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Understanding cybersecurity management for FinTech: introduction to FinTech and the importance of security objects (Article 1) | IT World Canada Blog

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7-9 minutes

FinTech encompasses a wide array of technological strategies, many of which have either improved the functionality of existing financial products and services or enabled the development of novel technological solutions for the financial sector. With the rapid growth of digital platforms, the FinTech industry has become more vulnerable to digital network security breaches. Simultaneously, the recent mass inundation of consumers living and working under lockdown conditions, as well as the corresponding decreased reliance on traditional physical financial institutions during the COVID-19 pandemic has increased the consumer demand for access to safer, more secure, and more reliable digital financial services.

Understanding Cybersecurity Management in FinTech (UCMF), a six articles series, aims to explore a range of cybersecurity issues which impact banks and other financial institutions in the provision of their specific financial services. As such complex financial systems face cybersecurity challenges that include both technological and operational elements. The articles in this series are based on the extensive research work behind our book titled 'Understanding Cybersecurity Management for FinTech', published by Springer this year. This series provides insight into the cybersecurity implications which stem from the unique FinTech ecosystem. This includes the issues of navigating cyber threats, detecting vulnerabilities, mitigating risks, and creating proactive governance frameworks, policies, and infrastructures, with the goal of enabling the design of a comprehensive cybersecurity framework for FinTech used by banks and other financial institutions to provide services.

The importance of FinTech

Technology acts as a tool to improve the visibility and operations carried out to achieve annual growth and long-term objectives. Technology transforms FinTech by opening new opportunities for the financial world. Its importance has increased during the COVID-19 pandemic because more business is conducted online. FinTech has reached out to the common people in every sector, including transportation, healthcare, grocery, banking, shopping, and education. Digital wallets and contactless payments are becoming an inseparable part of our day-to-day life. FinTech has the potential to transform the economy of any nation by allowing national and international business payments quickly. It is leading the financial institutions from the front.

The impact of FinTech on the global economy

Like any other technology, FinTech has some pros and cons on the global economy. Global FinTech statistics reveal that global investments in FinTech have been continuously increasing since 2008. With the invention and use of new technological solutions, FinTech has contributed a significant share of the global market. Nonetheless, there is another angle to FinTech and its impact on the global economy. According to a report published by Citigroup, it is estimated that 30 per cent of employees in the global financial sector are on the verge of losing their jobs to FinTech.

FinTech and banking

Traditional financial institutions play a significant role in building the economy. FinTech and banking, when combined, can do wonders. FinTech can bring down prices and improve margins for retail banking businesses in mortgage, wealth management, retail payments, and small to medium scale enterprises. FinTech faces many challenges in its efforts to grab the business of traditional banking systems and transform it into a completely new structure. Some pertinent challenges faced by FinTech in the banking sector include: attracting customers, reducing costs, collaboration with startups, building customer experience, and managing risk.

FinTech and online banking

Online banking has adopted technology and improved upon achieving its objectives. FinTech provides an interactive user interface to perform complex customer transactions that appear one-click away. One of the currently explored solutions in FinTech and online banking is forecasting cash flow. This is estimated by analyzing historical transactions and predicting future trends based on the analyzed information. Smart companies utilize transaction clusters to generate cash flow projections. Accurate and adequate predictive analysis is especially important for small or medium enterprises. It allows them to make well-informed decisions, predict the demand for potentially profitable products, and prevent hazardous supply chain decisions based on currency trends.

FinTech evolution

FinTech has evolved in three phases, as shown in Figure 1. The first phase witnessed the struggles with innovation but eventually landed up with telegraph services – a fundamental means of communication at that time. The second phase involved the invention of the internet and the world wide web, which transformed the traditional means of communication into digital platforms by supporting cashless and online financial transactions. Finally, the third phase experiences the use of techno-savvy and sophisticated technology in digital wallets that support direct service for the customers.

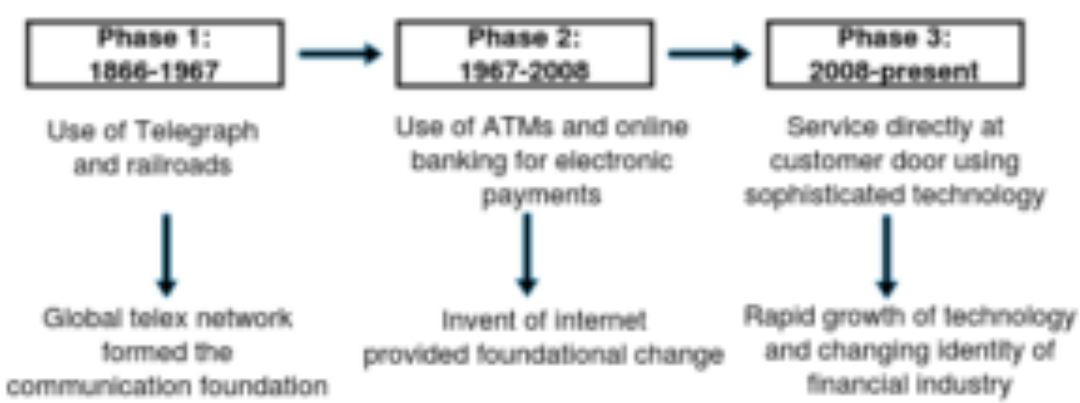

Figure1: FinTech evolution

FinTech ecosystem

The FinTech ecosystem comprises five key elements that contribute to innovative technology, competitive dynamics, and stimulating economics, as shown in Figure 2. FinTech startups form the heart of this ecosystem, including: payment, lending, wealth management, crowdfunding, capital market, and insurance companies. These companies contribute to significant innovation in the FinTech ecosystem. Financial regulators and legislature are the second components of the FinTech ecosystem. It includes government bodies that provide economic policies and development plans to stimulate innovation and global financial competitiveness in startups. The government is primarily involved in the licensing of financial services, tax relaxation, and capital requirements for startups.

Figure 2: FinTech ecosystem

Financial customers are the third component of this ecosystem. They include individuals and organizations who apply for mortgages, loans, or equity services provided by the government.

The fourth component – traditional financial institutions such as banks, insurance companies, stock market, and capitalists – adopts the innovative technology developed by FinTech startups and collaborate with them to transform their work environment. Finally, technology developers provide digital platforms for: big data analytics, cloud computing, cryptocurrency, and social media. These platforms facilitate FinTech startups' launch of innovative services such as smartphone applications to pay online through digital wallets.

What's next

This article introduces the fundamentals of FinTech and its importance in the contemporary banking system. It presents the evolution of FinTech and explores it further with essential elements of its ecosystem. The next article of the series, titled *Understanding cybersecurity management on FinTech: information security governance in FinTech* will introduce the information security governance framework for FinTech to guide corporations, board members, directors, and management personnel in the effort to secure critical data from unforeseen cyber-attacks.