

# An Analysis of the Role and Impact of RegTech Solutions' Implementation in Enhancing Regulatory Compliance at Private Bank in Oman

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## Abstract

This study focuses on analyzing the role and impact of regulatory technology (RegTech) solutions' implementation in enhancing regulatory compliance. The main objective of the research is to study and analyze the current regulatory compliance system, its role, impact, and key factors influencing the successful integration of RegTech solutions at Private Bank in Oman. There has been very limited research on RegTech's implementation and its impact on Omani companies. This project employs a mixed-method approach, utilizing both quantitative and qualitative data, with research instruments comprising interviews and a questionnaire. For the questionnaire survey, the population size is 144 and the sample size is 105. Two structured interviews were conducted with the Head of Compliance and Head of IT, and then analyzed utilizing thematic analysis. An online questionnaire was prepared and circulated to 105 employees of a private bank in Oman. The collected data is analyzed utilizing data analysis tools like Microsoft Excel and JASP. The types of statistical analyses utilized are histogram, correlation, and pivot table analyses. After conducting the qualitative and quantitative analyses, it was found that there exists a positive relationship between the implementation of RegTech and enhancing regulatory compliance procedures of the company. Existing or upcoming banks may benefit from this study and implement the recommended RegTech model in their companies. Researchers who wish to investigate RegTech solutions further can gain great insights from the study. As there is limited research on RegTech in Oman, future researchers can take this research as a starting point and can go in-depth to find greater results and recommendations on the implementation of RegTech in Oman.

**Keywords:** Automation, Efficiency, Implementation, Oman, Private Bank, RegTech, Regulatory Compliance, Regulatory Technology, Solutions

## 1 Introduction

The term Regulatory Technology (RegTech) covers technology solutions that enhance and simplify regulatory processes [1]. The main objective of the research is to study and analyze the current regulatory compliance system, role, impact, and key factors influencing the successful integration of RegTech solutions at Private Bank in Oman. The banking industry has been greatly influenced by the quick advancement of technology, with RegTech emerging as an essential tool for improving compliance and

risk management procedures [2]. The global financial crisis of 2008 was a turning point that marked the beginning of the modern paradigm of RegTech. This technology allows financial institutions to cut down on human labour, lower compliance risks, and respond faster to changes in a constantly evolving regulatory environment. With the implementation of regulatory technology, organizations may improve productivity and reallocate resources to strategic objectives instead of regular compliance tasks [3].

### 1.1 Statement of the Research Problem

As RegTech is a fairly new term in the Middle East, especially in Oman, there exists a research gap. To date, no research has been published on RegTech's implementation and its impact on Omani companies. Oman is a developing country that requires further input in RegTech solutions and strategies to foster implementation and provide guidance to companies. Therefore, this study focuses on studying, analyzing, and contributing practical strategies for Omani banks and proposes a framework that may optimize the implementation of RegTech solutions'.

### 1.2 Research Aim and Objectives

The aim of the research is to study and analyze the role and impact of RegTech solutions' implementation in enhancing regulatory compliance at Private Bank in Oman.

The research objectives are to study the current regulatory compliance system of a private bank in Oman; examine the utilization of RegTech solutions in the financial and banking industry and the challenges associated with it; investigate the potential impact of RegTech implementation on the efficiency and effectiveness of regulatory compliance practices; analyze the key factors influencing the successful integration of RegTech solutions; develop and propose a framework for the private bank to optimize the integration of RegTech solutions focusing on Oman Vision 2040.

## 2 Literature Review

### 2.1 Regulatory Technology

The term 'Regulatory Technology' (abbreviated as 'RegTech') refers to the technological tools that banks and other financial organizations employ to comply with regulatory requirements [4]. The new regulatory framework that emerged in the wake of the 2008 financial crisis is often cited as the driving force for the rise of RegTech. The goal of RegTech is to automate and simplify the numerous compliance procedures that organizations in the banking industry must adhere to. The goal of RegTech is to automate and simplify the numerous compliance procedures that organizations in the banking industry must adhere to. According to Financial Conduct Authority (FCA) RegTech is defined as "a subset of FinTech that uses innovative and integrated technology to facilitate the delivery of regulatory requirements more effectively and efficiently than existing capabilities" [5].

### 2.2 Regulatory Landscape in Oman

The Central Bank of Oman (CBO) sets guidelines and standards to preserve the stability, security, and effectiveness of the financial system and supervises the banking sector's regulatory compliance environment. The CBO's regulatory framework is extensive and covers a wide range of disciplines, including risk management, corporate governance, anti-money laundering (AML), and combatting the financing of terrorism (CFT). Omani banks, for instance, are required to follow stringent AML and CFT procedures, which include reporting suspicious behaviour, keeping track on transactions, and performing due diligence on customers. The CBO, which places a strong focus on corporate governance, requires banks to establish effective committees and boards to oversee operations and guarantee accountability.

The government of Oman makes sure that its financial system is robust and competitive on a global level by adhering to regulations set out by organisations such as the Financial Action Task Force (FATF) [6].

### 2.3 Application of RegTech Solutions in the Financial and Banking Industry

RegTech solutions improve regulated organizations operational efficiency and compliance with regulations. Opportunities to utilize RegTech solutions are expanding rapidly due to technological developments. These solutions include a wide range of application areas, such as regulatory reporting, operations, cyber security, capital management, and risk management. The three key areas where RegTech is applied is illustrated in Figure 1 [7].

- Application of RegTech in Regulatory Compliance
- Application of RegTech in Governance
- Application of RegTech in Risk Management

**Figure 1: Application of RegTech Solutions**



### 2.4 Challenges Associated with RegTech Implementation

- Regulation interpretation
- Integration with existing legacy systems
- Limited financial resources
- Insufficient availability of developed solutions
- Bias and absence of clear explanations
- Data quality issues
- Dependability on third parties

### 2.5 Key Factors Influencing the Successful Integration of RegTech Solutions

- Level of regulatory support
- Quality of the technical infrastructure
- Organizational readiness

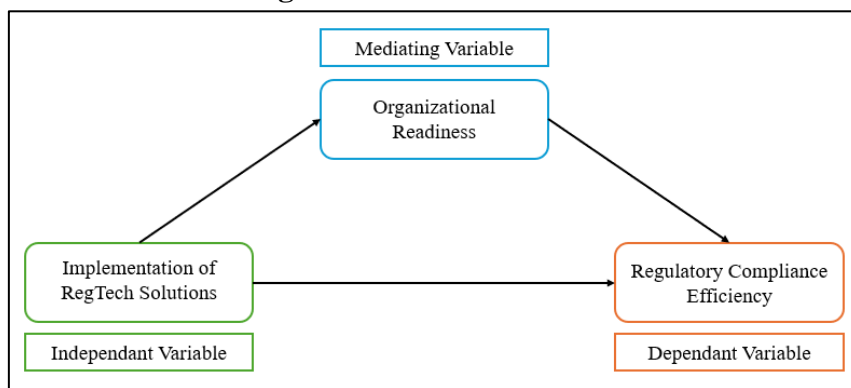
### 2.6 Impact of RegTech Implementation on the Efficiency and Effectiveness of Regulatory Compliance Practices

Regulated firms now face a more sophisticated and demanding regulatory landscape. Staying in line with regulations is crucial for keeping the trust of consumers and investors, as well as to prevent expensive

penalties and harm to an organization's reputation. To keep up with the ever-changing landscape of business models, threats, and laws, it is necessary to implement agile solutions. In 2008, organizations tracked around 10 daily regulatory changes whereas in 2016, that number increased to more than 200 and is further expected to rise in the upcoming years [8]. The increasing emphasis on risk and compliance procedures within regulated organizations has led to the rise of the term 'RegTech'. The Financial Conduct Authority (FCA) was the first to introduce the term RegTech in 2015, although the term has since taken on different meanings depending on the perspective of different stakeholders. The authors Teichmann et al., (2023) studied RegTech's benefits and challenges for companies and found that by utilizing RegTech solutions, regulatory data may be evaluated more effectively, leading to labour, time, and cost savings. The incompetence of the people operating the RegTech systems will cause them to fail, regardless of how advanced the technology is. The study also revealed that automation of risk management operations can be achieved with RegTech through the use of real-time data monitoring for risk detection.

### 2.7 Conceptual Framework of the Study

Figure 2: Mediation Model



The conceptual framework in Figure 2 demonstrates the links between the three main research variables: the adoption of RegTech solutions, organizational readiness, and the efficacy of regulatory compliance. This paradigm aids in conceptualizing the ways that the adoption of RegTech solutions influences the efficacy of regulatory compliance from the standpoint of organizational readiness. The main independent variable whose impact on the efficacy of regulatory compliance is being studied is the use of RegTech solutions. The dependent variable under investigation and improvement in this research is regulatory compliance efficiency. The methodology demonstrates how the implementation of RegTech solutions may significantly affect this efficiency and perhaps lead to more cost-effective and efficient compliance processes. Organizational readiness is the mediating variable, meaning that the organization's preparedness to deploy these technologies influences adoption of RegTech solutions on the effectiveness of regulatory compliance indirectly rather than directly.

## 3 Research Methodology

### 3.1 Research Design

In this study, both exploratory and descriptive research designs are combined to provide a detailed and comprehensive understanding of regulatory technology and regulatory compliance. This study includes an exploratory research design as this topic is understudied in Oman, explores the existing and recent studies and proposes a structured framework for Private Bank in Oman. Additionally, this study includes descriptive research design as ideas of various authors on the topic of RegTech and regulatory compliance are

discussed to derive conclusions.

### 3.2 Population of the Study and Sample Size

The population of the study is 144, which covers the Head of Compliance, the Head of IT, and all the employees working within compliance, risk, IT/ digital transformation, and strategy and transformation departments. As this study involves conducting interviews and collecting responses through a questionnaire, the Head of Compliance and Head of IT are interviewed to know their perceptions regarding the potential impact of RegTech solutions’ implementation.

### 3.3 Sampling Technique

Non-probability convenience sampling is utilized in this study as it should be covered within a limited timeframe, that is, three months. Moreover, this sampling technique is inexpensive and makes it easy for pilot testing.

### 3.4 Research Instruments

This study employs a mixed-method approach, utilizing both quantitative and qualitative data, with research instruments comprising interviews and questionnaires.

### 3.5 Data Collection Techniques

This study uses two types of primary data, interview and questionnaire. Structured interviews are conducted with the Head of Compliance and Head of IT. An online questionnaire is prepared and circulated to 105 employees of Private Bank in Oman to know their insights on how RegTech Solutions’ can be implemented in enhancing regulatory compliance.

### 3.6 Data Analysis Techniques

Qualitative data is analyzed by utilizing thematic analysis. The collected questionnaire data is analyzed utilizing two data analysis tools, they are, Microsoft Excel and JASP. The types of statistical analysis utilized are histogram, correlation, and pivot table analyses.

## 4 Data Analysis

### 4.1 Thematic Analysis of Qualitative Data

Table 1: Interview Questions and Answers from Interview 1 and Interview 2

No.	Questions	Interview 1 (Head of Compliance)	Interview 2 (Head of IT)
1.	Can you provide an overview of the current regulatory compliance system at Private bank in Oman, highlighting its strengths and areas for improvement?	The current regulatory compliance system at Private bank in Oman integrates automated reporting and ensures the <b>implementation</b> of all the regulations published by the Central Bank of Oman. Moreover, the system ensures the <b>assessment and communication</b> of the regulations to all the departments within the bank.	The existing regulatory compliance system guarantees that all regulations established by the Central Bank of Oman are <b>implemented, assessed, and communicated</b> . Strengths include real-time data which improves transparency and swift decision-making.

		One of the major areas for improvement is the commercial transactions area, especially the international transactions	Enhancing system integration among departments, international transactions, and user training are the two important areas for improvement.
2.	Are there any challenges associated with the current regulatory compliance practices at Private bank in Oman? If yes, what are they?	<p>Yes, the first challenge is the absence of clarity in the regulations. The compliance requirements stated by the regulatory bodies are not straightforward, hence it requires more interpretation and clarity.</p> <p>The second challenge is with the customer information. The customers are not updating their information from time to time. From the holistic perspective, another challenge is that there is no link between the individual and commercial information within Oman, that is, there is no central database that stores all the information on which the banks can rely on. Recently, Mala'a is working on this.</p>	<p>Yes, a major obstacle is the need to continuously upgrade systems to keep pace with the regular updates and changes in legislation. Integrating compliance standards into the current IT infrastructure without impacting business operations is a complicated and additional challenge.</p> <p>It is also difficult to guarantee that all departments are complying with the rules, especially when dealing with foreign transactions.</p>
3.	Does Private bank in Oman currently utilize technology and software solutions to ensure regulatory compliance? If yes, in what ways?	<p>Yes, for instance, the software is utilized to validate the Know Your Customer (KYC) information which is being provided by the customer through the civil ID. Recently, Private bank in Oman has been planning to collaborate with Mala'a for digital reporting.</p> <p>Moreover, software tools are utilized in mobile banking to validate the updates in customers' civil IDs. Private bank in Oman has implemented tools to check the criminal background of the onboarded customers, from either a sanction perspective or any other criminal records, worldwide not only in Oman.</p>	<p>Yes, one example is the utilization of Anti-Money Laundering (AML) software by the bank, which allows for real-time monitoring of transactions and detection of suspicious activities.</p> <p>Private bank in Oman also uses Know Your Customer (KYC) tools to verify customers' information.</p> <p>The compliance of all transactions with international sanctions lists is ensured by Private bank in Oman's sanction screening software.</p>
4.	How do you perceive the role of RegTech	The role of RegTech has two dimensions. The first dimension	RegTech offers advanced tools that boost accuracy and



	<p>solutions in enhancing regulatory compliance within the financial and banking industry globally?</p>	<p>includes clients outside Oman, that is, customers opening accounts with Private bank in Oman living outside Oman. The second dimension includes transactions and trading with external parties outside Oman. There are certain checkpoints or regulations before welcoming any client outside Oman, to ensure they are genuine and not engaged in any illegal practices. Therefore, RegTech solutions may aid banks in enhancing compliance</p>	<p>efficiency through automated reporting, real-time monitoring, and risk management. Financial institutions may benefit from RegTech solutions which utilize cutting-edge technology such as blockchain, artificial intelligence, and machine learning to keep up with regulatory changes and reduce compliance costs. Enhanced data management and analytics made possible by these technologies also allow for the proactive detection and reduction of compliance concerns.</p>
<p>5.</p>	<p>In your opinion, what are the specific RegTech solutions or technologies that can be implemented at Private bank in Oman to improve regulatory compliance practices?</p>	<p>The RegTech solutions implemented so far in Private bank in Oman are sufficient. But there is always room for improvement. To improve regulatory compliance, the bank may implement a system or tool to analyze the bank's database within the compliance area that may aid in knowing whether the bank can fully comply with the regulations or not.</p>	<p>AI-powered transaction monitoring tools can help Private bank in Oman detect and prevent fraud while improving regulatory compliance. Early compliance risk detection can be attained using machine learning algorithms for predictive analytics. By utilizing AxiomSL and other complete regulatory reporting solutions, the bank can streamline and enhance the accuracy of compliance reporting.</p>
<p>6.</p>	<p>From your perspective, what are the key factors that may influence the successful integration of RegTech solutions in the company?</p>	<p>First and foremost, the commitment among all the stakeholders of Private bank in Oman to comply with the regulations. Secondly, proper analysis of different available RegTech tools to ensure compatibility with the existing systems at the bank. Moreover, SWOT and PESTEL analysis can be conducted Assessment of the RegTech solutions from time to time from the</p>	<p>It is critical to ensure that RegTech solutions fit with the specific regulatory requirements of the Central Bank of Oman and other relevant regulatory agencies. To guarantee successful integration, it is crucial to evaluate the compatibility of RegTech solutions with the current IT infrastructure, including key</p>

		regulatory perspective to meet the requirements of the regulatory bodies.	banking systems and data architecture. It is vital to provide adequate training and assistance to staff on how to utilize RegTech solutions and adapt to new procedures to ensure a smooth deployment and acceptance by all.
7.	How do you envision the impact of RegTech implementation on the efficiency and effectiveness of regulatory compliance practices at Private bank in Oman?	As regulatory technology is emerging worldwide and promising to enhance regulatory compliance within companies and government bodies, it is surely going to benefit Private bank in Oman. It is important to implement the RegTech objectives and pass them on to all the organizational levels of the company to ensure the efficiency and effectiveness of regulatory compliance.	To improve productivity and minimize human error in compliance tasks, RegTech solutions can automate manual procedures including data collection, processing, and reporting. By proactively identifying possible compliance risks using advanced analytics and machine learning algorithms, RegTech solutions improve efficiency and effectiveness by mitigating risks before they escalate.
8.	Considering Oman Vision 2040, what strategic initiatives or frameworks do you believe Private bank in Oman should consider optimizing the integration of RegTech solutions and align with the national vision?	<b>Transformation and digitalization.</b> Private bank in Oman is still at the starting point, even though the bank has achieved various milestones in digitalization and transformation. From a regulatory perspective and from other perspectives like customer services, everything is linked together to achieve overall regulatory compliance.	Private bank in Oman should invest in skills training to help its employees use RegTech solutions, in line with the national goal of building a competent workforce. To seamlessly integrate RegTech solutions and build a culture of innovation, Private bank in Oman should prioritize innovation and technology to improve its digital infrastructure and capabilities.

**Identification of Themes and Codes**

**Table 2: Table showcasing Themes and Codes**

No.	Themes	Codes
1.	Current Regulatory Compliance System	• Integration and implementation

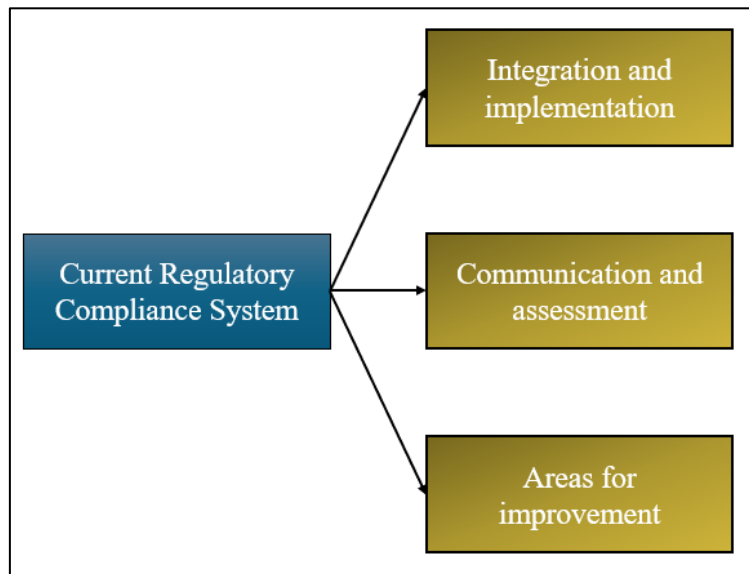


		<ul style="list-style-type: none"> <li>• Communication and assessment</li> <li>• Areas for improvement</li> </ul>
2.	Challenges in Current Regulatory Compliance	<ul style="list-style-type: none"> <li>• Regulatory updates</li> <li>• Customer information management</li> <li>• System integration</li> <li>• Departmental compliance</li> </ul>
3.	Utilization of Technology and Software Solutions	<ul style="list-style-type: none"> <li>• Existing tools</li> <li>• Digital reporting and collaboration</li> </ul>
4.	Role of RegTech Solutions	<ul style="list-style-type: none"> <li>• Enhanced compliance</li> <li>• Advanced technologies</li> </ul>
5.	Specific RegTech Solutions for Private bank in Oman	<ul style="list-style-type: none"> <li>• AI and Machine Learning</li> <li>• Blockchain</li> <li>• Regulatory reporting tools</li> <li>• KYC and customer due diligence</li> </ul>
6.	Key Factors for Successful Integration of RegTech Solutions	<ul style="list-style-type: none"> <li>• Regulatory alignment</li> <li>• Executive support</li> <li>• IT infrastructure compatibility</li> <li>• Training and change management</li> <li>• Data quality and governance</li> <li>• Cybersecurity and data privacy</li> </ul>
7.	Impact of RegTech Implementation on Efficiency and Effectiveness	<ul style="list-style-type: none"> <li>• Automation and streamlining</li> <li>• Proactive risk management</li> <li>• Enhanced decision-making</li> <li>• Cost reduction</li> </ul>
8.	Strategic Initiatives for Alignment with Oman Vision 2040	<ul style="list-style-type: none"> <li>• Government collaboration</li> <li>• Investment in technology</li> <li>• Skills development</li> <li>• Regulatory compliance and governance</li> <li>• Cybersecurity and data protection</li> <li>• Customer-centric approach</li> </ul>

## Analyzing the Themes with Literature

### Theme 1: Current Regulatory Compliance System

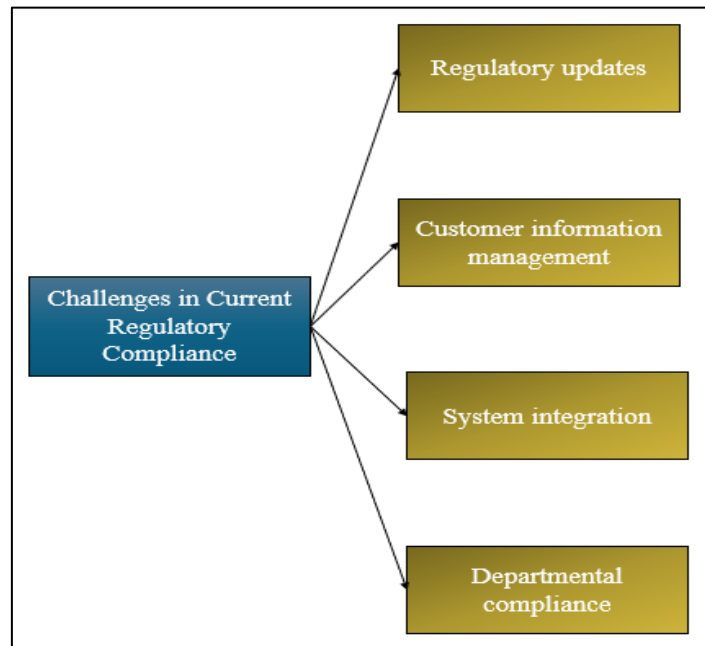
Figure 3: Theme 1



The analysis of the current regulatory compliance system at Private bank in Oman highlights a thorough and effective approach to integrating and implementing regulations set by the Central Bank of Oman. The Head of Compliance and the Head of IT both highlights on Private bank in Oman's strong system in place to review and communicate regulations throughout all departments. This integration helps to ensure that compliance practices are consistent, and that transparency is improved. However, the need for system integration to be improved was also identified, particularly in commercial and international transactions. This is a gap that poses a potential risk for compliance breaches, indicating that focused improvement efforts are necessary in these segments to uphold regulatory integrity [10].

### Theme 2: Challenges in Current Regulatory Compliance

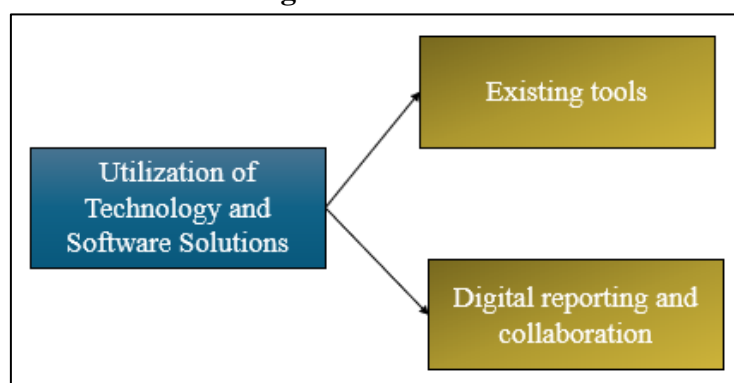
**Figure 4: Theme 2**



The interviews highlight the notable challenges associated with the existing regulatory compliance practices at Private bank in Oman. The Head of Compliance has noted a significant challenge: the absence of clarity in regulatory requirements, which requires a considerable amount of interpretation and poses a risk to compliance. In addition, the compliance landscape is further complicated by customer information management issues, including the absence of a centralised database and obsolete customer data. The Head of IT also emphasises the challenge of ensuring departmental compliance and maintaining up-to-date systems, particularly in the context of international transactions. These challenges suggest a crucial need for more precise regulations, enhanced data management practices, and seamless system enhancements to improve compliance efforts [8].

**Theme 3: Utilization of Technology and Software Solutions**

**Figure 5: Theme 3**

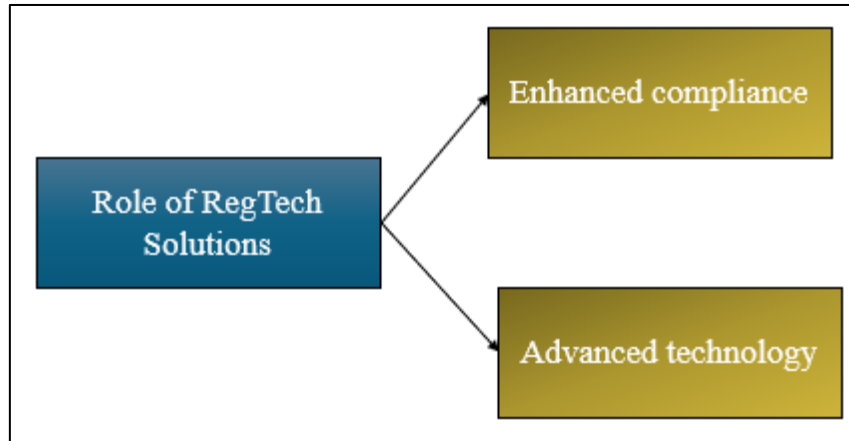


To enhance its regulatory compliance initiatives, Private bank in Oman implements numerous software and technology solutions. Both interviewees mention the utilisation of Anti-Money Laundering (AML) software and Know Your Customer (KYC) tools, which enable the real-time monitoring and validation of customer information [11]. The bank's collaboration with Mala'a for digital reporting, as highlighted by the Head of Compliance, indicates a transition to more automated compliance processes. Furthermore, the proactive strategy of mitigating compliance risks is illustrated by the implementation of tools for criminal

background checks and sanction screening. The bank's efficient and effective adherence to regulatory requirements is contingent upon these technological integrations.

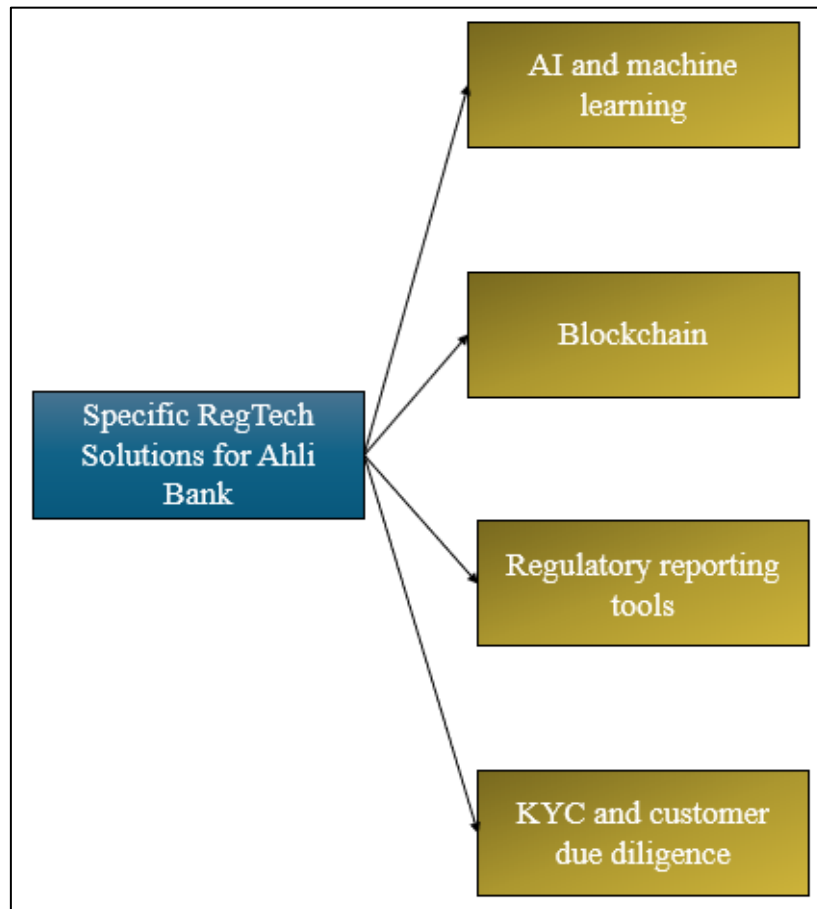
#### Theme 4: Role of RegTech Solutions

Figure 6: Theme 4



RegTech solutions are perceived as transformative instruments for improving regulatory conformance in the finance sector. The Head of Compliance addresses the dual function of RegTech in the management of clients and transactions outside of Oman, thereby guaranteeing compliance with international standards. The Head of IT emphasises the importance of advanced technologies such as blockchain, artificial intelligence (AI), and machine learning (ML) as core components of RegTech [12, 13]. These technologies improve real-time monitoring, efficiency, and accuracy. These technologies are essential in the contemporary regulatory landscape, as they not only minimise compliance costs but also enhance risk management and simplify compliance processes.

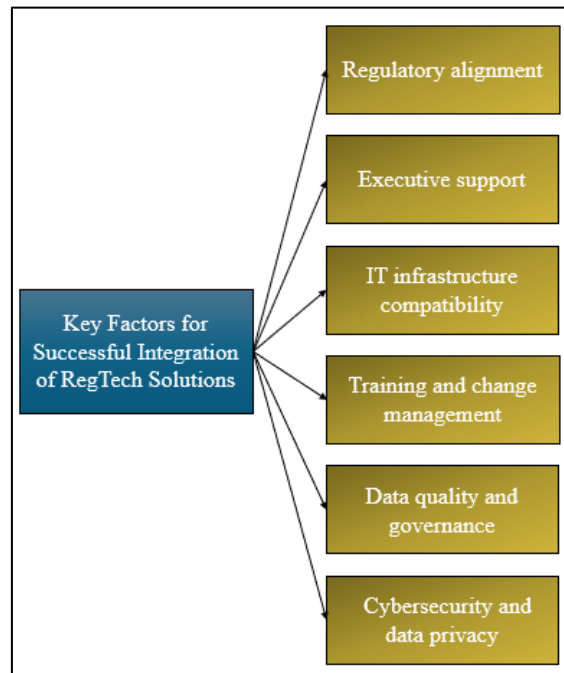
#### Theme 5: Specific RegTech Solutions for Private bank in Oman

**Figure 7: Theme 5**

Specific RegTech solutions could be advantageous for Private bank in Oman in order to enhance regulatory compliance. The bank's fraud detection capabilities can be considerably improved (as mentioned by the Head of IT) by implementing AI-powered transaction surveillance tools and machine learning algorithms for early risk detection. Furthermore, the implementation of comprehensive regulatory reporting tools such as AxiomSL can improve the accuracy and efficiency of compliance reporting. The Head of Compliance is of the opinion that, even though the current RegTech solutions are satisfactory, there is always space for development, particularly in the analysis of the bank's compliance database to guarantee complete regulatory adherence. Private bank in Oman can effectively navigate the intricate regulatory environment with the technological advantage provided by these solutions.

### **Theme 6: Key Factors for Successful Integration of RegTech Solutions**

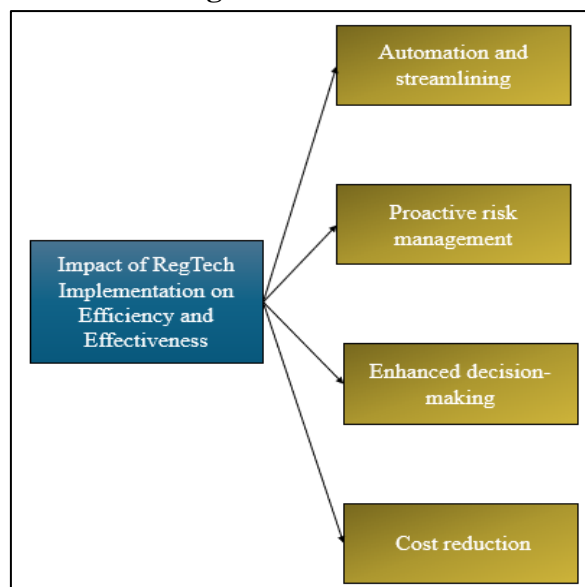
**Figure 8: Theme 6**



The successful integration of RegTech solutions at Private bank in Oman is contingent upon several critical factors. Both interviewees emphasise the significance of regulatory alignment and compatibility with the current IT infrastructure. The adoption of new technologies is significantly influenced by stakeholder commitment and executive support. Furthermore, it is crucial that staff members undergo consistent training and evaluations to guarantee that they can effectively utilize the RegTech tools [14]. In an effort to safeguard sensitive information, the Head of IT highlights the necessity of comprehensive cybersecurity, governance, and data quality protocols. Collectively, these factors guarantee the secure and seamless integration of RegTech solutions, thereby improving the bank's overall compliance framework.

**Theme 7: Impact of RegTech Implementation on Efficiency and Effectiveness**

**Figure 9: Theme 7**

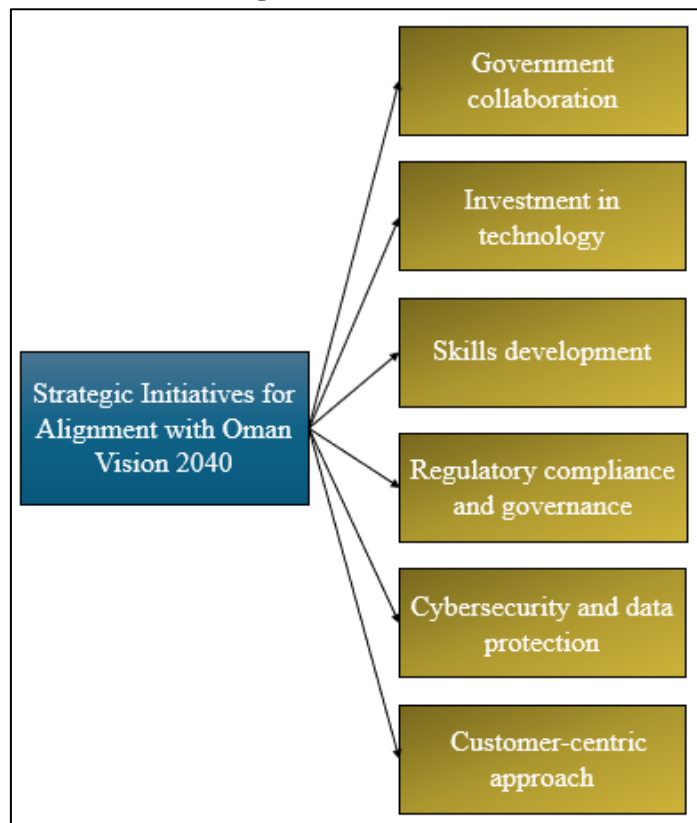




RegTech solutions are expected to substantially enhance the efficacy and effectiveness of regulatory compliance practices at Private bank in Oman. The advantages of automation in accelerating data collection, processing, and reporting are recognised by both interviewees. Machine learning algorithms and advanced analytics can proactively identify potential compliance risks, allowing the bank to mitigate them before they escalate [9]. Moreover, RegTech implementation mitigates human error and reduces compliance costs, in addition to improving decision-making.

**Theme 8: Strategic Initiatives for Alignment with Oman Vision 2040**

**Figure 10: Theme 8**



Private bank in Oman should prioritise strategic initiatives that foster digitalization and transformation in accordance with Oman Vision 2040. The significance of integrating regulatory compliance with customer service enhancements to achieve comprehensive regulatory adherence is emphasised by the Head of Compliance. Investment in skills training is recommended by the Head of IT to develop a workforce that is proficient in utilising RegTech solutions. In addition, the bank will cultivate a culture of innovation by prioritising innovation and technology to improve its digital infrastructure [7]. These strategic initiatives will optimise the integration of RegTech solutions, ensuring sustainable compliance and operational excellence while also aligning Private bank in Oman with national objectives.

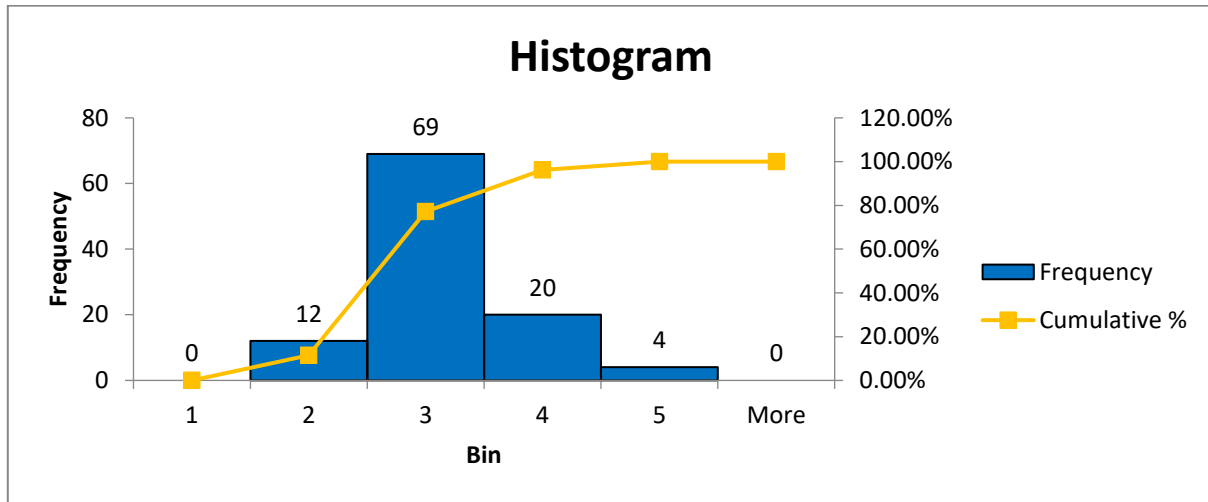
**4.2 Histogram Analysis**

**Table 3: Frequency Distribution**

Bin	Frequency	Percentage	Cumulative %
1	0	0%	0.00%
2	12	11%	11.43%

3	69	66%	77.14%
4	20	19%	96.19%
5	4	4%	100.00%
<b>More</b>	0		100.00%

Figure 11: Histogram Chart



The frequency distribution and histogram illustrated in the Table 3 and Figure 11 provide a statistical and visual representation of the responses to the question regarding the effectiveness of the current regulatory compliance system at the private bank. From the total 105 responses, the majority (69) rated the system as ‘Moderately effective’, which is equivalent to approximately 66% of the total. This demonstrates that the current system is generally regarded as functional, but there is potential for improvement. The ‘Effective’ category also receives a significant number of responses (20), indicating that a significant number of respondents have a positive perception of the system. However, a very small number of respondents rated it as ‘Very effective’, suggesting a potential gap in the regulatory compliance system's ability to achieve higher levels of satisfaction and effectiveness.

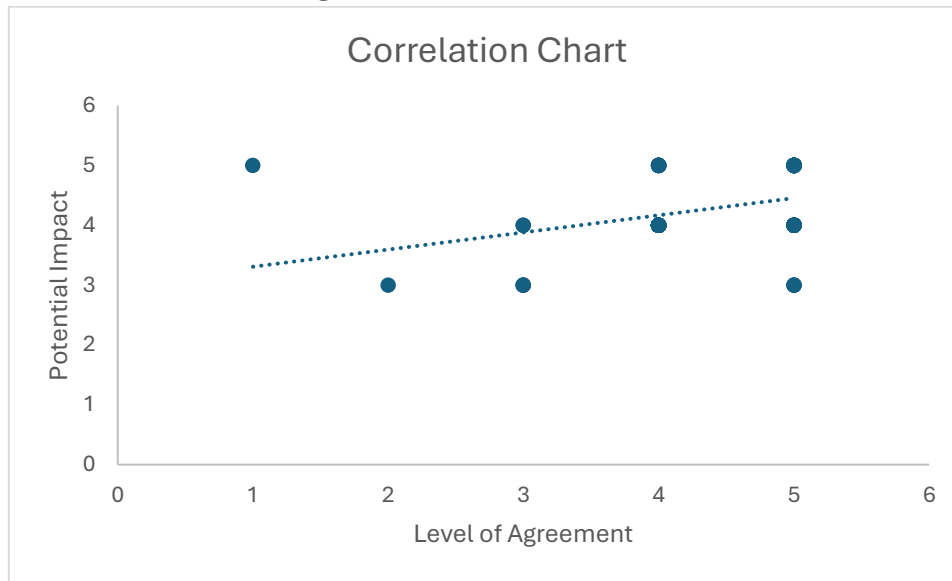
In the histogram, the cumulative percentage line emphasises the concentration of responses in the middle range. As it approaches the ‘Moderately effective’ category, the cumulative percentage has already reached 77.14%, illustrating that the majority of respondents do not perceive the system as either ineffective or very effective. The skewness towards the middle ratings implies that the system's effectiveness is perceived as balanced, not exceedingly highly favourable. The fact that no responses were submitted in the "Very ineffective" category reinforces the idea that the current system, despite its imperfections, is not deemed to be highly deficient by any respondent.

### 4.3 Correlation Analysis

Table 4: Correlation of Level of Agreement and Potential Impact

	Level of agreement	Potential impact
Level of agreement	1	
Potential impact	0.34953746	1

Figure 12: Correlation Chart



The correlation matrix in table 3 and the correlation chart illustrates the correlation between two critical variables: the degree of agreement with this statement that “Reg tech solutions have the potential to significantly enhance regulatory compliance practices” and the perceived potential impact of Reg tech implementation on the effectiveness of regulatory compliance practices at Private bank in Oman. With a value of 0.3495, the correlation coefficient between the two variables indicates a positive but moderate relationship. This shows that there is a positive but moderate correlation between the level of agreement with the possible benefits of Reg tech and the perceived influence of Reg tech on the effectiveness of regulatory compliance. There is a positive correlation between believing in the potential of Reg tech solutions and higher perceived impact. This suggests that if the bank can develop a favorable view of Reg tech benefits, it will be easier to adopt the solutions and be more successful.

Although there is a tendency for individuals who strongly approve that advantages of RegTech to also consider a great influence on regulatory compliance, this moderate correlation (0.3495) implies that other factors may also influence this perception. The banks change management and strategic planning may rely on this insight. It implies that to improve the potential impact, it is necessary to fix implementation issues, provide training, and provide real life Reg tech success examples, in addition to communicating its potential advantages.

#### 4.4 Pivot Table Analysis

Table 3: Pivot Table

RegTech Experience	Average of RegTech benefits	Average of RegTech in need of implementation	Average of main challenges
1	5	3	2.9375
2	5	3.04	2.76
3	4.962962963	2.62962963	3.111111111
4	4.75	2.5625	2.875
5	5	3.8	2.6
<b>Grand Total</b>	<b>4.952380952</b>	<b>2.885714286</b>	<b>2.914285714</b>

The above table 5, illustrates the pivot table where the respondents are categorized according to their level of experience with RegTech solutions (Q), including average scores for three critical metrics: the perceived benefits of RegTech (Q), the need for RegTech implementation (Q), and the main challenges hindering RegTech adoption (Q). Perceived advantages of RegTech solutions are consistently strong, with

average scores close to 5, across all levels of experience. This indicates that all respondents, irrespective of their level of expertise, believe that RegTech can improve the way the bank complies with regulations. Particularly, those in rows 3 and 4 with intermediate and advanced levels of expertise report somewhat lower average benefits (4.96 and 4.75 respectively) as compared to those in rows 1, 2, and 5 with no experience, beginner, and expert levels, respectively. This minor variation implies that, despite the fact that all respondents recognize the advantages, those who have had more practical experience with RegTech may have a slightly more tempered perspective, potentially as a result of their awareness of practical limitations and challenges.

As evaluated in the third column, the necessity of RegTech implementation is more varied across various levels of experience. Rows 3 and 4 indicate that respondents with intermediate and advanced experience report lower averages (2.63 and 2.56 respectively) than those with no experience and beginner levels (rows 1 and 2 with scores of 3 and 3.04). This trend indicates that experts in the field may be more aware of the complications associated with the implementation of new technologies or may perceive the current regulatory compliance framework as somewhat adequate. It is noteworthy that the need for RegTech implementation is most apparent among experts (row 5), with a score of 3.8. This suggests that those with extensive experience recognize the significant need for these solutions. The primary obstacles that restrict effective implementation are averaged at a moderate level (2.6 to 3.11), with the intermediate experience group rating them slightly higher (3.11). This could indicate a balanced perspective in which experienced users acknowledge both the practical challenges and the potential benefits, thereby offering a nuanced perspective that is crucial for strategic decision making in the bank's transformation efforts.

## 5 Summary of Findings, Conclusion and Recommendations

### 5.1 Summary of Findings

- The histogram analysis reveals that the majority of respondents (about 66%) assessed bank's present regulatory compliance system as "Moderately effective," meaning that while it is operational, there is room for considerable improvement.
- The degree of agreement that RegTech solutions may improve regulatory compliance and the perceived impact of RegTech deployment on regulatory compliance effectiveness at Ahli Bank has a moderate positive relationship (correlation coefficient = 0.3495). Although a favourable perception of RegTech's advantages is associated with a higher perceived impact, the moderate correlation indicates that other factors—like implementation challenges, training, and real-world success stories—also significantly influence this perception, pointing to areas where change management strategy should be concentrated.
- Pivot table analyses indicates that all experience levels regard RegTech solutions as having significant benefits, with average ratings around 5. This shows that, despite varying degrees of experience, all respondents strongly believe RegTech can improve regulatory compliance. The need for RegTech implementation varies based on experience level. Intermediate and advanced users report lower averages (2.63 and 2.56), which might be attributed to their knowledge of practical issues. However, experts see a greater need for RegTech adoption (score of 3.8), showing that they grasp the major benefits despite potential obstacles. While intermediate users evaluate these issues significantly higher (3.11), the average values for the primary obstacles to RegTech adoption vary fairly from 2.6 to 3.11. It is important for strategic decision-making in the bank's transformation

initiatives to have experienced users with a balanced view that acknowledges both the real-world difficulties and the possible advantages.

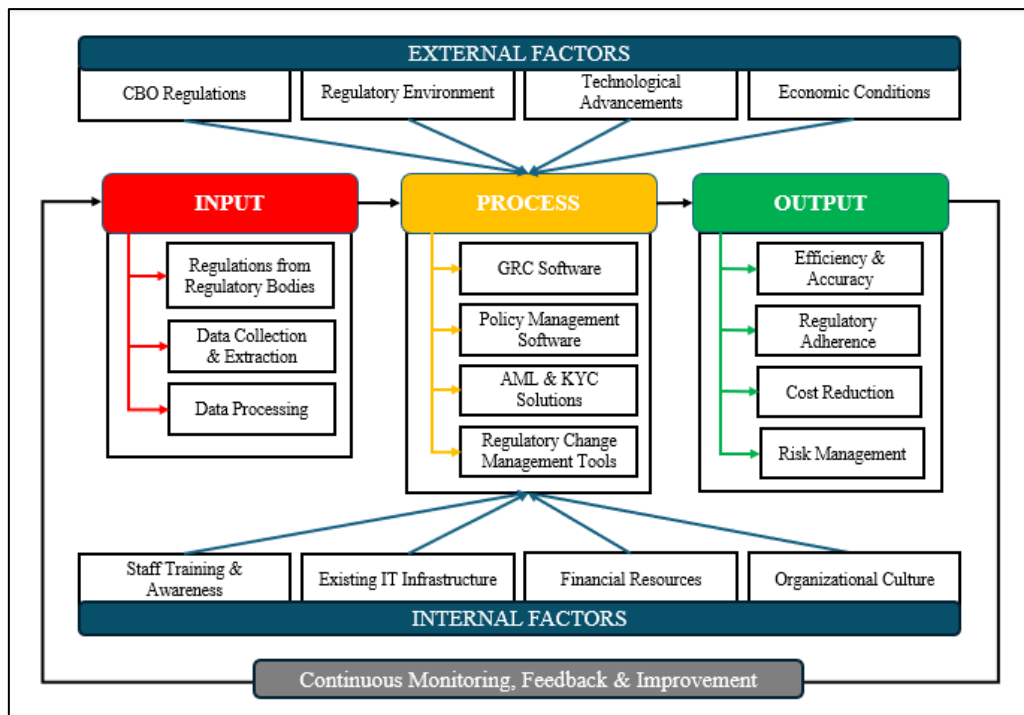
### 5.2 Conclusion

The research concludes that Private Bank in Oman may greatly benefit from improving its regulatory compliance by implementing RegTech solutions. By implementing the suggested framework and overcoming the challenges that have been identified, Private Bank in Oman can enhance the efficacy and effectiveness of its compliance efforts. This would be in line with the objectives of Oman Vision 2040 which aim to promote a competitive and dynamic financial sector.

### 5.3 Recommendations

- Invest in scalable RegTech solutions: Private Bank in Oman needs to allocate resources towards acquiring RegTech solutions that are both scalable and adaptable, capable of transforming in response to regulatory shifts and evolving business requirements.
- Develop a comprehensive integration plan: It is essential to develop a comprehensive integration strategy that emphasizes phased implementation to minimize the impact on ongoing operations.
- Enhance workforce skills: To effectively operate and manage RegTech systems, it is imperative to establish continuous training and development initiatives that furnish personnel with the essential skills.
- Foster a culture of innovation: Promote the development of a corporate environment that values and adopts technological advancements and ongoing compliance process enhancements.
- Engage with regulators: Ensure adherence to regulatory expectations and proactively manage compliance obligations by maintaining transparent communication channels with regulatory bodies.
- Monitor and evaluate continuously: Develop performance metrics for the ongoing assessment and evaluation of RegTech systems to verify their adherence to the intended compliance goals.

**Figure 13: Recommended RegTech Framework**



#### 5.4 Future Research Directions

- Longitudinal studies on RegTech implementation: To determine how RegTech solutions affect banking compliance and operational efficiency over the long run, longitudinal studies should be conducted.
- Comparative analysis across different banks: To identify optimal strategies and common challenges, conduct a comparative study of the effectiveness of RegTech solutions implemented by various institutions in Oman and the broader region, for example, GCC.
- Impact of emerging technologies: Analyze the potential enhancements that RegTech solutions may experience as a result of the implementation of emergent technologies, such as artificial intelligence and blockchain.
- Customer impact analysis: This analysis may help future researchers determine the effect that the implementation of RegTech has on customer satisfaction and experience in the financial industry.

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