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THE CAPCO INSTITUTE  
**JOURNAL**  
OF FINANCIAL TRANSFORMATION

TECHNOLOGY

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Digital disruption –  
a CEO's survival guide  
JET LALI

WEALTH & ASSET  
MANAGEMENT

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# THE CAPCO INSTITUTE

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## JOURNAL OF FINANCIAL TRANSFORMATION

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**DEAR READER,**

Welcome to edition 51 of the Capco Institute Journal of Financial Transformation.

The global wealth and asset management industry faces clear challenges, and a growing call for innovation and transformation. Increased competition, generational shifts in client demographics, and growing geopolitical uncertainty, mean that the sector needs to focus on the new technologies and practices that will position for success, at speed.

There is no doubt that technology will be at the forefront of a responsive and effective wealth and asset management sector in 2020 and beyond. The shift to digitization, in particular, will see the speeding up of regulatory protocols, customer knowledge building, and the onboarding process, all of which will vastly improve the client experience.

This edition of the Journal will focus closely on such digital disruption and evolving technological innovation. You will also find papers that examine human capital practices and new ways of working, regulatory trends, and what sustainability and responsible investment can look like via environmental, social and corporate governance.

As ever, I hope you find the latest edition of the Capco Journal to be engaging and informative. We have contributions from a range of world-class experts across industry and academia, including renowned Nobel Laureate, Robert C. Merton. We continue to strive to include the very best expertise, independent thinking and strategic insight for a future-focused financial services sector.

Thank you to all our contributors and thank you for reading.

A handwritten signature in black ink, appearing to read 'Lance Levy', with a stylized, flowing script.

Lance Levy, **Capco CEO**

# DIGITAL DISRUPTION – A CEO'S SURVIVAL GUIDE

JET LALI | Chief Digital Officer, State Street Global Advisors

## ABSTRACT

For a company to be successful in its digital transformation, leaders will need to understand what digital can deliver for their businesses and have a hand in driving that change themselves. Digital transformation is more than an IT solution, it is a firm wide event. Executives will need to comprehend the value of data and deeply understand what artificial intelligence (AI) can and cannot do for them. For those who get this right, the prize will be to unlock the information advantage for their businesses and for the very best, it will be digital supremacy and domination of their sector. This paper will explore the key areas of digital transformation, provide insights into how digital will disrupt our industry in the coming decade, and offer insights into how best to prepare for the change ahead.

## 1. INTRODUCTION

We are in the midst of the fourth industrial revolution. The agricultural, industrial, and technical revolutions changed the world through steam, electricity, and computing delivering unprecedented efficiency, automation, and productivity. Now the digital revolution is doing the same using advanced connectivity and exponential improvements in software, hardware, and the network effect.

Few notable industries have yet to undergo digital disruption. Those most ready for disruption are manufacturing, automotive, healthcare, and regulated services. Our own industries of asset and wealth management are laggards in the disruption lifecycle. However, change is coming and ours will be one of the next big industries to be rebooted.

As with all industrial revolutions, business models need to adapt and change if they are to survive. This is equally true today as evidenced by the number of companies that are making digital transformation their top strategic priority, the increasing number of Chief Digital Officers being hired and the significant budgets being allocated to deliver this change program.

The prize for companies that get transformation right is the information advantage they will have over their competitors. They will learn what their customers want and how their needs evolve so they can focus their resources on delivering better outcomes than their competitors.

Businesses will also face more competition than ever before and margins will continue to fall as digital drives automation and efficiency improvements, which will drive costs and fees lower. This will provide both better value for money and services for customers.

Best practices and innovation will come from all regions and sectors. In a digital world, information, ideas, and new business models are borderless and quick to deploy at marginal cost. Gaining a million more customers is often a marginal cost increase compared to the first million customers.

Customers embrace new technology faster than large companies are able to evolve. This is one of the reasons why the average tenure of a company in the S&P 500 index is getting dramatically shorter each decade. Disruption rarely happens within incumbents, businesses that are not adapting

fast enough also fail faster than ever before. Kodak and Blockbuster are often used as examples of companies that failed to evolve and subsequently failed. What is less known is that Kodak invented the digital camera and that Blockbuster was given the opportunity to buy Netflix but declined on the offer.

## 2. THE INFORMATION ADVANTAGE

For online customers, a key challenge in the digital age has been to “find” the best solution for their needs. Google has largely solved the information “search” problem. However, this has created a new challenge of how to “find” the answer from the vast amount of data that is returned. Often, when running a search query, we are presented with millions of results. This quantum of data is impossible to comprehend for the human brain, but increasingly computable and understandable for machines and smart algorithms.

We humans typically rely on the top three search results and simply click on one of those. This is still much more efficient than conducting research without using the internet, however we now have too much information.

Having a website means that a company can be found by billions of customers and prospects within seconds. However, in reality, customers are deluged by information and are frequently unable to find the best solution to solve their problems or meet their needs. Information search alone also does not answer the initial need of the customer, which might have been “which bank account should I open”? or “which fund should I buy”?

In a post digital transformation world, this challenge will largely be solved. Not only will customers have access to the data they need, they will also have access to the technology that is able to integrate and comprehend millions of data points and make sense of all that knowledge to provide the best answer.

That answer will be presented in real time, in the right context, just as it is needed and in the right format. We will have moved from search engines to “answer engines”.

## 3. INDUSTRY IMPACT AND WHAT CHANGES TO EXPECT

Over the next 10 years many of our current business processes will be unrecognizable to the next generation of investors, just as going to a travel agent or using the phone directory is alien to many of us today despite this being an everyday occurrence only a decade or so ago.

All change results in resistance and this revolution is inciting many concerns about privacy, security, and the loss of physical human connectivity. All are fair concerns, but on balance digital solutions are a positive force for humanity. We still have billions of people who remain unbanked and even more who neither invest nor have a pension. For too long this has been a luxury of the developed markets. For western markets, these services are more expensive than they need to be. They are also inefficient; it still takes days or weeks to open a bank account or obtain a mortgage.

Unlike analogue technology, digital technology is transformative as software only gets better, building upon the past quickly, and disrupting once its early versions have established themselves. For instance, even though the CPU (central processing unit) of an iPhone changes with each new model, the core software from previous operating systems still remains, incrementally improving with each upgrade.

Software that will automate work is already here, albeit still not in the mainstream but developing quickly. It will mature and become ubiquitous. Many inefficient processes will become automated and delivered in real time and cost a fraction of what they do today. Sophisticated processes are also not immune to automation. Financial planning advice, settlement of physical assets and contracts will be fully automated by the end of the decade. They will become the standard rather than the exception, as is the case today.

Barriers to entry are falling away fast and the speed at which asset and wealth managers will grow in the next decade will be akin to the speed of growth seen in technology companies of the last decade. Our industry is by nature digital. Our products are digital, distribution is digital, and our service and investment process can easily be digitized. We are much more digital than eBay, Amazon, Alibaba, and Uber.

In asset and wealth management, digital is already the preferred customer service channel. It is the way most customers conduct their research when making investment decisions. We can glimpse into the future by looking at the innovations that are already occurring in both the fast growing Indian and Chinese markets. These countries have had to leapfrog straight into digital solutions, without having had the luxury of an incumbent and mature financial solutions industry to cater for the needs of rapid economic growth over the last 25 years.



#### 4. THE GLOBALIZATION OF COMPETITION

India and China have over 2.6 billion people to serve and it would take an entire generation to train enough advisors and wealth managers to serve their customer base, using the same model as the Western markets. Hundreds of millions of adults enter retirement without any systematic savings solutions, and if not resolved the impact of not providing these huge populations with the ability to save and invest is an existential threat to nation states.

In India, necessity and opportunity has led to regulatory and structural innovation. High levels of inefficiency and fraud led to the world's largest biometric database (Aadhaar) and tightened "know your customer" (KYC) regulations by the Securities and Exchange Board of India (SEBI). This subsequently enabled the development of digital KYC service agencies that can use retina scanning and fingerprints to immediately authenticate customers. Centralized KYC platforms now allow regulated asset managers and wealth managers to reuse existing applications and avoid having to repeat the process, enabling customers who have completed the KYC process with one regulated firm to avoid having to do so again when they decide to open an account with another firm. This dataset is not only used to validate KYC requirements but also to authenticate for a wide array of e-services, including accessing cash from ATMs as well as passport and driver license applications.

Innovation in China has been led by large conglomerates that can move at speeds typically only seen by much smaller, more nimble companies. Firms such as Ant Financial, which as of 2019 was valued at U.S.\$150 billion, has one of the largest money market funds in the world, with assets under management (AuM) of over U.S.\$100 billion, wholly distributed in small increments from 600 million individuals through their mobile applications. This fund is now even bigger than the flagship money market funds offered by JPMorgan and Fidelity.

In Europe and America, large financial institutions no longer enjoy blind trust from either customers or regulators. Since the 2008 global financial crisis, they have demanded increasing levels of transparency from financial services firms. Concurrently, large digital players, such as Google, Amazon, Apple, Facebook, and even Uber have quietly become financial services companies. For instance, Uber now offers bank accounts, debit cards, and credit cards to its drivers. The huge advantage these companies have is access to their massive datasets on billions of customers and a culture of rapid product innovation.

In this decade, data will be the differentiator and the most important source of competitive advantage. Disparate data sets will become unified, leading to new applications. For example, the data held by Uber's passenger rating system, in which every customer is rated by the driver on a five scale rating, could in theory become a proxy for a credit rating system, to help model lending risk when offering credit cards or loans. Could a high "star rating" contribute to the calculation of low credit risk? Equally, Uber could potentially sell this data as a service and compete with Equifax and Experian as a global data provider.

PayPal was an early pioneer in payments 20 years ago, and 12 years ago it became a regulated bank (Luxembourg, 2008). In the last six years, PayPal has been joined by Apple, Google, Facebook, Amazon, and Uber in the payments business. Payments are a logical place to start, as this segment of financial services provides the lowest barrier to entry from a regulatory perspective.

How long will it be before these technology giants also decide to acquire banking licenses? This time not in Luxembourg, but in their most lucrative markets. Technology companies already have a history of rapidly extending and deepening their business models. Very few products are more digital than money or investment funds.

#### 5. CONVERGENCE OF INNOVATION AND REGULATION: NEW PLAYERS, NEW SERVICES

Currently, none of the top 10 digital companies in the world originate from Europe. More specifically, they were all born in the U.S. and China. This is similarly true for AI expertise. These markets have a significant head start in the most disruptive technology of this decade. Although one could argue that different types of innovations are taking place in Europe and India, with the former leading the way with full-service, digital-only banks and India leading with a well adopted biometric platform, businesses in both these regions are far behind and will need to do much more to catch up if they want to compete in the digital future. The increasingly protectionist regulatory and tax regimes we see in both these markets may also be a mistake, as these will ultimately keep them behind rather than encourage competition.

The American digital conglomerates are learning from their Chinese counterparts, who showed them how to leverage their captive customer base to compete in financial services. Apple became one of the world's largest payment solutions providers overnight when they launched Apple Pay. They enabled this

capability with a simple software upgrade to their iPhone operating system, making it extremely easy for the end-user to adapt and utilize.

Legacy banks like Santander found it difficult not to partner on Apple Pay, as it offered convenience for their existing customers, even though it was certainly not commercially beneficial. They feared losing customers by not keeping up with their competitors, who had also committed to offering the new payment capability. Businesses with large customer bases understand how important a frictionless customer experience is. They understand that design and the latest features are crucial elements to maintain in the ongoing digital arms race against their competitors.

As new technology emerges, so do new services. Uber needed the smartphone before its business model could become viable. Similarly, challenger banks have made the smartphone their only “branch”. Legacy banks and businesses are now burdened by their physical branches and legacy technology systems, something that not long ago was their competitive advantage and a barrier to entry for new competitors.

New digital business models and companies will emerge across all aspects of financial services. The technologies that will help power these models will include distributed ledgers, blockchain, digital assets, artificial intelligence (AI), and connected applications. All will become part of the backbone of new financial services business models.

Institutional business models have been more difficult for digital players to enter, but the traditionally more bespoke and complex solutions used by this industry are under pressure to standardize in order to both leverage scale and reduce operating costs. All large incumbents are facing fee pressure from their service partners and competitors. This dynamic is here to stay and over the long-term most players will be in a race to the bottom. New entrants may even operate at a loss to gain digital supremacy, by acquiring the most valuable customers and distribution partnerships. The reward for being the leader in a digital economy is often global domination of the sector. In a digital economy, there are rarely more than three or four players that own most of the global market share across the entire industry.

Transformation across institutional players may first occur with the adoption of smart contracts, which are automated self-actioning and based on robotics. As assets become digitized, collateral will leave accounts automatically and deposit themselves in the right place, for example when a securities lending borrower defaults.

Clearing and settling of derivatives with blockchain and smart contracts is already in the pipeline for the largest Institutions. It currently takes days, and a large volume of highly paid lawyers, to create and settle contracts. By 2030, the largest investment firms and custodians will partner to solve this inefficiency. Then the hurdle will not be technology, but rather the question of who will own the platform, as that will deliver competitive supremacy and a hugely valuable amount of data on the market.

As demonstrated in India, digital KYC is both a threat and opportunity for the wealth management industry. Rather than requiring weeks to onboard a new customer across legal, compliance, billing, accounts, and finance, this could happen instantly. Privacy concerns and partnering across competitors will be the main hurdle, rather than technology. Those that offer the best service and customer outcomes will gain customers fast and those that do not deliver will see their businesses decline just as quickly.

As we move into the retail markets, digital-only challenger banks may turn out to be the ones that take the lead. They have already begun to expand their business models, using technology and low fees as their competitive advantage. Revolut and Chime, the market leaders in the U.K. and U.S. markets, now offer FX services, checking and savings accounts, and free share dealing between them. It is inevitable that they will continue to move up the food chain into higher fee-paying business models, such as investing and next generation wealth management. Both these businesses started in the last five years and already have millions of customers. They are well funded and expanding aggressively across financial services capabilities.

Once these businesses have established large enough customer bases with their payments and savings solutions, they require only a simple software release to extend into investing and ultimately wealth management propositions. They will then have to decide whether to compete with robo-advisors such as Betterment and Wealthfront or to partner with them. API-driven (application programming interface) business models and open data regulations, like PDS2, will make both a real possibility.

In the future, a competitor may not be a single company but rather an alliance of companies, similar to the precedent set by the airline industry. Maybe these alliances will be organized around Amazon, Google, or Apple ecosystems, who themselves are building on top of existing global payments standards. These companies already have payment systems and industry relationships. They are currently more interested

in capturing data and owning the client experience rather than reinventing regulations and payment standards that are already digital and for the most part, working well.

The most likely scenario maybe a collaboration between the old-world banks and these very modern financial service players. It will be faster and more lucrative for them to just own the customer and the client experience, leaving the heavier lifting to the incumbents.

## 6. AI WILL BE THE DIFFERENTIATOR

The largest technology players and banks are aggressively investing in their AI solutions. These will provide hyper personalized, predictive, and pre-emptive advice across all aspects of modern life.

AI will provide curated answers in real time, based on what is useful for us at an individual level. This will lead to improved outcomes for customers. For instance, an understanding of the appetite for financial risk will be much more nuanced and relevant than it could ever be today, where wealth managers and advisors simply categorize everyone into a few broad segments. The reality is that customers are much more dynamic and continue to change perspectives over time.

Companies will be able to make real-time decisions and advise clients when to invest, which may happen on pay day or when a bank balance is higher than the average maintained.

We will also see an evolution of “buy lists” as AI solutions are able to scan the entire market of investments. Currently, buy lists rarely exceed 200 preferred products and it can take many months of due diligence and expensive salespeople to get your products added to the coveted lists of the largest wealth managers.

AI solutions will be able to automatically invest the right amount into an ISA (individual savings account) investment or 401k account when the tax window opens up. This will be the client experience that firms will compete to offer, as over time it will be harder to leave an AI-driven personal assistant that can predict what you need, before you even know yourself, than it will be to depart from the underlying checking or savings account. Your AI assistant will know your behaviors intimately and be intrinsically connected into many aspects of your life, possibly even becoming an extension of who we feel we are.

## 7. INEVITABLE REGULATION

New financial products that offer improved customer experience and outcomes will be followed by new regulations that are required to manage the resulting new risk. For instance, it is already difficult to understand why AI makes the recommendation it is making. It uses a dataset of billions, with highly nuanced statistical decision-making. Regulators will need to define miss-selling better than they do today, as it will be difficult to understand whether the fault was with the AI or with user error.



Newer distributed solutions that transcend borders are here to stay and will pose interesting challenges for regulators. In a world where privacy is rapidly declining, there will always be a place to circumvent the system. Regulators will find new ways to manage emergent risks from new financial products, just as they did with Bitcoin, which started with a niche but borderless customer base that soon became too big to ignore.

Whilst industry regulations will continue to be as important as ever, there will be a new voice that is also effective at regulating the activities of large companies: individuals will combine their voices and pools of assets to have a more active say in how companies operate and whether they are suitable to manage their wealth. In the past, single voices could not easily challenge multi-billion dollar businesses. Even global scandals that proliferated social media did not impact the share price much and if it did, it was only for a brief moment.

Increasing transparency, access to information, and the network effects will enable investors to also connect digitally with one another, with a powerful and unified voice. In finance, this started with peer-to-peer lending, crowd funding, and more recently in crypto currency investing. In the future, the financial services network effect will allow investors to connect on issues related to their “environmental, social and governance” (ESG) goals.

Not-for-profits like Wikipedia have already disrupted commercial businesses like Microsoft Encarta and Encyclopedia Britannica. The network effect will also enable individuals and interest groups to vote with their assets, whether it is through influencing investment firms or even creating special vehicles to push a specific agenda at an AGM.

Where governments and investment firms are not moving fast enough, individuals and groups will connect over borders for a common cause. “The crowd” has the potential to become a powerful global voice that transcends the boundaries of nation states or economic unions that typically limit regulators. Imagine an ESG-focused pool of assets that operates like a crypto currency, being tactically deployed at global scale, not having to consider the commercial ramifications of a public company. Wealth managers may have to manage rapid inflows and outflows in ways that cannot be imagined today.

Single voices will be able to rapidly grow into a loud voice of popular opinion in the future. When that capability is combined with the ability to move your bank accounts with a swipe of your finger on a mobile phone, the power of the customer will become paramount. Digital will overcome the current inertia to

change, which requires effort and time. We are already seeing large asset owners like the Ontario State Teachers Fund select investments on behalf of the ESG stance of their retirement plan participants. Digital will enable the combined voices of complete strangers to effect change outside of traditional institutions, across borders on a single cause, which may manifest as a refusal to invest in products and companies that pollute the environment.

Today, industry ratings from companies like Morningstar and Lipper will be supplemented by new ESG metrics, which will increasingly determine which products and companies to invest in. Solution providers themselves will not be immune though, they will also be judged on their own company's performance. One example might be employee diversity ratings becoming increasingly more common and public.

Regulation will continue to be a barrier to entry for some disruptive innovations and against monopolistic threats such as Facebook's Libra, but it will also not stop innovation. Regulators have evolved themselves and have since overhauled their approach. Once seen as fortresses protecting incumbents, regulators are no longer satisfied with high fees, poor transparency, and products that do not deliver on their promises. They have learned lessons from their failure to protect consumers in the 2008 global financial crisis.

Regulators increasingly welcome competition wherever it comes from and are fast becoming more global too, monitoring what other countries are doing with good ideas spreading across jurisdictions faster. Some of the strictest regulations, such as UCITS – which govern mutual funds and ETFs in Europe to help protect investors – are now being adopted in Asian and Latin American markets.

In January 2019, 50 regulators established the Global Financial Innovation Network (GFIN) to learn from each other, open up their markets, and globalize their approaches across borders. Participants include the World Bank, the SEC, the FCA (Financial Conduct Authority), MAS (Monetary Authority of Singapore), and HKMA (Hong Kong Monetary Authority). Switzerland, perhaps not surprisingly, remains a notable exception.

Cross-border government agencies do not always deliver rapid innovations, but regardless of whether GFIN is a success or not, it will not delay the disruption that has begun. Technology industries are learning about regulations fast, and if needed can up skill the institutional talent they currently do not have. For example, Amazon has just built its European headquarters in the City of London – not a bad location if you wanted to

leverage the largest pool of global financial services talent in the world, especially technical and regulatory talent that is well versed in global compliance.

## 8. DIGITAL AND AI REDUCE THE FRICTION OF BUSINESS

In the past, companies did not often expand horizontally. A retailer like Walmart would simply build more stores in the U.S. if they wanted to expand. However, once industries get digitized, the biggest challenge, rather than developing new services, is acquiring customers onto a platform. Industries like asset management, which has upwards of 30 percent profit margins, are difficult to ignore for any large digital business looking to expand.

New entrants that enter this space will be able to cherry-pick markets and solutions to create cost-effective and scalable offerings. They will bring significantly improved customer experiences that differentiate them from incumbents, focusing on the most lucrative and inefficient segments, rather than the need to compete everywhere. But, where they do, they will win on price, on customer service, and will aim to dominate.

Expansion into wealth management may not look like today's traditional "one-stop shop" physical business model either. In a digital world, it is possible to scale horizontally with partners and competitors and still provide an effortless experience. New wealth management entrants will have access to bank accounts in the incumbent banks, allowing for seamless interoperability across old and new players.

That said, large incumbents are not resting on their laurels. Technology forward companies like Schwab and Vanguard have successfully moved into wealth management through their robo-advice solutions. Goldman Sachs has moved into retail banking, and asset managers such as BlackRock, Allianz, and Schroders have invested in fintech startups such as Scalable Capital, Moneyfarm, and Nutmeg, respectively.

Schwab in particular has evolved quickly, having started as an online broker, they then started distributing funds, launched their own ETFs, and have now developed the world's second largest robo-advice business. Most of this expansion has been due to organic growth, a pattern that really makes Schwab stand out from the rest of the competition in an industry that has typically grown through acquisitions.

AI assistants that started with text (online chat), have now evolved to voice (Alexa) and will end up as realistic holographic copies of humans, as recently demonstrated by Samsung with

their Neon platform. These avatars will allow remote working and allow for your banker to appear in your home, rather than just on a video call.

Digital assistants can already recognize your voice, face, and emotions better than any human can. Voice and facial recognition are biometric markers, which will become the de-facto way to seamlessly authenticate customers as we move away from user IDs and passwords. Platform integrations and connected data will reduce the friction of KYC and account set up.

AI will only improve, and just as it now outperforms radiologists when scanning for breast cancer, it will also outperform financial advisors and personal bankers on many different tasks. There will no doubt come a point when we will not quite know whether we are speaking to a machine or a person.

This evolution will happen brick by brick, and it may take a generation before customers abandon traditional wealth managers. But the added value provided by a frictionless, more accurate, more personable, and immediate service will be increasingly difficult to compete with.

It is useful to note that the more data an assistant has over time, the better its answers will become. Ability to sift through mountains of information is inversely true for humans. For instance, when faced with the thousands of page results from a Google search, humans rarely get past the first few pages.

Improving the client experience is the key battleground for companies that want to disrupt, this will create a headache to incumbents that are reluctant to transform. This will be underpinned by the requirement for legacy banks to provide increasing amounts of transparency, whether it is from regulators, tax authorities, or customers. In the end, moving providers will nearly be as simple as swiping left when clients' expectations are not being met.

To compete, financial services companies will need to acquire and become familiar with new data sets about their customers' preferences and behaviors, and hire and train a totally different talent base to the one they have today – one that is able to leverage this new technology and the opportunities it offers.

## 9. THE NEXT GENERATION OF WEALTH MANAGEMENT

The shift of new entrants into wealth management will begin in retail markets, where millennial and Gen X consumers have already indicated that they prefer cost and convenience over

the trust and brand affinity offered by the legacy banks. But digital and data sharing will offer new products and capabilities that do not currently exist.

It is feasible to forecast that in the next decade a wealth management customer could have a checking account, investing capability, and wealth management service using a plug and play digital model. Regulators may even advocate it as it could reduce duopolies that are currently evident amongst many technology giants. It will enable smaller players to offer niche services that provide choice, increase competition, and reduce the market risk of large incumbents going bust. The harder question to forecast will be who would provide the ecosystem and standards required to power this future.

Our industry is responding to this change, unlike the newspaper industry which did not see the evolution until it was too late. Large financial services companies like my own (State Street), are responding quickly. We have created the world's first front-to-back platform that is being rapidly digitized. This means that we can provide a missing capability for our industry in terms of a back-end infrastructure for custody, trading, reporting, risk management, and regulatory requirements. This is an important prerequisite before any business is able to scale their investing propositions and distribution capabilities.

Others may build their own front-to-back solutions, but the race to acquire customers and create compelling solutions will be a higher priority for most firms. Most wealth and asset managers will grow when they improve customer outcomes, with broad product solutions at competitive prices.

Digitization of the back-end platform and the front-end experience will profoundly change the strategy and solutions offered by existing and future asset and wealth managers. Products that do not offer transparency or meet a myriad of customer needs will be rapidly superseded by new solutions and services better focused on customer outcomes.

Customers are adopting new digital solutions in financial services faster than ever before. Digital has, and will continue to, lower barriers to entry and democratize competition between large and small financial services firms. If businesses can scale effectively, there is still a huge benefit to being large, although very few global firms have been able to achieve this. However, most often size is no longer such a competitive advantage.

For smaller players, a digital world helps level the playing field as vendors can more cost-effectively offer institutional scale on tap in the form of front-end digital capabilities from

cloud service providers. It is possible to operate an entire business based on external platforms, leveling the playing field for smaller companies to aggressively compete with large incumbents and the fast-moving new entrants. New players that can demonstrably offer better outcomes to investors, will be welcomed with open arms.

## 10. DISRUPTION BECOMES THE NEW NORM

The most disruptive business models of the last decade have all been powered by a combination of digital and the network effect, where businesses use their platforms to connect customers with suppliers in real time and at scale. This is illustrated by the rapid growth and market valuations of Alibaba, Airbnb, and Uber, who all operate in totally different industries, but have leveraged the same market forces to be successful.

If we look back 20 years, few anticipated that a phone would become the most popular way for the world to bank. Smartphones now have powerful front-end virtual assistants (AI), which are improving exponentially every few years. Back-end technology has also used AI to power digital solutions we rely on daily, whether making quant investment decisions for our pensions, re-routing internet traffic, or returning Google search results when we search for information.

As customers become more comfortable with the use of voice assistants, voice search will become mainstream. This area will continue to expand and become a key part of the customer experience. It is different to traditional computing on a number of levels. Firstly, it is an ambient technology that does not get in the way like a PC or even a mobile phone, both of which require an interruption, as they need visual and special attention before we engage with them. Secondly, AI solutions like voice give us access to massive computer power in the cloud. Finally, it does this in a way that people who are not technologically sophisticated can use. Even a three-year-old is able to ask Alexa to play their favorite song or game on the device. Now imagine the expertise that a lay person will have on practically any topic in the next five years. This technology will help make us experts in many fields, for instance being able to instantly and naturally translate English into Japanese. The microcomputers that we will use to leverage these services will continue to improve in cost, speed, and capability as they will leverage resources from the cloud and become so small that they become invisible in plain sight, embedded into eyeglasses and even jewelry.

## 11. DIGITAL TRANSFORMATION IS AS MUCH ABOUT STRATEGY, PEOPLE, AND PROCESSES AS IT IS ABOUT NEW TECHNOLOGY

AI solutions will also help unify the digital technology stack and the disparate data held by asset and wealth managers. They will increase the productivity of employees by being able to answer several thousand predefined or learned questions and provide insights from unrelated systems that, due to the limitations of “human factors” like memory, would have not been possible for a person.

To compete, wealth managers will need to equip their advisors and wealth managers with similar technology. Companies that are able to leverage this technology most successfully will still have an important role to play. That said, whilst machines can crunch numbers faster than us, they are still far away from being able to understand all the nuances of human interaction. Currently, even two-year-old children are able to perceive more about human social interaction that cannot be coded for in AI. However, the inverse is also true, toddlers cannot fly planes or drive cars, but AI can.

Retail customers will benefit first from simple AI solutions. They will help demystify basic investing and immediately and precisely provide complex advice, such as the benefits of diversification and the power of compounding.

For more sophisticated users, AI will interrogate the world's data in real time, answering questions such as “What's the best way to get exposure to the S&P 500 based on total cost of ownership and liquidity?” (For those that are curious, the correct answer is SPY).

Answers will be comprehensive, in the format required by the client and delivered based on current data. As these technologies mature, these digital “answer engines” will likely become the client experience of choice. However, just as every Google search result provides far too much information for us to possibly comprehend when we search, these new solutions will have their own challenges. Even when mature, they will miss important information if the query is not precise enough.

Trained and regulated advisors will still be required to validate the answers and fill in the gaps when software does not have the complete answer. Trained advisors will still know the best questions to ask and how to ask them specifically enough to get the precise information that a client needs. Someone will also need to be accountable for when things go wrong. Just as we are still likely to need pilots on our airlines, assistants will become the tools that do most of the work but under supervised conditions.

This blending of human and machine will be a significant client service advantage for firms that are able to equip and train their workforce quickly enough. This combination will also reduce risk, increase client retention, grow sales, and improve onboarding, enabling employees to know their customers better and allow managers to have greater control over their teams' activities.

Digitizing processes will enable every aspect of the service offering to be measurable. For instance, the types of questions customers ask before they move their accounts to competitors, or to complete the myriad of processes required to onboard a client or open an account. Concurrently, improving customer service and employee productivity at the same time.

## 12. GETTING AHEAD OF EMERGENT CUSTOMER BEHAVIOR AND HIRING THE RIGHT TALENT WILL BE CRITICAL

Looking further out, it is hard to imagine a future where we will trust a machine to look after our financial health and invest our money. We still get comfort from humans sitting in the flight deck, even though most of the actions are executed by a machine. Whenever a new technology emerges, we are naturally cautious, however, this reluctance to adopt is replaced by comfort once enough people have consistently experienced successful outcomes.

In the early 20th century, elevators and telephones were the disruptive technologies of their time. They shortened the distance between people and enabled high rise department stores, residential towers, and office blocks, without impacting the customer experience.

It is hard to believe in retrospect, but the earliest elevators were untrusted menacing machines requiring white gloved lift attendants to operate them. This echo of history is still evident today in high-end apartment blocks in New York and offices in Mumbai.

Today, we hear about people who are willing to trust their Teslas even though full autonomous driving is not here yet. AI in financial services will follow a similar glide path. It will start as assisting humans, but then become a solution that does the work and is monitored by humans. For low value transactions, we will allow the machine to make the decision for us and explain later.

Laggards will always exist, and so traditional solutions will live on, just as some people still prefer a vinyl format over digital music. Some customers still prefer bricks and mortar over digital banking, but they will become the minority, willing to pay the premium for analogue solutions in the digital age.

Customer expectations are evolving fast, the oldest millennials are now in their 40s. By the end of the decade, they will be senior managers and decision-makers within organizations and the wealth creators in society. They are already used to real-time collaboration and communication. They will not be cautious about disrupting legacy business models, they will demand it.

Critical factors for success for leaders in our industry will be to hire and/or train a highly educated and data driven workforce, that know how to benefit from exponential improvements that come from digital connectivity, storage, and computing power.

To succeed, companies need to disrupt and reinvent their customer acquisition, engagement, cross-sell, and up-sell processes. They need to collect data across the customer lifecycle and from external sources, so that they can personalize services and predict what their customers need in real-time.

Digital provides opportunity to remove the friction and the inherent lag in traditional distribution processes. Enabling the delivery of solutions and information to customers in real time. Thus, circumventing the need for emails, phone calls, and meetings, and the associated costs for human capital needed to support that, which will further drive down servicing costs and prices.

This has happened already with print journalism. Newspapers at best provide yesterday's news, it would take at least one day for a piece to be written, printed, and distributed. Daily newspapers took decades to become established as their analogue distribution networks required many people doing manual processes that were hard to scale.

Today anyone with a smart phone can produce and broadcast their own TV programs, distribute their own music, products, and ideas. We can become self-employed and use our own car as a taxi or rent out our residences, all through a mobile application in a matter of minutes. Digital has already disrupted industries ranging from news media, music, video rentals, retail, banking, and all aspects of the travel industry, as well as working practices within these industries.

Disruption to analogue processes within banks and with customers will be similarly profound. The changes have only just begun and will be played out over the next 10 years. Many businesses will not survive as the pace of change will accelerate with each passing year, making it harder to catch up for those that have delayed their start. The largest businesses will find it hardest to evolve and will be encumbered by their

costs. The smartest businesses will be able to adapt and create new business models. For instance, Encyclopedia Britannica has evolved into a new segment and focuses on class room education. But it is no longer the preeminent source of knowledge that it once was.

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*For online customers, Google has largely solved the information “search” problem. A key challenge in the digital age has been to “find” the best solution for their needs.*”

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Wealth managers will also see threats from many different angles. These will include startups, large American and Chinese digital conglomerates, and rapidly evolving incumbents such as Schwab, Chase, Goldman Sachs, Vanguard, and BlackRock, who are all pivoting their business models. Competition will be welcomed by regulators, whose primary mission is to protect investors rather than incumbents. Regulators will welcome the change, as they now prioritize improved competition, transparency, data-based risk management, and fee compression.

As we move forward into the new decade, it is easy to forget the profound changes that have occurred over the last 10 years. Digital transformation has only just begun, and it has impacted the world fundamentally. Digital change accelerates exponentially, and we should expect even bigger changes to happen during the next decade. Many changes are easy to forecast as they are timing issues based on extrapolations, similar to “Moore's Law”. But the ones that will have the most impact are not, these will be “black swans”, such as the world wide web, which has been the most disrupted force in business in recent years. Companies that have leveraged that technology have become the largest on the planet and will continue to forge the blueprint for what comes in the near future.

Wealth management will operate very differently by the end of this decade. Many investment firms will not succeed, unless they have a radical plan to better understand how to benefit from the changes that are coming. Companies will also need to understand how to deliver their services digitally and for significantly lower fees, whilst also providing better outcomes for customers and shareholders. This will be the defining challenge for the industry in the next 10 years.



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Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

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