Futures Scenarios Post COVID-19
Insights into the Near-Term Impact to the Payment Processing Business
July 2020

Prepared by
AVENUE B Consulting Inc.
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Insights into the Near-Term Impact to the Payment Processing Business

The Secure Remote Payment Council has conducted a futures scenario assessment to provide thought leadership and to educate the payment stakeholders on the most pressing initiatives the industry will need to tackle once the COVID-19 quarantine is lifted and businesses resume some sense of normalcy. The focus of this assessment is designed to provide recommendations on near-term next steps for the payments industry to consider. Avenue B Consulting was hired to conduct the research and prepare the summary report.

This proposed approach differs from other COVID-19 industry prognostications in that the context for this study is niche-focused on the most pressing retail payment and debit network processing issues, and purposefully excludes ubiquitous COVID-19 issues relating to changes in the work force, office environment, social distancing, etc., that are commonly addressed in other recent industry research efforts.

Project Description and Objectives:

Conduct primary research on futures scenarios to identify most pressing payments trends, events, and influences in first phase of post COVID-19. Using current events as a baseline, the SRPc narrowed the list of most important industry trends to eleven futures scenarios represented in three broad categories of inquiry:

- The customer behavior scenarios address the use of digital channels, touching public surfaces and demand for new payment options.
- The systems and technology scenarios tackle the industry response to funds disbursements, onboarding new customers, usefulness of credit scores, deployment of contactless devices and ongoing fintech investment.
- The security, risk and fraud scenarios focus on new user authentication, growth in online fraud and underwriting standards.

The process draws systematically on the judgment of payment industry experts to define the issues, evaluate their impact, and find practical actions for managing to them. Based on input from these experts, the SRPc evaluated and built consensus around the scenarios that have the potential to have the greatest impact on our industry, and provide industry guidance on prioritizing payments projects, development efforts and investments that stakeholders will face near-term.

Methodology:

Conduct telephone interviews with industry experts using a highly structured interview protocol. The nine industry experts empaneled were selected among the SRPc Board members and other well-known payment leaders all of whom were generous with their time and insights:

Roger Applewhite, President and CEO, MagTek
John Drechny, President, Merchant Advisory Group
Brian DuCharme, Vice President, Global Payment Products & Solutions, Transaction Network Services
Kim Ford, Senior Vice President, Government Relations, Fiserv
Kirkland Morris, Vice President, Enterprise Strategy, Interac Corp.
Ann Morsch, Vice President, Membership and Operations, AFFN
Manish Nathwani, Senior Vice President, Product Development, Shazam
Bob Steen, Chairman and CEO, Bridge Community Bank
Paul Tomasofsky, President, Secure Remote Payment Council
Maria Arminio, President and CEO, Avenue B Consulting, Inc. (Interviewer)
Experts were queried on their views about the probability of occurrence and the impact assessment of each futures scenario, using a score of 1-10, 10 high.

A score of 1 for probability of occurrence means the panelist believes that futures scenario is not at all likely to occur, while score of 10 means the panelist believes it is certain to happen.

A score of 1 for impact in six months (T+6), if it materializes means the panelist believes the impact to the payment industry in the next six months is negligible, while a score of 10 means the panelist believes the impact in that timeframe will be most significant.

The interviewer engaged with the expert to understand their rationale for their assigned score and captured those comments. Their comments, insights and opinions have been captured anonymously (see Section on Detailed Findings for All Scenarios).

The panelists’ scores for each of the eleven futures scenarios were tabulated using a median score. Here are the resultant scores:

<table>
<thead>
<tr>
<th>FUTURES SCENARIOS</th>
<th>Ranked on scale of 1-10,10 high</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Customer behavior scenarios</td>
<td>Probability of Occurrence</td>
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<tr>
<td>• Systems &amp; technology scenarios</td>
<td>8</td>
</tr>
<tr>
<td>• Security, risk &amp; fraud scenarios</td>
<td>5</td>
</tr>
<tr>
<td>1 Customers increasingly rely on digital payment channels.</td>
<td>6</td>
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<tr>
<td>2 Customers demand more payment options at the point of purchase.</td>
<td>8</td>
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<tr>
<td>3 Funds disbursement is mired by antiquated systems.</td>
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<tr>
<td>4 Onboarding new customers puts pressure on legacy identity and access management systems.</td>
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<tr>
<td>5 Credit scores are rendered useless in determining customer’s credit worthiness.</td>
<td>6</td>
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<td>6 Deployment of contactless for attended (e.g., POS) and unattended (e.g., ATMs, kiosks) devices accelerates.</td>
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<td>7 Customers remain leery about touching public surfaces, e.g., ATM/Kiosk buttons, POS screens, etc.</td>
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</tr>
<tr>
<td>8 Merchants insist on using new ways to authenticate users both online and at the POS.</td>
<td>9</td>
</tr>
<tr>
<td>10 Merchant acquirers tighten underwriting standards.</td>
<td>3</td>
</tr>
<tr>
<td>11 Fintech investment in the financial service sector stalls out.</td>
<td>8</td>
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</table>

Research Findings:

The panelists’ scores for each of the eleven futures scenarios were tabulated using a median score. Here are the resultant scores:
The median result has been plotted on an XY axis chart. The upper right-hand quadrant shows the scenarios with high probability of occurrence and high impact if materialized, providing stakeholders with the industry experts’ perspectives of the most important near-term priorities.

The top five futures scenarios based on high probability and impact ranking are those clustered in the upper right-hand corner of the XY axis plotting. Panelists were most concerned about the accelerated deployment of contactless, growth in online fraud and tightening of underwriting standards.

Onboarding new customers to legacy identity and access management systems and customer’s reliance on digital payment channels were viewed as likely to occur but with slightly less impact, if materialized.

These five futures scenarios represent the most important considerations for near-term planning and development for payment industry stakeholders. If the forecasts for increased reliance digital channels and the predictions for growth in online fraud do materialize, then the payment industry might also want to focus on the deployment of new user authentication methods both online and at the POS.
Mid-range scores for probability and impact regarding concerns about touching public surfaces, antiquated funds disbursement systems and demand for new payment options suggest that these items are still somewhat important, but secondary to other priorities.

Low probability scores for the stall out of fintech investments and usefulness of credit scores in determining credit worthiness can be attributed in part to the divergence in the panelists’ viewpoints on whether or not these would materialize in the six month timeframe. In both cases, panelists view these futures scenarios to be short term situations.

An executive summary of the industry experts’ forecasts is provided in the table that follows.

The detailed findings of all scenarios include quotations and color commentary from the industry experts as they explain their thought process and reasoning behind their scores.

### EXECUTIVE SUMMARY OF INDUSTRY EXPERTS FORECASTS

<table>
<thead>
<tr>
<th>Futures Scenarios</th>
<th>Ranked on a scale of 1-10, 10 High</th>
<th>Industry Experts’ Forecasts</th>
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</thead>
<tbody>
<tr>
<td>1. Customers increasingly rely on digital payment channels.</td>
<td>8 7.25</td>
<td>Exigent circumstances have created an environment where customers have gotten more accustomed to placing orders and paying for goods online and via mobile phone. Digital payments are here to stay. Additional functionality such as rewards, loyalty, online ordering and pick up/delivery, will become an inexplicable part of the digital evolution.</td>
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<tr>
<td>2. Customers demand more payment options at the point of purchase.</td>
<td>5 7</td>
<td>There is no pressing demand for new payment options at the point-of-purchase as customers are basically satisfied with the options they have today. While consumers will use new payments types like P2P at the POS and online, there is no push to alternative payments or increased consumer demand for them. The new payment options most likely to emerge are “the Pays,” P2P and contactless.</td>
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<td><strong>FUTURES SCENARIOS</strong></td>
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<tr>
<td><strong>Probability of Occurrence</strong></td>
<td><strong>Impact T+6 months, if materializes</strong></td>
<td><strong>Problems with disbursement of stimulus funds lie with the government systems, not the private sector. Getting stimulus money into the hands of the unbanked and underserved segments of the population was challenging. Technology was not the root of the problem, rather policy and execution were the impediments to success.</strong>&lt;br&gt;The industry should respond to the disbursement problem by making systems upgrades, supporting new payment options, and starting contingency planning.</td>
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In these challenging times, customers are demanding new lines of funding credit to help with finances. This demand will put pressure on legacy systems, but those problems are manageable.<br>The industry must respond by streamlining the onboarding and underwriting processes. Greater efficiencies need to be built into the onboarding process, such as prepopulating forms and automating business processes. Better data analytics on customers will be extremely important to issuers.

Given the growing number of newly unemployed and failed businesses, the ability to assess the credit worthiness of new and existing customers becomes more problematic. The credit scoring companies will adjust their calculations to reflect the customers true creditworthiness given the current financial situation.<br>Lenders have already made efforts to keep customers from becoming a credit risk resulting from COVID-19. New credit models and more data analysis will be used to determine credit worthiness in the future.
<table>
<thead>
<tr>
<th>Futures Scenarios</th>
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<td><strong>9</strong> Online fraud grows beyond original projections.</td>
<td>8</td>
<td>With the implementation of EMV Chip, fraudsters have shifted their deviance to the online environment. Industry experts proposed a myriad of risk mitigation solutions to combat online fraud including the use of tokenization, user authentication, monitoring tools and fraud scoring engines. User authentication information should be identified and included in the transaction message.</td>
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<tr>
<td><strong>10</strong> Merchant acquirers tighten underwriting standards.</td>
<td>8</td>
<td>The pandemic has caused widespread service/event cancellations and holdbacks on pre-orders leading to significant portfolio losses and increased retailer bankruptcies particularly in certain merchant verticals. Merchant acquirers will become more conservative in their service offering and more vigilant in managing risk while maintaining their customer base under the current economic environment. New players, such as ISOs and Payfacs, and new product offerings will emerge.</td>
</tr>
<tr>
<td><strong>11</strong> Fintech investment in the financial service sector stalls out.</td>
<td>3</td>
<td>Industry analysts recently forecasted that fintech investment is shifting away from the financial service sector to other vertical markets, namely healthcare and insurance. Experts were split on the probability that will occur. Some forecasted fintechs are facing some tough times ahead; others believe fintechs in the financial service sector will continue to succeed and prosper.</td>
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DETAILED FINDINGS ON ALL FUTURES SCENARIOS

Future Scenario #1: Digital Channels

Existent circumstances have created an environment where customers have gotten more accustomed to placing orders and paying for goods online and via mobile phone. Across the board, our industry experts view that digital payments are here to stay:

“COVID-19 just gave customers the big push to shop online.” (P2)

“All types of customers, ranging from millennials to tech savvy seniors, are using digital channels.” (P8)

“Customers will be using more online payments regardless of whether they were purchasing things online or whether they’re picking up in the store.” (P1)

“This new reality is spurred by changes in consumer interaction. There is an increased reliance on remote payments and decrease access to in-person commerce. As social distancing takes effect these options will become more permanently entrenched. This trend has been real for some time but its impetus has hit us at a greater speed.” (P6)

“Consumers stuck at home are getting very accustomed to using online channels. Even holdouts on digital are thinking it is not so bad. The increased reliance on digital solutions means they are working well, but their ultimate success will depend upon finding the right balance that reduces consumer friction while protecting against fraud.” (P4)

One outlier suggested the trend to use digital channels might be situational:

“Customers have scaled to the problem, becoming more accustomed to using digital payments. In some respects, they have had no choice.” (P7)

Several panelists forecast that additional functionality will become an inextricable part of the digital evolution:

“In the past few weeks, we have seen an increase in the market adoption of digital payments accelerate by 3-4 years, evidence the growth experienced by companies like PayPal. Financial institutions that have been on the sidelines will jump on this adoption curve too. We will see a step up in marketing efforts to attract new customers and the addition of rewards and loyalty to sweeten the pot.” (P3)
“COVID-19 has put the spotlight on digital channels particularly mobile and online. Over the next six months, the industry will double down on innovation to these existing channels. Thereafter we will see new and more integrated digital channels emerge in support of IOT and healthcare.” (P5)

“Digital payments must be coupled with additional features attractive to consumers. Mobile phones need to support more functionality than just payments; Sam’s Club supports a process where the customer scans the items and completes the purchase using their mobile phone. Duncan and Starbucks have done well with their online order/pick up service.” (P1)

“Alternative solutions are available so payments will get made. Smaller financial institutions are processing payments efficiently from a technical perspective. We have learned that customers are getting accustomed to using remote deposit capture, mobile applications and online banking.” (P9)
Future Scenario #2: Payment Options

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<tr>
<td>2</td>
<td>Customers demand more payment options at the point of purchase</td>
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</table>

Across the board, the panelists agreed that there is no pressing demand for new payment options at the point-of-purchase as customers are basically satisfied with the options they have today. While consumers will use new payments types like P2P at the POS and online, there is no push to alternative payments or increased consumer demand for them.

“The demand for new payment options is not being driven by the consumer side of the equation. Historically, consumers have taken a more passive role in payment options and generally they use what they are given. However, consumer concerns about touching public surfaces and handling the PIN at the POS have increased their appetite for non-contact forms of payment.” (P6)

“While there will be more options available, customers are creatures of habit and will not change their behavior unless something is not working properly.” (P8)

“Consumers will gravitate back to plastic cards because that is what they have and know.” (P7)

The new payment options most frequently cited by the panelists include “the Pays” (e.g., mobile device wallets like Apple Pay, Google Pay, etc.), person-to-person (P2P) payments (e.g., Venmo and PayPal) and contactless:

“The push to contactless and “the Pays” is probably more anecdotal than actual. Payment providers are certifying contactless at the POS because merchants are asking for it. Contactless will get a bump in usage as a result, but consumers will still use plastic cards. Payment options like PayPal and Venmo may get a slight lift from COVID-19. Any changes in payment mix will occur because face-to-face transactions have been impacted, and this affects all types of payment.” (P2)

“The answer is nuanced. We will definitely see less use of cash. Some consumer segments will want mobile purchasing in the form of device wallets at the POS. Venmo and PayPal will remain strong for P2P payments, but there won’t be a big push to support this at the POS.” (P4)

“There may be more usage of in-app purchasing if the application has other complementary features spurring its usage, e.g., Open Table for restaurant reservations. There will be increased emphasis on “the Pays” precipitated by the consumer desire not to touch stuff. The impact will be significant because some players are just not prepared.” (P7)

One panelist distinguished between new payments supported online vs. the physical point-of-purchase:

“Consumers are ambivalent about the options at the POS but are looking for more ways to pay in the online environment, particularly for consumer-to-business (C2B) type payments. We will see a rise in in-app payments and use of payment portal services like PayPal.” (P5)
A couple of the panelists opined on the impact to the payment industry if consumer demand for new payment options did materialize:

“We started supporting “the Pays” but perhaps jumped the gun on this. Although there wasn’t a business case justification, our perception was that we needed to support it for our customers. We are paying a hefty token fee to Apple for the privilege.” (P9)

“If demand for new payment types does increase, the Department of Justice will need to step up and prohibit the global networks from gobbling up companies that can support these payment types. The regulatory agencies need to ensure there is a path for fair competition.” (P1)
Future Scenario #3: Funds Disbursement

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Panelists agreed that the problems with disbursement of stimulus funds lie with the government systems, not the private sector:

“Government systems were antiquated before COVID-19 occurred; the pandemic has just underscored how severe the problem is.” (P2)

“The crisis put tremendous pressure on state and federal antiquated payment systems, but the private sector was able to respond without problem proving ACH, pre-paid cards and debit payment options worked just fine.” (P4)

“The ACH has served the financial service sector quite well.” (P5)

“ACH disbursements of stimulus checks went very smoothly.” (P1)

“These systems are not antiquated, but some are not able to scale to accommodate increased workload.” (P7)

Getting stimulus money into the hands of the unbanked and underserved segments of the population was more problematic:

“Customers without checking accounts are not willing to open accounts for disbursements because they do not want government agencies to have their personal identifiable information.” (P1)

“Having a bank account is not a consumer “right” in the U.S. as it is in other countries like the U.K. Some consumers can’t or won’t use banking services.’ (P7)

“The underbanked and unbanked have paid the price for antiquated systems as their disbursements have been limited to receipt of checks in the mail and use of check cashing facilities.” (P5)

“Getting stimulus payments to beneficiaries has placed a disproportionate burden on the underserved and unbanked both in term of locational inconvenience and absorbent access fees.” (P9)

“The technology is available to support many types of funds but the government’s ability to disburse them is laughable.” (P2)

“There is a high uptake in electronic options for funds disbursements. We will see more EFT volume find its way to payments engines and the pandemic will be the catalyst to drive checks out of the system. Technology is not an impediment.” (P6)

“The U.S. Treasury could have issued money transfers in one day using Faster Payments. This is a policy decision, not a technical one.” (P7)

The panelists suggested the industry should respond to the disbursement problem by making systems upgrades, supporting new payment options, and starting contingency planning:
“What we have learned from the government stimulus disbursements is that some segments of the population (e.g., low income earners, temporary workers, etc.) will want to get paid more frequently. The upshot is an increased demand for more frequent payroll payments.” (P3)

“With projected increases in unemployment, systems supporting funds disbursements must be functioning properly to meet demand. Even state-of-the-art systems (like Florida’s unemployment system) has had problems scaling. We must start now to do contingency planning for the next emergency.” (P8)

“The government will not make investments in infrastructure for disaster situations.” (P1)

“There should be Congressional Reviews conducted on government systems to remedy the broken disbursement functions. The end state may be for the government to outsource these functions.” (P2)

Conspicuous by absence, none of the panelists mentioned the use of virtual cards that provide near-immediate access to funds. These cards are issued in support of card-less access programs, specifically designed for emergency payments needs.
Future Scenario #4: Onboarding

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Onboarding new customers puts pressure on legacy identity and access management systems.

In these challenging times, customers are demanding new lines of funding credit to help with finances. The industry experts agreed that this demand will put pressure on legacy systems, but those problems are manageable:

“Onboarding new customers has always been an issue. These baseline systems will never be replaced entirely, rather they will continue to be patched with fintech solutions.” (P8)

“Banks need for simpler, easier and faster solutions for onboarding customers. Absent a complete overhaul, these systems will be modernized using fintech APIs.” (P4)

“The next wave of new consumers will catch issuers off guard unless they are focused on improving their identity and access management systems. In the financial service sector, onboarding new customers is most tethered by regulatory constraints.” (P7)

“Big banks have invested quite a bit in these systems, and smaller banks will continue to rely on third party processors. New lenders, like Lending Pay and Quicken Loans, will evolve and build better capabilities.” (P1)

“This is not a problem. If we determine there have been lots of mistakes in the onboarding process then we will need to reexamine the identity and access management systems. The private sector is much more capable of supporting new account openings than the government.” (P2)

One industry expert provided a more global perspective on the development of identity solutions:

“New onboarding requirements will be the impetus to create more meaningful identification solutions. New government programs brought the need for rapid program execution and immediate payment. The payment piece has worked well. The bigger concern is user authentication, i.e., how to identify that the customer is who they say they are. This has prompted the need for more robust identity and access management systems that support rapid adjudication at scale.” (P6)

The industry must respond by streamlining the onboarding and underwriting processes. Greater efficiencies need to be built into the onboarding process, such as prepopulating forms and automating business processes. Better data analytics on customers will be extremely important to issuers. Panelists added their thoughts on other area of improvement:

“Financial institutions will continue to develop practical ways to identify our customers. Using tools like IDology alone is just not heavy duty enough. Biometric identification is becoming more important.” (P9)
“Legacy systems rely on identification based on three factors: knowledge, inherence and possession. Issuers will need to collect additional forms of ID to authenticate the customer but must find the right balance of risk vs. customer convenience (i.e., answering ten thousand questions). Stronger compliance requirements will force the industry to upgrade or replace identity and access management systems.” (P5)

“There is a mega trend to move to online onboarding of customers as COVID-19 has accelerated the adoption curve here by about 4-5 years. Banks will look to third party processors to build more capabilities like risk mitigation, underwriting scores and regulatory compliance.” (P3)
Future Scenario #5: Credit Scores

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Credit scores are rendered useless in determining customer’s credit worthiness

Given the growing number of newly unemployed and failed businesses, the ability to assess the credit worthiness of new and existing customers becomes more problematic. Will credit scores still be indicative of the consumer’s credit worthiness? The panelists had a wide divergence of opinions on the subject:

- “Credit scores are foundational; they are the Rock of Gibraltar. They will still be used as the baseline for assessing credit worthiness even with the projected unemployment forecast.” (P7)
- “Credit scores will continue to be used until something better emerges. The industry relies too heavily on these scores today.” (P8)
- “Credit scores are volatile and can be impacted when customers are merely shopping for refinancing options. Scores may not be indicative of the customer’s ability to make payments or fulfill their obligation, but right now there are no other alternatives. Perhaps this will spark innovation.” (P5)
- “There are tons of credit worthy people that are having cash flow and liquidity challenges so it will be tough to keep up with credit scores. This is a short-term headache. As the economy rebounds, consumer scores will become more reflective of reality.” (P6)
- “Credit scores were useless before the pandemic. If you get three (credit) scores, two of them are usually wrong so it is pointless to rely on them. There is no substitute for the lender getting to know the customer and making the decision on that basis.” (P9)
- “The bad economy knocked this business into a cocked hat. People in some segments of the economy will be denominated in a different way, and the old algorithms will not apply.” (P2)

Two of the panelists commented that the credit scoring companies will adjust their calculations to reflect the customers true creditworthiness given the current financial situation:

- “It will be hard for financial institutions to change to this mode of operation as credit scores have been around forever. Credit scoring companies will adjust indices to keep scores relevant.” (P4)
- “Credit agencies will continue to amend their data and adjust their algorithms to accommodate changes to customer credit worthiness.” (P1)

Several of the panelists observed that lenders have already made efforts to keep customers from becoming a credit risk resulting from COVID-19:

- “We have helped our clients by waiving fees and late charges, extending payment due dates by three months, and not reporting their (current) credit scores to the credit companies.” (P9)
- “Companies will respond by offering customers extended periods for payback.” (P7)
“Consumer credit scores will decline but lenders will respond by extending grace periods, adjusting lending parameters and lowering tiers for acceptable scores. Subprime lenders may emerge to fill in the gaps.”

“Some consumers’ will have their credit lines dropped while others will pay off balances. This will create froth in the credit business.” (P2)

“Consumer credit scores will decline but lenders will respond by extending grace periods, adjusting lending parameters and lowering tiers for acceptable scores. Subprime lenders may emerge to fill in the gaps.” (P3)

Others prognosticated that new credit models and more data analysis will be used to determine credit worthiness in the future:

“Many consumer advocates want to move away from the use of credit scores and include other data points like risk history and payment history, such as paying rent on time, to assess credit worthiness.” (P4)

“New models of lending will emerge in the U.S. We may see things like social network lending, in the form of crowdsourcing, to determine credit worthiness.” (P2)
Future Scenario #6: Contactless

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Deployment of contactless for attended (e.g., POS) and unattended (e.g., ATMs, kiosks) devices accelerates

Contactless device deployment was ranked among the highest of all the futures scenarios evaluated. One industry expert summed it succinctly:

“The global brands will continue to push contactless and the payments industry will embrace it across the globe. There will be a longer lag time in the U.S. because consumers are not accustomed to using the tap-and-go function.” (P5)

There were some diverging opinions on the emergence of contactless versus tap-and-go mobile:

“The underlying reasoning regarding the deployment of contactless at the POS must be questioned. There is much concern now about speed and convenience at the POS.” (P2)

“Contactless cards will have more of an impact than tap-and-go mobile payments. Tap-and-go via mobile phone has not grown; we won’t see the mobile phone as a replacement for cards.” (P1)

“Given consumer concerns about touching public surfaces, merchant resistance to contactless may wane. Mobile payments will get a lift and contactless will steal volume from Chip and PIN.” (P6)

“Contactless will become more prevalent, but probably not as quickly as we might expect.” (P8)

One panelist commented that contactless will spawn further product innovation:

“Customers do not want to touch public devices, so contactless interaction will be key. New product offerings that use alternative forms of user authentication (such as voice response and hand gestures) will emerge.” (P3)

With the deployment of contactless, some industry stakeholders expressed concerns about debit routing and liability shift:

“Touchless transactions need to be implemented to include functionality that preserves debit routing and fraud screens. With Chip and PIN, everyone implemented the easiest solution and now is scrambling to add more functionality to avoid liability shift.” (P1)

“Contactless at the POS will accelerate in the next six months but the industry needs clarity on debit routing options. Multiple routing options must be available when certain conditions are met.” (P4)

The industry experts made some distinctions regarding the deployment of unattended devices:

“Unattended devices tend to have an additional risk of fraud and security, that may not change with contactless.” (P4)

“Contactless will get a permanent boost at unattended devices like vending machines.” (P2)
“ATM access with contactless cards will get customers back to using cash.” (P7)

“Deployment of unattended devices will lag behind attended devices because the equipment is so much more costly.” (P9)

“We are already seeing unattended tellers in bank branches. Successful implementation of contactless means it needs to be fast and have good Internet coverage.” (P8)
### Future Scenario #7: Touching Leery

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**Customers remain leery about touching public surfaces, e.g., ATM/Kiosk buttons, POS screens, etc.**

Will there be any lasting effects of consumers touching phobias? Our panelists appreciate the heightened concerns about virus transmittal are warranted in the short term but add that as customers get more comfortable with touching screens or remediation in place, the impact fades in the next six months.

“Every merchant is trying to figure out what needs to take place at the POS for things like receipts, signatures, PIN entry, etc. Merchants need to determine if they intend to go PIN-less and/or give up routing rights.”

“Sustaining concerns about touching public surfaces will spawn new solutions and changes in behavior:

- Customers transaction activity at the POS has started to return. If touching public surfaces continues to be an issue, customers will turn to using mobile payment applications.” (P7)
- Lingering concerns will result in increased demand for contactless payment options.” (P6)
- “Tap-and-go contactless is a good solution for addressing consumer’s concerns about touch public surfaces.” (P8)
- “Merchants will respond by training their staff to do thorough job sanitizing customer devices, rather than looking for a technical fix.” (P4)
- “Touchless interfaces will emerge.” (P2)
“Every merchant is trying to figure out what needs to take place at the POS for things like receipts, signatures, PIN entry, etc. Merchants need to determine if they intend to go PIN-less and/or give up routing rights. It may be the case that PIN will only be used for cash back purposes.” (P1)

“In an effort to preserve the use of the PIN as an authentication tool, the industry will respond by building more support for technologies like PIN-on-Glass and PIN-on-COTS.” (P5)

“With the expansion of digital payments there is downward pressure on the use of cash. I’d hate to be managing a cash dispenser portfolio these days.” (P2)

1PIN-on-Glass: PIN entry on a touchscreen keypad integrated on a PCI-approved terminal.
PIN-on-COTS: PIN entry on the touchscreen of an off-the-shelf consumer smartphone or tablet connected to a PCI-certified card reader.
Future Scenario #8: New Authentication

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Merchants insist on using new ways to authenticate users both online and at the POS

There is an ever-increasing need for enhanced security and user authentication to protect against fraud, particularly in the online channel.

A few panelists cautioned about a decline in usage of PIN and user authentication in general:

“Although routing to debit networks is heavily dominated by PIN usage, the debit networks themselves need to invest in new ways to authenticate consumers. The tides are changing. Visa has become less sanguine about the use of a PIN because it interferes with the convenience aspect of contactless (among other reasons). In the U.S., Merchants generally don’t care about PINs because, in most cases, if the transaction is chip-on-chip they are not liable, even for lost and stolen. They may get a fee reduction for using the PIN but then you have to factor the expense of the PIN pad into the overall cost of operation.” (P2)

“At the POS customer convenience (e.g. reducing interaction time) is more important so perhaps the requirement to authenticate through personal devices will be increase. Here we will see an increase in the use of the tap-and-go function and transaction authorization floors based on dollar amount.” (P5)

“Merchants are looking for reasonable transaction fees, and the interchange fees from the global brands are not reasonable for most merchants, particularly those that have low incidences of fraud. Merchants will continue to search for that balance between low cost transactions and managing fraud exposure.” (P9)

“There are no popular models for user authentication in the online channel. Merchants want to accept whatever payment method the customer wants to use as long as they buy stuff from them.” (P2)

PIN entry on the mobile device is viewed as a viable solution for user authentication and it also addresses the customers’ concerns about touching public surfaces:

“We will see more integration of the POS and mobile device, which will enable new types of user authentication. There will be increased pressure to move PIN entry to the mobile device rather than the PIN pad.” (P3)

“Most industry stakeholders will not adopt new authentication techniques unless something is broken. Chip technology was adopted because card fraud got out of control. PIN alternatives such as PIN-on-Glass and PIN-less debit require new capabilities like neural networks and geolocation to authenticate the user without biometrics. The industry is more likely to concentrate their efforts into supporting PIN entry at the mobile device.” (P3)
Panelists speculated that new forms of multi-factor user authentication and other data enhancements will emerge online:

“We need to find new authentication methods for the online channel. These may include one-time-password or dynamic challenge questions.” (P7)

“To mitigate fraud, we will need more data driven information about the consumers. User identification must become more sophisticated using a combination of factors including credit scores and data analytics.” (P6)

“If the merchant is liable for the transaction, they will look for new ways to authenticate. Companies like Cybersource and Authorize.net developed artificial intelligence (AI) to help merchants address the problem.” (P1)

“Given the increase in digital, online and card-not-present fraud, the payment industry will need to look for better, more reliable ways to authenticate users. Also, we must be able to ensure that all transaction messages can identify how the transaction is authenticated.” (P8)

“Merchants are constantly looking for ways to improve user authentication tools, particularly for online shopping. A balance is needed as increased authentication can create friction which is off-putting to consumers. There is also a concern about consumer privacy laws, like the ones in California. We are likely to see more developments with solutions such as PIN-on-Glass which has now been used successfully for online SNAP purchases.” (P4)
Future Scenario #9: Online Fraud

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With the implementation of EMV Chip, fraudsters shifted their deviance to the online environment. Our industry experts agreed that there is a high probability that with increased in digital payments, online fraud will grow beyond what has been forecasted.

“Fraud growth will become large in both absolute and relative terms.” (P6)

“In recent months, there has been a significant increase in home deliveries so we are only beginning to see how much online fraud has occurred. If there is significant growth, the industry will need to push for more security standards.” (P2)

The question is how to create systems with better visibility into fraud problem:

“The industry needs more collaboration and would be better off if more parties were willing to share information on their customers.” (P1)

Industry experts proposed a myriad of risk mitigation solutions to combat online fraud including the use of tokenization, user authentication, monitoring tools and fraud scoring engines:

“There will be continued pressure on service providers and gateways to develop fraud solutions, monitoring tools and algorithms. The industry will also take advantage of AI and machine learning to enhance fraud tools.” (P4)

“The industry will respond by building more private controls and adaptive scoring, and deepening investments in machine learning based fraud solutions. We will also see innovation in fraud scoring, taking previous behavior into account.” (P5)

“Tokenization will come increasingly important in controlling fraud. Stakeholders will embrace this technology to protect market share rather than for security purposes. The fly-in-the-ointment is who controls transaction routing.” (P3)

“With the shift to online fraud there may be a need for an insurance product that provides an on-the-fly score and pricing based on transaction risk.” (P3)

“If this materializes the retailers will take advantage of specialty companies (like Chargeback.com) to streamline representation and scoring engines to avoid the transaction altogether. Leveraging a fraud engine is a multi-million dollar challenge.” (P7)

“The increased risk of cardholder fraud will escalate the need for stronger fraud systems like PIN-on-Glass. Technology like two-factor authentication will be used as frontline defense.” (P7)
With customers increased reliance on digital channels, it becomes even more important for the industry to standardize the information in the transaction messages to protect issuers and acquirers against fraud."

Concerns about combatting merchant fraud also surfaced:

“We will see increases in bad actors falsely creating credentials than incidences of breaches that expose customer credentials.” (P1)

“Online fraud will also increase focus on authenticating merchants to provide assurances of their legitimacy.” (P3)

One panelist elaborated on the importance of including authentication information in the transaction message:

“Bad actors take advantage of every situation, so we must be vigilant about protecting data viability. With customers increased reliance on digital channels, it becomes even more important for the industry to standardize the information in the transaction messages to protect issuers and acquirers against fraud. Currently the debit networks using the Common AID are blocked by the card brands from getting information (like biometric authentication method used) for issuers to use and enhance fraud detection.” (P8)
Future Scenario #10: Underwriting

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<td>Merchant acquirers tighten underwriting standards</td>
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The pandemic has caused widespread service/event cancellations and holdbacks on pre-orders leading to significant portfolio losses and increased retailer bankruptcies particularly in certain merchant verticals. Panelists predict merchant acquirers will become more conservative in their service offering:

“As bankruptcy rates skyrocket and merchants become less creditworthy, there will be tightening of credit. Merchant acquirers will require increased financial assurances about merchants because of their precarious situation. It will be a tough challenge to surmount. Government programs will arise resultantly.” (P6)

“This is tricky. If the underwriting standards are tightened too much, it will drive away existing business and it will be very difficult to get replacement business.” (P4)

“Standards are likely to tighten due to rising economic pressure. Small and mid-sized businesses will take the biggest hit.” (P5)

“Underwriting standard will tighten for industry verticals that take funds in advance such as airlines, cruise and car rental companies. These were hit hard by the pandemic. Merchant acquirers will try to understand the risk and adjust accordingly.” (P1)

There was a general consensus of opinion that merchant acquirers will become more vigilant in managing risk while maintaining their customer base under the current economic environment:

“The industry needs to find the right balance to protect merchant acquirers against losses while still supporting the merchant community.” (P8)

“Merchant acquirers want to tighten underwriting standards, but they could do a much better job and communicate who the bad players are. There is no good answer.” (P9)

“It is always a double-edge sword. Merchant acquirers do not want to push away business by tightening standards, so they will work with merchants to ensure that they keep making money. It is tougher to be in the processing business when value is determined by sales volume. It is better if value is based on transaction processing or fixed fees.” (P2)

New players and new product offerings will result:

“We will see ISOs and payfacs offering businesses incentives to switch to them.” (P4)

“Pay Now, Use Later services will expand chargeback losses and require larger holdback amounts. Tightening underwriting standards may create market entry opportunities for marginal players like those in the cannabis product business. Closed loop cards and other payment options will emerge.” (P3)
However, one industry expert viewed the tightening of standards to be a short-term issue:

“Underwriting standards have already tightened with the decrease in merchant credit and lower daily sales volume, but in six months it will be business as usual. Merchant credit programs may go away temporarily, and leasing programs may have extended contract periods to help stretch out costs. Over time, this will level out and merchant acquirer services will return to normal.” (P7)
### Future Scenario #11: Fintech Investment

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<td>Fintech Investment in the financial service sector stalls out</td>
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Industry analysts recently forecasted that fintech investment is shifting away from the financial service sector to other vertical markets, namely healthcare and insurance. Our industry experts were split on the probability that will occur, as reflected in their comments.

A few panelists viewed that the payments industry is facing some tough times ahead:

“Fintechs are all broke and slow to market. Look at Square’s losses since Q1 2020. It appears their formula is to lose money to gain market share. Fintechs have put their heart and soul into payments and they have some slick technology. They need to get scale but end up throwing away money.” (P9)

“Fintech will stall out in this sector because stakeholders will not have the funds to experiment, particularly with merchant solutions. Merchants will be focused first on reopening their business and creating a “touchless” customer environment.” (P1)

“Fintechs are risk takers and will continue to innovate, particularly in consumer facing services. However, pressure on access to funding will escalate. If funding stalls out in the financial service sector, fintechs will go elsewhere or die off, and big companies will lose opportunities with those fintechs poised for acquisition.” (P5)

Most of our industry experts believe that fintechs in the financial service sector will continue to succeed and prosper:

“Many banks are still investing in technology and acquisitions. This means fintech start-ups will continue to be attractive to banks as well as processors and networks. Smaller banks are especially dependent on deposit income and interchange fees so they will look to fintech to help them develop solutions that create new sources of revenue.” (P4)

“Fintechs provide novel ways to buy and deliver products and services. Fintech investment will increase unless there is a full-blown recession in which case there will be a call in of all markers. New companies like Square and Clover will increase their investment and try to capture even more share of market. There will be more bargain opportunities in the fintech space. These companies will roll out what they have and look for ways to monetize their investment. Everyone is looking for opportunities in the transaction processing business.” (P7)

“There will be a shift in investment focus, with more emphasis on all things digital such as identification, ecommerce and payments. Capital for fintech will not dry up but will be redistributed around multiple opportunities. There will be different winners and losers.” (P6)

“Fintech investment will increase in the form of products like authentication technologies and sanitation/cleaning solutions for payment devices. These services will not come from traditional players. Entrepreneurs will move the needle forward and more money will come with it.” (P3)
“There is so much capital out there looking for a return that fintech will still be seen as attractive. And fintech has some good targets, especially due to COVID-19. Online shopping has created new opportunities for technology and applications. In the physical world, sadly, many merchants will fail. But the businesses that replace them will junk the old POS devices and replace them with newer, more modern technologies.” (P2)
GENERAL COMMENTS

Industry experts were asked if there were any futures scenarios omitted from the list that would have a high probably of occurrence and high impact if it were to materialize in the next six months. Here are their opinions – unplugged.

Consumer Focus

“The payments industry will focus on those things that make the consumer’s life easier. Services like order ahead may have been forced upon consumers but now that they have adjusted, these services will continue to grow. Smaller players will have a more difficult time keeping up with larger competitors. Grocery companies made a big investment in their online services. Once customers sign up, they will not shift loyalties.” (P1)

“Consumers may be demanding real-time funds for funds need at the time of expenditure, such as bill payment for rent and utilities.” (P3)

“Sovereign debt, credit card debt and mortgage debt will continue to be an economic burden to the U.S. as we work our way out of this crisis.” (P9)

“At the extreme, this stimulus may be the precursor to a universal basic income model where all people get a monthly stimulus check for a lifetime.” (P2)

Technological Developments

“During COVID-19, the Internet has worked like a champ. Its value is enormously large, and it has solidified its role as our core infrastructure, deflating the cost of everything. It is imperative everyone have access.” (P2)

“We cannot begin to imagine the impact that 5G on the payments industry, but sources at AT&T portends to be a game changer. For the payments industry we can expect communications faster, better and safer telecommunications.” (P4)

“We will see increased innovation in consumer personal services like time management and budgeting, and seismic increase in need for the integrated payment functions. The payment component will be an adjunct to these services, supporting new channel access via APIs.” (P5)

“There has been a spike in the use of money transfer solutions. It is uncertain whether this trend will continue beyond the next six months. (P6)

“There will be a slow decline in the ATM hardware business, as customers move away from using cash. No additional investments will be made in this area.” (P4)

Healthcare

“Opportunities in the healthcare sector, particularly telemedicine, will skyrocket. This will mean huge growth potential for digital payments.” (P7)

“Healthcare is a hot topic. Advocates say you need a single payor system. The government put this into motion with the public (stimulus) payment.” (P3)

Mobile Wallets

“Proprietary wallets are not poised for success. Those with the best chance are the companies that have size and distribution to reach users at scale. The real winners of the wallet wars will be those that successfully address the digitization of the personally identifiable information (PII) contents residing in the wallet.” (P6)
OUR INDUSTRY EXPERTS

**Roger Applewhite**, a 25-year veteran of the payments industry, is President & CEO of MagTek. Founded in 1972, MagTek is a leading manufacturer of electronic systems for the reliable issuance, reading, transmission and security of cards, checks, PINs and identification documents. It also provides gateway processing, encryption, tokenization, and remote terminal management through its subsidiary, Magensa.

Prior to joining MagTek, Mr. Applewhite was the Director of Commercial Consulting at Benton International, a subsidiary of Perot Systems, providing payments expertise to a wide variety of financial institutions, debit networks, card brands, merchant processors & retailers.

**John Drechny** is CEO of the Merchant Advisory Group (MAG). As CEO, John helps MAG’s 140 plus merchant members to drive positive change and innovation in the payments industry, serving merchants’ interests through collaboration, education and advocacy. Prior to joining the MAG, John enjoyed a 20-year career at Walmart holding various leadership positions in Payments Acceptance, Marketing and Financial Services.

John chaired both the Merchant Advisory Group and the U.S. Payments Forum Steering Committee. He also held a steering committee seat for the Federal Reserve's Faster Payments effort, as well as a seat on the Governance Framework Formation Team.

**Brian DuCharme** joined Transaction Network Services (TNS) in 2019 as Vice President of Payment Solutions. He is responsible for leading TNS' global product team and driving product innovation in payments solutions.

Mr. DuCharme has over 20 years' experience in the telecom and payments industries. Prior to joining TNS, he was Vice President for Product and Innovation at First Data in Atlanta where he was responsible for the Client Innovation Workshop program and later led the modernization of STAR Network, the largest independent domestic debit network. Prior to First Data, Mr. DuCharme was Vice President, Emerging Payments, Strategic Partnerships at MasterCard where he led its expansion in North America, Latin America, Canada and Europe.

**Kim Ford** is Senior Vice President, Government Relations, at Fiserv, where she is responsible for development and implementation of the company’s political advocacy engagement. Kim joined Fiserv from the U.S. Faster Payments Council (FPC), where she was the first Executive Director. Prior to her FPC work, she spent 15 years at First Data, working her way from an entry-level position to become the Head of Global Government Affairs.

Before that, she was Regional Director for U.S. Senator Bill Nelson of Florida, and she worked in lobbying roles for two Florida-based business associations at the start of her career. Kim is a well-recognized and popular speaker on a variety of payments issues at industry and client conferences, and she has twice served as a subject matter expert witness to testify in front of the U.S. Congress.

**Manish Nathwani**, Senior Vice President, Product Development for SHAZAM, serves as a key contributor to the vision of SHAZAM’s electronic payments products and services. He and his teams develop products to enhance SHAZAM’s core strengths and introduce new products into the marketplace to help its clients succeed. Mr. Nathwani has worked at Shazam for 17 years in roles including senior engineer / consultant, information technology (IT) technical lead, and director of architecture.

He has more than 25 years of experience in the electronic payments industry, primarily building enterprise-strength, high-performance online authorization systems. He has experience in POS, ATM, acquirer and issuer processing, as well as leading and emerging technologies such as EMV, contactless and tokenization, mobile and payments based on IoT devices.
OUR INDUSTRY EXPERTS (continued)

Ann T. Morsch brings over 30 years of experience in the EFT and Retail Banking industry to The Armed Forces Financial Network (AFFN). As Vice President of Member Services and Operations. She is responsible for project management, development, implementation, and service delivery. In 2003, Ms. Morsch joined AFFN as an Account Executive responsible for the relationship management between AFFN and their Participants, Processors and Vendors. In her current role as VP of Member Services & Operations, Ms. Morsch is responsible for operations, relationship and network management, with a focus delivering the highest level of service excellence to AFFN’s Participants, Processors and Partners.

Kirkland Morris, Vice President, Enterprise Initiatives & External Affairs for Interac Corp. plays a lead role in driving strategic initiatives and shaping Interac’s corporate voice and relationship with policy makers and regulators, key payments industry stakeholders and industry bodies. A participant in numerous industry forums and active industry spokesperson, Kirkland held a seat on the inaugural Board of Advisors of the Payment Card Industry (PCI) Security Standards Council, is a member of the EMVCo Board of Advisors, and serves on the Board of Directors of both ATMIA and the Secure Remote Payment Council.

Bob Steen is Chairman and CEO of Bridge Community Bank, an employee-owned community bank. His background includes serving as a Federal Reserve Bank examiner. He serves as a member of the Iowa Bankers Association Payments Council and also serves on the ICBA Technology and Payments Committee, and a related Fed work group. Mr. Steen has served on the Iowa Bankers Association Board, served on the NACHA Board and is currently a board member of Shazam. He was a member Faster Payment Task Force and elected to represent small financial institutions on the Steering Committee.

Paul Tomasofsky, President, Secure Remote Payment Council, Executive Director, Debit Network Alliance, President, Two Sparrows Consulting, Partner, McGovern Smith Advisors, is a person who wears many hats. Mr. Tomasofsky is a well-known payment systems executive with over 39 years’ experience in retail financial services. In 2003, Mr. Tomasofsky founded Two Sparrows Consulting. It specializes in all aspects of small-value payment systems. In 2009, he founded the Secure Remote Payment Council. In 2013, he became the Executive Director of the Debit Network Alliance. In 2014, he became a Partner in McGovern Smith Advisors.

Maria Arminio, President and CEO of Avenue B Consulting specializes in strategic and business planning, market assessments, and the evaluation of payment systems, products, services and technologies. During her 40-year career as a payments systems expert, she has conducted research and consulted extensively for the financial and retail industries in areas including credit and POS debit programs, ATM networks, payment switching software, online banking, expedited payments, mobile banking & payments, risk management and payments security, electronic benefits transfer, and e-commerce solutions. She has authored or co-authored more than 400 publications and is a frequent speaker at financial industry conferences and trade shows.