

RegTech: Case Study Of Its Implementation In the Financial Industry

Jiacheng Zou*

*Department of Finance, Xian- Jiaotong Liverpool University, Suzhou, China

Abstract. Regulators are emphasizing the importance of data governance to support more frequent reporting cycle. It aids industry stakeholders in fulfilling their regulatory governance, reporting, and compliance responsibilities while managing risk. The goal of RegTech is to prioritize and improve the effectiveness of regulations and governance while reducing the cost of compliance through the application of various new technological solutions. Data security, regular updates and customer privacy are the main challenges for RegTech to solve. Over these years, it is still an emergent implementation in many industries and will be facilitated in more financial fields.

Keywords: Regtech, Risk management, Abacus 360, tax reporting, FiTAX, anti-fraud.

1. Introduction

In today's financial market, FinTech and RegTech start-ups are offering products related to the financial regulatory field. RegTech is the management of regulatory processes within the financial industry through technology. RegTech companies apply various new technological solutions through software-as-a-service (SaaS) to assist regulated industry stakeholders in meeting regulatory governance, reporting, compliance, and risk management obligations [1]. With the application of machine learning and acquiring high-quality data sources, RegTech improves the effectiveness of regulations and reduces the cost of data collection simultaneously [2]. It can also solve challenges arising from automatic business, such as cyber hacks, money laundering, and other fraudulent activities. It offers data on money laundering to a company's compliance department which mitigates the conduct of underground marketplaces [3]. Additionally, it also monitors transactions taking place online in real-time to identify issues or irregularities in the digital payment sphere, preventing fraudulent activities from taking place [4]. This essay focuses on three real cases of implementing RegTech solutions in bank reporting, tax reporting, and anti-fraud defenses. The limitations of the solutions and impacts for its further development will also be elaborated.

2. Case I: SBI chooses risk management solution Abacus360 Banking

2.1. Problem

State Bank of India (SBI) is the largest commercial bank in India, and its branch in Frankfurt plays an important role in the Indo-German trade. It also connects the business trade between India and most European countries. Since the banking supervision is still in a process of constant change, SBI is confronted with challenges from stringent regulations [5]. In 2018 The European Banking Authority required financial institutions to measure their interest rate risks in the banking book (IRRBB) at least quarterly from an economic perspective [6]. This requires accurate and timely data frequently which leads to accelerating workloads for tracking and reporting those metrics. It may be costly and time-consuming for the bank to update its reporting system in accordance to the new regulation. If the system cannot guarantee the quality of data, it may jeopardize the accuracy of the report.

2.2. Solution

With Abacus360 banking, BearingPoint RegTech offers an innovative solution that combines reporting and risk management functions on a powerful platform. Firstly, Abacus360 Banking

facilitates the implementation of new regulations and enables a timely response even to short-term requirements, such as ad-hoc reporting and fire drills. The system has robust data management capabilities that ensure high data quality and integrity [7]. Additionally, Abacus360 Banking can generate a wide range of regulatory reports, covering requirements of EBA, ECB, SRB, and national supervisory authorities [8]. This simplifies the inefficiency of dealing with data from various formats and disparate systems. Furthermore, the clients can individually optimize reporting processes and receive analytics reports which enables the bank to draw meaningful insight from the data and anticipate the future trend [9]. Aside from the updated reporting function, the integrated risk modules from Abacus360 enable the calculation of risk figures based on a Page Numbers

3. CaseII Vistra opts for DAC6 tax reporting solution FiTAX

3.1. Problem

Vistra is a global corporate service provider that provides administrative and operational solutions for companies and funds meeting their regulatory compliance. Since it operates in both the UK and EU, there is a potential challenge resulted from the post-Brexit. DAC (Directive on Administrative Cooperation) requires intermediaries to disclose details of cross-border arrangements that could potentially avoid or evade tax paying, which promotes tax governance and transparency [10]. It includes hallmarks linking to tax reporting arrangements to HMRC (HM Revenue and Customs) which span across several categories about issuing appropriate levels of tax. The directive requires that all relevant arrangements be reported within 30 days, which is tight to meet the timeline. However, UK regulations made on 29 December 2020 significantly limited the scope of DAC reporting in the UK [11]. This requires a thorough understanding of the difference between the UK's DAC6 rules and the EU's DAC6 rules and has a swift modification towards the change. Moreover, it is challenging to implement DAC6 reporting lies with multiple intermediaries such as private banks, wealth management, custody banks, lawyers, and accountants, each has different business models and transaction volumes, which regards specific categorizations for DAC6 [12].

3.2. Solution

FiTAX is regularly updated reflecting the changes in tax reporting requirements and variations across borders which assures that the company complies with the latest tax regulation. This solution embeds locally specified assessments and extensive functionality for audit, automation, and submission which can help Vistra swift smoothly from different regulations. These processes are streamlined automatically so that financial institutions do not have to focus on adapting to the changes and differences but can instead focus on their core activities [13]. Each module is independent and can be used as a stand-alone solution, in order to simplify the process and avoid delaying all reporting modules share the same user interface, and IT infrastructure. Moreover, this solution offers a secure end-to-end workflow starting from data collection and assessment [14]. It can provide sophisticated data analysis efficiently, reducing the risk of errors that need manual data handling. FiTAX also established various communication pathways between intermediaries for easier exchange of information and proof of reporting [15].

4. CaseIII Mashreq bank cooperate with Clair5 for anti-fraud defenses

4.1. Problem

Mashreq Bank, headquartered in the Middle East, pioneered in innovations and developments in banking, starting with entry-level digital-first customers. The spike in digital payments is a convenient solution worldwide during the pandemic but it has also given rise to fraudsters trying to deceive unsuspecting businesses or customers with innovative fraud schemes. It wants to move to an enterprise-wide real-time fraud management system and prevent suspicious fraudulent transactions from various channels such as online banking, mobile banking, debit cards, loans, etc. Additionally,

it was considering implementing a mechanism to detect both employee frauds including password sharing, and misuse of authority, as well as third-party frauds such as identity theft and mule account fraud [16]. Due to the developing fraud techniques, Mashreq requires users to quickly configure, test, and deploy new fraud scenarios, without the need for any programming skills or IT assistance.

4.2. Solution

Clair5 is a comprehensive, real-time monitoring of financial and non-financial transactions for customers, accounts, users, and employees, across multiple channels. Firstly, there are contingency plans for over 50 scenarios stored in the system, including some region-specific complex scenarios, and they will be updated in real-time with batched processing transactions [17]. Thus, Clair5 can not only recognize and block known fraud attempts but also identify successful new fraud attacks so they can be properly investigated and reported on [18]. Integrated with the core banking system, capturing transactions every 2 minutes, without impacting CBS application performance and utilizing <1% of source system CPU resources. This benefit of real-time fraud can convert fraud management into a revenue generating activity by using positive cases post-fraud assurance in real-time. This also links the analysis for insights into customers' financial and demographic differences across borders.

5. Limitation

With the implementation of Abacus360 and FiTAX, banks and institutions can manipulate the banking and taxing process efficiently and catch up to the latest regulations. Clair5 provides a powerful real-time fraud defense system for Mashreq in order to protect security for digital payment. However, there are still limitations for each software.

Application logic and data management of Abacus360 are based on the distributed processing of Apache Spark, a cluster computing framework with high market acceptance for big data projects. High-profile cyber attacks happen frequently these days, users need to take extra steps to ensure the data is safeguarded in line with current cybersecurity best practices[19]. Although Abacus360 has a risk management system, it may suffer from data breaches. As the platform deals with confidential financial data, it could be a prime target for hackers. This may lead to huge financial loss and reputation damage.

FiTAX keeps up with the constant changes in global tax law and regulations. Its users also need to regularly update the system and adapt to the new process in order to ensure compliance. This will cause extra costs for software maintenance and skill training for the employees to use the new system. While FiTAX is designed to comply with a worldwide range of business, it may not be able to fully accommodate customized or specific requirements [20]. Since some companies have their unique standard for tax reporting, they may need more effort to refine the system.

During the testing phase of Clair5 implementation, a significant amount of sensitive client data must be analyzed. As a result, Customers may get concerned about their privacy. Furthermore, the Advanced Anti-fraud System may mistakenly report legitimate transactions as fraudulent on occasion [21]. Consequently, customers' financial services may be unnecessarily interrupted, which could derailment customer relations.

6. Conclusion and further impact

All these three solutions bring significant benefits to those companies. For the regulator, it enables more transparency as well as agility in modifying requirements to meet new risks more timely. For the regulated, it strengthens compliance while enabling agility to anticipate and dynamically respond to changing regulatory needs [22]. Abacus360 Banking agility through faster implementation of new regulatory requirements. Due to the variation in reporting regulations between different countries, some international companies may apply different versions of the reporting system. This increases the autonomy of each branch, enabling them to focus on their business and establish their standards.

The utilization of Clair5 ensures customers and confidential data transactions within the banking system which critical factor that influences the willingness of individuals and businesses to invest and participate in the financial market.

However, in today's financial world, many financial organizations still use legacy technology due to the high cost of replacing systems, which makes it difficult to integrate with new technologies. Many companies delay using RegTech, although it brings benefits for the reporting process and keeps up with the latest regulations. If those software are easily installed and updated, they will be widely used and have a revolutionary impact in the financial industry. As financial institutions look for more efficient Regtech software, it can be predicted that the compliance cost will be more affordable [23].

Moving toward the future, Regtech can be implemented in more financial industries. For example, block chain technologies can be used for virtual currency management, with the lack of current standards for the crypto market, makes them ripe for fraud and money laundering. Some regulators also expect Regtech companies to invest in ESG projects so that the rules will be stricter and more clearly defined.

References

- [1] Liu, M.F., Feng, J., and Luo, X.W. (2022) 'RegTech: Theory and Practice in Technology Driven Financial Regulation', *Frontiers of Economics in China*, 17(1), pp. 164–187. doi:10.3868/s060-015-022-0007-3.
- [2] Kristanto, A.D. and Arman, A.A. (2022) 'Towards A Smart Regulatory Compliance, The Capabilities of RegTech and SupTech', 2022 International Conference on Information Technology Systems and Innovation (ICITSI), Information Technology Systems and Innovation (ICITSI), 2022 International Conference on, pp. 300–309. doi:10.1109/ICITSI56531.2022.9970801.
- [3] Firmansyah, B. and Arman, A.A. (2022) 'A Systematic Literature Review of RegTech: Technologies, Characteristics, and Architectures', 2022 International Conference on Information Technology Systems and Innovation (ICITSI), Information Technology Systems and Innovation (ICITSI), 2022 International Conference on, pp. 310–315. doi:10.1109/ICITSI56531.2022.9970830.
- [4] Battanta, L. and Magli, F. (2023) 'RegTech, the startups' ecosystem operated by Swisscom', *Economia Aziendale Online*, 14(4), pp. 1391–1412. doi:10.13132/2038-5498/14.4.1391 -1412.
- [5] State Bank of India Frankfurt (SBI) chooses BearingPoint RegTech's risk management solution Abacus360 Banking <https://www.bearingpoint.com/en-us/about-us/news-and-media/press-releases/state-bank-of-india-frankfurt-sbi-chooses-bearingpoint-regtech/>(access at: 25 May 2024)
- [6] Picker, M., Franke, T. and Rubach, A. (2020) interest rate risk in the banking book (IRRBB) available at : <https://www.bankinghub.eu/topics/interest-rate-risk-irrbb> (access at: 25 May 2024)
- [7] Mena Report (2017) 'Implementation Of The Requirements For Anacredit With Abacus360 And The Abacus|S2a Interface At The Hamburgische Investitions- Und Frderbank', 1 September. Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=edsgea&AN=edsgcl.502741628&site=eds-live&scope=site> (access at: 24 May 2024).
- [8] BearingPoint (8AD) 'BearingPoint, Berlin Hyp, SAP und okadis entwickeln Lösung für die Integration mit SAP FSDM auf Abacus360 Banking im regulatorischen Meldewesen', *Business Wire (German)*, 2019 . Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=bwh&AN=bizwire.bw7350398&site=eds-live&scope=site> (access at: 24 May 2024).
- [9] Sharma, M. et al. (2023) 'Artificial Intelligence in RegTech to Predict Financial Market Trends', 2023 6th International Conference on Contemporary Computing and Informatics (IC3I), Contemporary Computing and Informatics (IC3I), 2023 6th International Conference on, 6, pp. 925–930. doi:10.1109/IC3I59117.2023.10397963.
- [10] EU tax directive 2018/822 and its effects on cross-border tax arrangement <https://www.deloitte.com/lu/en/services/tax/research/dac-6-directive.html> (access at: 25 May 2024)
- [11] 7 Things You Need To Know About DAC6 Reporting And Why It's Important <https://tax.thomsonreuters.com/blog/7-things-you-need-to-know-about-dac6-reporting-and-why-its-important/>(access at: 25 May 2024)
- [12] Regulation of intermediaries, including tax advisers, in the EU/Member States and best practices from inside and outside the EU [https://www.europarl.europa.eu/RegData/etudes/STUD/2022/733965/IPOL_STU\(2022\)733965_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2022/733965/IPOL_STU(2022)733965_EN.pdf)(access at: 25 May 2024)

- [13] BDO in Germany opts for tax reporting solution FiTAX from BearingPoint RegTech <https://www.bearingpoint.com/en-ch/about-us/news-and-media/press-releases/bdo-in-germany-opts-for-tax-reporting-solution-fitax-from-bearingpoint-regtech/> (access at: 25 May 2024)
- [14] BearingPoint (5AD) 'Early Adopters Successfully Report under the Common Reporting Standards (CRS) with BearingPoint's FiTAX', Business Wire (English), 2017 Summer. Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=bwh&AN=bizwire.c78753523&site=eds-live&scope=site> (access at: 24 May 2024).
- [15] 'FATCA-Reporting mit dem BearingPoint Tool FiTAX' (2015) Risiko Manager, (24), p. 24. Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=111880480&site=eds-live&scope=site> (access at: 24 May 2024).
- [16] Mashreq bank strengthens real-time anti-fraud defenses enterprise-wide with Clari5 <https://www.clari5.com/case-studies/> (access at: 25 May 2024)
- [17] Clari5 enterprise fraud management <https://www.clari5.com/enterprise-fraud-management/> (access at: 25 May 2024)
- [18] The complete Guide to Regtech(2023) <https://www.unit21.ai/blog/regtech> (access at: 25 May 2024)
- [19] Bansod, A. and Venice, A. (2023) 'Importance of Cybersecurity and RegTech in FinTech', Telecom Business Review, 16(1), pp. 27–34. Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=174898052&site=eds-live&scope=site> (access at: 25 May 2024).
- [20] Butler, T. and Brooks, R. (2017) 'On the role of ontology-based RegTech for managing risk and compliance reporting in the age of regulation', Journal of Risk Management in Financial Institutions, 11(1), pp. 19–33. Available at: <https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=128878068&site=eds-live&scope=site> (access at: 25 May 2024).
- [21] Papantoniou, A.A. (2022) 'Regtech: steering the regulatory spaceship in the right direction?', Journal of Banking and Financial Technology: An Official Journal of the Institute for Development and Research in Banking Technology, 6(1), pp. 1–16. doi:10.1007/s42786-022-00038-9. (access at: 25 May 2024)
- [22] Charoenwong, B. et al. (2024) 'RegTech: Technology-driven compliance and its effects on profitability, operations, and market structure', Journal of Financial Economics, 154. doi:10.1016/j.jfineco.2024.103792.
- [23] Gentile, H. and Domin, H.(2022) The future of RegTech for AI Governance <https://www.ibm.com/blog/the-future-of-regtech-for-ai-governance/> (access at: 25 May 2024)