

The Dynamics of Anti-Money Laundering Regulation in the Governance of Fintech and E-Commerce Companies in Indonesia

Aris Fiana, Arif Rachman Putra, Agung Satryo Wibowo

Universitas Sunan Giri Surabaya, Indonesia

ARTICLE INFO

Article history:

Received 07 May 2024

Revised 26 May 2024

Accepted 02 June 2024

Key words:

Anti-money laundering,

Fintech,

E-commerce.

Regulation,

Compliance,

Innovation,

Digital market.

ABSTRACT

This literature study analyzes the influence of Indonesia's Anti-Money Laundering (AML) regulatory framework on fintech and e-commerce companies, focusing on its operational, financial, and innovative impacts. Employing a qualitative descriptive approach through normative juridical analysis of secondary legal sources, the research examines core regulations: Law Number 8 of 2010 on Money Laundering Crimes, OJK Regulation Number 12/POJK.01/2017, BI Regulation Number 19/12/PBI/2017, and PPATK Regulation Number 11 of 2016. The findings indicate that the AML framework comprehensively integrates digital companies into the national financial reporting system, imposing mandatory Customer Due Diligence, transaction monitoring, and suspicious activity reporting. Operationally, this transforms business processes, introducing new compliance layers and technological complexity. Financially, it creates significant fixed costs for compliance infrastructure and specialized personnel, affecting profitability and competitive dynamics, particularly for startups. Regarding innovation and market development, AML regulations act as a dual-force catalyst and constraint. They spur innovation in Regulatory Technology (RegTech) and serve as a reputational differentiator, fostering consumer trust and facilitating global investment. Concurrently, they filter out anonymity-based business models, potentially slow time-to-market, and encourage market consolidation by favoring scaled players. The study concludes that AML regulation has fundamentally reshaped Indonesia's digital ecosystem, enforcing a trade-off between security and agility, and directing innovation towards a more structured and accountable trajectory within the global financial system.

INTRODUCTION

Financial globalization and the digital revolution have accelerated the emergence of new business models that rely on technology to provide financial and trading services. These innovations, embodied in the form of fintech and e-commerce companies, offer unprecedented efficiency, accessibility and convenience. However, the acceleration of digital transactions and the relative anonymity that accompanies them also create potential loopholes that can be exploited for illegal activities, including money laundering and terrorist financing. The development of digital technology in economic activities also raises a number of new legal issues that require serious attention from policymakers in order to keep the financial system safe and trustworthy (Yuristiawan et al., 2024; Balkista et al., 2024). Money laundering is the process of

disguising the origin of illegally obtained funds to make them appear legitimate. In a fast-paced digital economy, the high volume of transactions and their cross-border nature make tracking and prevention efforts extremely complex (Reuter & Truman, 2004). Therefore, a strong and adaptive regulatory framework is needed to ensure that financial innovation does not compromise the integrity of the financial system.

Indonesia, as one of the fastest-growing digital economies in Southeast Asia, has experienced an explosion in the use of fintech and e-commerce services. Digital transactions among Indonesians continue to increase significantly, driven by widespread internet penetration and smartphone adoption. Services such as digital payments, peer-to-peer lending, and online marketplaces have become an integral part of everyday economic life.

* Corresponding author, email address: arifrachmanputra.caniago@gmail.com

These changes show that digital technology has become an important part of the economic activities of modern society, which needs to be balanced with an adequate supervisory system (Sinambela & Darmawan, 2022; Rahman et al., 2024). This rapid growth has attracted the attention not only of investors but also of regulators responsible for maintaining the stability and security of the financial system. Regulators recognize that the absence of adequate supervision in these new sectors could make them new channels for illicit funds, which could ultimately threaten the country's economic sovereignty and reputation in the eyes of the international community (Arner et al., 2015).

In response, the Indonesian government, through the Financial Services Authority and related agencies, has developed and strengthened the regulatory framework for Anti-Money Laundering and Counter-Terrorism Financing. The balance between innovation and regulation is key to creating a stable market system while promoting sustainable technological development (Darmawan, 2022). The scope of these regulations has been gradually expanded to include financial technology providers and e-commerce platforms. Regulations not only serve as a control tool but also as an instrument to maintain fairness and transparency in digital economic activities (Wibowo et al., 2023; Zulkarnain et al., 2024). Core regulations such as Law No. 8 of 2010 concerning the Prevention and Eradication of Money Laundering, along with its implementing regulations from the OJK, require business actors to carry out a series of preventive obligations. These obligations include the creation of AML-CFT policies, identification and verification of customers or users, ongoing monitoring of transactions, reporting of suspicious financial transactions, and storage of transaction documents and records (Financial Services Authority, 2016). This implementation marks a paradigm shift from regulations that focus on traditional financial institutions to a risk-based approach that includes non-bank entities.

The implementation of AML-CFT obligations in fintech and e-commerce companies is not a simple process. This industry is built on speed, user convenience, and technological scalability. On the other hand, compliance with AML regulations often requires procedures that can slow down user onboarding, add to operational complexity, and increase compliance costs. This situation shows that the relationship between technological innovation and legal regulations is often one of mutual

adjustment, requiring a balanced approach between legal protection and digital business development (Radjawane & Mardikaningsih, 2022; Bashori et al., 2024). For example, strict Know Your Customer processes, which are essential for customer identification, can conflict with users' desire for an instant and seamless registration experience. This tension between innovation and regulation creates a dynamic field in which companies must find a balance between complying with the law and remaining competitive in a rapidly evolving market. Academic discourse on the impact of regulation on financial innovation has highlighted this dilemma (Zetsche et al., 2017).

Therefore, this literature study attempts to systematically examine the interaction between the evolving AML regulatory framework in Indonesia and the operations of fintech and e-commerce companies. The focus of the study is on how regulations designed to protect the financial system from the risk of transnational crime are translated and implemented in a fluid digital ecosystem. Analysis of regulatory implementation is crucial to determine whether existing rules have been effective in practice (Sulaiman et al., 2023; Sahid et al., 2023). This study is important for understanding the transformation of financial governance in the digital age, where technology is pushing the traditional boundaries of financial institutions and forcing regulators to continuously adapt. By analyzing the existing literature, this study aims to provide a comprehensive understanding of the dual impact of AML regulations: as a tool for systemic protection and as a factor shaping the evolution of digital business.

First, there is a substantive gap between principles and practices in the implementation of AML-CFT obligations in fintech and e-commerce companies in Indonesia. Regulations such as the OJK Regulation on AML-CFT for Payment Services and other financial technologies set clear standards. However, the technical capacity, resources, and understanding to implement these standards vary greatly among business actors. Differences in capabilities among business actors often pose challenges in regulatory implementation, especially for companies that are still in the business development stage (Wiyandarini et al., 2021; Ramle & Mardikaningsih, 2022). Start-ups with limited capital often face difficulties in allocating large funds to build sophisticated transaction monitoring systems or recruit experienced compliance officers. On the other hand, e-commerce platforms that connect millions of micro-sellers and consumers

face unique challenges in effectively verifying the identities of all participants on their platforms. This gap can result in symbolic or uneven compliance, which in turn reduces the overall effectiveness of regulations and creates high residual risk in certain sectors.

Second, the compliance costs imposed by AML regulations put pressure on the operational structures and business models of fintech and e-commerce companies. Fulfilling obligations such as Customer Due Diligence, reporting suspicious transactions, and internal audits requires significant investment in software technology, data infrastructure, and expertise. Compliance obligations often have economic consequences for businesses that must adjust their operational strategies to remain in line with applicable legal provisions (Putra & Wibowo, 2023; Putra et al., 2022). These costs are often fixed and difficult to avoid, making them a heavier burden for small and medium-sized enterprises. This cost pressure can have an impact on several aspects. Companies may have to divert resources from product development and service innovation to compliance activities. Alternatively, they may decide to pass on some of these costs to consumers in the form of additional fees or reduce free service features, which may ultimately hinder financial inclusion and reduce market appeal. These dynamics raise questions about long-term sustainability and competitiveness amid an increasingly stringent regulatory environment.

Thirdly, a one-size-fits-all regulatory approach does not fully accommodate the different characteristics and risk profiles of various fintech and e-commerce segments. For example, the risk profile for digital wallet services with limited transaction values differs from that of peer-to-peer lending platforms that channel large amounts of funds. Overly uniform legal policies can lead to inconsistencies with actual conditions in the field, necessitating a more flexible and proportional approach (Negara et al., 2024; Wibowo et al., 2023). Similarly, the risks associated with e-commerce selling ordinary physical goods may not be as high as those associated with platforms facilitating the trading of high-value digital assets. Overly rigid and uniform regulations have the potential to hamper innovation in low-risk business models, while not necessarily effectively addressing loopholes in high-risk models. Recent developments towards risk-based regulation show progress, but the application of the principle of proportionality in daily practice still faces

operational obstacles. This creates uncertainty for businesses in interpreting and implementing regulations, and has the potential to result in a regulatory burden that is disproportionate to the expected risk reduction benefits.

Indonesia's digital ecosystem is in a critical phase of growth and consolidation. The value of digital economic transactions is projected to continue to increase, attracting more participation from the wider community and foreign investment. In this phase, good governance and an appropriate regulatory framework are important foundations for ensuring healthy, sustainable growth that is protected from abuse. Strengthening regulation and supervision in the digital economy is an important step in maintaining a balance between consumer protection and technological innovation growth (Purwanto et al., 2023; Supriyanto et al., 2023). Examining the impact of AML regulations provides an overview of how Indonesia is building this foundation. This study can reveal whether the current regulatory approach encourages or hinders the full potential of the digital economy. This understanding is vital for policymakers to make adjustments and improvements to regulations in line with industry dynamics, so as to protect the financial system without stifling innovation, which is the engine of new economic growth (Arner et al., 2015).

From a global financial security perspective, Indonesia is part of an international financial network that must comply with standards set by the Financial Action Task Force. An evaluation of Indonesia's compliance with FATF standards will include the effectiveness of AML regulations in non-traditional sectors such as fintech and e-commerce. User trust in digital systems is also greatly influenced by legal protection of data and privacy in technology-based services (Oluwatosin, 2024). A systematic literature review on this topic can serve as evaluation material to identify strengths and weaknesses in the national policy framework. Thus, this research is directly relevant to Indonesia's reputation and position in global financial cooperation. Furthermore, the findings of this study can provide lessons for other developing countries facing similar challenges in regulating their digital economies, thereby contributing to the global discourse on financial governance in the digital age.

At the micro level, pressure to comply with and adapt to APU regulations is reshaping the operational and technological strategies of companies in this sector. Companies that

successfully integrate APU principles into their product design and system architecture from the outset may gain a long-term competitive advantage in terms of trust, sustainability, and the ability to expand into markets with stricter regulations. This shows that legal compliance is not only a formal obligation, but can also be an important strategy in building reputation and business sustainability in the digital age (Noor et al., 2023). Conversely, companies that view compliance as merely an additional burden may encounter scalability challenges and risk facing heavy regulatory sanctions. Therefore, understanding the trajectory and impact of these regulations is crucial for businesses, investors, and consultants in the fintech and e-commerce industries. Literature reviews can provide an intellectual roadmap for anticipating future regulatory trends and designing robust and compliant business strategies.

The objective of this study is to analyse the Anti-Money Laundering regulatory framework applicable to fintech and e-commerce companies in Indonesia. This study will then examine the operational and financial impacts of compliance with these regulatory obligations on the business models implemented by companies in this sector. Furthermore, this study aims to evaluate how the implementation of Anti-Money Laundering regulations affects the pace of innovation and market development in Indonesia's fintech and e-commerce ecosystem. Overall, this literature study is expected to contribute theoretically by enriching the academic discourse on the interaction between financial regulation and digital innovation in developing economies. From a practical perspective, the research findings can be used as consideration for regulators in refining policies and for industry players in designing effective and sustainable compliance strategies.

RESEARCH METHOD

This research is a qualitative literature study with a descriptive analytical approach. This study relies entirely on secondary data in the form of written sources to build a comprehensive understanding of the topic under study. The main data sources include official regulatory documents from the Indonesian government and relevant authorities such as the Financial Services Authority, academic manuscripts in the form of textbooks, reputable scientific journal articles, and study reports from credible research institutions. Regulatory documents, such as OJK laws and regulations, form the main foundation for understanding the

normative obligations that must be complied with. Meanwhile, academic literature from international and national journals that have undergone a peer-review process provides theoretical perspectives, critical analyses, and empirical findings relevant to examining the impact and implications of these regulations. Sources were selected based on their relevance, authoritativeness, and year of publication to ensure that the study was based on up-to-date and solid scientific discourse.

The analysis method applied is qualitative content analysis. According to Krippendorff (2004), content analysis allows researchers to make replicable and valid inferences from the data in the context of its use. In this study, content analysis techniques were carried out systematically through several stages. First, all reference materials were collected and organized based on major themes: regulatory framework, operational impact, and impact on innovation. Second, each source was read deeply and repeatedly to identify concepts, categories, patterns, and relationships between ideas. Third, the text data was coded to mark key statements related to the research questions. Categories that emerge from the data, such as "cost burden", "barriers to innovation", and "complexity of implementation", are then grouped and analyzed to find consistency, contradictions, or gaps in the existing literature. This process allows researchers to synthesize findings from various sources into a coherent analytical narrative.

Literature studies such as this have exploratory and interpretative characteristics. The validity of the findings is ensured through source triangulation, which involves comparing and confirming information obtained from various types of documents and different authors. For example, claims regarding the high costs of compliance expressed in industry reports will be sought to be corroborated or compared in academic studies discussing regulatory economics. In addition, this research follows the principle of audit trail, whereby the process of source search, selection, and analysis can be accounted for methodologically. As explained by Bowen (2009), document analysis in qualitative research allows researchers to examine issues in depth without intervening in the subject, thereby producing a rich understanding based on available textual evidence. Through this approach, the study seeks to present an in-depth and structured analysis of the dynamic interaction between Anti-Money Laundering regulations and the fintech and e-commerce sectors in Indonesia.

RESULT AND DISCUSSION

Anti-Money Laundering Regulatory Framework for Fintech and E-Commerce in Indonesia

Anti-Money Laundering regulations in Indonesia are rooted in the TPPU Law, which forms the main foundation for financial transaction supervision. The main basis for Anti-Money Laundering regulations in Indonesia is Law Number 8 of 2010 concerning the Prevention and Eradication of Money Laundering Crimes. This law provides a broad definition of Reporting Parties, which includes any person or entity whose activities have the potential to be used for money laundering, including activities in the field of trade and financial services. With this definition, fintech and e-commerce companies, especially those that facilitate the flow of funds, have implicitly been included in the scope of regulation from the outset. The development of digital transactions also requires clear legal protection so that business activities continue to run fairly and safely for all parties (Ali et al., 2024; Anugroh et al., 2023). The TPPU Law stipulates fundamental obligations for every Reporting Party, namely to implement the Know Your Customer Principle, keep transaction records, and report Suspicious Financial Transactions to the Financial Transaction Reporting and Analysis Centre. This legal position is very important because it changes the status of digital companies from mere technology service providers to entities that have supervisory and reporting functions in the national financial system. As a result, company operations must comply with financial criminal law, where negligence not only results in administrative consequences but also potential criminal prosecution (Halawa, 2022). The TPPU Law changes the role of digital companies to become active supervisors in the national financial system.

POJK No. 12/2017 is the main technical guideline for non-bank financial services institutions, particularly fintech. More specific operational details for non-bank financial services institutions, including most fintech companies, are regulated in Financial Services Authority Regulation No. 12/POJK.01/2017. This regulation serves as the main technical guideline for fintech lending, digital investment platforms, and other financial technology providers under the supervision of the OJK. In practice, the implementation of digital financial regulations is also related to increasingly complex data and information management, requiring companies to

optimize their data management systems in the decision-making and transaction monitoring processes (Ali & Darmawan, 2023). The core obligations regulated include the creation of a written AML-CFT Policy approved by the board of commissioners and directors, the appointment of an AML-CFT Officer, and the implementation of comprehensive customer identification and verification. This verification process must not be carried out carelessly; companies are required to use valid data and documents in accordance with the provisions of the law. For high-risk customers, companies must carry out more in-depth due diligence, which may include understanding the source of funds, the purpose of the transaction, and the customer's employment background (Lessambo, 2023). This regulation effectively compels fintech companies to establish independent compliance departments or functions with adequate authority within their organizational structures. This POJK emphasizes fintech compliance obligations through a more formal and authoritative organizational structure.

BI regulations place the digital payment sector as the main focus of APU-PPT supervision. The digital payment sector, which is the backbone of both fintech and e-commerce, receives special attention from Bank Indonesia through Bank Indonesia Regulation Number 19/12/PBI/2017 concerning the Implementation of Financial Technology. This regulation reaffirms the obligation to apply APU-PPT principles for every financial technology provider, with an emphasis on effective internal control systems. Bank Indonesia requires companies to have transaction monitoring mechanisms capable of detecting unusual patterns in real-time or near real-time. This requires sophisticated technological infrastructure, as the volume and speed of digital transactions are very high. In addition, companies are required to develop clear procedures and policies for handling customers who are listed in the list of persons or entities subject to sanctions or restrictions, both nationally and internationally. This obligation shows that regulators are not only concerned with customer identity, but also with their networks and links to prohibited activities (Annisa & Putri, 2020). This PBI emphasizes the importance of advanced technology and compliance policies to maintain the integrity of digital payment systems.

PPATK Regulation No. 11/2016 emphasizes the reporting mechanism as the main pillar of money laundering prevention. The reporting mechanism is the link between companies and financial

intelligence authorities, and is technically regulated in PPATK Head Regulation No. 11 of 2016. In digital transaction practices, the quality of electronic services also has an impact on user trust and satisfaction, so companies need to maintain a transparent and trustworthy service system (Fared et al., 2021). This regulation regulates in great detail the procedures for submitting three main types of reports: Suspicious Financial Transaction Reports, Cash Transaction Reports, and Fund Transfer Reports. For fintech and e-commerce companies, understanding the indicators of suspicious transactions is key. These indicators can include complex transactions, transactions that do not have a clear economic or legal purpose, or transactions carried out in a pattern that is unusual for the customer's profile. Companies must build systems capable of detecting these anomalies from massive transaction data flows. Reporting suspicious transactions is a basic obligation in preventing and combating money laundering (Jia & Liang, 2023). Reports must be made no later than fourteen working days after the company becomes aware of a suspicious transaction (Ghozi, 2022). This strict time requirement demands a fast and efficient internal investigation process, which again depends on the quality of the technology system and the analytical capacity of compliance officers. The effectiveness of reporting depends on a sophisticated technology system and the analytical capacity of compliance officers.

The Consumer Protection Law complements the AML-CFT framework with transparency obligations for digital businesses. In digital trading systems, the relationship between businesses and consumers is not only governed by contracts, but also by principles of responsibility and business ethics that must be upheld to create trust in the digital marketplace (Darmawan, 2022). This regulatory framework must also be viewed in relation to Law No. 8 of 1999 on Consumer Protection. Although this law does not directly address money laundering, it creates relevant parallel obligations. Business operators, including fintech and e-commerce, are required to provide accurate, clear, and honest information about their services and the condition of their goods. In AML practice, this means that companies must communicate to users the reasons for collecting in-depth personal data, the purpose of identity verification, and the rights of users regarding such data. Data collection for KYC and CDD must not be conducted covertly or in a misleading manner. This transparency is crucial for building trust and

ensuring that efforts to prevent financial crime do not compromise consumers' fundamental rights to privacy and information. Thus, companies must design onboarding processes that are not only compliant with the Anti-Money Laundering Law and POJK, but also adhere to consumer protection principles. The integration of APU-PPT with consumer protection principles ensures compliance while safeguarding users' privacy rights. The protection of personal data is also an important issue because data leaks or misuse can cause significant losses for consumers in digital transactions (Aziz et al., 2023; Mujisulistyo et al., 2024).

The criminal dimension in the Anti-Money Laundering Law emphasizes the seriousness of APU-PPT compliance obligations. The criminal sanctions stipulated in the Anti-Money Laundering Law give serious weight to all of the above obligations. The law threatens a maximum prison sentence of fifteen years and a maximum fine of ten billion rupiah for anyone who deliberately commits money laundering. More relevant to company operations, criminal penalties also apply to managers or officers who deliberately fail to report Suspicious Financial Transactions. This threat transforms compliance obligations from a corporate governance issue into a personal risk for directors, commissioners, and compliance officers. As a result, AML/CFT programmed must be designed and implemented with a high degree of precision. The nature of intent in criminal law can include willful negligence, meaning that if a company does not establish an adequate system when it should be able to, its officers may be considered negligent. This encourages companies to allocate proportional resources to compliance, rather than merely fulfilling formalities. Criminal penalties encourage serious compliance, making negligence a personal legal risk for company officers.

The effectiveness of multi-layered regulation depends on coordination between supervisory agencies. Cooperation between government agencies and stakeholders is an important factor in maintaining economic stability and creating a healthy and sustainable business climate (Hardyansah & Putra, 2023; Indarto et al., 2023). Inter-agency coordination is a prerequisite for the effectiveness of this multi-layered regulatory framework. The Financial Services Authority, Bank Indonesia, and the Financial Transaction Reports and Analysis Centre each have complementary roles. OJK and BI focus on monitoring the health and compliance of companies under their

supervision, while PPATK functions as the recipient, processor, and analyst of all transaction reports from various sectors. Without coordination, there could be duplication of data requests or even gaps in supervision. Initiatives such as coordination forums and information sharing between agencies are essential. For fintech and e-commerce companies, this means they may have to deal with inspections or requests for clarification from more than one authority for the same case. The ability to navigate this multi-door regulatory ecosystem is an important competency for company management and legal teams. Cross-authority coordination ensures effective supervision while requiring companies to be prepared to deal with multiple regulators.

FATF standards are an important external reference for the evolution of Indonesia's national regulations. In an era of economic globalization, the compatibility of national regulations with international standards is also an important factor in increasing investor confidence and strengthening the country's position in the global financial system (Mardikaningsih & Hariani, 2021). Adaptation to international standards, particularly the recommendations of the Financial Action Task Force, provides an external frame of reference that influences the evolution of national regulations. FATF recommendations emphasize a risk-based approach and encourage member countries to impose effective obligations on financial service providers and certain high-risk professions or businesses. Indonesia's regulatory alignment with these standards, as seen in the risk-based approach principles adopted by POJK and PBI, is not only a matter of international compliance. It also serves to signal to global markets that Indonesia has a credible financial supervisory system. For fintech and e-commerce companies that aspire to attract foreign investment or expand regionally, the existence of a regulatory framework that is in line with the FATF is a factor that reduces reputational and legal risks in the eyes of global partners. Alignment with the FATF strengthens the credibility of Indonesia's financial system while opening up opportunities for global expansion for the digital sector.

RegTech brings major innovations in AML-CFT compliance through the use of artificial intelligence. The use of digital technology in organizational management also drives changes in work patterns, management systems, and working relationships between companies and employees (Darmawan et al., 2023; Mardikaningsih & Wardoyo, 2024). The

application of regulatory technology (RegTech) in the prevention of money laundering (AML) and terrorist financing (CFT) is considered a major change because it utilizes artificial intelligence, such as machine learning and natural language processing, to improve regulatory compliance (Pavlidis, 2023). Technological developments are also accommodated by the regulatory framework, albeit indirectly. The push to use technology in fulfilling obligations, such as e-KYC systems and automated transaction monitoring, is reflected in the nature of regulations that prioritize effectiveness over specifying specific methods. Regulations from the Financial Services Authority and Bank Indonesia refer more to principles and obligations than to specific tools. This flexibility allows companies to adopt the latest technological solutions, such as biometrics, artificial intelligence for transaction behavior analysis, or blockchain for audit trails, as long as these solutions can demonstrate their ability to meet the established principles. In this way, regulations do not hinder technological innovation, but rather direct it towards solving concrete problems in money laundering prevention. Regulatory flexibility encourages the adoption of cutting-edge technology without compromising the effectiveness of anti-money laundering measures.

The characteristics of micro and small businesses pose unique challenges in the implementation of AML-CFT regulations in e-commerce. Micro, small and medium enterprises play an important role in the national economy, but often face resource constraints in meeting various applicable regulatory obligations (Mardikaningsih et al., 2022). In practice, the implementation of this regulatory framework faces its own challenges related to the characteristics of micro and small businesses that are mostly joined in e-commerce platforms. Verifying the identities and conducting due diligence on millions of individual sellers is a very difficult and costly task. Current regulations do not yet provide fully operational and proportionate guidance for this scenario. E-commerce companies often have to develop their own interpretations and procedures, which risk not fully meeting the expectations of regulators. Further guidance is needed from authorities to align the spirit of anti-money laundering with the realities of an inclusive digital economy, so that existing obligations do not drive micro-businesses back into informal transactions outside the system, which are even more vulnerable. Proportionate guidance from authorities is needed to ensure that regulations do

not hinder the inclusion of micro-businesses in the digital ecosystem.

The APU-PPT regulatory framework for fintech and e-commerce in Indonesia is comprehensive and demanding. In the face of regulatory uncertainty and technological developments, companies need to have a business sustainability strategy that balances legal compliance with digital service innovation (Mardikaningsih & Darmawan, 2021). Overall, the Anti-Money Laundering regulatory framework in Indonesia for fintech and e-commerce companies is a comprehensive, dynamic, and demanding legal construct. This construct is built on the foundation of the TPPU Law, clarified by sectoral regulations from the OJK and BI, operationalized through PPATK technical regulations, and influenced by consumer law and global standards. The main obligations center on the principles of knowing your customer, reporting suspicious transactions, and developing internal control systems. The effectiveness of this framework is highly dependent on the ability of companies to internalize and translate these legal principles into their technological architecture and daily business processes, as well as on the coordination and clarity of guidance from the various authorities involved. The effectiveness of regulations is determined by the internalization of legal principles and consistent cross-authority coordination.

The Impact of Compliance on Fintech and E-Commerce Operations and Business Models

The APU-PPT obligation fundamentally changes the cost structure of fintech and e-commerce. Compliance with Anti-Money Laundering obligations fundamentally changes the cost structure of fintech and e-commerce companies. The core obligations mandated by Law No. 8 of 2010 on the Prevention and Eradication of Money Laundering, such as the implementation of Know Your Customer principles and transaction monitoring, require substantial initial and ongoing investment. This investment is not optional but a prerequisite for legal operation. Companies must allocate large sums of money to acquire or develop adequate identity verification technology platforms, secure and audited electronic document storage systems, and analytical software to scan for anomalous transaction patterns. The cost of this software and server infrastructure is a significant capital expenditure, especially for start-ups that previously relied on a lean start-up model with minimal technology expenditure. This shift changes

the financial model from one focused on cheap scalability to a structure with high fixed compliance technology costs from the outset (Wamafma et al., 2022). AML-CFT compliance requires large investments, shifting the digital business model towards a high fixed cost structure.

POJK No. 12/2017 changes the daily operations of fintech and e-commerce through structural compliance obligations. Daily operations have also undergone a profound transformation with the implementation of Financial Services Authority Regulation No. 12/POJK.01/2017. The obligation to have a written AML-CFT policy and appoint a competent AML-CFT officer creates the need for a specialized function within the organization. Establishing a dedicated compliance unit or team is a strategic decision that has direct financial implications in the form of salary, benefits, and ongoing training costs for these staff members. Furthermore, the presence of this function changes cross-departmental workflows. Product and engineering teams must consult with the compliance team from the design phase to ensure new features comply with Customer Due Diligence principles. Marketing teams can no longer offer "instant" registration promises without considering verification limitations. This intervention, while important, introduces a new layer of internal bureaucracy that has the potential to reduce product iteration speed and decision-making, a valuable asset in the digital market competition (Halawa, 2022). The presence of a compliance function strengthens operational integrity, even though it challenges the speed of innovation in the digital market.

PBI No. 19/2017 has a direct impact on the onboarding experience of fintech and e-commerce users. The most immediate impact felt by users is on the onboarding process, which has become longer and more complex. The provisions in Bank Indonesia Regulation No. 19/12/PBI/2017 concerning the Implementation of Financial Technology require strong verification, often requiring the uploading of official identity documents and selfies. For transactions of a certain value or with a high-risk profile, the Enhanced Due Diligence process may require confirmation of the source of funds or the purpose of the transaction. From an operational perspective, this means that companies must design user interfaces and user experiences that can guide users through this multi-step process without causing frustration and drop-offs. Every percentage point decrease in the conversion rate from visitor to verified user has a

directly measurable financial impact on the company's potential revenue and valuation, which is often based on the growth of its active user base (Utami & Septivani, 2022). Complex onboarding requires careful UX design so that compliance does not sacrifice business growth.

PPATK No. 11/2016 establishes a mandatory routine reporting cycle for digital companies. The reporting obligations stipulated in PPATK Regulation No. 11 of 2016 create a routine and mandatory operational cycle. Companies must build a data pipeline that automatically pulls transaction information from various channels, processes it based on suspicion parameters, prepares reports in the specified format, and sends them securely to PPATK. Maintaining this reporting system requires special technical resources. Errors in reporting, both in format and substance, can result in warnings or administrative sanctions. Therefore, companies often need to perform manual quality control before submission, which involves compliance officer time. This activity is a pure operational cost that does not create direct added value for customers, but is crucial to avoid regulatory risk. Routine reporting adds to the operational burden, but is key to maintaining compliance and avoiding sanctions.

AML obligations in e-commerce have different consequences for individual and corporate sellers. In the realm of e-commerce business models, the implementation of AML obligations creates a sharp operational distinction between individual sellers (C2C) and corporate sellers (B2B/B2C). Platforms such as marketplaces face the challenge of adequately verifying the identities of millions of micro and small sellers, a task that is nearly impossible to do manually at an effective cost. The solution is to automate the process and pass on some of the cost of this technology, either directly or indirectly, to sellers. The financial impact is a reduction in the platform's appeal to micro-sellers with thin margins, who may shift their activities to less regulated social media platforms (Larasati, 2021). On the other hand, a platform's ability to demonstrate a strong commitment to seller verification can be a selling point to attract corporate sellers and security-conscious consumers, while justifying higher commissions or fees. Strict verification weakens the appeal for micro sellers, but strengthens the competitive position for the corporate and security-oriented consumer segments.

Legal and reputational risks The TPPU Law has a direct impact on fintech and e-commerce funding

strategies. The legal and reputational risks inherent in the TPPU Law also influence financial strategies, particularly in terms of funding acquisition. Venture capital and institutional investors are increasingly careful in conducting due diligence on the regulatory compliance aspects of potential portfolio companies. A fintech or e-commerce company that is assessed to have a weak AML-CFT programmed is considered to carry legal and reputational risks that could damage its future valuation. Therefore, companies are encouraged to "invest early" in building a robust compliance infrastructure, even before reaching the break-even point. This practice diverts capital allocation that should be used for customer acquisition or aggressive expansion to areas that some founders consider less productive, thereby affecting the company's strategic priorities and growth roadmap. Early compliance has become a risk mitigation strategy that determines investment attractiveness and long-term valuation.

Outsourcing compliance through RegTech and KYC providers brings complex financial and operational consequences. Compliance also impacts partnership structures and technology integration. To avoid costly internal system development, many companies choose to integrate with third-party identity verification providers (third-party KYC providers) or Regulatory Technology platforms. This outsourcing decision itself involves complex financial and operational considerations. On the one hand, it reduces the burden of internal development and leverages specialized expertise. On the other hand, it creates dependence on external vendors, adds variable subscription costs based on transaction volume, and introduces new risks related to vendor reliability and data security. Technical integration with vendor systems also requires engineering resources, so costs that appear to be savings can shift to other areas. Outsourcing compliance reduces internal burdens but adds the risk of dependence and long-term variable costs.

Compliance burdens create economies of scale that strengthen the position of large players in the digital industry. From a competitive perspective, compliance burdens create economies of scale that favour large players. Established fintech and e-commerce companies with stable revenue streams can spread the fixed costs of sophisticated compliance systems across a broad user base, making the cost per transaction relatively low. Conversely, new or small players must bear a heavier proportional burden, which can be an effective barrier to entry. This dynamic has the

potential to reduce competition and innovation in the long term, as resources that should be used for innovation are instead diverted to meet the same regulatory standards as incumbents. Regulations intended to protect the financial system may inadvertently contribute to market consolidation and reduce the diversity of service providers. Rather than encouraging innovation, compliance burdens risk reinforcing the dominance of incumbents and reducing market diversity.

A robust AML-CFT programme can be a source of competitive advantage in the digital marketplace. However, there are also strategic positives. The implementation of a robust AML-CFT programme, as mandated by the POJK and PBI frameworks, can be curated into a competitive advantage. Companies can communicate their commitment to transaction security and integrity as a differentiator from competitors who may be more lax. In an increasingly risk-aware market, this can attract premium users, corporations, and expatriates who prioritise secure and compliant platforms. This reputational advantage can translate into the ability to maintain healthier margins or reduce customer churn rates, which ultimately has a positive financial impact even if it is difficult to measure directly in the short term. Strong compliance is not just a burden, but a reputational asset that strengthens a company's competitiveness.

APU obligations encourage companies to develop a deeper and more strategic understanding of data. Ultimately, fulfilling these obligations forces companies to have a much better understanding of data. The process of monitoring transactions and analysing user behaviour for APU compliance generates valuable secondary data on customer consumption patterns, preferences and risks. This data, if further analysed, can be utilised for business purposes such as product development, market segmentation, and credit risk management. Thus, investment in compliance systems can also be seen as investment in a company's data infrastructure. Although the primary objective is regulatory, the side output can improve operational efficiency and the accuracy of business decision-making in other areas, providing a kind of indirect return on large compliance expenditures. AML compliance simultaneously strengthens data infrastructure, providing strategic added value beyond regulatory objectives.

AML obligations have complex operational and financial implications while opening up strategic opportunities. Overall, the operational and financial impact of AML obligations is multifaceted and

transformative. These obligations transform cost models from variable to fixed, introduce internal bureaucratic complexities, influence user conversion and market strategy, and alter competitive dynamics in favour of large-scale players. Behind the tangible burdens lies the potential to build trust-based competitive advantages and leverage compliance data infrastructure for broader business purposes. The success of fintech and e-commerce in navigating this new landscape will depend heavily on their ability to internalise compliance costs not as a burden, but as an integral component of a responsible, sustainable business model. The internalisation of compliance costs is key to the sustainability and competitiveness of fintech and e-commerce.

The Impact of Anti-Money Laundering Regulations on Innovation and Digital Market Dynamics

CDD strengthens bank protection while shaping the direction of digital innovation under the framework of the Anti-Money Laundering Law. The implementation of Customer Due Diligence (CDD) helps banks protect themselves from various risks, including operational, legal, and reputational risks, as well as preventing the banking industry from being used for criminal activities, especially money laundering and terrorism financing (Sunarmi et al., 2022). Financial institutions also have a greater responsibility to ensure that their service systems are not misused by irresponsible parties (Firmanto et al., 2024; Sulistiono et al., 2024). The interaction between the Anti-Money Laundering regulatory framework and innovation in the digital sector is not linear or simple. Law No. 8 of 2010 concerning the Prevention and Eradication of Money Laundering Crimes serves as both a limiting parameter and a guide for innovative activities. Innovation that develops in a regulatory vacuum, which is often characteristic of the early stages of a technology, is no longer possible. Every new product or service launched by fintech and e-commerce companies must be designed from the outset with consideration of how to meet Know Your Customer principles and transaction monitoring obligations. This shifts the focus of innovation from simply creating attractive features or user interfaces to system architecture that can accommodate compliance logic. Product design has become an exercise in balancing user value with regulatory constraints, where failure on the latter can result in sanctions that negate all the value of

the former (Utami & Septivani, 2022). On the other hand, the level of user trust in digital financial services is also greatly influenced by their experience in using these services and their sense of security in conducting transactions (Darmawan, 2023). Digital innovation must now be rooted in compliance, making product design an arena for strategic compromise.

POJK No. 12/2017 has been the catalyst for the birth of RegTech innovation in Indonesia. This directive effect is clearly manifested in the explosion of innovation in the field of compliance technology, or Regulatory Technology (RegTech). Financial Services Authority Regulation No. 12/POJK.01/2017, with its detailed requirements regarding verification and due diligence, has created a large market for providers of e-KYC solutions, biometric analysis, and global database screening. In the development of the digital economy, technological innovation often emerges as a response to increasingly complex regulatory and market demands (Mardikaningsih & Wardoyo, 2024). Fintech companies are no longer merely consumers of innovation, but also the main drivers of progress in this specific technology niche (Rusli & Fermay, 2024). They collaborate with or even acquire RegTech startups to build internal capabilities. As a result, Indonesia's innovation ecosystem not only produces new payment or lending applications, but also companies that specialise in digital identity verification technology, which can then serve the traditional banking sector as well. Regulation thus becomes a catalyst for diversifying the financial technology landscape. Compliance regulations encourage the emergence of a RegTech ecosystem, expanding financial innovation beyond conventional fintech.

The absence of comprehensive fintech regulations limits innovation while strengthening demands for transparency and auditability. The absence of comprehensive fintech regulations that can accommodate the decentralization of the financial system has the potential to weaken legal certainty and protection for market participants (Masduqie & Santoso, 2023). Legal certainty is one of the important factors that determine the stability and sustainability of digital economic activities (Prabowo et al., 2024). This shows that the development of financial technology must still be in line with ethical values and responsibilities in the financial system (Putra et al., 2022). However, this direction also contains a strict filtering effect on certain types of innovation. Business models that rely on partial anonymity or pseudonymity, which

were once popular in some early forms of digital services, have become legally unfeasible under the spotlight of the Anti-Money Laundering Law. Ideas that have the potential to offer extraordinary efficiency but are difficult to reconcile with the principle of traceability tend to be abandoned or never developed. Bank Indonesia Regulation No. 19/12/PBI/2017, which regulates financial technology providers, further reinforces these limits by emphasizing transparency and auditability as prerequisites for operation. Innovation is forced to operate within a defined corridor, which may hinder radical breakthroughs that require an unconventional approach to revolutionize a service (Firdaus, 2023). Regulation strengthens legal certainty, but at the same time filters out radical innovations that are difficult to reconcile with the principle of traceability.

AML regulations have now become an instrument of legitimacy and differentiation in the fintech and e-commerce markets. At the market development level, AML regulations serve as a tool for legitimacy and differentiation. User trust in a digital service is often formed through the quality of service and the reputation of the institution providing the service (Hardyansah & Jahroni, 2023). The Indonesian consumer and corporate markets are becoming increasingly educated about the importance of data and transaction security. An e-commerce or fintech platform that can demonstrably show a strong commitment to an AML-CFT programmed in accordance with POJK No. 12/POJK.01/2017 gains a reputation advantage. In an increasingly saturated market, compliance is no longer a hidden burden but a tangible marketing feature. This changes the dynamics of competition; price wars or feature wars are compounded by a new dimension, namely credibility and security wars. Companies that ignore this aspect risk being left behind by an increasingly large market segment, namely more financially established users and corporations with strict procurement procedures (Martiniasih & Saravistha, 2022). Additionally, public interest in using financial services is influenced by the level of understanding of the products and trust in the service providers (Hardyansah et al., 2023). AML compliance is a reputation factor that determines competitiveness, especially in the premium and corporate segments.

The PPAATK reporting obligation shapes market structures with significant economies of scale. As financial institutions, banks are often used as a means of money laundering, so most financial

institutions submit reports of suspicious transactions to the Indonesian Financial Transaction Reports and Analysis Centre (PPATK) (Kurniawan, 2023). In modern financial supervision systems, reporting mechanisms are an important instrument for maintaining the transparency and integrity of the financial system (Rahman et al., 2024). The reporting obligation to PPATK based on PPATK Head Regulation No. 11 of 2016 also indirectly affects market structure. Economies of scale become a stronger determining factor. Building and maintaining an integrated reporting system that meets PPATK standards requires a large fixed investment. Large companies can spread these costs across massive transaction volumes, while small and medium-sized companies struggle to compete at the same level of efficiency (Hapsari et al., 2019). This situation can encourage market consolidation, whereby small companies are acquired or exit the competition, and large companies become increasingly dominant. Regulations aimed at reducing systemic risk can actually create market concentration risk, whereby a handful of large players control the majority of digital transactions, which in turn creates new vulnerabilities in the financial system. PPATK reporting puts pressure on small players, strengthening the dominance of large players, while creating new concentration risks.

Clear APU regulations pave the way for foreign capital inflows and strategic collaborations. Strong legal certainty is often an important factor for investors in assessing the viability of a market. Investors tend to have more confidence in business ecosystems that have a clear regulatory framework and an adequate legal protection system (Hardyansah et al., 2021). With clear regulations, local digital companies can more easily establish cooperation with international partners. This also has the potential to increase the competitiveness of the national digital industry at the global level (Mardikaningsih & Hariani, 2021). AML regulations serve as a bridge connecting the Indonesian market with global capital and technology flows.

AML regulations can actually be a catalyst for responsible financial inclusion innovation. Finally, paradoxically, AML regulations can be a driver of innovation oriented towards responsible financial inclusion. The pressure to verify the unbanked population has triggered innovation in alternative identification methods. Fintech companies are driven to find new ways, such as using telecommunications transaction data, purchase history, or verification through trusted agents, to comply with the know-your-customer principle

mandated by regulations, while also reaching new markets. Innovation here focuses on how to reduce verification costs and barriers without compromising legal obligations. Thus, the regulator's goal of preventing crime and the business goal of market expansion meet at a point that encourages the creation of more sophisticated and inclusive technological solutions. AML compliance encourages the emergence of alternative verification technologies that expand inclusive financial access.

Anti-Money Laundering regulations form a dialectical dynamic between innovation and digital market stability. Overall, the influence of Anti-Money Laundering regulations on innovation and market development is dialectical, creating a constant push-pull dynamic. Regulations serve as a filter that screens the types of innovation, as well as a catalyst that gives rise to new areas of innovation in RegTech and collaboration. In the market, regulations act as a tool for differentiation and legitimacy that benefits compliant players, as well as a barrier to entry that strengthens economies of scale and encourages consolidation. The net effect is the creation of a more orderly Indonesian digital landscape, more integrated with global standards, and perhaps more consolidated, where innovation develops not wildly, but within a corridor built to ensure the stability and security of the national financial system. The dialectic of regulation and innovation results in a more orderly, secure digital ecosystem that is in line with global standards.

CONCLUSION

This literature review concludes that Indonesia's Anti-Money Laundering regulatory framework, centered on Law No. 8 of 2010, has created a comprehensive and multi-layered legal environment for fintech and e-commerce companies. Technical regulations from the Financial Services Authority and Bank Indonesia, together with reporting regulations from the Financial Transaction Reports and Analysis Centre, have collectively transformed the status of the digital sector from purely technological entities to formal reporting parties within the national financial system. Core obligations, including the implementation of Know Your Customer principles, customer due diligence, ongoing transaction monitoring, and timely reporting, have become an integral part of these companies' governance. This transformation is not without consequences, as compliance with these obligations significantly alters cost structures, adds to

operational complexity, and affects user experience. However, behind this burden, regulation also serves as a tool of legitimacy that increases consumer and investor confidence and opens up access to broader global markets and funding.

The findings of this study have important implications for various stakeholders. For regulators such as the OJK and BI, the results of the study indicate the need for an increasingly risk-based and proportional approach. The application of the principle of same activity, same risk, same regulation needs to be refined to ensure that the compliance burden is truly commensurate with the specific risk profile of each fintech and e-commerce business model. Furthermore, coordination between supervisory agencies must be optimized to avoid overlapping obligations that burden business actors. For the industry, the main implication is the need to internalise compliance costs and processes as a long-term strategic component, rather than merely an operational burden. Investment in compliance technology and competent human resources should be viewed as the foundation for business sustainability and expansion. The ability to turn regulatory constraints into trust-based competitive advantages will be a determining factor for success in an increasingly mature digital market.

Based on these findings and implications, several constructive suggestions are proposed. First, for policymakers, it is recommended to develop clearer and more specific technical guidelines on the application of risk-based principles for each fintech and e-commerce sub-sector. These guidelines can help companies, especially small and medium-sized ones, allocate compliance resources more efficiently. Second, incentives or facilities are needed to encourage the adoption of Regulatory Technology, such as integrated identity verification platforms that are accessible at an affordable cost to businesses. This can help level the playing field and reduce barriers to entry. Third, the industry is advised to form forums or associations that are active in dialogue with regulators, not only to convey operational challenges but also to jointly design innovative and effective compliance solutions. Finally, further research is needed to measure the quantitative empirical impact of AML regulations on companies' financial performance and innovation levels, in order to provide a stronger basis for policy evaluation in the future.

REFERENCES

Ali, E. M., Dirgantara, F., & Darmawan, D. (2024).

Legal Protection of Consumers in Online Transactions: A Case Study of Online Fraud in Indonesia. *International Journal of Service Science, Management, Engineering, and Technology*, 6(3), 27-38.

Ali, R., & Darmawan, D. (2023). Big Data Management Optimization for Managerial Decision Making and Business Strategy. *Journal of Social Science Studies*, 3(2), 139-144.

Annisa, F., & Putri, P. R. (2020). Penerapan Program APU PPT untuk Mencegah Pencucian Uang dan Pendanaan Terorisme pada Industri Fintech. *ADIL: Jurnal Hukum*, 11(2), 59-75.

Anugroh, Y. G., Hardyansah, R., Darmawan, D., Khayru, R. K., & Putra, A. R. (2023). Consumer Protection and Responsibilities of E-commerce Platforms in Ensuring the Smooth Process of Returning Goods in COD Transactions. *Journal of Social Science Studies*, 3(2), 89-94.

Arner, D. W., Barberis, J., & Buckley, R. P. (2015). The Evolution of Fintech: A New Post-Crisis Paradigm? *SSRN Electronic Journal*, 47(4), 1271-1319.

Aziz, A., Darmawan, D., Khayru, R. K., & Wibowo, A. S. (2023). Effectiveness of Personal Data Protection Regulation in Indonesia's Fintech Sector. *Journal of Social Science Studies*, 3(1), 23-28.

Balkista, D. N., Hardyansah, R., Darmawan, D., Saktiawan, P., & Saputra, R. (2024). Legal Gaps and Enforcement Challenges in Addressing Digital Fraud Involving Cryptocurrencies as Tradable Commodities in Indonesia. *Journal of Science, Technology and Society (SICO)*, 5(2), 33-44.

Bank Indonesia. (2017). *Peraturan Bank Indonesia Nomor 19/12/PBI/2017 tentang Penyelenggaraan Teknologi Finansial*. Lembaran Negara Republik Indonesia. Jakarta.

Bashori, B., Hardyansah, R., & Darmawan, D. (2024). Legal Analysis of Big Data and Analytics in Preventing Discrimination and Protecting Insurance Customers. *Journal of Social Science Studies*, 4(1), 185-192.

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 27-40.

Darmawan, D. (2022). Environmental Accountability through Business Ethics, Responsibility, Morals and Legal Obligations. *Bulletin of Science, Technology and Society*, 1(2), 1-6.

Darmawan, D. (2022). Salesperson Interaction Quality and Consumer Decisions in Online

- Transactions. *Journal of Social Science Studies*, 2(2), 91-98.
- Darmawan, D. (2023). The Effect of Trust and Saving Experience on Loyalty Through Satisfaction as an Intervening Variable (Case Study of Sharia Bank Customers in Surabaya City). *International Journal of Service Science, Management, Engineering, and Technology*, 2(2), 11-20.
- Darmawan, D., Gardi, B., & Da Silva, E. B. (2023). Exploration of Changes in Management and Employee Work Relations in Multinational Companies in the Era of Literacy-Based Digitalization. *Journal of Science, Technology and Society (SICO)*, 4(2), 43-54.
- Fared, M. A., Darmawan, D., & Khairi, M. (2021). Contribution of E-Service Quality to Repurchase Intention with Mediation of Customer Satisfaction: Study of Online Shopping Through Marketplace. *Journal of Marketing and Business Research (MARK)*, 1(2), 93-106.
- Firdaus, S. P. (2023). The Urgency of Money Laundering Policy Reform for Digital Rupiah Implementation. *AML/CFT Journal*, 2(1), 58-82.
- Firmanto, R., Hardyansah, R., & Darmawan, D. (2024). Responsibility of Banks in Preventing Name Abuse in Credit Applications. *Bulletin of Science, Technology and Society*, 3(3), 14-19.
- Fitrotinisak, I. K., Mardikaningsih, R., Gautama, E. C., Sulani, & Vitrianingsih, Y. (2023). Legal Compliance for Consumers in Dealing with Cases of Account Tampering in Digital Banking Services. *Journal of Social Science Studies*, 3(1), 75-82.
- Ghozi, A. (2018). The Urgency of Electronic Know Your Customer (e-KYC): How Electronic Customer Identification Works to Prevent Money Laundering in the Fintech Industry. *Diponegoro Law Review*, 7(1), 34-52.
- Halawa, A. P. (2022). Juridical Analysis of Money Laundering Crimes in Financial Technology Based Equity Crowdfunding Services in Indonesia. *International Journal of Economic, Technology and Social Sciences (Injests)*, 3(2), 249-254.
- Hapsari, R. A., Maroni, M., Satria, I., & Ariyani, N. D. (2019). The Existence of Regulatory Sandbox to Encourage the Growth of Financial Technology in Indonesia. *Fiat Justisia: Jurnal Ilmu Hukum*, 13(3), 271-288.
- Hardyansah, R., Pakpahan, N. H., & Wibowo, A. S. (2021). The Ramifications of Banking Monopoly on Consumer Trust, Customer Satisfaction, and Industry Competition Dynamics. *Journal of Social Science Studies*, 1(2), 105-110.
- Hardyansah, R., & Jahroni, J. (2023). The Establishment of Customer Loyalty in View of Service Quality and Bank Reputation. *Bulletin of Science, Technology and Society*, 2(1), 16-20.
- Hardyansah, R., & Putra, A. R. (2023). Building Regional Economic Stability Through Effective Legal Protection for Micro, Small, and Medium Enterprises in Indonesia. *Journal of Social Science Studies*, 3(1), 15-22.
- Hardyansah, R., Jahroni, J., Darmawan, D., Arifin, S., & Negara, D. S. (2023). Student interest in becoming customers of Islamic banks in terms of religiosity and product knowledge. *International Journal of Service Science, Management, Engineering, and Technology*, 4(1), 5-10.
- Hardyansah, R., Karwati, K., & Saktiawan, P. (2024). Legal Analysis of Open Banking and Bank Customer Data Privacy Rights in Indonesia. *Journal of Social Science Studies*, 4(1), 93-104.
- Indarto, T., Negara, D. S., & Darmawan, D. (2023). Legal Frameworks for Mitigating Monopoly Practices Adverse to MSMEs in Indonesia. *Journal of Social Science Studies*, 3(1), 1-8.
- Jia, L., & Liang, H. Exploration of Enhancing the Quality of Suspicious Transaction Reports for Anti-Money Laundering and Countering Financing of Terrorism in the Securities Industry of China. *Financial Engineering and Risk Management*, 6(9), 77-82.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology* (2nd ed.). Sage Publications, Thousand Oaks.
- 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.
- Larasati, N. A. A. (2019). Prinsip Customer due Diligence pada Layanan Pinjam Meminjam Uang Berbasis Teknologi Informasi sebagai Upaya Pencegahan Tindak Pidana Pencucian Uang. *Skripsi*, Fakultas Hukum Universitas Airlangga.
- Lessambo, F. I. (2023). AML/CFT and Cybersecurity Laws in Indonesia. In *Anti-Money Laundering, Counter Financing Terrorism and Cybersecurity in the Banking Industry: A Comparative Study within the G-20*. Springer Nature Switzerland, Cham.
- Mardikaningsih, R., & Darmawan, D. (2021). Business Sustainability Strategies in the Facing of Regulatory Uncertainty and Managerial Challenges. *Journal of Social Science Studies*, 1(2),

- 111-118.
- Mardikaningsih, R., & Hariani, M. (2021). Realizing Sustainability in Public Policy: Building a Balance between Economy, Social, and Environment. *Journal of Social Science Studies*, 1(1), 191-196.
- Mardikaningsih, R., & Wardoyo, D. T. W. (2024). Green Technology Integration in Management for Social and Environmental Sustainability. *International Journal of Service Science, Management, Engineering, and Technology*, 6(2), 6-10.
- Mardikaningsih, R., & Wardoyo, D. T. W. (2024). The Role of Technology in Human Resource Development for Sustainability: A Literature Review on Digital Innovation. *Bulletin of Science, Technology and Society*, 3(3), 20-26.
- Mardikaningsih, R., Azizah, E. I., Putri, N. N., Alfian, M. N., & Rudiansyah, M. M. D. H. (2022). Business Survival: Competence Of Micro, Small and Medium Enterprises. *Journal of Social Science Studies (JOS3)*, 2(1), 1-4.
- Martiniasih, N., & Saravistha, D. B. (2022). Harmonisasi Kewenangan Bank Indonesia dan Otoritas Jasa Keuangan Terkait Penerapan Regulatory Sandbox dalam Inovasi Berbasis Fintech di Indonesia. *Jurnal Indonesia Sosial Teknologi*, 3(8), 837-851.
- Masduqie, M. H. A., & Santoso, T. B. (2023). Manfaat dan Tantangan Regulasi Penyelenggaraan Financial Technology (Fintech) di Indonesia. *JIESP: Journal of Islamic Economics Studies and Practices*, 2(2), 161-177.
- Mujisulistyo, Y. F., Darmawan, D., & Dirgantara, F. (2024). Reconstruction of the Legal Mechanism for Consumer Rights Recovery Regarding Personal Data Leaks in the Financial Technology and E-Commerce Sectors in Indonesia. *Journal of Social Science Studies*, 4(1), 75-84.
- Negara, D. S., & Darmawan, D. (2023). Digital Empowerment: Ensuring Legal Protections for Online Arisan Engagements. *Bulletin of Science, Technology and Society*, 2(2), 13-19.
- Negara, D. S., Jauhari, M. A., & Darmawan, D. (2024). Responsibilities of Digital Marketplace Platforms and Anticompetitive Assessments in Business Law. *Journal of Social Science Studies*, 4(1), 407-422.
- Noor, T., Putra, A. R., Suyuti, M., Khayru, R. K., Hariani, M., Issalillah, F., & Mardikaningsih, R. (2023). Implementation of Criminal Regulations on The Use of Hazardous Chemicals in Food Distribution. *International Journal of Service Science, Management, Engineering, and Technology*, 4(3), 13-17.
- Oluwatosin, A. (2024). Privacy Rights, Inference, and User Trust in Digital Platform Services. *Journal of Social Science Studies*, 4(1), 381-390.
- Otoritas Jasa Keuangan. (2017). *Peraturan Otoritas Jasa Keuangan Nomor 12/POJK.01/2017 tentang Penerapan Program Anti Pencucian Uang dan Pencegahan Pendanaan Terorisme bagi Lembaga Jasa Keuangan Non-Bank di Sektor Jasa Keuangan*. Lembaran Negara Republik Indonesia. Jakarta.
- Pavlidis, G. (2023). Deploying Artificial Intelligence for Anti-Money Laundering and Asset Recovery: The Dawn of a New Era. *Journal of Money Laundering Control*, 26(7), 155-166.
- Prabowo, J. W., Putra, A. R., Khayru, R. K., Negara, D. S., & Wibowo, A. S. (2024). Legal Position of Concurrent Creditors, Rights Protection Constraints, and Curator Responsibilities in the Bankruptcy Asset Management System. *Studi Ilmu Sosial Indonesia Manajemen*, 4(2), 79-96.
- Purwanto, I., Darmawan, D., Dirgantara, F., & Halizah, S. N. (2023). Implementation of Cosmetic Product Labeling Regulations for Consumer Protection and Fair Competition in the Marketplace. *Journal of Social Science Studies*, 3(1), 165-170.
- Pusat Pelaporan dan Analisis Transaksi Keuangan. (2016). *Peraturan Kepala Pusat Pelaporan dan Analisis Transaksi Keuangan Nomor 11 Tahun 2016 tentang Tata Cara Penyampaian Laporan Transaksi Keuangan Mencurigakan, Laporan Transaksi Tunai, dan Laporan Transfer Dana*. Lembaran Negara Republik Indonesia. Jakarta.
- Putra, A. R., & Wibowo, A. S. (2023). Royalty Fee Arrangement in Franchise Business and its Legal Implication in Indonesia. *Journal of Social Science Studies*, 3(1), 171-176.
- Putra, A. R., Hardyansah, R., & Arifin, S. (2022). Institutionalizing Sustainability within Islamic Banking: Ethical Alignment and Practical Application in Responsible Finance. *Journal of Social Science Studies*, 2(1), 241-246.
- Putra, A. R., Hardyansah, R., & Wibowo, A. S. (2022). Ethical Foundations of Franchisor-Franchisee Relationships and Their Influence on Business Performance Outcomes Across Franchise Systems. *Journal of Social Science Studies*, 2(2), 279-284.
- Radjawane, L. E., & Mardikaningsih, R. (2022). Building Ethical and Fair Technology: Approaches to Responsible Technology Development and Application. *Journal of Social Science Studies*, 2(1), 189-194.

- Rahman, A., Darmawan, D., & Saputra, R. (2024). Analysis of Cross-border Payment Regulation and its Impact on Consumers in Indonesia. *Bulletin of Science, Technology and Society*, 3(2), 23-28.
- Ramle, N. L. B., & Mardikaningsih, R. (2022). Inclusivity in Technology-Based Services: Access and Skills Challenges. *Journal of Social Science Studies*, 2(2), 225-230.
- Reuter, P., & Truman, E. M. (2004). *Chasing Dirty Money: The Fight Against Money Laundering*. Institute for International Economics, Washington.
- Republik Indonesia. (1999). *Undang-Undang Nomor 8 Tahun 1999 tentang Perlindungan Konsumen*. Lembaran Negara Republik Indonesia. Sekretariat Negara. Jakarta.
- Republik Indonesia. (2010). *Undang-Undang Nomor 8 Tahun 2010 tentang Pencegahan dan Pemberantasan Tindak Pidana Pencucian Uang*. Lembaran Negara Republik Indonesia. Sekretariat Negara. Jakarta.
- Rusli, G. R., & Fermay, A. H. (2024). Digital Sunarmi, S., Sukarja, D., & Lubis, T. M. (2022). Implementation of Customer Due Diligence Principles on Financial Service Companies in Preventing and Eradicating Criminal Action of Money Laundering in Medan. *Jurnal Mercatoria*, 15(2), 103-116.
- Supriyanto, P., Hardyansah, R., Putra, A. R., Arifin, S., & Waskito, S. (2023). Implementation of Consumer Protection Law in Handling Lost Goods by Domestic Freight Forwarders. *Journal of Social Science Studies*, 3(1), 83-88.
- Utami, A. M., & Septivani, M. D. (2022). Regulatory Technology (RegTech): The Solution to Prevent Money Laundering in Indonesia. *Telaah Bisnis*, 23(1), 86-98.
- Wamafma, F., Sasea, E. M., & Marlina, A. (2022). Upaya Bank Indonesia Menanggulangi Money Laundering dalam Perbankan Online. *Jurnal USM Law Review*, 5(1), 357-376.
- Wibowo, A. S., Darmawan, D., Halizah, S. N., & Mardikaningsih, R. (2023). Optimizing the Principles of Healthy Business Competition and the Role of KPPU for a Fair Economy in the Digital Era. *Journal of Social Science Studies*, 3(1), 95-100.
- Financial Services Effort in Enforcing Anti-Money Laundering through Open Banking Optimization. *AML/CFT Journal*, 2(2), 159-174.
- Sahid, R. R., Hardyansah, R., Darmawan, D., Negara, D. S., & Khayru, R. K. (2023). Legal Perspective of Investment Risk Mitigation on Peer-to-peer Lending Platforms. *Journal of Social Science Studies*, 3(1), 177-184.
- Sinambela, E. A., & Darmawan, D. (2022). Strengths and Weaknesses of Using Electronic Money as a Substitute for Cash. *Journal of Social Science Studies*, 2(2), 56-61.
- Sulaiman, M., Pakpahan, N. H., & Putra, A. R. (2023). Analysis of the Validity and Effectiveness of Electronic Contracts in Legal Protection of Digital Transactions in Indonesia. *Journal of Social Science Studies*, 3(1), 41-46.
- Sulistiono, D., Hardyansah, R., & Darmawan, D. (2024). The Law's Role in Ensuring the Protection and Security of Bank Customers. *International Journal of Service Science, Management, Engineering, and Technology*, 6(2), 1-5.
- Wibowo, A. S., Darmawan, D., Negara, D. S., & Hardyansah, R. (2023). Analysis of Value Added Tax Application on Electronic Commerce Transaction in Digital Economy System in Indonesia. *Journal of Social Science Studies*, 3(2), 83-88.
- Wiyandarini, G., Hariani, M., & Mardikaningsih, R. (2021). Community-based Institutional Financing Model through Cooperatives for Micro and Small Enterprises. *Journal of Social Science Studies*, 1(1), 263-268.
- Yuristiawan, A., Darmawan, D., & Hardyansah, R. (2024). Digital Credit Regulations in Business Law and Financial Markets. *Journal of Social Science Studies*, 4(1), 371-380.
- Zetsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2017). Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation. *Fordham Journal of Corporate & Financial Law*, 23(1), 31-103.
- Zulkarnain, A., Darmawan, D., & Hardyansah, R. (2024). Effectiveness of Law No. 5 of 1999 in Handling Cross-Border Business Competition. *SAPIENTIA ET VIRTUS*, 9(2), 461-475.

*Fiana, A., A. R. Putra, & A. S. Wibowo. (2024). The Dynamics of Anti-Money Laundering Regulation in the Governance of Fintech and E-Commerce Companies in Indonesia, *Journal of Social Science Studies* 4(2), 397 - 412