

DIGITAL[®] TRANSACTIONS

Trends in the Electronic Exchange of Value

12TH ANNUAL

FIELD GUIDE TO *innovative* PAYMENTS

Here are the nonbanks, banks, and networks now making the biggest waves in payments services



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ALSO IN THIS ISSUE:

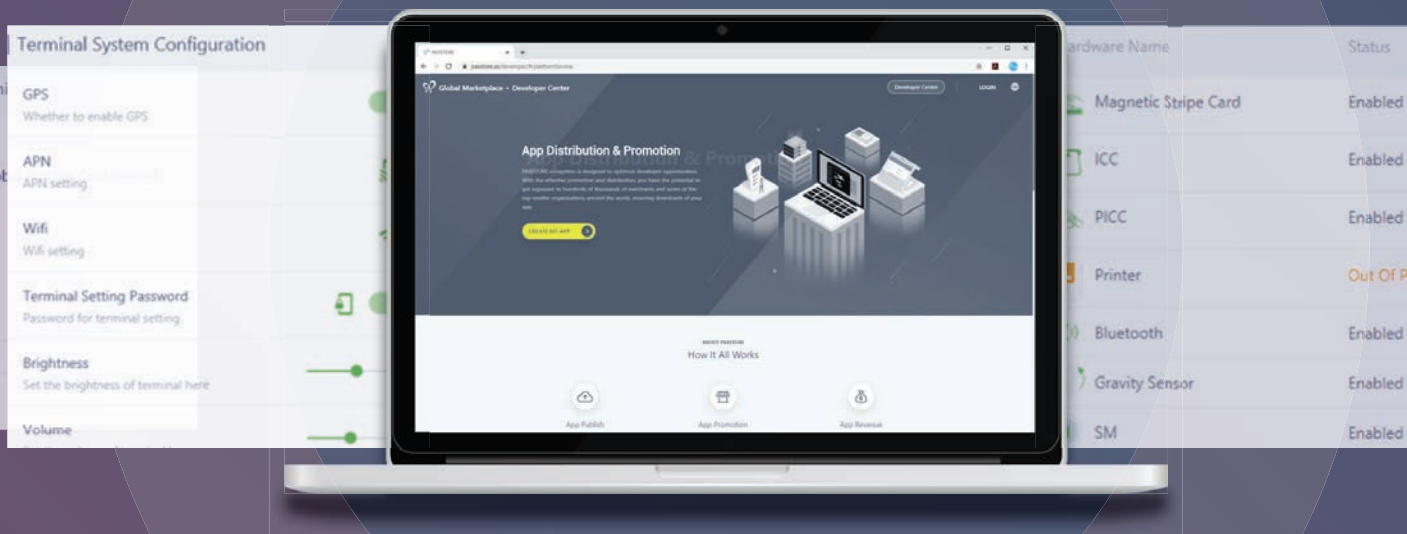
A Look at Interchange

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contents

MAY 2020 • VOLUME 17, NUMBER 5

12th Annual Field Guide to Innovative Payments 22

The guide has a slightly different name now, but the same purpose—to seek out and describe the nonbank players, apart from the big networks, that are rewriting the rules for the digital exchange of value.

THE GIMLET EYE Shape of Things to Come 4

TRENDS & TACTICS 6

A Glimpse of Costs to Come

Visa and Mastercard postponed their April interchange revisions to July. Here's an estimate of what's coming.

The Coronavirus Slows Down the ACH

It took a pandemic to put a damper on the surging network, which connects virtually every bank in the country.

Why Fraud Is So Stubborn

The AFP's annual report finds only a slight downtick in payments fraud. Business email compromise looms as the biggest culprit.



Plus, **Security Notes** explains the advantages of digital dollar claim checks in distributing aid during the pandemic; and **Payments 3.0** shows how fighting the coronavirus is exposing a need for new investment.

ACQUIRING 13

Payments in a Time of Plague

The Covid-19 pandemic is overhauling payment habits, and hence payment technology. How long-lasting are the changes?



ACQUIRING 16

Acquirers in Survival Mode

In the midst of the Covid-19 crisis, here's how payments providers are coping as merchants contend with shelter-at-home policies and other restrictions.

Cover Illustration: Jason Smith, 123RF.com



COMPONENTS 19

Wellsprings of IoT Payments

The Internet of Things has always had a gee-whiz factor, but unshowy sectors such as utilities, insurance, and purchases for business and household essentials are leading its payments growth.

ENDPOINT 31

The Storm Before the Calm

The pandemic is wreaking havoc on multiple fronts in the payments business. But if we let market forces work their usual magic, look for a recovery next year.

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SHAPE OF THINGS TO COME

WHAT WILL THE PAYMENTS BUSINESS LOOK LIKE when, God willing, the coronavirus vaccine becomes available and the plague lifts? That's one of the questions we've been battling around here at *Digital Transactions*, so in this issue we decided to take a shot at answering it. The results can be found in our double-barreled Acquiring section.

"Payments in a Time of Plague," which starts on page 13, looks in some detail at three technologies getting increased attention because of their utility for people in lockdown; contactless payments, e-commerce, and peer-to-peer payments, largely in real time. The case for these technologies in the middle of a viral outbreak is obvious, but the real question is, will the practices we adopt now outlast the pandemic and become habitual?

In this connection, we are struck by the example of image exchange, a now commonly deployed technology for check processing. But in 2001, checks were still flown in bundles around the country for settlement. The 9/11 attacks that year forced authorities to ground those and many other planes and started banks on the path toward adoption of the new technology (our thanks to Steve Ledford at The Clearing House for reminding us of that example).

We don't pretend to know whether, for example, contactless will similarly assume ubiquity as a result of a quite different, but no less frightening, emergency. The experts we talked to, though, agree the likelihood is high. Fear of infection is strong and may well outlast the actual virus, helping to form a habit among consumers of tapping a card while not touching a keypad.

Our second story, "Acquirers in Survival Mode," starts on page 16 and describes the ways in which third-party acquirers are coping with stay-at-home orders, store closings, plunging retail sales, and the disruption of acquisitions, both those in progress and those planned.

The heartening thing about this story, as senior editor Kevin Woodward found, is the resilience of these players in the face of daunting challenges. Some prospective deals had to be discarded, but others were consummated. Required equipment was installed in multiple homes—now remote offices—so employees could perform critical duties. Services such as loyalty programs and payroll processing were continued for clients at little or no cost to them.

I was struck especially by the positive attitude the acquiring execs have maintained through all this. As Austin Mac Nab, founder and chief executive of VizyPay, told Woodward: "It's teaching us a lot about what our capabilities are. We found a lot of things we're good at that we didn't know that we were good at."

May we all learn similar lessons in these unsettling times.

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trends & tactics

A GLIMPSE OF COSTS TO COME

Visa Inc. and Mastercard Inc. have postponed their planned U.S. interchange revisions until July, but when these changes do take effect the net impact on merchants could be deep, according to an analysis released last month by CMSPi, an Atlanta-based global merchant payments consultancy.

Indeed, the new pricing planned by the two big payment networks will yield “the first significant increase in rates in more than a decade” in a number of important merchant categories, says Calum Godwin, the firm’s chief economist. “This is really important for the U.S. payments industry.”

CMSPi’s analysis of the changes, which were originally scheduled to take effect in April but were put off by the networks in recognition of the coronavirus crisis, estimates that U.S. merchants in the aggregate will pay a net \$80 million more in interchange on Visa cards over 12 months starting in July.

The net impact of Mastercard’s revisions, meanwhile, is estimated to be \$383 million over the same year. CMSPi bases its total net cost estimates on 2019 volume figures.

THE TOTAL TAB

(Estimated total annual net cost of revised interchange rates, in millions)

VISA

\$80 Planned for July 2020

\$268 Planned for October 2020

MASTERCARD

\$383 Planned for July 2020



Source: CMSPi analysis

Merchants will see disparate effects, however. Visa transactions at supermarket chains will carry rates 15 to 30 basis points lower than they are now, while the travel-and-entertainment and passenger-transport industries will get Mastercard rates about 15 basis points lower, according to CMSPi’s analysis, which figures these changes as weighted averages for each industry.

But some other industries, including online merchants, will see their Visa rates rise. Mastercard-accepting merchants in a wide swath

of industries will incur rate increases of up to 15 basis points. Grocery-store rates will remain unchanged, but airline rates will go up 10 basis points, as will rates for general retail.

Fuel retailers, which are contending with an October deadline to install EMV technology at the pump, will see a 14-point increase. Again, CMSPi calculated these changes as weighted averages across each industry.

U.S. merchant acquirers typically pay card-interchange rates and then pass on the cost to their merchant clients, so how the networks’ new

rate tables will ultimately translate to the cash register will vary by category and possibly by individual merchant. “These changes are incredibly complex,” Godwin says.

Another difficult variable is how deeply the economic impact of the Covid-19 pandemic will be felt over the coming months, particularly by small and medium-size merchants. Businesses that close will quite clearly not be processing transactions, and so will not be paying interchange. Others may stay open but struggle, a factor that could influence the card networks’ plans.

“Visa already made the decision not to implement interchange modifications in the U.S. planned for April,” says a statement released by Visa last month. “Further, we have made no decisions regarding what, if any, changes will be made in the future in recognition of the dramatically changed environment in which all businesses are operating today.”

The uncertainty surrounding the extent of the pandemic’s impact, though, is such that CMSPi did not feel it could factor it in to its analysis.

“Our models don’t account for small-merchant attrition, simply because it’s impossible to model at this stage,” Godwin says. “On one hand there’s shocking U.S. jobless data, but on the other hand there’s an absolutely massive fiscal stimulus coming, plus we don’t know how long the pandemic will last.”

Still, the uncertainty has led the firm to adjust its growth expectations for the U.S. economy. “What I will say is we normally bake in 5% year-on-year growth assumptions for future forecasts, but we’ve not done that here,” Godwin says. “We’ve applied a zero-percent growth forecast.”

For its part, Visa says it is evaluating the situation with respect to its planned shift of liability for fraud losses to fuel retailers that don’t adopt EMV by October, but for now is keeping the deadline in place.

“Visa recognizes the Covid-19 pandemic has caused unprecedented impact on the global economy and acknowledges the importance of fuel retailers in enabling daily transportation and commerce,” says a separate statement from Visa in April. “Visa will continue to closely monitor the situation through ongoing assessments and conversations with partners to comprehensively gauge the ability of the ecosystem to support fuel retailers with their upgrade. As such, the liability shift date remains the same as Visa works with partners and retailers to upgrade to EMV.”

Besides the changes now scheduled for July, CMSPi also looked at further rate revisions Visa is planning for October that, among other things, will do away with the cents-per-transaction part of the fee for restaurants but increase the percentage part, known as the ad valorem rate. Under this plan, rates will change across a wide array of industries, with reductions for very big merchants and increases for smaller ones.

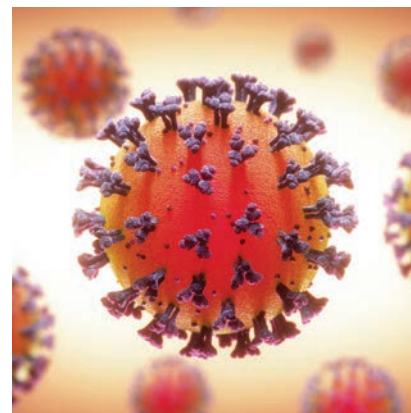
The biggest beneficiaries will be large retailers and restaurant chains with an average ticket below \$8.88, according to CMSPi. Small merchants and restaurant chains with average tickets above \$8.88 will see cost increases. All told, CMSPi estimates these changes to yield a net annual cost increase of \$268 million.

—John Stewart, with additional reporting by Kevin Woodward

THE CORONAVIRUS SLOWS DOWN THE ACH

Like other payment networks, the automated clearing house was going great guns until very recently (“The Surging ACH,” April), but, thanks to the Covid-19 pandemic, it’s now in the midst of a slowdown.

ACH governing body Nacha reported in April that total volume rose 7.1% year-over-year in the first quarter to 6.4 billion transactions, up by 423 million payments. Same-day volume jumped a full 42% to 75 million transactions from 52.7 million in 2019’s first quarter.



A STRONG FIRST QUARTER, BUT ...

(ACH transactions in millions)

	Transactions	Change ¹
Same-Day ACH	75	42%
P2P	44.5	24%
Internet	1,800	15%
Health Care	88.7	14%

1. From first quarter 2019.

Source: Nacha

The good times aren't rolling into the second quarter, however. "While ACH results for the entire first quarter are positive, the current coronavirus national emergency is already impacting payment system volumes, including the ACH," Jane Larimer, Herndon, Va.-based Nacha's president and chief executive, said in a news release last month.

"For the second half of March, there was a slowdown in payments volume," the release says. "That includes ACH, where the slowdown in economic activity has

affected the volume of payroll payments, bill payments, and supply-chain payments. This situation is likely to continue through the second quarter."

The first-quarter total was composed of 3.7 billion debits and 2.7 billion credits. Total payment value grew 10.3% from a year earlier to \$14.6 trillion.

Same-day ACH wasn't the only source of network growth. Person-to-person payments grew 23.6% to 44.5 million transactions. Internet payments rose 14.8% to 1.8 billion,

and health-care payments increased 13.5% to 88.7 million. Business-to-business transactions increased 11.7% to 1 billion while direct deposits rose 3.9% to 1.9 billion.

Nacha also released its annual listing of the top 50 ACH originators and receivers, this one for 2019. On the origination side, Wells Fargo & Co. led with 6.45 billion originations last year, up 10% from 2018. In second place, JPMorgan Chase & Co. originated 4.39 billion payments, up 6.1%.

—Jim Daly

WHY FRAUD IS SO STUBBORN

The good news is that attempted and actual payments fraud declined last year. The bad news is it went down only a tick and remains very close to the all-time high, according to the latest annual report from the Association for Financial Professionals, a Bethesda, Md.-based trade group for companies across a wide range of industries.

The association, which has surveyed companies every year for 16 years, found that 81% had experienced attempted or actual fraud in 2019, down slightly from 2018's 82%. The survey has found fraud rising steadily across a wide range of payment methods since 2013, when it registered at 60%. Now, "If anything, [fraud] is remaining stable," says Tom Hunt, director of treasury services at the AFP. "I don't take a lot from that."

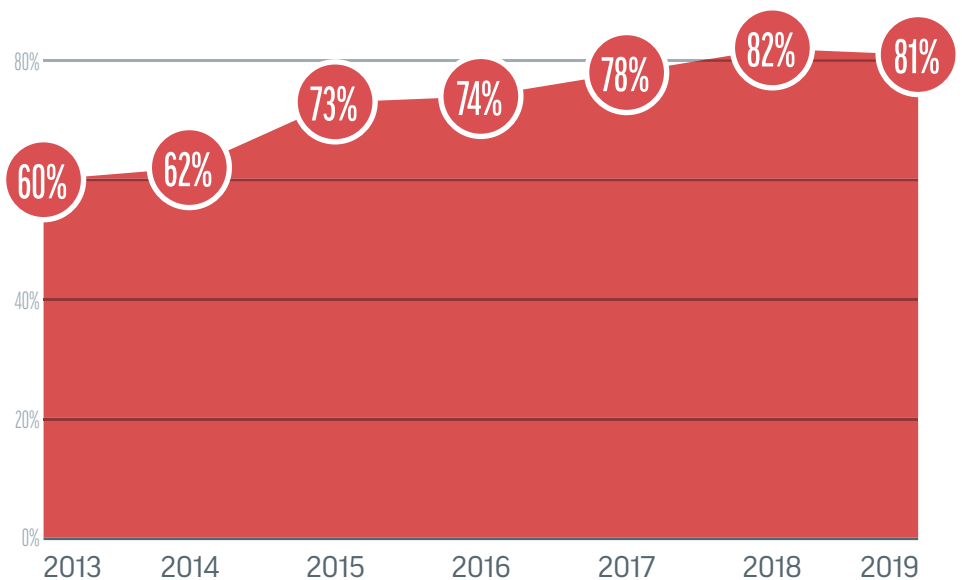
This year, the study found that companies may be getting better at defending against so-called business email compromise, which has

become a prime fraud vector. Some 75% of companies reported having been affected by this fraud, down from 80% in 2018 and the lowest percentage since 2016. Still, it remains

a persistent threat, with sixty-one percent of organizations that suffered from actual or attempted fraud of any kind reporting this tactic as the ultimate source.

FRAUD LEVELS OFF—AT A HIGH RATE

(Portion of organizations sustaining actual or attempted payments fraud)



Source: Association for Financial Professionals

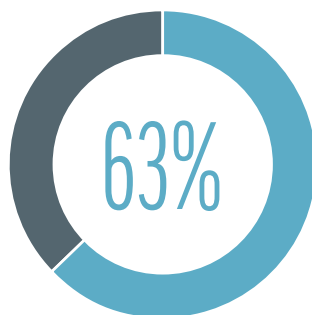
With business email compromise, fraudsters use emails dressed up to look as if they come from senior management to create a contrived sense of urgency and gull employees into triggering transfers to outside accounts.

Of the payment methods studied, only wire transfers experienced a decline in fraud and attempted fraud. Some 40% of companies surveyed cited wires, down from 45% in 2018. On the other hand, ACH credits rose from 20% to 22%, while ACH debits remained constant at 33%.

That's not coincidental, notes Hunt. "I see a trend developing," he says. "Wire fraud is going down, and that's a good trend, but there's an uptick in ACH credit fraud, and accounts-payable departments are most vulnerable to that." With ACH credits, organizations authorize payments to other parties, whereas debits involve payees initiating transfers from payors.

ACH transactions are processed in batch, which can help hide suspect items, while wires are usually subject to close scrutiny because they stand alone, involve immediate transfer, and are typically for very large sums, Hunt points out. "A wire has an immediate effect, it's very hard to get that wire back when you hit that send button," he says.

ACH credits have been eligible for same-day processing since 2016, but that still leaves time for some checking. Catching fraudulent credits "takes a lot more procedural cohesion" in accounts-payable departments, Hunt says. "An eye for one payment is easier than [identifying] a payment in an ACH batch. There has to be stronger processes put in place to question that



63% of companies that reported actual or attempted fraud said they had sustained zero direct loss.

Source: Association for Financial Professionals

payment, to make those phone calls, and also have a procedure in place to support that."

But other often-used payment methods also saw more actual and attempted fraud last year. Some 34% of companies reported fraud or fraud attempts on commercial and corporate credit and debit card transactions, up from 29% in 2018. Hunt says AFP is hearing from members that Visa Inc. and Mastercard Inc. "are getting better with detecting fraud." Still, he adds, "those [fraud] models will be really well-tested."

He advises companies "are going to have to be much more vigilant so they can defend against chargebacks."

For all the concern about rising fraud and attempted fraud, the study found that most attacks yield little for the fraudsters. Sixty-three percent of companies that reported actual or attempted fraud said they had sustained zero direct loss. Only 20% suffered a direct loss of \$20,000 or more.

For the study, "Payments Fraud And Control Survey Report," the AFP fielded a survey in January to 8,000 companies and other organizations, including non-profits, and governmental organizations. The association received 425 responses. JPMorgan Chase & Co. sponsored the research. ^{DT}

—John Stewart

MONTHLY MERCHANT METRIC

Total Gross Processing Revenue, in Percent

Sum of total discount, total transaction fee revenue, and total other fee revenue divided by total volume

Q4 2018		2.509%
Q1 2019		2.514%
Q2 2019		2.527%
Q3 2019		2.544%
Q4 2019		2.542%

Note: This is sourced from The Strawhecker Group's merchant data warehouse of over 3 million merchants in the U.S. market. The ability to understand this data is important as small and medium-size businesses (SMBs) and the payments providers that serve them are key drivers of the economy.

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

Source: The Strawhecker Group © Copyright 2020. The Strawhecker Group. All Rights Reserved. All information as available.



THE DIGITAL DOLLAR CLAIM CHECK



BY GIDEON SAMID
gideon@bitmint.com

A CLAIM CHECK for a certain sum of money, x , which can be claimed 24/7 for its exact nominal value, with instant credit to the claimant account, is not exactly a box full of coins summing up to x dollars. It is like a key to a readily available box where the actual money is placed.

If you owe x dollars, then, by passing the key to your creditor, you satisfy your debt, because the new keyholder has the box contents at their disposal. And the new keyholder can pass the key on to satisfy their obligations. As long as these traders trust that the box is readily accessible and loaded, the key is a valid trading instrument, though it is only a claim check for money, not money per se.

Modern cryptography offers us the power to manifest this key-exchange vision in cyberspace. Digital-dollar claim checks are constructed from strings of bits. They store as bits, fly as bits, and are secured as bits by the robustness of cryptographic locks that can't be picked or overcome by cyber thieves. The latest generation of these digital claim checks can have split value, and, most important, can be tethered. That is, cryptography can regulate their movement (see my book "Tethered Money" published by Elsevier).

Think about tethering. You will soon realize it is exactly what will

be needed in the months ahead as society reorganizes itself following the coronavirus crisis. As with every crisis, some formerly ordinary items suddenly become universally coveted. Big money is unleashed, a privileged few pile up and hoard, prices go through the roof, shelves go empty, and the civil order is shaken.

This coronavirus crisis is no exception. Except that we now have a trusted technology—digital-dollar claim checks, also known as BitMint. Designed here and first built in China. The American version is due soon. How does it work?

Here's an example relevant to the present crisis. An enterprising engineer who is also an MD and PhD develops a very effective facemask. If its design features are proven, a few deep pockets will likely buy the factory output for months to come, leaving the rest of us unserved. In response, the state government may enact an order that this product cannot be transacted against regular dollars, but only against digital-dollar claim checks at the listed price (no higher).

Anyone can buy these claim checks the way consumer products are purchased. Alas, the state will ask the buyers to identify themselves, and there will be a limit on how many such claim checks an individual can purchase. Once purchased, the buyer will cyber-pay these claim checks to the manufacturer, who in turn will claim their nominal value in nominal dollars.

The business is all the same as it would be without the purchase of the claim checks, only that the claim checks put the government in the middle to prevent hoarding and price gouging. It will be a matter of policy whether to allow hospitals to amass larger amounts, or whether to give preference to stateside buyers, etc.

The entire sequence is lightning fast. The mask buyer presses a single "buy" button on her app. That click activates the claim check purchase, which is instantly routed to the mask manufacturer, which on the spot redeems them and finds their value credited to its account.

Digital-dollar claim check technology can be extended to any and all merchandise where, without it, prices go sky high and shortages plague the ordinary consumer. It can be run by a mayor, a governor, or at a federal level. DT



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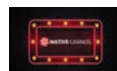


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COVID-19 IS A CALL FOR INVESTMENT

THE COVID-19 PANDEMIC is a mandate for making investments in customers, employees, and corporate infrastructure. The pandemic has caused many new problems, but even more so it has shown that old problems need to be addressed more than ever before.

Long-recognized concerns in financial services have become acute problems under the pandemic. Two examples, one from the customer perspective and one from the corporate perspective, show how this has happened.

First, on the consumer side, a statistic we have been hearing for years is that many Americans do not have enough cash to cover an unexpected \$400 expense. That came from the Federal Reserve's May 2016 study, "Report on the Economic Well-Being of U.S. Households in 2015." Then, in 2019, a survey from Bankrate found that only 40% of Americans could cover a \$1,000 emergency expense without borrowing, consistent with a range of 37% to 41% in similar surveys from 2014 to 2018.

While there were discussions and pilot programs for financial health, credit card debt hit an all-time high in February. Now most Americans are facing an economic emergency with high outstanding debt and little to fall back on. We are seeing reports like the one from the National Multifamily



BY BEN
JACKSON

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Housing Council that shows 69% of households had paid their rent by April 5, compared with 81% that paid by March 5, and 82% that had paid by the same time last year.

Second, on the industry side, when we think about things from the corporate perspective, the example of COBOL shows how a problem we have known about for a long time has become urgent. COBOL is an old computer language that banks, government agencies, and others still use.

This story has been brought out every so often, almost as a curiosity piece. In April 2017, Reuters ran a story entitled "Banks scramble to fix old systems as IT 'cowboys' ride into sunset." In September 2018, The Wall Street Journal wrote a piece entitled "Do You Know Cobol? If So, There Might Be a Job for You." Both pieces talked about how older programmers could make good money, help solve problems, and spend time with their grandkids.

Now we see headlines like this one from Popular Mechanics: "Why the Government Is Desperate for Programmers Who Know This Old Language," and from The Hill, "NJ seeking help from COBOL

programmers in coronavirus fight." As record numbers of people apply for unemployment, knowledge of this language has gone from a profitable niche to a pressing need.

The Covid-19 crisis provides an opportunity to address these and other longstanding issues. The crisis may cause companies to pull back from spending and taking risks, but they can't cut their way to growth. Returns come from investments, not cuts.

Companies can take the lead in helping individuals and the economy recover from the stresses of this virus. It is time to invest in customers to help them maintain their financial health through efforts like giving them a clear picture of their current financial situation and how they can improve it, extending terms, and offering flexibility for customers waiting on money from relief payments, unemployment, and other resources.

It is time to invest in business infrastructure and employees to gain efficiency and new tools to address the needs of the crisis. While that might not mean installing new core systems, it might mean training programmers and making plans for a switch.

Don't let a good crisis go to waste. Use it as a tipping point to make the changes that will solve the problems that have been with us all along. ^{DT}

acquiring

PAYMENTS IN A TIME OF PLAGUE

The Covid-19 pandemic is overhauling payment habits, and hence payment technology. How long-lasting are the changes?

BY JOHN STEWART

ON 9/11, WHEN TERRORISTS ATTACKED New York City and Washington, D.C., they commandeered passenger airliners and used them as flying bombs. Nobody knew in the heat of the moment how many more might be hijacked, so authorities grounded planes on the runway. An unintended consequence was that checks, which were then still largely transported by air around the country, couldn't settle.

The solution was a relatively new technology called image exchange,

which replaced paper items with electronic images. Expedient at the time, the move proved to be a permanent change.

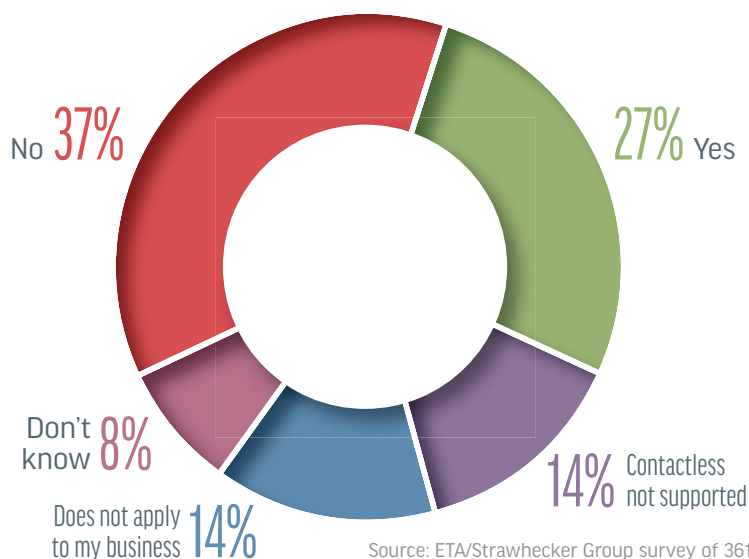
Now some observers are wondering how payments technology will change this time, under the cloud of the Covid-19 crisis. And they're asking which new ways of doing payments will prove permanent, like image exchange, when the emergency is a distant memory?

Like the terrorist attack on 9/11, "this [pandemic] exposes the ways we're vulnerable," says Steve Ledford, a senior vice president at The Clearing House Payments Co. LLC, the country's largest private-sector provider of real-time payments. "And we'll find a better way of doing it. Once people find a better way, they don't want to go back."

So what are the "better" ways in the face of a killer virus that seems to spread so frighteningly fast? Contactless payments can let you use your card to pay in a store without touching a keypad touched by countless others. Autonomous checkout adds the further advantage of allowing you walk out of that store without having to interact with anyone.

CONTACTLESS PAYMENTS MAKE AN IMPACT

(Small businesses' responses when asked if they've seen an increase since the onset of Covid-19)



Source: ETA/Strawhecker Group survey of 361 small and medium-size businesses, March 27-March 30

Real-time processing speeds money to people in need for a host of reasons. Same-day automated clearing house transactions aren't quite as fast, but fast enough for many purposes. E-commerce lets you shop and order meals from the safety of your house while under stay-at-home orders. By the second week of April, such directives were in effect in 42 states, three counties, nine cities, the District of Columbia, and Puerto Rico, affecting 316 million people.

A SEA CHANGE

Perhaps the biggest near-term shift could be to contactless payments, involving either plastic cards or mobile phones. "We've crossed a barrier here, where merchants won't be as passive as they have been in the past in terms of encouraging the use of contactless," predicts Randy Vanderhoof, executive director of the Secure Technology Alliance, a Princeton Junction, N.J.-based trade group.

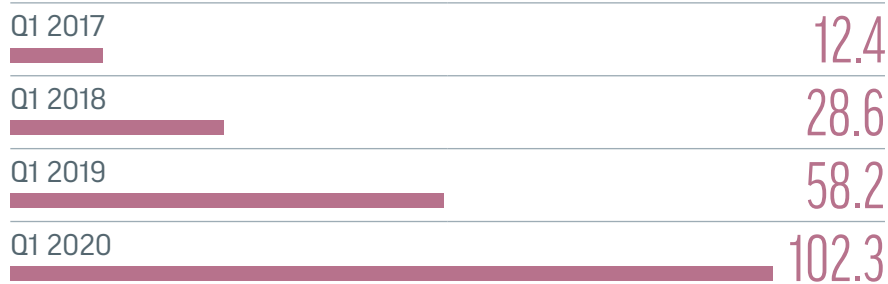
Shortly before he spoke, the big Publix grocery chain announced it had equipped its more than 1,200 stores with contactless capability. The stores accept Google Pay and Apple Pay in addition to antenna-equipped plastic.

Retailing giant Walmart didn't go quite that far, but it did rig its self-checkout machines to allow customers to sync Walmart Pay on their phones using a Quick Response code. Before, they had to touch an icon on the self-checkout screen to choose a payment method.

Observers see a sea change in progress. "The United States has been the slowest [country] to embrace contactless, but the pandemic

ZELLE ZOOMS AT BofA

(Transactions in millions)



Note: 10.4 million users by March 31, 2020

Source: Bank of America

changes that," says Eric Grover, principal at Intrepid Ventures, a Minden, Nev.-based consultancy (for more of Grover's thoughts on the subject, see page 31). "Issuers are going to be mass-issuing contactless cards to show they're with the program."

Contactless is coming to gas pumps, too. For example, Sound Payments, a Jacksonville, Fla.-based payments technology firm, is marketing an EMV solution for pumps in advance of a directive from the major card networks to convert by October. The technology includes contactless capability from point-of-sale equipment provider Pax Technology.

Bill Pittman, senior vice president of sales and strategy at Sound Payments, expects heavy usage. "We're habit-forming creatures," he says. "You have the benefit of the faster transaction. Once [consumers] start doing it, they will continue. Nobody wants to go backward."

There are tentative signs that may be true for smaller businesses across industries. A survey last month of small and medium-size businesses sought to find out how their payments technology had been affected so far by the pandemic. Some 27% reported an increase in contactless transactions since the onset (chart, page 13).

'PRETTY CRAZY'

Still, the results are too tentative for Jared Drieling, senior director of consulting and market intelligence at The Strawhecker Group, the Omaha, Neb.-based firm that conducted the research for the Electronic Transactions Association. "From a consumer's standpoint, you've got to have ubiquity. There's still a hurdle on that front," he says. There are still too many stores where cashiers don't know what contactless is or whether it's turned on, he adds.

A related application, the cardless ATM, may also hold appeal in the shadow of Covid-19. These machines allow consumers to pre-stage a withdrawal on a smart phone, then arrive at the chosen ATM and use the phone to link to the machine via near-field communication or a QR code. "I used to think the value proposition [for this] was lacking," says Sam Ditzion, chief executive at Tremont Capital Group, a Boston-based investment bank specializing in the ATM industry. But not any more, he adds.

Online commerce is likely to get a boost, as well, with tens of millions of consumers cooped up at home. But not all the beneficiaries will be virtual merchants.

Restaurants forced to close their dining rooms are turning to online ordering to fill the gap.

That's creating an opportunity for big online-ordering firms and delivery outfits, but also for independent sales organizations. Bryte Payment Solutions in Jacksonville, Fla., developed software last year for online ordering, then put it on the shelf. With the onset of Covid-19, it's embarked on a crash course to get it into the hands of eateries. "This whole thing is pretty crazy," says Dave Humphrey, president and cofounder. "These people are throwing in the towel."

The software takes two days to set up, he adds, and Bryte has waived its licensing fees and monthly minimums for usage. As of April 10, the company's independent agents had

signed up 127 restaurants. "I've got reps I never heard of connecting with me on LinkedIn asking, 'hey, can I sell this?'" Humphrey says. To handle deliveries, he encourages clients to bring back people they've laid off.

People staying home want to order from restaurants, but they also want to pay others, and fast. That's driving usage for services like Zelle, the real-time peer-to-peer payment service owned by Early Warning Services LLC, a technology firm controlled by some of the nation's biggest banks. Bank of America, one of Zelle's biggest backers, reported a 76% increase in Zelle transactions in the first quarter, compared to the same time last year (chart, page 14), as sheltering users look for ways to pay remotely.

Nearly one-third of the memo fields in Zelle transactions are filled out, according to Jamie Armistead, vice president of product line for the service. That gives the company some insights into what users are paying for, as well as to whom. Right now, the big uses are rent and gifts. But paybacks are big, too. "We're seeing a decrease in dining and entertainment, offset by some of the payback memos for groceries and charities," Armistead says.

Will the Covid-19 pandemic, in the end, change deeply embedded customs and social mores? Probably not. But it is clearly bidding to rework some of the ways people exchange value, in some respects with permanent effect. Says TCH's Ledford: "Of course it's going to change payments." DT

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acquiring

ACQUIRERS IN SURVIVAL MODE

In the midst of the Covid-19 crisis, here's how payments providers are coping as merchants contend with shelter-at-home policies and other restrictions.

BY KEVIN WOODWARD

THE WORD THAT LOOKS TO DEFINE 2020 IS "PANDEMIC."

Efforts to curtail the infection rate from the new coronavirus have included government orders to shelter-in-place and observe social-distancing requirements. And throughout the United States, merchants of all sizes—even those deemed essential and remaining open—have felt the impact of reduced consumer spending.

While it's well-known what the impact has been on merchants—with the hospitality industry particularly affected, resulting in closures and layoffs—what has been the impact on payments providers? How have they adapted? Which measures put in place to stem the spread of

the Covid-19 respiratory disease that results from the coronavirus might end up leading to lasting changes?

Prior to the countermeasures, Austin Mac Nab, founder and chief executive of VیزیPay LLC, a West Des Moines, Iowa-based independent sales organization, would have been hard-pressed to imagine 70% of the company's employees working remotely. Now, for the time being, it's a reality.

Mac Nab is enthusiastic about creating and cultivating a workplace culture. It's been a guiding principle since VیزیPay's founding in 2017. Before the shelter-in-place measures, none of VیزیPay's employees worked remotely. "Once we did it and incorporated video conference calls, the culture remained the same," Mac Nab says. "It was exciting to us that we could do that in a short period of time." To that end, no staffing changes were necessary through mid-April.

That's been critical because sales continue to come in, Mac Nab says. VیزیPay put more emphasis on its "Look Local First" campaign as a way to help its sales partners do what they can to retain merchants. Participation in the program includes a Look Local First sticker to put in a merchant's window with social-media marketing and related efforts to boost small-business shopping.



“Our Look Local First campaign focuses on putting the public’s eye on shopping small,” Mac Nab says. It appeared to be working as new sales were coming in through the end of March and into April, Mac Nab says. VیزیPay also used social media and videoconferencing to work with merchants.

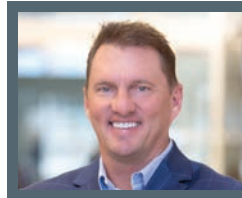
‘COVID-19 SURVIVAL KIT’

At Celero Commerce, the Brentwood, Tenn.-based payment provider views the situation from an offensive and defensive perspective, says Kevin Jones, chief executive.

One of Celero’s first moves was to create a pandemic-response team that holds daily meetings to examine industry data, its own trends, and the overall situation. The need was to understand what the impact would be on Celero’s business, Jones says. That group reviews merchant activity, overall trends, and the general situation to make better-informed decisions. That’s a defensive move, he says.

Led by a project manager, the response team constantly evaluates data against trigger points that would determine Celero’s subsequent actions. The data are evaluated against three levels of impact on the company to help Celero make responsible operating and expense decisions to maintain the well-being of the company, Jones says.

On the offensive side, Celero immediately started talking to merchants to learn what they were experiencing. One local flower shop told Jones that if it had \$200 a day in sales, it could keep three individuals employed and the doors open. One result of this information-



Buying FlashBanc ‘made sense, even in this particular environment.’

—KEVIN JONES, CHIEF EXECUTIVE, CELERO COMMERCE

gathering was the creation of the Celero Covid-19 Survival Kit, which focuses on solutions that help small businesses retain revenue.

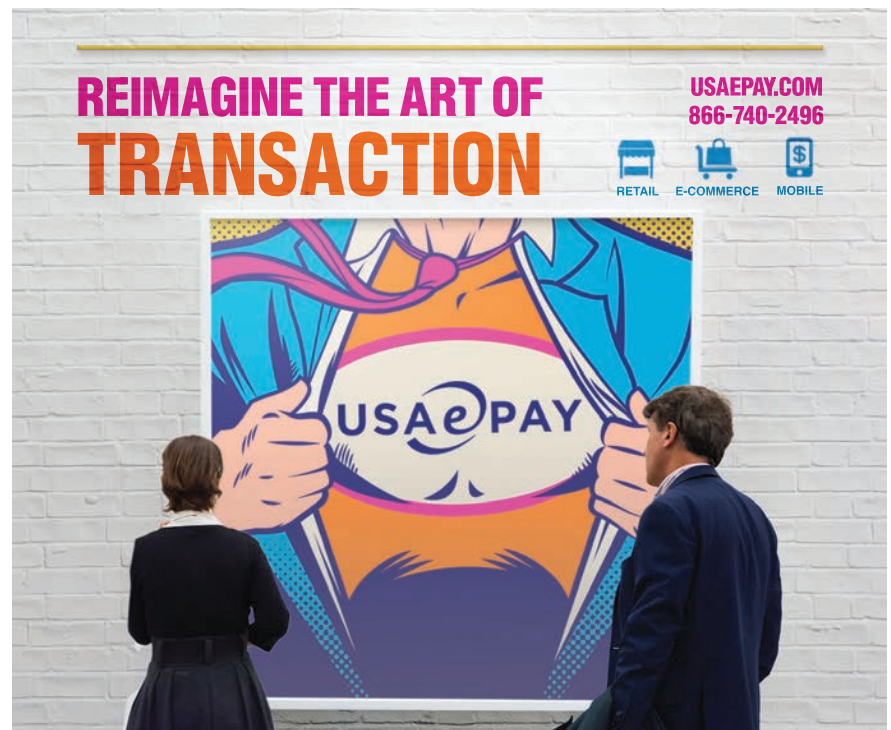
Software that enables online ordering and curbside pickup is a component of the kit, as are virtual terminals and idea-sharing, Jones says. In one seven-day period in April, Celero hosted 13 webinars for small businesses and banks.

Both Celero and VیزیPay have completed acquisitions during their pandemic response. Celero acquired payments provider FlashBanc in early April and VیزیPay bought Echo Daily, a deal that will provide a second office in Nevada.

Jones says most of the payments industry halted merger-and-acquisition activity as the

pandemic response evolved. In Celero’s case, it had three deals in the works at various stages when the Covid-19 outbreak happened. One, the company walked away from, another didn’t fit Celero’s risk profile, and the third was FlashBanc. “It made sense, even in this particular environment,” Jones says.

“Acquisitions came to a screeching halt mid-March,” says a research note from analysts at The Strawhecker Group, an Omaha, Neb.-based payments consultancy. “Most prognosticators predict that it will be a slow summer for M&A activity, however many expect that transactions will begin appearing in Q3. The question will be, will the sellers’ market continue, or will it switch to a buyers’ market?”



'A SPECIAL CHALLENGE'

Shift4 Payments LLC's first reaction to the Covid-19 outbreak was to create a plan, rapidly, for remote operations, says D. Taylor Lauber, chief strategy officer at the Allentown, Pa.-based payments provider. It also created a program to aid merchants and a daily updated Web site that provides a state-by-state impact on hospitality transaction volumes.

"Our business has geographically disparate offices," Lauber says, including a technology center in Lithuania. "What we had to figure out was how to get our entire 1,200-person workforce remote as quick as possible," he says. "That was a special challenge." It entailed deploying hundreds of laptop computers, setting up a new phone system, and training the workforce on remote operations within a week, he says.

"Productivity has been great," Lauber says. "Part of that is everyone likes to rally around a cause." Employee groups quickly figured out ways to do their jobs remotely, from shipping gift cards to POS equipment fulfillment, he says.

The effort paid off because merchant boarding did not slow down, Lauber says. Speaking in late March, Lauber said merchant production looked no different than it did three weeks prior. Acknowledging that may be unique to Shift4, Lauber says some merchants, even if they closed, might take on projects, such as upgrading a POS system during the downtime.

An April survey from the Strawhecker Group found 58% of small and mid-size businesses were adding new products or services to stabilize or grow their revenue.

Among acquirers, according to anecdotal information from Strawhecker analysts, the issues are varied and as different as the markets they focus on and the sales and business models they employ.

"From a straight volume perspective, some acquirers with heavy 'Main Street' portfolios (heavy percentage of restaurant and retail merchants) are most seriously affected by Covid-19, and are experiencing as much as a 50%

suggest merchants keep accounts open, with the acquirer agreeing to suspend fees, and instead become seasonal merchants, ready to reopen as the economy improves.

One payments component that is not changing is the interchange rate. Both Visa Inc. and Mastercard Inc. planned April interchange adjustments but postponed them until July. Merchants, in Strawhecker's "U.S. SMB Covid-19 Perspectives: Survey Results"



'Everyone likes to rally around a cause.'

—D. TAYLOR LAUBER, CHIEF STRATEGY OFFICER, SHIFT4 PAYMENTS LLC

reduction in overall volume which is a direct impact to their revenue," the Strawhecker analysts say.

"The extremes include those merchant portfolios that are focused specifically on the hardest-hit verticals, such as restaurant, hospitality, entertainment, personal services, etc. who have experienced as much as a 75% to 80% reduction in volume," continues the report. "Conversely, portfolios heavy in recurring billing, supermarket, pharmacy and [business-to-business] have experienced much lower impacts and in some cases actually have increased their volume and revenue."

'A LOT OF POSITIVES'

Some acquirers suspended some fees for a period or offered additional services, such as loyalty and payroll, at little to no additional cost. Others, in an effort to prevent attrition,

for April, said waiving, decreasing, or deferring credit and debit payment-processing fees was their top choice for relief.

But the acquiring industry is financially stressed, too. While not every acquirer is experiencing the same issues to the same degree, the impact of the pandemic response is widespread.

"At the same time that these issues are impacting acquirers from an economic standpoint, sales have plummeted and the number of attrited merchants [has] climbed, all combining to put financial stress on the industry," the Strawhecker survey report says.

One aspect is certain for VizyPay. "There's a lot of positives we're learning," Mac Nab says. "It's teaching us a lot about what our capabilities are. We found a lot of things we're good at that we didn't know that we were good at." DT

WELLSPRINGS OF IoT PAYMENTS

The Internet of Things has always had a gee-whiz factor, but unshowy sectors such as utilities, insurance, and purchases for business and household essentials are leading its payments growth.

BY JIM DALY

THE INTERNET OF THINGS SEEMED TO BE BIG even before Silicon Valley techies and their marketing-side allies started using the term “Internet of Things.”

Back around 2003, which Cisco Systems Inc. pegs as the inception of the IoT, the network had an estimated 500 million connected devices. Of course, at that time most of those devices were PCs, laptops, earlier generations of cell phones, and a limited number of other devices that could plug into the Internet.

Fast forward to 2020. Everything from wearables to TVs and smart speakers, refrigerators to electric toothbrushes, utility meters to motor vehicles, and all kinds of other

stuff is now connected to the Internet. Estimates of the IoT’s size vary widely depending on fluid definitions of what counts, but they’re all high.

United Kingdom-based Juniper Research pegged the network at 35.7 billion devices globally last year, and predicts it will grow to 83 billion by 2024, with about 40% of them in North America.

Another estimate comes from San Jose, Calif.-based Cisco, which was founded in 1984 and provides Internet Protocol networking equipment and related products. By Cisco’s count, the IoT is now up to 50.1 billion devices (chart, page 21).

“The numbers are all over the place,” says David Nelyubin, a research analyst at Mercator Advisory Group Inc., a Marlborough, Mass.-based research and consulting firm.

THE INVISIBLE IoT

This sprawling if indefinite network is not all what many consumers think it is, such as the headline-grabbing refrigerator Samsung and Mastercard touted four years ago that could compile a grocery list based on your past preferences, submit the order to your favorite supermarket, and facilitate payment.



Some electric toothbrushes from Philips and other manufacturers can order new brush heads when needed.



Photos: Philips

Instead, the IoT is quietly reshaping business and industrial processes in ways invisible to the average consumer. “The industrial sector, including manufacturing, retail, and agriculture, will account for over 70% of all IoT connections by 2024,” a recent Juniper report says.

The IoT, however, is indeed on its way to becoming a major new source of payment volume from consumers as well as businesses. But just what percentage of IoT devices is payment-enabled today is yet another mystery.

“That’s a really tough question,” says Nelyubin. “If I was to estimate it would definitely be single digits.”

A closely related question is, just what is an IoT payment? A 2019 consumer study by Javelin Strategy & Research found that 13% of

consumers are making payments on IoT devices such as smart speakers from Amazon.com Inc. or Google, according to Krista Tedder, head of fraud and security at the Pleasanton, Calif.-based firm.

But IoT devices can be used to make a variety of non-IoT payments. Take, for example, Apple’s Watch, a smart watch closely integrated with the Apple Pay mobile-payments service. It can be used for point-of-sale, e-commerce, and other purchases, notes Tim Sloane, vice president of payments innovation at Mercator.

“It’s your traditional brick in-store contactless transaction. It also can be used for a recurring transaction—you can sign up for *The New York Times*. That is not an IoT payment, it is a recurring transaction,” he says.

IT’S THE DATA

So what makes an IoT payment different from other common electronic payments? It’s all about the data. According to a Mercator definition boiled down by *Digital Transactions*, an IoT payment is a real-time, data-driven transaction that does not involve the buyer making a buying decision. The payment, which is not linked to any particular channel such as a card, is pre-authorized and automated, based on feedback from a sensor or other automated data source.

If that sounds a tad academic, Mercator’s Nelyubin points to several real-world use cases of IoT payments:

AUTO INSURANCE So-called “telematics” devices plugged into cars with the owner’s permission can

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track a driver's every move—speed, braking patterns, throttle positions, and so on, and essentially teach the person behind the wheel to be a better driver. Go over the speed limit and the device beeps, for example. The data generated lets the insurance company raise or lower premiums, which are paid monthly like a subscription, based on the driver's risk profile. "Fourteen percent of revenue of the top insurance companies is coming from an IoT device," says Nelyubin.

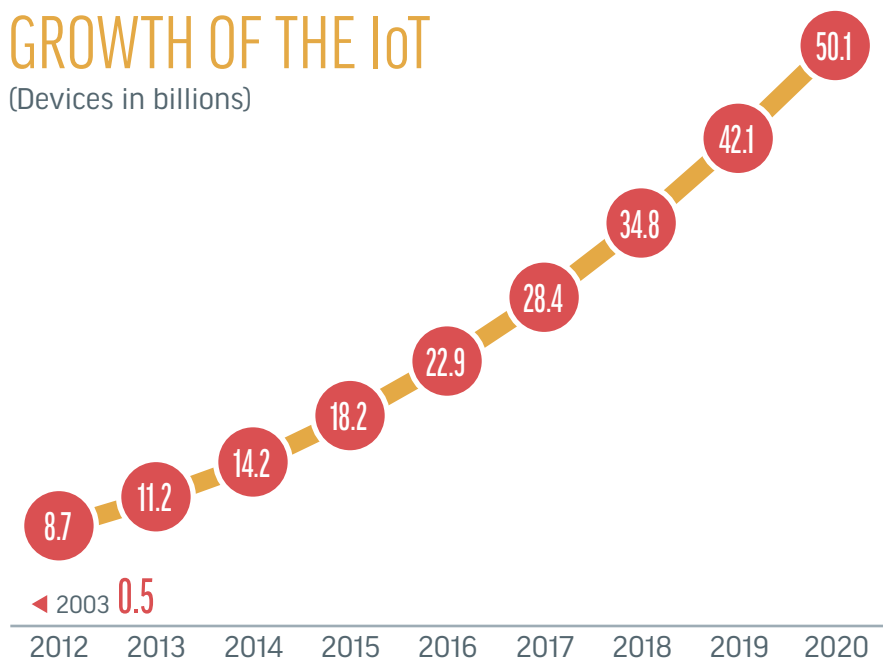
PRINTER INK Some 27% of printers from the major manufacturers sold in the U.S. are now Internet-connected models that can monitor ink levels and automatically order and pay for new cartridges when ink is running low. Many make that possible through application programming interfaces available through Amazon's Amazon Dash Replenishment service. Nearly 7% of the manufacturers' revenues now come from such IoT orders, Nelyubin says.

ELECTRICITY BILLS More than half of Americans now live in dwellings with a two-way "smart meter" that not only removes the need for utility workers to manually read meters, but also enables residents to adjust their electricity usage based on real-time data—and make automated payments. Mercator estimates 35% of U.S. residential electricity payments are now IoT-based.

TOOTHBRUSHES Also employing Amazon Dash, electric toothbrushes

GROWTH OF THE IoT

(Devices in billions)



Source: Cisco, NCTA—The Internet & Television Association, Mercator

from major manufacturers such as Philips and Oral-B can assess the condition of the brush head and automate the ordering of new ones.

THE NEXT GROWTH AREA

Fraud always follows payment volume, of course. In February, Milpitas, Calif.-based security technology vendor SonicWall Inc. released a cyber-threat report stating that malware directed at IoT devices is becoming more common. SonicWall pegged the volume of IoT malware attacks in 2019 at 34.3 million.

"But with a deluge of new IoT devices connecting each day, increases in IoT malware attacks should not only be expected, but planned for," the report says.

Yet earlier fears about the IoT bringing in hordes of manufacturers and software developers inexperienced in protecting payment data haven't played out, at least not yet. Smart speakers and other IoT devices from well-known manufacturers and Internet companies such as Amazon use tokenization and encryption, according to Javelin's Tedder.

"From an IoT perspective, we really aren't seeing a lot of fraud," she says. "When it comes to mobile devices, it's a different story."

Another issue with the IoT and all its data is consumer privacy. "The question simply becomes as we open up our lives to these devices that make our lives easier, what are we giving up in the way of privacy," wonders Mercator's Sloane. He confesses he doesn't have the answer.

Still, while Sloane says the IoT has a long way to go, "we think it's going to be the next growth area where it creates frictionless lives for consumers." DT



There may be billions of IoT devices, but only a small percentage of them are payment-capable.

—DAVID NELYUBIN, RESEARCH ANALYST, MERCATOR ADVISORY GROUP INC.

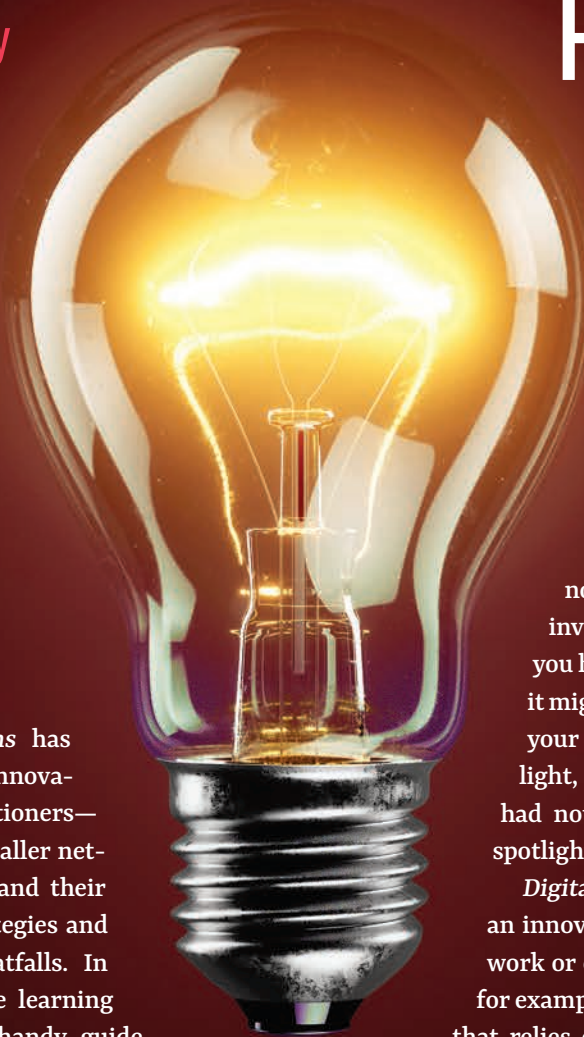
12TH ANNUAL

FIELD GUIDE TO *innovative*

PAYMENTS

The guide has a slightly different name now, but the same purpose—to seek out and describe the nonbank players, apart from the big networks, that are rewriting the rules for the digital exchange of value.

By John Stewart, Jim Daly,
and Kevin Woodward



Since 2004, *Digital Transactions* has traced the course of payments innovation through its nimblest practitioners—the startups, the fintechs, the smaller networks, the nonbank *arrivistes*—and their services and products, their strategies and tactics, their successes and pratfalls. In 2009, we distilled what we were learning about these innovators into a handy guide inside the May issue, and called it a “field guide” to what were then known, somewhat cheekily, as alternative payments.

Well, the guide worked out so well we decided to update it every May. And so you now hold in your hands the 12th edition. Only now, in recognition of what the guide and this magazine have been about all along, we’ve rechristened it as a guide to innovative, rather than alternative, payments. We think the new adjective better fits our purpose in sorting out the varied new pathways the nonbanks, and yes, banks and major networks, are forging for the payments business.

Much, however, has not changed. The guide is still as much about strategies and tactics as it is about emerging technology and new markets. And so we invite you to read this guide much as you have since 2009, with an eye to how it might inform your decisions, sharpen your competitive instincts, and bring to light, perhaps, some developments you had not encountered before—as well as spotlight some potential partners.

Digital Transactions generally defines an innovative payment system as any network or consumer interface (a mobile app, for example) that enables payments in a way that relies on or stands apart from a major network and/or stands between that network and the consumer in an important way. We emphasize consumer-facing payment systems, but of course many, if not most, of the systems profiled here market themselves to merchants to maximize acceptance of their products.

Information for the listings comes from news reports over the past year, company Web sites and spokespersons, and financial filings in a few cases. We list pricing for the merchant and consumer when it is relevant and publicly available. The “Founded” line refers to the year the particular service was founded, not the parent company, except in those cases where the two coincide.

ALIPAY

PARENT Alibaba Group

HEADQUARTERS Hangzhou, China

FOUNDED 2004

WEB intl.Alipay.com

FIELD NOTES Alipay's roots extend to 2004 when the digital wallet launched to aid payments on China's online marketplaces. Today, Alipay encompasses much more than that. In addition to online payments it can be used for in-store offline payments in China and elsewhere. In North America, Alipay has been adding in-store acceptance in tourist-heavy locations and in other non-face-to-face payment channels. Cross-border

payments specialist WorldRemit Corp. this year added support for Alipay to enable international remittances to Alipay. The allure is approximately 35 million Chinese citizens who live abroad and sent home an estimated \$67 billion in 2019, according to the World Bank. 7-Eleven Inc. added Alipay support in Canada in 2018. That year apparel retailer Guess? Inc. added in-store Alipay support at more than 50 of its U.S. stores.

AMAZON PAY

PARENT Amazon.com Inc.

HEADQUARTERS Seattle

FOUNDED 2007 (including predecessor services)

WEB pay.Amazon.com

FIELD NOTES Amazon Pay, which enables consumers to use their stored Amazon payment credentials to make payments on other Web sites, also is advancing its physical acceptance efforts. Consumers with Alexa, Amazon's voice assistant, enabled in their cars and trucks will be able to pay for fuel at ExxonMobil gas stations with simple voice commands. Some Audi, Ford, Lincoln, Lexus, and Toyota models work with Alexa natively or with an app. The technology should be available later this year. Processor

Fiserv Inc. is contributing the technology to enable the service. Amazon Pay also branched out with its Amazon PayCode service, which enables consumers to pay for their online Amazon purchases with cash. With PayCode, Amazon shoppers place orders online and then pay for the purchases later in person, in cash, with no additional fees. At checkout, the shopper selects the Amazon PayCode payment option to receive a Quick Response code and a number associated with the transaction.

APPLE PAY

PARENT Apple Inc.

HEADQUARTERS Cupertino, Calif.

FOUNDED 2014

WEB Apple.com/apple-pay/

FIELD NOTES Apple Pay, the most popular of the U.S.-based general-purpose mobile-payment services, is now generating 15 billion transactions annually, double the volume from a year earlier, and its revenues also have more than doubled, Apple CEO Tim Cook reported in late January. Marketing industry researcher eMarketer estimated 30.3 million U.S. Apple Pay users last fall compared with Google Pay at 12.1 million and

Samsung Pay at 10.8 million. Despite the big numbers, contactless mobile payments with near-field communication technology, the kind enabled by Apple Pay on Apple's iPhone and its chief competitors, commanded only a low-single-digit share of U.S. point-of-sale payments going into 2020. That share could grow this year as consumers shun cash and physical credit and debit cards to avoid contracting Covid-19.

BITCOIN

PARENT Satoshi Nakamoto

HEADQUARTERS n.a.

FOUNDED 2009

WEB Bitcoin.org

FIELD NOTES It's beloved by crypto-evangelists, but the Covid-19 pandemic that swept the world in the first months of 2020 only confirmed Bitcoin's longstanding unsuitability as a medium of exchange. Prices for the ever-volatile Bitcoin plunged 37% over the course of a week in mid-March, just as the extent of the coronavirus's pestilential trek across the U.S. was becoming apparent. Then came a choppy 28% rebound that left Bitcoin trading at about \$6,450 around April 1, off 49% from its 12-month peak

of \$12,576 in July, according to data from Coindesk.com. Bitcoin also continues to be plagued by volatile fees and blockchain processing times that don't come close of those of the card networks, though developers are working hard to solve that problem. Bitcoin remains by far the biggest crypto by market capitalization. Square Inc.'s Cash App enables Bitcoin trading, and Square reports that Bitcoin revenue grew 210% year-over-year in 2019 to \$516.5 million, or 11% of the company's \$4.71 billion total revenues.

BITPAY

PARENT BitPay Inc.

HEADQUARTERS Atlanta

FOUNDED 2011

WEB BitPay.com

FIELD NOTES BitPay is one of the more well-known cryptocur-
rency payments providers. Its debut in 2011 followed Bitcoin's
start in 2009. The company has developed strategic alli-
ances and added support for other cryptocurrencies. In late
2019, BitPay introduced payment acceptance and settlement

services in a trio of stablecoins whose value is tied to the U.S.
dollar: Circle Internet Financial Ltd.'s USD Coin, the Gemini
Dollar, and Paxos Standard Token. In 2019, BitPay processed
more than \$1 billion in payments, the second consecutive year
it reached that mark.

CASH APP

PARENT Square Inc.

HEADQUARTERS San Francisco

FOUNDED 2012

WEB Cash.App

FIELD NOTES Square is that rare merchant processor that also
has a sizable consumer-facing business. Formerly called Square
Cash, Cash App's original franchise was person-to-person pay-
ments. But the Cash App "ecosystem," a favorite word of Square
CEO Jack Dorsey's, now includes several services. One is Cash
Card, a Visa debit card that enables users to make purchases
drawing on their stored Cash App balances, which totaled
\$676 million at the end of 2019, up 102% year-over-year. About
20% of Cash App users have the debit card, which has a rewards

program called Cash Boost that gives customers discounts at
certain merchants. Customers also can use Cash App to buy U.S.
stocks, and buy and sell Bitcoin. Cash App, which accounted
for 27% of Square's gross profit in 2019's fourth quarter, as of
December had 24 million active monthly users who made at
least one transaction during a given month, up from 15 million
a year earlier. In April Square encouraged Cash App custom-
ers to use the service for direct deposits from the government's
giant Covid-19 rescue package.

COINBASE

PARENT Coinbase Inc.

HEADQUARTERS San Francisco

FOUNDED 2012

WEB Coinbase.com

FIELD NOTES Well-known cryptocurrency exchange Coinbase
added capabilities to its Coinbase Commerce service, which
enables merchants to accept cryptocurrencies. In October it
added the ability for customers of Coinbase Commerce mer-
chants to pay them directly from their Coinbase accounts.
They simply log into their Coinbase accounts, select a wallet
for the payment, and Coinbase handles the rest. This saves
consumers the steps of copying complex cryptocurrency
addresses and long decimal amounts. This followed the addi-
tion of linking a Coinbase.com account to an individual's

Coinbase Wallet app to make crypto transfers easier. Earlier
this year, Coinbase said Visa Inc. approved it as a principal
member, making Coinbase the first pure-play cryptocurrency
company to receive a Visa membership. Coinbase introduced
its Coinbase Card, a Visa debit card, in the United Kingdom
last year; the card is now available in 29 markets. It also added
the ability for Google Pay users to add the Coinbase Card to
the mobile-payment service. Coinbase says it has more than
30 million users who have traded more than \$150 billion in
cryptocurrencies.

CUMBERLAND FARMS

PARENT Cumberland Farms Inc.

HEADQUARTERS Westborough, Mass.

FOUNDED 2013

WEB CumberlandFarms.com/smartpay

FIELD NOTES Cumberland Farms, a convenience-store chain in
the Northeast and Florida, offers biometric support for its Smart-
Pay service, which is available for iOS and Android devices. Smart-
Pay gives users a 10-cent discount per gallon of gas when they use
it to pay for fuel. The app also works with a prepaid account or a
credit or debit card. The c-store chain added the card option last
year. The app—developed in-house by Cumberland Farms—uses
automated clearing house payment technology from Portland,

Maine-based ZipLine Inc. The biometric log-in feature for the
updated app works with any iOS or Android smart phone that has
a fingerprint sensor, or facial recognition, as with the iPhone X.
To pay for fuel, the user verifies the store location and pump num-
ber within the app to activate the pump. The app enables users to
pay for in-store purchases at any of the more than 600 Cumber-
land Farms locations in eight states, find a store location, track
rewards progress, and view savings from using the app.

DD PERKS

PARENT Dunkin' Brands Group Inc. **HEADQUARTERS** Canton, Mass. **FOUNDED** 2012 **WEB** DunkinDonuts.com/en/dd-perks

FIELD NOTES Dunkin's DD Perks loyalty program has been getting more popular every year, ending 2019 with 13.6 million members, up 39% from 9.8 million in 2018, when it grew 20%. Part of its popularity no doubt owes to the relative rapidity in which a member can earn rewards, and the ease of redemption. Dunkin's mobile app supports near-field communication

contactless payments in addition to its longstanding Quick Response code payment feature. In 2018 Dunkin' struck a multi-year agreement with CardFree Inc., its long-time software partner for the mobile app, giving it a perpetual license to the app software. Dunkin' is using the software for its digital initiatives that include catering, delivery, and curbside pick-up.

EXXONMOBIL SPEEDPASS

PARENT ExxonMobil Corp. **HEADQUARTERS** Irving, Texas **FOUNDED** 2016 **WEB** Exxon.com/en/Speedpass

FIELD NOTES ExxonMobil's Speedpass+ app debuted as a smartphone app that used mobile-payments services and credit and debit cards to make in-app payments for fuel at the pump. The app enables consumers to pay for fuel and other convenience-store products and services without dipping a card into a reader. It determines the consumer's location either via the global positioning system or barcode on the pump scanned by the consumer. Once a transaction is initiated, the consumer can

authorize payment with a stored credit or debit card, or Apple Pay, if using an iPhone, or Samsung Pay, if using an Android smart phone. The app is not only a way to avoid dipping a card, and perhaps exposing it to a card-skimming device, but as a way to drive additional sales with prompts for offers in stores or a car wash. ExxonMobil fuel stations also will accept the in-car payment service coming from Amazon that will be available in Alexa-enabled vehicles. Alexa is Amazon's voice assistant.

FACEBOOK PAY

PARENT Facebook Inc. **HEADQUARTERS** Menlo Park, Calif. **FOUNDED** 2015 **WEB** pay.Facebook.com

FIELD NOTES Launched last year, Facebook Pay consolidated the social network's payment services across its apps under one moniker. Facebook Pay enables consumers to store a payment method within the wallet and then use it to make purchases and payments within Facebook apps. Initially, Facebook Pay will be available in Facebook and Messenger in the United States for fundraisers, in-game purchases, event tickets, purchases from select businesses and pages on Facebook Marketplace, and for person-to-person payments on

Messenger. Eventually, Facebook Pay will spread across other Facebook products, such as Instagram and WhatsApp, a messaging app. To use the service, Facebook users go to Settings in the Facebook app or Web site to add a payment method, which can include most major credit and debit cards and PayPal. Facebook Pay is separate from the Calibra wallet Facebook is developing for the Libra cryptocurrency project. Facebook's messaging app, with at least 1.6 billion users, remains the largest and perhaps most useful such utility.

GOOGLE PAY

PARENT Alphabet Inc. **HEADQUARTERS** Mountain View, Calif. **FOUNDED** Android Pay, 2015; Google Wallet, 2011 **WEB** pay.Google.com

FIELD NOTES Google's mobile wallet is ramping up for an active year. Its big news, which broke in November, is a plan to work with financial institutions to launch so-called smart checking accounts that can be managed through the wallet. The first partners are Citigroup Inc. and Stanford Federal Credit Union. The banking partnerships could allow Google to expand services like bill pay while financial institutions handle regulatory

compliance. Another recent venture: integration with mobile apps on college campuses to make bookstore purchases and gain building access. And Cubic Corp.'s Cubic Transportation Systems unit agreed late last year to integrate contactless transit cards with Google Pay. The integration was set to begin with contactless payment systems for transit in London, Miami, and New York.

GULF PAY

PARENT Gulf Oil LP

HEADQUARTERS Wellesley Hills, Mass.

FOUNDED 2016

WEB GulfOil.com/gulf-pay

FIELD NOTES Announced in early 2017, Gulf Pay is slowly rolling out in Gulf Oil's market. In addition to paying for fuel at the pump with a smart phone, Gulf Pay users are able to locate Gulf stations, view actual fuel prices, obtain directions, and view offers for fuel and in-store products. The app, available for iOS and Android devices, also

enables purchases inside Gulf station convenience stores. Gulf Oil has more than 1,800 Gulf gas stations. The app is built on technology from P97 Networks Inc., a Houston-based petroleum-services company. Other companies using its technology include To Go Stores, a Puerto Rico-based convenience-store chain, and Phillips 66.

KLARNA

PARENT Klarna Bank AB

HEADQUARTERS Stockholm

FOUNDED 2005

WEB Klarna.com/us

FIELD NOTES Sweden's Klarna, known for its single-click purchasing utility and its willingness to delay payment until a customer receives the goods she ordered online, faces stepped-up competition now that more such services have entered the market. Competitors now include big guns like Mastercard Inc., which in April 2019 acquired Klarna rival Vyze Inc. But Klarna has been on a roll, nonetheless. Its biggest move came in March with an unspecified

minority investment from Ant Financial Services Group, parent of the hugely popular Alipay mobile wallet. The deal dramatically boosts Klarna's global presence while adding millions of potential customers, experts say. As things stand, Klarna is accepted at more than 200,000 merchants and e-commerce platforms, with more than 75,000 having been added last year, the company says, adding that some 85 million consumers use the service.

KOHL'S PAY

PARENT Kohl's Corp

HEADQUARTERS Menomonee Falls, Wis.

FOUNDED 2016

WEB Kohls.com

FIELD NOTES The Kohl's Pay app allows customers to redeem offers, rewards in the chain's Yes2You program, and Kohl's Cash in one barcode-based flash. But it faces a huge challenge now that Kohl's has closed all of its approximately 1,100 stores in response to the coronavirus outbreak. The app is designed for

speed at checkout. "When we say fast savings at checkout, we mean really fast," the company says on its Web site. The developer is Omnyway Inc., a 6-year-old startup cofounded by Bill Melton, well-known in the payments industry as a founder of point-of-sale terminal vendor Verifone.

KROGER PAY

PARENT The Kroger Co.

HEADQUARTERS Cincinnati

FOUNDED 2019

WEB Kroger.com/f/kroger-mobile-pay-faqs

FIELD NOTES Kroger's app, now more than a year old, is available for iOS and Android devices and uses QR codes for payments, as Kroger does not accept NFC-based general-purpose mobile wallets such as Apple Pay or Google Pay. Kroger Pay is part of a multifaceted loyalty program dubbed "Rewards" that includes a debit card, digital coupons, and personalized offers.

Consumers accrue loyalty points when using Kroger Pay and can receive additional points when the payment method is the Rewards debit card or a general-purpose prepaid card that also carries a Kroger store brand. The app emerged in the midst of the supermarket chain's boycott of Visa credit cards at two of its subsidiaries. The boycott ended in October.

LIBRA

PARENT Facebook

HEADQUARTERS Geneva, Switzerland

FOUNDED 2019

WEB Libra.org

FIELD NOTES Working with a group of prominent tech and payments companies, Facebook Inc. last summer launched Libra, a cryptocurrency whose value is tethered to a basket of securities, and has seen it attacked ever since by alarmed central bankers and financial regulators around the world. The heat was too intense for

Mastercard, PayPal, Stripe, and Visa, and one by one they dropped out of the governing Libra Association. Altogether, eight companies bailed. But in February, Shopify joined as the association's 21st member. Facebook is also working on a digital wallet, called Calibra, designed to work with the new digital currency.

MONEYGRAM.COM

PARENT MoneyGram International Inc.

HEADQUARTERS Dallas

FOUNDED 2010

WEB MoneyGram.com

PRICING \$500 online transfer to Mexico—\$4 if funded by checking account with cash pick-up; \$6.99 if funded by Visa or Mastercard credit or debit card.

FIELD NOTES These days, a money transfer using MoneyGram could involve blockchain technology from Ripple Labs Inc., which in November made a \$20 million investment in the No. 2 money transmitter. Coming on top of a \$30 million infusion Ripple poured into MoneyGram in June, the latest investment handed Ripple nearly 10% of the company. MoneyGram in return is working to boost usage of Ripple's On Demand Liquid-ity technology, which uses the blockchain company's XRP digital

currency to send money around the world. But MoneyGram isn't relying solely on blockchain to grow its digital-remittance business. The company followed its Ripple deals in December with an agreement to allow international transfers that rely on Visa Direct, Visa's push-payment technology. The initial corridors run to Spain and the Philippines. All told, Visa says it has more than 1 billion cards worldwide that can receive Visa Direct payments.

PAYPAL

PARENT PayPal Holdings Inc.

HEADQUARTERS San Jose, Calif.

FOUNDED 1998

WEB PayPal.com

PRICING 2.9% plus

30 cents per U.S. merchant transaction; for PayPal Here, 2.7% for swiped transactions, 3.5% plus 15 cents for manually entered transactions.

FIELD NOTES PayPal has had a busy—and mostly positive—year. Late in 2019 it consummated a crucial agreement with China's UnionPay payments network to integrate UnionPay cards in the PayPal wallet and allow PayPal users to pay Chinese merchants. Earlier, PayPal scored a big win by taking a 70% stake in China's GoPay digital-payments company. With that deal, it won the right to be the first foreign company allowed to process online payments in that huge market. On the domestic front, PayPal secured Visa to be the network for its new Venmo credit card, began to see glimmers of hope that the wildly popular but money-losing

Venmo service could soon break even, and extended its reach to shopping assistants and other online tools with its big \$4 billion deal to acquire Honey Science Corp., announced in November. In 2019's fourth quarter, active accounts cracked the 300-million mark. But then came the Covid-19 pandemic, with baleful consequences for commerce and payments. The hit to PayPal's results wasn't known in time for this entry, but the company joined the ranks of payments processors offering to funnel Paycheck Protection Program funds from the Small Business Administration to businesses impacted by the pandemic.

PHILLIPS 66

PARENT Phillips 66

HEADQUARTERS Houston

FOUNDED 2016

WEB Phillips66.com

FIELD NOTES Refinery operator and fuel retailer Phillips 66 announced a mobile-commerce-focused platform in 2017 based on the P97 PetroZone m-commerce service Phillips announced in 2016. In early 2019, Phillips 66 said paying for fuel at one of its stations will be integrated into a dashboard-commerce system under development with Honda Developer Studio. The new arrangement is expected to work at stations flagged under the Houston-based petroleum company's three brands, which

in the United States include 76 and Conoco as well as Phillips 66. Some 7,550 independently owned outlets in 48 states sell the company's products. The company also said it will continue rolling out its My Phillips 66 mobile app, which launched in 2018 and works in-store as well as at the pump with both Apple and Google devices. The app integrates Mastercard Inc.'s Masterpass wallet, which allows consumers to pay at the pump or in-store at Phillips 66 stations.

QWICKCODES

PARENT MagTek Inc.

HEADQUARTERS Seal Beach, Calif.

FOUNDED 2012

WEB Qwickcodes.com

PRICING \$49.99 annual subscription

FIELD NOTES QwickCodes rely on MagTek's MagneSafe security architecture to generate one-time, disposable transaction codes consumers can use in place of actual payment cards in stores, online, and at ATMs. Merchants can exchange the codes for the card-swipe track data they represent. Users add cards to the QwickCodes wallet by swiping them with a reader

supplied by MagTek. The wallet can also keep transaction parameters such as dollar limits, where the code can be used, and an expiration date, and users can revoke the code at any time. To use the code at the point of sale, the user scans a barcode generated on his smart phone screen. At ATMs or online, he enters the 8-digit code.

REVOLUT

PARENT Revolut Ltd.

HEADQUARTERS London

FOUNDED 2015

WEB Revolut.com

PRICING Standard service, free; Premium service, \$9.99 per month

FIELD NOTES Long available in Europe, the so-called neo-bank Revolut launched in the United States in March with an app that lets users obtain either a plastic or virtual debit card, freeze or unfreeze or otherwise control the card from

a mobile phone, convert from one currency to another, and flow wages directly into the account. Other features available in Europe, including cryptocurrency and stock trading, could come later.

RIA MONEY TRANSFER

PARENT Euronet Worldwide Inc.

HEADQUARTERS Leawood, Kan.

FOUNDED 1987

WEB RiaMoneyTransfer.com

PRICING \$500 U.S. to Mexico transfer—\$2 if funded with bank account or debit card and sent to bank account, \$13 with credit card.

FIELD NOTES Walmart Inc. uses Ria as its exclusive domestic in-store money-transfer provider, and in 2019 Ria joined incumbent MoneyGram International Inc. as a provider of Walmart2World international money transfers from the U.S. and Puerto Rico. Ria also now enables cash pick-ups at U.S. Walmart stores for inbound

transfers from U.S. and international Ria agent locations. Ria and its sister Euronet money-transfer service IME have 397,000 locations in 160 countries. Those two subsidiaries and a third Euronet money-transfer unit, xe, handled a total of 114.5 million transactions in 2019, up 6% from 107.6 million in 2018.

RIPPLE

PARENT Ripple Labs Inc.

HEADQUARTERS San Francisco

FOUNDED 2012

WEB Ripple.com

FIELD NOTES Blockchain-technology provider Ripple is the company behind XRP, which, with a valuation of \$7.87 billion in early April, was the third-largest digital currency by market capitalization, according to CoinMarketCap.com. Ripple also runs the RippleNet payment network. More than most of its crypto and blockchain cousins, Ripple has been willing to work closely with the banking and payments establishment, particularly on cross-border transactions. The company, which announced a \$200 million Series C funding round in December, now claims

about 300 financial-institution customers in more than 40 countries, including Spanish giant Santander and American Express and PNC in the U.S. Last year, Ripple invested \$50 million in wire-transfer provider MoneyGram International Inc. MoneyGram is using the funding to increase volume for On-Demand Liquidity, Ripple's blockchain-based product formerly known as xRapid, which uses XRP to send money globally. As of November, MoneyGram was moving about 10% of its Mexican peso foreign-exchange trading volume through On-Demand Liquidity.

SAMSUNG PAY

PARENT Samsung Electronics Co. Ltd.

HEADQUARTERS Seoul, South Korea

FOUNDED 2015

WEB Samsung.com/us/samsung-pay/

FIELD NOTES Samsung Pay can connect to point-of-sale terminals via near-field communication. But, unlike Apple Pay and another NFC-based competitor, Google Pay, Samsung Pay also enables Samsung's Android phones to link to the POS via a technology called magnetic secure transmission (MST), which means it works with just about any mag-stripe reader in the market. Among the mobile-payment service's recent updates is the integration of the Curve card-consolidating app to the

wallet. The new connection follows recent moves by Samsung Pay to enable cross-border payments and to launch a virtual prepaid product called Samsung Pay Cash. Samsung Pay Cash is aimed at a variety of use cases, most especially those that traditional prepaid cards help control, such as spending and budgeting. Devices that can run Samsung Pay, which the Korean electronics company launched in 2015, include models S6 and later.

SECURE REMOTE COMMERCE

PARENTS Visa, Mastercard, American Express, Discover

HEADQUARTERS n.a.

FOUNDED 2019

WEB EMVCo.com

FIELD NOTES Secure Remote Commerce is not so much a brand as a behind-the-scenes digital-payment mechanism developed by EMVCo, the standards body controlled by the global payment card networks. Referred to as “click to pay” by the networks, SRC’s purpose is to replace the clutter of payment brands on e-commerce checkout pages such as Visa’s Visa Checkout and Mastercard’s Masterpass with a common buy button that offers an operationally unified and simple purchase process. The consumer-facing button

at present is a rather bland black-and-white graphic that looks like a “C” with an appendage resembling a right-pointing double arrow. When clicked, the button pulls up the online shopper’s payment credentials. Visa reported in January that about 5,500 U.S. merchants had already implemented click to pay, and the remaining Visa Checkout-accepting U.S. merchants would be on the system in the coming months. On the cardholder side, Visa automatically converted its 50 million Visa Checkout users to click to pay.

STARBUCKS REWARDS

PARENT Starbucks Corp.

HEADQUARTERS Seattle

FOUNDED 2011

WEB Starbucks.com/rewards/

FIELD NOTES The coffee behemoth has been spending considerable energy building its China business in recent years, but its Starbucks Rewards program continues to grow in its home country. Built around a proprietary prepaid card and the Starbucks payment-enabled mobile app that uses a bar code for purchases, Starbucks Rewards claimed 18.9 million active U.S. members at

the end of 2019, up 16% from 2018. Last year Starbucks announced changes it said would enable customers to earn and redeem reward points, called stars, faster. Mobile order-ahead and pay transactions accounted for 17% of U.S. transactions by December. Newer additions to Starbucks’ payment family include a Visa credit card and prepaid card issued by JPMorgan Chase & Co.

TARGET WALLET

PARENT Target Corp.

HEADQUARTERS Minneapolis

FOUNDED 2017

WEB Target.com

FIELD NOTES Target last year began accepting Apple Pay, Google Pay, and Samsung Pay plus EMV contactless cards, but the discount retailer’s preferred payment method is its RedCard family. The group includes a private-label credit card and cobranded Mastercard credit card issued by TD Bank, and a Target-issued decoupled

debit card as well as the Wallet feature of Target’s mobile app. Redcards, which give holders 5% off on Target purchases, can be loaded into Wallet for payment and coupon redemptions at Target stores, and they also provide free shipping with Target.com purchases. RedCards accounted for 23.3% of Target’s 2019 sales.

VENMO

PARENT PayPal Holdings Inc.

HEADQUARTERS San Jose, Calif.

FOUNDED 2009

WEB Venmo.com

PRICING Regular P2P payments free, 1% fee for instant transfers.

FIELD NOTES With consumers stubbornly unwilling to pay for most person-to-person payment services, PayPal for several years has been trying to monetize its highly popular but revenue-starved Venmo P2P mobile app, which ended 2019 with 52 million active users and volume of \$102 billion, up 56% from 2018. While Venmo, which has social-media functions, does generate some P2P revenue from instant transfers, PayPal has been looking covetously at merchants willing to pay acceptance fees. Venmo

already offers Pay With Venmo, a fee-generating service that lets users tap their Venmo balance at the point of sale. Venmo also offers users a Mastercard debit card issued by The Bancorp Bank, which produces interchange income when used for purchases. Likewise, PayPal is expected to share in the revenues generated by the upcoming Visa-branded Venmo credit card issued by Synchrony Financial, which also will produce interchange when customers use it for purchases at Visa-accepting merchants.

WALMART PAY

PARENT Walmart Inc. **HEADQUARTERS** Bentonville, Ark. **FOUNDED** 2015 **WEB** Walmart.com/cp/Walmart-Pay/3205993

FIELD NOTES The world's largest retailer completed the rollout of Walmart Pay, its QR-code-based mobile-payment service, in 2016. Part of Walmart's strategy with the service is to make it easy for consumers to use their Walmart-branded credit cards in the app. Walmart made Walmart Pay an option for its order-online-in-store service. A shopper asks a store employee to order an item to ship to the store or the shopper's home. A receipt is generated by the employee app. The shopper then takes the receipt to any

store register to pay. Despite the massive size of Walmart and its customer base, Walmart Pay is not as well liked as Apple Pay is by these consumers. New York City-based Auriemma Consulting Group found that Walmart shoppers who use Apple Pay and have a mobile-payment preference are twice as likely to choose Apple Pay over Walmart Pay. Mobile apps from other retailers—Target Corp.'s Wallet and Kohl's Corp.'s Kohl's Pay—also are less likely to be chosen over Apple Pay.

WECHAT PAY

PARENT Tencent **HEADQUARTERS** Shenzhen, China **FOUNDED** 2011 **WEB** pay.Weixin.qq.com/index.php/public/wechatpay

FIELD NOTES WeChat Pay's North America presence is all about enabling acceptance for users, especially those hailing from China who vacation in the United States and Canada. To that end, WeChat Pay has struck several deals, such as one with 7-Eleven Inc. in Canada. Citcon USA LLC provides a service for merchants that enables WeChat Pay and other China-based wallets to be used at North American merchants. WeChat Pay is part of the

Tencent empire, which integrates a number of popular digital services, including social media. It depends on Quick Response codes rather than on near-field communication, the standard major U.S. wallets like Apple Pay and Google Pay have adopted. That makes WeChat Pay easy for merchants to install and appeals to China's huge population of smart-phone aficionados. In 2019, WeChat Pay announced foreign cards can be used on its system.

WESTERNUNION.COM

PARENT The Western Union Co. **HEADQUARTERS** Denver **FOUNDED** 2012 **WEB** WesternUnion.com
PRICING \$500 U.S. to Mexico online transfer with receiver cash pick-up—\$5 if funded with bank account, funds availability may take up to four business days; \$7 with debit card, \$21.50 with credit card. Funds available to receiver in minutes with card-based transfers.

FIELD NOTES The Big Daddy of the wire-transfer industry continues to build its digital presence in the face of rising competition from fintechs and traditional rivals such as MoneyGram and Ria. Although total revenues fell in the fourth-quarter and for all of 2019, fourth-quarter digital-service revenues from Westernunion.com and white-labeled services increased 25% year-over-year on a constant-currency

basis. Westernunion.com produced 15% of the quarter's total of \$1.13 billion in consumer-to-consumer revenue, up from 12% a year earlier. The service is now available in more than 70 countries. In January Western Union announced it has worked with Du Xiaoman Financial to launch Western Union international money transfers paid in real time into what the partners say is a majority of bank accounts in China.

ZELLE

PARENT Early Warning Services LLC **HEADQUARTERS** Scottsdale, Ariz. **FOUNDED** 2011 (as clearXchange) **WEB** ZellePay.com

FIELD NOTES Zelle, the person-to-person payment service chiefly available from banks, experienced double-digit growth last year processing \$56 billion in payments on 230 million transactions in the fourth quarter alone. For all of the year, its processed \$187 billion in payments on 743 million transactions, growth of 57% and 72%, respectively. As of January, Zelle said 766 financial institutions are on the Zelle Network, including 378 that are live. These numbers

likely have grown especially. Though not all active Zelle participants share data, Bank of America Corp. routinely does. In 2020's first quarter, BofA said transactions on its Zelle platform shot up 76% from a year earlier to 102.3 million. Users paid \$27 billion on BofA's Zelle service, a 69% increase from \$16 billion in 2019's first quarter. BofA ended the first quarter with 10.4 million Zelle users compared with 9.7 million at the close of 2019. **DT**

Commerce at the physical point of sale will come back. Virtual bars, restaurants, and barbershops don't cut it.

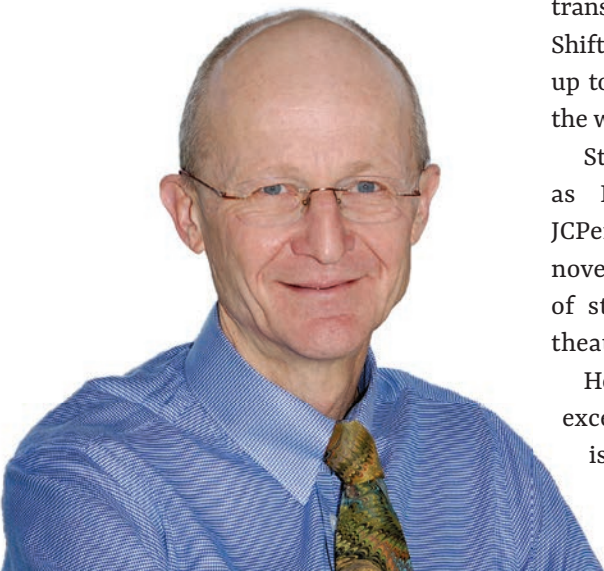
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THE STORM BEFORE THE CALM

The pandemic is wreaking havoc on multiple fronts in the payments business. But if we let market forces work their usual magic, look for a recovery next year.

BY **ERIC GROVER**

Eric Grover is principal at Intrepid Ventures, Minden, Nev.



THE COVID-19 PANDEMIC is roiling the payments industry. State shut-downs have taken a whopping 29% of the U.S. economy offline. Moody's reports eight in 10 U.S. counties are locked down, and they represent 96% of national output.

"Dr. Doom" economist Nouriel Roubini predicts a deep depression. Former Fed Chair Janet Yellen warned unemployment rates "may go to Depression levels."

Payments volume and mix have been drastically altered.

Borders are closed. International air traffic has come to a grinding halt. Close to 100% of highly profitable card-present cross-border payments have evaporated. Domestic payments in many sectors have plummeted.

Hospitality has been particularly hard hit. Hospitality and restaurant transactions for merchant processor Shift 4 Payments for the seven days up to and including April 8, against the week of Feb. 2, took a nosedive.

Storied department stores such as Nordstrom's, Macy's, Kohl's, JCPenney, and Sears are closed. The novel coronavirus will cull the herd of struggling big retailers. Movie theatres may be toast.

However, e-commerce, with exceptions like gym subscriptions, is booming. Emarsys reported that, in the 14 days prior to

April 4, retail e-commerce in the U.S. and Canada was up 43% year over year.

E-commerce colossus Amazon is hiring 100,000 new workers. Walmart's grocery app has seen record downloads, surpassing Amazon's by 20%. Costco's March online sales were up 48% year-over-year.

Grocery is also booming. At the physical point of sale, Walmart, Costco, and many supermarkets have struggled to keep shelves fully stocked.

CONTACTLESS AND CASH

Then there's contactless. For a quarter of a century, the U.S. payments industry has half-heartedly tried to spur contactless payments. In 1996, Mastercard in Manhattan and Visa at the Atlanta Olympics ran pilots. It wasn't compelling for either consumers or merchants. Swiping cards was habitual and nearly frictionless.

Google Wallet, Apple Pay, and Samsung Pay launched in 2011, 2014, and 2015, respectively. Mobile-wallet evangelists enthused they would usher in an era of contactless payments at NFC-enabled merchants. Cardholders and merchants didn't bite.

The coronavirus is more persuasive. Cardholders and merchants

don't want to touch cards, terminals, or PIN pads. Issuers are rushing to put contactless cards in consumers' leather wallets.

Now there's pressure on cash. Roughly 15.1% and 24.6% of 2018 U.S. consumer-payment volume and transactions, respectively, were in cash, excluding mortgage payments. In most countries, cash is still the leading retail-payment system. But the coronavirus has made merchants and consumers leery of transacting in potentially contaminated cash, accelerating the worldwide secular migration to electronic payments.

The virus will boost interest in digital currencies. Ideally, digital cash will be issued by competing banks like banknotes of yore. Launched in 2018, Signature Bank's dollar-anchored digital currency, Signet, supports instant interbank payments. It's built on a private, permissioned form of Ethereum's blockchain.

Signature Bank isn't alone. In 2019, Chase launched the dollar-backed JPM Coin to enable efficient settlement of B2B transactions. Last year Wells Fargo announced its plans to launch its own dollar-denominated digital cash in 2020.

None of these digital dollars targets

retail use cases. But the coronavirus may spur these digital-currency pioneers to broaden their ambitions.

PAYMENTS PROTECTIONISM

Borders and control of goods and services critical to national welfare are at the fore. Simmering payments nationalism is going to come to a boil. The argument payment systems are critical national infrastructure resonates in a world with closed borders and scrambling for masks, ventilators, and pharmaceuticals.

China, India, Russia, Turkey, and Indonesia mandate in-country payment processing and have national payment-system champions. Payments protectionism will spread, like a virus.

The European Union already has an abiding hostility to Mastercard and Visa, as it does to Google, Microsoft, and Facebook. It pines for a supranational EU retail-payments system.

Will there now be pressure on interchange rates as a result of the pandemic? The National Restaurant Association has asked President Trump, House Speaker Nancy Pelosi, and Senate Majority Leader McConnell to reduce credit card interchange fees.

Restaurant lobbyists hoped to piggyback credit-card-interchange price caps on the Coronavirus Aid, Relief, and Economic Security Act. But restaurants are in dire straits because of being closed by government and fear of a virus, not interchange fees.

ADAPT, WEATHER, EMERGE

So, how does the payments industry come out of the malaise?

The Coronavirus Depression will be as deep as the Great Depression and what journalist James Grant called the Forgotten Depression of 1920-21. Whether it's a sharp V-shaped recovery will depend on beating the virus and on government letting market forces do their magic as they did in 1920-21, but not in the Great Depression.

While I'm no fan of his central-planning mindset, my college classmate, oncologist Zeke Emanuel, is right in saying, "We will not be able to return to normalcy until we find a vaccine or effective medications." One hundred and twenty vaccines are in some stage of development. In the interim, we can take baby steps by loosening restrictions to forestall a prolonged depression.

Commerce at the physical point of sale will come back. Virtual bars, restaurants, and barbershops don't cut it. Nobel-prize winning economist Vernon Smith observes, "Once the pandemic passes and vaccines and treatments appear, people will be ready again to spend on services, travel, and hotels."

Despite the havoc of 2020, the payments industry will adapt to, weather, and emerge from the coronavirus storm, likely in 2021. DT

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