

Term Major Project
The Fintech Disruption in Financial Services Industry

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DISCLAIMER

The views expressed in this project are personal and not of the organisation and this project is done as a detailed study under the course from strategy perspective only.

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CERTIFICATE

This is to certify that the project entitled `The Fintech Disruption in Financial Services Industry` has been successfully completed by Sachin Mongia, student of MBA (Executive) with registration no. 2K16/ EMBA/ 528

This is further certified that this project work is a record of bonafide work done by him under my guidance. The matter embodied in this report has not been submitted for award of any degree.

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EXECUTIVE SUMMARY

Financial Technology is these days the most important focus area for global financial services industry. According to KPMG's "The Pulse of FinTech" report, funding of FinTech reached a record high in 2015 totaling \$19 billion. This was more than double 2014's investment. At the start of 2016 over 30 FinTech startups existed, valued at \$1 billion or more. Most established global financial institutions are actively engaging with FinTech in one way or another.

In a very short span of time, fintech companies have defined the direction, shape, and pace of change across almost every financial services sub-sector. Customers now expect seamless digital onboarding, rapid loan approvals, and free person-to-person payments—all innovations that fintechs made popular. And while they may not dominate the industry today, fintechs have succeeded as both standalone businesses and vital links in the financial services value chain.

In other words, while fintechs have yet to disrupt the competitive landscape, they've laid the foundation for future disruption.

Fintechs represent a great opportunity for smart incumbents. They provide a chance to see which new offerings show promise. The fintech ecosystem is also a veritable supermarket of capabilities, allow-

ing incumbents to rapidly deploy new offerings via acquisitions and partnerships.

The purpose of this paper is to identify the most important ways in which FinTech will disrupt established financial service organisations and catalogue some of the approaches banks and other financial institutions are taking to respond to the threats and opportunities offered by FinTech. Particular focus is on the context of the digital customer.

INTRODUCTION

The current FinTech revolution is not the first of its kind in financial services. Several predecessors corresponded with a global change in the social structure brought about by changes in technology. Recognising this pattern of technology-driven societal change as a key driver provides important context in recognising where to focus our attention to best anticipate how today's FinTech revolution will unfold.

The Agricultural Revolution changed society with the domestication of animals with money (and banking) resultant from the demise of the barter society.

The *Industrial Revolution* changed the world with the steam engine, changing too our transactional reality through the introduction of paper money and limited liability for organisations.

Similarly, the rise of the *Technology Age*, saw computers as the technology game changer and credit cards as the financial services / banking revolution. This prompted the shift from representational forms of money (coins, notes, paper) to a more abstract version of money (a credit card), paving the way for today's multiple new value transactional platforms.

The *Digital Economy* is now moving us into a new society orientated around the internet, social technologies, and increasing levels of om-

nipresent automation. The FinTech disruption is the corresponding change in the way we bank and manage financial transactions.

As in previous revolutions, today sees technology advances driving change in the way we work, communicate, engage with each other and measure value. Three key areas of financing were always impacted: new ways of transacting, new financial products and new channels.

The Digital FinTech revolution is no different, offering opportunity to reposition for success in a changed future. Each of these three aspects of the revolution is important. The problem for many banks is they often focus attention on one aspect – product, failing to see the disruptions in broader society. These aspects will be investigated below.

The next evolution is when the Internet of bots takes over from the Internet of Things. In the future, M2M - machine to machine - transactions will have the ability to identify and transact value between any two elements that are safely recorded and to which worth is associated. These areas of value may be as unusual as our memories stored on Facebook or a marriage (this has already happened on the blockchain). The shift may be that these valuable items (with no current measurable financial worth) will be transacted across networks and environments currently reserved for artefacts of purely financial value.

The shift will see the trust and depositing of valuable virtual items with providers traditionally having dealt in money and tangible valuables.

In a world of computer code, blockchain records and transactions, “valuables” will be fluid and redefined elements in the life of the digital customer.

Definitions

Fintech

The World Economic Forum defines a fintech to be a small, technology-enabled, new entrant to financial services. This definition does not include large technology firms that enter financial services (e.g. Apple with Apple Pay), or incumbent financial institutions who increase their focus on technology.

Disruption

Prof. Clayton M. Christenson and Prof. Rosy McDonald of the Harvard School of Business have described a “Disruption” as a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses. Specifically, as incumbents focus on improving their products and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others. Entrants that prove disruptive begin by successfully targeting those overlooked segments, gaining a foothold by delivering more-suitable functionality—frequently at a lower price. Incumbents, chasing higher profitability in more-demanding segments, tend not to respond vigorously. Entrants then move upmarket, delivering the performance that incumbents’ mainstream customers require, while preserving the advantages that drove their early success. When

mainstream customers start adopting the entrants' offerings in volume, disruption has occurred.

LITERATURE REVIEW

Though fintech is a relatively new concept and there is not much research at the university level that has gone into the effects it has had on the industry, industry bodies and management consulting firms have been actively researching and publishing on the subject.

The IOSCO Research Report on Financial Technologies published by the International Organisation of Securities Commissions in February 2017 focussed on impact of financial technologies on the Alternative Financing platforms and Retail and Institutional Trading platforms.

The 'EY Fintech Adoption index' brought out by Ernst & Young analysed the fintech adoption rates across 20 countries and the most used fintech services.

The 'Fintech 2.0 Paper: rebooting financial services' published by Santander InnoVentures, in collaboration with its partners Oliver Wyman and Anthemis Group highlights the benefits of collaboration and identifies some of the opportunities for profitable change in adopting fintech.

The research paper 'Cutting through the noise around financial technology' published by McKinsey & Co. analysed the global investment in financial technology and success strategies for fintechs.

The study paper 'Innovation in Payments: The Future is Fintech' published by the Bank of New York Mellon Corporation covered aspects related to growth of fintechs and issues in consumer and corporate payments. The paper also talks about how banks are responding to the challenge.

Research Gap

Although a number of research papers and articles have been published on the impact of technology on financial services, However, most of the available literature on the subject suffers from two issues-

First, the transfer of technology or knowledge gathered within the research organisation implies that the mother institution is often involved in the founding process and might even be an additional stakeholder. Second, the transfer of people from the academic to the business environment implies certain characteristics of the entrepreneurial and management team. Former researchers often have a technical background and less commercial or business experience because they have worked in a non-commercial environment and focused on research and publication rather than transfer or commercialisation. This study focuses on the second aspect.

OBJECTIVES OF THE STUDY

The theory of disruptive innovation has proved to be a powerful way of thinking about innovation-driven growth. Many leaders of small, entrepreneurial companies praise it as their guiding star; so do many executives at large, well-established organisations. This study paper seeks to examine the effect that financial technology has had on the financial services industry and has the following objectives-

- 1.To understand what disruptive forces are at play in the financial services industry today.
- 2.To study the impact that fintechs have had on various important segments of the financial services industry.

RESEARCH METHODOLOGY

This research paper uses the secondary sources of data- primarily the research papers and articles on the subject available on the internet to assess the impact of fintechs on the financial services industry as a whole.

The impact has been analysed in two stages-

- 1) On the industry as a whole- the major disruptive forces at play.
- 2) On seven major sectors of the financial services industry.

Period of Study

This study has been based on research conducted and published during the period from 2013 to 2017.

Sources of Data

The data and information contained herein has been collected from various secondary sources like research papers published by major consulting firms like Ernst & Young, Deloitte and Goldman Sachs, Website of the World Economic Forum and Bank for International Settlements.

DISRUPTIVE FORCES IN FINANCIAL SERVICES

The consulting firm Deloitte Touche Tohmatsu Limited recently brought out a research report where it identified eight major disruptive forces at play in the financial services industry today. These are-

1. Cost commoditisation
2. Profit redistribution
3. Experience ownership
4. Platforms rising
5. Data monetisation
6. Bionic workforce
7. Systemically important techs
8. Financial regionalisation

Let us look at each of these forces in detail-

Disruptive force 1

Cost Commoditisation

Operating cost is becoming less of a competitive advantage. Firms are exploring new technologies and working with other organisations—competitors and new entrants alike—to accelerate the commoditisation of their cost bases so they can preserve margins and focus on more promising strategies.

One approach is to create a new utility that standardises processes and avoids duplication of work among the companies it serves. Another is to source out an expanded range of activities (risk management is a recent example). Finally, there's automation. While financial institutions have always embraced enabling technologies, new tools have become available to streamline processes such as loan origination, audit compliance, and account reconciliation.

Between cost-sharing with peers and the use of industry-standard tools, the financial services value chain will flatten. In response, the industry will pay greater attention to partnerships and the overall ecosystem. Security and permissions will be treated independently to minimise the threat from any new external connection. Firms will also

step up their protection of user data as they share more information with external organisations.

Incumbent firms have additional work to do. They'll need to find ways to differentiate their customer-facing processes as their middle and back offices become indistinguishable from those of competitors. Regulators will stay busy tracking utilities and business service providers for potential risk.

Examples:

Banking- Banks are increasingly working in concert with regulators to set up trials of utilities focusing on mission-critical but non-core tasks such as KYC (Know Your Customer) and AML (Anti-Money Laundering).

Lending- Process improvement and middleware remain relatively expensive, causing incumbents to consider partnerships with marketplace lenders for fintech solutions that don't require a full infrastructure overhaul.

Market Infrastructure- As profitability in core businesses erodes, market infrastructure providers seek new sources of revenue from their data, which requires extensive industry cooperation between different data providers.

Disruptive force 2

Profit redistribution

Technology is shaking up the financial services value chain. Investment firms are using exchange-traded funds to entice customers away from savings deposits. Online sellers are accepting payments via web applications, precluding the need for a traditional merchant bank account. Incumbent institutions are pairing with startups in ways that put them in competition with their traditional partners. And regulators are curtailing financial institutions' control over access to infrastructure. The result of all this activity? An industry-wide redistribution of profits.

Intermediaries will feel the pinch from both sides. As technology reduces the cost of bypassing them to reach the end customer, intermediaries will need to find other opportunities to profitably add value. Meanwhile, fintech companies will gain an expanding pool of potential partners that offer scale and customer reach. The challenge for regulators will be to understand how shifting fortunes are reshaping the value chain, with long-regulated companies giving ground to new ones.

Examples:

Payments- Online shopping is growing quickly at the expense of in-person shopping, leading to the dominance of online, cashless solutions for transactions.

Insurance- Insurers and reinsurers increasingly partner with outside organisations (such as insurtech and large technology firms) to acquire expertise and hedge against disruption.

Investment Management- Margins are declining as demand shifts to low-cost products and robo- advisors, driving incumbents to search for operational savings.

Market Infrastructure- As technological improvements lower the benefit of economies of scale, operating a utility is becoming less profitable.

Disruptive force 3

Experience ownership

Traditionally, many financial institutions distribute the products they create. But with platforms and alternative channels on the rise, prudent incumbents are planning for conditions where distribution is beyond their control. Recognising that the balance of power swings to those who own the customer experience, dedicated producers of financial offerings are weighing strategies that call for extreme scale or focus.

Current trends offer an early glimpse of this post-integrated world. Customers buy ETFs from a wide range of companies that offer robo-advisory services. They download apps from providers that stringently control which products to display. And when it comes to advisory services, retail businesses are liable to be influenced by benchmarks and recommendations from a distributor with sweeping visibility into comparable retail data.

If trends like these take hold, customers will interact with increasingly fewer distributors as the market consolidates. Large technology firms and incumbent financial institutions have the advantage, the former due to their rich customer data and the latter because of their brand

and existing customer base. However, that won't stop other firms from seeking to become distributors, for their own products as well as for others. Fintechs may find niches that help them compete. And if an incumbent firm fails to establish a distributorship, it risks declining profits as its products become commodities.

The regulator's role in all this will be to guard against abuses of the market power that product distributors hold. This will be so especially for open platforms where distributors control the customer shopping experience. Another open question, one with far-reaching consequences, is how distributors and manufacturers will share liability in such an environment.

Examples:

Digital Banking- To lower costs, incumbent banks are eliminating in-person services and looking to fintech and large technology companies for other ways to engage customers.

Lending- Lenders are targeting non-financial platforms because they provide access to the exact moments when their customers need credit the most, such as during supply chain management or accounts receivables settlement.

Investment Management- Stepped-up regulation to protect retail investors has made it more expensive to provide individualised offerings through traditional channels, making robo- advisors a compelling alternative.

Disruptive force 4

Platforms rising

Customers are demanding more choices in financial services—and, increasingly, they expect one-stop shopping. Institutions are scrambling to respond, turning to digital platforms that enable them to deliver in multiple geographies, often alongside other providers.

Eventually, these platforms will become the primary means of distributing financial products. Business and retail customers, for example, will be able to purchase credit and asset management services from an online storefront of competing vendors. Buyers and sellers in the capital markets will be matched through platforms that accommodate a wide range of trades.

This development will have several effects on the industry. For firms, product differentiation will become critical.

That means putting an end to loss leaders—products will have to stand on their own—and accepting that price shoppers will favor large incumbents who enjoy product economies of scale. Meanwhile, platform owners will have to balance product manufacturer needs against

customer demand. Platforms will naturally capture market data from all participants, adding to the market power of the platform owner.

All participants must address the liability of products placed on public platforms, and regulators will have to decide on the responsible party in each market.

Examples:

Payments- Thanks to large technology firms, online payments are becoming less visible to the customer, with only a simple login required to enable a transaction.

Digital Banking- With the introduction of PSD2 (Revised Payment Service Directive) in Europe, banks are forced to open up their data to any third party, paving the way for platforms offering core banking.

Market Infrastructure- Trading platforms collect data to create an aggregated market view, aid discovery of suitable counterparties, and even support analytics that inform all participants.

Disruptive force 5

Data monetisation

Financial institutions know a lot about their customers. But when it comes to monetising this knowledge—or, more precisely, the data beneath it—technology companies have the lead. The reason? They've moved beyond static datasets to combine rich, differentiated data from multiple sources and use it in real time.

The potential of this approach is not lost on the financial services industry. Facing a future where data is increasingly important, firms are starting to collect it in flows rather than in snapshots—via location data accessed through customer phones rather than transactions, for instance. Firms are also looking to expand their customer datasets. One way is to make the digital experience more engaging to customers, collecting more data in the process. Another is to team up with other companies, offering customers additional value in exchange for their data. In short, institutions are applying a combination

of strategies to help them catch up to technology companies and differentiate themselves from other providers.

In the process, however, ownership and control of data will become a key issue for all stakeholders. Data security will be crucial to establishing and maintaining customer trust. New partnerships will be evaluated for the data they can provide. Incumbent institutions will have to decide whether it's worth keeping data in legacy systems as opposed to new systems where it can be easier to maintain. They may turn to fintech companies for help with the management, usage, and security of their data. As for regulators, the concerns will include not only hacking but also the ways banks use the additional data and how well customers understand the implications of sharing it.

Examples:

Insurance- Consumers are demanding coverage for specific locations, uses, and timeframes, driving firms to collect additional data that can help them tailor their products.

Payments- Financial institutions are increasingly partnering with non-financial firms, including merchants and data firms, in order to unlock the value of transaction data.

Lending- Incumbent lenders are investing heavily in data transformation, automation, and new analytics to bolster their underwriting models (especially for underbanked customers).

Disruptive force 6

Bionic workforce

Artificial intelligence (AI) isn't coming. It's already here, upending long-held notions of management as machines become increasingly able to replicate human behaviours. The result is an unfamiliar territory in which talent is both labor and capital, obliging firms to rethink what it means to have a workforce.

At the front end, AI is becoming the public face for financial institutions, similar to the devices that now dominate customer interactions with many technology firms. Internally, people are working alongside AI to boost their efforts, greatly reducing the time and personnel required to complete major projects that involve well-defined, repetitive tasks. Still undetermined is how to treat this mix of humans and AI. Are they colleagues, or a suite of capabilities?

Other developments seem clearer. Going forward, AI risk management will become an industry-wide priority. Technological improvements will likely come in waves, meaning that changes from AI will affect parts of the organisation at different rates. Companies will need to manage the balance between natural and synthetic, and train their people to effectively coexist with AI.

Incumbents will have to figure out ways to communicate their culture through customer-facing AI. They'll also need to acquire AI expertise, possibly by working with fintech companies. For regulators, AI will require new strategies, including ones for enforcement and punishment of non-compliant actions.

The intersection of AI and human resources has been the subject of much discussion. But so far, the debate has raised more questions than answers. Beginning in 2017, Deloitte and the Forum will study what lies ahead for this rapidly- developing issue that stands ready to affect every sector of the financial services industry.

Examples:

All Sectors-

The full value of AI can be unlocked only through having employees that can effectively complement the AI's strengths, which will require shifts in both hiring and training. Firms will be uniquely challenged to convey their differentiated values through AI. As AI replaces complex human activities across the front, middle, and back offices, competitive advantages derived from excellence in process execution will deteriorate.

Disruptive force 7

Systemically important techs

So far, major technology companies have shown little interest in offering financial services. But financial institutions increasingly depend on cloud-based infrastructure and use online utilities for data storage and processing. They're also following technology companies' approach to customers—namely, to make profitable use of their data and remove the friction from their digital experience.

Sounds promising? Yes, but it's also setting the stage for a collision between the two industries. The implication is that financial services faces a balancing act: On one hand, they risk becoming dependent on large techs, but on the other they risk falling behind their competitors. To avoid either outcome, financial institutions will need to find ways to partner with technology companies without losing their core value proposition, and accept some loss of control over their costs

and data. They'll also have to compete with large techs for talent, forcing them to redefine their talent model.

Fintech companies will occupy a middle ground. They can help large techs enter financial markets while providing financial institutions with technical talent. At the same time, regulators will have to figure out how to treat large techs under a traditional regulatory framework.

Examples:

Insurance- Virtual assistants from large tech companies could become virtual insurance agent for households, but insurers would have to cultivate the right relationships to use those channels effectively.

Digital Banking- Customers now demand the same immediate access, seamless experience, and comprehensive service and support from their mobile banking apps as they receive from other leading mobile applications, forcing banks to learn from outside the banking ecosystem.

Investment Management- Customers have become used to tech firms' customer-centric offerings and level of service in non-financial settings, and expect the same of wealth management services

Disruptive force 8

Financial regionalisation

Ten years ago, when the flow of capital across borders reached its peak, financial globalisation seemed unstoppable. Now the trend is going the other way, toward financial services models custom-built to local conditions. Diverging regulatory priorities, technological capabilities, and customer conditions are challenging the narrative of increasing globalisation, prompting industry players to forge distinct paths in different regions of the world.

In Europe, for instance, regulations to bolster data transparency and consumer protection is driving the development of platform ecosystems and putting pressure on incumbents. In China, the popularity of mobile solutions—combined with an absence of major consumer-focused bank offerings and a largely innovation-friendly regulator—has left significant market share in the hands of large technology companies. And in the United States, unclear regulatory direction plus a ma-

ture financial services industry means that any change is likely to be incremental.

Under these conditions, regional fintech hubs could crop up, creating breeding grounds for companies with geographic-specific offerings. This might favour local players at the expense of those seeking expansion abroad. Then again, it could make it easier for multinational firms to test their ideas in one geography before adapting it to other markets. Either way, regionalisation of emerging capabilities will likely force different solutions to similar problems. That's an abiding inefficiency that will be hard to ignore.

For incumbent firms, even global ones, financial regionalisation will mean cultivating locally competitive advantages and integrating with local economies. Fintech companies may prove eager partners as they seek opportunities to scale and enter new markets. For their part, fintechs will be challenged to establish themselves in multiple jurisdictions, despite the potential of technology to lower barriers to entry. As large incumbents push for global convergence and their smaller rivals campaign for localised regulations, regulators will find themselves in the crosshairs.

Examples:

Payments- Countries without modern payments systems have benefited greatly from mobile payment technology, leading to wider adoption in those locations than in others.

Equity Crowdfunding- Jurisdictions view equity crowdfunding very differently, and thus treat its risk profile differently, hampering the ability of platforms to expand and operate internationally.

Market Infrastructure- As the financial crisis fades into the past, regulatory bodies around the world are starting to revisit regulatory reforms that encouraged the growth of trading platforms.

DISRUPTIVE VS. COLLABORATIVE APPROACHES

Two clearly identifiable approaches are being taken by FinTech companies and banks alike. *Collaborative FinTech ventures* – those primarily targeting financial institutions as customers – seem to be gaining ground over *Disruptive ventures* – those that enter the market to compete against those institutions. The Economist Intelligence Unit agrees that the most likely scenario for success in the next five years involves symbiosis. Many of the banks surveyed for this report agree, either partnering with FinTech companies or buying them in completely. Funding for collaborative FinTech ventures, which accounted for 38% of all FinTech investment in 2010, grew to 44% of funding in

2015 globally, and to 60% in the USA.

Exhibit 6: Collaborative Fintech Investments vs. Competitive Fintech Investments 2010/15 (\$M)



Note: total excludes Other segment
Source: Accenture analysis on CB Insights data

SECTORAL ANALYSIS

In this part, we have examined the impact of the fintech disruption on seven important sectors of the financial services industry. These are-

1. Payments
2. Insurance
3. Digital Banking
4. Lending
5. Investment Management
6. Equity Crowdfunding
7. Market Infrastructure

PAYMENTS

Payments have continued their migration to digital channels in the face of geographically varied adoption of mobile payment and declining profitability

WHERE DID DISRUPTION OCCUR?

A. Payments have continued to migrate away from cash and become less visible to the customer as consumers shift purchases to online

and mobile channels

Evidence in Support:

1. Dominance of online sales- The global online shopping market is growing quickly at the expense of in-person shopping, and therefore online-based (cashless) solutions will dominate the overall transaction landscape.
2. Increase in mobile connectedness- Especially in emerging economies, the near ubiquity of mobile phones combined with the lack of development in traditional financial solutions is driving the development of technologically advanced, mobile-based solutions for payments
3. Growing role of online platforms- Large tech firms are driving the development of online payment platforms in e-commerce, causing payments to become less visible to the customer; the action of logging in to an online platform is sufficient to enable a transaction, with actual payment details stored in the background

B. Payments businesses are experiencing intense pressure on margins in the face of competition and a challenging regulatory environment.

Evidence in Support:

1. Eroding lending revenue- Revolvers – customers who use credit cards as short-term loans with high interest rates – are a major source of card profits. This market is facing serious pressure with the increase in alternative lenders, who target the same customers and offer more attractive interest rates
2. Faster Payment Scheme- The development of national-level faster payment schemes will lead to a decrease in revenues from other payment sources (wire transfers, cheques, etc.) as customers move to new platforms. Also, where national-level faster payment schemes exist, fees to the end consumer are non-existent, conditioning customers to expect low-fee payments in all transactions
3. New Foreign Exchange Solutions- Technologically advanced fintechs are moving into both the retail and B2B areas, lowering revenues that financial institutions can earn on foreign exchange (FX). Several banks have decided to partner with a fintech solution to offer FX services instead of operating their own, forgoing that income entirely

C. Regional distinctions between payments ecosystems are growing, as both customer behaviour and regulatory environments diverge

Evidence in Support:

1. Level of unmet needs- Countries without modern payments systems benefitted greatly from mobile payment technology, whereas the benefits are more marginal in countries with modern payments

systems. As a result, adoption has differed considerably by region, depending on the degree of unmet needs

2. Ubiquity of Technology- Whether new payment technology is ubiquitous also greatly affects the adoption of payment solutions. The adoption of mobile payment solutions has been much higher in Africa and Asia (where merchants have supported new technologies) compared to the United States, where merchants have resisted adoption
3. Demonetisation- Countries that embrace demonetisation will force the adoption of mobile wallets, which has the effect of giving mobile-based solutions the needed critical mass to succeed – a critical mass that may be a long time in coming in countries where regulators do not act as innovation drivers

WHERE HAS DISRUPTION NOT OCCURRED?

- A. Mobile payment solutions have not sufficiently exceeded the functionality of pre-existing solutions in card-based markets, thus limiting their adoption.

Evidence in Support:

1. Lack of ecosystem support- The ubiquity of card-based technologies has meant that many vendors simply do not support mobile payments, and it is often difficult to identify vendors that do. This creates a negative loop around the technology – the less support, the less customers will want to adopt, which leads to less support.
 2. Lack of single standard- Many card-based markets also lack one consistent mobile payment standard, meaning that even if stores accept mobile payments, it is often unclear which one of several solutions will work/not work, further clouding the seamless customer experience.
- B. Customer acceptance of nontraditional payment schemes (e.g. alternative currencies) remains almost non-existent.

Evidence in Support:

1. Security Concerns- Concerns around the inherent insecurity of alternative currency transactions have only been magnified by a number of negative shocks, including hacks, freezes and their use as a tool for capital flight, all of which reduce trust.
2. Real-time becoming reality- Countries around the world are following the lead of the United Kingdom's faster payments system and

modernising their domestic payments systems to move to real-time (or close-to) processing, improving the value proposition of traditional payment schemes compared to alternatives

INSURANCE

Insurers are challenged by the rise of "insurtechs" and a structural transformation of their customer base, forcing them to adopt to new technologies more quickly.

WHERE DISRUPTION OCCURRED

A. Increased modularity in the insurance value chain is enabling new combinations of players and threatening the position of incumbents.

Evidence in Support:

1. Changing purchasing patterns- Customers are purchasing insurance in new ways. Some customers are choosing different channels, such as online and mobile, while others are changing their purchase occasions, including purchasing micro- insurance products as needed and purchasing insurance directly tied to a product.
2. Rise of partnerships- With the rise of external forces, insurers and reinsurers are increasingly partnering with outside organisations (such as insurtechs and large tech firms) to acquire expertise and hedge against disruption, without risking direct product cannibalisation by innovating internally.

B. Usage-based, on-demand and object-specific insurance products are emerging in response to shifting customer lifestyles.

Evidence in Support:

1. Rise of the prosumer- The line between the consumer and a business is blurring, with the rise of the prosumer meaning that consumers need different coverages depending on what they're doing. As a result, insurers must shift their delineation between personal and commercial insurance in order to meet customer needs
2. Micro-insurance- Insurtech start-ups are offering ever smaller "slices" of insurance for individual products (e.g. customers' mobile phones), or for smaller amounts of time that customers can choose (e.g. for a potentially delayed flight). This will test the limits of insurance product design and necessitate on-demand sales.

C. Life insurers face pressure to reinvent their product strategies to meet the needs of their next generation of customers.

Evidence in Support-

1. Emerging markets growth- The vast majority of growth in life markets is in emerging markets, such as South-East Asia, the Middle East or Africa, and those younger customers seek to purchase term coverage more than retirement-related products.
2. Comfort with digital channels- In many emerging markets, the traditional agent network is weak and the population is much more invested in digital (including mobile) technologies, as opposed to ma-

ture markets where traditional life insurance depends on in-person interactions with both an agent and a doctor.

3. Rise of digital distribution- Several platforms started in 2017 sell simple life products online, using available information to bypass the medical check; this represents the start of a shift of rigid, fixed-term policies towards more flexible, consumable chunks for easy digital consumption.

D. The development of products to insure emerging risks is becoming critical to carrier profitability, particularly as margins in traditional products erode.

Evidence in Support:

1. New risks equal new products- The insurance market is starting to build products that protect against emerging tech-related risks, such as cyber insurance, AI and self-driving cars. Cyber insurance is already a \$2.5 billion market in the United States and is projected to grow quickly; the financial services sector itself represents a significant driver of growth for these products.
2. Change of role- In the commercial lines space, insurers are starting to shift to offering products that include sensor-based coverage, which reduce claims by monitoring for changes 24/7. The rise of

connected insurance and sensor technology will lead to an increasing share of business focused on prevention.

WHERE DISRUPTION DID NOT OCCUR

E. Connected devices are proliferating, but insurers have failed to convince customers that connected insurance serves their interests.

Evidence in Support:

1. Customer ownership data- As the amount of data from connected insurance rises, regulatory bodies have started to mandate consumer data protection policies, which put control of data in the customer's hands. Moreover, regulators in some locales are working directly with companies in order to ensure data security.
2. Ease of connection- To simplify the process of connected insurance and to reach out to sometimes hesitant consumers, insurers can work with product manufacturers to build the connection into the product. In most instances, however, that connection requires customer agreement.
3. Role of assistants- With increasing use of virtual assistants by Amazon, Google and Microsoft, and as such assistants collect more information about their owners, they may become a virtual insur-

ance agent for households. However, insurers would have to build relationships with large tech firms to use those channels effectively.

DIGITAL BANKING

Banking is on the cusp of significant disruption as regulations and technology begin to lay the foundations of a fundamental shift in the business model.

WHERE DID DISRUPTION OCCUR?

A. Traditional bank distribution models and economics are at risk of being deeply disrupted by the drive towards platform models of banking.

Evidence in Support:

1. Increasing Technology Capacity- APIs, as software intermediaries that allow programmes to connect and interact, provide exposure-specific functionality while protecting the rest of the application. This technology, which has achieved broad adoption in recent years, allows banks to seamlessly integrate with third parties and is necessary for developing platform models of banking.
2. Shrinking Margins- Margins on banking products are declining due to increased competition, lowering the profitability of product manufacturing. This incentivizes banks to refocus on distribution and seek partnerships with specialised product and service providers – in effect, creating platforms for their customers.

B. Banks no longer define customer expectations of the banking experience; instead, fintechs and large technology companies set the standard.

Evidence in Support:

1. Client comfort with digital channels- Customers' use of digital channels for banking has risen, as adoption of smartphones and other internet-enabled devices increases worldwide. Customers are also becoming more trusting of digital channels when conducting monetary transactions, as illustrated by the global rise of online shopping.
2. Experience with non-financial firms- Customers now demand the same immediate access, frictionless experience and low-fee or free offerings from their mobile banking apps as they receive from Uber, Starbucks and other leading mobile applications, forcing banks to learn lessons from outside the banking ecosystem
3. Real world cost-cutting- As revenues plateau, incumbent banks have sought to lower their costs by eliminating in-person services, driving customers to lower-cost channels and jettisoning unprofitable customer segments. These efforts, while necessary to maintain profitability, have meant that banks have had to learn alternative methods of customer engagement wherever they can, including from fintechs and large technology firms.

C. Incumbents are starting to migrate core systems to the cloud, as legacy infrastructure creates challenges in meeting customer needs

Evidence in Support-

1. Infrastructure issues - Core technological systems of financial institutions are largely built on decades-old infrastructure (using extinct languages, e.g. COBOL) and are riddled with inefficiencies. As a result, many incumbents are investing in "integration layers" to bridge the needs of client-facing systems with their core system. While these layers have proven valuable, banks are also aware of the need to migrate away from legacy cores.
2. Patchwork solutions- Start-ups are able to begin with the client experience and build an infrastructure specially designed for the client. In contrast, incumbent financial institutions must often build ad-hoc solutions to meet specific needs, providing a short-term solution but adding to the complexity of subsequent changes and the eventual modernisation of their systems.
3. Gradual shift to modernisation- Incumbent financial institutions are shifting away from strategies to "rip and replace" legacy systems towards a gradual migration of functions to the cloud, in order

to improve flexibility and reduce costs. However, the process of migrating away from legacy systems will take years and large amounts of capital, and may prompt reliability issues.

WHERE HAS DISRUPTION NOT OCCURRED ?

A. Few customers have moved away from traditional deposit accounts despite significant efforts from online and mobile challenger banks.

Evidence in Support:

1. Value of physical presence- Customers' preferences are quickly shifting to digital channels, but physical branches remain a critical component of the banking experience. Many customers have banking needs which only physical locations can currently fulfil (e.g. getting a same-day wire transfer for a home purchase), while other customers prefer a channel based on human interaction
2. Poor challenger bank economics- Because challenger banks are unable to meet more complex needs, they tend to be used as secondary bank accounts by most customers, causing them to lose out on a large share of revenue. Also, to attract customers, they often provide either lower fees or higher returns on deposits than incumbents, both of which lower profitability

3. Incumbents targeting attractive customers- The profitability of many customer segments declined following the financial crisis, as wealth levels fell and interest rates approached zero. In response, incumbents refocused their efforts on optimising their client base – retaining their most profitable customer segments, and ensuring that only less profitable customers would be tempted to switch to challenger banks

LENDING

New entrants are significantly disrupting the lending market, but do not appear poised to bring innovations to scale

WHERE DID DISRUPTION OCCUR?

- A. New adjudication techniques have significantly expanded access to credit for underbanked, "thin-file" and subprime customers

Evidence in Support-

1. New source of data- New sources of data have emerged for use in adjudicating credit, such as social and mobile data for individuals, and payments or accounting data for businesses. While this data has had limited effectiveness in improving the underwriting of established customers, it has proven to be valuable for "thin-file" borrowers (with insufficient credit bureau history) and small businesses.

2. Using data more effectively- Incumbent lenders are looking to their existing stores of data to bolster their underwriting models, especially for underbanked customers. However, that data is often unstructured and siloed, making it difficult to be put to use. To address these challenges, incumbents are investing heavily in data transformation, automation and new analytics
3. More agile credit models- New entrants improve on their credit models using short iteration cycles, while incumbents are constrained to making adjustments much more slowly. This lag in implementing best-in-class methodologies provides new entrants a temporary competitive advantage in understanding the credit risk of underbanked and “thin-file” customers, especially as new sources of data become available

B. Individual and small-business borrowers expect their lender to deliver the seamless digital origination and rapid adjudication pioneered by leading fintechs.

Evidence in Support -

1. Improved processes-New online lenders have cut loan adjudication times to minutes, forcing incumbent lenders to improve and automate internal loan processes in order to compete. As a result, many loan processes that previously needed human intervention are now auto-adjudicated, allowing incumbents to offer digital origination and rapid loan origination.

2. Legacy Technologies increasing costs- Constrained by decades-old mainframes, incumbents must add technological bridges to connect legacy infrastructure with the digital front ends demanded by customers. This additional effort increases development time and costs compared to fintechs, but is necessary for incumbents to compete.
3. Partnerships as cost saver- Improving processes and building middleware have both proven to be relatively expensive. Incumbents have thus looked at partnerships with marketplace lenders, allowing them to access fintech- driven technological solutions without fully overhauling their infrastructure.

C. Non-financial platforms are emerging as an important source of underwriting data and a point of distribution for credit.

Evidence in Support-

1. Increasing customer engagement- Lenders are targeting non-financial platforms because they provide access to the exact moments when customers need credit the most, such as during supply chain management or the settlement of accounts receivable. Thus, lenders can pre- emptively underwrite loans at “decision moments”.
2. Increasing data collection- Lenders are also turning to non-financial platforms as distribution channel partners because of the particular data sets many of these platforms hold. This data can provide

valuable forward-looking insights into a company's performance, as well as enable detailed comparisons between similar businesses and individuals. As such, this data helps to lower both underwriting risk and the cost of underwriting.

3. Risk of new entrants- Non-financial platforms have also begun their own exploration into providing lending products directly to their users as a new line of business. Whether these loans are funded directly from the platform's balance sheet or via a funding partner, they represent direct competition with financial institutions for credit distribution

WHERE HAS DISRUPTION NOT OCCURRED?

- D. Funding economics put marketplace lenders at a cost disadvantage compared to traditional banks, raising questions about the model's sustainability

Evidence in Support-

1. High customer acquisition costs- Building a client base from scratch has proved to be expensive for new entrants, particularly where they have relied on high-cost analog channels such as direct mail. These higher customer acquisition costs have created particular challenges in segments where incumbents are well estab-

lished and margins are low, as incumbents already have a well-defined client base and therefore a large cost advantage

2. High funding costs for marketplaces- While the absence of a branch network creates certain cost advantages for new entrants, they are more than offset by significantly higher funding costs than for banks. While incumbent banks are able to deploy low-cost deposits, new entrants have relied on private investors, who demand higher premiums to reflect a higher credit risk (perceived or otherwise) and a lesser-known brand.

3. Funding instability- Maintaining liquidity in a two-sided marketplace has proved to be difficult. Marketplaces initially sought hedge fund capital to fund growth, but found this capital to be unstable as hedge funds pulled back due to broader market volatility. In response, marketplaces are now exploring alternatives, including acquiring banking licences, which would give them access to lower-cost funding sources such as demand deposits.

INVESTMENT MANAGEMENT

Four trends in the investment management industry have shaped its future, and incumbents, not innovators, look poised to benefit.

WHERE DID DISRUPTION OCCUR?

A. As individuals become more responsible for their investments, robo-distribution has become the most compelling tool for customer engagement.

Evidence in Support -

1. Shift from institutional to individual- Baby boomers are drawing down on defined benefit plans (guaranteed benefits), while younger workers are predominantly limited to defined contribution investment plans (benefits based on investment returns). These trends are increasing the share of total investments that are self-man-

aged, driving demand for products and services targeted to individuals as opposed to institutional investors.

2. Increasing regulation raising costs- Regulators have stepped up efforts to protect retail investors, citing mis-selling scandals, rising investor dissatisfaction and the shifting of retirement burdens from institutions to individuals. An unintended consequence of these policies has been to increase the cost of providing customers with individualised offerings through traditional channels, making robo-advisors a compelling solution.
3. Rising client expectations- Customers have become accustomed to customer-centric offerings and service in non-financial settings, and expect their financial services experiences, including wealth management, to exhibit similar characteristics. Robo-advisory products offer a digital and customer-centric experience at a low cost and are thus attractive, particularly for younger customers.

B. Scaling the delivery of investment advice requires fewer resources, as middle and back office functions are increasingly being automated or externalised.

Evidence in Support-

1. Margin compression forcing cost-cutting- Manufacturing margins are declining as demand shifts from high-cost to low-cost products, and distribution margins are falling as robo-advisors gain popularity. This pressure is driving incumbents to search for savings, espe-

cially in the areas of the value chain that add the least value – the middle and back office

2. Growth in external service providers- Enabled by technological advancements, external service providers are growing and building a track record of success in driving efficiency. As these firms proliferate and allow asset managers to focus on the strategic aspects of investing, they will be trusted with more and more functions that are central to the asset manager's operations
3. Automation and Artificial Intelligence Replacing Processes- Automation and AI are becoming more capable and may soon be able to replace complex human activities across the front, middle and back office. As they do so, competitive advantages derived from excellence in process execution will deteriorate, leading to even more process externalisation.

C. The growth of low-cost products has increased the importance of scale in product manufacturing, driving pressures for consolidation.

Evidence in Support-

1. Alpha becoming more elusive- For asset managers, excess returns over the market (alpha) have proven elusive to generate in the post- crisis environment, making it difficult for managers to justify their higher fees and diminishing their appeal in favour of low-cost products

2. Low fees, high economies of scale- As the popularity of low-cost products has grown, providers have primarily competed on the basis of price, with the lowest-cost US equity ETF charging just three basis points. This significant advantage of scale in the production of low-cost products means industry consolidation is inevitable
3. Rise of smart beta- The growth of low-cost ETF products has created a gap in the market for investors that are attracted to active strategies but are also looking for low costs. As a result, “smart beta” products that employ active strategies but use low-cost beta products have risen in popularity, and are also helping to drive the push for additional scale to lower costs

WHERE HAS DISRUPTION NOT OCCURRED?

D. New entrants to investment management have struggled to gain market share in the face of customer stickiness and high customer acquisition costs

Evidence in Support-

1. Challenging per customer economics- Monoline robo-advisors have primarily attracted mass or mass-affluent customers. Coupled with their low fees, these clients generate relatively low per-customer revenue. These economics have proven challenging, as cus-

customer acquisition costs are high relative to each customer's value, making it difficult to be profitable.

2. Low barriers to entry- Monoline robo-advisors have primarily attracted mass or mass-affluent customers. Coupled with their low fees, these clients generate relatively low per-customer revenue. These economics have proven challenging, as customer acquisition costs are high relative to each customer's value, making it difficult to be profitable.

3. Value Added Services- Monoline robo-advisors have primarily attracted mass or mass-affluent customers. Coupled with their low fees, these clients generate relatively low per-customer revenue. These economics have proven challenging, as customer acquisition costs are high relative to each customer's value, making it difficult to be profitable

EQUITY CROWDFUNDING

Equity crowdfunding is growing, but the industry is still in its infancy and regulation will dramatically shape its future.

WHERE DID DISRUPTION OCCUR?

A. Crowdfunding platforms have grown rapidly, driven by strong demand from both investors and entrepreneurs.

Evidence in Support-

1. Strong private market returns- Established start-ups, finding a more liquid venture capital market, are choosing to remain private for

longer to avoid burdensome disclosures and market scrutiny. This delay has resulted in greater returns flowing to private investors, ultimately driving others to look for opportunities to participate in the area

2. Low seed stage funding rates- Venture capitalists are paying more attention to the growing pool of private companies with valuations above \$1 billion, and overlooking smaller firms, creating a strong need for seed capital from individuals
3. Rise in entrepreneurship- Shifting attitudes towards entrepreneurship and the availability of new technologies that lower barriers to entry for start-ups have resulted in an explosion in the number of tech-based start-ups, driving the need for additional sources of funding

B. The quality of regulation has been a defining factor in the success of the equity crowdfunding ecosystem

Evidence in Support-

1. Relaxed suitability requirements- Many regulators are encouraging the industry by relaxing private market suitability requirements to allow non-accredited investors to participate. This ensures that limits against investment sizes and wealth levels do not unreasonably limit the pool of potential capital.

2. Differing disclosure requirements- Regulators have generally taken a light-touch approach with respect to disclosure requirements, allowing for a process significantly less onerous than for public firms. However, certain jurisdictions have imposed harsher rules, deteriorating the caliber of start-ups on platforms as only those truly desperate for capital put themselves through such a process.
3. Limited deal size- Regulators have capped deal sizes to allow platforms to lead Seed and A rounds. If set too low, these risks significantly reduce crowdfunding's value to entrepreneurs seeking larger funding rounds

WHERE HAS DISRUPTION NOT OCCURRED?

C. The crowd has proven less wise than expected, highlighting the need for further education and commercial due diligence tools to assist investors

1. Lack of resources and time- Unlike angel and venture capital investors, crowdfunding platforms do not have the institutional knowledge and time to invest a sizeable amount of effort in due diligence, instead performing simpler diligence and relying on the wisdom of the crowd.

2. Inexperienced investors- Many large platforms allow non-accredited investors to participate in equity fundraising. Those inexperienced investors drive valuations high in early rounds and are more likely to invest in less viable start-ups, creating problems in later rounds. Moreover, investors' personal affiliations with brands can often play an outsized role in their investment decision

D. Equity crowdfunding remains disconnected from the broader financial system, limiting its long-term scalability

Evidence in Support-

1. Limited track records- Due to the immaturity of the platforms and the lack of an established track record, investors have limited ability to gauge the risks and return expectations of their investments. Thus, they are reluctant to invest or, in many jurisdictions, are limited by investor protection laws
2. Lack of liquid secondary markets- Early-stage venture capital investments are highly illiquid, with investors unable to realise a return until the company goes public or is sold – often years after the initial investment. A liquid secondary market would allow investors an opportunity to exit; it also creates “signaling issues” for the start-ups, as stock temporarily trading down could impact the business's prospect of raising future rounds of investment

3. Wider distribution networks- The majority of wealth is invested through financial advisers (both automated and human) and not through direct channels. Equity crowdfunding platforms have not yet accessed wealth management distribution channels.

MARKET INFRASTRUCTURE

The role of platforms in capital markets is growing, if unevenly, but regulatory changes and new technology will influence their adoption and capabilities.

WHERE DISRUPTION OCCURRED

A. Traditional over-the-counter (OTC) products continue their journey towards digitalisation, driven by regulation and the promise of improved economies of scale

Supporting evidence-

1. Data and Standardisation- Platforms are collecting demand/supply data to create an aggregated market view and aid discovery of suitable counter-parties, and are even providing additional market analytics to better inform buyers, sellers and intermediaries. However, securing data standards and cross-platform interoperability remains key to avoid fragmentation and secure liquidity during the electrification process
2. Asset class characteristics- Certain asset classes have characteristics that naturally make them better suited for trading platforms. Products that are relatively homogenous and have low trade sizes are particularly good fits for trading platforms, and have migrated quickly. Asset classes that lack those characteristics have struggled to reach a critical mass of supply and demand on the marketplace level

B. The efforts of electronic platforms to scale up are complicated by an uncertain and regionally fragmented regulatory environment and political instability.

Supporting evidence-

1. Post crisis regulation- Platforms have been able to achieve scale quickly in the last few years by taking advantage of regulatory reforms (such as MiFID, or Dodd-Frank in the United States) that were enacted in response to the financial crisis. As the crisis becomes a relic of the past, regulatory bodies around the world are starting to revisit financial crisis-era policies

2. Political instability- The widespread political uncertainty that enveloped many developed markets post-2016 has introduced new risks to capital markets, slowing investments as financial institutions wait for clear signals on the priorities of newly formed governments

3. Regionalisation- The global regulatory trend over the last few decades has been one of increasing global interconnectivity and standardisation, which benefitted platforms' journeys to scale. However, due to geopolitical factors and the regionalisation of financial ecosystems, the trend for the future is likely to be regionalisation of regulatory policies

C. Market infrastructure providers are disrupting themselves to preserve a pivotal role in future processes and unlock new revenue streams

Supporting evidence

1. Erosion of margins- As technological improvements lower economies of scale, the profitability of operating a utility is declining. Additionally, utilities are under pressure from a prevailing low interest rate environment and increasing capital costs, causing them to explore new profit opportunities
2. Data and Data flow as key resources- As profitability in core businesses erodes, the data flows of incumbent market infrastructure providers could create new sources of revenue. However, doing so will require extensive industry cooperation between different data providers, including complementary infrastructure and data-sharing agreements
3. Value chain disruption capabilities- New technology could lead to significant changes in the architecture of capital markets by enabling real-time processes and more direct connectivity. This could drive the elimination of many existing roles and the creation of new ones, upending the traditional value chain

WHERE DISRUPTION DID NOT OCCUR

D. New market platforms have rarely challenged incumbents, and instead see joint ventures and partnerships as the most successful path to scaling up

Supporting evidence-

1. Monoline challenges- Trading platforms with a narrow asset class or value chain focus (i.e. most start-ups) are struggling to meet the needs of incumbents, who operate in many differentiated markets and thus look for efficiency and cross-product synergies from their platforms
2. Incumbent adaptation- Incumbent banks, brokers and platform providers can use available resources (both talent and financial) and the industry's high switching costs to their advantage. Rather than adopt fintech solutions, they can either develop their own or acquire promising start-ups to bridge the gap
3. Stickiness- Even when significant efficiencies exist on new trading platforms, two factors have created a strong stickiness for traditional trading methods: the desire of incumbents to limit the integration of new technology platforms due to switching costs, and a reluctance to disturb the complex network of individual and institutional relationships characterising capital markets.

CONCLUSION AND RECOMMENDATIONS

PAYMENTS

1. Data Monetisation- New competition and increased regulation will continue to make core payment activities less profitable, pushing payment providers to focus on data monetisation as an important source of revenue. Data streams will be significantly more valuable where they are granular (e.g. product-level data) and multidimensional (e.g. location data), making data cooperation and partnerships critical to successful monetisation
2. Power of large merchants- As the ability of large merchants to influence their customers' payment choices grows (particularly in on-line transactions), their negotiating power within the payments ecosystem will grow accordingly. Combined with the increased importance of product-level payments data, merchants will be able to wield this power to lower fees and influence the broader evolution of payments ecosystems

INSURANCE

1. Value Chain Shift- Once tightly vertically integrated, the insurance value chain is rapidly being modularised by new technologies that allow for splitting activities across many different players. Leading organisations are using this modularity to their advantage, pursuing flexible partnerships that allow them to aggressively compete for adjacent profit pools.

2. Complex products, simply distributed- To remain competitive, insurers need to simultaneously achieve two seemingly contradictory objectives: on the one hand, they must develop complex and highly personalised products to meet customers' needs; on the other, they will need to significantly simplify the origination process, enabling even highly complex products to be sold directly through online and mobile channels

DIGITAL BANKING

1. Distributors or manufacturers ?- The rise of product platforms in digital banking will force market participants to make a choice between a strategic focus on product distribution (i.e. becoming the platform) or a focus on product manufacturing. This choice will have far-reaching implications for their businesses and customer interaction models, as well as for their competitive landscape
2. Fewer, bigger winners- The advantage of being the market leader will increase significantly for both product manufacturers and product distributors. Platforms will offer customers improved transparency into products, significantly increasing the advantage for the best products. For distributors, significant economies of scale in access to data and customer awareness will feed a virtuous cycle of growth
3. Ecosystem imperatives- Under all possible end states, digital banking institutions will forge more relationships with other financial services and, increasingly, non-financial services firms – meaning that

within the digital banking ecosystem, a proficiency for establishing partnerships and a willingness to create win-win, symbiotic relationships will lead to more partners

LENDING

1. The lowest fundings costs win- Despite innovations in origination and adjudication, the online lending model is fundamentally limited by high and unstable funding costs in its ability to compete with banks. The need for a consistent funding source at a cost similar to that of deposits for banks will drive online lenders to acquire banking licences – unless an alternative funding source can be found
2. Lending goes digital- Marketplace lenders and technology firms have reoriented customer expectations. Leading lenders are expected to offer simple credit origination experiences, where a combination of design and automation provides customers with a frictionless application experience and a swift response
3. Lenders use data effectively- Leading lenders are using data to improve both the effectiveness and the efficiency of their adjudication processes. They employ new sources of data to underwrite applications whose risks could not previously be assessed (e.g. "thin-file" customers), and reduce underwriting costs by automating the collection and analysis of key data (e.g. using data collected directly from a small-business accounting platform). Moving forward, lenders will increasingly look for new signals/data to inform lending decisions

INVESTMENT MANAGEMENT

1. Differentiation of offering - The ongoing industry-wide automation and externalisation of middle and back offices, combined with the ubiquity of robo-advisory offerings, are commoditising the investment advisory value proposition. Consequently, leading firms will seek to identify and invest in other ways of differentiating themselves to stand apart from competition, in particular through deeper personalisation of customer offerings
2. Advice driven customer guidance- As robo-advisors become more ubiquitous and more sophisticated, leading investment management companies will look to use these capabilities to deepen their engagement with robo-advisory customers, drawing on new sources of data to deliver advice on all aspects of their financial lives. This will mark the start of a change in their role from robo-investors to true robo-advisors
3. Role of human advisers- The human adviser will still be crucial when differentiating products, especially for high-net-wealth customers, but the role of such advisers will shift in leading companies from product selection to a focus on customer engagement, emotional intelligence and decision support.

EQUITY CROWDFUNDING

1. Improved liquidity at seed stage- Leading crowdfunding platforms will increase the amount of seed-stage funding available to entrepreneurs, thus filling a valuable niche in the fundraising ecosystem, especially in parts of the world with less venture capital investment
2. Regulator balance- Regulation plays a significant role in shaping the equity crowdfunding industry across all possible end states, whether crowdfunding platforms go direct to consumers or partner with incumbents. Regulators must balance encouraging crowdfunding and ensuring adequate due diligence
3. Integration with broader financial ecosystem- In order to achieve a sustainable level of scale, equity crowdfunding platforms will need to grow their scope of funding through integration with the broader financial ecosystem (e.g. incorporation into wealth management platforms) and will need to establish secondary markets with sufficient liquidity

MARKET INFRASTRUCTURE

1. Insufficiency of technology alone- In order to achieve a sustainable level of scale, equity crowdfunding platforms will need to grow their

scope of funding through integration with the broader financial ecosystem (e.g. incorporation into wealth management platforms) and will need to establish secondary markets with sufficient liquidity

2. Navigating regulatory uncertainty- Differing regulatory direction around the world will likely lead to both regionalisation and uncertainty in the short and medium term. Financial institutions will need to develop the flexibility to rapidly adapt to both large-scale regulatory changes and regionally divergent regulatory treatment of emerging-market infrastructure technologies
3. New value chain pressures and opportunities- Regulation and technological advancements are driving efficiencies, which will put pressure on incumbents to consolidate their positions and thus shorten the value chain. Forward-looking firms will seek to position themselves in areas that will continue to add value, including areas currently occupied by other firms

LIMITATIONS OF THE STUDY

Due to constraints of time and resources, the study is likely to suffer from certain limitations. Some of these are mentioned here under so that the findings of the study may be understood in a proper perspective.

The limitations of the study are:

1. The study is based on the secondary data and the limitation of using secondary data may affect the results.
2. The secondary data was taken from the research reports published by consulting firms and developmental agencies. It may be possible that the information published in the research reports was biased and did not reflect the actual numbers.

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