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Navigating Regulatory Challenges in Industry 5.0 Finance

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Abstract

This study examines the regulatory challenges that financial institutions face within the framework of Industry 5.0. It focuses particularly on the disruptive influence of emerging technologies like artificial intelligence and blockchain on compliance mechanisms. The research identifies a critical gap between the rapid pace of technological innovation and the static nature of current regulatory practices. This disconnect presents large compliance hurdles for institutions that try to maintain operational integrity and protect consumer interests. The study used comprehensive qualitative and quantitative data collection. It reveals that many stakeholders perceive existing regulations as inadequate for addressing the complexities introduced by new technologies.

Key findings indicate that some institutions are actively adapting their compliance strategies. But many others remain hindered by outdated regulatory frameworks. These old rules fail to support fast-changing technological environments. The implications of this research extend beyond the financial sector. It highlights the necessity for more adaptable and forward-thinking regulatory approaches. Such approaches can support innovation and protect consumers at the same time. This study contributes to the ongoing discussion on regulatory reform in an increasingly digitized economy. It emphasizes the need for regulators to collaborate with industry stakeholders. They must develop strong compliance systems that match technological advancements. The findings call for a major change in regulatory practices. This shift will profoundly influence how financial institutions, regulators, and policymakers handle Industry 5.0. It has the potential to improve the effectiveness and security of financial services in a technology-driven age.

Keywords: *finance, regulatory framework, strategies, policymakers.*

Introduction

The rapid growth of financial technologies and the start of Industry 5.0 changed the environment for financial institutions. Operations are now fast and often unstable. Digitization moves quickly because of artificial intelligence and blockchain. Other fintech tools also push this speed.

These changes reshape traditional services. They also create difficult regulatory challenges. Scholars and practitioners must pay attention to these issues. A key research problem exists. Stakeholders in the finance sector struggle to follow current rules. These rules fall behind the speed of new technology. The frameworks cannot handle the details of Industry 5.0. This problem raises compliance risks for institutions. They try to maintain operational integrity. They also work to meet consumer protection standards. This research has two main goals. It identifies the regulatory challenges institutions face during Industry 5.0. It analyzes them. The study also recommends ways to change frameworks for these needs. It aims to bridge the gap between new financial tech and static practices. This builds a better understanding of the difference.

The insights here matter for academic study and practical use. They help the field of financial regulation. They also help institutions manage compliance in a digital economy. The findings show that regulators must work with industry members. They need adaptive solutions for technological progress. This collaboration keeps the financial system resilient and trustworthy. The study explores these points. It looks for regulatory reforms. These reforms support new ideas.

Literature Review

Technology changes the financial sector. The shift to Industry 5.0 creates new opportunities but also difficult regulatory problems. This model combines human-focused methods with advanced tools. Traditional systems must adjust to this structure. Regulators must accept new technologies while protecting consumers and keeping markets honest. Scholars have studied AI and blockchain in financial services. They also examine changing consumer needs and how agencies support new ideas while enforcing rules. Studies show that rules must adapt quickly to technological speed. An agile approach supports progress rather than stopping it.

Writers have documented the technical side of Industry 5.0, but the regulatory difficulties remain unclear. Most research looks at specific tools like fintech. Broader frameworks for the whole regulatory system are rare. We also do not know how policymakers, industry leaders, and consumers can work together. Few studies use real data to analyze these diverse views. This information helps build strategies that match market realities. Global standards and local practices often conflict. Banks work globally, and mismatched rules cause compliance problems. Borders need synchronized efforts. Work in this field is new. Scholars can help define regulatory coherence in Industry 5.0 finance.

The history of regulatory problems in Industry 5.0 shows how technology and rules interact. Early research looked at Industry 4.0, automation, and data. This work prepared the path for financial changes and scrutiny. Scholars later argued for flexible practices to match the speed of tech integration. Industry 5.0 introduced human-centric discussions. Human input became as important as automation. This change forced a review of standards. Rules had to cover technology and ethics in financial choices. Complex products like blockchain and AI also raised doubts about transparency and accountability. Recent texts examine shared frameworks that balance new tools with strong oversight. These methods rely on stakeholder input to make rules effective. Diverse views will help solve regulatory problems in Industry 5.0. The environment must adapt to constant technical evolution.

Methodology

Finance changes fast, especially in Industry 5.0. We must address how technology and rules meet to help growth and protect consumers. Mixing these creates legal problems, so banks must use new tech but still obey current rules. New tools like blockchain and artificial intelligence are emerging. The research asks how

they affect regulations and the safety of the system. This section explains the methods used to study legal challenges in Industry 5.0 finance. It outlines a plan using qualitative and quantitative data. It compares rules across regions, using interviews and surveys to ask leaders about current problems and expected rule changes. This research also tests if flexible rules help new ideas while protecting buyers. It adds to the discussion on financial tech rules. This section adds value to academic writing because past work often looks at single tools. This work looks at the full picture of tech and rules. The methods help practitioners, regulators, and policymakers who want to manage the changes in Industry 5.0. The study uses a mixed approach with deep interviews and surveys. This builds on old methods and fixes gaps in past research. Past studies showed the need to mix fields to understand rule changes. This supports the methods chosen here. Using these methods creates a strong plan to address legal problems where finance and new tech meet. (A K Alhowaish, 2025). Given the emergence of innovative financial technologies, such as blockchain and artificial intelligence, the research problem centers around understanding how these advancements affect the regulatory landscape and impact financial system integrity (Dr. Mukuka S et al., 2025). The primary objective of this section is to elucidate the methodologies employed in analyzing regulatory challenges and their implications for Industry 5.0 finance, providing a structured framework that outlines both qualitative and quantitative approaches to data collection and analysis (Dr. Mukuka S et al., 2025). This includes comparative analyses of regulatory frameworks across different jurisdictions, stakeholder interviews, and surveys aimed at capturing the perspectives of key industry players regarding current challenges and anticipated changes in regulatory practices (Dr. Mukuka S et al., 2025).

Results

Advanced technologies reshape the financial sector, and regulatory challenges are now clear. Industry 5.0 finance combines artificial intelligence, blockchain, and fintech. We must review current rules, and regulations need strength to handle these complex innovations. Findings show that regulators face hard tasks. They must write guidelines that support new ideas and manage risks from disruptive tools. Many financial institutions struggle with compliance. Anti-money laundering (AML) rules and consumer protection laws cause specific problems. These laws have not updated fast enough for modern technology. Data also shows that rules differ across borders. This lack of

standard frameworks confuses international institutions, raises operational costs, and makes compliance harder. Previous studies listed barriers from old regulations. This study proves the need for flexible rules, and these mechanisms must change with technology. Past research called for engagement with fintech, but these findings show a different need.

Developers and regulators must work together. This partnership creates a sustainable finance system. These findings are not just theoretical. They offer practical advice for regulators and practitioners who want to lower risks and support new ideas. This research points out gaps in current rules. It adds to the academic discussion on finance. The work proves we need adaptable policies that support financial inclusion and stability. These insights tell policymakers about key design aspects. They must fix these issues to match changes in the financial sector. The study supports a major change in approach. Regulators should use flexible strategies, and these plans must match Industry 5.0 finance. Technology and regulation interact. This relationship shapes future compliance and influences the global financial system. (A K Alhowaish, 2025). The research identifies that many financial institutions are grappling with compliance issues, particularly concerning anti-money laundering (AML) regulations and consumer protection laws, which have not yet fully evolved to accommodate the rapid pace of technological advancement (Dr. Mukuka S et al., 2025). Furthermore, empirical evidence suggests that the lack of standardized frameworks across jurisdictions complicates the regulatory landscape for institutions operating internationally, resulting in increased operational costs and compliance burdens (Dr. Mukuka S et al., 2025). In comparison to previous studies which highlighted the barriers posed by outdated regulations, this study underscores the urgent need for adaptive regulatory mechanisms that can evolve alongside technological advancements (Dr. Mukuka S et al., 2025). Notably, while prior research has emphasized the necessity for regulatory engagement with fintech innovations, the findings here indicate that proactive collaboration between technology developers and regulators is essential for achieving sustainable finance ecosystems (Ogunmolu AM, 2025).

The importance of these findings extends beyond theoretical discourse, offering practical insights for regulators and practitioners aiming to mitigate risks while fostering innovation. By highlighting the existing gaps in regulatory frameworks, this research contributes to the broader academic discourse on finance, emphasizing the significance of developing

adaptable policies that promote financial inclusion and stability (Sari E, 2025). Moreover, these insights serve to inform policymakers about the critical aspects of regulatory design that must be addressed to keep pace with the rapid changes in the financial landscape (Khan HU et al., 2025).

Discussion

The discussion about the research paper "Navigating Regulatory Challenges in Industry 5.0 Finance" showed two things. It has a broad scope. But it also raises serious concerns about how clear the methods are. This is notably because the review relied on a summary, not the full text.

1. Brief Overview of the Papers Main Points:

The paper identifies a critical and current problem. There is a gap between fast tech progress in Industry 5.0 finance and the slow rules that govern it. This includes AI and blockchain. The authors want a complete, forward-looking change in how we regulate. They focus on flexible tools. They also want teamwork between regulators and the industry. Rules should match across borders. The goal is to support new ideas while protecting buyers. This also keeps markets honest. This builds strong financial systems.

2. Strongest Arguments from the Researcher:

The Researcher praised the paper for being on time. It addresses a key issue right now. They noted the new approach moves past single technologies. It looks at the whole regulatory field. The Researcher liked the plan for a big model change and flexible rules. They valued the focus on teamwork. The paper balances new ideas with safety for users. The Researcher also pointed to the planned mix of research methods.

This combines interviews and surveys. It collects data from many places. The Researcher said the full paper has the specific facts. They argued the summary lacks data on purpose. The forward-looking view on Industry 5.0 is a strength.

3. Strongest Critiques from the Critic: The Critic focused on one main issue. The summary lacked clear details on methods or proof. There were no facts about the sample size or where the data came from. It missed specific quotes or numbers. This vagueness made the claims seem weak. The Critic worried the results were not valid. The findings looked like they just restated the problem. The Critic also noted a heavy use of personal opinions. These were not checked against other data. Biases were also a worry. The summary did not show how it reduced these risks. Also, the paper did not look enough at other reasons for the challenges. It listed broad

theories but did not apply them well. The ethical side of Industry 5.0 was also missing.

4. Points of Agreement or Concession: Both sides agreed the research problem is vital. Regulating Industry 5.0 finance matters right now. The Researcher admitted the summary misses small details. It lacks the specific steps and theories found in the full text. They said this was a choice for the summary. The Critic challenged how the summary was written. But they accepted that the plan to mix methods was sound in theory.

5. Objective Assessment of the Papers Strengths and Limitations: The paper has real strengths. It takes a broad look at a complex global issue. It calls for a major change in models and flexible rules. It values teamwork and balance. This offers a useful framework. But the debate showed a main limit. The summary lacks specific facts and methods. This makes it hard to judge if the work is reliable. There is no concrete proof or detailed analysis steps. The paper feels more like a wish list than a proven study. This leaves big questions about its academic worth.

6. Implications for Future Research or Application: The paper sends a key message. We need flexible rules and teamwork across borders. This remains a key area for policy and study. Policymakers can use these high-level ideas as a guide. But real action needs the detailed facts expected in the full paper. This debate shows why clear reporting on methods matters. Even summaries need details to be credible. Future studies can build on this framework. They should add the hard proof and specific steps missing here.

The discussion surrounding the research paper "Navigating Regulatory Challenges in Industry 5.0 Finance" was thorough. It revealed the wide scope of the work. It also showed a deep need for proof in academic summaries.

1. Brief Overview of the Papers Main Points:

The paper argues there is a big gap. Tech advances fast in Industry 5.0 finance. Current rules do not keep up. The work takes a complete view. It looks past single tools to study the whole environment. This includes AI and blockchain. The main new idea is a call for a total change in regulation. Regulators must be flexible and think ahead. They should work with many industry partners. The aim is to help new ideas while protecting users. This helps build strong systems.

2. Strongest Arguments from the Researcher:

The Researcher praised the timing of the paper. It tackles an urgent issue. They stressed the new, broad approach. It does not look at things in isolation. The paper wants a major model change. It asks for flexible rules and teamwork. This balances growth with safety. The Researcher noted the planned rigor. The design mixes

methods and collects data widely. They claimed the full text has the missing details. These include sample sizes and raw data. The summary leaves them out by design. The forward thinking is a benefit. It offers a guide for the future.

3. Strongest Critiques from the Critic:

The Critic attacked the lack of detail on methods. The summary had no specifics. It claimed to have data but showed no proof. There was no mention of sample sizes or analysis types. It lacked quotes or stats. This made it hard to trust the findings. The conclusions felt like they just restated the topic. The Critic also worried about the reliance on opinions. There was no clear check against other facts. Biases were possible and not managed. The paper also barely touched on theories. It did not look at other reasons for the problems. The human side of Industry 5.0 was also missing.

4. Points of Agreement or Concession:

Both sides agreed the problem is important. Regulating finance needs to change fast. The Researcher admitted the summary missed details. It lacked facts and steps. They said the full paper has them. The Critic disliked the omissions. But they admitted the research plan was good in theory.

5. Objective Assessment of the Papers Strengths and Limitations:

The paper identifies a key problem on time. It offers a broad plan for new rules. It calls for collaboration and harmony. It seeks a balance between new tech and safety. But the debate exposed a major flaw. The summary lacks clear methods and facts. This makes it hard to judge the claims. There is no hard evidence shown. The paper seems more like a vision than a study. It leaves gaps in its proof.

6. Implications for Future Research or Application:

The main message supports flexible rules. It calls for more teamwork and consistent laws. This gives direction for future policy. Policymakers can use these ideas as guides. But real use needs the details from the full work. This debate shows that clear reporting is key. Summaries must show their methods to be trusted. Future work can use this framework. It must add the specific proof that was missing here.

Conclusion

Discussions regarding regulatory problems in Industry 5.0 finance revealed details about the relationship between fast tech growth and old rules. The study focused on the gap between progress in artificial intelligence, blockchain, and fintech and the weak mechanisms meant to control them. Qualitative

and quantitative studies showed that flexible rules and stakeholder teamwork are necessary. This approach supports new ideas and protects consumers. The research addressed the core problem by evaluating current rule systems. It proposed a complete plan that prioritizes flexibility and forward-looking supervision. This plan supports projects that fit the changing nature of Industry 5.0. It connects technology with regulation. The results offer more than theory. They provide practical advice for policymakers and industry leaders who manage modern finance. Promoting quick regulatory methods helps protect market honesty.

It builds a supportive setting for innovation. The study also shows potential for cooperation across borders. United rules can help technologies spread more easily around the world. Future work should address the many challenges found in the research. Studies should test how well proposed rules work in different regions. Researchers should also explore how new technologies like quantum computing and advanced machine learning affect rules. This topic offers a major path for study. Talking to stakeholders is necessary to understand practical problems and opportunities. This group includes fintech developers, regulators, and consumers. Continuous research must consider ethics, consumer views, and the speed of tech progress. Then scholars can suggest lasting regulatory answers. Combining these ideas creates a complete way to handle regulatory problems in Industry 5.0 finance. It helps build a strong and open financial system. The study highlights the pressing need for flexible strategies. These strategies must change with technology to stay useful and protect financial practices. This research offers basic facts that address current rule problems. It also inspires future study to start conversations about improving rule systems in the fast-moving world of financial technology. (A K Alhawaish, 2025). Furthermore, the research problem was adeptly addressed through a comprehensive evaluation of existing regulatory paradigms, leading to the proposal of a holistic regulatory framework that emphasizes flexibility and anticipatory oversight (Dr. Mukuka S et al., 2025). This framework champions initiatives that align with the dynamic nature of Industry 5.0, thus bridging the gap between technology and regulation (Dr. Mukuka S et al., 2025). The implications of these findings extend beyond theoretical contributions; they provide practical guidance for policy-makers and industry leaders seeking to navigate the complexities of contemporary finance (Dr. Mukuka S et al., 2025). The promotion of agile regulatory approaches is crucial for safeguarding market

integrity and fostering a conducive environment for innovation (Ogunmolu AM, 2025).

Moreover, the study reveals the potential for cross-jurisdictional collaboration, where harmonized regulations can facilitate smoother integration of technologies globally (Sari E, 2025). To address the myriad challenges highlighted throughout the research, future work should focus on empirical investigations into the effectiveness of proposed regulatory frameworks within various jurisdictions (Khan HU et al., 2025). Additionally, exploring the impact of emerging technologies, such as quantum computing and advanced machine learning, on regulatory practices presents significant avenues for further inquiry (Dr. Sujith A S, 2025). Engaging with stakeholders, including fintech developers, regulators, and consumers, will also be vital in understanding the practical challenges and opportunities within these frameworks (Adegbite MA, 2025). Therefore, ongoing research must consider ethical implications, consumer perspectives, and the pace of technological advancements in order to propose sustainable regulatory solutions (Temchenko E, 2025). The synthesis of these insights ensures a comprehensive approach to navigating regulatory challenges in Industry 5.0 finance, ultimately contributing to the development of a resilient and inclusive financial ecosystem (Batool A et al., 2025). Accordingly, the study underscores the pressing need for adaptable regulatory strategies that continuously evolve alongside technological advancements to maintain relevance and efficacy in safeguarding financial practices (Udegbe FC et al., 2024). Overall, this research provides foundational insights that not only address the existing regulatory challenges but also inspire future exploration to foster a robust dialogue on enhancing regulatory environments within the rapidly changing landscape of financial technology (Rane N et al., 2024).

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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