorithm.

Trust, as we see today, is shifting to digital coins minted by an entity that is fearful of the court. The new digital coins are backed by a universal commodity, or, better yet, a basket of traded commodities, where the trading is carried out by a mint that builds its trust through day-to-day trading. All that is needed for a digital currency to trade is the trust that the currency issuer is ready to redeem its coins for their purchase value, any time, anywhere.

For a digital currency to operate, no disruption of privacy is required. Naturally, people will be attracted to mints that safeguard the privacy of traders. These mints will develop more public trust the more they trade and observe their customers' expectations for ultimate privacy. That trust will attract more traders, and on it goes. Mints that deploy trade protocols that ensure smooth trading while safeguarding traders' privacy would be unstoppable. They would extend beyond national borders and erode the domain of fiat currencies.

By instinct, governments will fight back with regulations and limitations. They might be successful, but most likely not. Digital currency can trade under robust encryption safe from government's tentacles. The wholesome response from government is to abandon their plan to use digital currency as the ultimate surveillance tool, and instead adopt a national digital currency that upholds privacy and allows people to pay without exposing the identity of the payor.

The LeVeL digital currency by BitMint is an example of a quantum-safe digital currency that shifts the security burden to the trader. The more the LeVeL coin trades, the greater the cryptanalytic burden facing any hacker. For security, a trader will pass the LeVeL coin to himself often enough to stay ahead of any quantum computer and safeguard his or her privacy.

Such privacy-honoring national currencies will allow the authorities to obtain a court order to investigate suspicious transactions. This balance between privacy and law enforcement will resemble the search-and-seizure balance in the U.S. Constitution—a high barrier for the government.

Alternatively, the government will get out of digital money altogether and allow private entities to offer digital claim checks for the nominal fiat currency. Those private entities will comply with a public-protective regulatory regime and compete for the public's business.

One way or another, the availability of privacy-preserving digital money will prevent most countries from using the new technology as a high-powered public-surveillance tool. I stress, however, that this is how it looks right now. Alas, the idea of non-material money is so young and so given to innovation that the future may look nothing like what anyone imagines right now. DT

AN UNFAZED CFPB'S BIG AGENDA FOR '23

BY BEN JACKSON

bjackson@ipa.org

EVEN THOUGH THE Consumer Financial Protection Bureau will be working to secure its future throughout much of the year, the agency still has big regulatory plans for 2023.

As this column discussed in November, the Bureau will be facing court fights over the prepaid-accounts final rule and, separately, the source of its funding. While both of these could lead to big changes, it is forging ahead with a regulatory agenda that will reach across the financial-services landscape.

In the agenda it released late last year, it has four topics in the "prerule stage," including overdrafts, Fair Credit Reporting Act rulemaking, personal financial data rights, and fees for insufficient funds. In the proposed rule stage, it has rules on automated valuation models, property assessed clean energy financing, and two rules on nonbank registration. Finally, it has small-business lending data collection under the Equal Credit opportunity Act in the final rule stage.

Even though some of these items do not come as a surprise, compliance teams should not take them for granted. For instance, overdraft has been a target of the regulators long enough that it has led some banks to voluntarily end their overdraft programs. Large players like Bank of America, Citi, and Chase have changed their overdraft programs in the past few years.

The Bureau said in its filing that the rules about whether or not overdraft programs should be subject to Regulation Z have not been updated since 1969, and it is time to review and update them.

"While the nature of overdraft services, including how accounts can be overdrawn and how financial institutions determine whether to advance funds to pay the overdrawn amount, has significantly changed since 1969, the special rules remain largely unchanged," the filing said.

Industry players might be tempted to shrug their shoulders at the notion of overdraft regulation if they plan to move away from charging fees. But the danger of any rulemaking lies in unintended consequences. Updating rules is a good idea, but the industry needs to ensure regulators understand how products and services work and make sure rules for one set of products do not try to solve perceived problems across the market.

Another example is the proposed rule on consumer access to financial records. The original proposed rule was published in the Federal Register in November 2020. Changes in administrations probably led this to be sidelined until now. Nonetheless, the Bureau has provided clues in its blog posts and speeches that the rule will focus on spurring competition by making it easier for customers to move their data from one provider to another.

In addition to what appears on the Bureau's formal agenda, payments companies should keep in mind that the CFPB could at any point issue guidance about any products and services it thinks need more regulation. That guidance may carry a lot of weight in exams and enforcement. Buy now, pay later and earned-wage access are not on the formal agenda, but they have received their fair share of attention in the past. Guidance on these products may shape them in the near future.

Also, big events such as an outage, fraud, or collapse of a company could lead to guidance or rule making. An enforcement action against one bad actor could lead the agency to try to regulate an entire class of products. So compliance still needs to be an integral part of product development.

To keep abreast of unscheduled rules and policies, compliance teams should pay attention to the CFPB's blog and press statements. These channels offer insights into the Bureau's priorities and expectations. DT

GETTING ONLINE CHECKOUT RIGHT

Online sellers are starting to take a closer look at their checkouts. No wonder. The technology plays a key role in whether they can tap into the boom in e-commerce.

BY **PETER LUCAS**

CHECKOUT IS THE point at which the consumer either completes her purchase or doesn't. A checkout process that is slow or cumbersome, or produces surprises for the shopper, or is disrupted by technical glitches, will likely cost a sale. No wonder, then, that checkout technology is taking on a higher profile.

A recent survey by Paysafe Ltd. of 1,100 small and medium-size online businesses revealed that 74% of respondents saw checkout as a competitive advantage. Yet, 31% of respondents that have experienced issues that turned off shoppers during checkout reported lost sales of upwards of $100,000.

What are some of these issues? It's a full list, including: system slowdown, declined payment authorization, too many steps in the process, failure to disclose all taxes and shipping costs early in the process, merchants asking for too much personal information, requirements that customers leave the merchants' site to complete checkout, and consumers not seeing their preferred payment method.

Indeed, cart abandonment has many causes ("The $100-Billion Question," December), but problematic checkouts rank high among them. "The checkout experience needs to be simple, clear, and efficient, because it has a direct impact on the checkout conversion rate, and increased sales for merchants," says Keala Gaines, payments general manager for e-commerce platform provider WooCommerce.

A simple, streamlined checkout that allows consumers to complete a purchase in as few clicks as possible can't be overemphasized, payments experts say. Indeed, no step within the checkout process is too tiny to be overlooked.

A particularly besetting problem is slow checkouts. Two of the simplest ways to speed checkout are to provide autocomplete capabilities for a consumer's name and address and to allow repeat customers to enter stored card information using autofill. While such features may seem obvious, fully 51% of online checkouts don't use autocomplete capabilities, says Josh Ackerman, a product lead for Stripe Inc.

Other bumps in the road include failure to display a numeric keypad, as opposed to an alphanumeric keypad, for entering card numbers, and neglecting to flag data-entry errors in real time, as opposed to after the pay button has been clicked. About 60% of online merchants don't flag data-entry errors during checkout in real time, according to Stripe.

"These are the types of optimizations essential to removing needless friction from the checkout experience and are low weight for merchants to add," Ackerman says. "These kinds of optimizations may seem minor, but they are viewed as highly important by consumers during checkout."

WooCommerce, and other e-commerce platform providers like Shopify Inc., use Stripe's payment software, which has such features as autocomplete and real-time flagging of data entry errors built-in.

'EVERY CLICK, EVERY KEYSTROKE'

One sure way to put off a shopper is to display unexpected shipping costs, taxes, and other fees late in the checkout process. Lack of transparency about fees at the outset can lead to sticker shock for consumers when they see the final tally for their purchase. If the cost is too high, they could walk away. Unexpected shipping costs, in particular, are a leading reason for cart abandonment at checkout, payment experts say.

"If customers are less surprised by the total cost, they're more likely to complete the purchase and become a repeat customer," says Saumil Mehta, head of point of sale and e-commerce for Square Inc. "[Merchants] should make sure that all shipping, taxes, and any other fees are transparent during the checkout process."

One way to increase transparency for shipping costs is to provide supporting information or links on product pages, especially if the merchant can geolocate the customer through the device being used to make the purchase.

"Let shoppers know where they can get information they need about shipping [fees and taxes] before they hit the checkout page," says Frank Keller, head and general manager of merchant and payments for PayPal Holdings Inc. "An informed and curious customer will likely explore this information before getting deeper into the checkout process and will have a clearer sense of the total cost for the order."

It is also a good practice to inform shoppers that the cost to ship an inexpensive or bulky item can exceed the actual cost of the item itself, Keller adds. Plus, shoppers should be informed about restocking fees and return policies during checkout. The latter can be especially important to consumers purchasing a product they may end up returning, such as apparel. A recent study conducted by Happy Returns, a PayPal company, found that nearly half of shoppers have abandoned checkout because there was not a convenient return method available.

Having coupons or other promotional redemptions incorporated in the shopping-cart calculation, as opposed to after payment is selected, is another recommended best practice for bringing transparency to checkout, payment experts say.

While it is common for e-commerce merchants to gather as much data as they can from their customers for marketing purposes, asking customers for too much information at checkout, such as whether they want to subscribe to the monthly newsletter or receive email promos, can make checkout too cumbersome. Asking for that information should be done after the transaction is complete, payment experts say.

"Every click, every keystroke moves the consumer further and further to completing the transaction, so merchants should strive to ask for as little information as possible in order to allow consumers to reach the end page and complete the transaction," Rob Gatto, chief revenue officer at Paysafe.

TRACKING PAYMENT OPTIONS

Not surprisingly, payment options play a key role at checkout. Merchants should offer a variety of them to ensure they are meeting consumers' payment preferences, experts advise. Credit or debit cards, digital wallets, local payment options, and buy now,

KEY REASONS ONLINE SHOPPERS DON'T COMPLETE CHECKOUT

Checkout system slowdown
Failure to authorize payments
Technical glitches
Customers don't see the secure connection icon in their browser
Customers don't see a payment method they want to use
The promo code does not work
The actual cost of the purchase is higher than expected

Source: Paysafe Ltd., WooCommerce

pay later programs are some of the payment options merchants should be offering. BNPL, in particular, is becoming a must-have, as it is especially popular among younger shoppers and plays a role in attracting new customers.

"In some markets, it's almost a requirement to offer BNPL, and in some cases merchants need to offer multiple BNPL options," says Mark Rosales, vice president and general manager, payments, fintech and banking, for e-commerce platform provider BigCommerce Pty Ltd. "Offering multiple BNPL options is not cannibalistic if consumers use all of them."

But even having the right mix of payment options is not enough. Payment options must also be prominently displayed, and even rank-ordered by popularity. "Having a consistent and concise list of payment methods will prompt the consumer to easily choose the preferred payment method," says Chris Petersen, senior vice president of partnerships and core verticals at Paysafe. "Also, the platform should track the most-used payment methods with the biggest conversion rate, and then show them first, which will surely optimize the experience."

Another option for optimizing checkout is to break the process into two to three steps, as opposed to trying to collect every piece of payment, shipping, and customer information on a single page. For example, sellers could break a checkout form up into two or three separate steps as part of a series of steps in the checkout routine, says WooCommerce's Gaines. Payment details, for example, could be entered separately from shipping details. To make the process even smoother, the form for shipping and billing addresses could be enhanced with auto-fill capabilities.

"Although it can be tempting to make a long, detailed form collecting every piece of info from a customer on one page, it's advisable to break a checkout form up into two or three separate steps as part of a series of steps in the checkout," says Gaines. "Merchants can also offer auto-filling of pre-filled fields at checkout for things like addresses and checkboxes for same address for billing/shipping."

'MAKE IT EASY'

When breaking the checkout process into steps, merchants should be cognizant, however, to have no more than three to five steps in the process, Gaines adds.

Another tactic is to enable customers to save their cart information should they unexpectedly leave the checkout page while letting them know their carts will still be in place when they return. For customers who have left their cart at checkout, but have an account with the merchant, an emailed reminder that they have left items behind could save a lost sale. The same reminder could also be texted to an app, provided the customer has opted in for this option.

"Saving a buyer's cart and cart-abandonment emails are two key ways to make it easy for shoppers to come back and complete checkout," says Square's Mehta. "Businesses can give those carts a second chance by sending friendly reminder emails, prompting them to complete their purchases, all while keeping their business top of mind."

While there are many options to optimize checkout, merchants should always test any new enhancement to checkout before rolling it out.

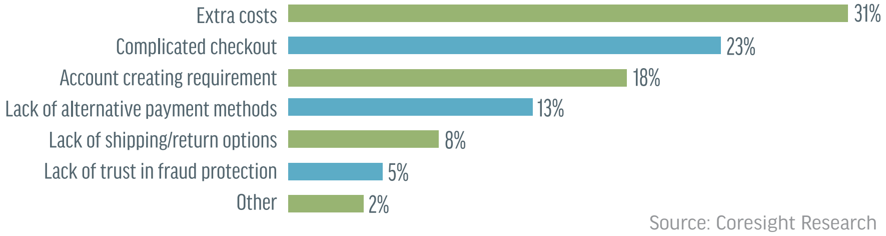
"Whether it's content on the checkout page, colors, payment options, where buttons are located, or the number of steps need to complete checkout, merchants need to be testing the elements of the checkout process," says BigCommerce's Rosales.

Finally, sellers should remember not to complicate checkout with distractions, such as pop-up ads or marketing messages, that can prompt shoppers to click on links that lead them away from the checkout page and subsequently cause them not to complete the transaction.

"If the checkout process is too complicated, it leads to abandonment," Rosales says. "If merchants can provide the right checkout experience, consumers will bite [and see the purchase through to the end]." DT

CHECKOUT LOOMS LARGE FOR MERCHANTS

(Reasons sellers give for cart abandonment, by percentage citing each reason as the biggest factor)



Source: Coresight Research

HOW TO RESTORE PAYMENTS COMPETITION

History has shown the two global card networks will never introduce real competition on their own. Time for regulators to intervene. The Fed and the FTC have made a start.

BY **MARK HORWEDEL**

THE RECENT CLARIFICATION by the Federal Reserve confirming that a more than 10-year-old law applies to online debit cards—coupled with ongoing global card network oversight by the Federal Trade Commission (FTC)—will help improve payment security by restoring competition for online payments.

The Fed's ruling has clarified existing law. It makes the point that it no longer accepts banks' phony excuses for ignoring the Durbin Amendment's debit-routing enablement requirements for online purchases. Although most merchant advocates would submit the amendment's language clearly calls for routing choice regardless of whether a debit transaction originates at a store location, via a mobile device, or online, the fact is most of the largest issuers have ignored the law for over a decade.

More recently, the FTC's decision to investigate whether tokenization inhibits debit routing suggests the agency will not tolerate efforts by the two global networks to stifle competition by hiding behind their proprietary technology.

Mastercard currently does not permit domestic debit networks to route tokenized transactions through their vaults. And, to my knowledge, neither Visa nor Mastercard has been willing to pass token-security credentials along to issuers for any domestic debit network transactions.

Global network officials and their advocates have publicly dismissed these actions by the Fed and the FTC as essentially meaningless, suggesting nothing will likely change as a result. They have touted the superiority of their two-message platforms over the single-message platforms employed by domestic debit networks. Two-message platforms perform payment authorization and payment settlement separately, while single-message platforms perform both steps in a single message to the card issuer.

The global networks have also portrayed their dominant share of online debit as resulting from fair and open competition.

Some of us beg to differ.

ILL PREPARED

Many senior payments veterans will recall how the regional debit networks, which were created in the 1980s and '90s, revolutionized payment processing by requiring online authorization of cash withdrawals at ATMs. Later on, these same debit networks leveraged the same process to authorize and settle payment purchases.

The Iowa Transfer System pioneered the use of real-time, single-message processing for use in authorizing and posting purchases originating at the merchant's point-of-sale. Prior to the advent of debit networks, banks were not comfortable with the risk associated with the rule-based payment-authorization platforms operated by the credit card networks.

As a result, early attempts by the credit card networks to develop debit products failed miserably for lack of acceptance by merchants and consumers.

The regional debit networks introduced single-message payment processing. With this method, the debit networks, bank processors, and the banks themselves were able to not only validate the identity of every cardholder using an ATM, but also were able to verify that adequate funds were available in the cardholder's account to "approve" all money withdrawn from ATMs instantly.

Single-message transaction data was automatically posted to the cardholder's account, eliminating the need for a cumbersome, batch-processed second message to be sent at a later time. It is instructive to note that the leading global network itself relied on single-message processing when it created Visa DPS (Debit Processing Services Inc.) in the mid-1990s.

Debit at the merchant point-of-sale was largely non-existent until the debit networks began to offer the capability to banks and merchants in the '90s. Mobil Oil was the first national chain to accept ATM/debit cards at its locations throughout the U.S. Mobil's lead was soon followed by local and regional competitors, as well as by pioneers from non-petroleum markets. All of them installed PIN pads to accept debit cards processed by single-message networks.

One might argue that dual-message credit card networks would have eventually developed ubiquitous acceptance of dual-message debit cards at the merchant point-of-sale. But it's hard to imagine this would have happened as fast as it did without the original efforts by the single-message debit networks, given the banks' concerns about the security of purchases relying primarily on signatures at the point-of-sale as well as the delayed posting of purchases relying on the batch processing implicit in two-message systems.

Indeed, the Fed's own surveys illustrate the vast superiority of single-message PIN-based debit over two-message signature debit in mitigating fraud at the POS.

Unfortunately for the regional debit networks, they were owned by many of the same big banks that owned the global credit networks. As big banks consolidated over the years, they insisted their networks consolidate as well. They had no interest in maintaining ownership or participation in multiple regional debit and international credit networks.

Credit networks eventually figured out how to offer successful debit cards, despite the fact they relied on outdated, fraud-prone dual-message platforms. Sadly, these same systems continue to limp along today, as resistant to change as their network owners and bank clients. Both owners are loath to invest in the real-time processing needed for tomorrow's


Horwedel

Horwedel: "The big banks and their networks won't innovate. They'll just count their profits."

commerce and are ill-prepared for the fraud that will arise from quantum computing.

RESTRAINING TRADE

Aside from regulators' stated goals of enhancing competition by requiring routing choice, there remains their concern about global networks using their proprietary technology—tokenization—to stifle competition.

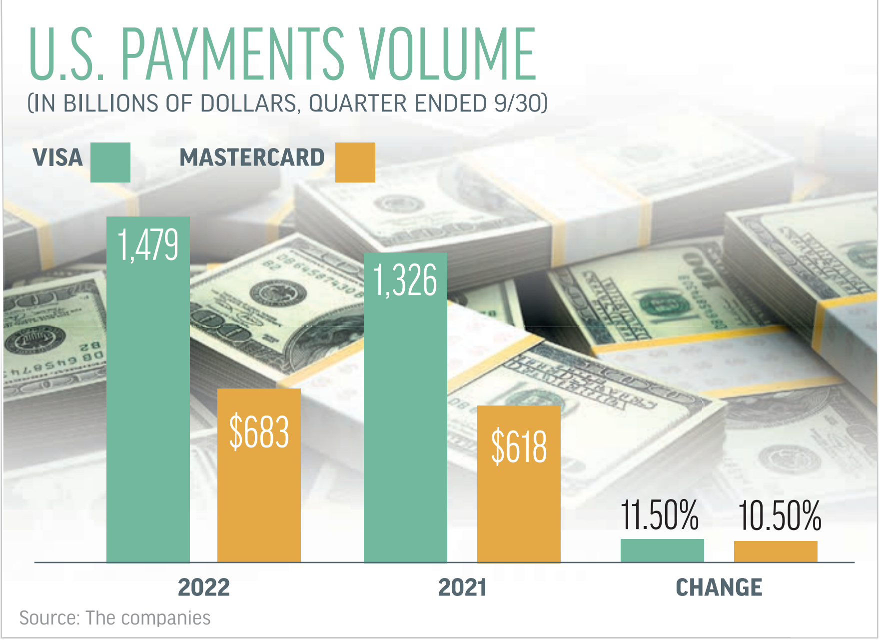
While most would agree that tokenization itself is a good thing insofar as it mitigates fraud, many would argue that it is not a substitute for two-factor authentication. As payment fraud continues to increase in the United States and other countries, it enhances the likelihood that two-factor authentication will re-emerge, given the excellent track record of PINs in stopping fraud.

The International Standards Organization (ISO) developed the card-numbering paradigm that became the standard in the early 1960s, when digital computing was in its infancy. The standard was meant to uniquely identify both the network and the bank associated with cards issued by individual banks.

It worked well for decades as a simplistic solution—for the challenge that arose in the '60s. Today, it begs for replacement or updating, since the dominant networks use it to impede competition. How? In practice, tokenization limits competition, since the global networks insist that all cards bearing their card numbers must rely on the networks as a token-service provider for the banks that issue their cards.

While the global networks contend that, under certain circumstances, they will approve of a token-service provider (TSP) other than themselves, I am unaware of a competing debit network ever winning approval to act as a TSP. This restrains free and competitive trade.

Perhaps regulators could address this restriction and enhance competition by forcing card numbers to be portable, as has been the case for many years with telephone numbers. They could also clarify that card prefixes and numbers are the sole property of the financial institutions that issue the cards, not of the card networks.



TIME IS SHORT

Unfortunately, the U.S. payment system does not exemplify the state of the art in payments today. It will never do so while the big banks and their global networks are in charge. These entities are quite content with their extraordinary profits, marketplace dominance, and historical freedom from real governmental scrutiny.

Competition from debit networks paved the way for today's ubiquitous merchant acceptance of debit cards at the point of sale. It also provided a less fraud-prone alternative to two-message, signature networks. Competition from the Fed's own real-time payment solution, FedNow, should help restore real payments competition after its launch next summer.

But empowering debit networks to compete with the credit card network duopoly by removing the barriers to competition will help as well.

Time is running out on the battle to keep fraudsters at bay. Given the likelihood that sophisticated quantum-computing systems will eventually be used by crooks to attack the rusty rails characterized by the two-message payment platforms, we don't have the luxury of relying on the big banks and their networks. They won't innovate. They'll just count their profits. DT

A MIXED PAYOFF FOR THE MEGAMERGERS

When six powerful payments companies separately merged into three organizations in 2019, it signaled that one end of the payments spectrum had dramatically shifted. But the actual payoff seems to have been inconsistent.

BY KEVIN WOODWARD

Think about the before time. Before the pandemic. Before the lockdowns. Before the cliff-dive of in-store payments. The payments industry in 2019 was about to go through another massive change, one that might have continued to garner headlines in 2020 and 2021 had the Covid-19 pandemic not materialized as it did.

That change was the consolidation among some of the largest payments companies in the world. First Data Corp. and Fiserv Inc. announced their merger in January, followed by FIS Inc. and Worldpay in March and Global Payments Inc. and TSYS in May. The First Data/Fiserv and the FIS/Worldpay deals would close within days of each in July and the Global Payments/TSYS combination in September.

More than three years on, what's been the impact of these mergers—the companies are known as Fiserv, FIS, and Global Payments now—on these players? On the payments industry?

First, two of the three seemed to weather the pandemic as well as could be expected. The exception was FIS. The Jacksonville, Fla.-based processor announced in December not only a change in its board of directors and the accelerated departure of chief executive Gary A. Norcross, who had spent 34 years climbing the ranks at the company, but a wholesale review of its business.

FIS said that review will include examination of the company's strategy, businesses, operations, and structure.

Brookfield, Wis.-based Fiserv, by contrast, renewed Frank Bisignano's contract as chief executive and chairman through December 2027. And Atlanta-based Global Payments expects to close in a couple of months on its latest deal, a $4-billion acquisition of EVO Payments Inc.

All three companies continue to provide services and sell their products to thousands of clients, but their sheer size has proven to be no guarantee of an easy path.

TWO BIG QUESTIONS

So now two big questions loom. Have these megamergers paid off as their proponents said they would? Also, how have they affected the payments industry overall?

"It has definitely changed the playing field," says Thad Peterson, strategic advisor at Aite-Novarica Group in Boston. "The mergers have helped the industry because the combined companies can take the best-of-breed solutions from their partner organizations and also identify synergies that might arise between traditional banking platforms and their payment acquisitions."

Even with all that activity among these very large companies, their shadows don't extend across the entire payments industry, often leaving opportunities for creative organizations to develop new products and services.

Indeed, the big mergers "also created opportunities for emerging players to capture market share by offering solutions on newer platforms or with different capabilities or functionalities," Peterson says.

The results of the megamergers are felt even among smaller companies. "Oftentimes, the impact falls upon small- and mid-sized companies," says Tim Russo, senior director of liquid fintech partnerships and business development at Palo Alto, Calif.-based TripActions, a card, travel, and expense-management services company.

"As the acquirer portfolios grow, these companies can fall by the wayside to larger enterprise companies that require high-touch services," Russo adds. Larger payments companies compete fiercely for enterprise customers.

"In the wake of these mergers and the support gaps, doors have opened for existing companies to expand their footprints and for fintech[s] to move into the marketplace," Russo says. "Companies like Stripe continue to grow based on their successful business model, while new players like Checkout.com can also enter the space and modernize legacy payment infrastructures for modern e-commerce companies."

Even if opportunities open between the shadows of the expansive reach of these companies, those shadows still enjoy a massive reach in the industry.

The virtues of leaner companies are just as easily discerned by larger players. "The merger has reinforced the importance of certain trends and key needs," says Casey Klyszeiko, Fiserv's senior vice president and head of global e-commerce and Carat. "Across our client base, the need to deliver a single-stack architecture that maximizes choice and optionality while minimizing complexity is clear."

'STRATEGICALLY PIVOTING'

With the emergence of fintechs, competition in general, and general economic issues to contend with, no company—regardless of size—has an easy time. But some may have more challenges than others.

FIS is experiencing that.

The company's business review is another indicator that size alone will not stave off all, or even most, challenges. FIS did not make an executive available for this article, instead referring *Digital Transactions* to its November earnings call, in which Stephanie Ferris, the new president, and other executives participated.

In the call, Ferris tried to assuage equity analysts' concerns about FIS's performance post-pandemic. "First, despite a fair amount of noise around disruption and market-share shifts, Merchant Solutions' revenue and volume growth in aggregate, when indexed to 2019 levels, has remained stable, showing steady revenue growth and high single-digit volume growth," Ferris said, according to a transcript.

Merchant Solutions is one of three divisions making up the Jacksonville, Fla.-based company's business, with the other two being Banking Solutions and Capital Market Solutions.

In the third quarter, Merchant Solutions recorded $1.18 billion in revenue, up 1.6% year-over-year. By contrast, the 2021 third-quarter result, $1.16 billion, represented a 15% increase from $1.01 billion in 2020's third quarter.

The other two processors, in their respective merchant-services units, had similar growth in the same quarter. Here, Fiserv recorded $1.9 billion in 2022 revenue, up 11.7% from $1.7 billion in 2021, which was up 13.3% from $1.5 billion in 2020. Global Payments generated $1.6 billion in merchant-services revenue in the 2022 third quarter, up 6.6% from $1.5 billion the year-prior quarter, which was up 25% from $1.2 billion in the 2020 third quarter.

Ferris said that its merchant solutions revenue and volume growth, in aggregate—when indexed to 2019 levels—has remained stable. "Further, revenue and volume growth rates and yields have remained consistent by sub-segment, albeit they

Klyszeiko: "The market has continued to become more competitive. The number of new entrants and new money coming into the space has increased since the mergers."

are very dependent on the merchant size and vertical in each category," she told analysts.

But while FIS may be able to pinpoint positive highlights, it's still undergoing a thorough business review, one that could rewrite its priorities or, potentially, the makeup of the company itself. FIS has said it will not provide updates on the review, and it does not intend to disclose developments "unless and until it determines that further disclosure is appropriate or required by law."

E-commerce and platforms are certainly part of FIS's future. In the same analyst call, when asked about weakness among small businesses in the company's merchant solutions segment, Ferris said the company wants to service small businesses via platforms and be more focused on e-commerce. The independent sales organization (ISO) and independent software vendor (ISV) segments, however, may not be emphasized as much as in the recent past.

"So, that piece of our business, whether it's our ISO business or ISV business, we are strategically pivoting away from that," Ferris said. "It's just not a high-growth business for us." This despite the fact that ISOs and ISVs have been widely seen as vital to recruiting and servicing small and mid-size businesses.

'INCREASED COMPLEXITY'

Being agile enough to adapt is something large companies sometimes are thought of as having a tougher time doing than a smaller company. It's not the size of the organization that's so critical in this instance as it is the personnel employed by the organization, suggests Ben Jackson, chief operating officer of the Innovative Payments Association, a Washington, D.C.-based trade organization.

"The agility of bringing a new product to market is oftentimes less about the size of the organization and more about the people who are in it," Jackson says. "When people are free to leverage their experience, they can make things happen not only quickly, but well."

For Jackson, a company's ability to compete well comes down to the personnel it uses. "Put together a good team, and you can get things done very quickly," he says. And large companies can tap vast resources to help.

Being able to compete is a constant goal. This is as true now for the three giants as it was before their big mergers. By contrast, competitive activity by and among other players has only increased, observers say.

"The market has continued to become more competitive," Fiserv's Klyszeiko says. "The number of new entrants and new money coming into the space has increased since the mergers."

Russo sees a similar phenomenon. "Enterprise merchants seemingly hold all the cards in this space—large companies only need two to three strong solutions to get the best discounts for their payments business," he says. "The real question is whether there are enough downmarket alternatives for merchants of all sizes and if those alternatives offer the same level of technology and customer support that large-scale merchants receive.

"In this case, the continued growth of Stripe and the emergence of Checkout.com meet the needs of those companies just under that large-enterprise

Jackson: "The problem is we forget that a tremendous amount of infrastructure is required to make good and interesting things happen."

Peterson: "2019 is really not that long ago, and it takes years to fully integrate and combine resources."

segment," Russo continues, adding this is true even "while independent sales organizations—like Payroc—are investing in their own solutions to provide modernized payment infrastructure in the SMB space."

Indeed, competition for merchants and their payments business has only intensified, says Peterson. "Competition has changed significantly in the past few years as new types of processors like payment orchestrators have emerged to simplify merchant payment-acceptance decisions," he says. "Add to that the increasing complexity of the space driven by tender type and cross-border among other factors, and any potential opportunity to lessen competition that the large processor expected to receive has probably diminished."

For its part, Global Payments touts several mergers since acquiring TSYS that have helped it compete. These combinations have "enabled us to accelerate our technology enabled, software-driven strategy, announce groundbreaking partnerships with industry-leading technology providers, and win new issuer clients, many of which have been competitive takeaways," a spokesperson says in a statement.

It's the combination of payments and banking services that was central to the megamergers. As Frank Bisignano, Fiserv's chairman, president, and chief executive, said in 2019 when the merger was announced, "For years, we have had aspirations to deliver a compelling core-processing platform." The combination with Fiserv fulfilled that ambition, *Digital Transactions* reported then.

"Increasingly, merchants are embedding banking services into their offerings, so the complementary qualities of our broad portfolio of merchant and bank services is more evident every day," Klyszeiko says.

'INNOVATION HAPPENS'

The other big question is, have these megamergers paid off for the companies? That answer may need more time to evolve, especially for FIS. Fiserv said its merger with First Data generated more than $700 million in revenue synergies and $1.2 billion in cost synergies, a 33% increase from the initial $900 million commitment, and did so in two-and-a-half years instead of the original timeframe of five years. "Our operating profitability has improved each year since the combination, while our top-line growth has exceeded that of the individual companies pre-merger," Klyszeiko says.

"2019 is really not that long ago," says Peterson, "and it takes years to fully integrate and combine resources. 2023 will probably be one of the more telling years for profitability as they gain cost savings."

Judging the success of these mergers requires context, argues IPA's Jackson. "To say positive or negative would depend on who you are and where you sit," he says. "On some levels, it's been very good for some players and tougher for others. The big stories in tech are always about a scrappy upstart and smart coders who found new ways to do things."

"The problem is we forget that a tremendous amount of infrastructure is required to make good and interesting things happen," Jackson adds. "Sometimes innovation happens and a group of people get together who have the tools to do something interesting."

FASTER PAYMENTS DEMAND FASTER ACTION

With major markets adopting real-time payments processing, U.S. banks that don't act soon risk being left behind.

BY **DAVE SCOLA**

Dave Scola is U.S. chief executive for Form3.

ALL AROUND THE world, banks are making the move to real-time payments. Throughout Europe, Latin America and Asia, we're seeing banking customers reap considerable benefits from being able to transact in real time.

However, the picture here in the United States isn't quite so rosy.

That's not to say that it's impossible to make real-time payments in the U.S. market. The Clearing House Payments Co. offers a real-time payment platform to its members, while the forthcoming introduction of FedNow will see many smaller financial institutions able to offer this facility to customers.

But overall—and largely due to the fractured nature of the financial ecosystem here—the United States is behind when it comes to real-time payments. And from conversations I've had with some bankers here, there seems to be a reluctance to accept that now is the time to get on board.

In this article, I'll explain why financial institutions large and small should be making real-time payments part of their strategy right now, the risks of not doing so, and the challenges we face in moving to the real-time future.

DIGITAL MEANS INSTANT

Payment processing has traditionally been done in a very linear fashion. Payment information is gathered, then screened. There are some fraud checks. Then the availability of funds is checked. This sequential processing was handled by big, on-premises mainframe systems within the bank.

The technology itself was the limitation to how quickly payments could be processed. It had to be managed and maintained in-house, was difficult to scale up, and very soon became out-of-date. Banks relied on this legacy infrastructure to perform all of their core processes—not just payments—so if there was an outage, everything could grind to a halt.

More recently, many banks have learned to place their trust in cloud-based systems. Suddenly, the ability to process payments at whatever scale is required is there. Instead of having to implement additional hardware to address spikes in volume, banks can readily access incremental processing capacity by leveraging the services of public cloud providers.

Also, the way in which many cloud-based systems are built revolves around micro services. This structure allows banks to break apart that sequential processing model and leverage different micro services simultaneously to allow payment processing to happen in a much faster way.

Using APIs, banks can stitch all of these micro services together to pull the relevant data much more quickly, while integrating the micro services of ancillary service providers into their own platform. Simply put: Advances in technology offer everything needed to support real-time payment processing and make it readily available.

There's no reason now why payments can't be delivered digitally instantly. But banks may still be in some doubt as to the need to move from three-day payment processing to instant. I would argue, though, that customers have become more demanding in the digital age.

With online shopping and services like Amazon Prime, I know if I order something today, I'm going to get it tomorrow or maybe even on the same day. Most things that can be delivered digitally are being delivered instantly. You can receive a physical item in some places faster than you can receive the actual payment for it. This is a dislocation in customer expectation.

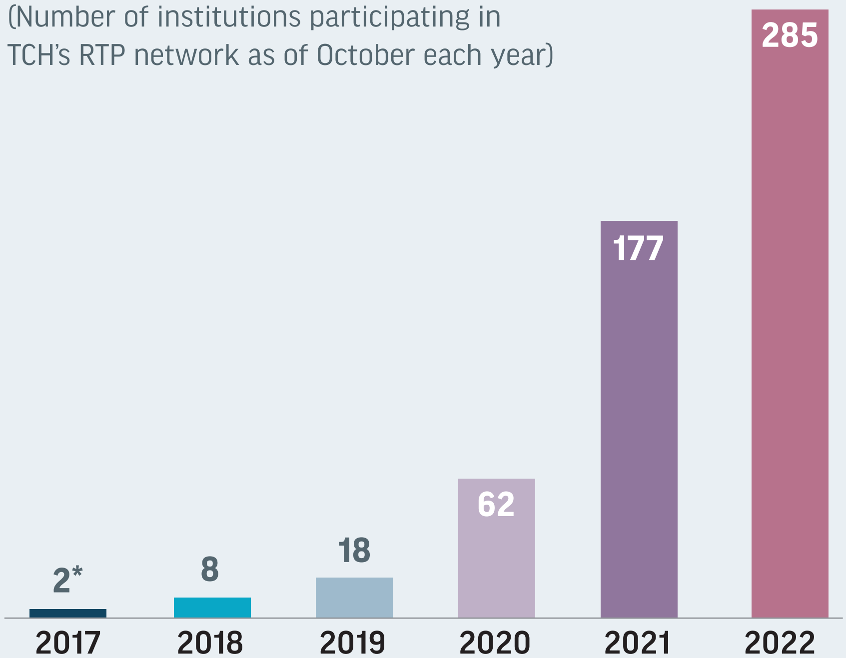
The changing nature of our lives also supports the case for real-time payments. Many people are reliant on money coming into their account quickly. The growth of the gig economy is well-documented and has led to an increasing number of people who receive their wages day-to-day rather than at the end of the week or the month. They need to make sure that, when they need to buy food and pay bills and make their rent payments, they can.

While services such as Zelle, PayPal, and Venmo are available in the U.S. market, in reality these services have some significant limitations. They're not using faster-payment rails, which means that, while funds become available, they are not irrevocable and come with some significant risk.

Many of these services have relatively low payment limits to help mitigate this risk. But with the addition of the ability to send real-time payments over real-time rails, this risk posture is significantly changed—with payments being cleared and settled centrally at all hours and with more control.

GROWTH AT THE CLEARING HOUSE

(Number of institutions participating in TCH's RTP network as of October each year)



*November. Source: The Clearing House

HIGHLY FRACTURED

Seeing what is happening overseas should give banks good reason to contemplate offering real-time payments to customers. The United Kingdom is already looking to introduce its next generation of Faster Payments. We're also seeing some interesting interconnectivity plays in Asia, where markets are linking their real-time payment platforms so that cross-border transactions become much more easily facilitated.

Some of the Latin American countries have been particularly quick to adopt real time payments. Brazil and Mexico, in particular, stand out as examples of countries where real time payments have taken off in the consumer retail market.

Here in the United States, some banks have been aggressive in their digital-transformation projects, but many others have been weighed down by legacy infrastructure.

So far, around 260 banks have adopted The Clearing House's Real Time Payments (RTP) platform. Many of these are only set up to receive rather than send, but at the very least this adoption has seen them start the process of adapting their infrastructure to handle real time payments. Those participants that will be sending as well have been announcing enablement features and solutions for some specific use cases, such as U.S. Bank's real time payment capabilities for auto dealers.

We here in the States have a well-developed but highly fractured banking system, meaning it is more difficult to move away from where we are to a new environment. The U.S. market has 10,000 or so financial institutions, and all of them need to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Trends in the Electronic Exchange of Value

Scola: "The bigger macro trend that real-time payments represents is a movement by banks away from having to do everything themselves."

come up to speed to allow for that shift. In the U.K., there are five or six big banks and then a bunch of smaller building societies, many of which are quite advanced in technological terms.

On a macro level, there are issues that affect the whole ecosystem. Fraud is one of the biggest problems when it comes to real-time payment processing. Though fraud checks are still one of the most important aspects of payment processing, fraud is often only exposed at the central level, where you have a view of what's happening in the whole market, rather than what's happening with just one institution.

Malicious actors will ping multiple institutions at the same time to try to make or receive a successful payment. If you don't see what's going on in the ecosystem as a whole, you won't be able to spot these patterns.

A PARADIGM SHIFT

Looking at the institutional level, one significant challenge for real-time payments revolves around liquidity. Banks have to deal with instant delivery of funds, rather than delivery in three days. How do you make sure that you have enough cash in the system to facilitate that on behalf of your clients? And how do you upgrade your technology platform to support it?

These are complex problems that banks that want to offer customers real-time payments must get on top of.

For banks that are struggling to upgrade their legacy infrastructure, there will be significant investment—in both time and money—required to get themselves to a position to be able to offer real-time payments to customers. However, they could also put their trust in third-party providers to help them with this transformation.

In a digital world, financial institutions from an analog era need some help to adjust. There's no shame in admitting this. While self-reliance is an admirable quality, pragmatic organizations that want to keep their customers happy don't have to do everything on their own.

They can strike partnerships with technology providers that will give them access to managed, cloud-based services that will allow them to offer features such as real-time payments without having to build anything themselves.

Judging by the conversations I've had, there are a lot of banks saying real-time payments won't take off in the U.S. market for some years. So they're kicking this issue into the long grass. Happily, though, there are others that are saying they see real-time payments as a clear differentiator from the competition, so they are looking to be early adopters.

Additionally, the fact that the US Department of the Treasury's Bureau of the Fiscal Service has now announced that it will be taking part in the FedNow pilot should persuade many of the financial institutions currently sitting on the fence.

I'm not a gambling man, but if I were I know who I would be backing. The banks that see real time as tomorrow's problem might find that they get left behind, while those that choose to get on board now will keep their existing customers happy—and probably attract a load of new ones, to boot.

Overall, though, the bigger macro trend that real-time payments represents is a movement by banks away from having to do everything themselves. Instead, they can use service providers for tasks and processes previously considered core to their operations, including the processing of payments.

This may be something of a paradigm shift for a fairly traditional, conservative industry. But those banks that can make the leap will find themselves in good shape for the future. DT

CBDCS' FUTURE LIES IN CROSS-BORDER PAYMENTS

A recent pilot demonstrated a number of benefits stemming from the conversion of real-world assets into their digital equivalents.

BY AARON MCPHERSON

Aaron McPherson is principal at AFM Consulting Partners

LOST IN THE coverage of the crypto meltdown last year were some important announcements by major bank associations, such as SWIFT and the Bank for International Settlements, about the use of central bank digital currencies in cross-border payments.

Central bank digital currencies are cryptocurrencies that are backed by a central bank. They have the characteristics of fiat money but are packaged so as to be tradable on cryptocurrency exchanges. A private-by sector version would be a "stablecoin" such as Tether or USD Coin, which is backed by reserves of government securities such as U.S. Treasury bills, or by highly liquid, low-risk commercial paper.

Since private stablecoins are backed by government debt anyway, it makes sense to simplify the structure by having a government issue its own stablecoin, backed by the central bank itself. This removes the risk of private stablecoins, which are vulnerable to interest rate shifts in money markets.

The advantage of a private stablecoin is that it works across national borders, which is not true of a CBDC. CBDC sponsors have had difficulty articulating a business case for domestic transactions, but the cross-border case is much clearer. Right now, cross-border payments have to go through global banks on their way to domestic banks. SWIFT, the global bank cooperative, is the accepted messaging framework for cross-border payments, so it makes sense that SWIFT would lead the way in experimenting with cross-border use of CBDCs.

TOKEN PROGRESS

At the Sibos conference in November, SWIFT's Nick Kerrigan reported on a successful pilot of a system that facilitates trades between banks in different countries using three different payment networks: the SWIFT gpi network, which is the next generation of the classic correspondent-bank system; local CBDCs; and local or regional real-time gross-settlement (RTGS) systems.

The project team made payments using combinations of all three networks and a centrally operated SWIFT gateway. For CBDCs, the team simulated a "regulatory node" that could accept payment requests and implement them on the national CBDC ledger. The SWIFT gateway acted as a payment hub, using the

ISO 20022 messaging standard as a common language between all three types of systems.

Establishing interoperability between CBDCs and existing payment systems was important because different countries are at different stages of development, and even once CBDCs roll out, they will be used alongside existing networks.

A related experiment extended the concept to tokens, which are like stablecoins but can represent any asset. You may have heard of NFTs, or non-fungible tokens, which represent real assets like artworks, music, real estate, and much more. In this case, the tokens represented bonds. The system was able to convert a bond into a token (tokenization) and back again (de-tokenization).

STARTING FROM SCRATCH

If we think of stablecoins as tokens, then we can see that the two experiments are essentially doing the same thing, which is converting real-world assets into their digital equivalents. This has numerous advantages, including:

- **Fractionalization:** a token can represent a share of an asset, enabling many investors to jointly own something that might be impossible for each of them to afford on their own. This will improve liquidity and pricing by increasing the number of buyers and sellers in a given market.
- **Cost savings:** a blockchain removes the need for periodic reconciliation, since every transaction is uniquely and indelibly recorded, at the time it is made, on a centralized ledger available at all times to both parties. Smart contracts make it impossible for one party to fail to fulfill its obligations, and confirmations take place in near real time.
- **Lower risk:** another purpose of reconciliation is to make sure that all transactions execute properly. Otherwise, you have what is called "counterparty risk," the risk that one party may fail to deliver the asset in return for the payment. Using escrow accounts and smart contracts, a blockchain-based system can eliminate this risk by linking the payment to the delivery. Essentially, the seller puts an asset into escrow with a custodian bank, which then transfers it to the buyer once payment is received. The blockchain provides perfect information to all parties at every stage of the process, aborting the sale if something goes wrong at any stage.
- **Redundancy:** in cryptographic payment systems, each participant has the option of maintaining a copy of the blockchain, which is synchronized on a regular basis. This means that if one participant fails, the others do not lose any information.
- **Increased automation:** smart contracts can automate existing or new processes, increasing efficiency and improving trust. Smart contracts are cryptographically signed, just like everything else on the blockchain, making it impossible to change them without the agreement of everyone involved. Combined with the rich data of ISO20022, it will be possible to use smart contracts to create new financial products and harvest improved data reporting for market and regulatory use.

One of the persistent challenges to cryptocurrencies has been that they provide few real-world benefits over existing payment methods, and quite a few downsides, such as volatility.

I have identified the most compelling advantages (in my view), but it is certainly possible to envision upgrading existing payment systems to gain the same benefits.

On the other hand, there is a benefit to starting over from scratch. This is the ability to discard decades of obsolete development. Maintaining legacy systems is so all-consuming as to leave banks with little time for true innovation. If we see CBDCs as an alternative to existing systems, and pursue the SWIFT strategy of interoperability, this should allow us to gain the benefits of starting over without losing the investment in systems that still work well. DT