SPECIAL REPORT: GEORGIA'S PAYMENT PROCESSING INDUSTRY

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Paying Atlanta Forward

Technology and Globalization Awaken a Sleeping Giant

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Author's Note

Why Payments, Why Now?

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Growing up in Columbus, Ga., I knew little about the payment processing industry, but I had an anecdotal sense for its power as a job generator long before I began to be intrigued by its inner workings.

The city is the unlikely (some say) home of TSYS, a substantial player in the world of payments and a homegrown technology success story that emerged from the earliest days of banking software innovation and stuck around even after its size seemed to dictate moving to a larger tech hub.

For me, its impact was simultaneously ubiquitous and unknown. Everyone knew someone who worked at TSYS, or at one of its many offshoots, updating software for terminals or entering data into computers. Many of my baseball buddies had parents commuting to the nondescript technology building on J.R. Allen Parkway, or later to the gleaming riverside complex that would give hope to the city's hard-up downtown. This company was big, and it had something to do with credit cards, but that's where our understanding stopped. What all those people did behind those closed doors was anyone's guess.

Reporting on business in Atlanta, I found that this blend of obvious importance and overwhelming ignorance pervades local thought on payments. Even those of us who have seen the necessity and vitality of the sector in Atlanta fail to understand the interplay among the web of actors that make a credit card or mobile payment transaction work. Because it's intangible, and because the brands that are so crucial to consumption so often don't face consumers, payment processing sometimes fades into the background.

Not anymore. With the launch of the American Transaction Processors Coalition in Atlanta in April 2014, the industry sounded a clarion call, a salvo against the perceived indifference of legislators and economic developers. No longer would an industry that has almost 10 times the statewide economic impact of the "Hollywood of the South" and nearly double that of the life sciences sector play second fiddle to "sexier" industries. As we watched this awakening unfold, it became evident that the timing was right to provide a snapshot of an industry that has moved from the shadows to the spotlight in Atlanta's international reputation.

The below report is just that: A quick glance at topics like the historical development of payments expertise in Atlanta from 1960s on, the industry's promise as an international "calling card" for the city's recruitment efforts and its potential for helping build out Atlanta's budding tech sector. It's already strong in health care IT, cybersecurity and mobility, industries that are underpinned by and interwoven with financial technology. We think the fruit of our journalistic labor is informative, but the biggest revelation was how much more we have to learn about this giant hiding in plain sight.

Georgia's Transaction Alley supports more than 40,000 jobs, according to the American Transaction Processors Coalition.

Sources, Upcoming Events

Resources

- Federal Reserve Bank of Atlanta - Retail Payments Risk Forum
- Select Georgia: Payment Processing Hub
- Fed's 2013 payments study
- TAG's Hub Magazine Fintech Issue
- TAG Fintech Society Ecosystem Report 2012
- TAG - Big Data Analytics in Financial Services
- American Transaction Processors Coalition
- Map of Transaction Alley
- Metro Atlanta Chamber FinTech Task Force (coming soon)
- Worldpay Global Payments Report (short
- Worldpay Global Payments Report (long)
- Boston Consulting Global Payments Report
- TSYS White Papers on Payments
- Fed - Payments Improvement Initiative - Faster/ Secure Payments Task Forces

Upcoming Events in Atlanta

Feb. 4, 2016 - TAG Fintech 2016 Symposium

Feb. 8-11, 2016 - Atlanta Trade Mission to Finovate in London

Feb. 27, 2016 - World Affairs Council of Atlanta Young Leaders: The Future of Money: How we Spend, Save, and Source It

Interviewees / Sources

- John Yates, attorney, Morris, Manning and Martin
- Michelangelo Ho, Fintech Catalyst, ATDC at Georgia Tech
- Wayne Johnson, SVP and research analyst, Raymond James Financial
- H. West Richards, executive director, American Transaction Processors Coalition
- Scott Meyerhoff, CFO, InComm
- Steve Karp, chief strategy officer,Worldpay U.S.
- Tony Catalfano, CEO, Worldpay U.S.
- Joe Kleinwaechter, vice president of innovation and design, Worldpay U.S.
- Phil Tomlinson, former chairman and CEO, TSYS
- Malek Mroueh, head of international business development, TSYS
- Sean Banks, principal, TTV Capital
- Debbie Guerra, former head of Brazil unit, First Data
- Brian Mahony, chief strategy officer, Elavon
- Jason Oxman, CEO, Electronic Transactions Association
- Blake Patton, managing partner, Tech Square Ventures
- Grant Wainscott, director of technology industry expansion, Metro Atlanta Chamber
- Allen Lipis, former head of Atlanta Payments Project and founder of Global Concepts Inc.
- Dave Lott, payments risk expert, Federal Reserve Bank of Atlanta
- Brian Egan, vice president, Federal Reserve Bank of Atlanta
- Rich Oliver, former head of ACH system and retired executive vice president and retail payments expert, Federal Reserve Bank of Atlanta
- Laurens Eckelboom, chief strategy officer, ParkMobile U.S.
- Jeffrey Sloan, CEO, Global Payments (earnings call)

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ORIGINS

HOW ATLANTA BECAME A PAYMENTS MECCA

Deep beneath what's now the American Cancer Society building in downtown Atlanta is a cluster of giant cables routing bits and bytes throughout the world.

Coursing through the pipes, amid all the corporate emails, funny cat videos and social media posts are tightly encrypted packets of information that constitute the collective nucleus of modern commerce: electronic payments.

The building, built in 1989 as a technology center, helped fuel what some say was a glut in network capacity in Atlanta, miles of unused "dark fiber" that took some 20 years to fill with data by some estimates. Today, the ACS building alone houses 128,000 square feet of data centers with plenty of room to spare. One myth surrounding the origins of the transaction processing industry in Atlanta is that the city's ample telecommunications infrastructure, built logically along the same right-of-ways as the railroads that created Atlanta, played a key role in its growth.

After all, electronic payments is all about using software to direct information across physical cables, switches, routers and telephone lines — the web of connections that allow your credit or debit card to be authorized within seconds of a swipe.

"That's really what transaction processing is — it's telecom without the voice. All we're doing is shuttling, transporting payment data," says Wayne Johnson, an analyst at Raymond James Financial in Atlanta who covers the processing industry.

But while the infrastructure didn't hurt, industry players are reluctant to draw a straight line between those wires and the prevalence of an industry cluster that supports thousands of jobs in Georgia today. Payments needed early visionaries, and experts agree that it was a mix of talent, technology and timing that drove things forward.

Checks and Balances

The first credit card had been issued by Diners Club International in the 1950s, followed by department store and gas company charge cards. In Atlanta, it took awhile for the attention to turn toward plastic, as banks at the time were swimming in paper: checks that transferred value between customers and companies.

The Federal Reserve Bank of Atlanta, which covered the sixth district encompassing Georgia, Alabama, Florida and parts of other Southern states, had built up its check settlement operations just as regional banks had built massive processing centers to handle the deluge of paper that came in daily via airmail and truck.

"Suddenly large amounts of checks were being written in the Southeast as the population exploded, and, in fact, the sixth Federal Reserve district became over time the largest check volume district in the United States," said Rich Oliver, a retired executive vice president and retail payments expert for the Atlanta Fed.

"There was a lot of paper and printing involved in the early days of electronic payments, but that's just what needed to happen to transition over time."

Meanwhile, the Federal Reserve Bank of San Francisco had worked with its local banks to formulate the Automated Clearing House, or ACH, a software system that could cut out the need to create checks for recurring payments. Instead, an account could now be directly debited, reducing the time, expense and human error of the existing process.

"The paper-based process was expensive, and it was at times clumsy and it was prone to error," Mr. Oliver said, noting that all along, Atlanta was watching what was happening out West. "The senior bankers here took notice. They said, 'You know, That idea is really sharp.'" They worked with the Atlanta Fed to create the Georgia Automated Clearing House Association, or GACHA, the second such association in the country.

Because it was dealing with competitive private banks, the Fed by default became the convener and the central hub for the software systems that made the ACH work. But the process didn't immediately jump from paper to phone lines: Automated clearing was first done through the existing courier networks, with trucks delivering both paper checks and vouchers as well as eight-inch reels of magnetic tape to be read by computers at the few bank processing centers that already had them.

"There was a lot of paper and printing involved in the early days of electronic payments, but that's just what needed to happen to transition over time," said Mr. Oliver, who became the second ACH administrator at the Atlanta Fed just a year after earning a graduate degree in computer science at Georgia Tech.

Atlanta's activity caught the attention of the government, which led to and even bigger win for ACH: its selection as the pilot site for direct deposits of U.S. Air Force salaries. It was later chosen for Social Security checks (Florida, with its army of retirees, was in the Atlanta Fed's district). Those developments brought the scale that the program needed, providing the larger "backbone" that companies and banks used to offer the service to their employees and customers, Mr. Oliver said.

There were all kinds of uses: Banks could more easily clear payments. Insurance companies automatically deducted premiums. Even health clubs loved it, Mr. Oliver said, because they could make new customers sign a direct-debit agreement rather than trying to track down cash after that New Year's resolve wore off.

Atlanta Payments Project

But the ACH didn't happen by chance. Brown Rawlings, an Atlanta Fed senior vice president, had struck an alliance with Professor Paul Han at Georgia Tech, who needed a set of banks to test out a machine he was developing for electronic check processing.

Life Cycle of Georgia's Payments Giants

ORIGIN	EVOLUTION	TURNING POINTS	CURRENT COMPANY
First Railroad and Banking Co. Augusta, Ga.	First Financial Management Corp. grew to become one of the country's largest processors	FFMC bought NaBanco in 1987, then was bought by First Data in 1995, which moved HQ back to Atlanta in 2009	**First Data** $11 billion+ in sales
National Data Corp. Atlanta, 1967	Built major business in health care records, partnered with MasterCard for payment processing	NDC spun off payments business in 2001	**Global Payments** $2.6B in sales
RBS Worldpay United Kingdom	Payments unit sold to private equity; rebranded as Worldpay; owners Bain Capital and Advent invested $1 billion	Worldpay earned £3,627 in revenues globally in 2014. In October, went back to public markets in one of London's biggest IPOs of the year.	**Worldpay U.S.** £1.67 billion ($2.48 billion)
Columbus Bank & Trust Columbus, Ga.	Created "Total System" software product sold to other banks, then offered as a service	Went public in a spinoff from CB&T as Total System Services in 1983	**TSYS** $2.4 billion in sales
NOVA Information Systems Atlanta, 1991	Bought by Elavon, a subsidiary of U.S. Bancorp, for $2 billion in 2001	Investments in innovation include "The Grove", a center focused on mobile payments	**Elavon** Now a top-5 acquirer Estimated $1.5 billion in sales
Fleetcor	Launched in 2000, soon acquiring Fuelman	Steady stream of acquisitions in fuel card sector, helping companies manage costs of their fleets; now nearly 5,000 employees globally	**Fleetcor** $1.2 billion in sales

Mr. Rawlings, now regarded as a visionary in electronic payments, shepherded Dr. Han's idea through the Fed's Board of Governors, and Georgia and Florida banks were chosen for the pilot. The first two phases of what became known as the Atlanta Payments Project were completed by 1970, bolstering the creation of the second ACH in the country.

But that was only half of four phases the board had funded. Phase III was set to take a comprehensive look at the future of electronic banking, and Phase IV would dive into the technology around debit cards. One problem: Dr. Han suddenly died in 1971.

Allen Lipis, then a 31-year-old New York banker, came to Atlanta in May of that year on "temporary" loan from his employer, the bank that would become Citibank. It quickly became evident to him that the project would require more than Georgia Tech graduate students.

Despite being competitors, four of the five largest banks in town sent two senior researchers each to the effort, supported by three people from the Atlanta Fed and three consultants Dr. Lipis hired, he told Global Atlanta.

"Whatever the Fed asked for, the banks in town supported," he said.

They created a 1,300-page study on electronic funds transfer, focusing on the ACH. The study suggested that while checks would continue to be a mainstay of the payments system, 30 percent of their volume could be removed through the system's implementation. Atlanta became a center for expertise around electronic banking, a sector that was changing faster than executives and regulators could keep up on their own.

"The enthusiasm that was generated within our study started to filter out across the country, and we had people who were calling me all the time and saying, 'I want to spend a day and learn about what you're doing,'" Dr. Lipis said.

At that time, many of the digital services taken for granted today were still in their embryonic stages. ATMs were brand new, and First National Bank of Atlanta made a splash in that technology with its famous Tillie the Teller, a friendly female face attached to the ATM in 1974 to personalize what amounted to a computer in a wall. Regulators for awhile were stumped as to whether ATMs constituted bank branches (eventually arriving at "no" because they didn't make loans). Interbank debit networks, allowing cash withdrawals from any ATM with a MAC, Pulse or Star logo, for instance, was still a long way off, Dr. Lipis said.

Credit card networks were also still nascent, and debit cards would really come together only in the 1990s (slower than they would have, Dr. Lipis believes, if the Fed would have agreed to take a more active role).

While waiting to hear whether the Fed would operate a central switch for debit systems, First National Bank issued the Honest Face card, which gave Atlanta supermarkets the assurance that a check cashed by a card-holding customer would be backed up by the bank. That put a damper on the interbank cooperation that had been central to the payments project. As the "loaned" bankers involved returned to their institutions, the team funded itself by selling reports and access to conferences that helped people stay abreast of the industry.

That spawned a series of consultancies in payments and banking research. Dr. Lipis himself, though initially slated to head back to New York, had settled in Atlanta and continued working in the field. He first struck out on his own, later joining Bank Earnings International, a major force in the industry created by Jim Cotton and Jerry Eickhoff.

"There were a lot of very knowledgeable people on payment systems that began to emerge from Atlanta. You start with a little nucleus, and that nucleus trains other people, and other people think they can start their own companies, and so it began to grow, and over a period of 20 years you have maybe six to 10 different companies that emerged because they had the knowledge," Dr. Lipis said.

Banking Regulations and 'Fly Paper'

That intellectual capital — and its decision to park in Atlanta — is in longtime Atlanta technology attorney John Yates's mind the essential ingredient to Atlanta's rise as a payments center.

"The beauty of Atlanta is that people come to Atlanta and stay in Atlanta; that's been one of our largest, most significant assets: We're like fly paper," Mr. Yates of Morris, Manning & Martin LLP told Global Atlanta.

But it didn't happen in a vacuum; the evolution of banking regulations had a role to play.

"Literally on every street corner … you'd have four different banks, and they were not your major banks. They were local or state-oriented banks. We had more banks in this community than you could shake a stick at at that point in time. " Mr. Yates said.

Phil Tomlinson, longtime TSYS chairman and CEO

North Carolina opened up its laws to allow intrastate consolidation among banks, leading to the creation of "mega banks" that began looking at Georgia's many smaller institutions as acquisition targets. In 1985 a Supreme Court ruling effectively legalized cross-state bank mergers.

"That caused what probably were thousands of people that were employed by those banks to have to look for other opportunities. So, literally what occurred in this community, and I saw it over and over again, was a huge pool of banking talent that became available at the same time that the IBM PC and the software revolution was coming about," Mr. Yates said. "That equaled to banking software companies."

Indeed in the 1980s, Atlanta became a hotbed for tech companies helping to automate small banks: Checkfree, InFront, Magnet Communications, Peachtree Software and larger companies that became the payments giants of today. First Data Corp. in the mid-1990s

Allen Lipis was tapped to lead the Atlanta Payments Project.

purchased First Financial Management Corp., a Georgia-born company. Global Payments Inc. was spun out of National Data Corp. in 2001.

Homegrown Innovation

But one Georgia company tends to be cited above all others as a pure progenitor of activity in the transaction-processing space, and it's not based in Atlanta. Now a publicly traded, $2.4 billion company, TSYS's story lends credence to Mr. Yates's view that software seeking a function combined with visionary expertise helped kick-start the industry in earnest.

TSYS got its start as product inside Columbus Bank & Trust, a local bank in Columbus, Ga., that had set up a division to serve its own needs for processing the private-label charge cards it had been issuing to local merchants since the late 1950s.

Phil Tomlinson, who had arrived at CB&T in 1974, said the bank had just gotten a new computer, and though everyone knew it would lend greater efficiency to operations, no one really knew quite what to do with it at first.

Processing checks and card payments seemed the logical choice. With three programmers, the "Total System" software solution was born, and the company began selling it to banks around the region. It landed its first big customer in St. Petersburg, Fla., a bank with 65,000 accounts. That seemed huge to CB&T, which had less than $200 million in capital at the time. Things snowballed from there, as larger banks began seeing the value in outsourcing their card processing.

"Once the word got out, people started showing up and we finally decided that we could be more successful selling the processing services rather than selling the software," Mr. Tomlinson told Global Atlanta.

When a $4 billion bank in Washington state contracted with the company, they knew it was something that could be a giant industry.

"We actually had a board member that said, 'Why in the world would a $4 billion bank in Seattle want to do business with us?' It was a great question and the light bulb went off," said Mr. Tomlinson, who retired as CEO of TSYS in 2014 after more than 30 years with the company.

CB&T's leaders, on their way to creating the banking network that would become Synovus, gave the company the latitude it needed to invest in technology and personnel for growth.

"We were aggressive. We wanted to do something in a big way. If you look at TSYS, we were very fortunate we had an owner who was willing to let us go do what we needed to do," Mr. Tomlinson said. "You had to pay a systems engineer more than you had to pay a branch manager. Not every bank would have been able to do that, because back in the day people didn't know what a systems engineer was."

TSYS was spun out as a public entity in 1983, early for a payments company. At the time, it had 1.5 million accounts, and Mr. Tomlinson they would have been thrilled with 5 million. Today, after more than 30 years of experience including an overhaul of its core software, a landmark decision to keep Columbus as the headquarters and a steady international expansion, the company processes more than 750 million accounts from Dublin to Dubai and Jakarta to Johannesburg.

That has led to nearly 5,000 TSYS jobs in Georgia and 11,000 globally for the company, which shows how the sector can use its historical position to drive future technology growth in a area ripe for innovation. It's taken decades, but a juggernaut that gradually developed over time is finally throwing its weight around, lest the hub developed here pack up for another connected city.

"I think they're finally starting to recognize that the payments business in Georgia is big, and a lot of people just don't recognize it because they're not names like General Electric or some the Fortune 500 companies, but they're names that employ a lot of people," Mr. Tomlinson said.

More than 40,000 — to be specific — and counting.

PAYING ATLANTA FORWARD

FINTECH SECTOR HELPS DRIVE CITY'S TECH ASCENDANCE

NCR is building a $260 million headquarters in Midtown.

Every Friday, ParkMobile's employees hold a planned happy hour at the sleek new bar within the mobile payments company's redesigned Midtown headquarters. It's designed to as a wrapup to the week, but don't label it a "meeting."

"This is the hottest bar in Midtown after 5:00 on Fridays," Laurens Eckelboom, the Dutch-born chief strategy officer for the company, told a recent group of visitors from the local Netherlands-American chamber.

Part of the fun is a periodic putting competition. The as-yet-unclaimed prize for draining a hole-in-one across the office's stained concrete floors? A bottle of whiskey.

ParkMobile, which moved in from the Vinings area, is one of many firms in the financial technology or "fintech" sector flocking to Midtown to avail themselves of what they see as the Atlanta neighborhood's advantages: proximity to talent pools near universities, specifically Georgia Institute of Technology, and amenities like the restaurants, transit stations and housing options they believe will appeal to the innovators who will be driving their industry forward.

ParkMobile, based in the Netherlands, is one of Atlanta's mobile payments players.

NCR Corp., the ATM, software and point-of-sale terminal giant, recently broke ground on the vacant lot at Eighth and Spring streets that will become its state-of-the-art $260 million headquarters, which it's moving in from Gwinnett County. The facility will eventually house 3,600 employees, who will be closer to innovation centers and Hartsfield-Jackson Atlanta International Airport, executives have said.

Like ParkMobile, NCR is one of the many firms citing the need to draw so-called “millennials” — those digital natives born after 1980 and said to eschew cars in favor of transit access and value employers with distinct corporate cultures.

“They are our target audience,” Mr. Eckelboom said.

Leaders from Worldpay, the London-based payments firm, made similar argument when deciding to move their American headquarters into Atlanta from the Sandy Springs building where it had been located since the 1990s.

Tony Catalfano, the CEO of Worldpay U.S., said that in the payment-processing space, where a few players own the data rails on which transactions travel, companies must now innovate at other points in the process to break away from competitors.

Rapid changes are sweeping the point of sale, the place where a credit or debit card is swiped, tapped or inserted — or in the case of apps like Uber, where the payment method is debited after the ride, he said.

"We're being a leader in some of that transformation, but we needed to get to a tech-savvy area where I could attract millennials, and I needed to get to a place where more of that innovation is happening,” Mr. Catalfano told Global Atlanta by phone from his new Atlantic Station offices, where Worldpay will soon occupy six floors and plans to eventually grow to 1,200 people from 400 now.

Mobile payment platforms like Apple Pay and Android Pay are (slowly) gaining momentum, and stores are beginning to use tablets and phones for checkout to boost convenience and drive conversion. Many big retailers are moving toward acceptance of the EMV standard, long established in Europe, where cards come embedded with computerized chips that dramatically improve security over the traditional magnetic strip used in the U.S.

“We wanted to develop a reputation, which is, 'Worldpay has the best technology and the best partnership process that is focused on partnering with innovators who are disrupting the point of sale, not buying POS products and competing with you,'” Mr. Catalfano said.

Steve Karp, Worldpay’s chief strategy officer, says it was also a realization that the company culture needed to catch up with the times.

“We’re not necessarily used to engaging with a bunch of 25-year-olds. They speak differently, they act differently, they think differently. Their expectations for partnership are different, and we’re at least realistic enough to know that we don’t necessarily know how to talk to them,” Mr. Karp told Global Atlanta.

More and more, firms are also setting up their own innovation centers with specific budgets to experiment, piloting ideas and products before incorporating them into their mainstream systems. Elavon, another payments company, set up “The Grove” a few years back to look into mobile payments. AT&T last year set up its Atlanta Foundry in Midtown last year as part of a nationwide network of product innovation centers. Other companies like General Motors, Black and Decker and Panasonic Automotive Sensors have set up innovation or IT hubs around the metro area.

Worldpay took its partnership approach to Technology Square, a cluster of buildings at Fifth and Spring streets where Georgia Tech has hopped the downtown connector. Home to companies, researchers and economic developers, some are calling it the city’s new center of gravity for innovation.

Worldpay gave $1 million to Georgia Tech’s Advanced Technology Development Center to create a fintech program that will include company mentorship and a dedicated curriculum. In return, Worldpay gets closer to the ATDC, the city’s oldest incubator, while showing its loyalty to the city where it chose to remain after a nationwide search. (Some industry boosters have pointed out that the company’s donation amounts to two-thirds of the $1.5 million the City of Atlanta provided to incentivize the in-town move.)

Michelangelo Ho, the ATDC’s “fintech catalyst” whose position was created by Worldpay’s gift, said he’s currently tailoring center’s traditional startup curriculum to the needs of companies like real estate

> “We needed to get to a tech-savvy area where I could attract millennials.”

investment platform Groundfloor and card management platform First Performance Corp., signature members of the center, which has graduated 150 companies over 30-plus years. ATDC sees itself continuing to play a key role connecting a virtuous triangle of startups, corporate partners and investors.

"What we're doing here is accelerating the collision of all three groups, and the ATDC is in a good position to help be that catalyst," Mr. Ho said.

Companies like Worldpay want to be a near that intersection to tap into what tech investors call "serendipity" — chance encounters that can lead to innovation, said Joe Kleinwaechter, vice president of innovation and design.

"It gets us access to what they're thinking, what they're seeing, what they're building," he said of the company's new location.

Blake Patton, managing partner of Tech Square Ventures, an investment fund that often works with fintech companies, said the concept of "open innovation" — working with company-led innovation centers or looking for startup partnerships — is native to tech hubs like Silicon Valley but is only now catching on at the Fortune 500 firms that make up Atlanta's corporate base. Coca-Cola Co.'s Bridge Program, for instance, aims to integrate technology solutions from Israeli startups into its supply chain globally.

Atlanta missed the "first wave of disruption" on fintech innovations like cryptocurrencies and peer-to-peer lending, but that should change as the city's innovation culture matures, Mr. Patton said.

"What you see happening here is what it looks like when it does start becoming an ecosystem," he said.

Atlanta is well positioned because it now has a strong cadre of startup graduates that serve as investors and mentors, a base of corporate giants that will become clients and acquirers for smaller innovators and a growing sense of place around around locations like Tech Square, Ponce City Market and the Atlanta Tech Village in Buckhead.

> "Tech Square is Atlanta's Sand Hill Road; it's Atlanta's Kendall Square."

"Tech Square is Atlanta's Sand Hill Road, it's Atlanta's Kendall Square [near MIT]," said Mr. Patton, who spent time working on startups in Boston. "It doesn't mean that all or even the best innovation is happening here, but it's a hub, a center of activity and a landing point that outsiders can understand. It looks like what they're used to seeing in other tech hubs."

Looking out of his Tech Square office at a new student housing high-rise that will include yet another co-working space, Mr. Patton is convinced that this is Atlanta's moment — both to capitalize on its status as "Transaction Alley," the nation's largest hub for payment processing, and for that sector to help fuel other key industry clusters.

New trends like the sharing economy and the Internet of Things dovetail well with Atlanta's strengths in industries like logistics and cybersecurity, and they create new payment challenges like how to authorize a transaction between devices with no person present.

"These are all problems that transaction processing has been solving at large scale for years," Mr. Patton said.

Grant Wainscott, director of technology industry expansion at the Metro Atlanta Chamber, agrees that the city's strength lies in the complementary nature of its tech sectors.

"We're so fortunate to not be a one-horse town. It's a fantastic story to say that we are the convergence of mobility meets cybersecurity meets payments meets fintech, and I don't think you can point to another region that can say that," Mr. Wainscott said. "You don't have to explain to transaction processing why cyber's important. They all get it. It's almost our own atmosphere, and we're all breathing the same oxygen and we understand what needs to be done."

Longtime Atlanta technology attorney John Yates of Morris, Manning and Martin says the breadth of Atlanta's tech industry, underpinned by payments, is starting to attract "bees to the honey" as the city's reputation grows in the eyes of investors globally. Small fintech players here have unrivaled proximity to big processors, providing a unique advantage over other hubs.

"It's like a game board, and we can fill every box on the board right now," he said. "We're seen that way outside the community by the investment community, so they're spending more time here wanting to see what kinds of business is here."

Tech Square is transforming Midtown, providing a reference point for investors.

A diversity of employers also leads to vibrancy in the tech labor market, especially as the processing comes out of the background. Traditionally not considered as "cool" as consumer-facing brands, payments companies are now pointing out how important their industry is to underpinning the modern economy.

"We're not going to build a brand in a way that a kid at Georgia Tech is going to know who we are because of that, but what we actually do is pretty cool and as relevant in the average of life of every single person as any other industry," says Mr. Karp of Worldpay.

And it's getting more important as electronic payments become integral to customer satisfaction, whether in apps like Uber and ParkMobile or in more tangible settings like buying a cocktail from the Monsieur "robotic bartender" being developed at Georgia Tech.

Traditionally, industries like manufacturing have taken precedence in the eyes of political leaders, which Mr. Karp views understandable given that payments firms make their living moving bits and bytes, rather than creating cars or iPhones. "We're not as sexy as Porsche," he joked, alluding to the auto maker's new headquarters by the airport. "We don't have a test track." That's now changing with the emergence of institutions in Atlanta that aim to tell the industry's story to legislators, economic developers, tech investors and the public at large.

The American Transaction Processors Coalition launched in Atlanta in April 2014 as a voice in Washington for an industry it says supports 40,000 Georgia jobs directly. It now counts key Georgia congressional leaders — including Rep. Tom Price, R-Roswell, and Republican Sen. Johnny Isakson — among its allies and has worked with the Electronic Transaction Association to drive the creation of a payments caucus in both houses of Congress. Locally, the coalition helped foster PeachPay, a corporate advisory council to Federal Reserve Bank of Atlanta.

The Metro Atlanta Chamber is in the process of building a Fintech Task Force — following the model of a similar group on mobility that has brought major conferences here. The Technology Association of Georgia has a Fintech Society, one of some 30 groups under the umbrella of the 30,000-member nonprofit.

At stake in these efforts is not only future expansion of Transaction Alley, but also the ground the city has already gained, says H. West Richards, the ATPC's executive director.

As Worldpay's headquarters search shows, global companies are always looking for the most favorable environment, and payments firms don't have capital equipment tying them down.

To keep what Atlanta has built, Mr. Richards says the city and state should introduce payments-related incentive programs, pass favorable laws, institute training programs to ensure a pipeline of industry talent, maintain healthy incubators and attract investment capital.

"We're either going to do all these things or we're going to slowly lose all these companies" to aggressive places like Florida and Texas, he said, adding a silver lining to his warning: Atlanta could become the "crossroads of digital commerce" for the 21st century, he said.

"You do all these things in payment processing, and 25 years from now and Atlanta could be on par with New York, Chicago and San Francisco as an international innovation and financial services center. I don't think you could do that in other sectors."

GEORGIA GIANTS CASH IN AS WORLD MOVES FROM PAPER TO PLASTIC

When promoting the payments industry -- the web of companies making things work behind the scenes when you swipe your credit card -- Atlanta boosters often mention the fact that 70 percent of U.S. transactions pass through companies in Georgia.

That may sound impressive, but it could be understating the future opportunity in the industry: About 95 percent of consumers live outside the U.S., and the market for outsourced card-processing services internationally is slated to grow twice as fast as in the U.S. in the coming years.

Now more than ever, some of the big names anchoring Georgia's Transaction Alley are looking abroad, with implications for the growth of a legacy sector that is gaining increasing prominence as its helps reshape Atlanta's technology landscape.

Overseas, the opportunities seem boundless. Asia has 55 percent of the world's people but less than 30 percent of its card transactions. Brazil's 200 million people have steadily moved from cash to card over the last decade. And in the European Union, new regulations are helping create a true common market of 500 million people and 28 countries from a payments perspective.

In merchant-acquiring, a sector where companies like Atlanta-based First Data Corp. and Elavon help sellers accept card payments, international revenues were nearly four times higher outside than inside the U.S. in 2013, according to research firm Raymond James Associates Inc. By 2018, that disparity is projected to widen: $69 billion overseas to $15 billion domestically.

On the other side of the business, providing processing services to the banks issuing payment cards, the international market is slated to grow by 4.1 percent to $29.8 billion while the domestic market contracts by 1.2 percent to $2.6 billion, according to the same study.

Many Atlanta-based firms, then, face an enviable problem: prioritizing between modest growth in their substantial home market and potentially exponential growth cumulatively overseas.

"There aren't that many bad markets. It's really that there are better markets, and the reason is that transaction volumes are all positive," said Wayne Johnson, an analyst at Raymond James in Atlanta covering transaction processing companies.

According to a study by MasterCard Advisors, 60 percent of the world's payments are still paper-based, and that's just those that can be measured. By nature, electronic transactions grow along with electricity infrastructure, and they go hand-in-hand with developing countries' efforts to bring more consumers into the formal economy.

That said, it's not always easy for large U.S. firms to crack new markets in a highly regulated industry where they have to be attuned to widely varying consumer buying habits and merchant needs.

> "As we say in our offices, 'The sun never sets on Global Payments.'"

While some promising countries like China are hard to access due to regulations that favor local companies, payments firms are learning how to strike deals all over the world.

Jason Oxman, CEO of the Electronic Transactions Association in Washington, said the organization counts among its members foreign firms like China's Alipay and Brazil's EBanx, both of which look to provide e-commerce solutions for U.S. merchants in their complex markets.

Conversely, American firms are finding less competition abroad than on the crowded playing field at home.

"There are more than 13,000 card issuers here in the U.S. It's just an incredibly robustly competitive market. You look outside the U.S., and there are some countries where there are one or two, so it definitely is an opportunity," Mr. Oxman said.

Working with those banks allows processors to build scale quickly, which is hugely important in an industry that relies on taking a tiny fraction of fees generated by millions of transactions, said Mr. Johnson.

"The good news going to some of these countries is that there is bigger bang for the buck," he said, citing Brazil and other locales. "You go to one financial institution, and the positive operating leverage from that one contract is much larger than it would be in the U.S."

The flip side is that big banks in many countries have a lot of pricing power and can squeeze margins. Within the "interchange" fee charged to a merchant to accept a payment, processors often have the smallest and most elastic portion, and regulations in some countries have introduced caps. While banks can raise interest rates to increase revenues, processors' potential is limited.

"The downside is all these institutions know they represent 25-30 percent of that market, so they totally play it," Mr. Johnson said of big banks.

Partnerships Key When Entering New Markets

Global Payments, a $2.6 billion company by revenues, has used both acquisitions and joint ventures in Asia and Europe in an effort to live up to its ambitious brand name as it seeks to grow into the Fortune 500 list (it's now on the Fortune 1000 at No. 851).

"The name foreshadowed the vision — what the company was working toward and all the worldwide growth that was to come," CEO Jeffrey Sloan wrote in the Technology Association of Georgia's HUB magazine in February.

Half of the company's revenues now come from the 28 countries where it operates.

"As we say in our offices, the sun never sets on Global Payments. We can wake up in Atlanta as someone is just ending the work day in one of our Asia offices, or they are in the middle of things in Europe. We go to sleep in the eastern United States and our team is getting started in Australia. Things just keep moving all around the world," wrote Mr. Sloan, who was not made available to comment for this story.

Key to its global success is Europe, which has largely been tapped through a partnership Spain's CaixaBank launched in 2010. Earlier this year the partners announced a joint venture with Vienna-based Erste

Group to target Central and Eastern Europe. Separately, Global Payments also recently acquired Realex, an Irish firm with the top e-commerce payment gateway in Europe.

"The Realex and Erste Bank transactions highlight our commitment to maintaining a preeminent position in Europe," Mr. Sloan said in a recent earnings call, as the company announced $278.4 million in profit for the fiscal year ending in May 2015, up 13 percent from last year, and that's with negative currency impacts dampening higher growth from international markets.

Elavon, another Atlanta payments firm, has also benefited from partnerships designed to gain make quick headway in a market, Brian Mahony, the company's chief strategy officer, told Global Atlanta. It's also working in Europe through a partnership with a Spanish bank, Santander, and has deepened its reach into emerging markets. In Southeast Asia, where its international partners have weaker networks, Elavon will likely work through relationships with domestic banks, he said, much like Global Payments has done with its Bank of the Philippine Islands joint venture.

"When we enter an overseas market, there are two things that we're looking for: access to distribution and knowhow to work in market," Mr. Mahony said. "It's unusual for us to enter a market de novo."

In Brazil, Elavon has opted for a collaboration with Credicard, a subsidiary of Citigroup. Now it has about 1 percent of the Brazilian market

Brazil's economy may be down, but it has provided steady opportunity for payment processors.

and nowhere to go but up, Mr. Mahony said.

"There's no question we're going to grow," he said, noting that despite the depreciation of the Brazilian real and the country's ongoing economic woes, the march toward electronic payments isn't likely to slow down.

First Data, the world's largest processor by revenues, has taken a more direct approach to entering new foreign markets, establishing subsidiaries in 33 countries from Poland to India to Argentina.

The debt-laden company, which recently raised $2.8 billion in an initial public offering, is shining a new spotlight on global markets as it tries to ignite a turnaround under CEO Frank Bisagnaro.

Earlier this year First Data established an international advisory board chaired by former U.S. Sen. Bill Bradley of New Jersey. Also appointed was R.K. Sehgal, the former commissioner of what's now the Georgia Department of Economic Development, who has experience in India and beyond.

Last year, the United Kingdom, Germany and Australia combined to make up about 42 percent of sales, but First Data is continuing to diversify geographically. International, previously its own division, has been incorporated into other business units.

A prime example of First Data's approach is Brazil, where the company last August introduced Bin, its merchant-acquiring solution for the local market, after more than two years of research and development and an investment of $150 million. The launch was underpinned by a partnership with Bancoob, a credit union with the equivalent of 2,200 branches throughout Brazil, which will offer First Data's solutions to its business customers. More than 200 team members were hired in Brazil to help develop and deploy Bin.

They told TSYS it couldn't build a tech company in Columbus, but 750 million accounts later, it proved them wrong.

Executives said the timing was right in a market that had long been dominated by two major players, Cielo and Rede, legacy companies that basically formed a duopoly based on Mastercard and Visa acceptance until regulations encouraging competition were enacted about five years ago.

In Brazil, First Data could combine localized solutions with its global scale, building its on-the-ground presence while enhancing its ability to serve multinational clients operating within Brazil, Debbie Guerra, former general manager of the company's Brazil unit, told Global Atlanta during a 2014 visit to the First Data offices in Sao Paulo.

"We've spent the time to launch with a full solution, and we've put a lot of force behind our sales and distribution channels in order to make sure that the growth comes with the investment," Ms. Guerra said a few months before Bin was announced.

Localized Solutions in Brazil and Beyond

Brazil's unique challenges exemplify how complexity can beget opportunity for payment solutions providers.

It's common practice, for instance, for customers to pay for items placed on a credit card in installments, meaning the processor has to be ready to split the cost into multiple parts, which Ms. Guerra said isn't as easy as it sounds.

On the merchant side, it can take 30 days or more to get paid by the banks after a credit-card payment is approved, so acquirers have begun releasing the money upfront with a product called "anticipation of receivables." Merchants pay higher fees for the service, which helps them better manage cash flow.

Like Elavon's Mr. Mahony, Ms. Guerra said the company sees itself as part of an inexorable move to electronic payments, which, while raising the specter of a consumer debt crisis, is also helping aid the poverty reduction that Brazil has achieved within the last decade.

"It's not just about setting up a business, making money, though that clearly is part of it, being part of a growing market. But it really is about participating in the changing landscape financially for Brazil and being able drive a more inclusive financial system. That, to me, gives a lot of purpose to your job," she said.

TSYS Inc., a $2.4 billion processor based in Columbus, Ga., has also taken its business to places where the industry is still immature, even as it grows its share in developed markets like Europe. Recently, for instance, a client in Vietnam worked with TSYS to provide biometric identification on ATM transactions.

TSYS's Dubai office reaches into Africa, where banks had been reluctant to issue true credit cards, instead opting for debit cards or cash cards that could only be used at ATMs. TSYS helped banks in Kenya and elsewhere introduce credit cards, going so far as to install technology needed for authentication within bank branches, both to comply with regulations and to allay their fears about security.

"What we do in Columbus is set up operations and provide services to the banks directly. In Africa we actually put that technology in the bank. The predominate reason is that we want the banks to get educated in how to run the card business. Our view is that this will help them really understand the business and at some point they will get to a South Africa sort of capabilities; then the outsourcing makes sense," said Malek Mroueh, who until February headed up the Middle East, Africa and Pakistan for TSYS.

Now head of international business development but still based in Dubai, Mr. Mroueh said the company is prepping for a future of "branchless" banking on the continent and in other developing markets.

In some ways it's already here: Kenya's M-Pesa service allows users to load cash onto their phones and then withdraw it from agents. Pakistan's EasyPaisa is similar, and the number of agents for the service has surpassed the number of bank branches in that country, Mr. Mroueh wrote in a white paper on branchless banking for TSYS.

Bringing Back Innovation

TSYS and other companies have seen their competitiveness enhanced by exposure to international markets, as solutions created in one part of the world can often be adapted to another, strengthening their overall portfolios.

One example: Bank cards TSYS developed in Arab states to comply with Shariah laws could eventually be rolled out in Africa, said the British-born Mr. Mroueh, who early in his tenure spent two months in training in Columbus to learn its service culture.

Phil Tomlinson, the longtime CEO of TSYS who retired in 2014, told Global Atlanta that international expansion has been key to the company's ascent since it went public in 1983. At the time, it had 1.5 million accounts and would have been ecstatic with 5 million just in the U.S. Now, it processes more than 750 million accounts worldwide. Needless to say, cross-cultural capabilities have had to grow as its reach has expanded, and training its overseas staff has become critical. The company now has service centers in South Africa, Cyprus and elsewhere and operates a joint venture with China UnionPay, the world's second largest credit and debit card network behind Visa.

"We started stretching out to Mexico, Canada, England, Scotland, Ireland, China — we had to learn how to do business in different cultures. We found that they didn't want to change their culture to American culture, but what they have all loved is that we have had great technology with a can-do attitude," Mr. Tomlinson said.

Paying attention to employees also helps: When banks shut down in Cyprus a few years back, other companies wrung their hands about how to pay employees. TSYS sent in folks with cash in suitcases, Mr. Tomlinson said.

Prepaid card provider InComm, which recently decided to expand its downtown Atlanta headquarters and its Georgia operations, believes tailoring products is the only way to go in new markets, said Scott Meyerhoff, the company's chief financial officer.

"What we've learned over the years is that each country is different, and if we try to go ahead with a U.S.-based model and stick it in another country, the only thing we'll do is fail, so we've really morphed to local tastes, local views of the world, local products in many respects," Mr. Meyerhoff said.

Japan provides an instructive example: There, Apple iTunes gift cards are purchased for one's self rather than for a friend or relative, and they're redeemed in a matter of minutes rather than weeks, Mr. Meyerhoff said.

"Sometimes you succeed in spite of yourself," he told Global Atlanta. "I don't think we went into Japan thinking that this was going to be used any differently, and we quickly realized it's a self-use purchase and not a gift. Now we're trying to change the culture of the way people think, that this product can be a gift as well."

In Brazil, InComm has launched various partnerships, including one that allows players of the online game Minecraft to buy virtual goods with prepaid cards sold in stores.

While Atlanta firms are headed overseas, some foreign-based payments firms have also benefited from their international networks when accessing the American market.

Like InComm, London-based Worldpay has learned that a functional solution in one market can't be "hammered" into another, the company's U.S. CEO Tony Catalfano told Global Atlanta.

"You have to start with the customer and the customer's business problems and what you're solving that are specific, but there's absolutely opportunity for leverage," Mr. Catalfano said.

He noted that Worldpay, which is investing heavily in its new Atlanta headquarters, has had an advantage as new, more secure EMV chip cards come on line to replace the magnetic stripe in the U.S. Despite being the "hot new buzz" here, EMV is old news in Europe, where it was developed.

"One of the nice advantages for me was that our U.K. business has been (involved with EMV) for six or seven years. We pull on each other very strongly for what's the best in security, data protection and those kinds of things, and there's also a lot of learning around things we've tested in each market," Mr. Catalfano said in an interview.

Steve Karp, Worldpay's chief strategy officer in the U.S., agreed, saying he can easily pick up the phone and call people at the home base when dealing with a tough issue.

"They're like our big brother in many ways," he said, nodding to Worldpay's 40 percent share in its home market.

Still, Worldpay U.S. has about 5 percent of a much larger processing market, and it'ss working to help its domestic merchants here go global, especially in e-commerce.

"If they own a website, they want to make sure they can operate as globally as possible. That means that when a cardholder shops at my website, their card may be issued by a foreign bank, and I want to be able to accept that card. That isn't a given; it doesn't just magically happen," Mr. Karp said, adding that Worldpay helps support "dynamic currency conversion," the ability to display prices to the buyer in their home currency and settle the transaction in U.S. dollars.

Ultimately, Mr. Johnson of Raymond James says globalization, updates to point-of-sale devices, security enhancements, the increasing use of the mobile device in payments have created a "sweet spot" of volatility that will serve the industry well.

"It's a big market; there's lots of change right now, and that's why the space is in demand. Change is good for outsourced service providers, because it's a reason to contact your existing clients and potentially new clients," Mr. Johnson said.

And with the U.S. and Europe occupying the dominant positions in the payments universe at the moment, they have a unique opportunity to bring innovations into less developed markets.

As the Raymond James "Investor's Guide to the Payments Galaxy" says:

The least-penetrated geographies for electronic payments are the Middle East/Africa, Asia-Pacific, and Latin America. Lower penetration rates lead to higher current, and we believe, future growth rates for electronic payment metrics, as payment cards and transactions are both expanding at a faster rate worldwide than in the United States.

Or as the Atlanta-based American Transaction Processors Coalition put it in its 2014 annual report: *Future growth will be driven by U.S. and European product innovation and consumer demand in countries with low credit card penetration … The world continues to migrate towards electronic payment processing for purchases as diverse as energy bills in sub-Saharan Africa to soda from a vending machine in Brazil. Building the security and technical tools and systems to meet this growing demand is a huge opportunity, and American companies are poised to play the leading role*

Mobile & Global: Atlanta's Role in the Future of Cashless, Connected Commerce

First swipe. Then click. Now tap — the verbs describing how we pay for things are changing as commerce evolves.

And to hear executives in Atlanta's payment industry tell it, the world has arrived at a crossroads where the future methods for exchanging value are in the process of being determined.

Or, as Boston Consulting Group put it in a 2014 report: "Never in the history of the payments industry has there been a time of such disruption and opportunity across regions."

That's because transactions are becoming increasingly global, as e-commerce grow worldwide and as travelers come to expect a similar payment experience whether in Atlanta or Asia. They're also going more mobile as the smartphone reinvents the wallet, throwing a wrench into the old question of cash or card.

The shift away from paper has accelerated. In 2000, checks made up 80 percent of non-cash payments. In 2012, the last year the Federal Reserve tracked the statistic for its triennial study on the topic, check volumes had plummeted to 15 percent. Combined, debit, credit and prepaid cards made up 66 percent of payment transactions in the U.S., with debit cards leading the pack.

At the same time, some innovations have been slow on the uptake in the U.S., and the connected world has introduced previously unforeseen security challenges.

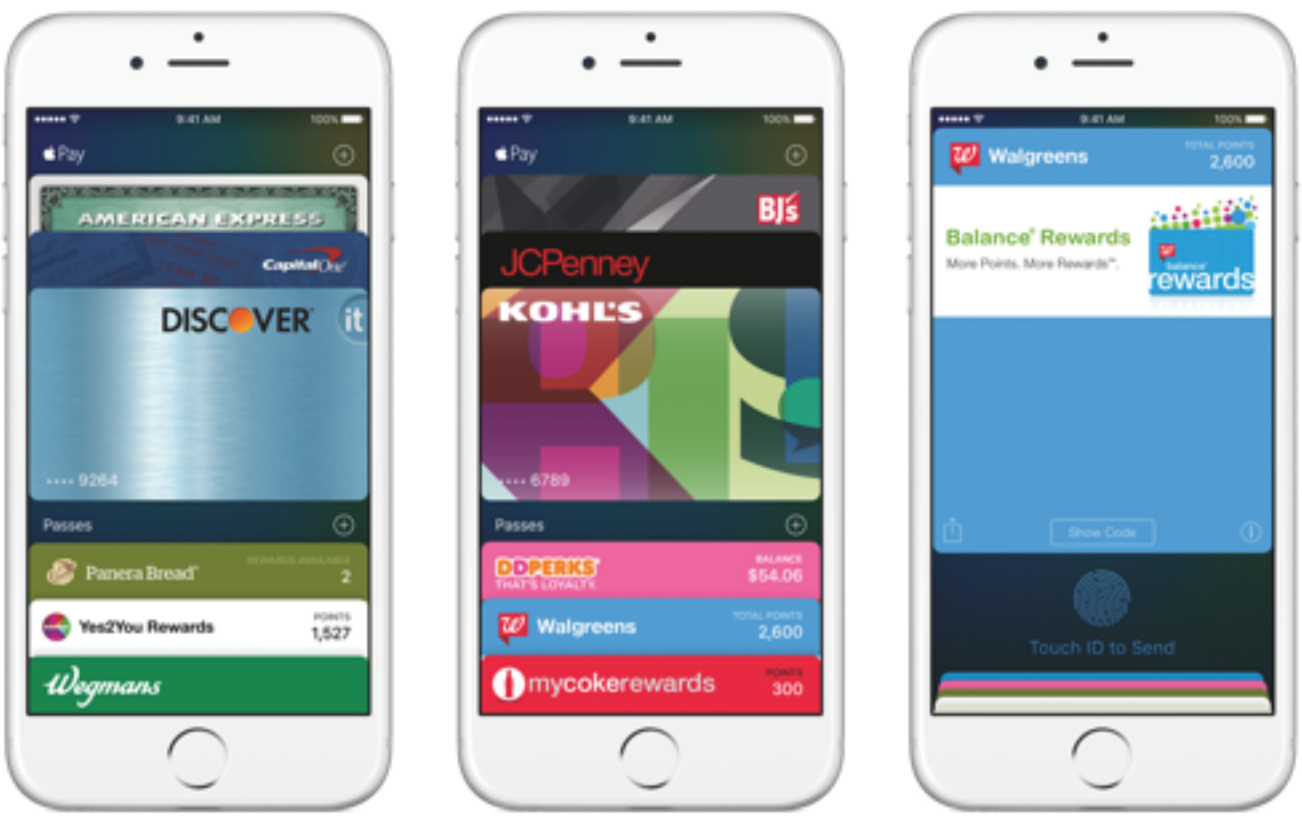
One core conundrum now driving innovation (and regulation) is how to speed up the payment process while at the same time enhancing security in a world where fraud costs issuers $7.1 billion per year and threats gravitate to the weakest link in the security chain.

"Speed, certainty and security are really important components of a system that engenders confidence and enables commerce to work more efficiently," said Brian Egan of the Federal Reserve Bank of Atlanta's Retail Payments Risk Forum.

And that has big implications for the economy as a whole.

"In a lot of ways the cost of payments is a tax, and if I don't have to pay that tax, then the cost of the goods and services that are being exchanged should be lower," Mr. Egan said.

The problem is that the incentives aren't always aligned on security. Greater security often means more "friction," the small headaches that make completing a transaction just a



few seconds slower, like entering a code or signing a receipt. Getting this balance right can determine which methods take off and which stall out.

EMV Helps Drive Mobile Adoption

The average American has four payment cards in his or her wallet or purse; if you're in that club, you've probably been receiving new cards in the mail embedded with computer chips. And when you've taken them to Target or another store, they've probably asked you to insert the card into the reader rather than swipe it the way you're used to.

That's thanks to the move to EMV, named after Europay, MasterCard and Visa, which banded together to develop it in Europe two decades ago. While it's the standard in most of the world, it hasn't caught on in the U.S. until recently.

Why the lag, especially when the chip-and-PIN technology is known to be much more secure than the magnetic strips from which information is intercepted relatively easily? There are a few reasons, but basically because the introduction of new payment methods always presents a chicken-and-egg problem, experts say.

"Consumers will use a new payment system if it's widely available, and merchants will put a new system in if it's widely used. But you can't get the merchant to do it unless there are lots of consumers that carry the cards," Allen Lipis, a long-time electronic payments expert, told Global Atlanta.

But with high-profile breaches of consumers' card

Chip cards are reducing fraud, but they're also driving mobile adoption.

information at retailers in the last few years, their inertia was finally overcome, says Dave Lott, also of the Atlanta Fed's risk forum.

"When that happened, the payment system kind of woke up and said, 'We have a serious weakness here that criminals are really starting to exploit on a large scale, and we need to start putting in place protections,'" Mr. Lott said.

As of Oct. 1, credit card associations like Visa, MasterCard and American Express shifted liability for any unauthorized transactions onto the merchant if the customer presents a chip card that can't be read by the register.

"I think some retailers are making an economic calculation about the risk of fraud liability versus the cost to upgrade," said Jason Oxman, CEO of the Electronic Transactions Association in Washington, who added that it was a no-brainer for electronics stores, jewelry stores and large retailers subject to fraud and cyber attacks. "The big box stores - they're done already."

Because of this, some industry watchers believe the EMV has been a godsend for mobile payments, another area where the U.S. has lagged the world.

Shrewdly, some say, Apple Inc. waited for the shift to introduce its Apple Pay service, which relies on registers embedded with the tap-to-pay technology in widespread use elsewhere globally: near-field communication. The reasoning was simple: If merchants were upgrading their registers anyway to comply with EMV, they'd also incorporate NFC.

The entry of Apple into the space was heralded as a watershed moment, but mobile still accounts for a tiny fraction of overall transaction volumes, and relatively few Apple iPhone 6 and 6 Plus users (the only models for which the service is available) have even tried the solution. At the same time, competition among mobile wallets is heating up, with Samsung Pay and Android Pay entering the scene and stores like Walmart and the 80 members of the MCX

Merchants group formulating their own solutions.

"By no means is the scene set for how this is going to operate," Brian Mahony, chief strategy officer at Atlanta-based Elavon, told Global Atlanta.

Security is key — and the phone presents new options both for protecting transactions and making sure the right person initiates them. Apple Pay and other methods use "tokenization" to send a code to the merchant instead of the full card number. At the same time, fingerprint readers and cameras can help verify the identity of the user. In short, it's a space that is evolving quickly.

"It's like the Wild West. We're going to see consolidation, we're going to see standardization both domestically and internationally, but we haven't seen it yet."

Technology attorney John Yates of Morris, Manning & Martin LLP, agreed, saying mobile payments is still the "Wild West," a bit like the competition among operating systems that occurred upon the release of the IBM personal computer in the 1980s.

"We're going to see consolidation, we're going to see standardization both domestically and internationally, but we haven't seen it yet," Mr. Yates said.

This holiday shopping season will go a long way toward driving mobile adoption as U.S. consumers are hit with the reality of slower EMV transactions, where the card has to stay in the reader while the chip is authorized, said Sean Banks, principal of Atlanta-based TTV Capital.

"The latency transaction speed at the point of sale will be fairly slow, and it will lead to a bunch of frustrated shoppers," Mr. Banks said.

Still, whether mobile will "take off" is a relative question, considering its low starting point, he said.

"I think this is a long game. Big companies— Samsung, Google and Apple — are the ones that will ultimately be the winners, not the little guys, because they can afford for wait to adoption to come. I still think it's a long cycle before it overtakes 10-15 percent of the swipe volume."

Can Atlanta Capture the Disruption?

So what does all this mean for Atlanta, a city whose financial technology sector largely revolves around large firms with tried-and-true business models focused on taking a small cut of millions of transactions? It means opportunity — if they're proactive about fostering innovation, says Blake Patton, managing partner of Tech Square Ventures. Atlanta missed the boat on things like bitcoin, the virtual currency; Square, the card reader that drove card acceptance for thousands of small merchants; and PayPal, the electronic wallet introduced early by eBay. "That innovation is going to happen, period. The only question is how much of it we're going to drive here," Mr. Patton said.

Holding the keys to the payment rails and relationships with hundreds of thousands of merchants, processors can provide immense value in helping budding fintech entrepreneurs match their solutions with market needs, he said.

John Yates is a longtime Atlanta technology attorney at Morris, Manning & Martin.

“I think they’re going to look at the sort of land that they hold as their ability to disrupt,” he said.

Mr. Yates, the Morris, Manning attorney, agreed, saying that Atlanta’s status as a business-to-business hub, while making it less visible than Silicon Valley in the media, gives it a position in the financial-technology space that is starting to get noticed by investors.

"The proximity to the processors is very unique. It allows the local entrepreneur to get a good inside look at what are the issues, what are the problems, what are the challenges, where might these large companies be going — and then tailor the entrepreneurial solution of the fintech company to address that need. That’s a unique benefit that we have,” he said.

Worldpay, the London-based firm with its U.S. headquarters in Atlanta, is already moving that direction by relocating its headquarters to Midtown, closer to Georgia Tech and the intellectual capital that can help churn out tailored solutions in an increasingly on-demand world.

For business, the company is creating payments offerings targeted to specific industries like grocery store chains, while working to address new changes at the point of sale, like customers ordering a coffee in advance for pickup or retail outlets accepting cards on an iPad to free up space at the checkout counter.

Building on mobile, Chief Strategy Officer Steve Karp sees a future where beacon technology enables merchants to offer coupons or debit payments from your phone based on location, without removing anything from your pocket — though he concedes it’s key not to be too early to the market with some things.

Other examples of efforts to reduce friction abound. In the case of Uber, the ride-sharing service, the passenger exchanges no money with the driver, and the payment happens seemingly magically in the background after hopping out of the car. McDonald’s and Google are testing a voice-activated payments system. To handle the issue of fraud in e-commerce, companies are looking at new ways to identify a cardholder based on their typing patterns or an iris scan from a webcam.

"If the way I type on the keyboard or move the mouse have already identified me to that computer, then why do I have to prove that I’m anyone else but the person that has been using that computer all along? When we get that friction removed, to me that’s the big ambitious play,” said Joe Kleinwaechter, vice president of innovation and design at Worldpay.

That’s especially true as e-commerce grows from $1.9 trillion in 2015 to $2.4 trillion globally by 2023, with e-wallets like PayPal and China’s Alipay continuing to take share from traditional credit card payments. Nearly a quarter of that spending will happen directly on mobile phones, Worldpay projects.

But the Internet of Things takes the conversation one step further, as connected devices interact with each other with or without human guidance, Mr. Patton says. The payments applications are myriad: Refrigerators can order milk when you’re running low. In a factory setting, a robot can order raw materials when they’re in short supply. Already ParkMobile, a Netherlands-based mobile payments firm with an Atlanta office, sees cars as the “largest wearable” and is working to integrate its parking payment solution into the connected dashboards being introduced by auto makers.

Mr. Patton says that’s an advantage for a city with a broad tech base.

"Fintech is a kind of pervasive opportunity, but I think Atlanta’s opportunity is that we’re already good at all the other things.”

Grant Wainscott,
Director of
Technology
Industry Expansion,
**Metro Atlanta
Chamber**

Brian Mahony,
Chief Strategy
Officer
Elavon

ROUNDTABLE:

How Does Payments Drive Atlanta Innovation?

Blake Patton,
Managing Partner
**Tech Square
Ventures**

Joe Kleinwaechter,
VP of Innovation
and Design
Worldpay

Moderated by:
Trevor Williams
Managing Editor,
Global Atlanta

In November, Global Atlanta convened a group of experts from the payments and fintech to discuss how they're driving the broader technology landscape forward in Atlanta.

Paying Atlanta Forward was held at the offices of the law firm Arnall Golden Gregory LLP, the event sponsor, with participation from the American Transaction Processors Coalition.

AGG Attorney Edward Marshall gave a behind-the-scenes look at a typical payment transaction, outlining the variety of players and institutions involved in the complex web of interactions that occur in seconds after the simple act of swiping or inserting a credit or debit card. ATPC Executive Director H. West Richards showcased the coalition's work in raising the profile of a largely unseen industry that accounts for 40,000 Georgia jobs.

The luncheon discussion focused on topics such as how payments firms approach global markets, how to attract and retain tech-savvy millennial workers, how metro Atlanta can keep its dominant position as "Transaction Alley" and how companies are approaching the concept of open innovation, partnering with schools and startups in newly launched innovation centers and sometimes even relocating their headquarters to what they see as the new centers of gravity for tech growth.

Trevor Williams, managing editor, Global Atlanta: Worldpay has just moved into Atlantic Station from the Perimeter. Why now, and why did Worldpay see fit to enter into a strategic partnership with Georgia Tech's Advanced Technology Development Center to the tune of $1 million?

Joe Kleinwaechter, vice president of innovation and strategy, Worldpay: Your closeness to people makes a big difference in how you engage and how you benefit from each other. And then also the closer you are together the more willing you are create something, synthesize something new. And really this site is about propinquity for us. It's got Georgia Tech just down the road. We're in the heart of Transaction Alley. We're in a space where a lot of the partners that we have to work with, need to work with, have to build payments solutions with, are a stone's throw away for us. It's so much easier when you're near somebody that you can actually find something that maybe you didn't expect, and that's where a lot of innovation happens. It's not the planned conversations; sometimes it's the accidental conversations, and those conversations happen when you're in the middle of where all those conversations are taking place. Georgia Tech was a natural draw for us and was one of the prime reasons, but also there were a lot of people that wanted — talent that wants — to stay down here now in Midtown, and we want to draw that talent.

Williams: What about specifically from a processing perspective? It seems there are, what, five or six companies that run the rails of payment processing, the infrastructure that makes that happen, so companies are having to innovate to move up the value chain in order to keep their customers. What's Worldpay doing on that front and how are you recruiting along those lines with your employees?

Kleinwaechter: Our strategy is simple: It's a partnering strategy. In colloquial terms, we want to help the disruptors disrupt, and the disruptors are down here. They're at places like the ATDC and other incubators that are trying to disrupt the world. For us to partner with them, it helps us twofold: First of all, gives us access to what they're thinking, what they're seeing, what they're knowing to keep us fresh and honest about what we're seeing. And just as importantly, we can fuel them with rails and experiences that a lot of our companies that are down here are now giving.

Williams: Blake, companies are now looking outside their walls to innovate. Can you talk about that trend, how that's developed and how that's different from maybe the way companies have approached innovation before, especially in payments and fintech?

Blake Patton, managing partner, Tech Square Ventures: From my vantage point as a venture capitalist investing in these seed and early-stage technologies, what has been the big change for Atlanta and I think for the Southeast is that although it's new here, it really hasn't been new in the technology community.

Traditional technology hubs like Silicon Valley and Boston, their giant companies happen to be technology companies, and they've been doing this since the '80s — this kind of ecosystem where the large companies interact with startups. They become their first customers. They acquire these companies. They invest in these companies. People leave these companies and start new companies, so it really forms the entire ecosystem, and that's a little bit of what we've lacked in the Southeast because our giants haven't been technology companies. But now we see more and more large companies starting to embrace open innovation, I think that's also why you're starting to see more innovation and startup activity here in Atlanta because it kind of completes that ecosystem. That's been a piece that we've been missing.

Our fund is Tech Square Ventures, and we're located in Tech Square for all the reasons Joe just said — the serendipity of all the things that happen when you put all those things together and people bump into each other and new opportunities emerge. One of the neatest things to see in Tech Square over the past few years are these corporate innovation centers opening up — Worldpay and the ATDC partnership, but it's also Coca-Cola, Delta was just announced yesterday, Home Depot, Thyssenkrupp, Panasonic, AT&T (and I'm probably forgetting a half-dozen others).

Part of it is just about being near this talent that otherwise doesn't happen to walk through their front doors. Some of it's about figuring out ways to have skunkworks operations and take their R&D efforts and put them in an environment that is more similar to what goes on in a startup environment … Some of it's about investing in startups. And some of it's about just creating an environment to engage startups that kind of de-risks that interaction before they hand them off to the business units internally recognizing that startups have a tough time selling … to big companies … I think it's a whole bunch of activity and it's been fantastic to see this development in Tech Square. I used to live in Boston, and it reminds me exactly of what saw in Kendall Square beside MIT in the '90s. So I started to think of this as kind of our Kendall Square, our Sand Hill Road in Silicon Valley.

Williams: Grant, I wanted to bring you in on this because you're out in the technology world but you're not specifically focused on fintech on its own. I've noticed that payments underpins a lot of other technological advancements and industries, and in particular I think there are two in Atlanta that are directly related when you talk about the future of payments. It's mobility — everybody's talking about how we can get more adoption on the mobile phone of payments, and Apple Pay has just come out — but also there's cybersecurity, because everyone wants to make sure their payments are secure. Can you talk about how the FinTech sort of underpins and interacts with the other technology sectors that the chamber has been so intent on promoting?

Grant Wainscott, director of technology industry expansion, Metro Atlanta Chamber: That's a good point. Those are great common threads, and I think that's one of unique things about the metro Atlanta marketplace as opposed to some of these other markets that really focus on maybe one cluster, one sector — Hartford for insurance and New York for markets — but Atlanta has a large piece of all of the technology threads. We're the health information technology capital of the nation. We have obviously been in mobility before mobility was really cool. And it's great to have cybersecurity, B2B software and all these other technology threads that really are helping to attract not just one type of company but companies that service technology companies in general.

I spent the morning meeting with two Asian companies especially who are interested in some new markets. They're here for a number of reasons, but we're known globally as a great technology hub now, and as Blake was saying, that wasn't really the case five or six years ago. On those list of innovation centers — in large part those aren't technology companies. Those are our Fortune 500s, companies that made their money in bricks and mortar — Home Depot, AT&T.

Having companies like that realize innovation is the key to them maintaining their market share, let alone growing it, is amazing. And when you can find companies like Worldpay and Elavon and some of our others that are creating these centers and partnering up with a great resource like ATDC, it really gives us ammo as we go out and we market globally.

Williams: Does it detract a little bit from the reputation because there are so many different industries you can't point to 'We're the biotech hub,' like a Boston is, or does it give you a fuller offering?

Wainscott: I'd much rather have 50 arrows in the quiver than just one, and we are known as the nation's health care IT capital. We are known as a center for mobility. So we already have calling cards. We are Transaction Alley. That's indisputable. Seventy percent of transactions come through metro Atlanta and through a Georgia regional center, so when we go out and we market, we have our key clusters. We can throw out stats ... but what does that really mean to the people you're talking to, to the audience? Being able to talk about a broader technology landscape is extremely important. We don't want to be a one-horse town.

Williams: Brian, part of innovation is doing so across your company and across the markets where you're in. Can you talk about how Elavon approaches some of its international markets? In particular, I'm interested to know whether there are certain products or certain methodologies that you've found in some markets, say a Brazil or China or somewhere, that you've been able to bring back here and see some diversification of some of your domestic product offering.

Brian Mahony, chief strategy officer, Elavon: We learned about currency conversation in the European market first, and then brought that into other markets, so that one of our most well-known product is one called automatic currency conversion where a consumer can go to the point of sale and then have the option of paying in their home currency so it removes the doubt for them when paying for a good or a service.

Another example would be in Brazil. Because of the nature of the economy there, installments is a big deal, bigger than it is in other markets, so we've had to learn the hard way how to make installments work through our platform. Now that we've made it work, we want to export it into other markets.

One of the biggest new additions in our industry over the last several years is what mobile technology is allowing to happen at the point of sale, so we're having to test with different mobile providers in different markets to see what works, what doesn't work.

Williams: [I've heard that] most of the growth in the electronic payments space is going to happen using innovations from the developed markets being applied in markets that don't even have mobile phones yet and don't have the electronic infrastructure for payments yet. In some ways companies (in Atlanta) have lagged behind innovations that have happened in other markets — mobile payments is a lot stronger in places like Korea and Kenya even than it is here, for example — but how they can use those skills and the rails that run across the global economy to start tapping into growth in those other countries. Can you talk about how you approach entering a new market?

Mahony: At a certain level strategy is pretty easy; you figure out where growth is happening and then you go there. We tend to think ourselves, I certainly do, as being the center of the universe here in Atlanta, the U.S. and in North America. But when you look at population growth, and then you compare how we're going to grow over the next 10-20 years, we're actually a rounding error compared to other markets, and given where they're coming from and where they're headed to, for sure growth in our business, much of it, is going to happen overseas. If you have overseas ambitions, you have to be there, you have to be part of what's happening and what will happen over the next several years.

So how do you enter a place like Brazil?

At a certain level, again, it's pretty straightforward. As much as we like to abuse regulators and all the things that come with that, regulation actually matters a lot to us, and the rule of law matters a lot to us, so as we're thinking about entering a new market, we look first and foremost to see whether they have a playing field where we can actually operate and we can win. In the end, our purpose is to yes, to enable payments, to grow commerce, but also to deliver returns to our shareholders. In order to do that you have got to gain entry into a market, into an economy where if you are successful in achieving a profit you can expect to repatriate that profit or reinvest it in your own business, and not see it expropriated away in ways that make your shareholders very unhappy. That's key for us.

Beyond that, we look for the trends: Are consumer using credit cards? Is that growing quickly enough? Are merchants at the point where they're ready to accept credit cards? Is that growing quickly? Is the infrastructure in place? And importantly, for the business that I'm in, we work largely through partners, through distributors. It would be unusual for us to enter a ... market without a bank partner or some other partner working with us.

Williams: Where do you see the biggest innovations happening in the payments space, and how well-prepared are we here in Atlanta to take advantage of those?

Mahony: There's a ton happening at the point of sale, with mobile technologies enabling niche providers to emerge and serve sectors. Whereas our experience in the past is that we would negotiate with a couple suppliers for equipment, now we negotiate with many, many more. And the reason we do that is because they're in a position to offer services targeted more specifically to certain niches. You can actually get software and services that are specific to dry cleaners, to pharmacies, to dentists and doctors. You can sub-segment and go even deeper into industries. That's a big change, for us…

Kleinwaechter: Coming from a U.S. background, I would say that innovation starts with the experience first. It all starts with an unmet need or a latent need or an expressed need that some of us don't know. If we were to go through our payments experience right now we can all probably find the one thing that we just don't understand why it's not solved. That problem is where the next innovation is coming: It's the thing that you can't explain why we have to do this.

Authentication for me is a space that's ripe for turning on its head right now. The fact that I have to remember something to type something in to prove who I am, when I already know who I am, is ripe to be solved. We've seen companies, if you've been at any of the conferences recently, Finovate or others, where people are figuring out how to identify who you are without you knowing that you're identifying who you are, behaviorally. If the way I type on the keyboard or move the mouse have already identified me to that computer, then why do I have to prove that I'm anyone else but the person that has been using that computer all along? When we get that friction removed, to me that's the big ambitious play.

Williams: There's a company within the ATDC that's creating a robotic bartender, and Blake, I think remember us talking about the fact that the customer's experience with that machine is really going to be impacted by the payment experience.

Patton: You hear about the Internet of Things, but when you think about billions of devices becoming connected and transacting not just information but creating transactions across these networks, obviously that opens up a whole bunch of payments questions — all the sort of things that we've already been talking about — but now you're talking about on an order of magnitude and a pace that's incredible. That is going to be the next giant pivot point, kind of like the Internet and trying to figure out how we do transactions online, that's going to become an opportunity for tons of innovation.

Mahony: If you talk about innovation you can't leave the topic without talking about all the money that's flowing into mobile wallets. It's just amazing to us how much money is being spent right now by players of all sizes trying to figure out how to engage consumers, to get them to adopt, and the banks, technology companies and various others attempting to get their wallets to the point where they have enough mass that they can really exert influence over other players in the ecosystem. That's a space I think that we'll see a lot of evolution in over the next several years.

Williams: Grant, the Metro Atlanta Chamber has just announced its intention to create a FinTech task force. Can you talk about the motivation behind that? Why now?

And I'll sort of open it up to a discussion about how we can keep this industry here given that it's mostly bits and bytes; it's data moving really across wires anywhere in the world, so there's not really an imperative other than from the talent perspective to really be in a place like Atlanta.

Wainscott: I'll agree and then take a bit of an exception. It is bits and bytes and in theory that can be generated anywhere, but it's generated in a place like Atlanta for all the reasons we've been talking about. It is talent. Talent's drawn by our educational partnerships, having ATDC, having Georgia Tech and all the other universities. We're known as one of the largest university towns in the hemisphere, and that's a huge marketing tool for us. And you get that point when you have a critical mass of students and intellect who wants to stay in the area.

The Task Force is still in its early infancy. We're yet to have our first full meeting. Our members are now being invited, but in the first part of Q1 we'll be pushing forward with a really aggressive plan with help from our partners and going to shows like Money 2020, which we just came back from, and Finovate in February, and taking not just the transaction and payments story on the road, but really pushing toward that tier-one financial services situation that we really want to find ourselves in, growing the entire financial services community. We want to keep payments here and do everything that we can to keep our phenomenal companies here, but it's also good for them to have insurance, reinsurance, credit, risk, cloud, mobility — you name it. When you have that critical mass continuing to grow, then you're finding venture capital that's paying attention, and I think that's phenomenal for the entire ecosystem. The task force is simply an effort to help elevate the story to a global scale.

Williams: I was recently at the office of a company called ParkMobile— this sort of gets at the retention of talent; this is why I'm telling this story. They have a putting competition every week, and if you make it all the way across the office into a cup on the other side on their stained concrete floor, you win a bottle of whiskey. I don't know how many of these big Fortune 500 companies have anything like that, but [one of the executives said] this is all about drawing millennials and being near the talent of the future. Are you seeing that being more important in the companies that you're seeing set up, Blake?

Patton: Companies are starting to think about that very early. They have a vision for their culture and they're starting to be very proactive in building it. Putting across the concrete floor for a bottle of whiskey is really about getting those employees together to interact with each other and to collaborate together, so I think it's super important, and tying it to your earlier question, what we do really is all about betting on people and betting on a market. And so what makes Atlanta great is not just the talent that these guys are talking about wanting to be near. It's the other way around too. These innovators absolutely require access to the domain expertise in an industry like fintech where entering new markets, distribution, credibility, regulation — all those things are huge barriers for early stage innovators, so to be able to align with companies and have access to that locally is huge. I know the question was on culture, but it's kind of that whole combination and a really big topic in startups now is how to create that.

Kleinwaechter: I will add to that too: There was a time 5-8 years ago when the West Coast swing came out this way in terms of, 'If you want to draw talent you get a ping pong table.' And it was totally backwards. We thought that getting a ping pong table was going to draw talent. No, talented people that share the same vision want to play together. They didn't get that one was a symptom of the culture, not an attractor of the culture, and I think we're starting to get that now. You can build all those things after you've got the vision right and you've got the strategy right and people want to be together. There's nothing worse than playing ping pong with people you can't stand.

Mahony: To reinforce, what matters is that the work has a purpose, No. 1, so people will come and join you if they feel that they're going to make a difference in the world and it's something that's important. No. 2, it matters how the work gets done and committing to a method of doing the work that attracts people. We use Agile in our innovation center and it was a departure for us. We had tried it before and it hadn't done well … but committing to it and sending that signal to the marketplace made a difference in how we recruited into our innovation center.

Williams: Grant, close us out with your final thoughts.

Wainscott: Fifteen years ago it was "play time" when companies were thinking outside the box, and it wasn't adopted in the South. And now it's not about the pingpong table, it's not about the bottle of whiskey; it's about how that adds to the ecosystem. I think that we've really come full circle to a workspace and an environment and teams that are far more productive and are, frankly, far more enjoyable to go to work with.

Regulatory Analysis:
A Tightening Chokehold – The FTC and CFPB Continue to Take Aim at the Payments Industry

By **Edward A. Marshall & Theresa Y. Kananen, Arnall Golden Gregory**

November 30, 2015 – Beginning in earnest in 2013, the Federal Trade Commission ("FTC") began to exert pressure on the payments industry—including payment card processors and independent sales organizations ("ISOs")—to stamp out businesses engaged in consumer fraud. More recently, it has been joined in its effort, dubbed by some as "Operation Choke Point," by the Consumer Financial Protection Bureau ("CFPB"). Together, these government agencies have pursued businesses perceived as serving as merchant "on-ramps" to the payments grid for allegedly facilitating the acceptance of credit and debit cards by businesses that inflict harm on consumers.

Initially, enforcement actions against players in the payments ecosystem were designed principally to capture "reserve funds" they might be holding to satisfy consumer-initiated chargebacks or to force a disgorgement of fees received from processing the transactions of "bad actors." That is, the government leaned on processors and ISOs principally to *contribute* to a pool of funds designed to redress consumer harm. To the extent businesses providing payment card services had actually received revenue or profits associated with those transactions, they were called upon to release them (to varying degrees) to help alleviate the injury caused by the merchants with which they did business.

Within the past year, however, the FTC and the CFPB have become more aggressive. They have attempted to put payment processors and ISOs on what amounts to the same plane of culpability as the merchants deceiving consumers themselves, seeking not merely reserve funds or disgorgement, but joint and several liability for the *entirety* of the consumer injury allegedly perpetrated by third parties. *See, e.g.,CFPB v. Universal Debt & Payment Solutions, LLC*, Civil Action No. 1:15-CV-00859-RWS (N.D. Ga. filed 2015); *FTC v. CardFlex, Inc.*, Civil Action No. 3:14-cv-00397 (D. Nev. filed 2014). And following a recent decision by the United States District Court for the Northern District of Georgia, it appears that such liability is at least theoretically possible—at least in instances in which a payments defendant engaged in "severe recklessness" by engaging in "an extreme departure from the standards of ordinary care." *SeeCFPB v. Universal Debt & Payment Solutions, LLC*, Civil Action No. 1:15-CV-00859-RWS (N.D. Ga. Sep. 1, 2015) (denying a motion to dismiss).

Critics have argued that pursuing such extreme relief

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against the payments industry is unwarranted and, at a minimum, disproportionate to the limited role the industry plays in authorizing and settling payment card transactions (without any direct consumer contact). And, at least in part, that criticism stems from a lack of clear guidance about the standards by which culpability is to be measured. Forcing the rapid or reflexive exclusion of certain businesses from the payments ecosystem based on amorphous standards presents a very real risk that even legitimate companies will be put out of business (without due process safeguards). And it also has the potential to involuntarily offload regulatory responsibility from the public to the private sector—forcing payment processors and ISOs to determine whether and when to exclude a business from the ecosystem under threat of being a complete insurer against consumer injury if they make the wrong call.

Clearer standards alone will not eliminate those concerns. But they may ameliorate them. And to that end, there are two emerging sources from which to draw.

First, the payments industry itself is working to provide detailed guidance regarding "best practices" for the industry in underwriting and monitoring risk. The Electronic Transactions Association, for example, has published *Guidelines on Merchant and ISO Underwriting and Risk Monitoring*, which is continuing to evolve as a source of normative standards to protect against potential consumer injury.

Second, there are the enforcement actions initiated by the FTC and the CFPB. Surveying the allegations of these cases begins to paint a somewhat clearer picture of particular practices that regulators perceive as taking a payments company across the line from unwitting facilitator of consumer fraud to deserving (whether justifiably or not) equally harsh treatment as the perpetrators of fraud themselves. These include:

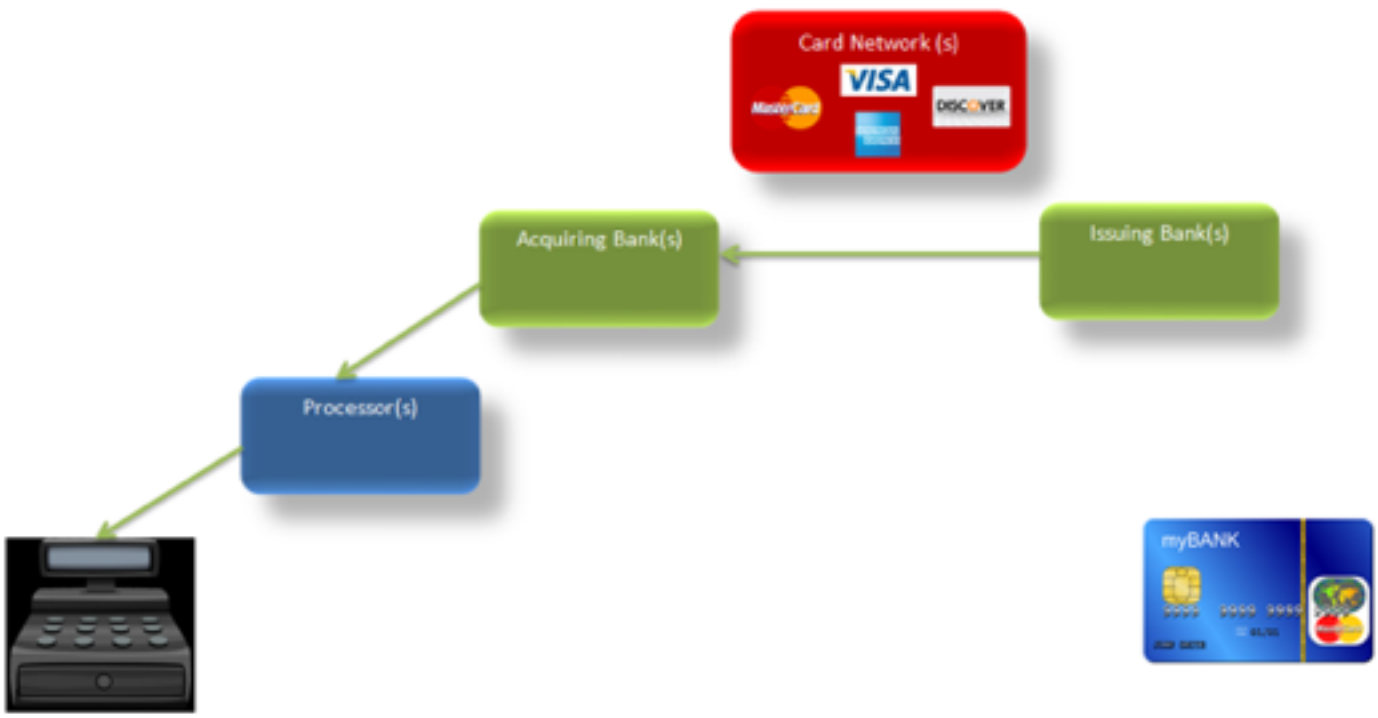
- Ignoring dramatically high chargeback ratios, including double-digit ratios (as high as 30%) between transactions made and transactions charged back by disappointed consumers;
- Failing to follow up on or investigate disturbing chargeback narratives (*e.g.*, consumer allegations that a merchant coerced payments of fictional debts by making unlawful threats), such as through calls to consumers who initiated the same;
- Activity assisting merchants in avoiding card brand detection by purposeful lack of transparency and load balancing—*i.e.*, cycling through different merchant identification numbers so that no one merchant id is identified as problematic by the card brands;
- Relying on personal guaranties of merchant principals to bypass or disregard internal credit risk policies;
- Accepting merchants that had previously been terminated or rejected by the processor or ISO based on unseemly business practices; and
- Failing to follow up on obvious errors or discrepancies in merchant applications (including, *e.g.*, merchant location, type of business, or principal identities).

Again, clearer standards alone will not address all the valid concerns being raised by critics of "Operation Choke Point." But, so long as the government's initiative continues, better understanding what perceived "red flags" exist in the mind of regulators can help industry players avoid the fallout of being made unwilling guarantors against merchant fraud.

How a Transaction Works

Payment Authorization

Settlement



-Edward Marshall

The world is here.