Introduction

In light of the fintech industry's tremendous growth in New Zealand, recent data from Technology Investment Network analysis discovered that New Zealand's financial technology sector has global revenues of close to \$2 billion and a compound yearly growth rate of 32%, adding 14 % more high-value jobs annually. New Zealand ranks among the 10 top fintech hotspots in the Asia-Pacific Region and one of the fastest-emerging fintech hubs (FintechNZ, 2022). As with any growing industry, Fintech is faced with various unforeseen repercussions. Regulators are trying to catch up due to the fintech industry's rapid expansion as they attempt to understand the additional risks it presents (Tadiwanashe et al., 2022).

This paper attempts to understand the regulatory framework in fintech implemented using Regulatory Technology and Regulatory Sandbox. The rapid pace at which Fintech is growing exposes FinTech companies to governmental regulations, legal actions, and penalties (Hazdun, 2022). To better comprehend the dangers and issues related to this rapidly growing industry, regulators are increasing their involvement. FinTech advances are monitored and governed by the Reserve Bank of New Zealand (RBNZ) using the same legal frameworks as traditional financial services (RBNZ, 2019). The paper by Ahiabenu (2022) states that it is difficult for regulators to remain on top of FinTech innovations and supervisory design procedures appropriate for the FinTech industry because innovation typically comes before legislation. The regulations always have the potential to either promote or stifle technical innovation by businesses subject to them. Over time, rules for the financial industry have changed, often due to a scandal, crisis, or period of volatility that prompts the creation of a relevant regulation (Ahiabenu, 2022). To balance the advantages and disadvantages of technologically enabled fintech and the growing digitalization of the world economy, many regulators worldwide have innovated themselves through RegTech/SupTech programs, regulatory sandboxes, digital infrastructure, and Innovation offices (World Bank and CCAF, 2020).

Based on the paper by Ng & Kwok (2017), a recent concern in Fintech is security. It is not surprising that cybercrime is currently at an all-time high outside the FinTech sector. Many Fintech companies employ cutting-edge business models that integrate finance and technologies, periodically making their business procedures and internal controls vulnerable. However, regulations ambiguities open fraud opportunities. One of the most significant

obstacles to the advancement of fintech, according to Rupeika-Apoga et al. (2021), is the state of regulation currently present. Regulation is a powerful tool for promoting economic growth and innovation. Legal environment variations may cause regulatory arbitrage across several jurisdictions (Rupeika-Apoga and Thalassinos 2020). Regulatory fintech (regtech) solutions, as per Anagnostopoulos (2018), can result in a stable, secure, and efficient financial services ecosystem. Regtech aims to increase financial system stability by lowering the risks related to online financial services (Tadiwanashe et al., 2022). The rise of regtech expedites the shift to a new financial services regulatory structure (Zhou et al. 2018).

Literature Review

The managerial concepts discussed in this section are Fintech, Regulatory Sandbox, and Regulatory Technology. FinTech, which combines the terms "financial" and "technology," refers to technologically facilitated financial innovation that is altering how financial institutions deliver financial services and how businesses and consumers utilize those services (RBNZ, 2022). Fintech businesses, primarily start-ups, are transforming the financial services sector by delivering superior customer value that can combine flexibility with speed and is supported by innovative business models (Nicoletti B 2017).

The need for specialized FinTech regulations by Fintech firms is not surprising. On one end, the lack of a legislative framework that concentrates explicitly on FinTech may give market participants in this sector some significant comparative advantages over conventional financial institutions, at least during the early phases of development. On the other end, and particularly at later stages, this deficiency delays market growth and establishes an equal playing field (Rupeika-Apoga and Thalassinos 2020).

Regulatory Sandboxes, innovation centers, and novel rulemaking are frequently cohabiting spaces in the FinTech world that combine conduct and prudential regulation tools and approaches (RBNZ, 2019). The Regulatory Sandbox enables businesses to test cutting-edge ideas on actual customers while giving entrepreneurs access to regulatory knowledge, including both established players and newcomers (FCA, 2022). Regulators can gain valuable insights into FinTech models and identify dangers, utilizing this information to advise or issue waivers regarding the more significant regulatory environment (RBNZ, 2019). However, the Financial Market Authority NZ does not necessitate having a Sandbox due to the current regulators and legislation. According to Ng & Kwok (2017), a sandbox project would give a regulatory structure more discretion, allowing regulated institutions to test innovative ideas more quickly in a secure setting before a public launch. Based on a study by Rupeika-Apoga and Thalassinos (2020), sixteen respondents requested special regulations for FinTech companies, while eleven participants endorsed the idea of regulatory sandboxes as an essential contribution to the Fintech space. The findings of the Ahiabenu (2022) study support the need for regulatory sandboxes and Regtech as a catalyst to encourage innovation in the FinTech dimension.

Cyberattacks, data breaches, and money laundering, among other duplicitous activities, have increased due to the growth of financial technologies (Frankenfield, 2020). Regulation Technology (Regtech), which regulates possible fraud (Ng & Kwok, 2017), uses automation to address problems brought on by a technology-driven industry (Tadiwanashe et al., 2022). RegTech NZ is a non-profit organization that brings together technology vendors, businesses, and regulators to discuss issues relating to compliance with regulations, using community and technology to make it easier to comprehend and implement laws. (FinTechNZ, n.d.). Fintech and Financial institutions can retain financial stability and reduce risks connected to digital financial services by utilizing regulatory technology (Tadiwanashe et al., 2022).

RegTech can help to open up the possibility of a constant feedback loop that will enable a two-way communication exchange and alert system between FinTech companies and regulators (Ahiabenu, 2022). Institutions can reduce the dangers and expenses of missing money and data leaks by quickly identifying possible threats (Frankenfield, 2020). The development of fintech in regulatory technology can significantly enhance the results of financial products. Regulators must adopt rules that balance the fintech industry's growth with reducing the dangers involved (Tadiwanashe et al., 2022). Since RegTech offers instruments to effectively and efficiently govern a sector with multiple fast-moving pieces, it is becoming a requirement for FinTech legislation (Ahiabenu, 2022).

Limitations

According to Ahiabenu (2022), the study was limited to Ghana. It should be done on central banks in various countries to get a world view, which will help to draw references and correlations. Ng & Kwok (2017) felt that due to Fintech's recent quick rise, its impact on this examination of the financial regulator's effectiveness and performance of its strategic approach is inconclusive. In addition to lacking sufficient facilities for stakeholder input supported by regulatory feedback processes and systems for frequent regulations revision, the current regulatory framework does not allow for revolutionary development in FinTech.

It can be inferred from the numerous studies that global financial rules for Fintech are reactive rather than proactive. Through their research, Rupeika-Apoga et al. (2021) emphasize that legislation poses a significant barrier to the emergence of fintech in the European Union. It added that FinTech companies are subject to regulations created with an emphasis on what are now regarded as traditional financial services. In some cases, there are no regulations for some Fintech services. These findings demonstrate the risk of emerging FinTech trends by upending the regulatory role.

Another limitation was the demand side, such as customer and other consumers' need for FinTech solutions, acceptance of technology, their IT and financial literacy, and personal attributes of actual and potential users of FinTech services, are not taken into account by Rupeika-Apoga et al. (2021) 's study because it focuses primarily on supply-side pertaining drivers of FinTech development.

Conclusion

With the arrival of disruptive technologies, risk management by regulatory agencies in a global ecosystem would eventually grow more difficult if not well understood. According to a 2022 study by Tadiwanashe et al., authorities must create and implement a detailed policy framework to support equitable fintech growth. Active policy actions targeted at financial liberalization can be used to achieve economic advancement. Since regulatory Sandbox and Regulatory Technology are relatively new concepts being tested globally, there is a lack of specific research articles for detailed analysis.

To reduce risks related to the fintech industry, regulators should devise plans for effectively using regtech and sandbox. By investing in RegTech, enhancing its regulated sandbox capabilities, and being a catalyst to encourage FinTech innovations, FinTech infrastructures may now be interoperable on access, pricing, and quality. Equal opportunity must be created, and market domination inclinations must be discouraged to promote competition (Ahiabenu, 2022).

The regulatory framework proposed in this report provides policymakers in developing economies with crucial areas to focus on as they cope with the fintech industry's explosive growth (Tadiwanashe et al., 2022). It's also vital to remember that because FinTech developments are not broadly applicable, the regulatory stance should be flexible.

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