Glenbrook Perspectives:

COVID-19 Impact on the Payments Industry

GLENBROOK

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Introduction

COVID-19's impact on the U.S. payments industry and domestic economy is profound.

Multiple reports from the U.S. Department of Commerce, merchant acquirers, and PSPs indicate the extent of the pain from this pandemic-induced recession. And for the millions of Americans without jobs, the word "pain" is an inadequate descriptor of their current situation.

This ebook will focus on the impact, implications, and responses by the stakeholders in the U.S. payments industry due to COVID-19. We'll examine the pandemic's effects on the payments industry through Glenbrook's Domains of Payments framework. This framework categorizes payments flows by transaction context and the parties most affected.

We will look at the short and longer-term impact of the pandemic on stakeholders using or providing services within each domain. We'll also assess the implications for major stakeholders and offer recommendations.

This report focuses on the U.S. market with reference to international domestic markets for illustrative and comparative purposes and was written between May-August 2020 in the early phase of the global pandemic.

Macro Economic Impacts on the Payments Industry

The pandemic will shape the economy and payments industry in multiple ways over the next few years. Here are just a few examples:

A Long Path to Recovery

The extent to which our lives return to "normal" is unknown, but economists are now projecting the eventual recovery will resemble the "swoosh" in form. It will be a sharp drop followed by a painfully slow and gradual rise up and to the right that could take, according to Fed Chairman Jerome Powell, until the end of 2021. Behavioral changes by consumers and businesses will also impact the path to a new normal.

Digital Transformation Will Reshape Segments of the Economy

While the damage to the retail, restaurant, travel, and hospitality industries is plain to see, the tech industry is enjoying strong growth because of society's increased reliance on its offerings. Tech giants will emerge as big winners. "We have seen two years' worth of digital transformation in two months," noted Microsoft CEO Satya Nadella in a call with Wall Street analysts after reporting earnings that were just shy of astounding.

An obvious example is the success of video collaboration tools. These tools have individuals and business leaders concluding that commuting and business travel is less important than previously assumed. The ripple effect of these shifts in personal and business decision making will be national in scope.

The Retail Apocalypse is Here

Large, primarily brick-and-mortar retail merchants, especially those with extensive mall-based operations, have been under pressure for years as many consumers have grown to prefer shopping in the Remote Commerce domain. The pandemic has accelerated that shift and worsened the already weak financial position of many firms. COVID-19 has accelerated retail stalwarts Neiman Marcus, J. Crew, JCPenney, and Pier 1 Imports into bankruptcy. While reorganization protections can extend life, familiar brands may disappear. COVID-19 will permanently shift an even greater proportion of sales to online channels.

Employment Restoration Will Take Time

The slow recovery means consumers and businesses will respond with new levels of caution that will extend to the pace of re-hiring. Employment in some segments will take years to recover. With aircraft orders way down, General Electric has cut 25 percent of its jet engine workforce. Restarting complex supply chains requires a careful balance of demand forecasting and capacity planning. Again, the impact on payments, most notably in the B2B domain is profound.

The Bankruptcy Avalanche is Yet to Begin

A tidal wave of personal and small business bankruptcies is ahead. Banks will take a hit and, to limit further exposure, will lower credit lines and increase standards of creditworthiness. This directly impacts consumer spending power.

Consumers and Businesses Re-Evaluate Assumptions

Individuals and enterprises of all sizes are reconsidering how they conduct their lives and operate their businesses. For many, getting back to the pre-virus status quo is the top priority. For others, however, the success of work-from-home operations will shift demand to a yet unknown extent. (WeWork finds itself in a new world as does much commercial real estate.)

What We Believe Matters

The Great Depression of the 1930s was deepened by the belief among most that there was no end in sight. Therefore, parting with money was unwise. With less spending, money no longer flowed from hand to hand and the economy slowed to a crawl.

That’s one of today’s risks. Governments around the world are pouring money into their economies to maintain some confidence in the future. So long as we have trust in the ability of society to manage our way through this pandemic, payments will continue to flow, if at a reduced level, over the coming months. With thirty-three million newly unemployed transactors largely taken out of the economy, U.S. policymakers and politicians face an epic challenge.

Key Themes

When the economy slows, payment flows decline and, as payment volumes decline, the payments industry hurts, too.

Early impacts on the payments industry itself include:

Price Sensitivity Heightened

With so much uncertainty, consumers will look for value, become more price-sensitive, and spend more cautiously. Premium-priced providers are feeling the pressure. Luxury goods providers will have to make a stronger case to increasingly discerning customers. This means higher-margin products will, at least for a time, make up a smaller proportion of overall purchases and depress the average ticket price.

As the recession continues, cautious consumers will further depress spend volume and increase pressure on retailer margins. In the short term, some retailers, especially in apparel, will be forced to flush stale inventory at very low prices to raise cash. Once these bargains are out of the system, expect cash-strapped retailers to reduce customer incentive programs.

Segment-Focused Providers Suffer

Acquirers and processors of hard-hit segments like restaurants and airlines are feeling outsize pain. Layoffs and furloughs at providers like these are already taking place. Weaker players could be acquisition targets.

A Forcing Function for Non-Contact Retail Payments

The pandemic will increase the pace of transition from paper to digital. Banks around the world have doubled the allowable contactless transaction size so that PIN entry on a publicly shared terminal can be eliminated for more transactions. Contactless cards and mobile wallets, in particular, will see increased usage.

Card on File Authorization Challenges

As consumer bank accounts drift toward zero and credit lines are maxed out, subscription and card on file (COF) based businesses will encounter a growing decline rate. Authorization optimization for merchants and their payment providers will become more challenging.

Payments Industry Consolidation Continues

Looking ahead, we expect M&A activity to continue but of the bargain hunter kind. Some providers will suffer. Others will need cash to fuel their growth while weaker players hunker down. Buyers are already on the lookout for best of breed companies that can be purchased at lower prices to complement existing portfolios.

Unfortunately, this is not an exhaustive list. The number of economic interdependencies is simply too great to anticipate all impacts. Changing conditions will affect the path ahead. In the next sections, we'll examine these impacts, and others, in more detail through Glenbrook's Domains of Payments framework.

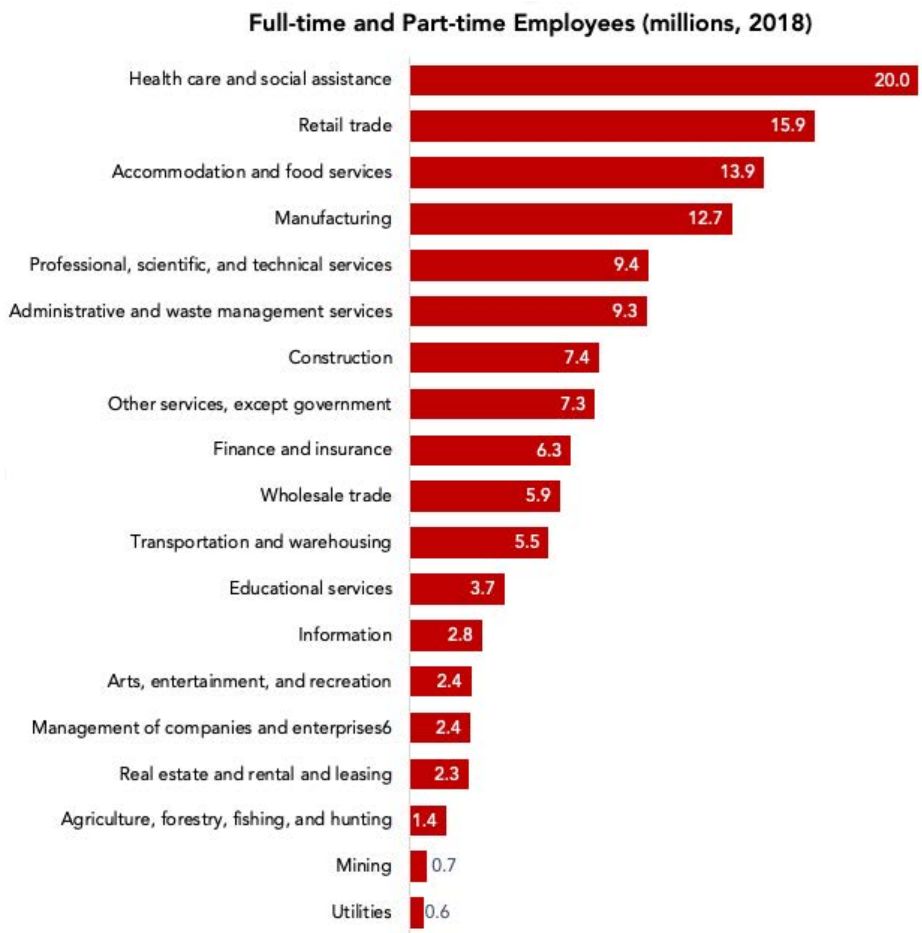
Point of Sale Domain: The Pain at the POS

The POS Commerce domain is the land of brick-and-mortar retail, representing the majority of retail activity with approximately 84 percent of retail sales in 2019.

That said, the POS Commerce domain has taken a direct hit from the pandemic. This has major implications for the wider economy and the payments industry at large.

The size and importance of retail to the economies of most countries is under-appreciated. While hardly a provider of high paying jobs, it's a major source of employment. In 2018, the U.S. had about 15.9 million workers in retail.

Only healthcare and social assistance, at 20 million, exceeded retail's employment contribution. And just behind retail is food services and hospitality, another major employment contributor that lies in the POS Commerce domain. Together, retail and food services/hospitality employs about 30 million people.



US Census figures show that combined, these two industry segments saw sales declines of $403.9 billion in April 2020, down 16 percent from March 2020, and 21 percent from 2019. The apparel and accessories subsegment declined in April about 89.3 percent from the previous year.

That means the broad payments ecosystem that enables merchant payment acceptance—from issuers to providers of merchant services—lost about $8 billion in revenue in one month from just these two segments.

Short-term Impact

1. **Certain industries are suffering**

   Payments company PSCU's Advisors Plus division has published weekly transaction reports throughout the pandemic.

   A few statistics are enough to demonstrate COVID-19's impact on the POS Commerce domain:

   - Restaurant transaction volumes are down—52 percent for credit and 28 percent for debit, year over year
   - Fuel retailers, the ultimate POS Commerce segment, have seen volume drop by 59 percent for credit and 39 percent for debit
   - Cash is the ultimate POS Commerce domain tender type and by May, ATM transaction activity dropped 30 percent from its mid-April volume.

   Not all POS Commerce segments have taken a beating. Supermarket and grocery volume was up 25 percent for credit and 23 percent for debit at the end of April 2020, and it continues to stay that way.

2. **POS volume has shifted to the Remote Commerce domain**

   During Mastercard's Q1 earnings call the company reported that, for the first time, over 50 percent of its volume was card not present versus 40 percent in the prior year. PSCU reported that CNP transactions represented 55 percent of overall transactions and 63 percent of total spend at the end of April 2020.

   But, the big winner at the expense of online and its offline competitors has been Amazon, with PSCU reporting credit transactions up by 51 percent and debit up 135 percent year over year.

3. **The role of cash in the POS domain is changing**

   Based on public health recommendations and concerns regarding its safety, the secular trend away from cash is being accelerated by the pandemic. While cash is used for about 26 percent of transactions, the average size of those transactions is now below $10.

   As we have seen in other countries further along in their digital payments transition, diminution of cash usage raises issues of financial inclusion. There are 14 million Americans without bank accounts who need the ability to get paid and to spend.

   Providers of cash services have a lot to worry about if the pandemic decreases cash usage. Operators of ATM networks and ATM fleets have significant fixed costs. The sustainability of their current business model has been raised as a concern by UK operators who have seen cash usage drop in favor of contactless debit payments.

4. **Checks will continue their decline in the POS Domain**

The role of checks in the POS domain has been declining for decades, and now the pandemic has provided yet another push. The parents of Baby Boomers are the major demographic continuing to use checks at the POS. This especially vulnerable population has far fewer of its members out and about writing checks in 2020.

We expect checks to continue to linger in the Biller, B2B, and Income domains with a smattering of P2P gifts via check.

Long-term Impact

1. **The retail apocalypse will begin**

Despite the robust pre-pandemic economy, many brick-and-mortar retailers were already in weakened financial condition due to high debt burdens, consumer preference for the e-commerce channel, and the younger demographic's disenchantment with the mall shopping experience. Now, multiple marquee store brands are either up for sale (Victoria's Secret), in bankruptcy (Neiman Marcus, J. Crew, JCPenney, Pier 1 Imports), or nearing the brink (Macy's, GNC).

Social distancing and stay-at-home orders produced an immediate 50 percent drop in sales for apparel. Mall foot traffic was down by double digits by mid-March. Other mall- and superstore-centric retailers saw between 15 and 27 percent declines. Restaurants and bars were down 26 percent. Non-store retailers, on the other hand, were up 3.1 percent with food and beverage stores up 25 percent.

The pandemic has added pressure onto mall operators and commercial real estate. The U.S. is famously overstored compared to other countries. Using Cowen's 2019 figures, every American has 23.5 square feet of retail space, a Canadian has 16.4, each UK resident has 4.6, and the French 3.8., a 600 percent difference. Mall real estate valuations declined 20 percent just from March to April 2020.

Many retailers won't survive the added pressure of COVID-19. Competitors with strong balance sheets and able crisis management will survive. Main Street merchants, those that have adapted to the pressure from Remote Domain actors (Amazon, Walmart, Target), are facing renewed existential pressure, especially for non-essential businesses. Without substantial government relief, many SMB retailers and service providers have not and will not recover.

2. **Long-term structural change will come to the restaurant industry**

Some restaurants have recouped lost business by pivoting to online ordering and home delivery, adding e-gift card programs, and adopting other digital programs. But the restaurant industry has taken a massive hit.

Food halls and high-density restaurants and bars will be forced to adjust their model to accommodate social distancing requirements and preferences. Famously operating on thin profit margins, many sit-down restaurants will simply not survive the COVID-19 pandemic.

3. **The payments industry will feel pain**

   Issuers, acquirers, processors, PSPs, and ISVs are all seeing drops in volume. Some of those operating primarily in the POS domain, with a reliance on in-person services, are responding with layoffs and furloughs.

   COVID-19 and the fragility of many brick-and-mortar merchants add up to a permanent reshaping of the POS domain. Its dominant role in payment acceptance will be reduced, but not overturned. As economies re-start, the POS domain will begin its recovery. The extent of that recovery remains unclear.

   That means payment services providers with a significant focus on Main Street retailers will hurt. Merchant cost sensitivity will only increase and that suggests renewed interest in alternate payment methods (APMs). There will be an abundance of used terminals for sale.

   Concentration of sales into larger physical retailers (once customers are comfortable enough to return to them) and e-commerce players will benefit acquirers and PSPs serving the largest retailers. Those serving SMBs, especially in the restaurant vertical, face truly challenging times.

4. **Cautious consumers will be the new normal**

   Consumer payment volume drops in every recession because unemployment rises. U.S. unemployment has increased by over 33 million in just two months since the shelter-in-place orders were initiated. Continuing financial uncertainty will further depress consumption. Managing current obligations and uncertainty will depress discretionary spending.

   For a payments industry reliant on robust consumer consumption and accustomed to the robust growth of the last decade, serving the POS domain will be a defensive activity as it continues to lose share to the Remote Commerce domain.

POS Domain—Industry Implications

High Pressure on the Payments Ecosystem

It's been a decade since the last recession, and merchant-facing providers have enjoyed a steady increase in payment volume since. Those gains are now in reverse. Operational course corrections—from budget cuts and freezes to staff furloughs and layoffs—are taking place. Independence for some providers, survival for others, will depend on:

- The extent of exposure to and reliance upon POS Commerce domain volume
- The sophistication of their card not present acceptance capabilities
- Fiscal condition entering the COVID-19 crisis
- Skilled crisis management
- The wherewithal to manage through a multi-year recovery process

Contactless Expansion

Contactless card and digital wallet adoption have been growing fast, and COVID-19 is an accelerant. According to Mastercard, more than 50 percent of U.S. consumers have some form of contactless payment in use. Contactless acceptance should become nearly ubiquitous as merchants respond to the shift in customer preference. As important, merchants, ISVs, and PSPs should finally get on with removing the signature prompt. That unnecessary step was made obsolete by the card networks two years ago. No one wants to touch a terminal used by dozens or hundreds of hands in a day.

Accelerating Omnichannel Commerce

Merchants must meet their customers "where they are" and today that means more online where card not present and card on file payments take place. The best-equipped retailers are those that had already created strategies for commerce enablement across multiple domains.

A Window for Non-card Payments?

For card-accepting merchants, it's often the case that payment acceptance is their number three cost after supply chain and employee costs. These enterprises will look at alternatives with renewed interest. Preference for regulated debit will continue in many merchant segments. But interest in lower-cost alternatives or those that do more to help the merchant sell will rise.

- **RTP Network.** In those markets not well served by Durbin-regulated banks, the Real Time Payments Network (RTP) of The Clearing House (TCH) and the eventual availability of the FedNow network, operated by the Federal Reserve, may offer a retailer-friendly method of payment. While little used today, the RTP Network's Request for Payment message type pushes a data-rich message to the message recipient, requesting that the payer initiate a push transaction to the merchant.
- **Installment Loans at the POS.** We see continued growth opportunities for installment credit providers such as Affirm and Klarna, and the processors who help sell them, to serve as sales accelerants.
- **ACH at the POS.** While merchant interest in ACH-based payments at the POS (think Target Debit RedCard) has languished somewhat since Durbin regulations went into effect, richer decisioning and assumption of risk by intermediaries like Trustly could revitalize interest in using ACH in the POS Commerce domain.

Raising the Likelihood of a U.S. Central Bank Digital Currency?

Returning to cash use cases, COVID-19 is yet another stimulus for the Federal Reserve to examine and consider piloting the digital greenback. The digital dollar was referenced in an early version of the CARES Act as a means of easing benefit payment distribution, particularly for the 14 million who are unbanked.

Recommendations

Digital Enablement of Real-World Interactions

- POS Commerce domain stakeholders have to ask, "How can I improve my in-store customer's experience through the digital channel?"
- POS Commerce providers need to offer programmable platform services and user interface tools that enhance the customer experience.
- Providers who have been focused on terminal-based, card present transactions must provide merchants with tools that enhance the customer's digital commerce journey that leads to a card-less transaction.
- In other words, successful POS Commerce providers must also excel in the Remote Commerce domain.

Merchant Recommendations

- Turn on contactless and turn off signature capture at your terminals because many customers will not want to touch your POS equipment.
- Look to pay-at-table or "order and pay ahead" solutions. Restaurant customers will be increasingly reluctant to hand over their cards to a server, adding health and sanitation worries to security concerns. For sit-down restaurants, pay-at-table options abound but they are not inexpensive and require active management, tough asks for the gut-punched restaurant industry.
- The need for buy online, pick up in store (BOPIS), curbside delivery, and home delivery capabilities will only increase. SMB merchants should turn to acquirers and PSPs who bring a higher level of commerce support for this capability.
- Review current payment, order management, and inventory systems. Cloud-based alternatives to in-store systems do not require upfront hardware and software licensing expenses.
- Evaluate alternative payment methods that either lower costs or help improve sales. Installment loans offered at the POS can be very helpful. ACH-based payment acceptance costs can be lower than debit cards.

Acquirer and Processor Recommendations

- Help merchants streamline payments through contactless support and signature elimination. Proactively offer omnichannel capabilities and value-added services, such as loyalty and gift card programs. Offering new APMs and installment loans at the POS will provide merchants with more options to offer paying customers.
- Acquirers and their processing partners need to innovate, now more than ever. Their decades-long focus on payment transaction processing has allowed PSPs to emerge that bring commerce-focused high-value services to merchants. This lack of innovation has allowed new competitors to take share. Today the ISV sells software that automates much of the client's business while bundling payment processing. Tools for customer digital engagement have to be a core part of the acquirer offering.

Payment Service Provider (PSPs) Recommendations

- Expect more PSP Remote Commerce experts encroaching on the POS domain
- Incumbents will feel even more pressure from the PSP and fintech vectors.

Independent Software Vendors (ISVs) Recommendations

- ISVs must rely on resilience and patience while still serving existing customers, especially if revenues are based on payment volume.
- Digital capabilities, such as order ahead, are obvious enhancements for some restaurant customers.
- Buy online, pick up in store (BOPIS) has become table stakes.

ATM Networks

- The slow secular trend away from cash has caused ATM industry consolidation and, with a few cash-loving exceptions, reduced opportunities for ATM placement.
- Can the ATM hardware be reimaged as a kiosk for the future?

Issuers

- Commit to issuing dual interface contactless cards. Examine the benefits of accelerated replacement, ahead of the expiration date of currently deployed cards.
- Make sure all cards are enrolled in EMVCo issuer tokenization for compatibility with Apple Pay, Google Pay, Samsung Pay, and other wallets that support contactless payments.

Remote Commerce Domain Takes Center Stage

The Remote Commerce domain is home to e-commerce, many mobile payments, and the mail-order, telephone-order method (MOTO). There are five key verticals in the Remote Commerce domain:

Retail	Travel & Entertainment	Digital Goods & Services	Marketplaces	Subscription Services

The growth in transaction volume in this domain has been nothing short of phenomenal accounting for a:

- 56 percent of overall U.S. retail sales growth in 2019
- 47 percent increase in U.S. sales forecasted for 2019 – 2024

Consumers and merchants are rushing to the Remote domain as convenience and self-quarantine shift shopping and retail behavior.

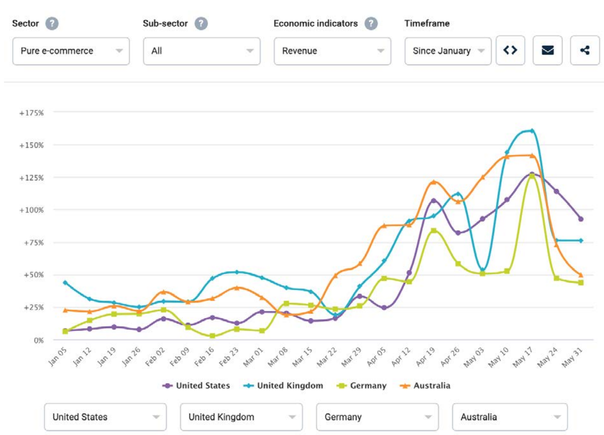
Historically, payments innovators have had to overcome the “chicken and the egg” problem: the need for both consumers and merchants to adopt a new payment method for it to be useful. Shifting consumer behavior requires either a perceived financial gain (loyalty points) or increased convenience to motivate a behavior change. If the provider can do both, the better.

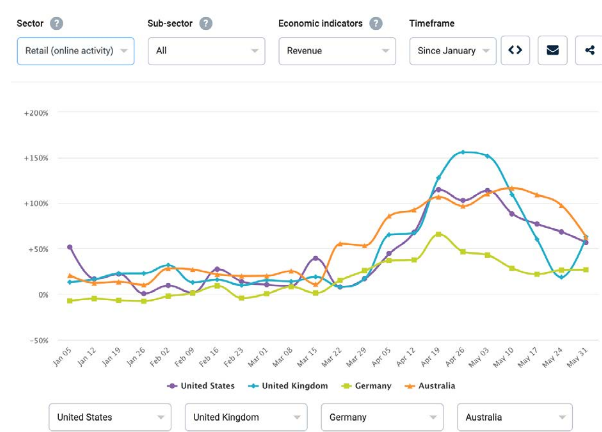
To those consumer imperatives, we now add “necessity.” Whether a local purchase via a “Buy Online, Pick-up In Store” (BOPIS) scenario, through a home delivery service, or from an online retailer, consumers are increasingly using in-app and online payments to complete the transactions.

In lockstep with consumers, many merchants have changed how and where they accept payments. Merchant payment decisions are traditionally motivated by, first, how well that method helps the merchant get paid. Second, if a new method of payment increases sales, so much the better. Lowering its cost compared to other payment methods is in third place.

Under COVID-19, we add business survival as a motivator. For many verticals shut out of selling in the POS Commerce domain, card not present transactions have become a major component of their payment flows.

These graphs highlight the swift shift to online channels in four countries. Year over year payment orders (count) for pure e-commerce retailers (those with no brick and mortar presence) and brick-and mortar-retailers with an online presence show high volatility since January but both show substantial growth in Remote Commerce activity. (Source: CC Insights, Worldometer)





Fraud and Risk Rise

The online behavioral shift has implications for all payments ecosystem stakeholders, most notably in direct card payments and digital wallets, which enable a combined 82 percent of remote commerce volume globally.

The Remote Commerce revenue enabled by card systems is accompanied by three major challenges:

- **Chargebacks.** Increased disputes or chargebacks due to online and friendly fraud where the convenience of the Remote Commerce channel makes fraud easier to perpetrate
- **Liability Shift.** Liability shift based on card network rules that shift transaction liability to the merchant for card not present transactions.
- **Failed Transactions.** Increased failed transactions often due to the lower authorization rates of the CNP channel.

Since the pandemic started, there has been an uptick in fraudulent transactions in many countries. The domino effect of increased disputes and chargebacks is now apparent.

Some of this is attributed to commerce fraud. Forbes reported that Amazon has removed more than one million products related to COVID-19 found making false claims. A Reuters report highlighted that consumer victims in the United Kingdom have lost more than £800,000 in recent coronavirus-related scams in April 2020.

There is also evidence of increased buyer or "friendly" fraud. The US has seen fraudulent order activity rising in March, as fraudsters take advantage of merchants overwhelmed by the number of orders, cancellations, delayed orders, and chargebacks. Similar patterns can be seen in other countries. The National Fraud Intelligence Bureau (NFIB) and the Federal Trade Commission are warning people to be on guard against both.

Additionally, security reports published by Google and other sources demonstrate increased account credential harvesting activity with subsequent upticks in phishing and credential stuffing attacks for account takeover (ATO) purposes. Think of this as the harvesting of data by fraud rings for immediate gain as well as preparation for increased fraud (i.e. theft) as legitimate customer spend increases and fraudster activity is hidden among the higher volume of legitimate transactions.

The Costs of Fraud

Losses get expensive. Liability shift costs include network or acquirer fees associated with the chargeback on top of the loss to the merchant of the good or service itself. These fees can be as much as $20 per item. Similarly, wallets may pass on losses related to disputed transactions to merchants. In some cases, acquirers will impose reserve requirements on merchants experiencing high dispute, return, or cancellation rates, making today's difficult working capital situation even more challenging.

We anticipate lower authorization approvals as issuers, wallet providers and merchants adjust their risk models and tighten controls to accommodate volatile purchase patterns and mitigate fraud losses.

The table below summarizes the impact on payments ecosystem stakeholders of these three challenges across card and wallet payments.

	Consumers	Merchants	Acquirers	Issuers	Networks
Increased Disputes & Chargebacks	Neutral	👎	👎	👎	Neutral
Liability Shift	Neutral	👎	Neutral	👍	Neutral
Increased Failed Transactions	👎	👎	👎	👎	Neutral

Short-term Impact

1. **A rise in "false positives"**

   Some consumers with available funds or open credit lines will experience "false positive" declines due to changing fraud detection models, a negative outcome for the consumer, the merchant, and the issuer.

2. **A learning curve for brick-and-mortar merchants**

   Merchants with experience in this domain understand and know how to manage its challenges. "Brick-and-mortar" merchants, innovating in the Remote domain for the first time, may see significant chargebacks and the associated liability shift costs, particularly in verticals like restaurants and grocery stores.

3. **Higher declines for subscription services**

   Those in the Subscription Services vertical may experience higher than normal declines as consumers struggle with lower or no incomes. They may also encounter upticks in cancellations or requests to suspend services.

4. **Managing chargeback losses will be a big task**

   With impacts in nearly every aspect of the economy, some acquirers may look at rebalancing their merchant portfolios to reduce exposure to the POS Commerce domain. Managing chargeback losses, a major factor in Remote Commerce transactions, will be another task. Shifts in approval rates may also result in revenue fluctuations for acquirers. Many issuers, intent on maintaining revenue, have loosened AUTH standards for CNP transactions to replace lost POS Commerce transactions.

5. **Global networks will defer releases**

   We have seen immediate action by the Visa and Mastercard Networks in response to the pandemic. They deferred their spring release and planned interchange increases in the US. They also relaxed chargeback adjudication timeframes. With merchant pressure (such as the recent letter restaurants sent to the US Congress petitioning for expanded interchange regulation) and potential regulatory scrutiny, we may see this deferment extended. However, these actions do not directly impact the networks. Instead, they affect issuers who are also facing lower transaction volumes and increased chargebacks.

Long-term Impact

1. **Remote Commerce will overtake POS**

   We see the pandemic as an accelerant to a Remote Commerce trend that projects Remote Commerce transactions to permanently overtake POS by 2024. The critical dimensions highlighted in the previous table will still be in effect 18+ months from now.

2. **New parameters for underwriting and credit extensions**

   As immediate operational issues are addressed, we expect both issuers and acquirers to reassess their risk appetites and set new parameters for the extension of credit to consumers and underwriting requirements for merchants. The COVID-inspired spike in fraud will further drive those changes.

3. **Increased oversight from central banks and regulators**

   We anticipate increased oversight from central banks and regulators as they closely monitor economic recovery efforts. There are implications for new or accelerated mandates for consumer identity management, data privacy, and payments fees.

Remote Commerce Domain–Industry Implications

Real-time retail payments may move more aggressively into Remote Commerce with modified rules for dispute resolution and possibly more attractive pricing for merchants. Whether consumers will shift from traditional debit card transactions to “instant” or push payments will likely hinge on convenience and the protection they receive for fraud. Larger merchants might offer benefits like purchase protections to incentivize consumers.

Networks and issuers may accelerate tokenization plans to protect the integrity of their payments systems while increasing fees and fines to enforce compliance.

Secure Remote Commerce (SRC), an EMVCo tool that enables consumers to pay with account details stored and managed by the card network rather than the merchant, may see a boost in adoption if networks promote the product more aggressively.

Regulators in countries where identity and authentication laws are not in place may implement regulatory measures that enable better consumer protection. In parallel, increased online fraud in core verticals in countries that have not mandated strong customer authentication (SCA) may lead to new regulatory requirements for strong customer authentication.

Recommendations

Merchants

- Take immediate and continuous steps to augment network security and monitoring for signs of phishing attacks, credential stuffing, and attempted data breaches. This includes consumer and employee education programs on password management and protection, multi-factor authentication, password storage, and social engineering.
- Implement customer alerts when account details are modified, employ 2-factor or multi-factor authentication, and establish tokenization of account information through an acquirer or PSP.
- Work with payment providers (acquirers, wallet providers, or PSPs) to review internal policies and procedures that optimize sales and mitigate fraud, with ample consideration to the uncertainty brought on by COVID-19. A starting point for this review would include policies and procedures for:
    - Network and website security
    - Customer account management (opening, updating, and closing accounts)
    - Account and sensitive data tokenization
    - Cancellation and refund policies
    - Delivery policies
- Consider payment options that help boost sales in periods of credit tightening and reduce financial liability. Options to consider include:
    - Digital wallets (Apple Pay, AliPay, Google Pay, and country-specific wallets)
    - Digital Consumer Financing products (AfterPay, Affirm, and Klarna)
    - Payments with zero Merchant liability (real-time retail payments, and some Digital Consumer Financing payments)

- Execution—frictionless payments, strong customer communications, predictable fulfillment—is today's table stakes.

Issuers

- Support for techniques that raise authorization rates, e.g. proprietary and EMVCo-based, is essential. One unnecessary decline and the issuer's card could be replaced by a competitor's offering.
- Consider augmenting card products with installment plans and single item credit for essential goods and services. This would help both consumers and merchants through economic recovery and strengthen relationships with customers. These capabilities may be built organically or established through fintech partnerships.

Networks

- Continue to broaden support for non-card payments systems either as direct participants or through overlay capabilities.
- Consider broadening operating rules to other supported payment systems to increase adoption of new installment, credit, and real-time retail (push) payments.
- Rethink and rationalize liability shift across the POS and Remote Commerce domains, while augmenting and accelerating requirements for strong authentication and tokenization.

Acquirers

- Look to new entrants in the Digital Consumer Financing and payment Facilitator space for ways to enable commerce in underserved merchant verticals. These moves will help onboarding and merchant management as underwriting policies and procedures are reassessed in the new economic circumstances.
- Establish new business practices that re-look at areas traditionally considered high-risk given the resilience of some of these verticals during the pandemic.

Regulators

- Consider laws to further protect consumer information and mandate strong authentication practices across payments systems. With innovation in lending options likely to surge, regulations for non-financial institutions in particular should be reviewed as they see broader utilization in the Remote Commerce domain.

Fintechs

- Continue to push the envelope across all stakeholders by providing fresh thinking to the many challenges the next few years will pose commerce and payments. Solutions that bridge domains will become attractive as POS, Remote Commerce sales enablement, B2B payments, and working capital become increasingly interdependent.

Will Billers Push Harder for Digital Payments under COVID-19?

Americans are facing record unemployment. Consumers are struggling financially and many are having trouble paying their bills. These individuals have to make difficult decisions and prioritize their spending, which often means groceries and healthcare expenses come first.

The Biller domain is populated with companies that provide essential services: electricity, water, rental properties, insurance, and unsecured lending in its multiple forms including auto loans.

In this high unemployment, high uncertainty environment, billers are looking at a complicated period ahead.

Short-term Impact

1. **Lower bill payment volume**

   Billers and lenders across the country are providing relief and support. While the relief takes different forms depending on the sector or the state, the impact in the short-term will undoubtedly be lower bill payment volume overall as Americans miss payments (often with the support of their billers and lenders) and focus their spending on absolute necessities.

   Some billers may not be impacted as drastically as others in the short term. Companies that offer subscription services to home-bound customers may see an increase in bill payments and new customers. For example, Netflix and Peloton both saw record sales during the pandemic's first quarter. Of course, those subscriptions take share from other sectors such as movie theaters, gym memberships, and sports team tickets.

2. **Mortgage and rent relief**

   The CARES Act included protections for homeowners with federally backed mortgages. Specifically, it prevented a mortgage lender from foreclosing a property for 60 days (starting on March 18) and can be extended to up to 12 months at the request of the borrower.

   Private lenders are working with local governments to offer support as well. In California, for example, around 200 banks are offering a 90-day grace period on mortgage payments as part of a deal reached with Governor Newsom. Similar agreements exist across many other states as well.

   Renters are also being provided with relief. Some cities have forbidden landlords from evicting tenants who can't make payments. In other cities, the government is providing direct rent assistance. Furthermore, some landlords are taking matters into their own hands and temporarily canceling rent entirely for their tenants.

3. **Utilities to stay on**

   While not required by law, many utility companies are committing to not turning off their customers' service if a payment is missed. As many as 700 internet service providers signed the FCC's Keep Americans Connected Pledge, which asks companies not to terminate service due to the inability to pay, as well as waive late payment fees.

4. **Credit card relief**

   Many credit card issuers are also providing relief to their customers who can't make their payments and are experiencing financial hardship. For example, Apple/Goldman Sachs allowed customers to skip their March 2020 payment without accruing interest or other penalties.

   However, the bulk of issuers are assisting on an ad hoc basis for customers that seek help. Many of these issuers have dedicated COVID-19 support pages and phone lines for customer inquiries. The level of assistance and eligibility requirements varies by issuer and by customer. For more information on how issuers are responding to the crisis, refer to Credit Karma's tracker here.

Long-term Impact

1. **How we bill will change**

   In the long term, the virus will have a structural impact on how billers send bills and receive payments, rather than on the volume of payments they receive. Many billers are again asking themselves: "how can we eliminate reliance on paper bills and payment processing that requires human resources and physical touch?"

2. **More billers will transition to electronic bill delivery**

   The pandemic highlights the risk for both billers and consumers due to reliance on mail-based bill delivery and payments. Billers of all sizes that rely on post office bill delivery may not have had sufficient staff available to prepare bills for mailing. Their outsourced print and mail provider may have had disrupted service due to virus-driven staff reductions. This will further motivate billers to transition toward electronic bill delivery.

   Smaller billers that do not utilize lockbox services currently receive paper checks in the mail at their offices. Processing these payments requires staff on-site. Many smaller or less technologically sophisticated billers still lack a website configured to host electronic bills and allow customers to make one-time or recurring payments. The virus may finally be the push needed to make the necessary changes to start sending electronic bills and accepting electronic forms of payment.

3. **Operation centers may close**

   For large, sophisticated billers, the payment function that most requires physical hands-on is in-house or outsourced lockbox processing. Operations centers may close or have limited capacity as they attempt to reduce employee exposure and maintain safe-distance guidelines during COVID-19. This disruption may reoccur in waves depending on how the pandemic plays out geographically. We expect billers will seek alternative electronic and digital solutions to ensure business continuity and predictable cash flow.

4. **No options for in-person payments**

   Some individuals still pay their bills in person using cash at a range of agent locations, such as biller retail sites, customer service centers, money transfer agents, money order services, convenience stores, etc. Since consumers have been under lockdown or remain reluctant to return to public spaces, those that rely on in-person payment services are left without an option for paying their bills.

The Biller Domain–Industry Implications

Perhaps native electronic "eChecks" such as those offered by Deluxe will gain in popularity as a way of replacing physical check processing and help transition consumers who are stubbornly reliant on checks.

Smaller billers will seek support from their accounting package or ERP (e.g. Intuit, Netsuite), a payment provider (e.g. Stripe), or a billing provider (e.g. Transactis, Billtrust, Bill.com) to enable electronic billing and payment. We expect SMB and mid-market focused billing and payment enablers to gain new customers, which in turn will drive an increase in payment volumes.

The difficulties associated with processing paper payments may also cause banks and billers, of all sizes, to adopt new Request for Payment (RfP) solutions offered by TCH RTP and Mastercard Bill Pay Exchange. These solutions address both bill delivery and electronic payment. They have the added benefit of easier payment posting since the payment is logically tied to the RfP ebill. For more information on the RfP capability, read Glenbrook's White Paper.

Finally, as it becomes increasingly difficult to staff physical payment acceptance locations there may be a consolidation of in-person payment at convenience stores and other essential retail locations. PayNearMe would benefit if that occurs, and so too could the beleaguered USPS if they offered enhanced bill pay solutions.

Recommendations

Financial Institutions

- Banks should explore redundancy of their lockbox services, potentially utilizing operations in different geographic locations, even from the same vendor, to ensure continuity.
- Enhance offerings for biller customers to help them transition consumers to electronic payment via ACH or card, or new real-time RfP. This will likely require partnerships with biller-centric solution providers.

Billers

- Adapt electronic billing rather than rely on printing and mailing bills to consumers.
- Large billers with in-house and outsourced lockbox operations should seek redundancy and simultaneously encourage electronic payments.
- Seek vendors with strong bill presentment and payment expertise.
- Small and mid-sized billers that have historically relied disproportionately on checks should look to their ERP and accounting system, or specialist billing and payment providers for solutions.

Providers Serving Billers

- Demand will intensify, and many new customers will be late-adopters without digital experience. This will stress provider implementation resources and may result in delayed revenue. Pre-integration with popular billing platforms, ERP/accounting software, and other biller-centric solutions will help.

The P2P Domain Gets a Big COVID Push

We have seen relatively immediate and significant effects in payments within the P2P domain, particularly during the economic shutdown. The convenience and safety of electronic P2P transfers today will guide many users toward a permanent behavior change. Further, cost barriers are falling away: the cost of these transactions is generally free for domestic transfers, and declining for cross-border remittances as more competitors enter and penetrate the market.

Short-term Impact

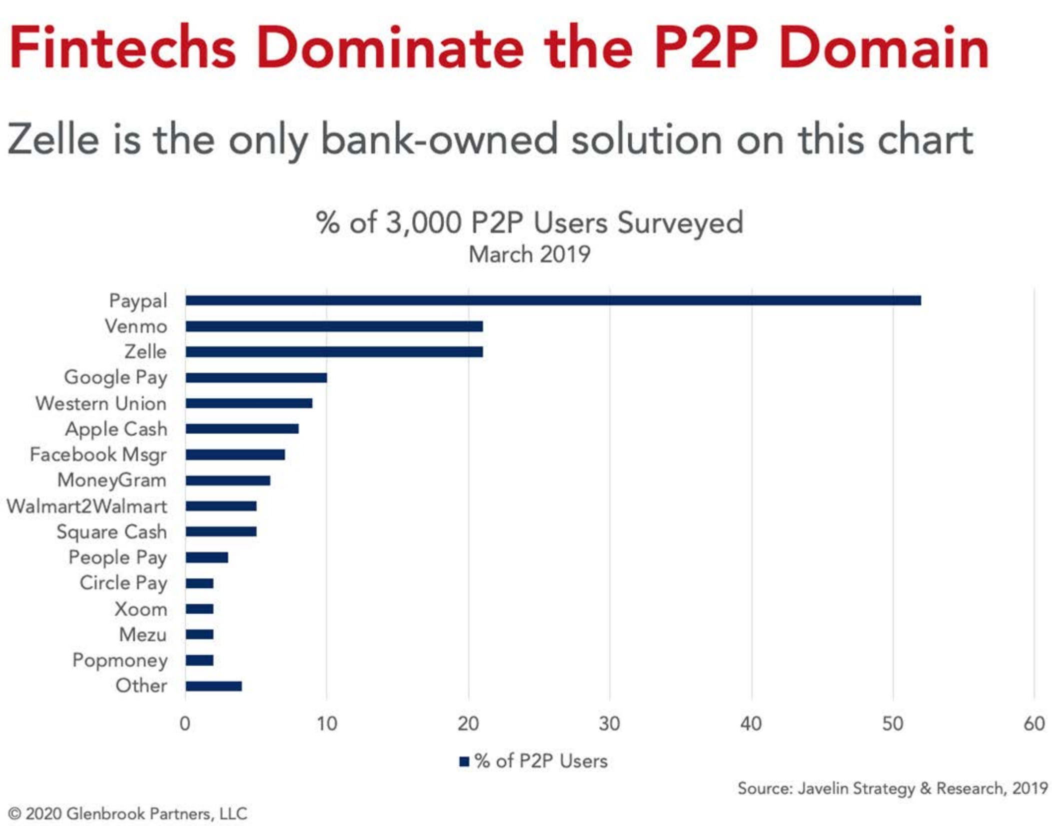
1. **Electronic P2P solutions will get a major boost**

   Economic disruptions are increasing the need for family and friends to assist one another financially.

   The "established" leader in this still-emerging space is Venmo, owned by PayPal. While PayPal's Q1 2020 overall results show a bit of deceleration, Venmo volume continued to grow at nearly the 50 percent YoY pace recorded last year. Venmo processed more than $10B in transfers during each month of the first quarter, a run rate well above the $100B processed last year.

   Zelle, the bank-based account-to-account transfer system introduced by Early Warning Services just a few years ago, has grown even larger. It processed $187 billion in P2P volume in 2019, growing 57 percent. It is also reporting above-trend line growth in enrollment with growing usage across consumer segments, including those over the age of 55.

   We fully expect that these services, and other P2P solutions from the likes of Apple, Google, Square, and others, will have accelerating growth in 2020. In fact, today's market is clearly dominated by non-bank providers.



Long-term Impact

1. **P2P transfers will exhibit a sustained pattern of electronification**

   This trend was already well underway before coronavirus arrived. While there is a tendency to associate P2P transfers with small, casual transactions (splitting the lunch tab, settling that sports bet), these systems are already being used for more fundamental purposes. Zelle transactions currently average about $250 and are often used to automate applications like rent payment and utility sharing among roommates. They are also used to complete consumer payments to smaller, less formal businesses (think landscapers, home healthcare workers, tutors, etc.).

   Recognizing this trend, Venmo raised its transaction limit to support these and other use cases.

   Square now segregates the sources of revenue from its Cash app into "Sending" (activities related to personal transfers) and a fast-growing category of "Spending" (card transactions and ATM withdrawals tied to the balance in the Cash app). Even this treatment, we think, underestimates the commercial use of the Cash app, as simple transfers for rent and utilities do not generate revenue unless they are funded by a credit card or subsequently transferred to a bank account using the instant deposit feature.

2. **More applications for P2P transfers in the disbursement space**

   The "push to card" systems offered by the card networks (Visa Direct, Mastercard Send) are already being widely utilized by insurance companies to pay claims to individual policyholders and by ride-sharing services to pay their drivers on an expedited basis (for which drivers pay a premium).

   Government disbursement also impacts P2P usage. Square's Cash App broke multiple records in Q1, including April's highest ever net-new active customer growth with volume increasing some three times over March. Tied to direct deposit volume, this growth was primarily driven by CARES Act stimulus payments.

   Payments players usually don't stay in their boxes, and we expect to see more innovative use of these transfer systems beyond pure P2P remittances in the coming months and years.

P2P Domain—Industry Implications

Expect accelerating growth for all electronic P2P systems in the near term and beyond, as the pandemic suddenly makes them a far superior alternative to cash and checks for many consumers. This behavior will be permanent.

Also, expect P2P transfers to continue morphing into new use cases and applications involving payment of less formal bills. Enterprise disbursements are a large opportunity for these systems and, unlike pure P2P transfers, it can produce a new revenue stream for financial institutions and processors.

Recommendations

Financial Institutions

- COVID-19 makes P2P an immediate necessity. Given the sustained consumer behavior changes and expanding use cases, your investment is worthwhile.

Small Businesses

- Consider how these systems can be leveraged to reduce inbound check volume, even if there is a cost. Your employees and customers will thank you.

Private and Public Enterprises

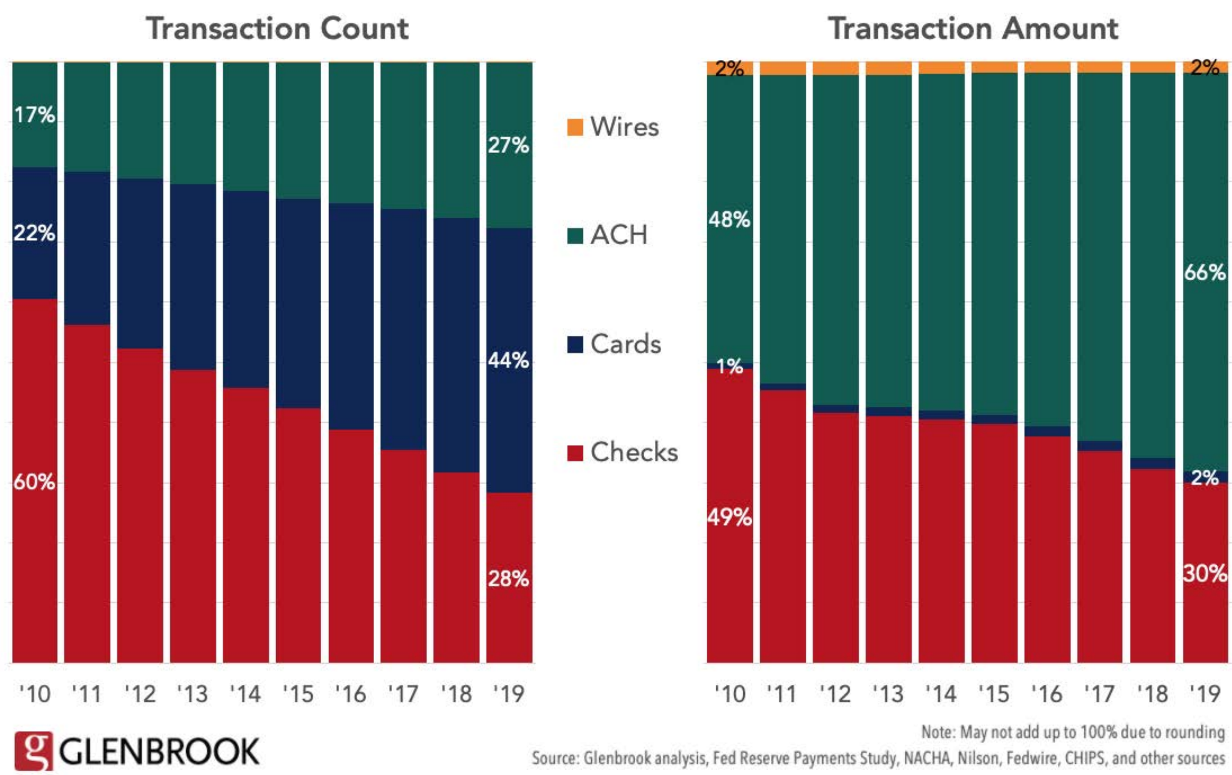
- Explore the ways P2P systems can be used to drive both better efficiency and greater customer satisfaction.

COVID-19 Will (Finally!) Force B2B Digital Adoption

Despite decades of payment industry efforts, businesses have remained stubbornly dependent on checks. Back office processes (and personnel) can be remarkably change-resistant regardless of the size of the business.

But the Covid-19 pandemic is a watershed moment for B2B payments.

B2B supplier payments—invoiced, accounts payable transactions—have steadily migrated toward digital methods but checks still represent 30 percent of the total value and 29 percent of B2B transactions.



U.S. B2B Supplier Payment Mix – Excludes T&E, intracompany transfers, and investment/M&A transactions

Enterprises have made more progress in digitizing payments than smaller businesses. Yet they are often frustrated when paying the 'long tail' of their non-strategic, typically smaller suppliers.

Glenbrook estimates that SMBs generate nearly two-thirds of B2B check payments. Reasons for check's resilience include:

- Smaller companies may not be offered ACH origination as a default feature of their banking accounts.
- Many rely on online bill pay to make payments to their vendors. Ironically, many of those 'electronic' transactions result in paper checks. If the SMB buyer is paying an invoice from a company that is not a major biller via online banking bill pay then a check will be cut on the back end and mailed to the biller.
- Anecdotally, we understand that 80 percent of the checks generated by online banking bill pay are payments to SMBs.

Short-term Impact

1. **Reliance on paper-based manual processes will be exposed**

   The sudden COVID-driven shift to remote work exposes how reliant businesses are on paper-based manual processes for invoicing and payment. Businesses experienced multiple impacts from this paper dependency:

   - Suppliers with accounts receivable/billing departments reliant on USPS invoice delivery may not have had sufficient staff available to prepare invoices. Their outsourced print and mail provider or lockbox may have had disrupted service due to virus-driven staff reductions.
   - Buyers similarly may not have had sufficient accounts payable staff on hand to receive and process incoming invoices. Not all invoices are directed to accounts payable departments so many may have stacked up, waiting for office managers, department heads, and line of staff buyers to return to work.

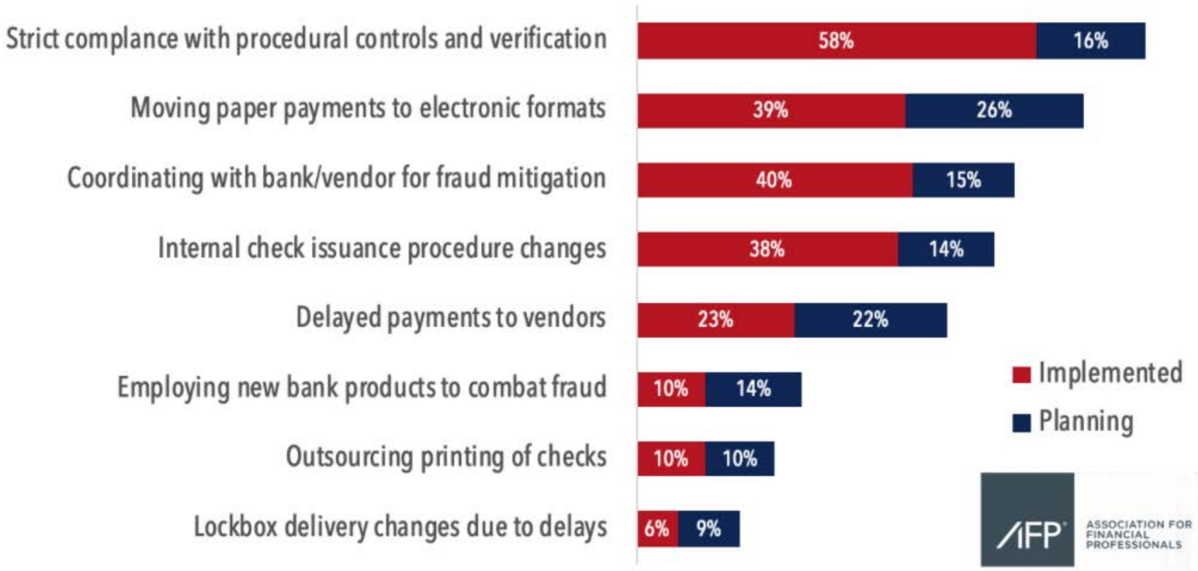
   Even those businesses that have digitized have struggled with a range of issues:

   - Back office employees can't securely access the enterprise financial software they use to perform their primary duties.
   - Many back offices with on-premise software were unreachable to home-bound employees.
   - Many mobile and tablet versions of corporate treasury solutions have disproportionately focused on management reporting and approvals (for positive pay, dual control of large value transactions) rather than day-to-day accounts payable and accounts receivable processing.
   - Large enterprises often rely on business process outsourcing to handle large scale manual work. Their outsource vendors are likely to have experienced COVID-based staffing disruptions and there are likely to be ongoing challenges as the pandemic ebbs and flows across geographies.

2. **Check payments will move to electronic formats**

An April 2020 Association for Financial Professionals survey found that 65 percent of businesses have already started or are making plans to move check payments to electronic formats. AFP found that "thirty-eight percent of organizations have implemented changes in their internal check issuance procedures and another fourteen percent are working on making similar changes. Many financial professionals have challenges with check printing processes, as well as the requirement of wet signatures for checks above a certain threshold."

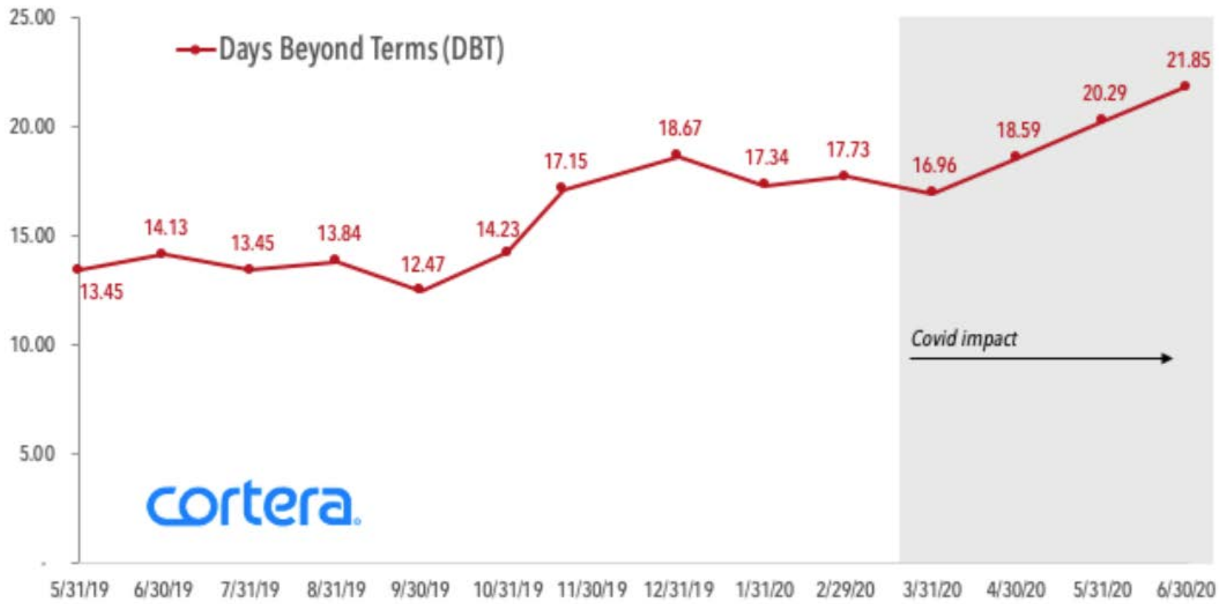
Not surprisingly, the move to remote work has also intensified focus on process controls and fraud mitigation.



2020 AFP Survey: Impact of the COVID-19 Pandemic; the survey was conducted April 1-10, 2020 and received 465 responses. Note that AFP members tend to be mid-market and enterprise-sized businesses.

3. **Intense cash flow pressure**

The broader impact of the pandemic on the economy and resulting uncertainty creates intense cash flow pressure. Buyers are extending terms and paying later than usual. Suppliers must carefully consider (and reconsider) the financial health of buyer customers to avoid the risk of not being paid at all. Newer businesses that have only operated during the decade-long expansion are facing reduced sales and late payments for the first time—often without the experience, procedures, reporting, and cash management tools necessary to manage through the crisis.



Cortera COVID-19 Economic Impact Tracker (CEIT)

Uncertainty underscores business reliance on reliable, timely transaction information to project cash flow, predict creditworthiness, and manage collections. Manual processes introduce keying errors and are inherently inefficient. As a result, businesses suffer doubly—because of disruption of manual processes and impaired decision making due to incomplete or delayed data.

Long-term Impact

1. **More C-suite attention on back office "business continuity" challenges**

For years accounts payable and accounts receivable teams have struggled to garner IT attention, obtain funding for process improvement, and implement new financial solutions. As a result of the COVID-19 crisis, digitization will finally occur.

Increasing demand for digital business processes could not come at a better time. Over the last few years, the payments industry has intensified its focus on business transactions. There is increased focus on interoperability between buyer and supplier-centric solutions to exchange invoices and effect payment.

New real-time payment systems offered by TCH and being planned for by the Federal Reserve are ideal for business transactions, not because of speed but because of data handling.

Meanwhile, both Visa and Mastercard acknowledge that cards are appropriate for only a modest number of B2B supplier transactions. They have redoubled efforts to support a wide range of business payment methods and address associated remittance delivery challenges. Both networks have intensified partnerships with enterprise solution providers to address the needs of buyers and suppliers. Industry Implications

2. **Machine Learning/AI Impact**

The increase in digital transactions will boost the utility of artificial intelligence (AI) and machine learning (ML). Benefits of this technology include:

- More sophisticated translation of data from one format to another
- Better matching of invoices to purchase orders and matching of remittance information to associated payments
- More accurate application of incoming cash to open invoices in accounts payable
- Improved cash flow forecasting
- More effective risk management tools.

This will increase straight-through processing rates and better decision making to better manage through future business cycles.

3. **Focus on Directory Services**

Electronification of business transactions will intensify focus on directory services. Everything necessary to pay by check is provided on the supplier invoice. Shifting from check to electronic payment requires additional information – either RTN and account number for ACH/wire/real-time or 16 digit PAN for cards. Yet businesses have concerns about sharing sensitive payment credentials (suppliers/accounts receivable) and storing it (buyers/accounts payable). Directory capabilities offered by NACHA Phixius, Mastercard Track, and PaymentWorks could address this concern, but none have meaningful traction thus far. In the meantime, the consumer-oriented Zelle P2P solution has the potential to serve many SMBs.

There is also a need for registries to facilitate exchange of electronic invoices. The Minneapolis Federal Reserve sponsored Business Payments Coalition has made great strides toward an e-Invoicing Framework for the United States and a similar approach may be useful for remittance data exchange.

4. **Faster Payments Systems Offer Flexibility and Data**

New faster payments infrastructure (like TCH RTP and the forthcoming FedNow) are well-positioned to replace checks for B2B transactions, especially since they can support delivery of payment-related data.

These modern systems feature "request for payment" (RfP) functionality which enables a supplier to generate a simple invoice and send it to the buyer. These solutions address both invoice delivery and electronic payment. They have the added supplier benefit of easier payment posting since the payment is logically tied to the RfP invoice.

- For less complex relationships involving SMBs, where the invoices themselves aren't particularly complex and each invoice is paid individually, the RfP message itself provides adequate information for each party to understand and complete the transaction.
- More complex B2B counterparty relationships will require far more robust data capabilities. The ISO 20022 message standard includes a remittance message that can either be delivered with the payment (for example embedded in an ACH CTX) or delivered separately via one of the increasingly interoperable business solutions serving buyers, suppliers, or both.

5. **ACH Powers On**

Meanwhile, old-fashioned ACH has an important role to play in replacing checks. Business use of ACH has steadily climbed and is likely to accelerate, particularly if banks proactively offer debit-blocked accounts. Customers have long resisted sharing RTN and account numbers, of course, but accounts that only allow inbound credits have little risk.

Historically, third-party origination of ACH transactions has been tightly controlled due to fraud concerns (banks and NACHA want to reduce the opportunity for bad actors to debit consumers and businesses) but there may be an opportunity to facilitate credit-only ACH origination on behalf of business buyers.

Recommendations

Financial Institutions

- Enable SMBs to deposit checks without visiting the branch or ATM—by increasing, or removing altogether, limits on remote deposit capture—manage risk by managing funds availability on the back end instead.
- Similar to bill payment, explore redundancy of lockbox services, potentially utilizing operations in different geographic locations, even from the same vendor, to ensure continuity.
- Enhance receivables solutions to help businesses transition customers to electronic payment via ACH, card, or new real-time RfP. This will likely require heavy lifting from core processors such as Fiserv, FIS, and Jack Henry but also partnerships with the invoicing and payment solution providers that businesses rely on. Visa and Mastercard's recent focus on business payments and 'network of network' B2B strategies will also help.

For Buyers/Accounts Payable and Their Providers

- Work with banks and providers like Deluxe to explore alternatives to maintaining check stock on-site and shift toward outsourced check printing.
- Leverage the deep expertise of procurement and B2B networks such as SAP/Ariba and Bottomline to increase strategic focus on electronic payment.
- Transition to a digital accounts payable environment by working with companies such as Mineral Tree and Bill.com that can have built electronic invoice workflow and payment solutions geared toward mid-market and SMBs.

For Suppliers/Accounts Receivable and Their Providers

- Adapt electronic invoicing rather than rely on printing and mailing invoices.
- Encourage electronic payments from buyers. Seek vendors with strong bill presentment and payment expertise, like Billtrust and Transactis.
- Small and mid-sized businesses should look to their ERP/accounting system providers for solutions. Intuit/Quickbooks, Netsuite, and Xero should all benefit but may need to augment their payment capabilities (e.g. integrations with fintechs and banks, and reconciliation capabilities to support new real-time transactions, ISO formatted messages, and bank/bank processor APIs).
- Providers that have long served SMBs such as Square, PayPal, and Freshbooks enable invoiced transactions and the associated payment. A myriad of industry-specific ISVs (increasingly payment-enabled by Stripe) are also well positioned to help.

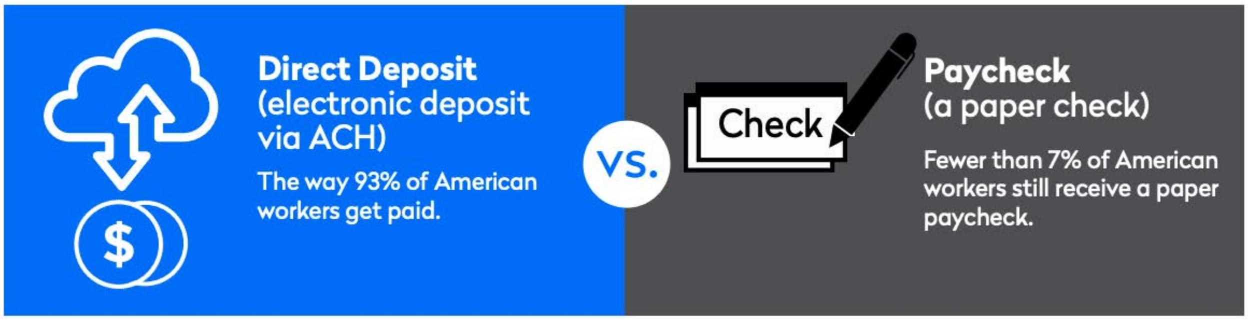
For Providers that Serve Businesses of All Sizes

- Be prepared to scale. This is a once in a lifetime opportunity to take advantage of a step-change in business process automation.

COVID-19 and the Income Domain

The Income Domain consists of payments to individuals for salary, benefits, rebates, and expense reimbursements. In the U.S., these payments are made primarily via direct deposit through NACHA's ACH system, and to a lesser extent, paper checks and payroll cards.

When the government announced plans in March 2020 to release the first stimulus payments, the most (or least) surprising element to many payments professionals was the reliance on paper checks as a disbursement method for those whose bank account credentials were not on file with the IRS.



NACHA infographic

The current centralized hub of account credentials that the IRS used to disburse stimulus payments is based on individuals who have filed tax returns electronically and provided their bank account credentials to receive tax refunds via direct deposit (ACH). According to NACHA, "more than 80 percent of people who received a stimulus payment did so by Direct Deposit."

However, there was also a portion of the population excluded from the IRS' pseudo-directory: non-filers and those without traditional bank accounts. The government's initial solution was to reach these individuals via paper checks, which take months to arrive.

Non-filers were directed to enter their name, address, date of birth, Social Security Number, and bank account information on the IRS portal to enroll for stimulus payments by check. This approach is particularly susceptible to fraudulent interceptions. There was no good way to verify these individuals and authenticate that the bank account belonged to them. The Federal Trade Commission "reported that it had gotten four times as many complaints about identity fraud in the first few weeks of April as it had received in the previous three months combined."

A directory could help mitigate issues related to fraud and enable more payments to be made electronically. Other countries employ centralized or federated directories or have a national ID system that tracks individuals' identity and status (e.g., dead or alive). The U.S. does not have an easy way to identify and validate individuals' identities or their bank account credentials. Nor is this information maintained or updated routinely (e.g., there have been reports of $1.4B in stimulus aid sent to deceased individuals).

While this is not a new phenomenon, the Treasury Green Book is, in part, supposed to maintain updated bank records. Early Warning Services' Zelle network is the closest example of a consumer directory, however, there would still be data sharing required, technical challenges, and, of course, it is most useful to banked individuals.

In the absence of a directory, and to reach the long tail of individuals that would otherwise have to rely on check payments, we observe a host of industry developments that have helped Americans gain access to funds in a timely and digitized manner. For example, prepaid cards became the better alternative to paper checks, and several non-traditional financial services companies stepped in to help.

Short-term Impact

1. **Prepaid accounts gain popularity**

   Prepaid accounts saw a resurgence in popularity, and several notable fintech players from P2P mobile wallets to neobanks, found ways to help consumers receive funds.

   Per the Electronic Funds Transfer Act (EFTA) Regulation E, government agencies cannot require consumers to create accounts at a particular financial institution as a condition to receive government funds. However, the CFPB issued an interpretive rule stating that pandemic relief payments are not considered government benefits under Regulation E.

> **Mailed Check Payments May Be Sent As Debit Cards**
>
> If the Get My Payment application says you're receiving a check, your Payment may come as a debit card. Debit card Payments come in a plain envelope from "Money Network Cardholder Services."
>
> For more information, see Prepaid Debit Cards.

IRS "Get My Payment" page

   Shortly after this announcement, both Walmart and 7-Eleven announced solutions for customers to receive stimulus payments via, respectively, the MoneyCard and Trans@act prepaid programs. MetaBank and Fiserv also "won U.S. Treasury contracts to issue Visa Inc. prepaid cards loaded with stimulus payments." As of May 2020, about 4 million Americans were eligible to receive their stimulus payments via prepaid card.

2. **Increase in non-bank alternatives**

   We saw a host of non-bank alternatives launch efforts to provide customers with an option to receive their stimulus payments. Square's Cash App has allowed users to sign up for direct deposit using the app since 2018, but amid the pandemic, the company rolled out steps for consumers to apply for a Cash Card and submit their information to the IRS to receive stimulus payments.

   Similarly, as of April this year, Venmo began to roll out direct deposit via the app to a subset of users who could then direct stimulus payments to their Venmo balance, so long as they were approved for or had applied for the Venmo debit card.

   Neobanks Chime and Current emerged as champions of their customers. Chime reportedly offered early access to stimulus payments to approximately 100,000 of its customers. Current indicated it credited approximately 10,000 of its customer accounts as of early April.

   We believe we will see more public and private sector collaboration to distribute funds, especially to those who cannot receive direct deposit based on current IRS parameters. We have seen evidence of both regulatory bodies and technology companies stepping in to identify alternative disbursement mechanisms, particularly to reach the unbanked and underbanked.

Long-term Impact

1. **Continued interest in non-banks**

   We expect to see more interest in non-traditional/digital financial services providers, especially among the financially excluded and vulnerable gig economy workers.

2. **More attention on faster delivery of payments**

   For now, we expect to see this via push-to-card, Same-Day ACH, and The Clearing House's Real Time Payments (RTP) network. For example, payroll provider, Paychex, recently announced that it launched payroll disbursement using the RTP network. In the longer term, the upcoming FedNow service, based on the Federal Reserve's role as the fiscal agent for the U.S. Treasury, may become an option.

Income Domain—Industry Implications

We expect more focused interest in faster payments for the payroll use case, driven both by pandemic concerns and the secular trend toward faster payroll delivery for hourly workers.

We also expect increased usage of non-traditional, alternative financial products. These may come from digital financial services such as mobile wallet providers like CashApp and Venmo, neobanks like Chime and Current, that stepped up to fill the gap traditional banks were unable to fill for consumers. We also see a significant movement towards immediate payroll payments from small and large employers; companies that provide the "earned wage access/on-demand pay" like DailyPay, Even, PayActiv, and Branch will gain new customers in the foreseeable future.

Recommendations

Financial Institutions

- Consider the benefits of accelerating faster payments deployment to expand treasury management offerings for companies with demanding payroll requirements and other use cases.
- Let Fintech Help. Typically equipped with modern technology, a focus on niche use cases, and a strong user experience, a fintech provider may offer products and services unavailable from the incumbent provider.

Networks

- Networks are natural directory providers. Apply learnings from other countries, or even NACHA's own Phixius B2B directory scheme, to expand upon the directory capabilities we already have.

Regulators/Government

- Apply lessons learned from financial inclusion efforts in emerging markets to encourage financial institutions and fintechs to offer basic or limited-use accounts, requiring minimal KYC, given the inherently low-risk nature of G2C/G2P payments.
- Push to improve industry collaboration to improve payment system interoperability through directory interoperability, shared best practices in risk mitigation, etc.

Conclusion

For most, a full return to prior patterns of living and working is the only desirable outcome. While much will be restored, a full return to the former status quo is far from likely.

No one can predict precisely how long customer consumption adaptation patterns to COVID-19 will endure. Some will have few options. For instance, most Millennials already had their earnings negatively impacted by the 2008 Great Recession. Injured by another economic downturn, their spending will slow down again. Students from kindergarten to post-doc levels will be challenged by the pandemic's impact on education. Schools and universities are already struggling to adapt to the current economic realities, never mind manage the health of their students and staff.

Besides economic disruption across the economy, other factors will influence the shape of the post-COVID payments industry.

The Digital Shift and Payment Industry Evolution

The pandemic's impact will not be measured solely by how long it takes to return to 2019 levels of economic activity.

The pandemic will be viewed as a historic forcing function across multiple aspects of life and work, specifically our reliance on digital technology.

The wide availability of broadband internet access via fixed and wireless connections, coupled with cloud-based delivery of services like Zoom and Slack, has enabled continued productivity by workers forced to remain home.

The impacts of this and the reduction of commuting time, are many:

- Subway and train volumes are down 80 percent, stressing transit agency budgets.
- While vehicle miles traveled (VMT) have recovered in many areas, some areas continue to see reductions of 12 percent to 20 percent. As of mid-June 2020, gasoline sales in the U.S. were down over 20 percent and are not expected to return to 2019 levels until 2023.
- Commercial real estate, particularly for operators of office parks and open-concept workspaces, is facing new conditions as tenants reassess their space needs. Rents are down in San Francisco and New York.
- Sales and rental prices of suburban homes have increased as urban dwellers, fatigued by work-from-home orders and the loss of urban amenities, opt for more spacious homes.
- While remodeling activity was bolstered by DIY projects during the first quarter (Home Depot's foot traffic is up 35 percent YOY), other forecasts suggest concern over employment and general economic conditions will depress spending in 2021.

The impact of these linked behavioral shifts on payment activity is obvious.

As individuals, most of us will return to a form of the old normal but not in every aspect of our lives. For others, without employment, healthcare coverage, and facing eviction, the results could be catastrophic.

For many businesses, even a 5 percent revenue decline can have a major impact on that enterprise's stakeholders: employees, supply chain partners, stockholders, and customers. The impact of even modest changes in buyer behavior is consequential and often in unexpected ways.

Secular Trends Amplify the Digital Shift

We now have more information technology tools than ever to enable remote work:

- Cloud computing has scaled to accommodate the shift to online work.
- Broadband communications to the home and office provide the channel to exchange data at high speeds.
- Web-based development delivers business and entertainment services to homes and offices, with data integration via APIs.
- Laptops, tablets, and smartphones are ubiquitous, mobile devices increasingly dominate usage, assuring access to cloud capabilities for many.
- When web-based tools are insufficient for a compelling user experience, downloadable software enhances the experience via apps.

As important as the tech, the global working population is largely composed of digital natives, those who are entirely comfortable with digital tools for collaboration, service delivery, and entertainment.

Combined, these trends have enabled a critical mass of people to shift an even greater proportion of their lives to the digital realm, than would have occurred naturally.

Much of this pandemic-pushed digital shift will be permanent. With a vaccine, sports, bars, restaurants, and live entertainment will return to pre-pandemic patterns and levels. Air travel, especially for business purposes, will not, given the success of virtual meeting technology. For many companies, the work-from-home operation will assume a greater role, with an impact on office space needs, employee transportation, and more.

The Changed Competitive Landscape

Adaptability is essential to the long-term survival of both start-ups and industry incumbents. These anything-but-normal circumstances have exposed multiple frailties in some industries (restaurants, airlines) while amplifying the proposition of others (e-commerce, Amazon).

The payments industry has seen significant drops in volume before but nothing to this magnitude, despite its short duration. Nor have we seen transaction reductions so prejudicial to some segments while so favorable to others. Some payment service providers with a hard focus on an affected sector are in survival mode. There is a growing tidal wave of business bankruptcies that will remove tens of thousands of merchant businesses from acquirer and processor roles.

For an industry tied to transaction volume, this is a gloomy prospect. The transaction pie has gotten smaller and even with economic recovery, its shape will be different. Depending upon your role and company wherewithal, that 5 percent shift in business activity may be a minor irritant or an existential threat. But what about a 20 percent or even 40 percent drop? These unprecedented conditions will challenge business leaders responsible for navigating their enterprises through this period.

New technology tools, new methods of payment, and demographic preferences had already begun to alter the marketplace before COVID-19. Now, the pandemic is forcing payments industry participants to be nimble and adaptable to the new circumstances. These circumstances favor firms with current technology and the ability to quickly adjust business models.

Incumbents are confronted on the margins by the new competitors. But their own size and operational legacies constitute a larger barrier to their adaptation to new conditions. Further, in multiple markets around the world, regulators are either leveling the playing field or building new payment rails.

Even merchant-run payment services are gaining momentum. Taking advantage of the cloud, APIs, app stores, and smartphone ownership, Rappi Pay in Latin America and Oxxo Pay in Mexico are just two examples.

The payments industry is in an intense period of change, amplified and exacerbated by COVID-19. Beyond cost management, strategic options include new customer experiences, new front and back-office capabilities, taking share from competitors, divesting business lines, the addition of new lines of business via merger, acquisition, or organic development.

The status quo is gone. Glenbrook is ready to assist as you evaluate strategic options under these altered circumstances. Beyond short term adaptations, preparation for the post-pandemic era is a priority.

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