2020 has seen a new Black Swan take flight, in the form of a global pandemic.
2020 has seen a new Black Swan take flight, in the form of a global pandemic.
Black swans are never exactly alike, at least in terms of how they materialize – across economic crises, financial panics or pandemics. But they always bring disruption and chaos on a grand, global scale. We asked 20 payments executives for their takes on what firms can learn from past crises, what must be done in the current environment – and what we might see on the other side of it all.

The black swan glides into view, beats its wings and sends shock waves through everyday life.

Shorthand for unforeseen – and unforeseeable events – a “black swan” occurrence is characterized by its rarity, of course, but also its widespread and severe ripple effects.
It used to be that the 2008 financial crisis was the quintessential black swan event – a perfect storm where banks, consumers, businesses and governments scrambled to address the widening fallout of the U.S. housing market. The dot-com bubble in 2000 has often been cited as another black swan.

Now comes the pandemic, where the coronavirus has spurred hundreds of millions of individuals to stay indoors, untold numbers of businesses to shutter as supply chains screech to a halt, and governments and central banks to work in concerted effort to throw financial lifelines to citizens and enterprises.

Dealing With Seismic Shifts

The nature and the appearance of the black swan seemingly always change. But the increasingly global and digital nature of the way business is done – no matter the industry vertical – brings a new urgency to the need to examine lessons learned from past systemic shocks, and how they can help us deal with the present (and even future) seismic shifts.

We asked 20 payments executives, across 19 firms, about what they’ve learned over their decades of experience, how we came through past black swans and how that hard-won knowledge can help us grapple with the challenges of the COVID-19 era.

Some of these companies were born from the ashes of the financial crisis and have helped reshape the way credit and loans are offered, have influenced the way consumers control their financial lives and, of course, have helped bring commerce into the digital age.

But as the brick-and-mortar locations go dark and financial services branches close, threats of another type emerge: Fraudsters will increasingly target vulnerable populations. Some respondents told us an embrace of advanced technologies such as artificial intelligence (AI) and machine learning can help pinpoint trouble spots and telltale signs hidden within a deluge of data – and stop data breaches and account compromises in their tracks.

Risk can be mitigated through several areas of preparation, said those surveyed. It is critical for companies, particularly those in financial services, to build contingency plans, be ready to pivot and mitigate risk with payment flexibility – all in a bid to foster continuity, no matter the level of uncertainty.

From crisis, too, springs opportunity – if one knows where to look. As an example, eWallets and online marketplaces gained traction only after the swans that marked earlier decades in the millennium.

The current crisis may cement telecommuting, distance learning and digital payments even more firmly into everyday life across the globe, opening up new avenues of innovation and accelerating current trends once the dust settles. Instant payments, digital onboarding and omnichannel commerce (ordering items online and picking them up curbside, for example) will likely grow, according to those we queried.

It’s too soon to tell where we might be headed, as COVID-19 continues to dominate headlines and spurs companies to adopt new strategies on what seems like a daily basis. But as our 20 time-tested executives quoted in these pages can attest, we’ll get through this, stronger than ever.
Financial Crisis Spurs New Way To Pay For A New Generation

Afterpay was born out of the fallout from the world’s last financial crisis. Our founders, Nick Molnar and Anthony Eisen, understood that younger consumers who had experienced the impact of the 2008 financial crisis firsthand were very wary of credit products and loans. In fact, many of their peers and colleagues were very budget-conscious and preferred debit cards. Nick and Anthony reasoned that the younger generation would be more apt to buy things they wanted and needed if they could use their own money and pay over time — in a way that didn’t incur revolving debt, interest or fees. And if the payment solution drove...
more buyers, especially valuable millennials and Gen Z buyers, retailers would be willing to pay for it.

The timing of the Afterpay idea coincided with another important economic shift. In the last decade, millennials and Gen Zers replaced baby boomers and Gen Xers as the generation with the most disposable income. This year, millennials will have the highest spending power with almost $15 trillion worldwide. By 2025, U.S. millennials’ income will represent almost half of all salary earned, and they will spend $600 billion annually in the American market. And Gen Zers, ages 16-22, are right behind them as they enter the job market and the prime of their earning power.

With this type of spending power, retailers have responded by giving millennials and Gen Zers the options to spend in the ways they prefer — this means mobile shopping, social shopping and the ability to use their own money and pay over time. It is for these reasons that we see “buy now, pay later” (BNPL) solutions being so rapidly adopted around the world. In fact, according to Worldpay’s FIS 2020 Global Payments Report, BNPL solutions are poised to grow by 28 percent in major markets around the world.¹

Our view, and a key learning from the past economic downturn, is that young shoppers are increasingly wary of credit and loans with interest, fees and revolving debt. With the new method, people are empowered to use their own money in a responsible and safe way. Financial wellness and budgeting are, and will continue to be, the future of payments.

¹Worldpay Global Payment Report, February 27, 2020: https://worldpay.globalpaymentsreport.com/#/en
As a global community, we have made tremendous strides in improving our ability to respond to major crises. Despite our progress, however, we still struggle in the face of the unexpected. Today, we are dealing with the stark realities of COVID-19 and experiencing anew how failure to adequately prepare for the unknown can result in tragedy. The truth is, we cannot predict the onset of a global pandemic. However, history teaches us that, with hindsight, we can often pinpoint the telltale signs. Therein lies our hope for the future. We can deconstruct the anatomy of past crises and threats and apply that intelligence to the defenses we build today as we prepare for the unknown.

YINGLIAN XIE
CEO and Co-founder

AI And Machine Learning Can Help Us Proactively Prepare For The Unknown
challenges of tomorrow. Viral attacks in the human world operate similarly to viral attacks in the digital realm, and what we learn from one can help us understand the other.

We are fortunate to have the technological means to perform so many essential functions online. However, the more we transact online, the more vulnerable we are to digital threats. This is especially the case when it comes to digital transactions and payments.

Banks are closing branches and encouraging app use instead. Big-box stores are limiting hours, recommending payment apps at checkout and promoting online shopping. People are relying on services like Apple Pay, PayPal, Stripe and Venmo for payments. Simultaneously, banks are encouraging people to open new online accounts, take advantage of special promotions and leverage online services. In short, there is a dizzying blur of digital activity happening across the global economy — and where there is chaos at scale, you can be sure fraudsters are close by.

Fortunately, we have the technological capabilities to analyze, process and derive actionable insights from all this data, and we can do so in real time using AI and unsupervised machine learning. Even as fraudsters leverage the speed of automation and the scale of vast bot armies, we have solutions that can surface correlated patterns and expose hidden connections. From mass registrations of fake new accounts to promotion abuse attacks to account takeovers, we can identify where suspicious activity is taking place by holistically analyzing raw data, without the need for labels or pre-existing rules.

We cannot outright predict a pandemic any more than we can predict a data breach or an account takeover. What we can do, however, is empower organizations to proactively spot burgeoning crises early and take decisive action before extensive damage occurs.

A recent article from WIRED highlights how lessons learned from SARS and H1N1 helped Hong Kong, Taiwan, Japan and South Korea respond swiftly, successfully and proactively to COVID-19. When it comes to black swan events in the digital economy, we can do the same. By combining what we already know with new AI-powered capabilities to process the unknown in real time, we can architect defense and response systems to mitigate damage associated with major threat attacks.

WHAT WE CAN DO, HOWEVER, IS EMPOWER ORGANIZATIONS TO PROACTIVELY SPOT BURGEONING CRISIS EARLY AND TAKE DECISIVE ACTION BEFORE EXTENSIVE DAMAGE OCCURS.
Surviving in tech — or in any executive role — means spending your energy on what you can control, but also preparing for unforeseen occurrences that might disrupt your business, your family and your life. This includes something as unthinkable as the coronavirus.

My personal story is as complicated as any. In January, I moved to Singapore from Seattle to open Ekata’s new Asia Pacific office — exactly when this global pandemic started to ramp up. Fortunately, Singapore has done an excellent job of early identification through testing and monitoring the general health of its citizens. While I am not
concerned about my physical health, I am focused, along with the rest of Ekata’s leadership, on supporting our customers and building business contingencies to keep things moving in spite of the inevitable market decline.

Things we are considering at Ekata:

**Human vs. Digital**
Concerns over the virus have decimated the event scene across several industries, including Money2020 Asia, among countless others. Businesses must pivot to reach customers, partners and prospects digitally. It is challenging to replace the face-to-face human connection through digital means.

We are finding new ways to buy a “digital beer” for people so we can foster relationship building.

**Action vs. Learning**
Ekata’s success is grounded in the care and commitment of our employees’ actions. Although travel has ground to a halt, we won’t sit around and wait. Teams are proactively investing in projects that increase our knowledge, enabling us to better serve our customers, evolve our product lines and improve our overall operational efficiencies.

**Growth vs. Sustainability:**
Nearly all industries will see their revenue impacted by this pandemic. One of CEO Rob Eleveld’s mantras is to “play the long game.” This slowing of commercial activity, albeit unfortunate, allows us to place even more focus on developing our people, strengthening partnerships and building enduring customer relationships. We will support our customers to help them fortify their own companies and do our part to reduce the negative effects of this economic downturn.

Colleagues: take this chance to reflect and pivot. Get yourself ready for the inevitable recovery by defining your key pillars and marching prepared toward the next bull market.
The current coronavirus saga will echo through history as a prime example of the importance of preparedness by financial institutions (FIs) when it comes to black swan events. But how can an organization fully prepare for an epidemic such as this? Well, the honest answer is that it cannot. It is impossible to fully prepare for something of this magnitude, which has rocked the world’s economy and turned once-thriving cities into temporary ghost towns. However, an organization can still prepare itself to mitigate the impact of the potential disaster by having dedicated teams and services in place to see it through the tough times.
COVID-19 is not the first of these black swan events that we have seen in our lifetime – and unfortunately, it likely will not be the last. That is why it is crucial to learn from what has already happened and to have a strategic plan in place to fight against the event. By arming themselves with the right technologies and developing a focused, transparent plan, FIs can stand a chance against these inevitable crises.

**Focus on Customers Through Technology**

Regardless of the situation, financial institutions need to assure their customers that their money is safe and that they can still use it how they want. That means FIs as well as their technology providers need to work tirelessly to keep their systems and solutions at 100 percent in order to provide their customers with certainty during uncertain times. The same omnichannel solutions that FIs provide to customers need to be available without a single hitch in the process. During a black swan event, consumer trust is tested to its maximum, and the providers that rise to the occasion will build a brand centered on doing what is best for the people who trust them.

**Preparation is 9/10 of the Law**

There’s an old saying that “possession is 9/10 of the law.” However, when talking with my own leadership team and when addressing my organization as a whole, I like to adjust the saying to “preparation is 9/10 of the law.” When I say this, I am reminding employees that if they are properly prepared for an event, meeting or project, they drastically reduce the potential for things to go wrong.

I mentioned earlier that there really isn’t a way to be 100 percent prepared for a black swan event, and that is true. However, having a plan and a dedicated team to tackle these situations head-on will help lower the negative impact that your organization may experience. For example, establishing a crisis management team before a crisis even occurs — as well as having a business continuity strategy — will help all aspects of your business. By being fully transparent about this plan with employees, customers and business partners, organizations can potentially limit what can go wrong to just that last 1/10.

**Establishing a Crisis Management Team Before a Crisis Even Occurs**

The outbreak of coronavirus (COVID-19) is impacting every person, business and institution around the world today. This is true for the payments industry at large as well as for the vertical markets Flywire serves, including education, healthcare and travel.

Like all of us, our clients are trying to navigate the best path to support their employees, customers, partners and community — and, of course, to protect their bottom line. Our role at Flywire is to help them to do this with minimal disruption to their business.
In times of crisis, our clients and payers expect business as usual. We feel navigating this uncertainty is best achieved by providing the high level of payments service they are used to getting from us. Redundancy, resilience and payment flexibility are inherent to Flywire’s payments network and platform. These capabilities are never more critical than in volatile times.

Here are a few examples of capabilities that enable our clients to manage unforeseen circumstances related to payments:

- **Clearing options:**
  Providing two or more local clearing options in each major region ensures redundancy if one bank partner is disrupted.

- **Multiple methods:**
  Offering 290+ payment methods to our clients’ customers enables them to use the option that best meets their needs. In some cases, it may be the only one available to that customer.

- **Payment structure/plans:**
  As customers face financial difficulties, the option for payments to be made in installments can be invaluable, especially in healthcare and education.

- **Customer support:**
  Our clients want their payers to have an outstanding and reassuring experience — especially in their most important moments. We can ensure that with 24/7 support in 10+ local languages, across email, phone and chat.

- **Human touch:**
  We make clients’ and payers’ lives easier with a range of digital-first self-service tools, but a human touch is critical in a crisis. It’s important to offer payers a choice.

- **Security:**
  Unfortunately, there are those who seek to profit from uncertainty. Our clients’ payers have been the subject of different phishing and fraud attempts. To guard against this, we have a range of security measures in place across different methods, so regardless of a payer’s choice of method, their money will be safeguarded.

In times of uncertainty, it’s important that we help our clients mitigate risk by offering flexibility, redundancy and resilience. At Flywire, we are focused on both the digital technology and expert resources needed to ensure that our clients’ customers’ most important payments go through. Our global footprint, operations and business continuity plans mitigate any potential disruptions to the flow of monies. And our relationships with the world’s top banking institutions and trusted regional and local payment partners are designed to assure continuity and minimize risk in the face of market volatility.
Black Swans Are The Sand Box Of New Innovations

At the time of the black swans in 2001 and 2008, it was hard to tell anything positive was coming out of them. That's the nature of these events. A few innovators do come forward with good ideas, but often the environment can't support them past the short term. The business model isn't completely figured out, or the technology to support it isn't there, or people aren't ready socially.

But the lesson is to not despair. While it may take years, these good, innovative ideas often resurface when the time is right. They are reworked and they take off. That's what's happening now. Thanks to the world of digital and mobile commerce we are living in today, we
have the necessary tools to survive during a time when businesses and schools are closed in the U.S. and across the globe.

Let me share an actual example. Back in 1999, at the advent of the internet bubble, I had just joined Visa USA and got recruited into a new organization that was created to respond to the changes occurring around us. I became part of e-Visa, an organization tasked with making Visa USA an eCommerce innovator. We built some of the first eWallets and online marketplaces. We even created the ability to use chip cards in a USB-attached chip reader to form-fill and send EMV-like payment information to merchants across the internet.

But when the dotcom bust happened in 2001, our innovations also died. A few innovators thrived – and some, like Amazon and PayPal, have gone on to reshape commerce as we know it today. But for the rest of us, it seemed these were all bad experiments. In hindsight, it turns out they were critical first steps. Today, marketplaces dominate the eCommerce landscape, and mobile devices have made myriad wallets, from Apple Pay to WeChat Pay, almost ubiquitous.

That brings us to today’s black swan event, the COVID-19 pandemic. As I write this, I am living under shelter-in-place guidelines. As a family, we are supposed to stay in our home for at least three weeks, maybe longer. And much like in the past, I am thankful for the innovators who are making this difficult period more reasonable. From high-speed wired and wireless internet; to digital content providers; to the app and gig economy that connects the digital world to my front door; to the messaging services that connect me to friends, family and colleagues around the world – I (and even more so, my kids) couldn’t imagine how this would have unfolded without these innovations. Financial services have improved markedly, as we can now use our mobile devices to deposit checks, pay bills, set controls, get alerts and even avoid handling cash. Even those communities that are unbanked or underserved can choose to receive their social security and veterans benefits through reloadable, prepaid cards.

Clearly, this isn’t to say there won’t be negative effects as a result of this black swan. We are already seeing its effects on airlines, hotels, malls, restaurants, entertainment and sporting events. As a country, we will all need to rally around small businesses and support the gig workers who will inevitably come under stress as people stay home.

However, the impact of the current crisis will not change the fundamentals of our digital economy — if anything, it has made it an even more important part of our lives. Our GDP, the financial markets and key industries will recover over time. I expect that some of the early social experimentation we’d been seeing before the announced pandemic with telecommuting, online education and moving to a cashless and virtual financial system will likely become the norm. This most recent black swan is proving that online financial services are a lifeline service. If you didn’t have a card before, you’ll probably want one now — at least a virtual card as a funding mechanism for the continuity of your life online.

Just as with past black swan events, this one will launch new ideas, create new opportunities for innovation and hatch new, successful business models that we will come to accept and that will improve the human experience.
COVID-19 And The Acceleration Of Digital Payment Adoption

With the black swan event of COVID-19, not only have the markets been adversely affected, but daily life as we know it has been altered dramatically, at least for the foreseeable future. Things we often took for granted — heading out to work and to school, going to sports and theater events, eating out, traveling internationally — have all been paused or put into question.

As an instant payments company, we have learned from past events that business continuity and pandemic planning is a core part of the payments business. We have learned from previous unpredictable events that preparing for pandemics isn’t just an academic exercise meant to
satisfy some compliance auditor. Money flows and payments are considered “essential,” especially in times of emergencies, and making sure that our solutions continue on time and as promised is no less important than hospitals remaining open to service the ill.

Luckily, we live in an increasingly digital world — more so than during past events — and as leaders in driving digital payment adoption, we are fortunate that the tools are available to us now to ensure 24/7/365 uninterrupted service levels. We can continue to employ our human capital from at-home work situations, and we have made sure our technology exists in hardened and redundant environments.

Social distancing doesn’t have to stop the flow of money in today’s digital world. Whether we are talking about spending money or receiving money from a disbursement, we will likely see the acceleration of digital payment adoption. Consumers and small businesses will have a greater opportunity to pay and be paid virtually, without the need to physically go to a store, visit the bank or handle cash or paper checks. Additionally, instant payment adoption may continue to grow, with more just-in-time consumers needing faster access to funds to pay their bills and make ends meet.

As COVID-19 forces us all to adapt to potential changes in how we live, interact and handle our daily tasks, we can be confident that digital payment solutions will continue to improve, providing more immediate access to funds, especially for those who need it most.
One of the biggest lessons from the COVID-19 pandemic is how important it is to stay ahead of the digital transformation curve.

We’ve seen mainstream banks such as HSBC and Lloyd’s shut down scores of branch offices as they try to shift more of their business online. For some financial institutions, this is an easy switch because they’ve already made the investment in digital channels. But for those who haven’t, the last few weeks have been a nightmare.

“The value of digital channels, products and operations is ...
immediately obvious to companies everywhere right now,” said Sandy Shen, senior director analyst, Gartner. “This is a wake-up call for organizations that have placed too much focus on daily operational needs at the expense of investing in digital business and long-term resilience. Businesses that can shift technology capacity and investments to digital platforms will mitigate the impact of the outbreak and keep their companies running smoothly, now and over the long term.”

As consumers’ needs and preferences evolve based on the technologies and apps they use every day, FIs must adapt their offerings to meet these evolving expectations. Technology can enable these organizations to better utilize an already stretched workforce to work more effectively with its customers. The following five areas will help transform these organizations and better enable them to react to black swan events.

**Omnichannel Engagement**
While some customers may want to engage with their banks in traditional brick-and-mortar offices, a growing number want to communicate through online web chats, via an app on their mobile phone, by telephone or through other online services.

**Digital Onboarding**
During a pandemic, no one is marching into a branch office to open an account, so they’re turning to online channels. Sadly, between 40 percent and 50 percent of online applicants abandon the application process because the onboarding and identity verification process is too clunky and time-consuming. Organizations that have transformed and expedited the new account setup process are realizing dividends now, as they’re able to capture more customers and a greater ROI on their marketing investments.

**Mobile-Friendly**
Digital transformation means leveraging mobile apps that allow their customers to do things like deposit checks, transfer money, view banking transactions, set up budgets and alerts or even pay for merchandise, right through their smartphone or smartwatch.

**eKYC and AML Compliance**
For most financial institutions, digital transformation begins and ends with compliance requirements. Organizations with antiquated systems and processes find it more difficult to be compliant in many situations, especially when it comes to reporting and auditing. Digital platforms lend themselves well to these requirements and deliver a better customer experience.

**Adaptive Workplaces**
FIs are slowly embracing this need for variation by providing a digital environment that allows employees the ability to transition work and be productive from wherever they need to be. Having adaptive workspaces leads to much greater productivity and increased health and well-being for employees, which dramatically cuts down sick days and increases retention, not to mention creates a positive and thriving work environment.

By acting on consumer preferences, technology adoption and macro-trends — not simply paying lip service to them — financial institutions will be far better prepared to weather these types of transformative disruptions.
2020 has surprised the world with a new type of black swan event, one that is unprecedented. How can businesses continue to operate and transact with each other throughout the sudden and rapid shifts in cultural norms and expectations during the COVID-19 outbreak?

For businesses of all sizes, this disease is disrupting global supply chains and financial operations. What we can bring into the future is greater depth and breadth for our business continuity plans.

Every company needs a business continuity plan for various unexpected black swan scenarios,
such as the dotcom bust in 2000, 9/11 and the global financial meltdown in 2008. Each time these rare events happen, we see severe consequences that seem difficult to predict. However, our preparations as business and technology leaders help us weather these types of storms.

So, while this pandemic is unprecedented, we must add this scenario into our plans going forward. To weather unpredictable events, organizations must have these key capabilities:

**Agility**

This trait is incredibly important for companies when it comes to responding appropriately to black swan events. Business processes and technical infrastructure must be agile to ensure a quick response to changing requirements. An agile infrastructure allows companies to accommodate surges in demand or reductions in demand. A firm’s connected ecosystem should enable this agility, which means choosing technology partners that support it.

**Adaptability**

It’s now more important than ever to ensure your company is adaptable to changing environments. More black swan events – and, to a lesser extent, normal day-to-day business operations – require companies to be able to quickly adapt to changing drivers. If your payments systems can be brought down by a single point of failure, you need to build greater adaptability into your solutions.

**Technology**

Today’s technology enables a remote workforce, but is your organization ready to send staff home? We hire people who we trust to do a job well, and for many in the tech sector, employees can perform their work superbly from anywhere. This is an incredible benefit of cloud technology as we work to stop COVID-19 from spreading and overwhelming healthcare systems worldwide.

We need to learn from past black swan events so we can best prepare for and predict what may happen in the future. Think of something unthinkable, and then make sure you have a plan for it. For example, what would happen if Amazon failed and went out of business in a matter of weeks? How would that impact your company? Could you access your business-critical data if that happened? Could you switch to another cloud provider quickly, or would it take months or years for your organization to change? Cloud technology is critical for agility and adaptability, so make sure you can take advantage of your connected ecosystems without being locked into a single cloud provider.
Black swan events, while unexpected and challenging, open the door to the implementation of adaptive processes to meet the demands of the new environment and the underlying infrastructure, supporting the “new normal” that is created as a result. The coronavirus pandemic will be no different.

The promise of AI to transform our lives in general and financial services in particular is greater than ever before. And the reality is that we as an industry have been making more progress than we may have realized.

We should expect to see the launch of new businesses and the growth of existing businesses to support a plethora of hands-off, automated payments.

More ‘No-Touch Payments’ For B2B
capabilities that don’t depend on staff. In addition, it will result in the adoption of more no-touch processes, and services that provide disaster “survival” for the largest to the smallest of businesses.

We also predict that contactless payments via smartphones in the consumer-to-business realm will experience massive growth in the United States, as it becomes apparent that transferring credit cards from hand to hand should be taboo.

In business, payments are mission-critical. Yet, for business-to-business (B2B) payments, trillions of dollars are currently issued on paper checks. Reliance on paper checks and automation of the check process while having a backup plan in place to issue checks may be a good stop-gap solution, but it’s not the long-term answer for forward thinkers. Should this pandemic slow or completely disrupt the USPS, great pain will ensue.

Even worse would be the failure to make payments at all due to the lack of appropriate resources. Automating payments provides the ability send funds with the press of a button instead of having to print and mail a check.

We anticipate that the COVID-19 crisis may be the catalyst for ending manual check printing and mailing in B2B payments. Migrating to no-touch electronic payments is imperative, and moving to an online, automated system can keep the wheels of a business – and our whole economy – turning.

In addition, we expect to see larger organizations move to a more decentralized approach to accounting operations, including payments. CFOs will not want all of their payment eggs in one basket, knowing how disruptive this may be if a team is stricken with an illness or a shutdown is mandated. The rise in popularity of “shared services centers” by large enterprises may need to be examined and re-engineered as a result.

Decentralization may boost the resilience of larger organizations, providing redundancy and fail-over support to ensure continued access to supplies needed to maintain operations and pay vendors.

As a result of this black swan, for B2B transactions, we expect to see more touchless, automated processes to disburse payments that do not require staff intervention. Companies will want to move their money with the press of a button or via a completely automated approach as opposed to a manual process. Today’s black swan will prove to be the tipping point that motivates CIOs and CFOs to overcome their hesitation to move to digital payments because the risk is seen as too great or the barrier to entry as too high.
As we are in the grip of the COVID-19 epidemic, it’s not easy to say with certainty what lies ahead. Hindsight is 20/20, and we simply aren’t there yet. However, there is one lesson that is already becoming clear from 2020’s black swan event, as businesses safeguard against future disasters — in our interconnected world, one cannot be prepared for the worst without taking into consideration the disruption of both supply and demand.

When the coronavirus first began its spread in China, the biggest impact was on supply chains. With workers mandated to stay home, Chinese factories and businesses were at a standstill. Still, there were some factors preventing total...
shutdown. Many merchants had increased inventories in preparation for the upcoming Chinese New Year. This gave them some cushion as production slowed. Others were quick and creative in finding alternative sourcing from areas as yet unaffected by the epidemic.

Next came challenges in logistics. Flights out of China and customs processes were slowing. To mitigate losses, marketplaces eased policies to protect sellers in the case of delivery delays, and some waived refund fees. Payoneer worked with online sellers to help them identify new suppliers, infrastructure partners and routes. The focus was on getting supply chains back to normal, and over the course of two months, these steps did lessen losses. Sales volumes in February dropped, but by less than the 20 percent to 50 percent feared by Payoneer’s surveyed sellers.

However, a new problem is now arising. As the coronavirus has moved into the rest of the world and is now ravaging Europe, the U.S. and beyond, attention has turned to demand. Here, much is still unknown. On the one hand, it’s clear that many consumers are avoiding retail stores and are instead shopping online. There are also theories that people could increase online shopping, as they’re sitting at home with little to do. On the other hand, people may start limiting discretionary spending as the economy and work slows down. Payoneer’s preliminary sales volume numbers for March indicate growth, but as stock markets tumble and uncertainty and disruption increase, this situation could quickly change.

What is clear is that businesses can’t afford to be completely unprepared for black swan events. One key principle that most businesses deeply understand is that “cash is king.” This is never more true than in a black swan event. Understanding what financial levers are available to maximize cash and minimize burn in times of crisis is critical for businesses of any size. The main goal for most is to survive and emerge from the other side of the crisis with enough resources to benefit from the eventual bounceback.

Other strategies focus on diversifying risk on both the demand side and supply side. One approach is to branch out into new markets. This hedges against the risk of losses if a single market or region is heavily impacted. For businesses selling goods, diversifying product categories can also help protect against supply chain interruptions. And, as always, having supply chain redundancy is critically important. Businesses learn quickly in a crisis which partners are well-managed and which are not. Not all are equal, that’s for sure. When a crisis hits, having options can be critical to maintaining stability. We have learned quickly that all businesses must ensure that they are prepared for extended work-from-home periods, investing in the technology and setting up procedures for remote work and lower worker turnouts and productivity.

While these are very distressing times, it is almost inconceivable to imagine how we all would have managed through a crisis like this even just a decade ago, without the technology that makes working from home possible (and effective), and the eCommerce that enables us to get so much of what we need and want delivered to our homes. Digitalization has been driving these global trends of remote work and commerce for quite some time — and the current crisis is actually amplifying these existing trends.

As we navigate the uncertain waters of this world health epidemic, we face a stark reminder of the importance of planning ahead. Now is the time to ensure that we learn from the current crisis and that we will be better prepared for the next unpredictable – and inevitable – event.
In the midst of a black swan event — and certainly in the early days of understanding what the United States and the world face amid COVID-19 — the downturn often feels sudden and unexpected. Looking surface-level at the defining black swan events of the past few decades — from acts of terrorism to the bursting of a major industry bubble to a global viral pandemic — you’d no doubt see few similarities in the events that came before.

But for businesses scrambling to reforecast and plan for potential economic developments (McKinsey is currently outlining three potential scenarios, ranging from quick recovery to global slowdown to a full...
recession), there are rich insights that lie within historical transactional data.

There are a number of key factors and fields that can be scrutinized and analyzed to enable a business to more successfully steer through uncertain times. Taking a holistic view of payments data includes analysis at an industry and vertical level, taking into account geographic regions, company sizes, chargeback trends, and transactional clusters and patterns before, during and after an economic event in order to proactively prepare or stabilize your portfolio. Highlighted below are two key focus for navigating and preparing for uncertainty.

**Distill Insights Within Your Historical Payment Data**

Look at past payment volumes to understand how an event could impact your business, monitor trends in chargebacks or refunds to advise merchants on what to expect, and consider isolating merchants and payment volume in affected areas to determine the potential business impact. Margin-sensitive or event-contextual verticals will inform where to prioritize retention versus acquisition efforts and where to find resourcing during tight times.

**Analyze Concentration Risk**

Risk of amplified losses that may occur from having a large portion of processing volume in a particular vertical is significant. A diversified portfolio requires ongoing and proactive analysis in order to minimize concentration risk in an economic shutdown. In the current environment, we can expect to see industries like nonprofit, travel (hotel, airlines, cruises, hotels), events and service (bars, restaurants, salons/spas) in despair.

While it may feel counterintuitive to look backwards in order to move forward in the face of significant economic events, applying the proper data mining, data analytics tools and action plans to your business’ wealth of transactional data may provide a roadmap through adverse situations.
What gets brands through the darkest downturns isn’t the financial capital they have on hand – it’s the relationship capital they build with their best customers.

When the 2008 financial crisis hit, Paytronix was already a few years into developing restaurant loyalty programs, and our clients had some practice developing strong guest relationships. Before the crisis, they focused almost exclusively on using our platform to build revenue by increasing both the number of visits and how much guests spent when they came in – but these relationships meant so much more. We later found that relationships forged in the best of times helped
sustain the brands through the depths of the Great Recession. Later, those same customers led the recovery.

In looking at the post-recession results from a large fast-casual restaurant client, we found that the top 8 percent of their guests — those who came in twice per month before the crisis — continued coming in twice a month all through the downturn. Those who came in less often dropped off significantly. In fact, those twice-a-month customers accounted for a whopping 35 percent of the overall business.

When we interviewed those customers to better understand their behavior, many told us how they felt “invested” in the brand and had, in fact, dropped other brands to keep up with this one. When we broadened our research and looked across all our clients, the findings were remarkably similar: Those who had invested time and resources in developing relationships with their top guests were rewarded with loyalty.

What we’re experiencing today is vastly different than what we saw back in 2008. There is no precedent for the hit the overall economy is taking right now, and never have we seen an industry hit as hard as those in hospitality. We are, however, seeing signs that the relationships restaurants established with their customers are paying off.

We’re seeing people buying gift cards for their favorite brands just to keep them alive. We’re even seeing local organizations like chambers of commerce and local news publications putting out lists of businesses that have takeout and delivery, so people know where they can order. Some brands have even set up funds to support employees who are currently without tips, or who have been laid off, and customers are donating liberally.

When the current black swan finally departs and restaurants begin to reopen, we hope those that truly invested in developing strong relationships will survive – and their best customers will be the first ones standing at the door.
Expansion always has a surprising yet rational way of reversing.

At the time of this writing, spring is in full bloom in Hangzhou, China (where I am, which is also known as “the Silicon Valley of China”). The country is now recovering from the coronavirus, while Europe and the U.S. are still experiencing a rapid increase in new infections.

China has had non-stop growth for more than 40 years, and even the two previous crises (2000 and 2008) did not result in overall negative growth. People would never have imagined that a virus could bring the country to a full stop for a month.
Notwithstanding the origin of the coronavirus, the large-scale outbreak can be primarily attributed to highly increased mobility (airplane and high-speed rail in China, especially), resulting in a higher concentration of people, and a lagging behavioral change in personal sanitation and isolation. The lack of a systematic backstop further aggravated the issue. It is no surprise that Wuhan, the epicenter of the virus, has long been the transportation hub for central China.

**Black Swan Accelerates Instead of Changing**

Looking back on the impact of past crises, my belief is that a black swan is an accelerator of trends, rather than a game-changer or reverser.

For the 2000 period, in retrospect, it was very clear that not every business was ready for a website-based solution (Webvan, CommerceOne), and information in cyberspace was too much to navigate. 2000 was the year when Yahoo! used Google as its search engine, setting the tone for the dominance of Google in the PC web era.

For the 2008 to 2009 period, the most notable trend was an acceleration of social networks, as typified by Facebook and LinkedIn, that built personal and professional direct connections. They both successfully embarked on major international expansion in the depths of the crisis, piggybacking on users’ need to share information, express themselves and seek employment during a difficult time.

**2020: All About Point-to-Point, Real-Time Connections**

For 2020, the trend is not definitely clear, but I have a few initial observations:

Global commerce and business move to direct point-to-point. In the midst of confusion and cost-cutting during the crisis, middlemen will be squeezed out. On Amazon, we are seeing sellers sourcing directly from manufacturers as they seek lower prices, more customization and faster delivery.

Mobile screen goes from social to business. After users successfully form habits of texting, video chatting, swiping and clicking, they are ready to move more business activities to mobile. Video conferencing may be the sage of things to come – and it may spell trouble for some enterprise software makers who are slow to mobilize.

Real-time information flow calls for real-time money flow. Domestically, the experience has been exemplified by Venmo, Square Cash and Zelle. However, at a global level, the point-to-point money movement has not been as easy or efficient. At the time of the outbreak, PingPong partnered with one major global bank to create a special channel for real-time donation from Europe and the U.S. directly to hospitals.

Governing becomes more direct. Governments and heads of state speed up the use of technology to interact with citizens. The current president uses Twitter more efficiently than newspapers and television, with unpredictable consequences. During the depth of the crisis, Alibaba pioneered the Green Code, using self-declared information, geolocation and third-party verification to generate a real-time endorsement by the government as a health pass. This pass is used as the basis for arranging the orderly movement of people post-crisis. It is literally the issuance of a digital smart ID nationwide for more than one billion people, exclusively on mobile devices. The newly gained efficiency should give rise to smart governing with higher efficiency, more direct participation on the upside and possibly more volatility as a downside.
Over the past two decades, we have experienced some significant “black swan” events that produced major impacts on the U.S. and global economies. The first was the burst of the dot-com bubble in 2000; the second was the 2008 financial crisis. These types of events are almost impossible to anticipate, as they are often random and unexpected.

As we deal with the global COVID-19 pandemic, we are faced with much uncertainty. As retailers, restaurants and other businesses close in hopes of slowing the spread of the coronavirus, we are already beginning to see the economic impact of this crisis. But how vast will it truly be?
There is no immediate indication of how long this decline in demand will exist.

While organizations cannot predict or fully prepare for a black swan event, there are steps that can be taken to help minimize the impact.

**Business Continuity is Key**

Through our experience with previous black swan events and other crises, we know that a comprehensive business continuity plan should be developed and continuously evolved. This is imperative to mitigating impact.

In response to the pandemic, we activated both our Business Continuity Plan (BCP) and Pandemic Response Plan (PRP) and continue to take proactive steps in accordance with the procedures outlined in each, quickly adapting them to support an ever-changing environment.

**Solid Foundation of Support**

While we are experiencing an uncharted global pandemic, we recognize that our connected ecosystem will be significantly affected, undoubtedly reshaping many aspects of how businesses function — even though experts believe the financial system is stronger now than during the last financial crisis in 2008.

With strong data and analytics capabilities, PSCU is equipped with the tools to forecast impacts and help our credit unions to plan ahead as much as possible. When it comes to cybersecurity and fraud protection, it is critical to have monitoring tools in place to manage both internal and external fraud detection. This includes machine learning tools, a clean desk policy (CDP) and monitoring of employees for the protection of member data. PSCU has built a robust and resilient cyber and fraud foundation to support our credit unions and their members.

Additionally, having policies and business continuity plans for key partners is imperative. It is important to assess key vendors that may be located in high-risk areas to ensure the availability of alternatives that can be readily sourced. Our well-orchestrated vendor management program and strong supply chain provide our credit unions with confidence in our ability to serve them in their greatest times of need.

As a CUSO, PSCU is committed to the credit union philosophy of “people helping people” — a commitment made even more important when black swan events occur. As credit unions help their members manage through the current COVID-19 crisis, it’s more important than ever for CUSOs like PSCU to partner with credit unions to help them and their members weather the storm of uncertainty.
With the outbreak of COVID-19, we are living in an uncertain time. In the span of 10 weeks, the outbreak has penetrated nearly every aspect of our lives. In such volatile times, showing empathy and offering flexibility of access to your services is especially important. Not only is it the right thing to do, but it can also pay dividends well after the crisis is over. The very unknown nature of the pandemic is causing a variety of reactions in consumers, from panic shopping to the creation of endless memes. Both businesses and consumers are facing an unprecedented reality that is changing and evolving with each day that passes, with no clear end in sight.
We have become used to the convenience of having everything we need and want readily available at our fingertips, from streaming media and entertainment to a variety of consumer goods that get delivered to our doorstep on a regular basis. As consumers are looking for ways to cope with social distancing, the rollout of regional shelter-in-place mandates and a possible quarantine, we have already seen – and should continue to see – shifts in how subscription services are delivered.

Some news and media outlets, like The New York Times, The Wall Street Journal and Bloomberg News, are lifting paywalls to make breaking news and coronavirus coverage accessible to all. As gyms close, many fitness brands are now streaming workouts online. FabFitFun announced it would open up its library of workouts on FFFTV to non-members as well, to help people stay fit from home. With states and counties mandating closures for dine-in restaurants but granting exemptions for businesses that ship or deliver groceries and food directly to residences, the food services sector has no choice but to rely even more heavily on third-party delivery services. To ease access while reducing the risk of virus exposure, Caviar announced no-contact delivery. Education services are likely to see a huge spike in traffic as schools across the country go into online learning mode and parents juggles homeschooling with working and trying to stay productive. It’s also given that streaming media and entertainment services will see a massive spike in new subscribers and usage as people try to stay entertained at home in the coming weeks.

Universal has reacted by releasing movies straight to streaming. Will Netflix and Disney+ give their service away to acquire new subscribers and do the right thing during this unprecedented time? Will others join in? Will subscription businesses respond to consumers’ fear and enable them to pause subscriptions in an effort to prevent panic-related churn? Can subscription businesses join forces and bundle their offerings during this time of need to provide more value? Balancing the need to do the right thing while keeping revenue streams alive is something that every subscription business is considering right now. Stay tuned.

Danielle Gotkis

BALANCING THE NEED TO DO THE RIGHT THING WHILE KEEPING REVENUE STREAMS ALIVE IS SOMETHING THAT EVERY SUBSCRIPTION BUSINESS IS CONSIDERING RIGHT NOW.
Building Resilience
For Financial Institutions

Vincent Caldeira
Chief Technologist
for FSI, APAC

The limitation black swans really highlight is our blindness with respect to randomness – in particular, outlier events with an extremely large impact, which can be caused and exacerbated by the fact that they are unexpected. This is a very relevant topic in our approach to building resilience in critical technology infrastructure of the financial system that supports our economy.

Traditionally, designing such infrastructure for high resilience has meant assessing systems for potential single points of failure and removing them, providing redundancy at all possible layers of infrastructure and software, and automating recovery processes.
against all potential known scenarios of failure.

While this is definitely required, I believe it would also be short-sighted to think this is sufficient. One case in point is financial institutions moving their workloads to public cloud providers, with the view that cloud-distributed systems with multiple data centers providing seamless redundancy will be less vulnerable to failure than their own infrastructure. However, in April 2011, many Amazon Web Services (AWS) customers, including some high-profile websites, lost access to their systems following an outage at one of the North American data centers.

The reality is that in normal conditions, cloud systems – which are designed to be self-monitoring and self-repairing – can handle expected failures seamlessly, with little to no impact on users. When something unexpected goes wrong, however, the behavior of such complex systems becomes hard to predict.

Consequently, the way forward is to assume that failure for critical infrastructure will happen in an unforeseen way, and to start building those assumptions in the overall system design. This approach would not rely simply on redundancy, but rather the design of a componentized, distributed system of loosely coupled service components and data stores, so that “mission-critical” applications can keep working even when things go wrong. This also ties in with distributed architectures based on microservices and event-driven, inter-service communication, and the ability to automatically move system components across the hybrid cloud to provide computing and storage resources whenever needed on short notice.

**WHEN SOMETHING UNEXPECTED GOES WRONG, HOWEVER, THE BEHAVIOR OF SUCH COMPLEX SYSTEMS BECOMES HARD TO PREDICT.**
In the numerous articles about 2020 trends and predictions, no one foresaw anything like the current COVID-19 pandemic. That is the very definition of a “black swan.” Businesses are facing a new reality, and now realize that black swans can change the trajectory of the world.

Payment businesses are somewhat resilient to economic crises — they go up and down with the economy on average, but are not disproportionately hit like the travel industry has been today. Despite the buffer, when a black swan hits — like the current COVID-19 pandemic — a payment business should quickly assess how consumer habits...
are impacted and how change is imminent across the globe.

Supply chains will re-shape and adapt, remote work and communication will accelerate, and broader parts of the population will get accustomed to ordering everyday items online. In fact, China saw a 300 percent increase in online grocery orders in January and February this year due to the pandemic.

We are also experiencing unprecedented demand for essential goods. Hand sanitizer and toilet paper are available from one store or website, but not from another. Consumers are turning to ordering directly from manufacturers, and direct-to-consumer (D2C) services will undoubtedly continue to see an uptick.

People are preparing to be at home for long stretches of time, and as an industry, payment companies need to seize the moment and adapt quickly by adding card-not-present options, while independent software vendors (ISVs) have the opportunity to quickly enable D2C ordering applications.

One such vertical that is already rapidly growing, even before economic changes from the coronavirus, is the consumer packaged goods (CPG) industry. Currently, nearly half of U.S. consumers shop for CPGs online, and by 2022, U.S. households are expected to spend $850 per year on online food and beverages, according to FMI and Nielsen.

Many innovators, whether in the personal care or beverage sectors, sell their niche products via D2C options, allowing them to reach broader markets and cut out the middleman. In fact, Aaron Doacles, CEO of Peach, a D2C provider of bath tissue, said that as of March 12, sales had gone up about 267 percent in two weeks.

Outside of the coronavirus shopping rush, D2C brands such as razor brand Billie and footwear-focused brand Soludos are not only flourishing, but are expanding their product offerings.

As consumers will likely rely more on delivery for common household items and food, the payments industry will see the D2C industry expand. That will also bring a reinvigorated focus on supplying manufacturers with payment options that make the customer and merchant payment process seamless, an element that is often overlooked by CPGs, according to Shopify.

However, the transition from retail to D2C should be strategic. Most commonly, D2C payment options are debit and credit cards and PayPal, but the increased costs of setting up the required logistics and payment options could potentially offset any capital gains from utilizing the D2C model. In addition to traditional debit and credit, providing options such as monthly subscriptions, direct debit and instant payments (such as the request-to-pay model) could be advantageous.

Payment solutions providers are likely to see an increase in DTC spending and demand, and they should prepare now to help facilitate a smooth transition. This virus may be contained in a few months, but the long-term impact to the economy is still unknown.

In this “new normal,” ISVs and payment facilitators should be prepared by partnering with a payments processor that can help them quickly adapt and scale new payment methods.
The most significant challenge with black swan events is adapting to changes quickly. Many of these adaptations feel unnatural, but those who are better in adapting to the “new normal” will fare better. Given the uncertainty of how ever-changing situations may affect the world, enabling greater adaptability with business strategies and tools is key.

The most basic strategy is to maintain a strong cash position. This affords businesses with a foundation from which they can hold their ground. Ideally, an organization has built that up with smart finances during the good times. It is important...
for a business to evaluate possible scenarios and make adjustments that will ensure long-term viability.

Investors will likely hunker down (as they did in the previous two black swan events), and firms will most likely need to be self-reliant.

Once that solvency is in place, the organization should evaluate what the “new normal” looks like. What adjustments do they need to make now that their teams work from home? What processes relied on physical human interaction that cannot occur as regularly now? If the team’s efficiency is expected to decline during the initial adjustment period, how can the business help through automation?

Finance is one of the areas that can benefit tremendously from automation. More than ever, CEOs, boards and investors will expect the office of the CFO to drive the business to do more with less, not only for their finance department but for the entire organization.

Whenever possible, businesses should de-centralize while ensuring control. They can let the suppliers onboard themselves, fill tax forms, enter payment data and respond to exceptions. It will save time, allow the supplier more control and minimize the opportunity for mistakes (after all, suppliers have the best knowledge of their own information).

If workflows are manual (regardless of whether the communication is digital or not), a firm can expect disruptions. If an organization relies on a person to summarize information and manage the collection of information and approvals, they can expect disruption. The better course of action is to rely on automated systems that can streamline the collection of information and approvals.

If payment execution itself is manual, firms can expect disruption. If third parties use manual labor to execute payments, there will be disruption. To the extent possible, it’s best to use fully automated systems that minimize manual labor both in the company and in the provider’s back office.
There is a reason that accounts payable (AP) is consistently identified as the single most time-consuming function of finance.

A growing number of FinTech solutions are now available to significantly reduce the manual effort required to manage the supplier payments operation. Banks are excellent at moving funds in a one-to-one model, but any scaled one-to-many operation is problematic. That often requires additional staff to handle AP and disbursements, most of which involve setting up and monitoring transfers (U.S. ACH, wire, local bank transfers/global ACH, PayPal, paper checks, etc.). It sounds simple, but ensuring that a supplier is payable and having their correct bank routing data can involve detective work and outbound communication skills, activities for which finance people are not well-suited.

In a shifting climate where unknown factors can affect cross-border payments and supply chains, the risk of payment failures and regulatory issues increases with manual intervention. Looking into AP automation tools that fit a business’ payment needs is crucial.

Many still lose sight of the fact that AP automation is more than straight-through invoice processing. AP includes supplier onboarding and management, tax compliance, making payments in the U.S. as well as to and from numerous geographies, fraud and financial controls, PO matching and payment reconciliation. Solving for invoices is difficult, but it’s just as difficult to execute payments, and it takes just as much time to reconcile payment data back into ERPs. The most modern AP automation solutions provide a level of artificial intelligence (AI) that improves the adaptability required to address changing conditions at every step of the payables process.

The lesson from the past black swan events in 2001 and 2008, and now COVID-19, is to enable rapid and ongoing adaptation, recognize the “new normal” and be open to change.