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## THE SUDDEN ASCENT OF QR CODES

They're having their day in the sun as consumers turn toward contactless payments.



Volume Seventeen, Number Ten • DigitalTransactions.net • October 2020

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# contents

OCTOBER 2020 • VOLUME 17, NUMBER 10



## The Sudden Ascent of QR Codes

20

Efficient and fast, the funky-looking barcodes are having their day in the sun as the Covid-19 pandemic channels consumers toward contactless payments.

### THE GIMLET EYE Contactless Doesn't Always Mean NFC

4

### TRENDS & TACTICS

6

#### Scraping Away Old Ways

Data networks are moving away from screen scraping and toward a standard API, which is a safer and more efficient technique. But are they moving fast enough?

#### Beyond Contactless

The fully automated store—complete with cashierless checkout—is making strides beyond Amazon Go.

#### Cross-Border in an Instant

You've heard of real-time payments, and you've heard of cross-border transfers. Now PayPal and Visa are mixing the two.

#### Phishing Gets Even Fishier

You may have thought there was security in those https prefixes in Web-site addresses. Think again.

Plus, Security Notes ponders digital transactions without the Internet; and Payments 3.0 asks whether the contactless boom will outlast the pandemic.

### ACQUIRING

14

#### 'It Was Actually a Blip'

Portfolio valuations proved they aren't immune to the effects of the coronavirus. But brokers say merchant books have fared far better than many feared.



### COMPONENTS

17

#### Your Smart Phone Is Your Terminal

Momentum is building fast for card acceptance on ordinary mobile phones. And now Apple could be the next player in this increasingly important game.



### STRATEGIES

28

#### ISO 20022 Is Coming

How to get ready for a big but challenging upgrade to a crucial standard for cross-border payments.

### ENDPOINT

31

#### Do Rich People Pay Less?

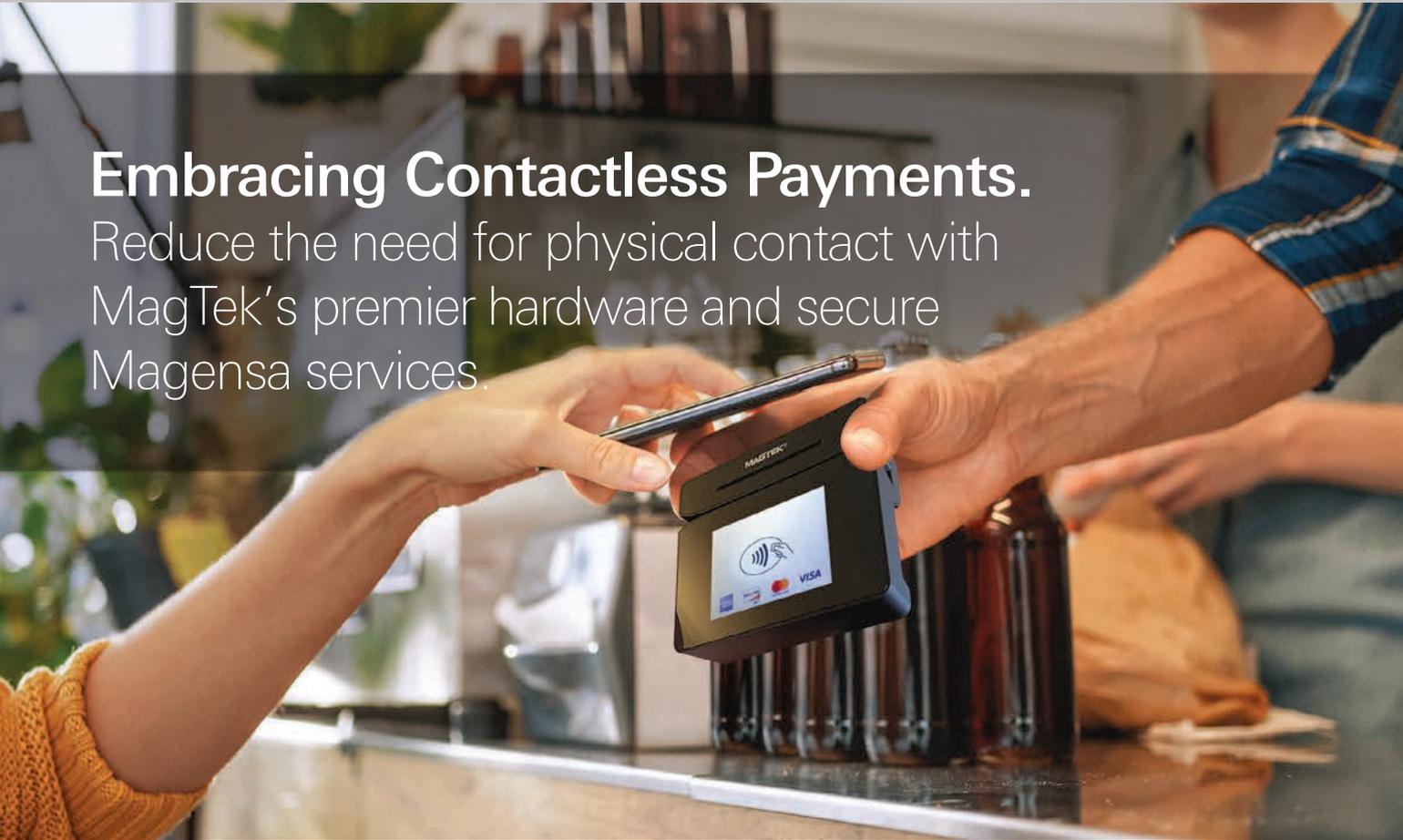
The Reverse Robin Hood hypothesis sounds compelling. Here's why it's wrong.

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## CONTACTLESS DOESN'T ALWAYS MEAN NFC

**IF YOU HAVEN'T NOTICED** stores adopting contactless payments all of a sudden, you haven't gotten out much in recent months. With a raging pandemic scaring customers away from touching surfaces such as PIN pads and other point-of-sale technology, retailers are rushing to install NFC-equipped devices that will let patrons wave or tap a card without risking even a brush of the hand against a payment device.

No wonder. Poll results released by Mastercard at the end of August indicated fully 51% of Americans are now using some form of contactless payment, including mobile apps as well as cards. The same percentage were using cash less often or not at all. As our Payments 3.0 columnist, Ben Jackson, points out on page 12, the key now is whether this trend will outlast the coronavirus.

It's been fascinating to watch this sudden conversion to a technology that, in the United States at least, merchants had been slow to embrace compared to at least some other countries. Some suspect an economic motive behind this erstwhile reluctance: Why make credit card transactions even more convenient, and hence more numerous, when they carry the highest interchange rates?

But the more likely explanation is that, in the absence of an exogenous force, merchants were inclined to pursue higher priorities when it came to tech in the store. Well, late last winter, that force arrived, and now even big holdouts like Kroger have switched on contactless.

As this month's cover story shows, however, NFC isn't the only route to touchless commerce. If the payments business wasn't conversant with QR codes before Covid-19 struck, they are becoming more so now, as our cover story starting on page 20 shows. (If you're curious about QR in action, aim your phone's camera at that kite on this month's cover).

The interesting thing is, payments weren't even on the radar screen when QR codes were born. The technology emerged 26 years ago in a Toyota plant as a means to track parts while automobiles were assembled. But the square-shaped barcodes are on plenty of screens now, particularly with PayPal's announcement in July that it and InComm, a processor based in Atlanta, will enable the technology for checkout at some 8,200 CVS Pharmacy stores.

On their mobile screens, a customer will be able to generate a QR code representing a designated funding source in her PayPal wallet. The cashier will scan the code, and that data plus the transaction details will flow to InComm, which will route them to PayPal.

The debate over the reliability and convenience of NFC vs. QR code will continue. The market will ultimately decide the winner.

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# trends & tactics

## SCRAPING AWAY OLD WAYS

The data networks that connect payments and other financial apps to users' bank accounts are scrambling to standardize data access by moving to application programming interfaces and away from an older, cruder form of access known in the business as "screen scraping."

The effort comes as financial apps gain popularity and regulators like the Consumer Financial Protection Bureau mull rules for data sharing, the heart of what the industry calls open banking.

The concern with screen scraping is that it relies on the use of passwords and other personal credentials held by consumers to link apps like Venmo and Square Inc.'s Cash App to accounts at financial institutions. Fearing security issues, "a lot of the industry is starting to transition from credential-based to API-based access," says John Pitts, global head of policy at Plaid Inc., a major data network.

A big move in that direction came early last month with news from Lehi, Utah-based data network MX Technologies Inc. that it is introducing a set of open-source software offerings collectively called MX

Open. The new platform includes an API that can allow financial institutions and fintechs to connect users to their financial data. MX announced earlier this month that it had built a network of more than 50,000 connections to financial institutions and fintechs, outdistancing the estimated number of links established by other data networks.

"MX Open gives organizations the tools they need to define and launch their open-finance strategy and innovate faster with the vendors and technology providers that will serve their customers

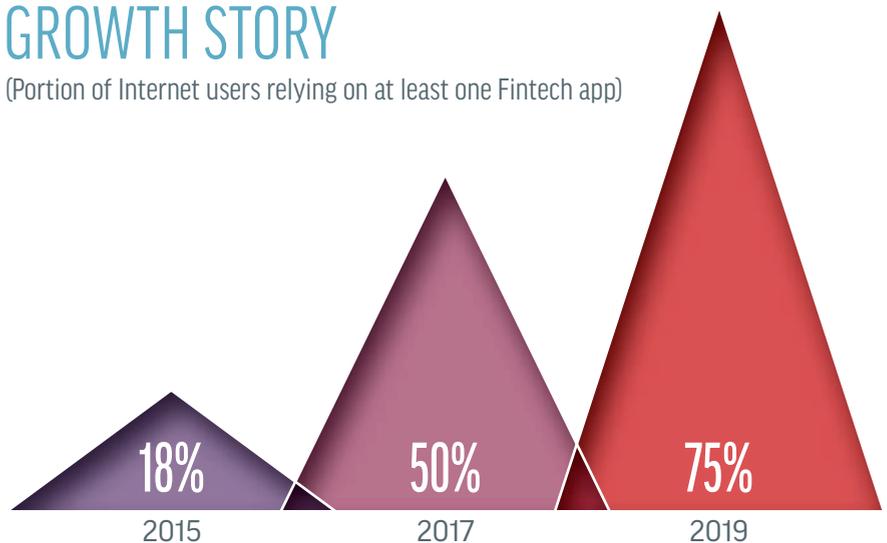
best," said Brett Allred, chief product officer at MX, in a statement.

Then, also last month, financial-services technology giant Fiserv Inc. announced AllData Connect, its own solution for data sharing among fintechs and banks.

"This process can be difficult for financial institutions to support if screen scraping impairs online banking performance, or when login credentials are stored at unaffiliated third parties," said Paul Diegelman, vice president of digital Payments and data aggregation at Fiserv, in a statement. "AllData Connect gives

### GROWTH STORY

(Portion of Internet users relying on at least one Fintech app)



Source: Visa, quoting data from Ernst & Young

# BEYOND CONTACTLESS

financial institutions the ability and insight they need to confidently empower consumers to share their financial account information.”

Even so, Plaid's Pitts estimates that about 90% of data sharing is occurring outside of APIs, typically by means of acquiring credentials from users. “Only the top 10 to 20 banks have made progress developing their own APIs,” he notes. “If there were a prohibition on screen-scraping, there would be this two-tier system where customers of small community banks wouldn't have access.” Plaid offers its own API called Plaid Exchange.

Visa Inc. said in January it was paying \$5.3 billion to acquire San Francisco-based Plaid in a deal that is undergoing review both in and outside the United States. The Competition and Markets Authority in the United Kingdom granted clearance in August.

At the same time, the Financial Data Exchange, a trade group for open banking, is working on a cross-industry standard API for data sharing. MX and Plaid are among the more than 100 members of the Reston, Va.-based FDX, which operates under the auspices of the 21-year old Financial Services Information Sharing and Analysis Center (FS-ISAC).

Industry standards are one thing, but the federal government is also likely to lay down its own rules. The CFPB in July said it plans to set out a so-called advance notice of proposed rulemaking for consumer-permitted access to financial data. The Bureau's interest in the matter rests on Section 1033 of the Dodd-Frank Act, which bears on consumers' access to, and use of, their financial records.

—John Stewart

Cashierless technology is spreading as stores hunt for ways to automate service and payments while keeping operating costs in check.

The latest example is supermarket chain Giant Eagle Inc., which has teamed up with Grabango Co., a Berkeley, Calif.-based provider of checkout-free technology, to introduce cashierless technology to its GetGo Café+Market convenience stores. The first store to be retrofitted with Grabango's technology went live Sept. 1 in Fox Chapel, Pa., near Pittsburgh.

Grabango's technology uses computer vision to track when an item is removed from the shelf or a refrigerated case. Small cameras hidden in the ceiling, within a casing similar to a fluorescent light fixture called a G-rail, follow consumers as they move through the store grabbing items.

When a consumer who has downloaded the Grabango app enters the

store, the app automatically begins tracking items as she picks them up and keeps a running tally. To complete the purchase, the consumer scans a code, generated by the app, on a Grabango terminal, thus bypassing the checkout counter.

The system charges the purchase to a credit or debit card the consumer has registered in the app and sends a digital copy of the receipt to the app. The app also stores copies of receipts for prior purchases.

Because Grabango's technology does not rely on shelf sensors that indicate when an item is removed from the shelf, in the way that Amazon Go stores do, retrofitting an existing store can be done faster and cheaper, says Andy Radlow, chief business officer for Grabango.

“It can cost a store hundreds of dollars per square foot to install checkout-free technology with other systems,” says Radlow. “Our



solution is lighter-weight, which reduces the cost of implementation, and can be installed without interrupting store operations.”

In the case of the Fox-Chapel GetGo location, which is 3,000 square feet, the store was retrofitted in about three nights, says Radlow, who declines to reveal Grabango’s pricing.

As it keeps track of items customers pick up, Grabango’s technology also notifies the store when shelf stock is low. Merchants receive data about in-store traffic patterns and other analytics that can aid merchandising strategies. Merchants can white-label the Grabango app and can send customers promotional offers via the app, even in-store, Radlow adds. The app is available through the Apple and Google app stores.

“With Grabango, our GetGo guests are able to get in, get out, and get going even faster with a more convenient, contactless shopping experience,” says Laura Karet, president and chief executive of



From the GetGo: Grabango’s app in action.

Giant Eagle. “We look forward to success at our Fox Chapel GetGo and to rolling out more Grabango-powered convenience and grocery stores in the near future.”

Giant Eagle operates 202 GetGo stores in Indiana, Maryland, Ohio, Pennsylvania, and West Virginia.

Giant Eagle is not the only c-store chain operator to embrace cashierless checkout. This summer, Alimentation Couche-Tard’s, which operates Circle K convenience stores, announced that the first retrofitted

Circle K store will go live in Phoenix in early 2021, with potentially dozens more to follow. Alimentation Couche-Tard operates nearly 14,500 convenience stores worldwide, including the Circle K brand.

Looking ahead, Radlow says plans are in the works to add a virtual shopping basket to the Grabango app that will display items in it at the Grabango terminal to allow shoppers to see what’s in their basket, as opposed to reading through an itemized receipt.

—Peter Lucas

## CROSS-BORDER IN AN INSTANT

PayPal Holdings Inc. and Visa Inc. are adding cross-border payments to an agreement to route payments made through PayPal’s Instant Transfer Service through the Visa Direct platform. The expanded agreement will allow consumers and small businesses to send or

receive money to or from a Visa card account in real-time via PayPal, Venmo, or Xoom internationally.

In addition, the expanded agreement will enable PayPal to extend global white-label Visa Direct payout services through PayPal and its Braintree, Hyperwallet, and iZettle services.

While PayPal customers can use real-time domestic payment capabilities through PayPal’s Instant Transfer service in North America, as well as markets in Asia Pacific and Europe, the ability to facilitate cross-border payments will enable PayPal to support business customers that have a need to offer this service to their customers.

“This is about providing our customers—both consumers and merchants—with the tools and services they want and need to effectively



‘International growth is going to be a big part of P2P payments.’

—PATRICIA HEWITT, PRINCIPAL, PG RESEARCH AND ADVISORY SERVICES LLC

manage and move their money,” PayPal says. “We rolled out Instant Transfer capabilities several years ago, but now, having seen great interest from our customers, we are expanding the service globally.”

The addition of real-time cross-border payments is expected to give PayPal a competitive leg up against many of the startups in the international online money-transfer business.

“PayPal is a legacy player, and to compete internationally against fintechs like TransferWise and Revolut, [it] needs to be relevant to consumers and businesses in other countries where cross-border payments are more common and used to manage money as opposed to pay certain bills, which is the focus of [peer-to-peer] payments in the United States,” says Patricia Hewitt, principal at PG Research and Advisory Services LLC, Savannah, Ga. “International growth is going to be a big part of P2P payments.”

As for Visa, pushing into real-time cross-border payments will arm the payments network with more firepower to compete with low-cost providers of cross-border payments, such as The Clearinghouse’s Real Time Payments network, says Sarah Grotta, director for the debit and alternative products advisory service at Mercator Advisory Group.

“As more real-time payment solutions are launched, such as The Clearinghouse’s RTP, that have lower price points, then Visa needs to look at where they have advantages,” Grotta says. “The speed of debit push payments, the broad reach coupled with cross-border and cross-currency capabilities, are real assets. A fully digital solution such this one from

Visa Direct and PayPal makes sense now when users are not sure if physical pickup locations will be available.”

The expanded agreement will also strengthen Visa’s standing as a potential bridge between P2P solutions, experts say.

“It may soon be possible, for example, for a PayPal customer

to send money to a [Square Inc.] Cash App user or to an Apple Cash user and/or a Zelle user,” says Rick Olgesby, president of AZ Payments Group. “By signing PayPal, which also brings Venmo, Visa’s taken a big step toward connecting these currently disparate services.”

—Peter Lucas



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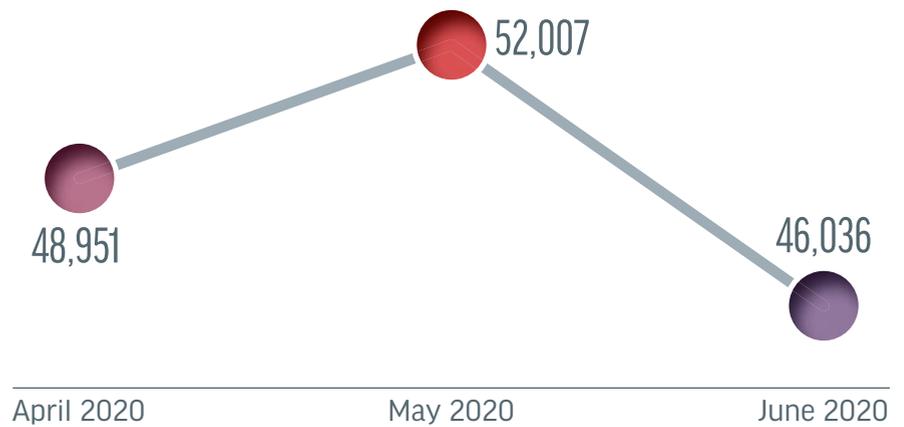
Online criminals are now launching most of their phishing attacks from domains secured by the HTTPS protocol—and they’re hijacking the sites they need to do it, according to a new report from the Anti-Phishing Working Group, a security-industry organization that tracks the crime.

Some 77.6% of phishing sites in the second quarter featured the normally reassuring HTTPS prefix, up dramatically from about 55% a year ago, according to data from PhishLabs cited in the APWG report.

Indeed, the second quarter represents the third period in a row that such attacks have accounted for better than 70% of all phishing assaults. The growth of the tactic has been so fast that as recently as three years ago the percentage stood at just over 10%. PhishLabs is a Charleston, S.C.-based cybersecurity firm.

In phishing attacks, Internet gangs use plausible-looking emails to direct victims to sites where they can

## UP AND DOWN (Number of unique phishing sites detected)



Source: Anti-Phishing Working Group

harvest card credentials and other vital details that can be used for identity fraud or sold online. HTTPS is an encryption protocol that legitimate Web sites use to cloak data exchanged between a user’s browser and the Web site he or she is visiting. Consumers are often advised to look for the HTTPS prefix on Web addresses at sites offering e-commerce or those requiring passwords.

“Studying HTTP on phishing sites provides insight into how phishers are fooling Internet users by turning an Internet security feature against them,” notes the APWG report.

And criminals often come by this valuable tool by hijacking law-abiding sites, the report adds. “Phishers are hacking into legitimate Web sites and placing their phishing files on those compromised sites,” said John LaCour, founder and chief technology officer at PhishLabs, in a comment featured in the report. In some cases, fraudsters can get certificates from firms that issue them at no cost, the report adds.

All told, the number of phishing sites dropped 11% from the first quarter, when 165,772 were detected, to 146,994, the report says (chart). The 16-year old APWG includes financial institutions, online retailers, software companies, Internet service providers, and law-enforcement agencies among its more than 2,000 members. **DT**

—John Stewart

### MONTHLY MERCHANT METRIC

## Q2 2020 Account Attrition And Growth

#### Account Attrition:

Total attrited accounts in given period divided by total portfolio active accounts from same period of the prior year.

#### New Accounts Added:

Total new accounts in given period divided by total portfolio accounts from same period of the prior year.



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.

# DIGITAL TRANSACTIONS WITHOUT THE INTERNET

**“WHEN THE INTERNET FADES,** payment dies. Alas, society runs on payment. And payment continuity is a must.” Central banks around the world recognize this very challenge, and search for answers.

The importance of this topic was recently recognized in the International Conference IEMTRONICS held in British Columbia Canada, where it was the topic of the keynote address, with the respective paper earning the “Best Paper Award.” Here is a synopsis of the technology that offers to safeguard payment continuity:

The idea is to anchor cyber coins to material reality. This can be accomplished through (i) smart coins, and through (ii) smart wallets. In both cases, the payee must gain confidence that the payment is bona fide. We do so with regular cash. Inspecting a dollar bill in our hands, we conclude that it is not fake. A smart coin is a physical implement that contains cyber memory with cyber money. To pass as bona fide, the coin manufacturer may use two tracks: (i) tamper-detectability, and (ii) tamper-resistance. Technology to effect detectability is based on material of construction that splits to myriad of tiny pieces when hammered. Therefore, when you are given such a coin intact, you are quite confident that it was not cracked open



BY **GIDEON SAMID**

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and emptied (See details in US Patent 9,471,906 ).

Technology to effect tamper-resistance is based on several detectors built into the coin. They are designed to sense drilling, splitting, cracking, melting, etc. When these sensors are activated, they instantly erase the digital content of the coin (for details see U.S. Patent 10,445,730).

A hard wallet, on the other hand, is a physical implement that can dispense any amount of money stored inside. Imagine a piece of hardware with a digital port that spews bits claimed to be money. To trust this money, it has to be more than a bit-written number; it has to have identity. For example, BitMint identity-bearing digital currency.

Second, you need to trust the integrity of the spewing wallet. Any high-class fraudster can fake a piece of hardware, claiming authenticity. To frustrate this fraudster, one uses a composite material manufactured through nanotechnology where the input is quantum grade randomness. It builds a wallet that has a very large number of unpredictable readily measurable attributes. These attributes

are found in a public ledger distributed by the wallet manufacturer.

All that the payee has to do is to attach a simple measuring device to the physical wallet, take instant measurements and compare them to the pre-loaded figures published by the manufacturer. If the two sources agree, the payee is satisfied, and regards the bits that subsequently flow out from this wallet as bona fide money.

The manufacturer of the wallet receives the digital coins and the payment software from the mint that issues and redeems the transacted coins. It will work with any digital money where value and identity are fused together. The wallet will pay at any resolution enabled by the paid currency. In the case where the recipient is a similar hard wallet, the paid money can be further paid to a third payee. This defines an ongoing payment regimen that will support society for as long as the Internet is dark.

The hard wallet will operate equally well while the Internet is on. It is noteworthy that hard-wallet payment can be done with total anonymity. Payers need not identify themselves. The payee validates the wallet, not the person submitting it.

With the hurdle of payment continuity resolved, the road is clear for the full vision of digital money to change society on a global scale. **DT**

# WILL CONTACTLESS BE A COVID-DRIVEN FAD?

**IT SEEMS OBVIOUS** that Covid-19 would lead to an increase in the adoption of contactless payments, and it has. But this still may not be the tipping point for tap-and-pay transactions.

Contactless payments are a two-sided coin. They require both consumers and merchants to adopt them, so a variety of factors may slow down that adoption.

On the consumer front, the pandemic seems to have provided the impetus for consumers to give contactless payments a try, but the initial data does not indicate huge adoption.

A survey of 3,014 U.S. adults conducted in May by the Harris Poll for Fiserv Inc. found that only 19% said tap-and-pay cards were their most preferred way to pay. Almost half (48%) said that inserting a chip card was their most preferred way to pay.

So, why is tap-and-pay not at the top of the wallet? It could be the issue of acceptance and availability.

On the acceptance side, about 58% of retailers accept tap-and-pay transactions, up from 40% last year, according to research from the National Retail Federation. In addition, 69% of retailers surveyed said they had seen an increase in contactless payments. But while 94% of retailers said they expect contactless payments to increase over the



BY BEN JACKSON

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next 18 months, given the consumer data, it's not clear that will happen.

What are the factors mitigating against contactless adoption, and why is inserting cards still the most preferred way to pay?

The first mitigating factor is shopping behavior. We know that shopping overall has decreased, but perhaps more important are the changes in the way people shop. A survey of 2,006 U.S. consumers by McKinsey & Co. in June found that 75% of respondents said they had tried new shopping behaviors since the pandemic began. About a third of shoppers said they are using grocery delivery more or for the first time, and about a quarter said they are using curbside pickup more or for the first time.

A contactless option does not matter if the shopper is not going into the store at all. People who have grown accustomed to the convenience of having their groceries delivered, for example, may not return to stores as often even after they are able.

The second mitigating factor, which is harder to measure, is whether or not consumers believe they can tap

and pay. Note in the numbers above that, last year, less than half of retailers accepted contactless payments. No one wants to look foolish by tapping a card at a terminal that cannot read the payment, so consumers may just end up inserting the card to avoid the risk of embarrassment.

The payments industry, plus retailers, need to decide if contactless payments need to be promoted. A big opportunity was missed during the EMV conversion to transition everyone over to contactless. Another opportunity exists now. As I discussed in last month's column, experts say that it is easier to get people to adopt new behaviors when their environments change. As three quarters of people try new shopping behaviors, it is also a good time to convince them to try new payments behaviors.

There are signs that shoppers would be open to it. In the Fiserv/Harris survey, 42% of respondents thought that tap-and-pay was the safest way to make a payment during the pandemic. That could be a powerful driver of new behavior.

Retailers and issuers that want to encourage the adoption of contactless should promote the use of the cards and terminals while consumers are open to new tools and before they slip back into old habits. <sup>DT</sup>

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## ‘IT WAS ACTUALLY A BLIP’

Portfolio valuations proved they aren't immune to the effects of the coronavirus. But brokers say merchant books have fared far better than many feared.

BY KEVIN WOODWARD

**AS THE CORONAVIRUS PANDEMIC** drags on, its effects on portfolio valuations—especially valuations attached to portfolios with high concentrations of hospitality merchants—are beginning to stabilize. And buyers and sellers are adjusting to the new norms.

For sellers, that may mean adjusting the weight certain merchants carry and getting used to longer payout terms. For buyers, it could mean restructuring deals to adjust for the out-of-the-norm periods seen this year and requiring longer payout periods.

While the details of how merchant portfolios are valued and sold may have changed, the consensus is that the moves are temporary and intrinsic value remains constant.

“I would not say the value has changed,” says Peter Michaud, director of consulting at The Strawhecker Group, an Omaha, Neb.-based payments consultancy. “There’s still a general sense of taking less risk. It’s very much a buyer’s market.”

Restaurants and other hospitality merchants may have endured worrisome revenue flows during the lockdowns earlier this year (“Cooking up a Comeback,” June), but many are rebounding.

“If you have a portfolio of all restaurants, certainly it took a hit,” says Denise Shomo, president of Cutter, a Wyomissing, Pa.-based buyer of portfolios. But “those restaurants seem to be back up and running,” she adds. “It’s amazing how quickly these merchants and portfolios have recovered. Industrywide we saw a significant drop in April and May, but significant increases in June and more in July.”

### ‘A VOID HAS BEEN FILLED’

As Covid-19 restrictions eased in many states—coinciding with better weather that enabled outdoor dining in many locations—transaction volumes moved closer to typical levels. That helped hospitality merchants and the portfolios they’re a part of. But gaps remained for some portfolios, affecting their value.



“The void has been filled for most of my clients by increased volumes with merchants that were not severely impacted by the pandemic,” says Paul A. Rianda, principal at The Law Offices of Paul A. Rianda, Irvine, Calif. Rianda’s firm provides legal advice to independent sales organizations and other acquirers.

“Most of my clients reported major reductions in volume in April and May,” he says. “But as time has gone on, most have reported a steady increase in volume of their portfolios such that now many are reporting that their portfolios are about the same as before the pandemic started.”

Still, while volume has returned to the satisfaction of many, portfolio valuations will have to contend with the lingering impact of the pandemic.

In addition to looking at transaction volume and revenue, other considerations, such as geography, will be important, he says. A hotel in New York City and a hotel in Sioux City, Iowa, will have very different economics, he says. The Hawkeye state property may have a lower average ticket, but it also may have been more consistent than a property heavily reliant on the tourist trade. “That’s always going to be an impact,” Michaud says.

It’s important to conduct a holistic evaluation of a portfolio to see what’s happening with it and where it is trending, he says. “I’m not paying you because you made \$1 million last year,” Michaud shares as an example. “I’m going to pay \$2 million because it’s

going to earn that over the next 18 months. Then I get everything on the upside.”

## PARTIAL BUYOUTS

Multiples are not lower either, says Shomo. But one primary aspect of buying and selling a merchant portfolio that has changed for some, albeit on a temporary basis, is the payout structure.

As an example, the upfront payments at closing may be less while the earnout may be enhanced, Shomo says. That could affect when the payouts are delivered or the percentage earned. This is done to give the portfolio in question time to get back to normal, she says.

Cutter has taken the step of analyzing the revenues generated

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during the peak of the Covid-19 lockdowns with the objective of quantifying the result so it won't devalue the portfolio. "They took such a temporary hit," Shomo says.

Another trend is the increasing use of a partial buyout. "If they're not selling their entire portfolio, we buy a portion," Shomo says. "Then, once residuals are paid every month, we ACH them every month the excess beyond what we paid."

For example, an agent may have a portfolio valued at \$20,000 in residuals. Cutter buys a portion of it. As the portfolio value creeps back up,

utilities or government, he says. It will take time to get educated about the new market, what merchants need, and what they expect.

Many independent sales organizations, especially smaller ones, typically only sell into one or two merchant categories, Michaud says. "That's where they're most effective. If that is an industry adversely affected by the pandemic, they're probably looking to expand."

Rianda says many of his clients have continued to service merchants in the same verticals as before the pandemic. "But they

next big thing to go wrong, Michaud says. The 2020 pandemic was it.

"They're always trying to measure risk in every transaction. That kind of risk just occurred," he says. "That's already happened." As investors see it, electronic payments are resilient, he says. "That shows you this is a viable product with a lot of support when things go awry."

And Shomo says the attraction for buyers has not changed significantly. "I see that buyers, at least Cutter, are looking at portfolios from different angles, but are able to get creative and flexible and make it fair and allow you to proceed with your buyout," she says.

Generally, the impact of the pandemic does not appear to be long lasting. "In the last financial crisis, the portfolio values dropped significantly and took a long time to recover," Rianda says. "That is not the case now. It does not seem like there are distressed portfolios out there pulling down values like the last time there was a large disruption in the financial markets."

As for Michaud, he suggests portfolio activity will stay consistent. "Uncertainty and risk are the two biggest drivers going forward," he says. The next 90 days, which includes the holiday shopping season and a presidential election, will be interesting to monitor, he says, adding, "Still, consumers want to use cards."

Shomo, too, sees the impact on merchant portfolios as temporary. "We're seeing portfolios re-energized and getting back to normal," she says. "Businesses are obviously finding a way to survive. When Covid hit, we thought this was going to be a year or longer. But, it was actually a blip." DT



'We're seeing portfolios re-energized and getting back to normal.'

—DENISE SHOMO, PRESIDENT, CUTTER

the agent gets paid the amount left over after Cutter gets what it's due.

Another change stemming from the pandemic is that sellers now might be more interested in merchant diversification. "Sellers always emphasize the strong points of their portfolios and the pandemic has changed which attributes are attractive," Rianda says. "Before, maybe it was restaurants that had an integrated point-of-sale system, whereas now e-commerce merchants might be more desired."

## A VIABLE PRODUCT

Those portfolio owners who just started considering adding different types of merchants this spring may have been challenged, Michaud says. It's not as if an acquirer can flip a switch to stop selling hospitality merchants and start selling

have focused more on trying to assist...merchants with new technologies to allow them to accept more payments," he says. "For example, sales agents servicing restaurants have rolled out software programs to help restaurants take online orders on the Internet and help with order delivery."

Where many once placed a lot of value on the penetration of integrated point-of-sale systems in a portfolio, that may have changed, too, Rianda says. "Most of those were in the retail space. The value of that type of merchant in the future remains to be seen."

The pandemic doesn't appear to have negatively affected the appeal of merchant portfolios for investors, either. One reason is that electronic payments are resilient. And investors are always planning for the

## YOUR SMART PHONE IS YOUR TERMINAL

Momentum is building fast for card acceptance on ordinary mobile phones. And now Apple could be the next player in this increasingly important game.

BY PETER LUCAS

**THE DRIVE TO TURN** mobile devices into point-of-sale terminals without requiring a plug-in card-acceptance device, such as a dongle, got a big shot in the arm in August when Apple Inc. acquired Montreal-based developer Mobeewave Inc.

While speculation runs rampant as to Apple's plans for Mobeewave, the tech giant, as is its custom, was tightlipped about the deal, saying it "buys smaller technology companies from time-to-time", and when doing so it "does not discuss its purpose or plans."

Nevertheless, Apple has a history of incorporating the technology of the smaller tech firms it acquires into its products.

Mobeewave's software enables mobile devices to securely accept

card payments when the card or mobile wallet is tapped to the phone. The technology, also known as NFC phone tap, leverages the near field communications (NFC) chip smart-phone makers have embedded in their hardware for years to support mobile wallets.

To initiate a transaction, a consumer taps her contactless card to the NFC-enabled mobile device. The software reads the card data and transmits it to a processor. A similar technology known as PIN-on-glass uses the same NFC tap-to-phone technology, but also allows mobile devices to accept PINs entered through the device's keypad, eliminating the need for a PIN pad ("Get Ready for Mobile PINs," March 2018).

It is not far-fetched then, to think that Apple bought Mobeewave for the express purpose of making Mobeewave's app standard on iPhones and iPads. After all, Apple is no stranger to payments. The company made Apple Pay a standard app on the iPhone in 2014 and launched its own credit card in 2019.

Buying the 9-year old Mobeewave, for which Apple paid a reported \$100 million, gives Apple a ready-made payment-acceptance app for mobile devices. That's an



advantage, payment experts say, because it spares merchants from purchasing add-on hardware.

“Acquiring Mobeewave is a good fit for Apple because its phones come with a secure chip [to enable mobile transactions],” says Sam Shawki, chief executive of Santa Clara, Calif.-based MagicCube, which offers a PIN-on-glass application.



‘2021 will be the year of the contactless card in the United States.’

—SAM SHAWKI, CHIEF EXECUTIVE, MAGICCUBE

Another advantage of the Mobeewave acquisition, Shawki says, is that Apple doesn’t have to develop its own mobile-acceptance application, which means it can come to market with a bona fide solution faster.

## ‘GOING MAINSTREAM’

Enabling smart phones and tablet computers to accept card transactions simply by downloading an app is expected to open the door wider for tens of millions of small cash-and-check-only merchants to accept credit and debit cards through mobile devices.

Many of these merchants are one- or two-man operations, such as tradesmen, food trucks, and vendors that sell on the street during events. Despite their lack of size, they represent a rich, untapped vein of potential transaction volume, payment experts say.

Enlisting a manufacturer with a broad distribution network and with a built-in application to accept cards on its mobile device, such as

Apple, is a huge step toward making the technology ubiquitous.

“While PIN-on-glass (and NFC phone tap) are still in the early stages of development, Apple’s acquisition of Mobeewave increases the prospect of the technology going mainstream,” says Krista Tedder, director of payment for Pleasanton, Calif.-based Javelin Strategy & Research,

in an email message. “Most small merchants already have a smart phone, so this technology will likely be attractive to them, because they won’t have to buy a separate piece of hardware to accept cards.”

Besides the opportunity to make card acceptance on mobile phones easier and more affordable for merchants, Apple’s acquisition of Mobeewave also provides a competitive advantage over other smart-phone manufacturers looking to play in the same space.

Prior to the acquisition, Mobeewave worked with Samsung Electronics Co. Ltd. to allow mobile phones to process card transactions without dongles or other card-reader add-ons. The transactions worked via an NFC link between a contactless card and the mobile device. The technology launched in October 2019.

Acquiring Mobeewave denies Samsung access to Mobeewave technology. “Apple is not going to support Android devices,” says Shawki.

If Apple’s acquisition of Mobeewave slows Samsung’s plans to

pursue NFC tap-to-phone and PIN-on-glass capabilities, it won’t be for long. Samsung is working with other software developers.

In February, for example, First Data, which is part of Brookfield, Wisc.-based Fiserv Inc., began enabling merchants in Poland to accept cards through mobile devices through an application that accepts contactless card and PIN-on-glass transactions.

Fiserv worked with Samsung and software provider PayCore to bring its application to market. PayCore supplies EMV software to facilitate transactions enabled by Fiserv’s NFC phone tap solution. Fiserv’s solution has been certified by Visa Inc.

Fiserv, which estimates there are 23 million micro-merchants in Europe that lack POS terminals, plans to expand its offering to other countries throughout the Europe, Middle East and Africa region, as well as in Asia-Pacific.

“Our solution brings payment acceptance to micro-merchants, which can’t afford, or don’t want to pay for, card terminals, and typically don’t have a lot of payment solutions available to them,” says Sebastian Gollwitzer, vice president, head of merchant product, EMEA, for Fiserv. “The technology is about democratizing access to payment acceptance for small merchants.”

## ‘MONEY IS MOVING’

Other players vying for a share of the burgeoning NFC tap-to-phone and PIN-on-glass space include Santa Clara, Calif.-based MagicCube and San Francisco-based Square Inc. Both companies have begun rolling out their respective

applications in countries where contactless cards and chip-and-PIN transactions are universal.

“The standards around the technology are global, so we decided to start deploying our technology first in markets outside the United States that are more ready for it,” says Shawki, a former Visa executive who founded MagicCube in 2014. “2021 will be the year of the contactless card in the United States.”

MagicCube, which has developed a PIN-on-glass application for mobile, is currently working with three banks outside the United States and has been certified by all four card networks and EMVCo, the international payments-standards body. In 2019, MagicCube began offering its technology to retailers in Japan.

Square, which has championed the development of standards for PIN-on-glass, debuted the technology in Australia in 2016, then followed suit in the United Kingdom a year later. The company, which revolutionized the acceptance of cards through mobile devices with its Square dongle, which is a miniaturized magnetic stripe reader for mobile devices, views PIN-on-glass as an evolution of the dongle.

“Mobile devices are doing more and more through software, so it’s getting harder to see the purpose of a dedicated POS device for mobile devices to accept card transactions,” says David Talach, head of payments for Square. “Why add a device that adds to the cost of acceptance?”

While improved accessibility to card acceptance for small merchants is a driving force behind deployment of NFC phone-tap and PIN-on-glass applications, it is only one piece of the puzzle.

Transaction security is an equally important aspect of this burgeoning payment technology. Enabling mobile devices to accept a cardholder’s PIN allows the devices to validate the cardholder.

In contrast, dongles and other types of add-on hardware don’t accept PINs. These solutions instead rely on the consumer using his fingers to



‘It is only a matter of time before vulnerabilities are found.’

—KRISTA TEDDER, DIRECTOR OF PAYMENT, JAVELIN STRATEGY & RESEARCH

scrawl his signature on the device’s screen to validate himself, which can create legibility issues and open the door for a potential chargeback.

“Payments need strong authentication because money is moving between two parties,” says Talach. “Authentication creates trust between the parties involved in the transaction.”

## THE BIG UNKNOWN

Having a global standard for PIN-on-glass and NFC phone-tap technology is also helping the technology gain traction. Creating a standard involves major players in the industry to vet the technology and provide their input to the standards body, says Talach.

In January 2018, the Wakefield, Mass.-based PCI Security Standards Council, which establishes the rules for payment card security, introduced a rule that allows off-the-shelf mobile devices, such as Android phones and iPhones, to accept card transactions and PINs with no hardware attachments.

“We pushed for ratification of the standard because we felt it was an important part of the process for the payments industry to thoroughly develop the technology,” Talach says. “This is a technology the entire industry can now adopt.”

Nevertheless, concerns exist that hackers will find ways to crack the technology.

“With every new technology, it is only a matter of time before vulnerabilities are found, which is why the industry needs to continually evolve the security around the technology,” Tedder says.

The big unknown, says Tedder, is how long it will take for criminals to find the vulnerabilities in PIN-on-glass and exploit them.

One way to slow this assault is to roll it out at a sensible pace. That way, markets can be shaped as they come on online, and security will have the time to evolve to where the industry is not playing catch-up with criminals, says Gollwitzer.

In the meantime, the promise of expanding card acceptance to tens of millions of cash- and check-only merchants is expected to attract bullish new competitors that will push the market for the technology even farther forward.

“This is an innovative payment-acceptance technology, not a replacement for POS hardware,” says Gollwitzer. “More competition will help with the rooting of the technology.” **DT**

# THE SUDDEN ASCENT OF QR CODES

Efficient and fast, the funky-looking barcodes are having their day in the sun as the Covid-19 pandemic channels consumers toward contactless payments.

BY JOHN STEWART



**IT HAS BECOME COMMONPLACE** to observe that the Covid-19 pandemic has energized contactless payments, and all the numbers seem to bear that out. But contactless at the point of sale doesn't necessarily mean EMV cards embedded with near-field communication antennae. There's a cardless alternative, and all of a sudden it's getting a big share of the spotlight.

While common for payments in much of Asia and India, QR codes were relatively obscure in North America. Big merchants like Starbucks, Walmart Inc., and Kohls Corp. use them routinely for payments and loyalty on private-label accounts, but when it comes to general-purpose payments they were shoved aside for years in favor of NFC.

This summer, that began to change. Along with NFC, QR-code transactions have ridden a rising wave sparked by consumers' fears of touching surfaces like terminals and keypads.

That momentum could outlast the pandemic. Mohammad Khan, chief technology officer at Omnyway Inc., predicts that NFC will control fully 60% of in-store transactions by the middle of 2021. But he also figures QR codes will account for anywhere from 5% to 10% of those payments, up from less than 1% now. San Francisco-based Omnyway equips stores for contactless acceptance, including QR codes.

And that share could go even higher. Other proponents see fast growth for QR technology, particularly among small businesses, where NFC has lagged.

"I think QR will take off in the United States pretty fast. In the next three to five years we'll see the same growth curve we see in Asia," predicts Chuck Huang, chief executive of Citcon USA LLC, a Santa Clara, Calif.-based startup that specializes in equipping U.S. stores to accept the hugely popular Alipay and WeChat Pay apps used by Chinese tourists.

Both wallets rely on QR codes, which now control anywhere from 20% to 30% of all store payments in China, Huang estimates.

## IMMEDIATE OPPORTUNITY

Processors are adopting QR technology as well to lead consumers to a checkout page without touching any surfaces. Shift4 Payments Inc., for example, this summer introduced QR codes that don't trigger a payment but do direct restaurant patrons to a payment page that lets them check out with a credit card.

Similarly, sensing an immediate opportunity, Schaumburg, Ill.-based point-of-sale technology vendor NMI started selling QR code capability "coming out of Covid," says Jennifer Sherman, senior vice president of product. The company markets the capability through independent sales organizations and software vendors.

"My team started talking about QR codes three months ago. It's absolutely in response to the need for contactless," she says. Already, NMI merchants are using a QR code to refer customers to a checkout page in 14% of instances where such referrals take place (chart, page 25).

Sherman says the QR approach gets contactless into more stores much faster than with NFC. "The [NFC] adoption has just been a little slower," she notes. And the approach also means any consumer with a smart phone can pay, regardless of whether he has a contactless card.

A drawback lies in the card-not-present treatment this process yields, Sherman concedes. "It essentially becomes an e-commerce transaction," she notes. That invokes a higher rate of interchange, raising merchants' transaction cost.

Even Apple Inc., long a stalwart of NFC for its iconic Apple Pay mobile wallet, shows signs of investigating QR Codes. "In July, a code leak from the second iOS 14 beta indicated Apple Pay had a new feature on the way

# ACTIVE PAYPAL ACCOUNTS

(In millions)

169

Q2 2015

188

Q2 2016

212

Q2 2017

244

Q2 2018

286

Q2 2019

346

Q2 2020

Source: PayPal

for ‘Code Payment,’ which would enable Apple Pay transactions to take place via QR codes,” industry newsletter *AppleInsider* reported in September. “By scanning a code displayed in-store, this would instruct the Wallet app to perform the transaction via Apple Pay’s servers over its own cellular system.”

## THE PRICING QUESTION

But much of the optimism surrounding QR codes lately rests on one signal event: PayPal Holdings Inc.’s stunning announcement in July that, together with Atlanta-based technology firm InComm Inc., it is embarking on a major effort to enable transactions via QR codes for both PayPal and Venmo at 8,200 CVS Pharmacy stores. Transactions will flow to InComm, which will route them to PayPal.

PayPal, long an e-commerce payments giant, is no stranger to this technology. Its efforts over the years to find a way into the physical point of sale have seen it enable QR codes in stores in some 28 countries.

Not long before announcing its deal with CVS, it rolled out a formal program to sell the technology to small and medium-size businesses, offering a two-month free period followed by pricing of 1.9% plus a dime per transaction. It hasn’t discussed pricing for

retailers on the scale of a CVS, and the pharmacy chain refused to comment for this article.

Pricing, though, could be critical. Merchants, and big chains especially, have already proven to be quite sensitive to pricing for ordinary card transactions. “What’s PayPal going to charge that merchant as a fee? Historically, it was quite high,” notes Mike Russo, chief technology officer at Allentown, Pa.-based Shift4.

One big difference with the installations for CVS—and presumably for big chains to follow—is that checkout clerks at these stores will execute transactions by reading a QR code generated by the customer’s phone. The code will represent a pre-selected funding source—card or PayPal balance—that the store’s scanner will read and process.

Advocates argue this experience is more consistent than NFC. “Whereas a consumer’s experience with NFC may be excellent at one store and subpar at another, their experience with QR and barcodes is more consistent and reliable,” say InComm executives Adam Brault, senior vice president for financial services, and Kia Taylor Lee, vice president for strategy and product development. The two responded jointly by email to questions posed by *Digital Transactions*.

This approach works best with chains, which typically have the needed equipment in place at the point of sale. “High-end merchants will use a scanner” to read customers’ QR codes as they hold up their phones, says Omnyway’s Khan.

In transactions at smaller stores—and indeed with QR code transactions, for example, in Asia—the merchant may generate a code that the consumer reads with his phone, triggering payment from the consumer’s pre-selected funding source. In some cases, the familiar barcode can be simply a paper printout pinned on a roadside vegetable stall.

The latter approach remains far more common. With Shift4’s QR Pay, where QR codes are presented to customers via the PIN pad, the

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# NFC ADVOCATES AREN'T BOARDING THE QR BUS

Backers of near-field communication technology for mobile payments have made it plain they're ready to fight back against QR codes, a rival technology that has won support not only from giant systems like China's Alipay and WeChat Pay but also domestically from merchant apps from big chains like Walmart Inc. and Kohls Corp. and from major payments providers like PayPal Holdings Corp., Shift4 Payments Inc., and NMI.

The NFC Forum, a Wakefield, Mass.-based standards body, released last year what it calls a "candidate" spec aimed at making mobile transactions even easier than with QR codes. The Money Transfer Candidate specification's method would apply to both person-to-person and consumer-to-merchant transactions, and has been undergoing industry review and comment.

"QR codes aren't dead but they are about to take a punch to the gut," a spokesman for the NFC Forum noted at the time the candidate spec was released.

But so far the spec exists only on paper. "We are still evangelizing the specification in the payment ecosystem," the spokesman now says. "There is to my knowledge no implementation of this specification as yet."

QR codes require users to open an app and position their phones to zero in on and scan a displayed code, steps the NFC Forum says its new spec will replace with a single tap. The group also says the new spec will offer more secure transactions than QR codes.

"The starting point was to define an NFC solution able to replace existing QR code solutions in Asia which require additional actions from the user to pre-select the right payment app and then to activate

and place the camera in the correct position," Daniel Orsatti, an executive at STMicroelectronics and group chair for the NFC Forum's reference applications framework working group, said at the time the spec was announced.

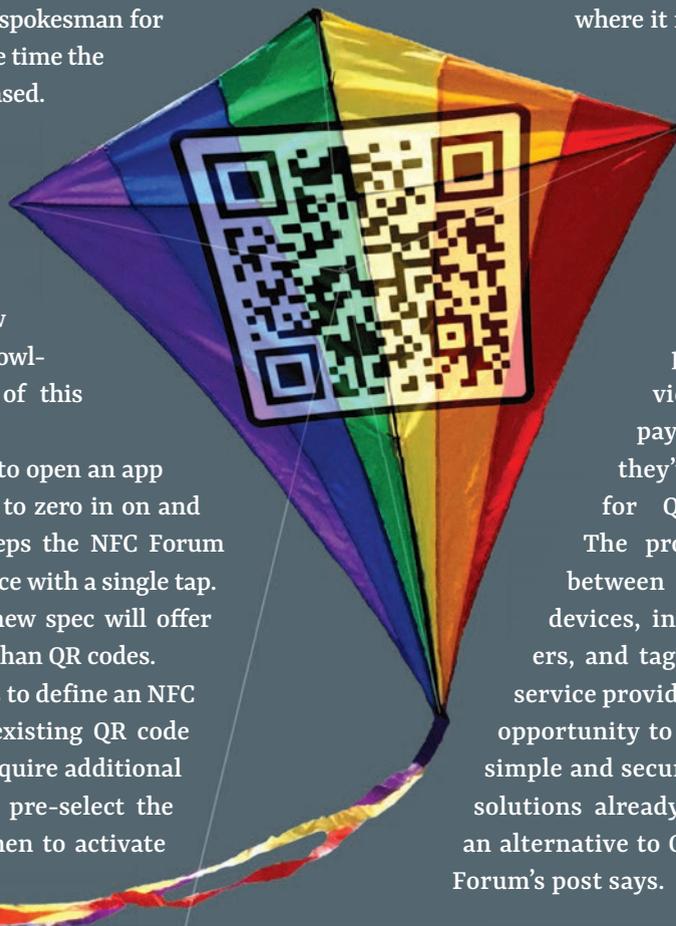
"Once the development process was started, it quickly became apparent that there was an even greater need for an NFC solution," Orsatti continued. "We have enlarged the specification's scope to not only cover Asia use cases but to offer a generic framework covering payment systems."

Orsatti's remarks were posted by the NFC Forum as part of an interview regarding the new NFC spec.

"This spec was developed based on input from member companies primarily in China. Because this is a candidate spec, we are offering member companies and the industry to provide input and feedback before the spec is adopted. It is too early to project where it may be deployed," Paula

Hunter, the forum's executive director, told *Digital Transactions* last year.

The spec works by proposing an open framework allowing payment-service providers to "map" the payment-data exchange they've already defined for QR-code transactions. The process will take place between all NFC-enabled devices, including phones, readers, and tags, and "gives payment service providers and consumers the opportunity to take advantage of the simple and secure NFC-based payment solutions already in use worldwide as an alternative to QR code solutions," the Forum's post says.



focus has been on enabling as much touchless commerce as possible in restaurants and hotels, Russo says.

The system doesn't trigger payment but allows establishments to minimize visits to the table. When the customer is ready to pay, a terminal at the table displays a QR code, which the diner can scan. The diner's phone then displays the bill, which he can pay at the terminal with a card.

"The QR code is a way to solve a business-flow problem," Russo says. "It represents the guest check and eliminates [a server] walking back and forth."

## TIP OF THE ICEBERG

But, as a technology either for payment or for leading up to payment, QR codes are not without drawbacks (box, page 24). Critics point out that NFC is faster and less frustrating when considering the seconds it can take for a consumer to position his phone's camera just right to capture the QR code on display.

"The user experience, frankly, is not great," says Randy Vanderhoof, executive director of the Secure Technology Alliance, a payments trade group.

"It's going to be difficult for QR to catch on," he adds. "Inserting your card, tapping your card, holding your watch up, is a marginally better experience. The milliseconds build up with no significant benefit to the consumer." Loyalty benefits could entice consumers to use QR, he concedes, though "that adds significant cost to the merchant."

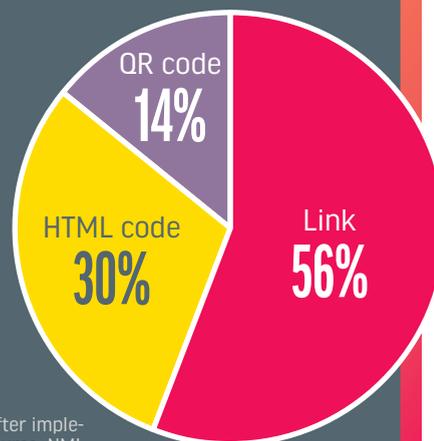
Even an entry by Apple would likely not change the picture, he says. "It's hard to predict what Apple will do, but making [payments] available through a QR interface is not a significant step up for them."

InComm's Brault and Lee counter that not all merchants can afford NFC. "There's a significant cost advantage, particularly for small retailers who do not have the resources or the budget to purchase new terminal devices enabling NFC," they say

## GETTING TO CHECKOUT

(Percentage of occurrences in which an NMI merchant chose to generate a reference to NMI's checkout page via a QR code, a link, or an HTML code they embed on their Web site.)

Note: Data collected three months after implementation of QR code capability. Source: NMI



in their email response. "QR codes allow for ubiquitous adoption of contact-free payments."

More likely, though, is that merchants over time will start to accept both technologies, according to an expert source who asked not to be identified. The key is merchants' appetite for incremental transactions. "I have a little knowledge. [CVS] is the tip of the iceberg," he says. "You're going to see that [technology] get a ton of investment to start using QR codes as a new revenue opportunity."

And some observers point out U.S. consumers are more familiar with QR codes than anyone might have thought. "They're already doing those kinds of scans, with loyalty cards, for example," says Citcon's Huang, who argues QR scans are more reliable than NFC reads.

It also doesn't hurt that EMVCo, the standards body controlled by the world's six biggest card networks, established a standard for QR codes in 2018.

## RIGHT PRESCRIPTION?

For a technology that came out of a Toyota automobile plant in 1994, QR codes have come a long way. They embody a ton of information and do so quite efficiently. Now the question is how much farther can they can go—and how well they can bring efficiency to in-store payments.

Indeed, the key for the technology's adoption in payments in North America, some experts argue, lies in how soon it can filter down from big chains like CVS to corner-store sellers. "We'll see if a Square could take the low-tech approach and push it down to micro-merchants and to retailer-specific apps," says Sarah Grotta, an analyst at Mercator Advisory Group, a Marlborough, Mass.-based consulting firm.

For now, though, all eyes will remain fixed on CVS. From that experience, the payments industry will decide whether QR codes are the right prescription for a Covid-haunted world. **DT**

## ISO 20022 IS COMING

How to get ready for a big but challenging upgrade to a crucial standard for cross-border payments.

BY ISABEL SCHMIDT

Isabel Schmidt is global head of direct clearing and asset account services, BNY Mellon Treasury Services, New York City.

**CROSS-BORDER PAYMENTS** are set to be transformed by the upcoming introduction of ISO 20022. This new messaging standard will replace existing, ingrained messaging infrastructures—including SWIFT MT messages and their equivalents used by legacy clearing systems, such as CHIPS.

These services are no longer able to adequately support today's granular business models and payment needs, including the speed and transparency that end customers expect from their service providers.

ISO 20022 is a messaging ecosystem with enriched, structured data at its core. The degree and depth

of information that ISO 20022 will facilitate, as well as the increased automation that will come from working with a central standard, will enable banks to optimize payments. That will make for a seamless service, with a better, faster, cheaper, and more efficient experience for clients.

Beneficiaries, for example, will be able to access more detailed, structured remittance information, helping them to automatically reconcile against open invoices and accounts receivable. This, in turn, could enable improved cash flow and counterparty risk management, thereby helping to create opportunities for clients to grow their businesses.

The interoperability of the networks that will be created will allow payments to travel more easily across the globe, across different payment rails. Meanwhile, having robust, quality data at the initiation stage of a payment will help to enable payment pre-validation and result in fewer false positives.

Such capabilities will not only reduce manual intervention and costs, it will also allow for more focused, effective risk management and play a key role in driving 100% straight-through processing rates. And, by increasing efficiencies and removing friction from payments processes, that will allow banks to





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focus more on value-added activities, such as data analytics.

So ISO 20022 (ISO) will unlock a host of benefits and bring about a new era for cross-border payments. Yet, the path to implementing ISO is far from straightforward, and many banks may not be fully prepared for the scale of what is involved in the ISO migration.

## UPDATING SYSTEMS

An important point is the significant discrepancy in the size and amount of data between Message Type (MT) and ISO (also referred to as MX) messages. MX messages will use the XML text-based format, which has many

more fields, making it very comprehensive from a data perspective.

Banks will therefore need to ensure their systems are able to source, store, and process the larger set of data. That will, of course, mean preparing payments and financial-messaging platforms. But it must be understood that any system that touches a payment within a bank's internal ecosystem could be affected as it needs to be able to receive and transmit the additional, structured information. Banks will need to carefully consider this in their ISO preparation.

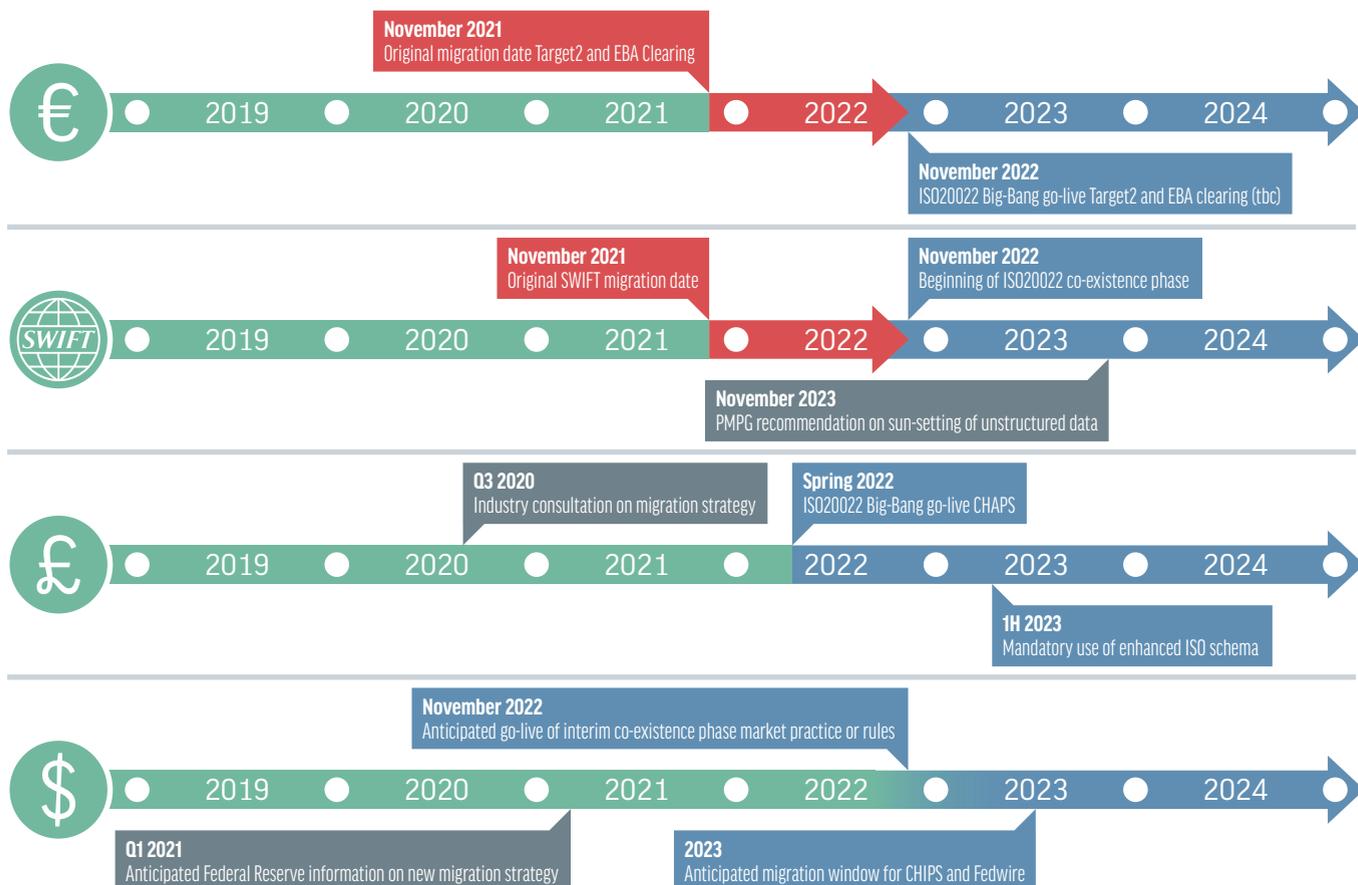
Besides technology, the importance of communication and guidance cannot be underestimated.

Work will need to be undertaken by underlying clients, and banks should evaluate how they can best support them to help ensure they are ISO ready.

For example, unlike MT messages, which have a broad, non-specific field for address information, the address field for ISO messages is much more structured. Corporate clients will therefore need to have the correct information for MX messages in the correct structure and format.

Communication with internal stakeholders is also vital. One of the most important developments for staff to understand is the differences between MX and MT messages. The format description for

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the MT103, for example, is half a page; the equivalent ISO message spans multiple pages.

The business language traditionally used in the cross-border payments space will also be different. Those currently called “originators” or “ordering parties” will be called “debtors.” These now designated “beneficiaries” will be called “creditors.”

Ultimately, banks need to ensure everybody who supports the business-as-usual payments environment is prepared for the new ISO landscape. A great deal of education and training will be required.

## THE COEXISTENCE PHASE

A key challenge that banks will need to navigate will be the coexistence phase, when some banks will be using ISO and some will be using legacy formats. This is due to the fact that the major market infrastructures are migrating at different times over a period of four years.

The proposed migration dates of different jurisdictions have altered in recent months and the landscape remains fluid, so banks must continue to closely observe developments.

As of August 2020, the migration is due to begin in the United Kingdom with the transition of the GBP (British pound sterling) high-value payments system CHAPS moving to ISO in April 2022. This will occur in a “like-for-like” migration with respect to the data that is to be transmitted, followed, approximately one year later, by the mandatory use of the enhanced version of ISO, when the enriched data is to be used.

November 2022 will see the euro clearing systems TARGET2 and EBA Clearing, as well as SWIFT, move to ISO in its full, enhanced capacity.

With respect to the United States, the situation remains subject to change. Initially, the U.S. market infrastructures had planned a gradual migration starting in 2021 and lasting until 2023. Those plans have been put on hold and we are awaiting publication of the final plans for The Clearing House, CHIPS, and Fedwire. The industry anticipates, however, that the transition will likely occur in the second half of 2023.

Finally, the migration ends in 2025 with the retirement of the legacy messages, with, for example, the discontinuation of category one, two, and nine MT messages on the SWIFT network.

## PLENTIFUL REWARDS

While the U.K. is migrating in spring 2022, as this is initially on a like-for-like basis only, this development will not have the same impact as when banks begin to use the enhanced version of ISO in November 2022.

Complications will arise for banks then because, though payments could be originated in ISO by a fully ISO-ready bank using and transmitting richer, more structured data, they would have to be cleared through a market infrastructure or correspondent bank in a jurisdiction that has not yet migrated. There will therefore be a significant discrepancy in the level

of information that can be received and sent on.

The key question therefore becomes, “How does the industry deal with that funneling process?” There is no easy mechanism for intermediary banks to translate ISO information into legacy formats without potential loss of information. For each extra piece of information received, every bank will have to assess how to deal with it and where to pass it on.

A great deal of effort is under way in the industry to try to address this issue, including initiatives by SWIFT, such as the Cross-Border Payments and Reporting Plus (CBPR+) group, which aims to help formulate a standardized approach to ISO implementation.

SWIFT has also provided training and tools to assist with the migration in general. The Readiness Portal and MyStandards tool have been launched to make it easier for banks to carry out testing and validate their messages.

As the industry embarks on a multiyear journey, it is important that banks are aware of the time and investment involved in the transition and are prepared for the challenges ahead. Equally, however, while the road to ISO implementation may be complex, the rewards will be plentiful.

The ecosystem that ISO 2002 will enable will revolutionize cross-border payment capabilities, allowing banks to deliver a truly optimized end-to-end client experience. 

The views expressed in this article are those of the author only and may not reflect the views of BNY Mellon. This does not constitute Treasury Services advice, or any other business or legal advice, and it should not be relied upon as such.

Credit cards don't drive up prices for the poor.

# endpoint

## DO RICH PEOPLE PAY LESS?

The Reverse Robin Hood hypothesis sounds compelling. Here's why it's wrong.

BY STEVEN SEMERARO

Steven Semeraro is professor of law at Thomas Jefferson University, San Diego, Calif.

**DO RICH PEOPLE PAY LESS** for goods and services than the average person? This topic came up recently in *The Wall Street Journal* article "The Credit-Card Fees Merchants Hate, Banks Love and Consumers Pay." The reporters quote Aaron Klein's use of a phrase, "reverse Robin Hood," that I coined in a 2009 Rutgers Law Journal article entitled "The Reverse-Robin-Hood-Cross-Subsidy Hypothesis."

In the study, I explained that higher interchange fees, known as swipe fees, may not hurt low-income consumers. Klein and others assume swipe fees compel merchants to raise prices, thereby reducing demand and forcing everyone to pay more.

That thinking is flawed. If accepting cards only required the merchant to raise prices without providing benefits, no merchant would do it.

The Reverse Robin Hood argument can be broken down into two parts.

First, rich people who use credit cards pay less because of rewards. If you stopped there, the hypothesis is probably true, but not surprising.

I just spoke with an investment company charging a lower percentage to those who invest more. Discounts are often higher for those who buy more. Frequent fliers pay less than occasional travelers because of airline loyalty programs, and drivers effectively get more groceries for the same money than generally less wealthy pedestrian and biker shoppers when supermarkets provide parking for free.

Still, the benefits of card rewards are not limited to the wealthy. They are widely available to consumers at all income levels. Nearly three-fourths of cardholders who earn less than \$20,000 annually have a rewards card with perks linked to wholesale clubs, gas stations, and home-improvement stores, to name a few.

The Discover card offers a 5% reward at a rotating group of merchants regularly frequented by lower-income consumers. Right



now, these include wholesale clubs, Home Depot, and gas stations.

The piece in *The Wall Street Journal* includes quotes from small merchants—a coffee shop, a record store—saying that swipe fees hurt them. But merchants could combat the impact of reward cards if they found it profitable to do so. Federal law protects their ability to offer cash discounts.

And there are creative ways for merchants to effectively lower prices for those who don't use expensive rewards cards by offering their own store card or discount code. Burger Lounge, a mid-sized burger chain, does this effectively while continuing to accept credit cards.

## A REALISTIC READING

More important, though, Klein, like many commentators before him, asserted a second and more controversial part of the Reverse Robin Hood Hypothesis: Those who pay in cash or with debit or non-rewards cards pay more than they otherwise would.

Exactly how this might happen turns out to be a very complex economic question. Although accounts in the popular press rarely articulate it, the theory typically goes as follows: Swipe fees compel the merchant to raise prices to cover the cost of the swipe fee, thereby reducing demand and forcing everyone to pay more. Rich people using rewards cards get back some of the inflated price from their rewards, but poor people don't.

Of course, that's implausible. A more realistic reading of this situation is that merchants who accept cards likely increase their sales because card customers make purchases that they otherwise wouldn't make.

Purchase volume also likely increases because of psychological factors that lead customers to buy more when they are using a rewards card than they would if they had to pay cash or use a card without any rewards.

If card acceptance increases sales, merchants can spread their fixed costs across a larger revenue

base. For this reason, card-accepting merchants may reduce prices, benefiting everyone.

Determining the precise distributional effects of rewards cards is thus more complicated than press accounts imply. It would require analysts to calculate and compare prices in but-for worlds without credit cards (or without rewards cards) to those in actual markets.

That sort of economic analysis would be difficult if not impossible. And the truth is that we don't know the distributional impact of rewards cards across income levels and different types of merchants.

## NO ONE IS PUNISHED

Still, we can draw tentative conclusions from observed practice. If credit card use benefited the ultra-rich over the middle class and poor by significantly raising prices for all and rebating only the wealthy, one would expect discount stores to emerge that don't accept credit cards.

These stores could slash prices because of the cost savings from refusing to accept the high-swipe-fee credit cards. And lower-income customers who rely on cash and debit cards would flock to these discount stores.

But that hasn't happened. To be sure, discount stores appealing to lower-income customers are abundant. But almost always, these stores accept credit cards. This suggests that if card acceptance increases prices, the impact is insignificant.

And, if that's true, then no one is really punished because of rewards credit cards. <sup>DT</sup>

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