



The Influence of Disruptive Technologies on the Financial Services Industry and Auditing Standards

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Abstract

The financial services sector is rapidly evolving. FinTechs have emerged due to the confluence of technology and finance, altering the fundamental basis of the financial industry. It is anticipated that the success of financial firms would be reliant on their capacity to shape the sharing economy and customer intelligence and deal with technological advances such as blockchain, robotics, Artificial Intelligence (AI), and others. This transition has resulted in a fundamental shift for many organizations that were not previously considered digital enterprises in the business world. However, these firms recognize that digital transformation is necessary, and a fundamental culture shift generates value. They prioritize investments in new systems and data analytics technologies to understand better their business and the needs of the markets they serve to avoid being disrupted. Audit firms must consider how change may impact their business practices like corporate organizations. This is more than a technological shift as well as a transformation in how auditors perform their duties. It enhances connectivity, utilizes automation to boost time spent on areas needing judgment, and aids in enhancing analysis and insight.

Keywords: - Financial Services, Technological Innovation, Artificial Intelligence, Blockchain, Robotics, Automation, Audit Performances, Digital Transformation

Introduction

The financial services industry is undergoing a tremendous digital revolution that will have far-reaching impacts on how businesses operate. New technology allows banks, insurers, and other established financial services firms to restructure their operations and develop new client-serving strategies.¹ Concurrently, the emergence of these technologies presents chances for competitor enterprises, such as payment services providers. Moreover, financial services firms operate in a highly regulated environment, requiring that they

¹ Blockchain: A Promising Future | Wolters ... - Wolters Kluwer. <https://www.wolterskluwer.com/en/expert-insights/blockchain-a-promising-future>

manage digital transformation while simultaneously satisfying stakeholders' aspirations for greater openness and confidence.

There is a significant movement toward modernizing outdated systems in the financial services industry and introducing an agile manner of working across all business processes.² Companies seek to rearrange their operational models to become more nimble and realize more efficiencies. To meet consumer needs, investments are continuing in creative online banking, digital platforms, the exploration of alternative channels, client-preferred insurance applications, and improved data quality for more precise reporting. Adoption of technology is the critical factor enabling these transformations.

Principally Disruptive Technologies

Artificial intelligence (AI), blockchain, data analytics, the internet of things, and robotic process automation are the key technologies in which financial services companies invest (RPA). In order to replace outdated systems, an increasing number of financial institutions are turning to the cloud, which is not only viewed as a driver of efficiency but also as a facilitator of change. The advantages of cloud infrastructure for financial services include reduced costs, more significant and more integrated security, enhanced scalability and flexibility, and a more efficient and cost-effective approach to big data and analytics.

Automation is an essential aspect of digital transformation for financial services organizations.³ Banking and insurance, in particular, are businesses that rely heavily on transactions and create vast quantities of data. The processing of this data automatically enables them to function much more efficiently and utilize technology such as AI and data analytics to retain and grow their customer base while controlling their risks.

For instance, businesses can utilize chatbots to improve the customer experience, AI technology to extract complex information from documents, and analytics to understand business operations better. In addition, many financial services businesses are collaborating with ecosystem partners to build new goods and services due to the automation possibility. The technological advancements we observe considerably enhance the interconnectedness inside the financial services industry. Increased connectivity enables banks and insurance businesses to react and adapt to ubiquitous and constant change more quickly.

I. Artificial Intelligence (AI)

According to a PricewaterhouseCoopers study, most financial services decision-makers are investing in artificial intelligence (AI). Fifty-two percent of executives confirmed they are making "substantial" investments in AI, while seventy-two percent believe it will be a competitive advantage for their business. The anticipated cost savings of \$447 billion by 2023 would undoubtedly convince the skeptics of artificial intelligence's promise for the industry.

How then do financial institutions employ artificial intelligence? The most apparent use of artificial intelligence (AI) in the banking industry is for customer support via chatbots and robots. The technology assists

² Financial Services and the cloud: Accelerating the <https://cloudblogs.microsoft.com/industry-blog/financial-services/2019/04/01/financial-services-and-the-cloud-accelerating-the-compliance-journey/>

³ Narwal Partnership with Katalon - Blog | Narwal. <https://www.narwalinc.com/blog/news/narwal-partnership-with-katalon/>

financial organizations with risk management and lending decisions and serves as a framework for different technologies such as big data analytics, robotic process automation, and voice interfaces. AI is also essential in enhancing security and preventing and detecting fraud in financial organizations. Several top financial companies like Bank of America and JPMorgan Chase use AI to improve customer service. AI is also used to support mobile banking, which provides clients with access to financial services 24 hours per day, seven days per week.

II. Blockchain

Utilized for the first time in Bitcoin, blockchain technology is a distributed database that can track transactions verifiable and permanent. The Harvard Business Review forecasts that blockchain will disrupt banks similarly to how the internet transformed the media industry. Blockchains are highly secure, transparent, and relatively inexpensive to operate. More will use the technology as more financial institutions recognize how blockchain technology can enhance security, reduce costs, and boost customer satisfaction. In multiple ways, blockchain can benefit the banking industry. Bitcoin demonstrated how it could be used for payments. However, it can also revolutionize how our capital markets function by existing tokenizing bonds, equities, and other assets and storing them on public blockchains. Blockchains would eliminate gatekeepers and third parties from the loans and credit system, making borrowing money more secure and reducing interest rates. Blockchain might also reduce the need for manual bank ledger data reconciliation. Smart contracts powered by blockchain technology will disrupt the current exchange of information and funds.

III. Big Data

Examining how an industry invests in technology is one method for determining its impact on a sector. IDC's Semiannual Big Data and Analytics Spending Guide identifies the banking industry as one of the top industries investing in big data and business analytics solutions.⁴ The amount of data collected by the banking industry is mind-boggling, including credit card transactions, ATM withdrawals, and credit scores. Moreover, utilizing this data to make business decisions and properly process it to get actionable insights will be crucial for future competitiveness. Using big data, financial institutions can learn more about their customers and make real-time business decisions, such as learning about a customer's spending habits, sales management such as segmenting customers to optimize marketing and product cross-selling, fraud management, risk assessment, and reporting, and customer feedback analysis. Not only does considerable data analysis aid in identifying market trends, but it also streamlines internal operations and reduces the risk for financial institutions.

IV. Robotic Process Automation (RPA)

Since robotic process automation can reduce labor costs, operating expenses, and errors, many financial institutions are beginning to utilize this technology to provide the most outstanding user experience possible

⁴ How Banking Chatbots are Transforming Financial Services. <https://artificialintelligence.oodles.io/blogs/chatbots-transforming-financial-services/#!>

for consumers and to remain competitive.⁵ In robotic process automation (RPA), the software is built to enable robots and virtual assistants to do repetitive and labor-intensive activities without human interaction.

RPA is used to automate portions of the claims-handling operations in insurance businesses. RPA, through customer care chatbots, enables banks to handle low-priority inquiries from customers, such as account and payment inquiries, so that human customer service representatives may focus on high-priority issues. Another way RPA affects financial organizations is by promoting compliance in a highly regulated business. Customers can now receive a decision on their credit card application within a few hours or, in some instances, nearly immediately after submitting their information. Additionally, it optimizes mortgage processing.

V. Cloud Computing

Cloud computing stores and provides data and computer services, such as servers, databases, networking, software, and analytics, over the internet.⁶ Cloud service providers use pay-as-you-go pricing to charge individuals and businesses based on their usage. Cloud computing enables around-the-clock, global client assistance. In addition, cloud computing increases the agility of financial institutions and facilitates the scaling up of services. Since financial organizations only pay for their services, cloud computing can help them control costs. Additionally, cloud computing enables safe online transactions, digital wallets, and online transfers.

VI. Voice Interfaces

Financial institutions deploy chatbot systems enabled by powerful artificial intelligence to minimize costs and meet consumers' expectations for the quick response and effective issue resolution. A chatbot can replace traditional forms of two-way communication such as email, phone, and text. Gartner predicts that by 2020, chatbots will handle at least 85 percent of customer service conversations. Chatbots provide an almost instantaneous conversational experience that may be tailored, allowing clients to receive expedited premium service. Bank of America, Capital One, and Wells Fargo have utilized chatbots for account-related questions for years, but today's sophisticated chatbots might also provide financial advice. Additionally, bots can provide unified financial management across the many channels via which consumers communicate with their financial institutions, thereby rectifying the fragmented nature of the past. This ever-improving technology will enable customers to interact with their bank on their terms.

VII. Cyber Security and Resilience

Financial institution security is paramount in an industry dealing with sensitive personal and financial data that is an attractive target for cybercriminals. It would be prudent for financial institutions to assume there will be a security breach and plan for how to minimize the damage, as it is nearly impossible to prevent all cyberattacks due to the diverse ways consumers interact with their money and the numerous vulnerabilities that exist regardless of how much time and effort is invested in cybersecurity prevention. Security is never guaranteed

⁵ Robotic Process Automation. Part 1. About the Technology <https://newline.tech/robotic-process-automation-part-1-about-the-technology/>

⁶ Three technologies transforming accounting, finance, and tax. <https://blog.epson.com/enterprise/3-technologies-transforming-accounting-finance-and-tax/>

from mobile apps and web portals to third-party networks and even vulnerabilities supplied by employees and consumers, even if periodic attacks can be thwarted. To protect against cyberattacks, financial institutions must do more than invest in technical protections. They must collaborate with governments to ensure that cybersecurity is prioritized, be proactive in educating employees about their cybersecurity responsibilities and the importance of following protocols, and reach out to the public to help them understand the situation and their role in keeping their data secure.

VIII. Instant Payment system

Technology has altered consumer and business payment expectations. Despite the lack of rapid payment infrastructures, instant payment options are accessible in several markets. Banks that offer alternatives to immediate payments actively market apps to their consumers in certain countries. In others, banks collaborate to give a more extensive customer base a direct P2P payment experience. The availability of an immediate payments platform provides banks with an intriguing chance to meet consumer expectations for transaction speed and improve customer satisfaction. More transactions will be conducted digitally rather than in cash with quick payments, resulting in cheaper and more user-friendly payments. By developing and merging instant capabilities with e- and m-commerce solutions, banks and credit unions could establish a portfolio of innovative new services.

IX. Augmented and Virtual Reality

If augmented reality (AR) or virtual reality (VR) can better individual user experiences, banks can also be institutionalized by banks to transform the banking system. The possibilities are still in their infancy, and testing is conducted worldwide. The Commonwealth Bank of Australia, for example, targets bank customers who are looking to purchase or sell a home. Rich data and augmented reality present historical information about property sales, price trends, current listings, and sold properties in the vicinity. This knowledge assists individuals in making prudent sales and purchasing decisions. Analysts believe that augmented reality and virtual reality might be used to provide bank customers with autonomy in terms of at-home banking. Hybrid bank branches are conceivable as well.

X. Quantum Computing

Quantum computing represents a significant leap forward in computing capacity, surpassing the promise of cloud computing and blockchain technology. Quantum computing, according to FedTech, utilizes the laws of quantum mechanics to perform complicated data operations. Quantum computing utilizes quantum bits, also known as qubits, instead of the bits used by standard computers (1s or 0s in binary). These can be interpreted as 1s, 0s, or both, giving exponentially greater computing power than standard computers by shortening the computation process.⁷ Due to several stability and security problems, its widespread implementation in business applications will likely not occur. Despite this delayed timescale, corporations like JPMorgan and Barclays are researching the potential of quantum computing alongside IBM.

⁷ Use cases for quantum computing - Qureca. <https://www.quireca.com/use-cases-for-quantum-computing/>

XI. Advanced Machines

In the coming years, the impact of intelligent machines (intelligent vision systems, virtual customer assistants, virtual personal assistants, smart advisors, and other natural-language processing technologies, etc.) on financial institutions is beginning to take shape. From applications for Amazon's Alexa to bank-developed virtual assistants such as Bank of America's Erica, the era of intelligent computers serving as digital concierges on behalf of consumers is rapidly approaching. Banks and credit unions investing in improved digital interaction will have more profitable customer connections. Customers will continue to self-select the bank that offers minimal friction and the most pertinent help and guidance.

The digital transformation of the auditing system

In the same way that increased connectivity is revolutionizing the financial services industry, it is also transforming the auditing practices of financial services organizations. Auditors are placing technology at the center of their audit strategy to have better access to the data that corporations retain and interrogate, thereby improving audit quality and offering more excellent value to the stakeholders of audited entities. A significant advantage of a digitally transformed audit is that it generates more visibility into the firm and its threats. Auditors can get more significant insights from the data kept by financial services businesses, thanks in particular to data analytics. This, therefore, enables them to pose more complex questions to management, thereby increasing the value of the audit for the audited business and all its stakeholders. By automating some procedures and embracing technology such as artificial intelligence and machine learning, the administrative load on organizations throughout the audit process is minimized, and auditors are given more time to focus on the application of judgments. This is also a significant factor in the accounting standards.

The digital audit is expanding in tandem with the industry in financial services. Auditors continuously innovate to accommodate technological advancements in financial services and other industries. They comprehend the necessity of utilizing technology to provide the most outstanding quality service and to adapt to changes in the larger company environment. This development in auditing has undeniable benefits for financial services companies. In order to establish a more effective and efficient audit plan, auditors will be better able to comprehend a financial services company's internal processes, utilize professional skepticism constructively, challenge management, and assess risks as they interrogate larger data samples. In addition, they will utilize new skill sets in areas such as communication, critical thinking, data analysis, and design to accomplish this. Financial services organizations are under increased pressure to establish credibility. The digital audit is one technique to equip them with a deeper understanding and broader perspective on their work.

Conclusion

Progressive financial services organizations are on the hunt for new technology that can enhance their efficiency, speed of service, and client experience. The exponential rise of information technology has driven corporations to revolutionize the financial services industry through customer experience management by digitizing banking technology. As a result of competition from consumer brands such as Amazon, Facebook, and Google, the financial services industry seeks to enhance online customer service. Most financial services

executives believe that enhancing the client experience is the primary driver of banking digitization. Intelligent analytics enables financial services organizations to use the abundance of consumer data to comprehend better and serve their consumers.

Additionally, technology has helped businesses produce novel financial services. The improvement of payment systems is a significant challenge for enterprises. There is also a chance that Robo-advisory may become an important use. Likewise, blockchain-based services will increase in prominence over the next few years. The digitization of financial services is a revolution in progress. Enterprises can focus innovation on a separate company or integrate it throughout their enterprise. This requires "excellent engineering." Firms will do well to have a deep bench of engineers who can provide vitality to innovation management while embracing a start-up mentality. Organizations that provide financial services can leverage the cloud to make operations more transparent and cooperation simpler. In response to the digital revolution of businesses, the role of audit professionals is evolving. Using automation for ever-increasing data quantities can aid in the delivery of high-quality audits and enable auditors to devote more time to risk detection and business insights. This audit progression results in better connectedness and openness and, as a result, increased confidence among stakeholders. The evolution of technology is crucial to efforts to improve customer service through customer experience management. Adopting modern banking technology is essential for financial services firms' success.

BIBLIOGRAPHY

- Agur, I.; Peria, S. M. & Rochon, C. (2020). Digital Financial Services and the Pandemic: Opportunities and Risks for Emerging and Developing Economies. International Monetary Fund Research. Special Series on COVID-19.
- Ardic, O. P., Heimann, M., & Mylenko, N. (2011). Access to financial services and the financial inclusion agenda around the world: a cross-country analysis with a new data set. The World Bank.
- Beck, R.; Avital, M.; Rossi, M. & Thatcher, J.B (2017). Blockchain technology in business and information systems Research. Business & Information Systems Engineering, 59(6).
- Campbell-Verduyn, Malcolm (2017). Bitcoin, Crypto-Coins, and Global Anti-Money Laundering Governance. Crime, Law, and Social Change
- Chauhan, V., & Choudhary, V. (2018). Barriers to adopting internet banking: analyzing the influence of information availability and consumer demographics. International Journal of Financial Services Management, 9(3), 207-225.
- Claessens, S. (2006). Access to financial services: a review of the issues and public policy objectives. The World Bank Research Observer, 21(2), 207-240.
- Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in the use of financial services across and within countries. Brookings Papers on Economic Activity, 2013(1), 279-340.

- Harden, G. (2002). E-banking comes to town: Exploring how traditional UK high street banks are meeting the challenge of technology and virtual relationships. *Journal of Financial Services Marketing*, 6(4), 323-332.
- IFC. (2017). Digital financial services: challenges and opportunities for emerging market Banks. EM Compass Report, No 42, August. International Finance Corporation, World Bank.
- Krivoruchko, S.; Ponamorenko, V. & Nebera, A. (2018). Central Bank Policy and Cryptocurrencies. *Journal of Reviews on Global Economics*, 7, pp. 549-561.
- Malady, L. (2016). Consumer protection issues for digital financial services in emerging markets. *Banking & Finance Law Review*, 31(2), 389-401.
- Pandey, P. K. (2017). Bitcoin as Emerging Virtual Currency and Its Related Impact on India. *International Journal of Latest Engineering and Management Research (IJLEMR)*, 2 (7), pp. 59-63.
- Richter, C. Kraus, S. & Bouncken, R. B. (2015). Virtual Currencies like Bitcoin as A Paradigm Shift in The Field of Transactions. *International Business and Economics Research Journal*, 14 (4), pp. 575-586.
- Sarel, D., & Marmorstein, H. (2002). Migrating customers to new distribution channels: The role of communication. *Journal of Financial Services Marketing*, 6(3), 254-266.
- Tsanidis, C.; Nerantzaki, D.; Karavasilis, G.; Vrana, V. & Paschaloudis, D. (2015). Greek Consumers and the Use of Bitcoin. *The Business and Management Review*, 6 (2), pp. 295-302.
- Woodside, J. M.; Augustine, F. K. & Giberson, W. (2017). Blockchain Technology Adoption Status and Strategies. *Journal of International Technology and Information Management*, 26 (2), pp. 65-93.

