INNOVATION TRENDS OBSERVATORY

COVID-19 EDITION

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SOCIETE GENERALE

INNOVATION TRENDS OBSERVATORY

COVID-19 EDITION

The COVID-19 crisis has been a catalyst for accelerating trends in digital adoption by our customers and new ways of working for businesses. The Group's COVID-19 Trends Observatory, launched in March at the initiative of the Innovation Department, has enabled us to decipher and follow up on trends in our markets, thanks to the contributions of our experts in real estate, insurance, mobility, asset management, open banking, open innovation, investments, and data, in France as well as in Africa and China. Check out these inspiring editions.

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NB The articles without a specific author mentioned have been written by the Group Innovation Team.

1 CUSTOMER EXPERIENCE AND DIGITAL USAGES, NEW WAYS OF WORKING, AND THE COMPETITIVE LANDSCAPE

CUSTOMER EXPERIENCE & DIGITAL USAGES

Globally, we are seeing the expected short-term impacts of the crisis, such as a decrease in cash and check usage, lower payment volumes (-30% for bank cards, -20% for contactless). Similarly, we are seeing the expected increase in digital usage (especially around finance, gaming, education, business or fitness apps).

The crisis confirms the preeminence of mobile over other digital channels (+10% to 30% vs 2019 in the second wave of countries impacted by the virus), including for business purposes (around +100% of hours spent on business apps across the infected countries, vs 2019), probably paving the path to more assertive mobile-first strategies, including for professionals and corporates. As the lockdown progressively eases in China, **we will get an indication of digital channel usage in the post-crisis new normal**.

Through the crisis, the scope of services that are acceptable through digital by a majority of customers will broaden rapidly. We are already seeing the normalisation of digital channels for applications previously considered complex, such as primary, secondary and higher education, consultations with medical specialists or meetings of Board of Directors. The extension of this normalisation to complex financial needs is only one step further: discussing sophisticated investment strategies remotely with a banker, or mortgage requirements with a remote mortgage advisor. The winners will be the ones able to revisit their offers and services combining the best of digital player experiences.

NEW WAYS OF WORKING

It is too early to tell how much of it will stick, but employees around the world are becoming used to working remotely, with some increases in productivity due to reduced friction such as from transportation. Fewer projects than could have been anticipated are being put on hold due to remote working. Usage of remote working tools, such as Slack, Trello and others, is soaring. Video conferencing platforms, such as Zoom, Webex, Google Meet or Skype, have a usage 20 times higher than usual. Zoom went from 10 million daily meeting participants in December 2019 to 200 million during the ongoing pandemic, while Skype daily usage went up 70%. Similarly, Microsoft Teams had added 12 million users by March 19, the equivalent of Slack's userbase, and is still continuing its growth with the addition of Microsoft Teams for consumers. **Capital One has announced it is maintaining its Summer class of 1,000 interns and that they will all be doing their internship remotely**.

COMPETITIVE LANDSCAPE

Disruptive business models, such as platforms will likely emerge strongly post-crisis. Amazon, Microsoft, and Deliveroo are at the heart of the customer online behaviors throughout the crisis. They are also instrumental in addressing issues related to the crisis, e.g., Amazon delivering virus testing kits and Deliveroo delivering groceries. To better serve their clients, they could choose to embed part of the financial services value chain. We see early indications of this trend, with Facebook opening a hub to support SMEs through the crisis and Microsoft announcing their strategic partnership with the aggregator Plaid to turn Excel into a personal and professional financial planning tool. States and the ECB could choose to accelerate disruptive monetary policies building on the early work of crypto-assets and stablecoins in Europe, combined with a push of companies such as **SWIFT to enable instant and frictionless payments from account-to-account anywhere in the world**, with an end-to-end solution that combines international and domestic capabilities.

In a context of increasing digital demand and business model adjustments, we are likely to see a consolidation of the competitive landscape through partnerships or acquisition leading to powerful "fintech survivors", and "reinforced incumbents". On one hand, we are observing a relative "flight to quality", especially on deposits (in the US, the Federal Reserve observed a monthly gain of + 5.6% in deposits in large banks over the last month, i.e. a 6-fold increase vs 2019, compared to a monthly gain of + 1.7% in small banks over the same period). However, incumbents are impacted by the low digitalisation of SME credit to process a large number of applications in the context of recent government schemes. On the other hand, Fintechs and Big Techs are demonstrating agility and adaptability to the new customer needs arising from confinement (e.g., LYDIA, the French peer-to-peer payment app, rapidly shifted towards payments of teleconsultations and closed restaurants, Facebook opened a SME portal to support their digital on-boarding and Alliance Autocar shifted its model within days to address the emerging "VIP safe mobility" market).

2 SOCIETE GENERALE AFRICA, TRUST IN A LOW TOUCH ECONOMY, DATA PRIVACY AND NEW PARADIGM

TRUST IN A LOW TOUCH ECONOMY

The transition period between containment and full operation will take time (up to 12–18 months according to the BCG). During this transition, trust will be a key factor to limit both the length and depth of the economic downturn. **The Board of Innovation issued an excellent analysis and report on low touch economy**. **Attachment courtesy of Ilya Polyakov**. Businesses will therefore need to implement confidence-building measures, by leveraging digital:

Businesses and consumers have essentially been given a massive opportunity to try out and get accustomed to digital shopping, working and collaboration. McKinsey's **consumer-sentiment analysis** reveals new consumer groups trying out digital products and services for the first time and some of those rapid changes in shopping habits are expected to stay (e.g.: more than 55% of Chinese consumers are likely to permanently buy more groceries online).

Banking is no exception to this trend and according to **J.D. Power**, nearly one-third (31%) of new account openings are now executed through a bank website or mobile app in the US, up from 22% in 2019.

The social distancing imperative combined with consumers' fear of contamination risks in physical locations urge organizations to make their content, products, services, and representatives available remotely to keep on servicing their customers.

Beyond accessibility and a feeling for "safety", organizations have the opportunity to "provide meaningful advice and guidance that's critical to the financial well-being of consumers, especially during times of economic uncertainty" (Ryan Caldwell, founder and CEO of **MX**) and develop proximity with their customers.

As some of its agent locations are temporarily closed, Western Union recently announced the launch of a new channel – **Digital Location** – to enable customers in Austria, Belgium, Italy, Portugal and Oman to connect in multiple languages via a voice or video call to a money transfer personal-service assistant who will help them through the transaction.

Uber (whose overall business has been cut by more than 50% by the virus) has launched a **'work hub'**, which lists down jobs for its US-based drivers in companies like Domino's, Shipt, or CareGuide (and Uber won't be earning any commission for the people that it refers to these companies).

Still there is more to enabling trust than just digital. Organizations will also have to demonstrate to the general public that they include collective concerns in the definition of their purpose. To that extent, COVID-19 is **a litmus test for stakeholder capitalism**.

DATA PRIVACY NEW PARADIGM

Leveraging personal data could strongly contribute to handling the sanitary crisis. It can help to understand virus propagation, **check the respect of confinement policies**, model deconfinement scenarios or monitor post-confinement contamination. Yet, the sense of urgency must not make us drop all cybersecurity and privacy key principles:

Individual consent & RGPD compliance: As Stephane Richard, Orange's CEO, stated in a tribune in Le Monde, that citizens should remain free to choose whether to use contact tracking applications or not.

Privacy enhancing technologies (PET): These methods enable the use of personal data while minimizing the possibility to link information to any particular individual. **Apple and Google are working together to create a contact tracing application** relying on such technologies. The French National Institute for Research in Computer Science and Automation (INRIA) is also working on a **similar application**.

Ethical AI: A strong increase in the use of AI will put it under an even higher level of scrutiny. Businesses should consider all aspect of a responsible AI, **from transparent data acquisition to ensuring unbiased, fair and explainable models** (McKinsey).

No compromise on cybersecurity: The explosion of popularity of some online services caused by the sanitary crisis is highlighting the prime importance of not taking shortcuts with security. For example, Zoom has made choices to improve the user experience at the expense of security and is **now under critique**.

In a post-crisis world, the lessons learnt might be leveraged to rip other benefits. For example, the World Economic Forum has already published, pre-crisis, a **white paper** about the benefits financial services could draw from PET enabled data sharing.

THE IMPACT OF THE COVID CRISIS IN AFRICA

By Valérie Noëlle KODJO DIOP, head of innovation of Societe Generale Africa

In African economies, cash is king because of the huge importance of the informal sector that does not have adequate access to the banking system and a high rate of unbanked people. Experience shows that the only way to re intermediate the cash in circulation out of the banking system is through **mobile money** "momo" with a 47% penetration in Sub-Saharan African countries. We believe that COVID could be a catalyst for high adoption of mobile money as a new lifestyle for basic usages such as transfers and billing, but also nano credit, savings, micro insurance and health.

Governments also see an opportunity using mobile money as an enabler to fuel and support poor people, boost financial inclusion and also as a tool to stem the Covid-19 spread. Strong incentives have been put in place to push people to go digital and to lower barriers. Indeed, most African governments, central banks (BCEAO, BEAC, BoG, CBK, etc.) and telcos have implemented a fee waiver to reduce the physical exchange of currency. Some companies have even announced that all P2P transactions would be free. In some countries, like Kenya, the presidents have issued directives to explore ways of deepening mobile money usage to reduce the risk of spreading the virus through physical handling of cash. And this pushed interoperability solutions cross countries, in a broader scope than simply payment.

Lastly, this crisis will **foster the uptake of e/s-commerce** as mobility is restricted. The construction of a network including new merchants accepting digital payment (including mobile money) will be needed and with Telcos lowering fees on data bundles «to help teleworkers» and fee waiver on merchant payments, one can expect commerce on social platforms like WhatsApp, Facebook, etc. (which is already a major trend on the continent) to gain even more momentum.

Last but not least, the excellent **internet analyst Mary Meeker has issued her new report**. A must read for all Geeks!

3 SOCIETE GENERALE CHINA, ACCELERATION OF SMARTBOTS, DIGITAL TAKE ON COMMERCIAL AND CORPORATES

THE ACCELERATION OF CONVERSATIONAL TECHNOLOGIES TO INTERACT WITH CUSTOMERS

As social distancing has become the only effective way to limit the COVID19 pandemic, customers turn to their phones to interact with their bank, through digital self-care services or contact centers. Finalta's remote banking pulse check shows that mobile app users grew for 90% of banks worldwide and that in Western Europe there has been a 25% increase in calls. Without appropriate 24/7 self-care services and conversational channels automation, call growth leads to a degraded customer experience due to waiting time increase, which have more than tripled in March for Western European banks according to Finalta.

If **Chatbots or Smart Speakers** like Google Home or Alexa, sometimes led to disappointments until now, 2020 could be a new start as noticed by the **World Economic Forum**. Significant progress in Natural Language Processing - NLP - has been made lately by AI research departments of major technological actors, such as Google & **Facebook**; using billions of human exchanges samples to train them. Half of voice assistant owners in UK increased their use of the technology, according to a new report by voice tech agency Voxly Digital and 40% plan to up their use of the tech even after the lockdown end.

Therefore, the current NLP systems allow to analyze sentiments and integrate customer's context, to better detect intentions and provide the most appropriate response, on a seamless and instantaneous way as far as possible. They also become a vehicle for inclusion.

Nevertheless, 3 major challenges must be met to achieve truly optimal conversational agents:

- Their capacity to be adapted quickly to handle new urgent customer needs or services. As the UK-based **TSB Bank** did recently to provide in 5 days a Smart Agent chatbot, to give customers' access to certain relief measures amid the pandemic;
- Their ability to respond in a truly relevant way to the complex requests expressed by clients, using a rigorous structuring of knowledge while addressing transparency, bias, fairness, and data privacy; at the risk of causing mistrust in case of incoherent results;
- Their integration in a holistic approach, including a clear digital journey, to identify and reactively rebound on each datapoint left by the customer, such as a comment or a webpage visit, and to proactively propose a personalized service to anticipate most predictable queries.

DIGITAL WILL TAKE ON A PROMINENT ROLE IN COMMERCIAL AND CORPORATE BANKING POST-CRISIS RECOVERY

(Sources: Mckinsey & Company, Oliver Wyman, Forrester)

The COVID-19 pandemic is impacting commercial and corporate banks. A report by Oliver Wyman forecasts an average ROE of 4-5% over 2020-22 across the industry in base case, with lower quartile banks close to zero, and with 'legacy full-service banks' most heavily impacted. Digital can help banks and their clients on three levels:

Client service digitalisation: Critical focus areas in the immediate term are cash management, trade finance and loan origination (in particular to implement government-backed schemes). Previously paper based processes are rapidly being shifted to digital, and electronic documents are being accepted where physical meetings would previously have been required. While this is proving a challenge for traditional banks, hindered by legacy systems and processes, some promising examples are emerging (i) UBS is using machine learning algorithms to automatically scan and process applications and shorten the time to release of funds and (ii) a group of UK Fintechs, including digital lending platform **Trade Ledger**, digital SME credit scoring platform **Wiserfunding**, trade credit insurance provider **Nimbla**, and remote client onboarding platform **NorthRow**, have formed a taskforce to help SMEs get access to government-backed loans. The platform includes risk assessment, KYC and insurance capabilities — and can support term loans, invoice finance, and asset finance with funds deployed within days.

Considering the quick adoption of digital channels by banks and clients, we expect a sustained shift to digital channels for SMEs and large corporates in the future. Incumbents who most quickly manage to put in place good quality digital customer journeys are to gain a competitive advantage as each market comes out of the crisis. Rather than building in-house, it may be faster to partner with Fintechs (e.g. **UK digital business lender Iwoca**, who is able to provides decisions within a few minutes and transfers funds electronically within one business day thanks to the use of AI and APIs from Amazon, eBay, PayPal, Sage Pay, and other sources).

Risk management: Applications of AI are being used to proactively scan client portfolios amid the coronavirus crisis, identify risk areas, assess the creditworthiness of individual businesses and reach out to clients with potential solutions. As an example, UK digital lending platform OakNorth has developed a "COVID vulnerability rating." It enables to scan their loan books and categorize borrowers by how severe an impact the pandemic will be on them.

Cost reduction: can be achieved in the short- to medium-term through (i) **Client service transformation** - Client-facing activities like sales and coverage currently account for ~50% of costs. Yet corporate client satisfaction with bank providers is typically low. Beyond clients' digital self-care options, RM productivity can be materially enhanced through applications of AI and automation of front-office processes. There is significant potential to both take share by improving the client experience and take out costs through moving to more technology-driven service models and delayering of overlapping and duplicative sales, coverage and client service organisations and (ii) **Back-end automation** – Significant amounts of work from loan origination to servicing, remains manual, and can be automated through digital technologies.

THE IMPACT OF THE CRISIS IN CHINA

By Socrate Lao, Ronan Vuillemard, Minghua Dai, Societe Generale China Digital & Innovation Team

Many companies including SG China have chosen **W**ork **F**rom **H**ome + minimum onsite at the beginning of pandemic to ensure the business continuity. VPN and Remote Virtual Desktop are the main solutions used to ensure this setup. **WeChat, Zoom, Tencent Meeting, Microsoft teams, Biz Conf Video**, etc. are also chosen to ensure the daily internal and external communication. Banking regulators encourage each bank to keep a reasonable onsite/WFH ratio and secure the financial market stability. WeChat is also used as one of the official communication channels for the notice publishing, and feedbacks collection from each bank.

As for SG China, we have also benefited from our newly setup Corporate WeChat Platform to timely publish our official communication and to demonstrate how close we are standing together with our clients. More importantly, **Trading From Home and Sales From Home** were put on the table for discussion internally and together with the regulator. It was the 1sttime TFH and SFH became possible in our real daily activities with a certain specific trading activities, products, and portfolios.

The government of different regions have put in place a **QR code** to indicate **the health condition** of the person with the cooperation with high tech companies like Alibaba, Tencent, etc. The health QR code colors is calculated automatically based on the past 14 days trajectory, close contact of the person using Big Data technology from different sources, i.e.: main mobile operators in China, Airline/Train reservation systems, Inter-city road in/exit records, etc. People can only go outside if the QR code is Green. **QR Code** is also used in **public transportation**, scanned for each passenger when taking the bus or metro. A single code is assigned to each train of the metro, or bus to ensure the close contact could be identified in case any contamination observed.

By the end of March 2020, online shopping customers in China reached about 710 Million, +16.4% increase compared to end of 2019. Most delivery platforms have deployed a **contactless delivery service**. Customers and delivery drivers can use the app to determine where to drop off the order. When paying for their order, customers can select “contactless delivery” and then determine where the order should be dropped off.

The online reservation is widely used by different sectors to avoid the unnecessary crowd gathering due to a long queue. Retail banking branches, hospitals, government departments, etc. have enhanced their Mobile APP by adding an online reservation function to be able to visualize the current onsite volume and make an appointment in advance.

As of today, the COVID-19 situation is getting **under control** in China. When we looked back, it is the most widely impacting pandemic since 2nd World War but on the other side, it also tested our digital capacity prepared in the past years, it forced us to change the traditional way that we worked, it opened another door to let a lot of companies, regulators to think differently. Our daily life as well as our daily work is getting changed. PBOC (Central Bank of China) is also announcing to speed up the implementation of the Digital Currency/Electronic Payment to replace the existing RMB cash in China.

4 THE FUTURE OF WORK, CRISIS IMPACT ON INVESTMENTS, AND THE IMPACT ON SOCIETE GENERALE SECURITIES SERVICES

THE FUTURE OF WORK

Imagine it’s October. Things are back to a new normal, meeting face to face and travel is possible. However, the experience of being a customer, employee, citizen, human has definitively changed and even the long-term implications of the pandemic on the future of work are still unknown, it is clear that this crisis has accelerated workforce transformation and increased the digital demand. (i) What are the implications in terms of working spaces (ii) what about the importance of digital skills training in the short term?

(i) A revolution is underway in working space and mentalities, can we bet on the disappearance of the open space and theflex office? Density and conflict of uses generate nuisance, noise and now health risks. Do these concepts really translate the reality of openness, agility, cooperation or finally did they take the opposite view of what they should represent?

It is necessary to rethink this whole value chain, to give new meaning to the collaborative, (The Culture Code de Daniel Coyle) erase the constraints of travel and enhance proximity (the city of 15 minutes by Carlos Moreno) to reduce the risks associated with a single workplace, see each other less but better. In a study of Chaire Workplace Management ESSECpublished recently, 32% of the panelists want more health and safety, 69% want to continue teleworking, this is in line with the decisions taken by certain companies from the most traditional (PSA) to "distributed companies", who adopt full remote (GitLab, Buffer, Platform.sh), and 18% claim more autonomy. This new possible organization would become more responsible and inclusive for people with disabilities if they can't move around.

(ii) It's a fact, in all bad times, training budget is a big target on the wall for traditional companies. There is going to be a digital talent war. Progressive companies are going to continue to invest aggressively in their best people and also hiring in next generation of digital talent. Learning is not only for young or educated people, everyone and of course during this crisis, can go to YouTube to get hundreds of courses from the best universities in the world and the best professors. With Coursera and **Udacity**, people don't need to go to Stanford to get a great job at Microsoft, Bank of America. What value does the diploma represent? Beyond that, it is necessary to improve the capacity of employees to reskill themselves permanently, more easily and cheaper according to customer needs to avoid the risk of skills becoming quickly outdated. That's why **empowerment and growth** mindset are key words. In the long term, turnover essential to oxygenate organization will occur naturally since trained employees will more easily find outside jobs.

Employees are the most important asset companies haveto help serve today's customers, while adapting to tomorrow's customer-satisfying processes and technologies, so adopt the LLL, listen, link, lead.

CRISIS IMPACT ON INVESTMENTS

It remains very uncertain how the Covid crisis will impact venture capital market over time. After a significant slowdown, funding activity seems to be picking up, especially on specific areas such as healthtech and future of work, outlining future investment trends.

According to FT Partners, there was a total of $1.45 trillion in dry powder (ie. cash reserves) across the private equity and venture capital industry at the end of 2019. This total represents twice the amount from five years prior. VC firms are mostly using this amount to help their portfolio companies get through the crisis.

Over the short to medium term, the Covid crisis will likely result on a decline in venture capital deal volume, with investors being very cautious spending their capital and spending less time evaluating new deals (cf. infra). At the same time, valuations will probably decrease for the next year. Where the pricing will move on late stage companies is quite unclear and some VC firms are looking at more early stage deals and doing more references on the founders.

According to **Rosenblatt Securities**, a US brokerage company, Fintech unicorns valuations could contract by 15% on average, as downturn could wipe off $76 billion of their market value. Down rounds, ie. at valuations significantly below those of prior funding rounds, already exists with UK digital bank Monzo facing a 40% valuation drop in its latest fundraising. It is important to note that tensions on neobank valuations existed before the pandemic.

As pre-covid, investors could favour B2B models which are more resilient through subscriptions revenues, and platform players with embedded data and analytics. On the Fintech market, the Covid-19 pandemic could speed up horizontal mergers and lead to consolidation as acquisition become cheaper.

Before the virus emerged, VC teams would spend two thirds of their time looking for new opportunities and the rest of the time supporting existing portfolio companies. The Covid crisis reversed this situation. During early months of the pandemic, **VC funds assessed the crisis impact on their companies** and helped them optimize their cash flow. In support of their portfolio, some investors are using dry powder to make **follow-on investments**.

The Covid crisis also created an **adjustment on investment funnel**. According to **Chausson Finance**, most European investors are now re-opening their deal flows and are willing to receive new investment opportunities. Regarding 1stmeetings with management teams, half of them have **changed their way of assessing required qualities of founders**, favoring resilience, agility and ability to monitor. The Covid crisis also impacted **the way VC funds assess the structure of a startup's unit economics** during the deep dive phase. Half of them declare refocusing on profitability, cash burn and growth. To cover investment risk, investors also adapt term-sheet conditions, including milestone-based tranched equity rounds, discount on convertible notes and ratchet.

A VIEW FROM SOCIETE GENERALE SECURITIES SERVICES

By Yvan Mirochnikoff and Laurent Marochini

The recent health crisis has highlighted for Societe Generale Securities Services (SGSS) and its clients the need to strengthen their resilience while adapting to a new economic and social environment. As a whole, SGSS' clients (Banks, Insurance companies, Asset managers, Investment companies) have had to adapt more quickly than expected to a new environment by taking greater advantage of new technologies. In order to continue to ensure business continuity and maintain profitability, SGSS has strengthened its presence with its clients, both commercially and operationally, and to seek greater efficiency while working remotely.

In fact, we continue to rethink customer relations through simplified paths and more ergonomic interfaces, accessible anywhere and at any time, while gradually reorganising the value chains, optimising its end-to-end processes and seeking the most efficient solution for each link in the chain. This crisis has thus accelerated the concept of **ATAWAD ("Any Time Any Where Any Device")** by offering dematerialization solutions such as:

- The electronic signature to avoid travel and make interactions more fluid, in complete legality and security. The obstacles to deployment have thus been removed in geographical areas.
- The digitisation of boards of directors and our meetings, through our remote applications and our new communication tools such as Skype or Livestorm. In this context, Voice to text tools are also being tested to improve our efficiency and for better risk management.
- Remote on-boarding for increased efficiency and customer satisfaction. This track is to be developed to improve the customer experience.

The support of our customers has been the key word to facilitate their remote work and our tools, such as **Gallery**, have demonstrated their interest in this new world.

This digitization, not having always involved emerging technologies, has nevertheless found its usefulness to our customers and for a company focused on a sustainable future. This is the positive feedback we have received from clients after these few weeks spent at a distance, during which they consider that SGSS "did the job! "as shown in the post-COVID survey of a sample of 76 major SGSS clients.

5 HOW BIG TECH BECAME BIGGER DURING THE CRISIS, THE RISE OF MOBILITY AS A SERVICE AND IMPACT ON CONSTRUCTION AND WORKPLACES

HOW BIG TECH LEVERAGED ON COVID-19 TO BE PART OF THE "SOLUTION"?

The COVID-19 crisis certainly did prove how dependent consumers and companies are on Big Tech players, whether it be their logistics, infrastructure, or various platforms. If we take a look back on the past 4 month's announcements, we also notice that most of their recent initiatives constantly leveraged the context by focusing on either a "reputational" effort to position themselves as indispensable AND responsible players, or simply well-planned commercial opportunism:

Responsible in their core business: Early on, announcements have fascinated many, showcasing how Google, Facebook or even Microsoft would be temporarily closing down offices and going fully remote – and some, such as **Facebook**, clearly decided to set this as a standard for the future. Even in cases where their core business couldn't allow them to go remote, such as **Amazon**, communications always focused on responsibility towards their employees and consumers. While staffing (+175,000 employees) to answer the surge in demand, Amazon stated in their earning's announcements that they would invest their full Q2 earnings (**close to $4 billion)** in protecting its employees at the cost of decreasing business. This effort however has not always been implemented with the same care everywhere: Amazon France got pinned for its lack of respect for social distancing rules in its warehouses and condemned to a daily fine.

Opportunistically providing financial services: In parallel, the crisis clearly didn't slow down Big Tech's interest in providing financial services, especially to those most impacted: merchants and SMEs. There's been an early flourishment in direct financial support as countries locked down (cumulatively **estimated at $681.5M in relief funds and advertising credits** by Google, Facebook, Amazon, Microsoft and Apple, in an effort to keep some of their most fragile customers afloat). Now that the economy is slowly picking up in some parts of the world, this previous trend seems to have found a more opportunistic approach of "supporting Small Business": leveraging on direly needed loans. In India, for example, Google announced that it will now **provide millions of loans in India to Google Pay merchants**, noticeably to "help small businesses in the country steer through the pandemic." Quite similarly, Amazon has announced a series of SMBs credit lines, **with Goldman Sachs in the US** (rumored with a fixed annual interest rate of 6.99% to 20.99%!), or with **ING in Germany**.

Filling a gap in the healthcare space: Finally, both the GAFAM and BATX alike have strongly focused on positioning themselves as directly fighting the virus or supporting governments and its citizens in the process. As such, Google and Apple have been quick to act and surprised many in collaborating to provide means on how to **slow down & identify contamination chains**.

In Asia, Alibaba has gone further by providing online clinic services (driving over **100,000 consultations a day**), as well as a **drug delivery service for people**. **Tencent** has even opened up its supercomputing facility to help researchers find a cure for the virus. And it is undoubtedly in the healthcare space that the boldest moves in terms of diversification have been announced by the BATX: Alipay's parent company Ant Financial (which officially renamed itself as "Ant Technology"), Baidu or even Xiaomi – mostly focused on Hardware products so far – all plan to **enter the Chinese mutual aid industry** targeting **450 million users in the industry** within 5 years.

The COVID-19 crisis certainly did prove how much Big Tech players are changing our lives and economies across the globe. And it comes as no surprise that most of these recent initiatives have a common denominator: they illustrate a push to accelerate the promotion of public Cloud as a key ingredient to strengthen the resilience of our societies in a post-COVID world. Tencent expects to see "accelerated cloud services and enterprise software adoption from offline industries and public sectors over the longer term." Putting their money where their mouth is, they plan to **invest $70 billion in 'new infrastructure'** — a term used by Beijing to encompass areas of technology such as artificial intelligence, next-generation mobile networks known as 5G and infrastructure around transportation such as electric cars. Providing the infrastructure to accommodate the low touch imperative of a world that is becoming «digital by default» is undoubtedly the next battlefield for these tech giants.

THE IMPACT OF THE COVID-19 CRISIS ON MOBILITY

Vision of ALD Automotive and Societe Generale Assurances

As a first and brutal impact, lockdown and social distancing measures due to the sanitary crisis have **slowed down mobility and therefore the entire automotive industry's sales**. Population lockdown, auto dealers shutdowns, restrictions on transportation as well as financial concerns regarding the crisis have led to a dramatic decline in sales. On the French market for instance, registration of new vehicles in April 2020 was 89% lower than the records of April 2019.

With the gradual reopening of the economies, **constructors are putting efforts into addressing the crisis and fostering a commercial revival**, backed by governments and fiscal incentives. Some segments of the industry are expected to suffer lasting backlashes: for example, many companies suspended or **postponed their work around autonomous vehicles** such as Waymo (Google), Lyft, Argo AI and General Motors. It will most certainly delay projects but is not to mark the end of autonomous programs that remains part of R&D strategies.

Reversely, the crisis **accelerated initiatives** that were already shaking the industry pre-COVID, particularly the **ecological transition**. In France for example, the recovery plan not only offers financial triggers for consumers to buy greener vehicles thus increasing the demand, but it also asks for constructors to increase production of electric and hybrid vehicles. Consequently, Renault's production of green vehicles is expected to triple by 2022.

Besides, with local distributors being shut down, **auto makers had to rethink distribution channels to boost sales and pave the way for more flexible and digital distribution**, another pre-existing trend that got strongly accelerated. In that matter, Tesla is already proposing "touchless delivery", offering the possibility to get possession of a car without any contact between the buyer and the delivery employee by using the Tesla phone app. In the same vein, Volvo launched in April an online ordering service called "Stay Home Store" including lease options. The change was already anticipated by OEMs like Polestar and Lynk & Co (part of Volvo & Geely Group), which designed a full digital customer journey, and are about to start operating in Europe without any dealer network.

As a matter of fact, **even if a return to individual car mobility is to be expected** (vs. shared solutions and public transports), **usages and customers' expectations will most surely evolve**. Since the beginning of the Covid-19 crisis, preference for buying a car has increased among younger generations, but they are also more likely to delay purchases because of affordability and economic crisis impacts. **As a result, leasing products** (and, amongst them, the ones of shorter duration and greater flexibility), **but also pay-per-use and subscription models should further develop**. Those services are distributed digitally via mobility platforms. They offer buyer experience as e-commerce leaders, including delivering and return at home. It will also appeal to the ones who, for personal taste or health concerns, are reluctant to visit car dealers and used cars parking lots.

Speaking of used cars, they could well become very sought-after assets in those platforms, for their price and the reassurance they provide in times of uncertainty and rapid changes, whether economical or technological. **Buying or renting a car, new or used, in a digital store** - or selling your old one for that matter – **will become part of the new normal**, thanks to innovative financing schemes (pay only for your real usage and return when you feel so), enhanced photo and video experience (check the scratches and organize your virtual tour from your couch), verified pedigree of your coveted vehicle and immediate credit clearance (IA-based, thanks to your favorite fintech). All of this, contactless and home delivered! **For services actors deeply linked to the automotive ecosystem (leasing companies, insurance, …) that means a necessary model pivot to smoothly switch from a standard approach to an individual and tailor-made model.**

In addition to profound changes in the personal usage of a vehicle, **the crisis will also have strong but differentiated impacts on the mobility ecosystem and its actors**, depending on their value proposition. Today, **we can assume that, together with public transports, shared mobility actors will be the most impacted**. Prices will inevitably rise, with impacts difficult to predict on the whole ecosystem. On the other hand, new mobility actors (EAV, NVEI, e-scooter, e-bikes, …) leading to the development of **Mobility as a Service Model. A big part of the answer will depend on how local government and municipalities will tackle the infrastructure challenges that are required to facilitate such a profound transition**.

WHAT IMPACT WILL THE CRISIS HAVE ON OUR WORKSPACES AND CONSTRUCTION METHODS?

Vision of Sogeprom, real estate development subsidiary of Societe Generale

The recent health crisis has not only accelerated the change that Sogeprom anticipated in terms of workspace, but also in construction methods.

If the boom in telework and the search for savings led some companies to postpone their leasing projects in order to re-adjust their specifications, the challenge today is to re-enchant the workspace, even to rethink the mission of the office space which becomes a **professional hub** by being the privileged place for social ties, the consolidation of corporate culture, collective creativity, while offering **confidential spaces**, both to promote concentration and to allow contract negotiations. For this it must be both:

- **Desirable** - by the architectural quality, the comfort and the interior atmosphere, the presence of nature, the provision of efficient and healthy working tools by an adequate treatment of the air and water, the use of self-cleaning and depolluting materials (photosynthesis, photocatalysis, ie degradation of pollutants on a surface under the action of light rays), suitable acoustic quality and the use of depolluting plants;
- **Modular** - by allowing, through the use of easily movable partitions, the adaptation of spaces to the desired uses in real time, in particular to facilitate work in project mode which requires spaces of different sizes according to the nature of the projects and stages of collaboration;
- **Service-oriented** - offering quality catering, a gym, secure 2-wheeled premises, a concierge…
- **And finally, economical**, both in the choice of equipment and of materials, the scarcity of natural resources and financial resources of companies, forcing them to reduce the consumption of buildings. **Connectivity** must be generalized to monitor buildings: measure consumption of all kinds, optimize the use of different premises, detect equipment leaks or failures, even anticipate them (predictive maintenance).

More than ever**, the level of CSR labeling of buildings** will be a pre-requisite both **for users and for investors** whose conflicting constraints (manage the optimization of space density ratios compared to new health standards, while being careful to present a positive carbon footprint) must balance each other. New types of secure workspaces will appear at the foot of buildings and coworking - the sector of which is evolving towards a certain consolidation - will retain a place in the tertiary landscape to meet the need for proximity between workplace and home.

Finally, the **development of the off-site construction method** should accelerate because it reduces construction times, noise, dust and traffic nuisance, limits the production of waste, while adapting more easily to new health constraints for construction workers.

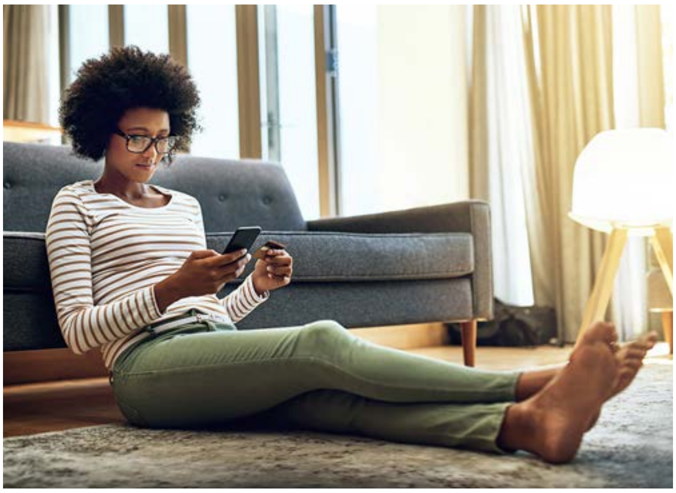
6 THE EFFECTS ON E-BUSINESS, OPEN BANKING AND FINTECH TRENDS IN CHINA, AND RESPONSIBLE INVESTING AND DIGITALISATION

HOW FAR WILL COVID-19 BOOST E-BUSINESS?

Analysis by Group Innovation Division

The varying short-term effects of COVID-19 on e-business

It may seem commonplace to say that e-business has benefited from the sanitary crisis and there is no doubt that the coronavirus will have long-term effects on spending patterns. However, in the short term, it is untrue. International research shows that the e-commerce sector has suffered a negative impact just as the rest of the economy.



Shortly after the lockdown in many countries, on-line sales of basic necessities surged to record highs. However, they dropped significantly afterwards as consumers had piled up dry food and toiletries. The shift to on-line grocery shopping proved very significant in countries where retailers had fully fledged online sites (US, UK and even France) and quite weak in some other countries, such as Germany, where poorly prepared hard discounters account for a major part of the food market. (Source: Nielsen)

Obvious winners of the lockdown are online leisure (video streaming, e-sports and gaming) and communications (video conferencing) but not surprisingly, other sectors are suffering a dramatic downturn such as travel & tourism and sporting goods.

Two key factors have mitigated the expected benefits for e-merchants: logistics and concern. The supply chains and delivery services have been disorganized, as illustrated by the temporary closure of Amazon's logistics platforms in France. Non-discretionary spending is slowly recovering, but discretionary spending remains depressed because sales to the wealthier consumers are far below their pre-crisis levels due to their concerns for the future.

In the medium term, the recovery of e-business will strongly depend on the evolution of the sanitary situation. Whether entire regions or even countries go back to lockdown, or not, may well decide the fate of many e-merchants, not unlike brick and mortar shops.

Potential long-term effects of the pandemic

Surveys also provide a few useful hints about the significant structural changes e-business will experience when the coronavirus dies out.

Consumers have indeed developed new habits. For instance, a survey covering 15 countries (from the USA to the Far East) reveals that 1 in 5 online grocery shoppers were new comers. Among the more senior ones (aged 56 or more) they were 1 in 3 and 77% of them intend to continue post-crisis (source: Accenture). In the USA, when the epidemic broke out, the proportion of online grocery shoppers surged from 30 to 60% of the general population. The fraction of consumers using online banking rose from 50 to 70% and the apparel (clothing) sector saw a dramatic increase from 13% to a record 45% (source: McKinsey).

A number of services were deemed to require in-person interaction, such as advisory services (not least retail banking) and health services (medical visits) and they suddenly shifted to digital. Massive online courses (MOOCs) were already starting to reshape the world of education. With the pandemic, the classroom has become virtual and digital tutoring has spiked. How could such changes not affect the future?

From now on, the engagement of newcomers to the digital economy is the new challenge for e-merchants and e-services. The expectations of clients have risen. Digital may now be seen as the norm, although new forms of "phygital" distribution, combining physical and digital, will certainly strive.

CHINA TRENDS: OPEN BANKING & FINTECH

Societe Generale China Digital & Innovation Team

Currently less impacted by Covid-19 epidemic, China begins to see the light at the end of the tunnel at its economy slowly recovers. And now that business is almost back to pre-lockdown levels, we foresee a resumption of former initiatives that had to be stopped as well as new trends emerging for the banking industry.

Political push for Open banking

Affected by the epidemic situation at home and abroad, the People's Bank of China (China Central Bank) has been recently seen promoting open banking to accelerate and encourage online processes of financial services. To help banks to navigate, the People's Bank's of China as published in February new specifications and proposed technical standards for open Banking.

This milestone, if successful, will foster the demand for the integration of banking services and the service offer of online processed, together with the overall supervision of the Chinese regulator.

Some Chinese Banks already entered the fray. Shanghai Pudong Development Bank is setting it's open bank architecture around external cooperation, via it's "Science and Technology Cooperation Community" and its' "Joint Innovation Lab".

Chinses Banking players are transforming business models through fintech

For both China corporate and retail banking players, fintech has been empowered more significantly through heavier investments to transform their traditional business models. China Merchant Banks and Ping An Bank, two of the most active fintech players in China banking industry have been investing significantly in the technology including AI, big data, cloud, and blockchains, to support their transformation from offline to online, from only large enterprise focused to long-tail enterprises captured for corporate banking, and from product-driven to experience-driven for their service-offerings.

For example, Ping An Bank's KYB (Know Your Business) platform is an online SME credit data loan platform mainly obtains real and valuable enterprise operating data through third-party channels and uses big data to establish mathematical models to judge enterprise qualifications, thereby making credit risk judgments.

Chinses banking players also invested more on the so-called "Banking ecosystem establishment" investing in other industries including Smart Parking, Smart Medical Care, and E-commerce. This is also related to their strategy of utilizing fintech to streamline different business scenarios to capture user's data, which could in turn help them develop customized marketing strategy to transform such "customer traffic" to the online platforms of core finance business.

LYXOR TRENDS: RESPONSIBLE INVESTING AND DIGITALISATION

Analysis from Lionel Paquin, Lyxor Chief Executive Officer

Although it avoided massive outflows, the asset management industry has seen its profitability come under heavy pressure from the crisis: at the peak of the pandemic, the markets' broad decline had an enormous impact on assets under management and therefore income. Yet the COVID crisis, which started outside the financial system and was therefore experienced but not caused by it, has not triggered the crisis of confidence or systemic risks seen in the past. Unprecedented, huge, in some ways impossible to grasp, COVID is giving management companies the opportunity and responsibility for pursuing their primary goal: helping their clients to manage their risks and build their future. It gives new urgency to the previous two underlying trends: the need for responsible finance and the growing role of digital technology.

The shift of portfolios towards responsible investing will gain pace and tackling climate change will become essential.

Through the awareness it has raised and its brutal reminder of how much we rely on the balance of natural systems, the COVID crisis directly challenges our environmental responsibility, our priorities and our socio-economic choices. Asset managers have a key role to play in the emergence of more sustainable and responsible practices: first because they direct significant capital flows through their investment policies or the products that they develop (in index management, for example, flows into ESG ETFs grew at a record rate in June, with inflows of EUR 3.7 billion, often into the strategic, stable pockets of portfolios); because of the services that they will create in the future, e.g. to measure a portfolio's "temperature" or its impact; because of the influential role they must play on companies through their voting and issuer engagement policies; and because of the commitments and causes that they will undertake as companies. ESG has really become part of the "new normal" for investment.

COVID-19 is also a powerful vector for digitalisation

In just a few days, sometimes even overnight, businesses and their clients, schools and their pupils, administrations and services, have launched their digital revolution. This movement is irreversible and asset management companies are part of it in their own way: like others, in the organisation of work, combining remote working with presence at an office that will have been given a purpose and its own added value; in client relations, which digital communication channels and exposure to data and services are continuously making more effective for everyone; and in processes – operational, investment, risk management – made more efficient and robust by the easier use of better organised data. Introduced, extended or stepped up during the crisis "because there was no choice", the use of digital is essential for asset management companies, whose fundamental role assumes the ability to mobilise knowledge and data, extract value from it, and return this to clients. Digital will not replace the men and women who work in asset management, but it will help them – in their office or elsewhere – to show their true worth.

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