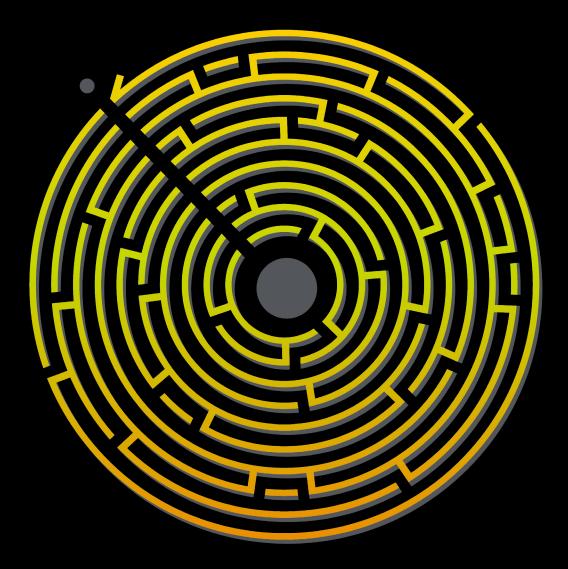
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#### Realizing the digital promise

COVID-19 catalyzes and accelerates transformation in financial services

## Introduction

Prior to COVID-19, the financial services industry was already evolving at a rapid pace, driven by changing customer expectations, heightened competition from incumbents and new entrants, evolving regulations, and advancements in technology. Digital transformation was well underway, evidenced by a proliferation of digital channels, tools, and challenger banks around the globe.

Yet despite these trends, customers' willingness to adopt – and firms' willingness to invest in – digital remained inconsistent across players, markets and continents.

In a matter of weeks, COVID-19 has upended those conventions. It has forced radical changes in customer behavior, moving significant portions of the economy online and increasing customers' comfort and willingness to engage digitally. It has also proven the case – and exposed the urgency – for digital transformation, as digitally-mature financial institutions (FIs) have displayed agility and resiliency in the immediate aftermath of the crisis.

In this supplement to the Realizing the Digital Promise series authored by the Institute of International Finance (IIF) and Deloitte, we examine the four fundamental shifts brought on by COVID-19 that have accelerated digital transformation in the financial services industry, discuss the role digital has played in FIs' pandemic response, and explore the implications for FIs as they navigate the uncharted waters ahead.

# COVID-19 drives unprecedented change: Four fundamental shifts

Already, COVID-19 has dramatically accelerated the rate of digital adoption in financial services, causing unprecedented changes in human behavior and forcing new ways of working on FIs. Specifically, four fundamental shifts are creating ripple effects throughout the industry:

#### ) Forced adoption of online, mobile, and call center channels

Limited mobility and shelter-in-place orders across the globe have forced rapid adoption of digital channels in financial services, condensing years' worth of changes into months if not weeks. In the U.S., which has traditionally lagged other countries in digital adoption,



and banks are experiencing all-time highs in the number of mobile logins and check deposits. Interestingly, a significant share of this is growth coming from seniors and boomers, groups that have traditionally been slower to adopt digital channels. This trend extends beyond retail to institutional clients as well; Goldman Sachs, for example, has reported a 25% increase in the number of active users on the bank's institutional platform over the past several months.<sup>2</sup> Additionally, with branches and insurance storefronts closed, call center interactions have spiked as customers continue to seek relief from financial pressures caused by the crisis.

#### ) Tipping point for digital and contactless payments

There has been an acceleration toward digital and contactless payments as consumers shift a greater share of their purchases online and businesses – either by choice or by necessity – race to setup e-commerce capabilities to capture sales during government lockdowns.

Visa saw more than **13 million** customers in Latin America make their first-ever online transaction in the March quarter of this year.<sup>3</sup>



As payments shift to digital, non-traditional players often benefit disproportionately as their market share is concentrated in digital: PayPal reported 20% year-over-year (YoY) growth in payments volume in April 2020<sup>4</sup>, and Stripe raised an additional \$600M in funding at an increased valuation, even at the height of the pandemic.<sup>5</sup> In the physical world, hygienic forms of payment such as digital wallets and tap-to-pay have taken off as well, with



MasterCard reporting more than **40%** growth in contactless transactions globally during the pandemic.<sup>6</sup>

The U.S. in particular has seen staggering growth in contactless payments, with Visa reporting a 150% increase for the 12 months ending March 2020, aligning the country more closely with already-high adoption seen elsewhere throughout the world.<sup>7</sup>



#### ?) Overnight virtualization of workforce and ways of working

Nearly overnight, FIs have gone from scarcely imagining their employees working from home to individual companies transitioning tens, if not hundreds of thousands of employees to a remote work model. Bank of America and Wells Fargo have each transitioned over 150,000 employees, or roughly 70% of their workforces, to work from home, and have established contingency locations for their remaining trading and call center operations.<sup>8</sup> On the other side of the globe, Standard Chartered has kept most of its 84,000 employees working from home as of May 2020, increasing the capacity of its VPN system by 600% to keep pace.<sup>9</sup> Even traders, which have traditionally been tethered to the office, have shifted to remote work in large quantities, as TD Bank has built new features to allow over 80% of its traders to work from home.<sup>10</sup> Moreover, all leadership, culture, communications, and interactions have been digitized. Bandwidth teething issues aside, the transition has largely been successful, and many FIs such as Nationwide Insurance, who moved more than 98% of its workforce to work from home in just five days, have committed to making the change permanent.<sup>11</sup>

#### Evolution of underlying market structure and economics

After several years of relative stability, COVID-19 has ignited a fundamental shift in the size and structure of the financial services industry, fueling margin pressures for organizations. On top of already pressured net interest margins (NIM), banks are being hit with lower interest rates – the 10-Year U.S. Treasury yield dropped below 1% for the first time in March 2020<sup>12</sup> – a drop-off in consumer spending, and increased loan loss provisions.<sup>13</sup> Meanwhile, insurers are battling reduced premiums and escalating claims costs due to pandemic payouts. And although it is impossible to predict the length and severity of the economic downturn, the outcome is likely to be a smaller market that should require FIs to operate more effectively and efficiently in order to remain competitive. Moreover, competitive dynamics will likely continue to evolve as "big tech" redoubles its entry into financial services, leveraging its size, scale, and expanding role in the daily lives of consumers (e.g., delivering essential products and services during the pandemic and actively shaping the health response) to gain more bargaining power in future discussions and partnerships with FIs. Meanwhile, smaller fintechs could be put at risk with their funding models. These evolutions may have significant implications on build, buy, partner decisions for many industry players, both incumbents and new entrants alike.

## Unlocking hidden potential: COVID-19 has removed traditional barriers to digital transformation

COVID-19 has been a defining moment for digital transformation, as financial institutions that invested – strategically, financially, and culturally – in digital over the past decade have been better prepared to navigate these shifts and respond to the crisis. The CIO of DBS Bank, frequently named "the world's best digital bank," stated that COVID-19 has: "... brought forth the value of technology and the investments we've made over the past decade to modernize our technology stack. But the transformation we've undertaken is not just in the way we've architected our infrastructure. One of the biggest things we realized was the change in the mindset of our people."

Conversely, for those FIs that have historically struggled to kick-start their digital transformation journeys, the crisis

has exposed gaps in technology, and firms have responded quickly to close those gaps. As Alex Manson, head of SC Ventures at Standard Chartered, puts it, could COVID-19 be the chief transformation officer that has always been missing?<sup>16</sup>

For many financial institutions, COVID-19 has unlocked hidden potential, stripping away many of the barriers that organizations traditionally face in realizing the digital promise. As detailed in our second report, Key Enablers to Digital Transformation, digital initiatives often stall without the right commitment from the top of the house – COVID-19 has generated leadership and organizational support by highlighting the need for digital transformation as a means to reach customers and maintain

operational resilience. One bank has gone so far as to make "delivering new capabilities to customers" one of just three strategic priorities to deliver on during the crisis.

Similarly, financial institutions aspiring for digital transformation are frequently held back by their risk aversion and need for greater agility. COVID-19 has swiftly removed these roadblocks by revealing organizations' true capacity for innovation, shattering the timelines previously thought required for designing, building, and launching new digital products. One regional US bank we spoke to displayed newfound speed and agility by delivering the MVP for a digital account opening solution in just two weeks, previously meant to take six months. We heard from another Canadian bank that it was able to increase the productivity of its development team (by amount of code going into production) by nearly 20%. As we have seen, the pandemic has provided FIs with license to evolve their ways of working.

Collaborating with the external partner ecosystem has also typically presented challenges to financial institutions' digital transformation efforts (see our first report, Top Nine Challenges to Digital Transformation in Financial Services). Yet again, COVID-19 has unlocked an ability to accelerate partnership discussions and for FIs to work effectively with fintechs and other ecosystem players. One insurer we spoke to was able to onboard an insurtech partner onto its platform, conduct a remote claims management pilot, and get a fully digitized solution up and running for its customers in place in less than a month. The organization overcame all inertia related to digital and insurance to accelerate its digital journey at a speed previously unimaginable.

"I have not seen so much move so quickly in terms of cutting through process to get COVID-related initiatives out there. I have seen this bank move at a fintech pace."<sup>15</sup> – Aiaz Kazi,

Chief platform officer at Santander Bank

Since the pandemic outbreak, organizations have seen massive progress in their digital transformation agendas. However, with decisions being made and solutions being implemented in real-time during the crisis, we have yet to see the full effects. How will safety and security be impacted as organizations rush to act with incomplete data, or even limited governance? Moreover, digital transformation is more than just a bolt-on solution – will Fls be willing to commit to permanent changes in technology strategy, mindset, and behavior once the urgency subsides? There are several implications that financial institutions must consider beyond the immediate crisis response.

"The bank's sales jumped from 25% digital to nearly 75% digital during COVID-19, condensing 10 years' worth of changes into two months"<sup>17</sup>

PNC Bank's CEO



# Future implications: Thriving in the new normal

Regardless of where financial institutions are in their digital transformation journey, COVID-19 is fundamentally altering the landscape. How organizations compete and win today will be different than how they will compete and win tomorrow. COVID-19 will have several lasting implications for the future of financial services across customer behaviors, products and services, operations (front-, middle- and back-office), operating models, external engagement, and ways of working:



#### As digital channels become "table stakes," financial institutions must find new ways to differentiate themselves in the eyes of customers

As COVID-19 accelerates front-end digitization, the customer experiences that serve as differentiators today – digital account opening and onboarding, straight-through lending, remote claims – will soon become table stakes, and investing in these areas will likely be essential for FIs to attract and retain customers. To create truly differentiated propositions, FIs can further extend into products and services that meet customer' non-financial needs; a leading example from Asia is DBS Bank's Marketplace, which allows customers to search, buy and sell properties and cars, book travel, and even compare and switch utility plans.<sup>18</sup> These trends apply across both retail and business customers, and financial institutions must adapt their value propositions accordingly.

Similarly, the "last mile" of digital services will likely become the next battleground, as financial institutions look to make digital interactions more personalized and human-like. To enable this, a deeper, more data-driven understanding of customers will be required to help deliver the right products, at the right time, through the right channels.

Furthermore, despite organizations placing more control directly into customers' hands via digital and self-service capabilities, maintaining a human feel via branches and call centers will be critical, with call centers – previously almost considered a legacy from the past – notably rising in importance. Additionally, branch transformation efforts should be accelerated to match supply with demand, and there will likely be a proliferation of new concepts, further footprint consolidation, more standalone ATMs with additional servicing capabilities where branches once were, and reorganization of existing full-service branches to specialized advice centers.



#### Laser focus on cost-to-serve will become essential to adapt to (and survive) new industry economics

Considering an almost but certain near-term reduction in market size and increased margin pressures, digital transformation will likely become even more essential as a means to improve efficiency and optimize costs. According to a recent study by the European Central Bank (ECB),



# Digital-only banks have an average cost-to-income ratio of **47%**, substantially lower than the **73%** average among less significant banks

(as defined by ECB) – while digital-only banks are often still in the early days of their evolution, this difference highlights the meaningful cost advantages to be gained from full-scale digitization.<sup>19</sup>

Aggressively reducing technical debt will play a key role for legacy players in increasing long-run operational efficiency, accelerating industry-wide modernization and digital (e.g., public cloud, AI). And although technology investments may be tougher to sell given the broader business and economic climate, removing structural costs through full-scale digital transformation will be important to compete with digitally-native new entrants in the long run – even if it requires an investment horizon outside of FIs usual appetite (e.g., beyond three-to-five years).

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The renewed focus on efficiency can also help drive further automation across the value chain, as the crisis has given increased latitude to implement cost reductions that would have previously been considered too bold. Technologies such as application programming interfaces (APIs), intelligent automation, cloud, and robotic process automation (RPA) will likely play a key role in streamlining middle-office processes such as onboarding, KYC, AML, etc., and deliver improvements in both efficiency and efficacy. In addition, artificial intelligence (AI) and machine learning (ML) are proving themselves through the crisis, enabling FIs to streamline their loan processing efforts and enhance customer interactions through AI-powered virtual assistants.<sup>20</sup>

The financial health of consumers and businesses alike has been significantly impacted by COVID-19, with income and cash flow suffering from extended stay-at-home orders and government closures of non-essential businesses. Given these massive shocks to the system, traditional credit models could be less effective in measuring risk in the near-term, and both banks and insurers must digitize and expand their modeling capabilities while looking to integrate alternative data into core underwriting processes. As an example, PNC Bank has tapped UK fintech OakNorth to provide scenario-based, forward-looking ratings for its business loan portfolios.<sup>21</sup>

FIs must reimagine front-, middle-, and back-office processes to truly reap the benefits of digital transformation and uncover sizeable opportunities on both the revenue and cost sides of the equation.

## The remote workforce and workplace of the future will require people operations and culture to be reimagined...

As financial institutions adopt remote working models more permanently, organizations should assess the impact of working remotely on their workforce, and how to balance the need for human interaction with the potential cost savings, efficiencies, and productivity tradeoffs that may result from shifting to a remote work model. Leaders must identify new ways of establishing and maintaining culture virtually, helping to ensure employees stay motivated while continuing to encourage and reward innovation. The ability to "lead from home" effectively may well be the greatest leadership challenge for the next decade. The entire notion of an office is also likely to be reimagined, and according to Barclays CEO Jes Staley, "may be a thing of the past," as more hybrid or hoteling systems – where employees travel into the office one or two days per week to collaborate, with the rest of their time spent working from home – are poised to emerge.<sup>22</sup> Moreover, firms should once again consider moving employees, particularly those in middle- and back-office functions, to suburban satellite locations to save costs and improve resiliency, just as Citigroup is doing today.<sup>23</sup>



### ... And will demand new approaches to tackle inherent cyber and compliance risks

With tens, if not hundreds of thousands of employees across call centers, trading departments, and other groups all working from home, each using virtual collaboration and communication tools, cyber and security concerns will likely mount in importance as organizations must strategically assess (and develop) appropriate policies and procedures regarding use of personal devices, networks, etc.

In particular, monitoring and tracking of trading activity should be redesigned for remote work environments. Thus far, regulators have given varying degrees of leeway, often putting the responsibility on banks to conduct enhanced monitoring and retrospective reviews. In the UK, for example, the Financial Conduct Authority (FCA) still expects all calls in which trades are discussed to be recorded, however recognizes that circumstances may arise where this is not always possible.<sup>24</sup>

Coming out of the last global financial crisis, trust in financial institutions was deeply eroded, and the question remains whether the world is ready to return that trust given the events of the past decade. Looking ahead, Fls should proactively engage with regulators to develop standards that ensure compliance and allow for the appropriate level of business oversight – the results will likely vary by market, based on evolving local regulations as well as the level of trust granted by consumers and society at large.

## Non-traditional third-party risk-driven by the acceleration of ecosystems and open banking drive the need to introduce new risk management concepts

As financial services become more digital, and fintechs and bigtechs become more embedded in the daily lives of consumers, we will likely see greater industry collaboration, partnerships, and utility models (e.g., banking as a service). As this trend plays out, financial institutions should consider how to evolve their non-traditional, third-party

risk management strategy. For example, what systemic risks could result from opening up platforms, and what is the proper balance to strike when vetting fintechs and other external partners?

In this environment, better standardization and connectivity will also be needed to help unleash the full potential of open banking, and regulators must focus on how to enable this new ecosystem through clear, thoughtful guidance on data sharing and other key policies. "As technology companies start entering the payments value stream, and financial services companies become increasingly more technology driven, the areas of distinction will become blurred, and competition will become fiercer. Those players who are best at providing platforms that are effective, efficient and provide customers with comfort over ethical use of data, are the most likely to succeed."<sup>25</sup>

Chief risk officer at FirstRand Bank Limited

## Seizing the moment: No regret actions

While several critical uncertainties about the future still remain, the contours of what the financial services industry will look like post COVID-19 are starting to emerge. Over the next 6-12 months, there will be a unique opportunity to build trust and loyalty among customers through responsive and accurate servicing, both in the retail and small business segments. To achieve this, service needs to be contextual, tilted to speed with a degree of urgency, and above all, empathetic to customers' needs. The degree to which FIs can accomplish this will determine whether trust and loyalty (and by extension, willingness to share data) grows or erodes.

Looking ahead, it is abundantly clear is that digital transformation will not only accelerate, but financial institutions that do not fully embrace digital transformation – and adapt to new ways of working – risk being left behind. To that end, there are 10 "no regret" actions FIs can take today across three key areas to help position themselves to thrive in the new normal:





Business, shareholders, and stakeholders



- Leverage customer data, analytics, and AI/ML to deliver hyper-personalized, advicedriven services and engage customers in new and differentiated ways
- Advance low- and no-touch experiences through investing in contactless, digital payments, and enabling technologies such as tap-to-pay and facial recognition
- Optimize, connect and expand distribution ecosystems to build towards a more digital future
- Redefine call center strategies and upskill/cross-skill agents to deal with more complex servicing needs that may have previously taken place in-person
- Identify structural cost takeout opportunities across the value chain (process digitization, for example) and reinvest savings into digital transformation initiatives
- Apply technologies such as intelligent automation and alternative data to risk modeling processes to improve efficiency and effectiveness
- Perform strategic risk assessments and craft policies and procedures that enable taking full advantage of data sharing, ecosystem partnerships, and developments in open banking in a safe, secure manner

Embed cultural changes brought on by COVID-19 permanently into ways of working (e.g., enhanced focus on digital, increased agility and speed-to-market, new innovation mindset)

Evaluate workforce and workplace strategies to determine functions, work, and roles that should return to offices vs. work remotely permanently, and define practices for remote team readiness

Reimagine talent strategy and capitalize on new operating model opportunities

## Conclusion

In response to COVID-19, financial institutions have shown speed and agility in re-imagining their business models and re-inventing their ways of working to meet rapidly-shifting customer and marketplace needs. Looking ahead, organizations must harness these changes to culture and behavior brought on by the crisis to accelerate their digital transformation journeys and be careful not to fall back on existing patterns once the urgency subsides. Doing so will be essential to surviving – and thriving – in the new normal that is currently taking shape.

In addition to acting as a digital accelerant, COVID-19 presents a unique opportunity for financial institutions to deeply consider the role they will play, and how they will create value, in emerging ecosystems. In our next report, the third and final installment in our Realizing the Digital Promise series, we will discuss these ecosystems in greater detail, and how they can help FIs in their digital transformation journeys.

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## Endnotes

- 1. Penny Crosman, "Digital banking is surging during the pandemic. Will it last?" American Banker, 27 April 2020, https://www. americanbanker.com/news/digital-banking-is-surging-during-the-pandemic-will-it-last
- 2. Lananh Nguyen, "Older Crowd Embraces Online Banking, Rewards Firms' Digital Push," Bloomberg, 31 May 2020, https://www. bloombergquint.com/business/older-crowd-embraces-online-banking-rewards-firms-digital-push
- Emily Bary, "Visa sees 'massive' digital acceleration with millions trying e-commerce for the first time," MarketWatch, 18 May 2020, https://www.marketwatch.com/story/visa-sees-massive-digital-acceleration-with-millions-trying-e-commerce-for-the-firsttime-2020-05-13
- 4. PYMNTS, "PayPal Processed More Transactions on May 1 Than On Black Friday," PYMNTS, 7 May 2020, https://www.pymnts.com/ news/mobile-payments/2020/paypal-processed-more-transactions-on-may-1-than-on-black-friday/
- Emily Bary, "Stripe extends huge funding round as coronavirus boosts online activity," MarketWatch, 16 April 2020, https:// www.marketwatch.com/story/stripe-extends-huge-funding-round-as-coronavirus-boosts-online-activity-2020-04-16
- 6. Allison Prang, "Mastercard's Contactless Transactions Jump More Than 40% Amid Coronavirus Crisis," Wall Street Journal, 29 April 2020, https://www.wsj.com/articles/mastercards-profit-falls-though-ceo-says-spending-is-stabilizing-11588164791
- Visa blog, "Merchants and consumers turn to tap to pay as part of new daily routines," Visa, Apr 30, 2020. https:// usa.visa.com/visa-everywhere/blog/bdp/2020/04/30/merchants-and-consumers-1588276426783.html
- Richard Craver, "COVID-19 has corporations re-thinking working from home," Winston-Salem Journal, 26 April 2020, https:// www.journalnow.com/business/covid-19-has-corporations-re-thinking-working-from-home/article\_c7b60a69-9ec5-524cada4-ff26555d07bf.html
- Chad Bray, "Banks scramble to patch systems, enact workarounds as coronavirus pandemic upends operations," South China Morning Post, 3 May 2020, https://www.scmp.com/business/banking-finance/article/3082352/banks-scramble-patch-systemsenact-workarounds-coronavirus
- BornDigital, "TD Bank's Digital Preparation for COVID-19," BornDigital, 16 April 2020, https://www.borndigital.com/2020/04/16/tdbanks-digital-preparation-for-covid-19
- Lee Clifford, "Working from home during coronavirus is going so well that this Fortune 100 company is going to keep doing it permanently," Fortune, 11 My 2020, https://fortune.com/2020/05/11/permanent-work-from-home-coronavirus-nationwidefortune-100/
- 12. Heather Long, "The 10-year U.S. Treasury yield hit an all-time low. Here's why that's worrisome," Washington Post, 3 March 2020, https://www.washingtonpost.com/business/2020/03/03/treasuries-record-low/
- 13. Laura Noonen and Robert Armstrong, "Biggest Wall Street banks set aside \$25bn for loan losses," Financial Times, 15 April 2020, https://www.ft.com/content/374de9f7-4746-4d3f-82e6-32fa749b9cd1
- Aaron Tan, "How DBS is reaping the dividends of digital transformation," Computer Weekly, 22 April 2020, https://www. computerweekly.com/news/252481976/How-DBS-is-reaping-dividends-of-digital-transformation
- IIF, "Digital Finance Webinar Series: Post-COVID World: FinTech Landscape," May 2020, https://www.iif.com/Events/Meeting-Home-Page?meetingid=%7B3D2701C7-8C89-EA11-80E2-000D3A0EE4ED%7D
- IIF, "Digital Finance Webinar Series: The Post-COVID World: Technology Accelerants," May 2020, https://www.iif.com/Events/RSVP-Event?meetingid=%7b5C4A251E-1584-EA11-80E7-000D3A0EE828%7d

- 17. Interview with William Demchak, "Closing Bell," CNBC, 14 May 2020, https://www.youtube.com/watch?v=G0SYXogm4lg
- 18. DBS Marketplace, Accessed 15 June 2020, https://www.dbs.com.sg/personal/marketplace/
- Pentti Hakkarainen, "The first lesson from the pandemic: state-of-the-art technology is vital," European Central Bank: The Supervision Blog, 8 May 2020, https://www.bankingsupervision.europa.eu/press/blog/2020/html/ssm. blog200508~f6f8de4b66.en.html
- 20. Lananh Nguyen, "Bank of America's Al Robot Learns 60,000 Ways to Talk About the Coronavirus," Bloomberg, 8 June 2020, https://www.bloomberg.com/news/articles/2020-06-08/bofa-s-ai-robot-learns-60-000-ways-to-talk-about-the-coronavirus
- 21. Pavithra R, "OakNorth & PNC team up to deploy COVID Vulnerability Rating framework," IBIS Intelligence, 5 June 2020, https://ibsintelligence.com/ibs-journal/ibs-news/oaknorth-pnc-team-up-to-deploy-covid-vulnerability-rating-framework/
- 22. Martin Braun and David Westin, "Connecticut Governor Says Days of Commuting to NYC May End," Bloomberg, 12 May 2020, https://www.bloomberg.com/news/articles/2020-05-13/connecticut-governor-says-days-of-commuting-tonyc-may-be-over?cmpid=BBD051320\_BIZ&utm\_medium=email&utm\_source=newsletter&utm\_term=200513&utm\_ campaign=bloombergdaily
- 23. PYMNTS, "Citigroup CEO to Workers: No Layoffs," PYMNTS, 1 April 2020, https://www.pymnts.com/coronavirus/2020/citigroupceo-to-workers-no-layoffs/
- 24. Financial Times, "How coronavirus turned the business of trading at banks on its head", Financial Times, 20 May 2020, https:// www.ft.com/content/8066154d-83c4-49a6-97d4-4c3c65684136
- 25. Jaco Grobler, "Here Comes a Big Paradigm Shift," 2020

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