Money Laundering Prevention through Regulatory Technology and Internal Audit Function in Indonesia Banking Sector

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Abstract

Money laundering poses a significant challenge globally, involving using cash to conceal the origins of funds. With the rise of digitalisation and the adoption of financial technology (FinTech), the financial sector has been compelled to adapt to these changes. The COVID-19 pandemic has further accelerated the use of FinTech services, including digital banking, to address social distancing concerns and enhance customer convenience. Despite having an index of risk considered moderate for money laundering, Indonesia continues to be a destination for these types of illegal activities. Anti-money laundering (AML) and counter-terrorism financing (CFT) programs must be implemented, especially in all financial service providers that Bank Indonesia oversees.

Additionally, the internal audit function is crucial in identifying money-laundering activities within banks. However, there needs to be more research regarding integrating RegTech and evaluating internal audit functions in preventing money laundering in Indonesian banks. This paper aims to address this gap by examining the benefits of RegTech solutions and the role of internal audit functions in preventing money laundering. The findings can be used to enhance regulations and implement effective measurement to combat money laundering and illicit activitivities. Furthermore, the study highlights the importance of Indonesia's membership in the Financial Action Task Force (FATF) to strengthen the country's AML framework and contribute to global policies on AML and countering the financing of terrorism.

Keywords: money laundering, regulatory technology, internal audit function, banking sector

1. Introduction

Money laundering is a global phenomenon involving using cash to facilitate the mixing of legal and criminal funds to hide the source of the funds (Kurniawan, 2023). This phenomenon is concurrent with the proliferation of global trade, the advancement of the financial infrastructure, and the reduction of impediments to financial operations and international mobility. The exact magnitude of funds involved in money laundering is challenging to determine owing to the covert nature of the process (UNODC, 2022). The primary objective of money laundering is to sanitise money through financial institutions (Kurniawan, 2023).

Digitalisation has become a necessity in every industry in the modern era. Rapid technological advancement has also compelled the financial sector to adapt to these changes. Customers also changed, and the concept of digital customers emerged, forcing the adaptation of products and services to this concept. New financial instruments and effects incorporating advanced technology have emerged (Utami & Septivani, 2022). The present study aimed to determine the impact of adopting FinTech services as the new normal following the lockdown. The study successfully identified the factors that influence this trend. Amidst the COVID-19 pandemic, it was observed that the inclination towards utilising FinTech services escalated owing to their potential to mitigate social distancing concerns and enhance convenience (Meiryani et al., 2022). As per the findings of the Basel Institute on Governance in 2022, the average risk score for 141 countries, as indicated by the Basel AML Index, is 5.25 on a scale of 1 to 10, where one denotes minimal risk and 10 denotes high risk. Indonesia, a high-risk index showing 5.19 out of 10 for money laundering and terrorist financing, is a noteworthy location for money laundering (Basel Institute of Governance, 2022).

Indonesia has enforced the adoption of anti-money laundering (AML) and counter-terrorism financing (CFT) initiatives across all financial service providers under the supervision of Bank Indonesia with the issue of money laundering. Implementing measures to prevent money laundering and terrorism financing serves to mitigate these illicit activities and uphold the precautionary principle, which can effectively safeguard both service providers and consumers against a range of potential risks (Meiryani et al., 2022). Under such conditions, banks must possess tools that aid them in meeting their regulatory responsibilities and mitigating potential regulatory and reputational hazards. RegTech is the set of instruments that are relevant in this context. It is focuses on developing and implementing technological solutions aimed at enhancing the efficiency and effectiveness of regulatory compliance processes beyond the existing capabilities (Meiryani et al., 2022). Regulatory technology enables financial institutions to automate and comply with anti-money laundering regulatory obligations (Meiryani et al., 2022).

Internal audit function (IAF) is not viewed as the primary role in identifying money-laundering activity within banks. Given the global surge in instances of money laundering, it may be necessary to adopt a reconfigured strategy for managing the risks associated with anti-money laundering (AML). Naheem (2016) found that to operate within a globalised banking and regulatory environment effectively; internal audit must adopt a novel approach, particularly regarding addressing AML compliance challenges. Given the breadth of this topic, this paper will narrow its focus to the employment of regulatory technology and internal audit functions to prevent money laundering within Indonesian banks.

2. Background of Study

The high number of reports of suspicious financial transactions (RSFT) in the bank, the presence of RegTech in identifying risks, and the use of financial technology systems to combat money laundering are crucial. The Prevention of Money Laundering in Indonesia is supported by the amalgamation of the Regulation of the Financial Services Authority of the Republic of Indonesia No. 23/POJK.01/2019 and the Regulation of the Bank of Indonesia No. 14/27/PBI/2012. Utami & Septivani, (2022) argued that policymakers encounter challenges in detecting and remedying policy deficiencies and emerging money laundering techniques employed by criminal elements, notwithstanding domestic regulations and law enforcement measures.

RegTech is an essential component of an efficient AML system because it has the potential to contribute by delivering regulatory solutions that are secure, efficient, and dependable for the use of digital technology, including in the financial technology sector (Karsha & Abufaraa, 2020). RegTech is the combination of trade, tax, and financial regulators, and it offers solutions that are dependable, secure, and cost-effective to financial institutions in order to boost the efficiency of those organisations. In addition, RegTech makes it possible for enterprises to remain in ongoing compliance with the requirements of the law (Zabelina et al., 2018).

Turki et al. (2020) conducted a case study in the banking sector of Bahrain to assess the efficacy of electronic know your customer (e-KYC), transaction monitoring (TM), and cost and time efficiencies (CTE) in preventing money laundering. The study revealed that e-KYC technology did not significantly contribute to preventing money laundering. The Financial Action Task Force (FATF) advocates for the KYC principle as the most efficacious approach for the banking sector to counteract money laundering. It involves acknowledging and verifying the identity of customers, scrutinising customer transaction activity, and reporting any suspicious transactions (Meiryani et al., 2022). As per Naheem's (2016) findings, a bank's management and governance framework is responsible for conducting a comprehensive assessment and identifying instances of money laundering. The internal audit function is a fundamental component of the banking governance structure, comprising four pillars: the audit committee, board of directors, external audit report, and internal audit function. The internal audit function is transforming, prompting a timely assessment of potential reorganisation strategies to mitigate the risks associated with widespread institutionalisation and financial malfeasance. Concurrently, the discourse at hand could be associated with advancing and assessing worldwide anti-money laundering (AML) adherence, which is interconnected with transnational illicit activities. Therefore, this research makes a significant contribution by presenting vital insights into the effectiveness of RegTech adoption. The subsequent sections of the paper delineate essential factors pertaining to internal audit function evaluations aimed at mitigating money-laundering risks in Indonesian banks. Financial institutions can utilise the outcomes of this study, Financial Transaction Reports and Analysis Centers

(PPATK), bank personnel, and RegTech service providers in Indonesia to sustain the process of revising regulations and executing initiatives aimed at countering money laundering and terrorist financing.

3. Problem Statement

Money laundering is a crucial aspect of corruption that needs to be addressed by countries. Money laundering remains a significant challenge in Indonesia due to the low level of awareness about the issue. The Indonesian Corruption Watch (ICW) has criticised the Corruption Eradication Commission (KPK) for not giving enough attention to combating money laundering. The KPK has focused on chasing corruption suspects using the "follow the suspect" strategy, with asset recovery as a secondary priority. However, the ICW urges the KPK to utilise new strategies and additional powers in the 2010 Anti-Money Laundering Law to combat money laundering effectively. The ICW suggests that the KPK and other law enforcement agencies adopt the "follow the money" strategy, which involves tracing the flow of illicit funds to identify the beneficiaries and users of corruption proceeds (ICW, 2011).

The lack of attention to money laundering is evident in the small number of cases prosecuted by the KPK that involve money laundering charges, as shown on the bar chart as follows:

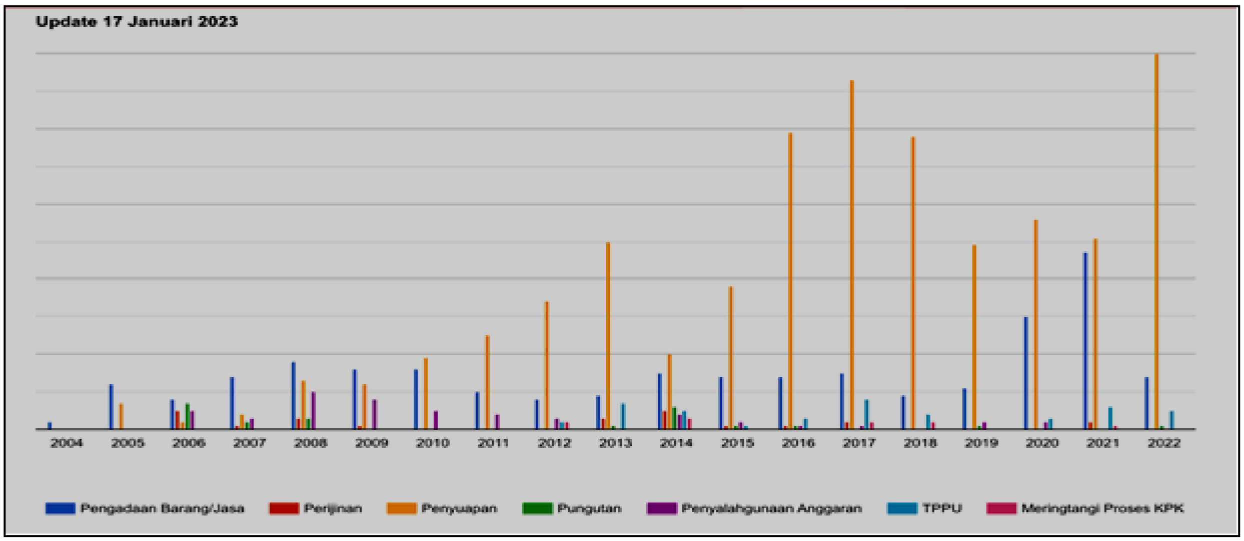

Figure 1.

Source: https://KPK.go.id

From 2004 to 2022, there are 1,351 cases prosecuted by KPK, however there are only 50 cases of Money Laundering:

Table 1.

TYPES OF CASES	NUMBER OF CASES FROM 2004 - 2022
Procurement of Goods/Services	277
Licensing	25
Gratuity/ Bribery	904
Collection/ Extortion	27
Budget Abuse	57
Money Laundering	50
Obstructing the KPK Process	11
	1351

However, according to BBC Indonesia (2023), Indonesia is facing increased discussions about money laundering since the revelation of a tax gratification case by Rafael Alun Trisambodo (RAT), an official in the Directorate General of Taxation in Indonesia. RAT, who holds a position as a State Civil Servant, possesses vast wealth that must be reported in his Wealth Report (LHKPN).

Additionally, Indonesia's Coordinating Minister for Political, Legal, and Security Affairs, Mahfud MD, has raised concerns over allegations of money laundering amounting to IDR 300 trillion (approximately USD 20.8 billion) by a senior official at the Ministry of Finance. He emphasised that the authorities need to take swift and concrete action to investigate and prosecute those responsible for this alleged crime. This latest alleged money laundering case highlights the importance of strengthening Indonesia's anti-money laundering (AML) framework and ensuring that regulations and laws are properly enforced to prevent financial crimes (Tempo, 2023).

Moreover, Indonesia is a country that still needs to join the Financial Action Task Force (FATF) due to not meeting the criteria for membership in the organisation. According to Kongah (2023), FATF is an international organisation that focuses on global efforts to combat money laundering, terrorism financing, and the financing of weapons of mass destruction proliferation. Indonesia's membership in FATF is essential, as it will positively influence the credibility of the country's economy, leading to an increase in positive perceptions of Indonesia's financial system that will lead to rapid economic growth through domestic and international investment. Furthermore, by becoming a full member of FATF, Indonesia is expected to make a broad contribution to determining strategic global policies related to anti-money laundering and countering the financing of terrorism, thus emphasising Indonesia as a country with integrity that is capable of actively contributing to the international stage (PPATK, 2023).

The condition and information, as explained above, indicate that Indonesia still needs to gain awareness of money laundering cases, and the fact that Indonesia still needs to meet the criteria for membership in FATF suggests that Indonesia is still struggling to prevent money laundering. It implies a need to enhance the country's efforts to combat money laundering, as it remains a significant threat to its financial institutions' financial stability and integrity.

As per the Mutual Evaluation Report for Indonesia conducted by FATF (2023), internal audit and RegTech were identified as part of the critical findings and preventive measures. Initially, the FATF acknowledges that only several financial institutions have implemented RegTech solutions, which have been developed by both internal and external providers, primarily for customer due diligence and transaction monitoring. Financial institutions that employ cutting-edge technological solutions demonstrate a comprehensive understanding of the potential money laundering and terrorist financing risks that may arise. A risk assessment is conducted before introducing new products or services, including new delivery channels. However, there are concerns regarding the effectiveness of recognising and analysing risks associated with products prior to their introduction, as well as whether they fully comply with AML/CFT obligations.

Furthermore, regulatory bodies in Indonesia have proactively participated in outreach initiatives aimed at improving adherence to the regulations on the prevention of money laundering and terrorist financing. These endeavours have facilitated financial institutions in comprehending and fulfilling their responsibilities in this regard. The inadequacies in implementing PF-TFS (Proliferation Financing- Targeted Financial Sanctions) have been highlighted in various supervisory inspections due to the internal audit and sanctions screening failures of Financial Institutions. During supervisory inspections, it has been observed that certain financial institutions must exhibit more consistency in their internal audit processes and sanctions screening mechanisms, falling short of the requisite standards. It suggests a deficiency or opportunity for enhancement in the execution of measures to prevent money laundering and terrorist financing (FATF, 2023).

Financial institutions, such as banks, are crucial in preventing money laundering. It is imperative for regulatory bodies and financial institutions to consistently revise and enhance regulatory frameworks while also executing pertinent initiatives. It is expected that using advanced technology will enhance the automation of monitoring, reporting, and regulatory compliance procedures. Additionally, it will facilitate examining dubious financial transactions associated with money laundering and terrorist financing. Additionally, it will enable the alerting of potential occurrences of such transactions (Meiryani et al., 2022). With the increasing digitalisation of banking and the rise of cryptocurrencies, there is a growing need for banks and regulators to work together as collaborative gatekeepers to deter money laundering in the financial system (Yeoh, 2019).

Both internal audit and regulatory technology hold equal significance in preventing money laundering. Implementing an internal audit is crucial in preventing money laundering as it facilitates the identification of possible vulnerabilities in systems and controls by financial institutions. The internal audit function provides impartial and unbiased assurance regarding the effectiveness, reliability, and compliance of a financial institution's internal controls and risk management procedures with all pertinent legal and regulatory mandates. The financial services sector in Indonesia is subject to regulatory oversight and guidance from the Otoritas Jasa Keuangan (OJK) and the Institute of Internal Auditors (IIA) of Indonesia. These entities establish and enforce internal audit practices for financial institutions such as banks and insurance companies. The research conducted by Wahidah (2023) investigated the implementation of anti-money laundering and terrorism funding prevention programmes in PT. BPR Yogyakarta, following the regulations established by OJK and Bank Indonesia. The study found that PT BPR Sleman Yogyakarta had established a mechanism that complied with the Anti-Money Laundering and Terrorism Funding Programme No.12/PJOK.01/2017 issued by OJK. However, the study also revealed that the Human Resources department posed a challenge in implementing business activities, as evidenced by the suboptimal quality of CIF (Customer Identification File) data input and inadequate core banking system. In these circumstances, the Internal Audit function is crucial in providing assurance and consulting services to ensure that the organisation's business operations sufficiently comply with regulations to prevent money laundering.

Implementing Regulatory Technology (RegTech) solutions and strengthening internal audit processes in financial institutions can enhance compliance with anti-money laundering measures. By addressing these aspects, Indonesia can safeguard its financial stability, protect the integrity of its financial institutions, and contribute to the global fight against money laundering and terrorist financing.

4. The Gap in Research

Through an analysis of regulatory technology to prevent money laundering in Indonesia, this paper aims to build a case for the proposition. It is because of the high number of reports of money laundering cases in Indonesia, the presence of RegTech and internal audit functions in detecting risks, and the use of financial technology systems to combat money laundering. All of these factors are essential to combating money laundering.

Therefore, this paper highlights the benefits of RegTech solutions for the bank industry in preventing money laundering. In doing so, the article intends to highlight the benefits of RegTech solutions and the role of internal audit functions in the bank industry in the prevention of money laundering. In addition, this article contributes to the body of knowledge by recommending standards of excellence for organisations to follow during the RegTech integration process in Indonesia, furthermore inside a globalised financial service of the future. To this point, most of the study that has been done on RegTech has looked at it from a legal standpoint and has concentrated mainly on the financial industry. Furthermore, this paper highlights internal audit functions within an AML framework and the advice to reassess the internal audit functions within a future globalised banking service. It has been proposed in the context of a developing globalised criminal milieu, where money laundering is a reality and the complexity of this crime is expanding globally.

5. Literature Review

5.1 Regulatory Technology

RegTech, often known as regulatory technology, is any technology that assists organisations in meeting regulatory institutions' compliance duties. Companies can use RegTech solutions to stay up with new rules and cybercrime concerns. RegTech has aided automated procedures to reduce the risk of human mistakes and give firms more efficiency in achieving regulatory compliance due to cutting-edge technology such as big data, machine learning, artificial intelligence, and cloud computing. Furthermore, these technologies can provide significant support for business growth, help improve customer service, and help accelerate time to market. As a result, adopting RegTech technology provides an advantage in competition (Teichmann et al., 2023).

5.2 Know-Your-Customer (KYC)

Know-Your-Customer (KYC) laws and anti-money laundering (AML) compliance duties are two specific areas in the banking industry where RegTech might be beneficial. RegTech can utilise AI and machine learning to authenticate clients' identities, monitor transactions, and identify possible fraud situations. (Reciprocity, 2021). Know-Your-Customer, also known as Know Your Client, is a required procedure that financial institutions and enterprises must complete when opening or maintaining client accounts. With KYC, businesses can assess risk and comply with anti-money laundering law requirements. A KYC check involves verifying clients' identities and assessing their potential risks of illegal intentions or activities. This process is commonly used in the financial industry, particularly in banking and investment services, to comply with anti-money laundering regulations (Norvill et al., 2020). When a customer opens an account at predetermined calendar intervals, banks conduct Know-Your-Customer checks whenever a suspicious transaction occurs. Financial institutions may refuse to establish an account or terminate the business relationship if a client fails to meet Know-Your-Customer (KYC) requirements. Many businesses are transitioning from paper-based KYC to electronic KYC (e-KYC) to expedite the verification process (Indeed, 2022).

5.3 Transaction Monitoring (TM)

Transaction Monitoring (TM) refers to the post-execution monitoring of transactions to detect anomalous individual transactions. This includes the monitoring of both single transactions and transaction flows. The transaction monitoring process plays a crucial role in identifying anomalies in the transactional behaviour of customers, which can be a challenging undertaking for major financial institutions that are required to screen millions of transactions daily within a limited timeframe (Balooni, 2017). Presently, the volume of transactions conducted by commercial banks has surpassed several hundred million. This trend is expected to persist, as evidenced by the recorded transactions of Bank Mandiri, which amounted to 118 million as of July 2022, and Bank Rakyat Indonesia (BRI), which recorded 726.4 million digital transactions as of June 2022 (Anggraeni, 2022; Hutauruk, 2022).

The sheer purpose of transaction monitoring is to provide a succinct picture of customer activity, which may include transfers, deposits, wire remittances, and withdrawals. By estimating risk scores by looking at the client's profile, account pattern, relationships with counterparties, and transaction monitoring via an automated system, financial institutions' meeting of AML/CFT obligations would become less hurdled (Simpson, 2019).

Implementing RegTech solutions is expected to enhance the effectiveness of anti-money laundering measures by utilising machine learning to analyse unstructured data. The Basel Committee on Banking Supervision (2018) has posited that establishing linkages is expected to aid banks in the surveillance of substantial quantities of customer transactions and the disclosure of dubious transactions. Real-time transaction monitoring is becoming essential if firms want to keep up with money laundering because systems can detect potential financial crime instances and take necessary steps to shut them down. (RegTech Analyst, 2022). It is a crucial mitigation against AML (Von Solms, 2020).

5.4 Cost and Time Efficiencies (CTE)

Manual compliance and regulatory reporting entails a substantial investment of time and resources, is prone to incurring unnecessary expenses, and is vulnerable to human error. Similarly, isolated reporting systems and frameworks can generate redundant data, which can challenge financial institutions and regulators if this data cannot be accessed within the financial institution's systems. According to Papantoniou (2022), the aforementioned circumstances served as adequate motivators for financial incumbents to explore alternative methods of adhering to regulations.

The implementation of RegTech is of significant importance in the context of anti-money laundering systems, as it has the potential to offer regulatory remedies that are secure, economical, and dependable (Karsha & Abufara, 2020). The emergence of RegTech is attributed to several factors, including the disclosure of vast amounts of data by supervised entities, advancements in data science that facilitate the organisation of unstructured data, the imperative for regulated entities to mitigate rising compliance expenses, and the regulators' endeavours to enhance the efficacy of their supervisory duties. According to Arner et al. (2017), the primary objective of this initiative is to enhance competition, ensure financial stability, and uphold market integrity. Implementing RegTech in the banking industry facilitates the expeditious and effective prevention of money laundering (Turki et al., 2020). According to Tennant (2017), RegTech offers advantages in terms of speed and efficiency in preventing money laundering.

Integrating RegTech solutions incorporating automation, scalability, flexibility, and security can significantly decrease the expenses and time required for anti-money laundering prevention activities. RegTech has presented a novel opportunity for financial institutions to fulfil their compliance obligations more cost-effectively and efficiently while reducing the burden of compliance-related issues for regulated entities (Yusoff et al., 2022). The implementation of this technology has facilitated the adherence of numerous financial institutions to global benchmarks and local mandates, thereby optimising workforce utilisation and minimising expenses and time constraints (Papantoniou, 2022)

5.5 Internal Audit Function

The concept of auditing has undergone significant evolution due to the emergence of economic projects and the implementation of internal control systems. It has transcended its traditional role of cash maintenance and has become a crucial function in ensuring that a company's objectives are achieved. As such, auditing has emerged as one of the most effective means of preventing deficiencies in a company. Implementing internal control is of paramount importance for businesses as it bolsters the execution of policies and objectives (Tamimi, 2021). The function of internal audit is crucial in preventing money laundering within institutional settings. Juntunen and Teittinen (2023) posit that comprehending the customer is crucial in mitigating money laundering. To this end, employing a risk-based approach, client risk classification, and internal bank directives have all contributed to elucidating routine anti-money laundering (AML) protocols. According to Tamimi (2021), the internal audit function can evaluate the effectiveness of risk management procedures, provide guidance and suggestions to the risk management department, and authenticate the efficacy of risk management techniques in addressing risks. Internal audit enhances an organisation's governance and strategic decision-making processes. This is achieved through a comprehensive analysis of the various risk management systems to identify potential areas of concern (Naheem, 2016). Regarding AML compliance, the internal audit function may analyse the system's relevance and efficacy and trace the trail of a sample of Suspicious Activity Reports (SARs) to ascertain the bank's actions and the reports submitted to the Financial Intelligence Unit (FIU). The risk management department benefits from the input of internal audit departments at banks, which provide guidance, suggestions, and counsel.

Recent research on Trade-Based Money Laundering (TBML) and internal audit (Naheem, 2016) questioned experts on how the function of internal audit may be expanded to lessen the risk of TBML exposure inside financial services and banks. The experts identified numerous critical adjustments that should occur in AML audit practice, including:

(1) Trade finance: Due to rising levels of susceptibility, this should be reviewed annually with a focus on possible TBML transactions.

(2) Red flags: These must be evaluated and updated regularly as criminal strategies change.

(3) Know-Your-Customer: This information should be checked and audited regularly, with a particular emphasis on completeness.

(4) SARs: These reports should be examined regularly, with a sample of them audited to monitor and document the grounds for the SAR and the responses to and results of the detected concerns.

The internal audit research results will help develop an Anti-Money Laundering audit procedure related to the AML compliance processes. This could also mitigate issues caused by a misunderstanding of AML and internal audit functions. As a result, the internal audit function is an essential component of a bank's governance structure and can help to prevent money laundering.

6. The Proposed Conceptual Framework

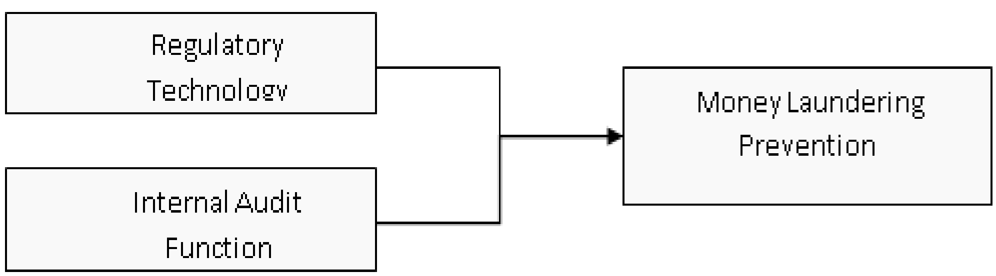

Figure 2. Proposed Conceptual Framework

Figure 2 is shown prposed conceptual framework. The conceptual framework under consideration highlights the correlation between the implementation of regulatory technology (RegTech) solutions and the internal audit function in preventing the risk of money laundering in the banking industry of Indonesia. RegTech solutions provide financial institutions with the tools to enhance their AML capabilities and comply with regulatory obligations more effectively. These solutions automate compliance processes, improve transaction monitoring, and facilitate detecting suspicious transactions. Simultaneously, the internal audit function ensures the effectiveness of AML measures by assessing the adequacy of controls, monitoring compliance with AML policies, and identifying any gaps or weaknesses that could facilitate money laundering. The findings and recommendations of internal audit can help strengthen the overall AML framework of banks. Integrating RegTech and internal audit functions contributes to a robust and comprehensive approach to preventing money laundering in Indonesian banks. The implementation of this conceptual framework has the potential to augment the anti-money laundering (AML) frameworks of financial institutions in Indonesia, thereby enabling them to make valuable contributions to global policies and effectively combat money laundering.

7. Conclusion

Technological advancement has laid the way for the development of RegTech as a powerful tool for combating money laundering. RegTech solutions, such as AI-powered transaction monitoring and advanced analytics, can assist financial institutions in more effectively detecting and preventing suspicious transactions. RegTech should not, however, be viewed as a replacement for human oversight and the internal audit function. RegTech should be incorporated with the internal audit function to improve the efficacy of anti-money laundering (AML) programs. Using RegTech tools, internal auditors can conduct risk assessments, conduct testing and monitoring, and provide assurance regarding the effectiveness of AML controls. By leveraging RegTech solutions and the internal audit function, financial institutions can enhance their AML compliance programs and mitigate money-laundering risks, thereby establishing the prevention of money laundering.

8. Recommendation

Indonesian financial institutions prioritise the implementation and incorporation of regulatory technology (RegTech) solutions in order to bolster their anti-money laundering (AML) and counter-terrorism financing (CFT) initiatives. Regulatory Technology (RegTech) has the potential to offer proficient and impactful solutions for streamlining the procedures of regulatory compliance. This includes tasks such as conducting Customer Due Diligence (CDD), monitoring transactions, and reporting suspicious activities. Implementing this measure could enhance the banks' capacity to detect and deter instances of money laundering. It is recommended that financial institutions engage in active collaboration with RegTech service providers in order to devise and execute customised solutions that effectively address their unique anti-money laundering (AML) and countering the financing of terrorism (CFT) requirements. Through close collaboration with industry professionals, financial institutions can effectively utilise cutting-edge technologies and optimal methodologies to address the challenges of money laundering, maintain adherence to regulatory requirements, and minimise related hazards.

The consistent surveillance and maintenance of RegTech solutions are crucial for financial institutions to stay informed about contemporary money laundering tactics and regulatory alterations. This necessitates the requirement to stay abreast of emerging trends, conduct risk assessments, and implement proactive measures to enhance the capabilities of RegTech systems in identifying and preventing new money laundering methods. Financial institutions need to recognise the critical importance of the internal audit function in identifying possible money laundering risks and ensuring compliance with Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CFT) regulations. Therefore, banks must improve their internal audit functions. Internal audit teams must have adequate training and resources to assess the effectiveness of financial institutions' anti-money laundering (AML) protocols, including the implementation and utilisation of regulatory technology (RegTech) solutions. Conducting regular assessments and evaluations of anti-money laundering (AML) controls, policies, and procedures is a crucial responsibility of the internal audit function. Implementing this approach will facilitate the delivery of self-governing validation to administrative leadership and regulatory entities. Establishing and maintaining effective communication and collaboration channels with regulatory authorities, such as Bank Indonesia and the Financial Transaction Reports and Analysis Center (PPATK), is crucial for banks to ensure compliance with regulatory requirements. Additionally, such channels facilitate the exchange of information and expertise on money laundering risks and mitigation strategies. Regulatory agencies can provide guidance, support, and oversight to financial establishments in integrating effective anti-money laundering (AML) protocols and incorporating regulatory technology (RegTech) remedies.

Indonesia prioritises engaging in international collaboration and endeavours to attain membership in the Financial Action Task Force (FATF) by satisfying the requisite criteria. Furthermore, it is recommended to engage in active involvement in worldwide endeavours that are targeted towards preventing money laundering and terrorist financing. The integration of Indonesia into the Financial Action Task Force (FATF) would enhance its position in the international sphere and create a platform for the country to make significant contributions towards the progression of global anti-money laundering (AML) measures. The optimisation of Indonesia's anti-money laundering (AML) framework can be achieved through international collaboration, acquiring insights from exemplary practices in other jurisdictions, and reinforcing its capacity to deter money-laundering activities in the banking industry.

The execution of these suggestions possesses the capacity to enhance the anti-money laundering (AML) and countering the financing of terrorism (CFT) competencies of banks in Indonesia. Moreover, employing technology can facilitate detecting and deterring money laundering endeavours while concurrently ensuring compliance with regulatory mandates. It is anticipated that the execution of these measures will augment the durability and effectiveness of the financial system, conserving the integrity of the banking sector and guaranteeing the protection of the country's financial steadiness.

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References

Anagnostopoulos, I. (2018). Fintech and RegTech : Impact on regulators and banks. *Journal of Economics and Business, 100*(July), 7-25. https://doi.org/10.1016/j.jeconbus.2018.07.003

Arner, D. W., Barberis, J., & Buckley, R. P. (2017b). RegTech: Building a Better Financial System1. In *Handbook of Blockchain, Digital Finance, and Inclusion*, Volume 1: Cryptocurrency, FinTech, InsurTech, and Regulation, 359.

Balooni. (2017). *How Technology Is Helping Overcome Anti Money Laundering Challenges*. Retrieved from: https://banknxt.com/60329/technology-anti-money-laundering/

Basel AML Index. (2022). *11 the Public Edition Ranking money laundering and terrorist financing risks around the world*.

Basel Committee on Banking Supervision. (2018). *Sound Practices: Implications of Fintech Developments for banks and banks Supervisors*. Bank for International Settlements 2018 (www.bis.org).

BBC Indonesia. (2023, April 3). *Indonesia Pangkas Target Pertumbuhan Ekonomi 2022 dari 5,5% jadi 4,5%*. Retrieved from: https://www.bbc.com/indonesia/indonesia-64879826

FATF. (2023). *Anti-money laundering and counter-terrorist financing measures –Indonesia, Fourth Round Mutual Evaluation Report, FATF, Paris*. Retrieved from: https://www.fatf-gafi.org/content/fatf-gafi/en/publications/Mutualevaluations/MER-Indonesia-2023.html

Indeed. (2022, June 25). *Know Your Customer (KYC): Definition, Importance, and Compliance Requirements*. Retrieved from: https://www.indeed.com/career-advice/career-development/kyc

Indonesia Corruption Watch. (2011, June 10). *Miskinkan Koruptor dengan Undang-Undang Pencucian Uang*. Retrieved from https://antikorupsi.org/id/article/miskinkan-koruptor-dengan-undang-undang-pencucian-uang

Juntunen, J., & Teittinen, H. (2023). Accountability in anti-money laundering – findings from the banking sector in Finland. *Journal of Money Laundering Control, 26*(2), 388-400. https://doi.org/10.1108/JMLC-12-2021-0140

KPK. (2023, January 27). *Statistik TPK Berdasarkan Jenis Perkara*. Retrieved from:(https://www.kpk.go.id/id/statistik/penindakan/tpk-berdasarkan-jenis-perkara

Kurniawan, V. (2023). The Role of Regulatory Technology & Bankers to Prevent Money Laundering in Bank. *JBMP: Jurnal Bisnis, Manajemen Dan Perbankan, 9*(1), 43-52. https://doi.org/10.21070/jbmp.v9i1.1660

Lee, E. (2018). Financial Inclusion: A Challenge to the New Paradigm of Financial Technology, Regulatory Technology and Anti-Money Laundering Law. *SSRN Electronic Journal,* 1-51. https://doi.org/10.2139/ssrn.3018960

Meiryani, M., Soepriyanto, G., & Audrelia, J. (2022). Effectiveness of regulatory technology implementation in Indonesian banking sector to prevent money laundering and terrorist financing. *Journal of Money Laundering Control*. https://doi.org/10.1108/JMLC-04-2022-0059

Naheem, M. A. (2016). Internal audit function and AML compliance: the globalisation of the internal audit function. *Journal of Money Laundering Control, 19*(4), 459-469. https://doi.org/10.1108/JMLC-05-2015-0020

Nasional Kompas. (2021, April 9). *ICW: Sepanjang 2020 Ada 1298 Terdakwa Kasus Korupsi, Kerugian Negara Rp 567 Triliun*. Retrieved from: https://nasional.kompas.com/read/2021/04/09/18483491/icw-sepanjang-2020-ada-1298-terdakwa-kasus-korupsi-kerugian-negara-rp-567

Norvill, R., Cassanges, C., Shbair, W.M., Hilger, J., Cullen, A.J., & State, R. (2020). *A Security and Privacy Focused KYC Data Sharing Platform*. Proceedings of the 2nd ACM International Symposium on Blockchain and Secure Critical Infrastructure. https://doi.org/10.1145/3384943.3409431

OJK. (2022, 21 September). *OJK dan IIA Indonesia perkuat Peran Profesi Auditor Intern di sektor Jasa Keuangan*. Retrieved from: https://ojk.go.id/id/berita-dan-kegiatan/info-terkini/Pages/OJK-dan-IIA-Indonesia-Perkuat-Peran-Profesi-Auditor-Intern-di-Sektor-Jasa-Keuangan.aspx

Papantoniou, A. A. (2022). RegTech: steering the regulatory spaceship in the right direction? *Journal of Banking and Financial Technology, 6*(1), 1-16. https://doi.org/10.1007/s42786-022-00038-9

Pusat Pelaporan dan Analisis Transaksi Keuangan (PPATK). (2023, February 24). *Indonesia Selangkah Lebih Dekat Menjadi Anggota Financial Action Task Force* [Press Release]. Retrieved from:

https://www.ppatk.go.id/siaran_pers/read/1257/siaran-pers-indonesia-selangkah-lebih-dekat-menjadi-anggota-financial-action-task-force.html

Quill, T., & Lennon, R. (2019, April). Automating legal compliance documentation for IoT devices on the network. In 2019 *IEEE 5th World Forum on Internet of Things* (WF-IoT) (pp. 408-412). IEEE. https://doi.org/10.1109/WF-IoT.2019.8767346

Reciprocity. (2021, July 5). *What Is RegTech and Why Does It Matter*? Retrieved from: https://reciprocity.com/resources/what-is-RegTech-and-why-does-it-matter/

RegTech Analyst. (2022, July 26). *Why real-time transaction monitoring is the next step for compliance*. Retrieved from: https://member.RegTechanalyst.com/why-real-time-transaction-monitoring-is-the-next-step-for-compliance

Simpson, A. (2018). The role of transaction monitoring in ongoing monitoring: AML compliance programmes in Canada. *Journal of Financial Compliance, 2*(2), 165-175.

Tamimi, O. Y. (2021). The role of internal audit in risk management from the perspective of risk managers in the banking sector. *Australasian Accounting, Business and Finance Journal, 15*(2), 114-129. https://doi.org/10.14453/aabfj.v15i2.8

Teichmann, F., Boticiu, S., & Sergi, B. S. (2023). RegTech – Potential benefits and challenges for businesses. *Technology in Society, 72*(October 2022), 102150. https://doi.org/10.1016/j.techsoc.2022.102150

Tempo Bisnis. (2023, March 13). *Mahfud MD Sorot Dugaan Pencucian Uang Rp 300 Triliun Pegawai Kemenkeu: Ini 3 Tahapan Money Laundering.* Retrieved from: https://bisnis.tempo.co/read/1701690/mahfud-md-sorot-dugaan-pencucian-uang-rp-300-triliun-pegawai-kemenkeu-ini-3-tahapan-money-laundering

Tookitaki. (2022, September 22). *Indonesia Anti Money Laundering Guide*. Retrieved from: https://www.tookitaki.com/blog/indonesia-anti-money-laundering-guide

Transparency International Indonesia. (2023, January 31). *Indeks Persepsi Korupsi Indonesia 2022 Mengalami Penurunan Terburuk Sepanjang Sejarah Reformasi*. Retrieved from https://ti.or.id/indeks-persepsi-korupsi-indonesia-2022-mengalami-penurunan-terburuk-sepanjang-sejarah-reformasi-2/

Turki, M., Hamdan, A., Thomas, R., Sarea, A., Karolak, M., & Anasweh, M. (2020). Heliyon The regulatory technology "RegTech" and money laundering prevention in Islamic and conventional banking industry. *Heliyon, 6*(March), e04949. https://doi.org/10.1016/j.heliyon.2020.e04949

UNODC. (2023). *Money Laundering Overview*. Retrieved from: https://www.unodc.org/unodc/en/money-laundering/overview.html

Utami, A. M., & Septivani, M. D. (2022). Solutions to money laundering prevention through Regulatory Technology (RegTech): Evidence from Islamic and conventional banks. *Jurnal Ekonomi Dan Keuangan Islam, 8*(1), 17-31. https://doi.org/10.20885/jeki.vol8.iss1.art2

Von Solms, J. (2021). Integrating Regulatory Technology (RegTech) into the digital transformation of a bank Treasury. *Journal of Banking Regulation, 22*(2), 152-168. https://doi.org/10.1057/s41261-020-00134-0

Wahidah, N. A. K. (2023). *Penerapan Program Anti Pencucian Uang Dan Pencegahan Pendanaan Terorisme* (Apu Dan Ppt) Berdasarkan Peraturan Otoritas Jasa Keuangan Dan Bank Indonesia (Studi Kasus pada PT BPR Bank Sleman Yogyakarta 2020) (Doctoral dissertation, Universitas Islam Indonesia).

Yeoh, P. (2020). Banks' vulnerabilities to money laundering activities. *Journal of Money Laundering Control, 23*(1), 122-135. Emerald Group Holdings Ltd. https://doi.org/10.1108/JMLC-05-2019-0040

Yusoff, Y. H., Ghazali, N. I., Fazel, A. A. M., Jamaludin, N., Tawil, N. L., & Madzlan, N. (2023). Roles of Auditor in Combating Money Laundering: A Concept Paper. *International Journal of Academic Research in Business and Social Sciences, 13*(4), 78-87. https://doi.org/10.6007/IJARBSS/v13-i4/16593

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