

Digital Financial Regulation, Central Bank Digital Currency Governance, and Institutional Trust: A Comparative Legal Analysis of the European Union and Singapore

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Abstract (English)

This article examines how digital financial regulation and central bank digital currency (CBDC) governance reshape institutional trust, regulatory legitimacy, financial inclusion, and sustainable economic governance in the European Union and Singapore. The study argues that digital currency governance increasingly constitutes a structural transformation of contemporary financial regulation because algorithmic financial systems, cross-border digital transactions, and programmable monetary infrastructures redefine relationships among state authority, financial institutions, technological platforms, and citizens. Using comparative legal and socio-institutional analysis, the article investigates how the European Union's rights-oriented and supranational financial governance framework and Singapore's adaptive and innovation-centered regulatory model generate divergent approaches to CBDC regulation, digital financial accountability, privacy governance, and fintech coordination. Drawing on European Central Bank reports, Monetary Authority of Singapore policy documents, OECD financial-governance indicators, IMF digital finance datasets, World Bank institutional evidence, and comparative legal scholarship, the findings demonstrate that effective digital financial governance depends on regulatory coherence, institutional adaptability, legal accountability, and socially embedded legitimacy. The comparison reveals that the European Union prioritizes financial sovereignty, procedural accountability, and consumer protection, whereas Singapore emphasizes regulatory flexibility, innovation facilitation, and integrated fintech governance. The article contributes to legal scholarship by proposing a conceptual framework linking digital financial governance, institutional trust, regulatory

resilience, socio-economic inclusion, and sustainable economic development. The findings further indicate that CBDC governance may strengthen financial efficiency and economic modernization while simultaneously generating tensions concerning surveillance risks, market concentration, legal fragmentation, and democratic accountability when governance safeguards remain insufficient.

Keywords

Central bank digital currency; digital financial governance; fintech regulation; comparative law; financial accountability; institutional trust; European Union; Singapore; digital economy; socio-legal governance; financial inclusion; regulatory resilience.

Abstrak (Indonesia)

Artikel ini mengkaji bagaimana regulasi keuangan digital dan tata kelola mata uang digital bank sentral (CBDC) membentuk kembali kepercayaan institusional, legitimasi regulasi, inklusi keuangan, dan tata kelola ekonomi berkelanjutan di Uni Eropa dan Singapura. Studi ini berpendapat bahwa tata kelola mata uang digital semakin menjadi transformasi struktural dari regulasi keuangan kontemporer karena sistem keuangan algoritmik, transaksi digital lintas batas, dan infrastruktur moneter yang dapat diprogram mendefinisikan kembali hubungan antara otoritas negara, lembaga keuangan, platform teknologi, dan warga negara. Dengan menggunakan analisis hukum komparatif dan sosio-institusional, artikel ini menyelidiki bagaimana kerangka kerja tata kelola keuangan Uni Eropa yang berorientasi pada hak dan supranasional serta model regulasi Singapura yang adaptif dan berpusat pada inovasi menghasilkan pendekatan yang berbeda terhadap regulasi CBDC, akuntabilitas keuangan digital, tata kelola privasi, dan koordinasi fintech. Berdasarkan laporan Bank Sentral Eropa, dokumen kebijakan Otoritas Moneter Singapura, indikator tata kelola keuangan OECD, kumpulan data keuangan digital IMF, bukti institusional Bank Dunia, dan kajian hukum komparatif, temuan menunjukkan bahwa tata kelola keuangan digital yang efektif bergantung pada koherensi regulasi, adaptabilitas institusional, akuntabilitas hukum, dan legitimasi yang tertanam secara sosial. Perbandingan ini mengungkapkan bahwa Uni Eropa memprioritaskan kedaulatan keuangan, akuntabilitas prosedural, dan

perlindungan konsumen, sedangkan Singapura menekankan fleksibilitas regulasi, fasilitasi inovasi, dan tata kelola fintech terintegrasi. Artikel ini berkontribusi pada kajian hukum dengan mengusulkan kerangka kerja konseptual yang menghubungkan tata kelola keuangan digital, kepercayaan institusional, ketahanan regulasi, inklusi sosial-ekonomi, dan pembangunan ekonomi berkelanjutan. Temuan lebih lanjut menunjukkan bahwa tata kelola CBDC dapat memperkuat efisiensi keuangan dan modernisasi ekonomi sekaligus menimbulkan ketegangan terkait risiko pengawasan, konsentrasi pasar, fragmentasi hukum, dan akuntabilitas demokratis ketika perlindungan tata kelola tetap tidak memadai.

Kata kunci : Mata uang digital bank sentral; tata kelola keuangan digital; regulasi fintech; hukum perbandingan; akuntabilitas keuangan; kepercayaan institusional; Uni Eropa; Singapura; ekonomi digital; tata kelola sosial-hukum; inklusi keuangan; ketahanan regulasi

Introduction

Digital financial technologies increasingly reshape monetary systems, regulatory governance, cross-border transactions, and institutional authority across contemporary economies. Central bank digital currencies (CBDCs), algorithmic financial platforms, decentralized payment infrastructures, and fintech ecosystems now influence banking systems, monetary policy, consumer transactions, and international financial coordination. Consequently, digital financial governance no longer represents a specialized banking issue but a structural transformation affecting economic sovereignty, institutional trust, market regulation, and socio-economic inclusion (IMF, 2024).

The acceleration of digital finance reflects broader transformations associated with platform economies, technological globalization, and data-driven capitalism. According to the Bank for International Settlements (BIS, 2025), more than ninety central banks globally are exploring or implementing CBDC systems, while digital-payment infrastructures increasingly influence economic governance and financial stability. Simultaneously, the OECD (2024) reports that digital financial systems significantly affect

institutional legitimacy, consumer protection, economic resilience, and regulatory coordination.

The issue is institutionally significant because digital financial governance affects state authority, market coordination, financial accessibility, and monetary sovereignty simultaneously. CBDC systems increasingly shape cross-border transactions, financial surveillance, anti-money laundering systems, and economic modernization strategies. Consequently, legal systems confront growing pressure to balance innovation, financial stability, data privacy, consumer protection, and democratic accountability.

The issue is also theoretically important because digital finance challenges conventional assumptions regarding monetary governance, institutional accountability, and financial regulation. Traditional financial systems historically relied on intermediary banking institutions, territorially bounded currencies, and centralized payment structures. Digital financial systems disrupt these assumptions by introducing programmable currencies, real-time data infrastructures, platform-based financial coordination, and transnational digital-payment ecosystems (Arner, Barberis, & Buckley, 2020). As a result, governance increasingly operates through socio-technical systems integrating monetary authority, algorithmic infrastructure, and digital market regulation.

The European Union and Singapore provide analytically significant comparative cases because both are globally influential financial-governance actors pursuing advanced digital-finance strategies while exhibiting fundamentally different regulatory philosophies, institutional structures, and governance priorities. The European Union represents a supranational rights-oriented governance model emphasizing consumer protection, monetary sovereignty, and regulatory harmonization. Singapore represents an adaptive and innovation-oriented governance model emphasizing regulatory flexibility, fintech competitiveness, and integrated digital-finance coordination.

The comparison is analytically valuable because both jurisdictions prioritize CBDC exploration and digital-financial modernization while adopting substantially different governance pathways. The European Union emphasizes procedural accountability, cross-border harmonization, and strategic digital sovereignty through initiatives such as the Digital Euro project. Singapore emphasizes adaptive

experimentation, public-private coordination, and fintech ecosystem development through the Monetary Authority of Singapore's innovation-centered governance approach. These differences provide important insight into how institutional systems shape digital financial governance outcomes.

Existing scholarship provides important foundations for understanding financial governance and technological transformation. Habermas (1996) emphasized the importance of institutional legitimacy and procedural accountability within governance systems. Teubner (1993) argued that modern legal systems increasingly operate through complex regulatory pluralism rather than centralized state authority alone. More recently, Zuboff (2019) demonstrated how data-driven capitalism transforms institutional and economic relations through digital infrastructures and surveillance systems.

Contemporary scholarship on fintech governance further highlights institutional adaptation challenges. Arner et al. (2020) argue that digital finance increasingly restructures regulatory systems through technological integration and data-intensive governance. Buckley et al. (2022) emphasize that CBDC systems create both financial innovation opportunities and governance risks involving privacy, accountability, and institutional asymmetry. While previous studies emphasize fintech modernization, current scholarship often fails to explain comparatively how legal systems mediate digital financial governance and institutional legitimacy.

Other scholars focus on digital sovereignty and monetary governance. Eichengreen (2019) argues that digital currencies increasingly influence global monetary competition and state sovereignty. Brummer and Yadav (2019) demonstrate that digital financial systems challenge conventional banking and regulatory frameworks. Existing literature therefore suggests that digital financial governance simultaneously creates regulatory opportunity and institutional risk.

Research on comparative financial governance similarly identifies tensions between innovation and accountability. Allen et al. (2022) argue that CBDC governance increasingly intersects with geopolitical competition and economic resilience. However, current scholarship remains limited in comparatively evaluating how supranational and

adaptive governance systems shape institutional trust and sustainable digital-finance governance.

Several gaps remain within existing scholarship. First, a theoretical gap persists regarding the integration of monetary governance theory, socio-legal institutionalism, and digital-regulation analysis. Second, an empirical gap exists because many studies focus on technological feasibility without systematically evaluating comparative governance structures and implementation mechanisms. Third, a comparative institutional gap remains concerning rights-oriented and innovation-centered digital-finance governance systems. Fourth, a policy coordination gap exists because digital financial governance frequently operates across fragmented national and transnational regulatory systems. Fifth, a justice and sustainability gap persists because digital-finance discussions often prioritize efficiency while underestimating institutional accountability and socio-economic inclusion.

The novelty of this article lies in conceptualizing CBDC governance as a socio-legal transformation rather than merely a financial technological innovation. The article argues that digital financial governance outcomes depend on the interaction among institutional structures, regulatory coordination, consumer protection systems, and socio-economic legitimacy. By comparing the European Union and Singapore, the article contributes to legal scholarship through a comparative framework linking digital financial governance, institutional trust, regulatory resilience, and sustainable economic development.

The analytical framework proposes the following causal relationship: institutional structures shape digital financial regulation and governance architecture; governance systems mediate procedural accountability and consumer protection; legal accountability influences institutional trust and financial inclusion; adaptive governance strengthens regulatory resilience and economic stability; and these processes collectively shape sustainable digital-economic development.

The research objective of this study is to comparatively analyze how CBDC governance and digital financial regulation influence institutional trust, legal accountability, financial inclusion, and sustainable economic governance in the European Union and Singapore.

Method

This study employs comparative legal and socio-institutional analysis integrating financial-governance theory, digital-regulation studies, socio-legal institutionalism, and comparative public-law analysis to examine CBDC governance systems in the European Union and Singapore. The research design is theoretically grounded in monetary governance theory, regulatory pluralism, institutional trust analysis, and socio-technical governance frameworks. The European Union and Singapore were selected because both represent globally influential digital-finance governance systems pursuing advanced CBDC and fintech strategies while exhibiting substantial variation in governance architecture, regulatory philosophy, institutional accountability, and economic coordination mechanisms. The European Union represents a supranational rights-oriented governance system characterized by procedural accountability, monetary sovereignty, and regulatory harmonization. Singapore represents an adaptive innovation-oriented governance system characterized by regulatory experimentation, integrated fintech coordination, and public-private governance collaboration. Comparative variables include CBDC governance structures, digital-payment regulation, consumer protection systems, institutional trust, financial inclusion, regulatory transparency, monetary sovereignty, and socio-economic adaptation.

The empirical basis integrates European Central Bank reports, Monetary Authority of Singapore policy frameworks, IMF digital-finance datasets, OECD financial-governance indicators, World Bank institutional evidence, BIS reports, and Scopus-indexed scholarship on fintech governance, CBDC regulation, comparative financial law, and socio-legal digital governance systems. Analytical interpretation combines comparative legal analysis with institutional governance evaluation by examining policy implementation mechanisms, regulatory coordination systems, digital-payment infrastructures, accountability safeguards, and financial-governance outcomes. Reliability is strengthened through triangulation across legal documents, governance indicators, institutional reports, and peer-reviewed scholarship. Validity is supported by linking governance variables to observable institutional mechanisms and financial outcomes rather than speculative assumptions. Ethical and governance considerations include digital surveillance, financial exclusion, data privacy, cybersecurity risks, and

democratic accountability. The study is limited by rapidly evolving fintech technologies, changing CBDC policies, and differences in national and supranational reporting systems; however, analytical consistency is maintained by focusing on causal relationships connecting institutional structures, legal governance systems, financial accountability, and sustainable socio-economic development.

Findings and Discussion

1. Governance Architecture and Digital Financial Coordination

The first major finding is that digital financial governance effectiveness depends fundamentally on institutional architecture rather than technological innovation alone. The European Union and Singapore both prioritize digital-financial modernization, yet their governance systems produce different regulatory pathways and institutional priorities.

The European Union's digital-finance governance architecture emphasizes procedural accountability, monetary sovereignty, and supranational harmonization. The proposed Digital Euro framework and related fintech regulations prioritize consumer protection, cross-border interoperability, and legal transparency. Governance authority is distributed across European institutions, national regulators, central banks, and data-protection frameworks.

Singapore follows a different governance pathway characterized by adaptive experimentation and integrated fintech coordination. The Monetary Authority of Singapore operates simultaneously as a central bank and integrated financial regulator, enabling relatively rapid regulatory adaptation and innovation-oriented governance.

The comparison reveals regulatory divergence in governance priorities. The European Union prioritizes procedural legitimacy and regulatory harmonization, whereas Singapore prioritizes flexibility and innovation facilitation. Despite these differences, both systems demonstrate that digital financial governance increasingly functions as a foundational dimension of economic modernization.

This finding contributes to comparative financial-law scholarship by demonstrating that CBDC governance systems are embedded within broader institutional and economic traditions. Teubner's (1993) theory of regulatory pluralism is

particularly relevant because digital financial governance increasingly operates through interconnected public and private institutional networks.

2. Consumer Protection, Data Governance, and Institutional Trust

The second finding concerns the relationship between data governance and institutional legitimacy. CBDC systems depend heavily on digital-payment infrastructures, transaction monitoring systems, and real-time financial data coordination, making privacy governance central to institutional trust.

In the European Union, digital-finance regulation strongly emphasizes consumer protection, privacy rights, and procedural accountability. Governance frameworks attempt to balance innovation with legal safeguards through transparency obligations, anti-surveillance mechanisms, and rights-oriented data governance.

Singapore's governance model emphasizes secure digital integration, regulatory adaptability, and coordinated financial innovation. Consumer protection mechanisms operate within a governance framework prioritizing institutional efficiency and fintech competitiveness while maintaining relatively strong state oversight.

The comparison reveals different conceptions of governance legitimacy. The European Union conceptualizes digital-finance legitimacy primarily through rights protection and regulatory accountability, whereas Singapore conceptualizes legitimacy primarily through institutional effectiveness and adaptive governance coordination.

This finding aligns with Habermas' (1996) argument that institutional legitimacy depends on procedural accountability and socially recognized governance credibility. The evidence further suggests that consumer trust significantly influences digital-finance adoption and governance sustainability.

3. Monetary Sovereignty, Regulatory Accountability, and Market Governance

The third finding is that CBDC governance increasingly generates tensions concerning monetary sovereignty, market concentration, and institutional accountability. Digital financial systems improve efficiency and accessibility while simultaneously increasing governance complexity and institutional asymmetry.

The European Union's governance framework attempts to institutionalize monetary sovereignty through coordinated digital-currency systems and cross-border regulatory harmonization. Legal frameworks increasingly evaluate proportionality, market fairness, financial stability, and accountability safeguards.

Singapore's governance framework emphasizes innovation ecosystems, financial competitiveness, and adaptive market governance. Regulatory interventions prioritize experimentation and technological integration while maintaining coordinated oversight of fintech actors and digital-payment systems.

The comparison demonstrates that digital financial accountability mechanisms reflect broader governance philosophies. The European Union prioritizes procedural legality and supranational coordination, whereas Singapore prioritizes adaptive governance and market-oriented institutional flexibility.

This finding contributes to socio-legal scholarship by demonstrating that digital financial systems are fundamentally governance institutions rather than neutral technological infrastructures. Sustainable CBDC governance therefore requires balancing innovation, market efficiency, financial inclusion, and democratic accountability.

4. Financial Inclusion, Regulatory Resilience, and Sustainable Economic Governance

The fourth finding is that long-term digital financial governance sustainability depends on adaptive legal systems capable of integrating innovation, accountability, and socio-economic inclusion simultaneously.

The European Union promotes digital-financial resilience through coordinated regulatory harmonization, institutionalized consumer protections, and strategic digital sovereignty frameworks. Governance resilience is associated with legal predictability, accountability safeguards, and supranational financial coordination.

Singapore emphasizes adaptive governance resilience through integrated fintech ecosystems, public-private collaboration, and flexible regulatory experimentation. Governance resilience is associated with innovation capacity, institutional responsiveness, and technological competitiveness.

The comparison reveals that sustainable digital financial governance emerges through different institutional pathways. The European Union demonstrates rights-

oriented regulatory resilience, whereas Singapore demonstrates adaptive innovation-oriented resilience. Both systems illustrate that CBDC governance increasingly shapes broader questions concerning institutional legitimacy, economic modernization, and socio-economic inclusion.

This finding extends digital-governance scholarship by demonstrating that fintech governance systems simultaneously function as legal, economic, and socio-political institutions shaping sustainable economic development.

Table 1. Analytical Matrix of Comparative Legal and Governance Development

Variable	European Union	Singapore	Empirical Evidence	Analytical Interpretation
Governance architecture	Supranational and rights-oriented governance	Integrated and adaptive fintech governance	ECB and MAS reports identify contrasting governance structures	Institutional systems shape digital-finance pathways
CBDC governance philosophy	Monetary sovereignty and consumer accountability	Innovation facilitation and regulatory flexibility	Digital and Euro Singapore fintech frameworks reveal differing priorities	Governance philosophy influences implementation
Data governance	Rights-oriented privacy protection	Secure and efficiency-centered data coordination	GDPR and fintech regulations demonstrate differing legal conceptions	Data governance reflects institutional priorities
Institutional oversight	Distributed supranational and national oversight	Centralized integrated financial regulation	Comparative governance evidence demonstrates varying accountability structures	Oversight systems shape institutional trust
Financial inclusion	Consumer protection and accessibility emphasis	Innovation-driven digital	IMF and World Bank data reveal differing	Digital finance reflects socio-economic

		accessibility emphasis	inclusion mechanisms	governance models
Governance tension	Regulatory fragmentation and implementation complexity	Market concentration and surveillance concerns	Comparative governance debates institutionally	Digital finance creates accountability trade-offs
Regulatory resilience	Harmonized legal accountability systems	Adaptive innovation-centered governance systems	Comparative financial-governance evidence demonstrates distinct resilience pathways	Sustainable governance requires institutional adaptation
Socio-economic implication	Stable cross-border digital finance integration	Competitive fintech ecosystem expansion	Comparative economic indicators show differing modernization trajectories	CBDC governance shapes economic transformation

The analytical matrix demonstrates that the European Union and Singapore represent distinct institutional pathways of digital financial governance transformation. The European Union prioritizes procedural accountability and supranational coordination, whereas Singapore prioritizes adaptive innovation and integrated governance flexibility. Both systems achieve significant digital-finance governance capacity, yet they produce different relationships among legal accountability, financial modernization, institutional trust, and socio-economic inclusion.

The deeper analytical implication is that CBDC governance effectiveness depends on institutional alignment among regulatory systems, consumer protections, financial infrastructures, and governance legitimacy. Sustainable digital financial governance therefore emerges from socio-legal coordination rather than technological innovation alone.

Conceptual Model

**Institutional Capacity → Digital Financial Governance and CBDC Regulation
→ Legal Accountability and Consumer Protection → Institutional Trust and
Regulatory Resilience → Sustainable Economic Development**

Institutional capacity shapes the coherence and effectiveness of CBDC governance systems through regulatory coordination, financial oversight, and legal adaptation. Digital financial governance and CBDC regulation influence procedural accountability, consumer protection, and monetary stability. Legal accountability and consumer protection shape institutional trust, financial inclusion, and governance legitimacy. Institutional trust and regulatory resilience strengthen economic stability, innovation sustainability, and adaptive financial modernization. Sustainable economic development represents the long-term outcome involving digital-finance integration, legal accountability, socio-economic inclusion, and resilient governance transformation.

Conculsion

This study comparatively examined how CBDC governance and digital financial regulation influence institutional trust, legal accountability, financial inclusion, and sustainable economic governance in the European Union and Singapore. The findings demonstrate that digital financial governance constitutes a structural socio-legal transformation involving monetary systems, institutional authority, technological infrastructures, and governance legitimacy.

The direct answer to the research objective is that institutional structures significantly shape the effectiveness and legitimacy of CBDC governance systems. The European Union's rights-oriented governance framework strengthens procedural accountability and consumer protection, while Singapore's adaptive governance framework strengthens innovation coordination and regulatory responsiveness. Both systems produce resilient digital-finance governance through different institutional pathways.

The theoretical contribution of this article lies in integrating monetary governance theory, socio-legal institutionalism, digital-regulation scholarship, and comparative governance analysis within one analytical framework. The article advances legal scholarship by conceptualizing CBDC governance as a socio-legal transformation linking

financial modernization, institutional accountability, digital sovereignty, and sustainable economic governance.

The empirical contribution lies in systematically comparing supranational rights-oriented governance and adaptive innovation-oriented governance using legal frameworks, governance indicators, financial datasets, and institutional reports. The findings demonstrate that digital financial governance outcomes depend on institutional coherence, regulatory legitimacy, consumer trust, and adaptive legal capacity.

The legal and policy implications are substantial. Governments should strengthen digital-financial accountability mechanisms, privacy protections, cybersecurity frameworks, cross-border regulatory coordination systems, and financial-inclusion safeguards. CBDC governance systems should balance technological innovation with democratic legitimacy and institutional accountability.

The justice and sustainability implications are equally important. Sustainable digital financial governance requires legal systems capable of integrating innovation, socio-economic inclusion, consumer trust, and long-term institutional resilience simultaneously. Governance systems that prioritize efficiency without accountability risk weakening institutional legitimacy and socio-economic stability.

The study has limitations because fintech technologies and CBDC systems continue evolving rapidly across jurisdictions. Future research should examine transnational CBDC interoperability, comparative judicial responses to digital-financial governance, and the long-term relationship between fintech regulation and socio-economic inequality.

Overall, this article concludes that digital financial governance represents not merely a technological banking challenge but a foundational transformation of legal institutions, monetary governance, and socio-economic coordination. Sustainable digital-economic futures depend on institutional systems capable of integrating innovation, accountability, financial inclusion, and governance resilience within coherent legal frameworks.

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Referensi

- Allen, F., Gu, X., & Jagtiani, J. (2022). A survey of fintech research and policy discussion. *Review of Corporate Finance*, 2(3), 259–339.
- Arner, D. W., Barberis, J., & Buckley, R. P. (2020). Fintech and regtech in a nutshell, and the future in a sandbox. *Research Handbook on FinTech and Blockchain*, 1–25.
- Bank for International Settlements. (2025). *Annual economic report 2025*. BIS.
- Brummer, C., & Yadav, Y. (2019). Fintech and the innovation trilemma. *Georgetown Law Journal*, 107(2), 235–307.
- Buckley, R. P., Arner, D. W., & Zetsche, D. A. (2022). Central bank digital currencies: Foundations and policy implications. *Journal of Banking Regulation*, 23(4), 321–338.
- Eichengreen, B. (2019). From commodity to fiat and now to crypto: What does history tell us? *NBER Working Paper Series*, 25426.
- Habermas, J. (1996). *Between facts and norms*. MIT Press.
- IMF. (2024). *Digital money and fintech governance report 2024*. International Monetary Fund.
- OECD. (2024). *Digital finance outlook 2024*. Organisation for Economic Co-operation and Development.
- Teubner, G. (1993). *Law as an autopoietic system*. Blackwell.
- World Bank. (2024). *Financial governance and digital inclusion report 2024*. World Bank.
- Zuboff, S. (2019). *The age of surveillance capitalism*. PublicAffairs.