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Chapter 1: The digital transformation of traditional finance through intelligent automation and cloud platforms

1.1. Introduction

The digital transformation of traditional finance is enabled through intelligent automation and cloud platforms. With these technologies, traditional banks and financial institutions can digitalize their products and services, transforming the banking and finance value chain along the way. Digital transformation goes beyond mere product digitization. As traditional financial institutions journey through the transformation process, they start to share their data and enable integration of back-end processes with other players in the finance ecosystem. Digital transformation leads to opening of traditional financial products through partnerships with fintech enabling easier access to financial services by suppliers, with embedded finance options. Traditional financial services such as lending and insurance underwriting become easier for customers to access through any supplier's front-end interface with integration to bank backends. Data sharing on transaction-based open finance and creditworthiness on decentralized identity with digital wallets, backed by blockchain privacy models enhances financial access for the unbanked and under-banked customers. Products are tailored to the needs of end-users through data analytics techniques and fintech partnerships (Egbuhuzor et al., 2021; Chen, 2023; Mohsen et al., 2025).

Digital transformation from the traditional services to the new age digital services is a difficult journey, complicated by legacy systems in banks and finance institutions. Intelligent automation streamlines bank processes enabling seamless integration with cloud partners and tech fintechs who build digital interfaces and offer value-added services on the front-end. The focus is on being customer-centric and improving customer experience while increasing revenue and profitability for the institution itself as well as the ecosystem partners. Through a structured approach with proven methodologies and analysis techniques, traditional banks and financial institutions can disrupt themselves. By embracing the digital transformation journey of creating and

capturing new value with intelligent automation and innovative cloud-first approaches, banks and financial institutions can evolve from products to platform as a service models with ecosystems built around scaling best practices (Subramanyam, 2021; Nwoke, 2024; Turner, 2024).

1.2. Understanding Digital Transformation

Digital transformation is a conceptualization that refers and uses technologies and digital platforms to radically alter a traditionally analog environment.

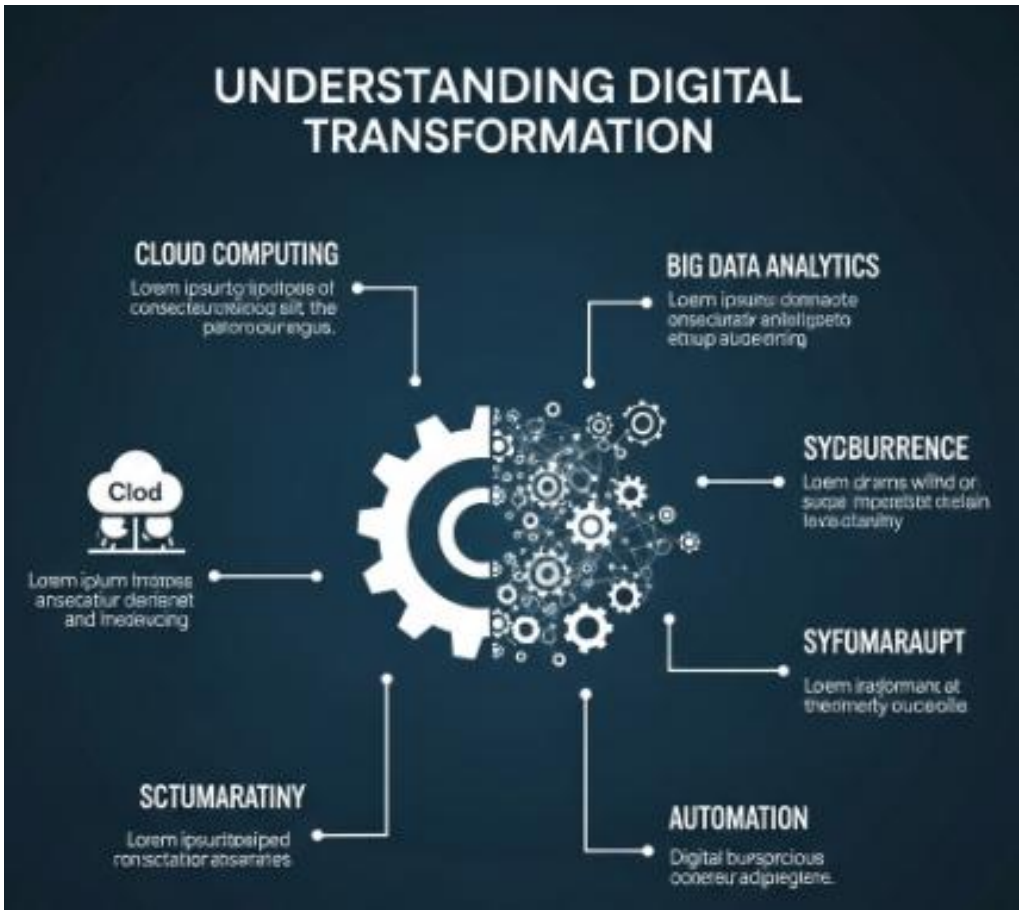

Fig 1 : Understanding Digital Transformation

Digital transformation is maybe one of the greatest transformations in human history, in terms of reach, scope, intensity, and speed. While most areas of human endeavor have felt the disruptive effects of digital transformation, some have been more affected than others. Most notably, products and services businesses in the entertainment, shopping, and information delivery and exploitation areas have undergone dramatic and swiftly

executed digital transformations. Others, such as education, news-gathering and reporting, finance, knowledge work, voting and political processes, research, and public administration have been slower to materialize but are similarly important. Technology and service-based industries have led the charge, but other privately and publicly funded industries have been affected, such as healthcare, social services, defense and security, or public transportation for instance. Digital transformation, bringing along both acceleration and thaw of analog processes, is ultimately the epitome to which we must serve in the creation and developing of a knowledge society, with common good of its citizens.

What really drives the degree of transformation within any particular industry is the nature of the products or services, as well as customer and consumer relationships. In essence, more concern from consumers is what brings pressure on companies to digitally transform their relationships with customers, partners, and stakeholders as these relate to the delivery of the products or services involved in an industry. Therefore, successful digital transformation – and the road to success is still not clearly paved or settled for many companies pursuing it – digitally infiltrates the processes and systems of both production and supply of products or services, creating deeper and broader capabilities for achieving perceptions of better service from customers, more efficient operations and systems on the part of business companies. Efforts to digitally transform companies and their industries by informed leaders, especially those of the younger generations still naïve to the historical importance of physical objects as an anchor for capitalism, should bypass the carelessly built legacy processes and systems of industrial and managerial capitalism.

1.3. The Role of Intelligent Automation

Companies create digital capabilities about their reengineering of business processes – digitally transforming traditional finance – as part of significant scalable capability-building efforts supported by using cloud and business process management service. Three significant technology trends have moved on a path of convergence and led digital business leaders to build scalable digital operational transformation capabilities in their businesses: the inside-out adoption of business process management as a service; the outside-in digital transformation of traditional business processes; and the evolution of traditional information technology and organization toward internal cloud information technology and organization development and functioning.

The digital transformation of traditional finance involves using cloud processing power and Artificial Intelligence-powered applications focusing on business process transformation to re-engineer unproductive traditional business processes. It allows organizations to achieve digital operation excellence by driving down the processing

cost, cycle preparation and execution time, and throughput of business processes while simultaneously driving the accuracy, visibility, and company-wide accessibility of the processed business operation outputs, thus mitigating the risk of using traditional business process models based on company silos, Information Technology and organization complexities, and inertia. Today, intelligent automation celebrates a growing number, diversity, and sophistication of uses and results in organizations. In turn, these dynamic and changing use cases and business results of intelligent automation activities and practices benefit from growing interest, respect, and belief in the existence of a significant automated Intelligence from a growing number of digital business leaders.

1.3.1. Definition and Concepts

Intelligent automation is the intersection between automation, artificial intelligence, and the evolving cloud ecosystem. Whereas process automation encompasses tightly defined, rules-based workflows, the term "intelligent automation" implies that a degree of AI is applied to the task at hand. By incorporating AI into automation, it is possible to make decisions, design outputs or workflows, recognize and respond to changing conditions, and learn from experience. Many companies use automation to replicate processes traditionally done by humans. However, these process automations are limited as they can only do rule-driven, repetitive tasks, often without the ability to interact with the many different applications involved in business processes.

Intelligent automation is the next step in this evolution. The synergy of automating a process that is powered by AI makes it possible to handle a greater variety of tasks, including those that change frequently and contain a wider range of conditions. It can increase scalability, speed, and reliability, and reduce costs and errors. The adoption of AI and machine learning, as well as a slew of new innovative companies, has entered the current market and laid the groundwork for intelligent automation. These innovations accompany our drive to create business processes powered by intelligent automation as a key enabler of digital transformation. Therefore, whereas traditional automation involves the use of scripted, rules-based bots that don't have the capacity to learn, intelligent automation combines process automation, cognitive AI technologies, analytics, and machine learning to create a self-improving, and able to perform broader tasks than traditional automation alone—and succeed.

1.3.2. Benefits of Intelligent Automation

Intelligent Automation enables organizations to cost-effectively scale operations, handle increasing transaction volumes, and reduce time-consuming manual errors, allowing

employees to focus on high-value tasks. As automated systems become increasingly intertwined with traditional banking processes, banks can leverage IA to develop solutions using digital workers that autonomously manage a range of standardized, manual, transaction-level activities, such as transaction onboarding or fulfillment. Front-office functions can be optimized using IA solutions that work alongside staff, including Virtual Agents that engage customers with basic information, guidance, and support. Intelligent Automation is transforming transactions and reducing costs, in functions from IT to procurement, logistics, finance, HR, and manufacturing. Continued exploitation of automation solutions is critical to achieving disciplined growth, controlling costs, and using automation for direct and indirect cost savings. Banks are now keen to ensure that Intelligent Automation becomes an integral feature of their operations.

Top financial services companies will derive a significant portion of their performance benefits from the continued optimization of their operations base, and these organizations are keen to blend innovation with disciplined management of costs. Intelligent Automation is a key component of this; analysis suggests that the top 25 financial services firms will realize close to $60 billion of savings from Intelligent Automation in 2023. At the most basic level, these gains will come from the abatement of core processes such as funds transfer, KYC, onboarding, claims processing, and account maintenance. These activities are increasingly handled by digital labor at high levels of accuracy, improving lead times and productivity while also eliminating many labor-intensive errors.

1.3.3. Challenges in Implementation

The transition to intelligent automation requires not only the new technology but also change in the underlying processes and, in some cases, the products. In some organizations, there are inertia and resistance to change. It may be necessary to reorganize operational teams and business functions to promote collaboration. Furthermore, the incorporation of intelligent automation can lead to concerns over job displacement. Employees in related functions may feel apprehensive about the changes that will come about, fearing that their functions will be taken entirely over by technology, or that they may be moved to lower-level positions. Therefore, change management becomes vital.

The key to overcoming these challenges is to identify the unique capabilities that are required to interact with the new technologies and then help the staff to build those capabilities. More and more powerful technologies create new types of high-skill jobs that require workers to interact with and leverage the capabilities of artificial intelligence. They may be responsible for guiding the technology in different use cases, ensuring that it is being applied correctly and responsibly. The technology itself does not

eliminate this requirement. In this context, both management and workforce need to develop greater capabilities and trust in working alongside these technologies.

Existing IT governance frameworks for cybersecurity and data governance will need to be strengthened. Many organizations have built security mechanisms to safeguard customer and business data against traditional cybersecurity threats. Organizations will have to establish stricter security and technology governance in building, implementing, and deploying AI and automation use cases. These preventive measures will be necessary to safeguard and guide the behavior of AI in deployment. In addition, the need to monitor and audit the using AI and data models is essential.

1.4. Cloud Platforms in Finance

Most back-office activities are inherently digital. Financial services such as payments, recordkeeping, asset trading and custody, loan applications, and account management were transformed in the 1990s and early 2000s into online or mobile services. As the roles of all the actors involved in providing financial services became dependent almost entirely on the underlying digital and electronic systems to enable information transfer, it was a natural evolution for financial services providers to adopt automation software to increase efficiency of those systems. The evolution of the internet into a truly global entity, with low-cost servers and infrastructure being run by various companies, allowed financial services providers to reduce their costs by introducing what are now known as Cloud Platforms. Cloud platforms offer an ease of adoption and use, cost efficiencies, and the ability to rapidly scale solutions based on usage without requiring massive capital expenditures, unlike the on-premise or hosted services.

The recognition of how quickly new products could be introduced and the flexibility in scale of traditional financial services systems and applications provided by these Cloud Platforms, together with the availability of a wide range of low-cost automation software products, saw the impact that the introduction of cybersecurity – data security and fraud prevention is of critical importance in any financial services application. Cloud providers have introduced far higher levels of cybersecurity and surveillance at levels far exceeding any enterprise's internal cybersecurity. The Cloud is built to utilize massive processing availability combined with security best practices, which means that most internal cybersecurity are suboptimal and outdated for the 21st-century threat actor compared to dedicated cybersecurity available in the Cloud.

1.4.1. Overview of Cloud Technologies

Traditionally, companies purchase their computing capabilities and deploy them into private data centers owned by the organization. In this arrangement, the company is responsible for purchasing the requisite hardware, installing it in a purpose-built facility, paying for its operation and maintenance, and securing it from both physical and cyber threats. Also, under this arrangement, the company must estimate its maximum usage during peak periods and ensure that its capacity meets those needs even though the vast majority of the time, its servers may be operating at only 20 to 30 percent of capacity.

Cloud computing technologies have revolutionized this model for many organizations. Through their flexible and on-demand subscription models, they enable companies to avoid or at least reduce heavy up-front capital investments and instead pay for IT resources on a usage basis. They force firms to focus on what differentiates them in their business but more importantly, they have reduced the costs associated with the basic enablers of IT, i.e., processing, storage and networking. The advent of massive commercial cloud offerings operating at enormous scale have enabled accelerations in cost reduction that have been transformative.

Cloud technologies allow organizations to dynamically access a shared pool of configurable computing resources for rapid provisioning and release and pay for only the amount of resources they use. Organizations access these resources over the Internet using a self-service and automated business model. Because of their hyper-specialized design and delivery, they further accelerate IT progress through regular software and hardware upgrades and continuous innovation in a wide range of areas such as AI, machine learning, IoT, and data science.

1.4.2. Security Considerations

Security Risks for Cloud-Based Financial Systems: Access Management and Provider Privileged Access Management

Security is the core issue surrounding the deployment of any financial application in a cloud infrastructure. When the entire computing infrastructure gets outsourced to an external provider, the ability of the company to govern the security becomes limited. The vendors that truly manage the security controls and have the same type of access protection implementation used in the financial institution as well as extensive security audits are limited. Most companies are not in a position to truly conduct audits of these vendors. Potential design flaws within the application can either be gaping holes or misconfiguration of system authorizations around sensitive financial data. Financial companies ignore the ability of employees of the vendor to access the data under the concept of privileged access management.

The major security threats to consider when hosting financial applications in the cloud involve issues such as insider threats or usage of poorly thought out privileged access model and poor design of the application itself. Although, cloud vendors may implement encryption and tokenization solutions to help protect sensitive data within their infrastructure while in transit or at rest, the fundamental issues around PAM have to be considered on an ongoing basis. What happens when the vendor granted access into the company's environment gets misused either by an employee or partner? Since PAM issues cannot be mitigated during the implementation of a cloud application and during that internal application lifecycle, they must be carefully monitored and audited regularly to ensure protection of sensitive functions and data within the financial infrastructure remains in balance with usability. Security considerations also extend to the underlying infrastructure. Include consideration of the security controls surrounding shared physical and logical resources of the underlying virtualized or mesh infrastructure shared by applications within a multi-tenant model.

1.4.3. Cost Efficiency and Scalability

As companies move their operations online, they can access these resources as needed, relieving users of the burdens of installing and operating complicated software applications. Furthermore, for online applications such as email, order processing, and other simple services, cloud service providers can achieve even greater economies of scale than the users themselves and pass these savings on to users in the form of lower subscription prices. The price of cloud compute resources has dropped dramatically over time and now represents an important part of any organization’s cost structure. However, for many companies, the cost of these services has dwarfed their capital investment for all operating expenses, especially among smaller firms. Lower costs and easy access to technology also spur innovation by allowing startups to quickly and inexpensively build and test new products.

Many organizations are drawn to the cloud by cloud-based services that require sizeable upfront investments. As companies move to the cloud for functions such as enterprise resource planning or customer relationship management, they benefit from avoided capital investment costs and relative short implementation timelines. In addition, cloud providers enable smaller organizations to access technology and services with levels of performance and sophistication not previously affordable. These services include heavy duty processing capabilities, interoperability across devices, and high availability accounting for potential disasters. While the capital investment to design and build such resources could have limited many companies, cloud service providers can offer these and other features at low cost and with reduced risk. Further businesses, by pre-establishing procedures and shipping fully configured packages, can enable companies

to obtain results quickly, with lower staffing requirements and avoid long configuration, testing, and preparation.

1.5. Case Studies of Transformation

In order to illustrate how intelligent automation and cloud platforms create tangible changes in the business operations of traditional finance, the following sections report how banks, investment firms, and insurers in developed and emerging regions of the world are maneuvering these technologies. The characteristic examples selected can each be seen as representative of a wider trend.

The global pandemic served as a catalyst for many banks to accelerate their transformation journey. Guided by the lessons learned, bank executives seem determined not to step back to the status quo, especially regarding their bank's digital maturity. Banks are deliberately aligning their digitalization objectives with their corporate strategy and closely monitor progress. Since investments into digitalization are substantial, corporate governance and risk management in terms of budget setting and prioritization of initiatives are becoming increasingly important. The target is to achieve positive results both in terms of revenue increases and cost savings.

Insurance companies are leaning into the advancements in artificial intelligence, robotic process automation, and analytics that promise to take care of otherwise tedious work. They are redirecting talent to higher-value activities while also making the customer experience more seamless and pleasant. This paradigm shift presents a massive challenge and an incredible opportunity. Moving from traditional silos to cloud-based technology enables general insurers to enhance the customer experience, maintain ongoing relevance to customers, gain deeper insights into customer behavior, and deliver personalized products and services. Such improvements would help transform a historically cautious sector into one that challenges customer perceptions. The industry has moved from solely focusing on banked customers, and is now increasing its focus on the unbanked and the underbanked.

1.5.1. Banking Sector Innovations

Banks have traditionally operated as intermediaries between capital providers and consumers. Their position has historically allowed them to earn significant margins by charging interest on the loans they make and by collecting fees for other services. Within the past twenty years, however, competition has intensified due not only to other banks, but also to numerous finance companies and related organizations offering the same services, often at lower prices and with better technology. Customers have been less

patient with long transaction times for foreign exchange, credit authorizations, and fund transfers, and banks have been under constant pressure to improve the speed and quality of their financial services, not to mention lower their costs. Against this backdrop, the banking industry, having just recovered from an enormous wave of bankruptcies triggered by a debt crisis, is in the forefront of American industry in its use of technology to enhance competitiveness. With perhaps more than a little help from unusual competitors, the nonbank and international banks that have been undercutted by technological innovations that have lowered the cost of providing various financial services.

There are several reasons to believe that the changes that technology is bringing to consumer financial services will accelerate in the coming years. First, consumers have become increasingly sophisticated in their demand for financial services. New products, such as money market savings accounts, have placed pressure on banks to earn the highest possible interest rate on consumer deposits. Second, so banks are competing on price for consumer deposits. Bank branches can often only recover their costs through service charges on basic checking accounts. Technology has allowed money market funds and other money market instruments which pay higher rates of return to offer checking features similar to those offered by banks.

1.5.2. Insurance Industry Adaptations

The industry that least adapted to the Digital Revolution until now was the Insurance sector. Life Insurance companies are often 200 or even more years old and Property/Casualty Insurance carriers have about 30 to 100 years of existence. They took long to sell their products, which are expensive and complex, and sell little more than promises to provide services in the future, often after death. Also, the Insurance business required and still requires a large amount of capital to be licensed. The Insurance sector has its specificities and differences. But, as the Banks, the Insurance companies started to feel the pressure for change imposed by new competitors that are not insurance or banking companies, the InsurTechs, that started to appear and gain market in the recent past with the offer of cheap products and fast delivery. They have in common that both the banks and the InsurTechs are in the same field, moving people's money around, when a life is close to be extinguished and the final payout is done.

The Digital Revolution has also provoked the commutation of the Human Resources. Jobs will disappear, but as the crisis alerted, there are still many "robots" on the street – no job and no money. The Insurance Sector has an advantage in relation to other financial segments, there are many people that are in the street because they became old and were forced to retire. Although they have no money to hold policies, they have something that few people have: Time. Another change is the information available on the net. In this

way, customer doubts can be answered during the answer and offer process, a function that has been traditionally entrusted to Sales Reps, which still are paid high commissions.

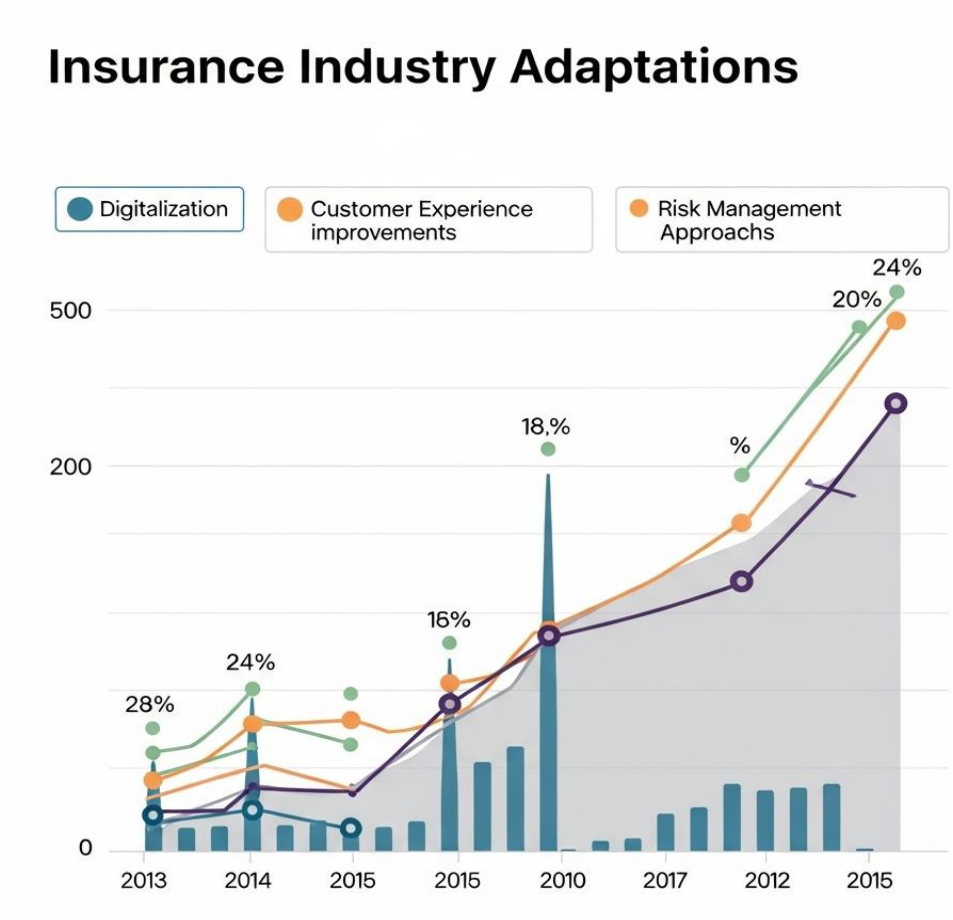

Fig : Insurance Industry Adaptations

1.5.3. Investment Firms' Strategies

Investment firms have mainly targeted three areas of their business operations in recent years. Creating virtual work environments is the first goal. Organizations have established the necessary foundations to ensure that workers can produce all day while at home. Workspaces in the cloud now include file sharing, video conferencing, and instant messaging functionality. Investment banks have been able to restore business as usual after COVID-19 thanks to the success of these programs. The focus has now shifted to enhancing workers' productivity while working from home, and evidence shows that this is achievable. Furthermore, business operations by investment firms are projected to persist in the cloud since employees do not appear to be in a rush to return

to physical offices. The second component of a successful digital strategy is ensuring that remote operations are backed up with modern technology. Leading investment firms are investing in new infrastructure, with a focus on cloud-enabled tools that can boost data processing and service delivery. The realignment of the workforce will take some time, and emerging technology should lower the risks connected with distant work in the interim. According to the third goal, firms must upgrade the digital parts of their internal and client-facing operations and find methods to offer services through automated channels. Numerous firms have not yet begun modifying their internal or external business models and service structures to improve client journeys or the economics of production. Investment firms' digital transformations are fiercely led by their front-office functions. CIOs collaborate closely with their front-office executives since the technology is mission-critical. By automating modeling and other labor-intensive activities, new cloud- and data-enabled products are substantially changing these sectors. Overall, front-office jobs have used technology to maintain their approaches concentrated on high-return areas despite a backdrop of high-revenue pressure and increasing costs. This technology augmentation is marked by examples of artificial intelligence-driven, new risk models.

1.6. Regulatory Implications

The financial services sector is among the most heavily regulated sectors in the world. Regulatory organizations monitor all system participants to maintain stability and safeguard customer interests. Developed economies impose access barriers, investment expensiveness, compliance complexity, and tax burden to limit the number of active players in this sector, a monopoly among the dominant players being a highly desirable outcome. In the rest of the world, financial players are still largely unregulated, with higher risks to customers. Governments collect taxes from the few financial players and lend them huge amounts of money at a lower interest rate, so why not regulate the sector and let every citizen protect his/her interest? New regulations have attempted to capture new realities by inserting new provisions and tougher constraints in existing regulations, but these need to be revisited for adequate implementation.

Intelligent Automation opens up a Pandora's Box of risks that financial regulators are ill-prepared to handle; AI-based decisions are opaque and beyond accountability, training data carry existing biases into tomorrow's decisions, and robots need appropriate supervision; furthermore, existing regulations are built around the actions of human beings, not of algorithms working autonomously. So, a different approach will need to be followed. Perhaps, the financial sector is the most readily available testing ground for the principles of ethical design that should be applied globally. Core concerns regarding AI use include respect for human agency, safety and security, transparency, fairness,

data governance, accountability, and, remarkably, also sustainability and societal and political impact. Enforcing it rigorously and including sustainability as a new pillar of financial regulation could steer the entire sector towards the right approach, while ensuring that financial players do not deviate from the accepted path.

1.6.1. Compliance Challenges

Compliance challenges presented by IA include: a lack of transparency, an ability to generate biased or unfair outcomes, a reduction in opportunities for human involvement in the decision-making process, and a temptation to automate IA systems too far down the, previously human-dependent, usage paths. Such challenges generally cut across all industry sectors that IA touches, not just FinTech; and they are challenges offered by the possibilities presented by advanced IA technologies.

How do IA systems stumble with respect to sufficient transparency? Decision flows through infrastructure are sinister. They are effectively black boxes with respect to how decisions are being made. This level of opacity can clearly irritate a regulator concerned with compliance:

- Credit scoring models that create increasingly tend to be furnishable with very large feature sets that cause the inbuilt risk analysis rules to be, in effect, impenetrable. Getting these credit score models certified by regulators is thus getting increasingly difficult.

- Facial recognition systems capable of providing the policing community, and others, with automation assistance in making assessments about probable criminality or dangerousness can likewise become black boxes. And for similar reasons as with regard to credit scoring models, causing the ability of these cop-assist facilities to be certifiable is becoming a challenge.

1.6.2. Impact on Financial Regulations

New technologies such as AI, cloud ecosystems, decentralized networks are challenging and transforming traditional compliance functions such as KYC/AML, transaction surveillance, detection and reporting of suspicious activity, and risk scoring and assessment. Financial regulators need to balance the competing priorities of enabling firms to innovate while ensuring the safety and security of the financial services industry. Regulators around the world have established regulatory sandboxes that would allow firms to test innovative products, services, and business models in a controlled environment but this is not the answer to all problems. Regulators need to ensure that

traditional banks and financial institutions are not put at a disadvantage to their unregulated or lightly regulated crypto, fintech, and decentralized finance challengers.

If successful adoption of such technologies results in safer and more resilient financial institutions, regulators can use these technologies to augment the traditional data sources to bring additional analytical power to the compliance functions. When firms can bring new technology-enabled products and solutions into the marketplace, new regulatory challenges emerge such as how regulators use these new solutions to fulfill their missions, fill resource gaps, which solutions are better suited for better detection of bad actors, and what is the best approach to adopt regulatory data collection and sharing. 2023 may be the year of reckoning for regulators across the world as they grapple with some of these questions. The recent turmoil within the crypto industry has made it abundantly clear that the current rules are woefully inadequate and unsuitable for in-scope companies. For financial institutions that hold deposits insured by the government and have access to the federal facility in times of liquidity stress, everything that they engage in is a regulated activity. Yet some of these activities are impermissible, meaning that they cannot do those activities. Other activities are permissible but the companies must go through the bank charter.

1.7. Future Trends in Financial Technology

Over the past decade, the presence and influence of technology on financial services has only grown in sophistication. The foundation of fintech is solid. For financial organizations, the acceleration of clients' need for convenience has resulted in higher expectations regarding their communications with the organization. Customers expect intuitively that their experiences with financial institutions be as easy and efficient as those with other service channels — or even better, than other service channels. Financial services are evolving into the financial services ecosystem, formed by a collaboration between banks, nonbank lenders, payments networks, payment service providers and other technology organizations. These partner ecosystems are critical. A bank's ability to capitalize on partnerships to deliver solutions that use best-practice applications is an opening for fintech growth.

The pandemic exacerbated the move online for consumers and businesses — and fintech has taken root and flourished in the wake of lockdowns and ongoing remote work. In the rush to reduce costs and deliver seamless digital transactions for every aspect of finance from payments to collections to view balances, financial organizations have engaged in a whirlwind of transition involving payments, lending, savings, insurance, risk management and investment. Mobile apps were speeding up a financial services transition that has occurred in months rather than years or decades. Currently, the development of enhanced digitization continues, with every player in the finance

ecosystem taking a seat at the digital table. Organizations that do not understand how to take advantage of these advancements are at risk of falling behind in the development of their digital offerings.

Fig 2 : Future Trends in Financial Technology

1.7.1. Emerging Technologies

Just as traditional industries have undergone digital transformations, so too will finance. Volume and velocity are two vectors along which such transformations may occur. There is already conclusive evidence that many traditional banking products are no longer viable and that customer service is the key to successful retention in the face of thousands of competitors. Products support customer engagement, but engaging customers, more often and in more deep and meaningful ways, is the key to loyalty and enduring success.

Embedded finance is the term that describes the embedding of financial functionality via APIs in software platforms whose primary reason for existence has nothing to do with finance. A bill payment solution is embedded in a biller's web site where consumers go to pay bills. A digital wallet is embedded in the phone. A social payment solution is part of the social services platform that users have embraced because it is how they engage

with each other. A card-not-present payment method is provided by Big Techs, available at any merchant that enrolls in payment services. A card-present payment method is made available wherever a merchant is set up to accept contactless card payments, in this case prepaid card payments.

Disruption comes in waves. It can happen surreptitiously and gradually, as merchant services did for 40 years, or elastically and suddenly, as happened with credit cards for travel in the late 1950s and 1960s. The second wave of the managed shift to digital banking in the early years of the 21st century — enriched by the notion of embedded finance and the emergence of FinTechs — has a different relationship with consumers. Even banks and credit unions that have embraced digital solutions struggle to obtain attractive returns on the capital invested. Customers demand low or no service fees for the kind of transactional activity that pays an attractive return after the cost of capital is considered.

1.7.2. Predictions for the Next Decade

We often get asked what we see as the trends in FinTech for the next decade – such as what we think investment areas will be, what areas will succeed and/or fail, what companies to watch, etc. So with that in mind, here are some digital banking trends that we think may be of interest to those of you following FinTech.

RegTech 3.0: As institutional investors gain greater scrutiny and are subject to ever-increasing requirements around KYC and AML diligence, the demand for regulatory software systems will again take on greater importance. Enhancements in AI, visualization, and hosting solutions will drive the development of more effective RegTech solutions.

Digital Asset banks, wallets, and securities: Cryptocurrency is here to stay and government sponsored cryptocurrencies are on the way. With these new instruments being accepted, demand for banks and wallets that can offer services will flourish for the foreseeable future. The same goes for regulated exchanges and banks that can offer crypto securities.

The expansion of Data Aggregation and AI: As Data Aggregation technologies mature and the use of machine learning and AI enhance our understanding of data, never before will it be easier to assess company health, fraud detection, and less expensive customer acquisition and retention. Look for new prospects and companies that leverage this technology to emerge.

Some investment areas will reach parity with traditional institutions, while some aspects will be adopted by the larger banks and provided for their existing customers. Financial

Embedding will have arrived and financialization will have rocked the traditional financial services boat once and for all.

1.8. Conclusion

Intelligent automation and cloud-centric architectures can significantly enhance the experience economy in retail financial services. The driving forces behind this transition are customers' expectations of a delightful experience unfettered by technology, a culture of validation through action, and a strong desire for overall well-being for all people, communities, and the planet. Modern digital banking platforms built atop an intelligent automation and cloud-fundamented decentralized technology architecture, a platform of platforms, deliver compelling experiences through the seamless co-creation of products, services, or experiences in the anticipation of changing customer needs, in collaboration with regulated financial institutions. The seamless integration of a decentralized technology architecture with scalable intelligent automation capabilities offers financial enterprises the speed and agility to innovate products, services, and entire customer experiences in a safety and soundness framework.

To achieve these compounding benefits, the defect-free integration of the processes managed by intelligent automation is paramount. Digital disruption by embedded finance demands the right first-time automation of every process that delivers tremendous technology leverage across the ecosystem of financial institutions, embedded finance integrators, solution providers, and customers. The very ambitious and visible stated missions of major technology companies, in collaboration with fintechs and financial institutions, mandates the intelligent automation-ready architecture, the right first-time intelligent automation for both non-IT and IT processes, and the seamless productizing of intelligent automation capabilities, to enable the evolution of the enterprise to a cloud maker, not just a cloud taker. In this new world order, financial enterprises need help to peel away the layers of outdated technology and isolated processes. They need partners to guide them on their digital transformation journey, a path that, if done correctly, results in the delivery of a superior experience. Despite the challenges faced by enterprises, the demand for products and services, and the need for everything around it, do not evaporate. They merely transform.

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