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Institutional Dilemmas, Friction Mechanisms, and Rule-of-Law–Oriented Optimization Pathways for Local Financial Regulation in the FinTech Era

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Abstract

FinTech is reshaping financial supply through data, algorithms, and platform-based operations, while accelerating the cross-domain transmission of risks. Local financial regulation consequently faces a compounded predicament characterized by regulatory lag, misalignment between authority and responsibility, and insufficient capacity for technology-enabled governance. Situated in an institutional setting in which "financial management is primarily a central government responsibility" coexists with territorially based obligations for local risk resolution, this article integrates doctrinal normative analysis, legal-dogmatic interpretation, and institutional analysis. Building on a systematic review of FinTech's impacts on "7+4" categories of local financial organizations, the article identifies three interlocking friction mechanisms underlying the ineffectiveness of local financial regulation: (i) an inadequate supply of legal and regulatory norms that opens windows for regulatory arbitrage; (ii) ambiguous central-local boundaries of authority and responsibility that generate incentive distortions and coordination failures; and (iii) delayed governance of data-related risks that exacerbates information asymmetries and induces risk spillovers. Based on a cost-benefit assessment of institutional arrangements, the article proposes an optimization pathway centered on: reconstructing a function-oriented regulatory rule system; proceduralizing central-local coordination and accountability chains; formalizing RegTech under the rule of law; and advancing coordinated data governance. These reforms aim to achieve a dynamic equilibrium between "promoting innovation" and "preventing risks," thereby advancing the modernization of local financial regulation.

Keywords: financial technology, local financial regulation, dilemmas, hindering mechanisms

1. Introduction

In Fintech in the context of accelerating the reshaping of financial business boundaries and risk generation mechanisms. The problem of institutional adaptability of local financial supervision has become increasingly prominent. While Fintech innovates financial service models and improves transaction efficiency, it also poses structural challenges to the existing regulatory system: The continuous innovation of the

financial industry has made local financial regulatory authorities more arduous in identifying, warning and handling risks of "7+4" institutions empowered by fintech, and may amplify the triggering probability of systemic risks. The 2025 Central Economic Work Conference emphasized "insisting on keeping the bottom line and actively and steadily resolving risks in key areas." The National Financial System Work Conference proposed the policy context of "preventing risks, strengthening supervision, and promoting high-quality development". Local regulatory practices are forced to make frequent trade-offs between "promoting development" and "keeping the bottom line". Therefore, it is urgent to respond to this tension from the perspective of rule of law and institutional design, and turn to the evaluation of existing research.

Existing research mainly follows two clues: "local regulatory failure" and "financial technology risk evolution". As far as local financial supervision is concerned, local financial risks lie between macro risks and micro risks, departments are prone to governance difficulties such as insufficient regulatory capabilities, regulatory credit overdrafts and overlapping functions (Wang, C., 2017); Under the impact of disruptive innovation in financial technology, the problem of incentive distortion caused by unclear boundaries of local regulatory powers and responsibilities is more prominent (Chen, B., 2020; Feng, H., 2021; Li, Y., & Ke, D., 2018), and concentrated on the difficulty of balancing regulatory and economic development goals (Zhang, X., 2023; Yin, Y., & Peng, X., 2020; Li, Y., & Cheng, B., 2018), the legal protection system is relatively weak (Zhang, Y., 2019; Tan, S., 2019), some scholars further advocate the use of administrative accountability mechanisms to strengthen the effectiveness and legal legitimacy of local supervision (Zhang, J., & Zhai, H., 2024). As far as Fintech risks themselves are concerned, relevant studies point out that it is accompanied by potential systemic legal risks (Chen, H., & Guo, L., 2020; Sun, Q., 2023); Because financial technology has a "dual nature" (Feenberg, A., Han, L., & Cao, G. (Trans.)., 2005), on the one hand, it promotes the popularization and optimization of financial services (Qiu, H., Huang, Y., & Ji, Y., 2018; Lin, C., 2022; Qian, H., Tao, Y., Cao, S., et al., 2020; Li, N., 2018) and improves market efficiency and competitiveness (Zhang, X., & Ji, J., 2023), on the other hand, the cross-border nature, mixed industry nature and strong technical nature have strengthened the necessity of technical supervision. If there is a mismatch between tools and capabilities, it may induce systemic financial risks and intensify local regulatory pressure (Yang, D., 2018; Li, M., 2019; Jin, W., 2019); at the same time, being driven by massive data also comes with high data risks (Yuan, K., & Cheng, Y., 2023; Liu, N., & Lyu, H., 2022). This leads to policy recommendations such as expanding the scope of pilot projects, using supervision to guide innovation, and strengthening corporate governance (Han, Y., 2022). The above results provide an important reference for understanding the problem, but also suggest that the local dimension still lacks an explanatory framework that integrates "rules, rights, responsibilities, and capabilities".

Accordingly, this paper will mainly focus on the following three research topics: First, there is a structural lag between the supply of legal regulations for local financial supervision and the evolution of financial technology formats, making it difficult for the rule system to cover the functional deformation of "7+4" entities; Second, under the dual requirements of "financial management is mainly the power of the central government" and "strengthening local risk disposal responsibilities", the boundaries of central and local power and responsibilities are still unclear, and the overlapping of power and responsibilities and the poor accountability chain jointly increase the operating costs of the system; Third, data-driven business logic makes it more difficult for regulatory agencies to implement data governance and regulatory technology applications, causing risk identification and disposal to exhibit a "lag-spillover" transmission characteristic. Based on this, this article takes "realistic dilemma – blocking mechanism – optimization path" as the main line, and comprehensively uses normative analysis, legal doctrine interpretation and institutional analysis methods to provide academic support for the construction of a unified and predictable local regulatory framework for financial technology.

2. The Dual Effects of Financial Technology on Local Financial Supervision and Its Institutional Implications

Fintech is the practice and application of

technological means and innovative models in the field of financial services. It uses emerging technologies to reshape traditional financial business models, thereby effectively improving the efficiency of financial services and broadening the coverage of financial services. While helping the financial industry achieve service innovation, it also has a profound impact on the current local financial regulatory system.

2.1 Concept Definition and Analytical Premises: Transformation from Technology Application to Institutional Structure

First of all, from a conceptual level, financial technology is not only the external embedding of technical tools, but also an institutional force that uses data, algorithms and platforms as core elements to promote the reorganization of financial transaction structures, risk patterns and governance methods; Accordingly, local financial supervision is not just "administrative management of local financial organizations", but a public governance chain formed around risk identification-early warning-disposal-accountability. Based on the above definition, this article proposes three analytical premises: First, the impact of financial technology on supervision is "dual". It may improve supervisory performance through information increment and tool upgrading, or it may amplify risk spillovers through cross-border operations and technological black boxes; Second, the effectiveness of local supervision depends on the dynamic matching between the supply of rules, allocation of rights and responsibilities, and capacity resources, rather than "making up for shortcomings" in a single link; Third, in the data-driven financial ecosystem, Reg Tech should be understood as an institutional change in the way regulatory power is realized, rather than a simple tool choice by regulators to "use technology". Based on this, the following will analyze the impact mechanism from two dimensions: promotion and impact.

2.2 The Role of Financial Technology in Promoting Local Financial Supervision

(1) Improve financial transparency. From the perspective of information structure, financial technology companies master a large amount of user information and transaction data through technical means, forming significant data advantages; Therefore, local regulatory authorities can use the capabilities of massive data mining, intelligent data analysis, and intelligent regulatory decision-making to gain a deeper insight into the operating status of the financial market and grasp market dynamics in a timely manner. Furthermore, when regulatory authorities can transform dispersed data into comparable, verifiable, and traceable risk signals, information asymmetry risks will be significantly reduced, and financial market transparency and regulatory pertinence will be enhanced. It can be seen that financial technology has provided an increase in efficiency for local supervision at the level of "data availability", but whether this increase can be transformed into substantive supervisory performance still depends on the regulatory authorities' institutionalized acquisition and legalized use arrangements for data.

(2) Promote regulatory technological innovation. From the perspective of governance tools, the rapid development of financial technology has given rise to the rise of regulatory technology and promoted the transformation of the local regulatory process from the traditional model of "manual experience-sampling inspection" to the technical chain of "automated collection-real-time identification-continuous evaluation-closed-loop reporting". Specifically, automated data collection, risk identification, risk assessment and regulatory reporting and other processes can significantly reduce manual operations and information delays, and reduce regulatory deviations caused by human errors, thereby improving overall regulatory efficiency. It needs to be emphasized that the introduction of regulatory technology does not automatically equate to an increase in regulatory intensity. Its more critical institutional implications are: The way in which supervisory power is exercised has undergone a shift from "programmed to codified", so it must simultaneously respond to legal constraints such as the legality of data sources, algorithm interpretability, and procedural legitimacy. Based on this understanding, the promoting role of financial technology will eventually be transformed into a normative proposition: Local regulatory capacity building should be promoted simultaneously with legalized procedural constraints to avoid new compliance risks brought about by "technology replacing rules."

2.3 The Impact of Financial Technology on Local Financial Supervision

(1) Fintech empowers the financial industry,

making supervision more difficult and inducing regulatory arbitrage. From the perspective of regulatory boundaries, the rapid development of financial technology has given rise to new financial formats, especially after large technology companies enter the financial industry. Their massive data advantages and platform ecology make it difficult for the traditional financial supervision model to respond in a timely and effective manner, thereby greatly increasing the difficulty of supervision. More importantly, based on the cross-regional and decentralized characteristics of financial technology, the boundaries of financial activities tend to be blurred; the provision of financial services in 4 regions and even across borders has become the norm. Under the circumstances where the existing regulatory legal system is limited and lagging, some financial technology companies develop cross-border financial services in order to avoid regulatory constraints, inducing "regulatory arbitrage" behavior and endangering financial stability and security (Hou, D., 2025). It can be seen that, while financial technology expands financial availability, it also objectively increases the external intensity of local regulation: risks are no longer limited to territorial boundaries, but are rapidly spilling over through online and platform-based processes.

(2) Financial technology intensifies risk expansion. From the perspective of risk externalities, the financial industry has always received great attention from regulatory agencies because of its significant negative externalities. Traditional supervision usually focuses on "systemically important institutions" and allocates regulatory resources and rule intensity accordingly. However, financial technology innovation breaks through the traditional business model and relies on the rapid transmission characteristics of the Internet, resulting in a significant increase in business concealment and risk. Local supervision is more likely to encounter the dilemma of "lag in discovery – rising disposal costs" in risk identification and disposal. In particular, small loans, loan assistance businesses and licensed financial technology companies launched by Internet financial companies may induce cross-border business operations due to the existence of a regulatory vacuum, thereby exacerbating financial risks (Shi, G., 2023). Therefore, financial technology does not simply expand the scale of risks, but changes the path of risk expansion: risks are more likely to be superimposed in a "cross-subject, cross-business, and cross-region" manner and accelerate contagion through the technology chain.

To sum up, financial technology has a dual effect of "incremental efficiency" and "incremental risk" on local financial supervision: On the one hand, it improves transparency and reduces some regulatory costs through data aggregation and regulatory technology innovation; on the other hand, it increases regulatory externalities and governance complexity through cross-domain operations, regulatory arbitrage and negative externality expansion.

3. Triple Failures of Local Financial Supervision Under the Background of Financial Technology

Driven by the empowerment of financial technology, financial risks are showing a clear trend of transferring from the central to local governments, from traditional financial fields to non-traditional financial fields, and from offline financial transactions to online. As a result, local financial supervision has encountered systemic pressure from the three-dimensional mismatch of "rules-powers and responsibilities-capabilities". Based on the theory of institutional regulatory lag and functional supervision, this paper presents the practical difficulties of local supervision from the aspects of legal system, central and local powers and responsibilities, and data governance.

3.1 The Legal System for Local Financial Supervision Is Imperfect

First of all, from the perspective of the relationship between "regulating supply and market evolution", the imperfection of the legal system constitutes a key bottleneck for local supervision to respond to the development of financial technology: When new business and risk forms are rapidly generated and the supply of rules lags behind, regulators can only rely on low-level documents or temporary measures to fill the gap, thereby weakening the predictability and legitimacy of supervision and amplifying the uncertainty cost of compliance for market entities. This phenomenon is not only a technical problem caused by the "legislative gap", but also a structural failure that makes it difficult for the rule system to achieve "penetration –

adaptation – enforceability". Secondly, from the perspective of the relationship between "five sectors", the current system still has obvious insufficient rule coverage in the local financial field: Although in 2022, the People's Bank of China, together with relevant departments, studied and drafted the Regulations on "Local Financial Supervision and Administration (Draft for Comment)". However, the document is still in the draft stage and has a limited level, which is not enough to form a nationally unified and directly applicable upper-level norm; At the same time, there are still deficiencies in the regulatory provisions for social crowdfunding institutions, investment companies, farmers' professional cooperatives that carry out credit mutual aid, and other entities, resulting in the continued existence of a regulatory vacuum with nothing to follow. Furthermore, under the background that national regulations have not yet been promulgated, some local regulatory rules are mostly departmental regulations or normative documents, and the legal level is low, and the legal system of local financial supervision is incomplete (Zhang, W., Feng, G., & Zhou, G., 2025); In small loan companies and other fields, the supervision practice is highly dependent on local policy documents, lacking the support of superior law, which affects the intensity and effect of supervision, and the timeliness and scope of supervision laws are limited (Cheng, X., 2024). Cross-border, cross-sector, and concealed transaction models are more likely to form regulatory blind spots and induce regulatory arbitrage. Take the peer-to-peer online lending platform "E-Zubao" as an example, this case involved 31 provinces, autonomous regions and municipalities, more than 1.15 million investors, and an amount of 76.2 billion yuan involved. It exposed the tension between "regional operations of financial institutions" and "systemic risks" and posed a prominent challenge to the horizontal and vertical allocation of national financial regulatory powers. In short, the lag and fragmentation of the rule system make it difficult for local supervision to form stable institutional expectations. This dilemma will naturally lead to further issues about the boundaries of powers and responsibilities and coordination mechanisms.

3.2 In the Field of Financial Technology Risk Supervision, There Is an Imbalance of Regulatory Powers and Responsibilities Between the Central and Local Governments

First of all, from the perspective of the principal-agent framework of vertical power allocation, the imbalance of central and local power and responsibilities is essentially the manifestation of the tension between "increased risk externalities" and "solidified territorial governance responsibilities": The institutional reform in 2023 will promote the continuous evolution of the central financial regulatory system, while the rights and responsibilities of local-level financial regulatory entities are still relatively vague. When central rules are unified and local risk handling responsibilities are simultaneously strengthened, without operable power division standards and a clear accountability chain, local supervision may fall into a governance dilemma of "more passive disposal and less active governance". Secondly, from the perspective of local internal governance structure, the "one agency, multiple brands" shared office model is conducive to resource coordination to a certain extent, but it may also lead to overlapping responsibilities and increased coordination costs. The financial office of the local party committee, the financial working committee and the local financial management bureau have formed a closed loop of 'decision-making-coordination-execution' under the framework of 'party management of finance', but in practice there are still problems of conflicts of rights and responsibilities and imperfect coordination mechanisms. At the same time, local regulatory agencies, as extensions of the original local government departments, will have insufficient independence to affect regulatory effectiveness when regional financial development conflicts with regulatory objectives. It can be seen that 'organizational integration' at the local level does not necessarily equate to 'clear responsibilities'. On the contrary, it may amplify institutional friction when the interface between rights and responsibilities is unclear. Thirdly, from the perspective of central-regional boundaries and cross-domain operations, the central government emphasized that 'under the premise of insisting that financial management is mainly the power of the central government, in accordance with the unified rules of the central government, strengthen territorial risk disposal responsibilities', and formed a hierarchical structure of 'general bureau-provincial bureau-branch' after the

reform. However, as Fintech leverages big data and cloud computing to expand operations across regions, local risks may escalate into systemic hazards. The mismatch between local regulatory oversight and nationwide operations exacerbates accountability gaps, while decentralized governance structures may lead to arbitrary risk management responsibilities. Therefore, the imbalance of power and responsibilities between the central and local governments is not simply a quantitative issue of "too much authority or too little", but requires an institutionalized match between the strength of risk externalities and the accountability of the disposal chain.

3.3 Data Risk Management Problems Faced by Local Financial Regulatory Agencies in the Context of Financial Technology

First of all, from the perspective of information structure and governance capabilities, financial technology expands the breadth and depth of financial services, and uses data processing and application to become an important driving force for industry growth. However, it also introduces more complex data risks: In the data-intensive financial industry, the uncertainty, replicability and high liquidity of data make risks more concealed and complex, thus raising the threshold for regulatory identification. In the sense of legal power structure, this dilemma can be understood as a structural imbalance between "data control of the platform" and "information availability of regulators", the consequences of which are often manifested in the lag in regulatory judgment and the increase in disposal costs. Secondly, from the perspective of the adaptability of regulatory tools, the real risks of data collection, utilization and sharing have triggered regulatory demands for data governance in financial institutions, but it is difficult for traditional data management frameworks to adapt to the "disruptive" innovation characteristics of financial technology; The combination of lagging regulatory thinking and insufficient governance means makes it more difficult to identify, prevent and control data risks. It is particularly worth emphasizing that the current regulatory response to Fintech risks still mainly relies on traditional means such as capital requirements, business scope/quota restrictions, and risk warnings. However, the institutional supply of data risk prevention and control is obviously insufficient, especially the lack of specialized mechanisms and strategies for Fintech data governance (Liu, N., & Lyu, H., 2022). As a result, it is difficult for regulatory authorities to form effective synergy, and when data acquisition methods are limited, risk monitoring capabilities are further restricted by hidden information asymmetry and sensitive information asymmetry, thereby weakening the pertinence and effectiveness of regulatory decision-making.

To sum up, the three dilemmas faced by local financial supervision are not isolated from each other: the lagging supply of rules provides institutional soil for the imbalance of rights and responsibilities, which in turn aggravates the insufficient investment in data governance and regulatory technology, while the problem of data risk governance in turn amplifies regulatory arbitrage and risk spillovers.

4. The System Generation Logic and Transmission Chain of Insufficient Local Financial Supervision Effectiveness

In the aforementioned triple dilemma of "insufficient supply of rules – imbalance of central and local powers and responsibilities – lagging data governance", the insufficient effectiveness of local financial supervision is not an isolated implementation deviation, but a "blocking structure" jointly shaped by the mutual reinforcement of the time lag in institutional supply, vertical power allocation and technical governance capabilities. The key feature of this structure is that financial technology extrapolates risk generation from "inside the institution" to the "platform ecosystem" and accelerates risk transmission through cross-domain operations and data-driven, making local supervision face adaptability pressure at the three levels of rules, incentives and capabilities at the same time ("7+4" risk disposal pressure and cross-domain risk spillover coexist).

4.1 Regulatory Gap Mechanism: How the Time Lag in Rule Supply Amplifies Regulatory Arbitrage and Risk Spillovers

First of all, from the perspective of institutional supply lag, local financial supervision has experienced structural breaks under the impact of financial technology, such as "insufficient rule coverage – reliance on low-level documents for execution – unstable regulatory expectations": When national and unified local financial regulatory rules have not yet been formed, and

local-level rules are mostly supplemented by normative documents, once the business functions of the regulatory objects are transformed, it is easy to create a compliance gray area between "existing classifications and new functions", thereby forming a regulatory arbitrage window. In practice, this rupture is manifested in the following: lack of regulatory provisions for some financial organizations, insufficient support from higher-level laws, and the coexistence of fragmented rules, making it difficult for local supervision to form predictable compliance boundaries and establish stable legal application paths in cross-domain scenarios.

Secondly, from the perspective of the institutional conditions for risk spillover, the gap in rules will be transmitted through "cross-domain supervision objects-difficulty in tracing responsibility-externalization of disposal costs": Fintech has driven financial activities to become more concealed, decentralized, and cross-border/cross-domain, creating potential gaps in the local supervision chain of "discovery-qualification-imputation." Therefore, the real harm of the regulatory gap is that it transforms cross-domain operations caused by financial technology into governance problems where "rules are difficult to penetrate" and further increases the risk of incentive distortion in the vertical allocation of rights and responsibilities.

4.2 Incentive Distortion Mechanism: How Unclear Boundaries of Central and Local Powers and Responsibilities Can Induce Coordination Failures and Selective Regulation

First of all, from the perspective of vertical decentralization and the principal-agent relationship, the juxtaposition of "central unified rules" and "local risk disposal responsibilities", if there is no operable power division standard and clear accountability chain, will cause local supervision to bear high-intensity disposal pressure under the condition of limited power resources, forming a structural mismatch of "responsibility rigidity-authority flexibility". After the reform, the regulatory system at the central level continues to evolve, while the positioning of the rights and responsibilities of financial regulatory entities at the local level remains unclear, which is a realistic manifestation of this mismatch. In this case, the rational strategy of local supervision may shift from "pre-emptive governance" to "post-event disposal" and focus limited supervision resources on links that can be quickly accountable.

Secondly, from the perspective of the local internal governance structure, although the co-location of "one agency, multiple brands" strengthens coordination, it may also increase coordination costs and weaken regulatory independence when the responsibilities are unclear: While the financial office of the local party committee, the financial working committee and the local financial bureau have formed a closed loop of "decision-making-coordination-execution",
there are still problems of conflicts of powers and responsibilities and imperfect coordination mechanisms. Moreover, local regulatory agencies, as extensions of the original local government departments, face conflicts between regional financial development and regulatory objectives, and their lack of independence affects regulatory effectiveness.

Therefore, the incentive distortion mechanism is not only reflected in the abstract division of labor disputes about "who controls what at the central and local levels", but will be embodied in the observable consequences of "coordination failure-regulatory competition-selective regulation" under the constraints of local organizational structures and development goals, and further aggravate the lack of investment in data governance and the lagging application of regulatory technology.

4.3 Capability Constraints Mechanism: How Do Data and Algorithmic Structures Perpetuate Information Asymmetry, Thereby Leading to Delays in Risk Identification

First of all, from the perspective of information structure, financial technology embeds data processing and application into the financial supply chain, which enlarges the dependence of supervision on data availability and interpretability, but at the same time introduces more complex data risks; The development of financial technology expands the breadth and depth of financial services, and while data processing capabilities become a key force for growth, it also brings complex and changing data risk challenges. The data-intensive characteristics of the financial industry combined with the technical attributes of financial technology make data risks more uncertain and unique, thus significantly raising the regulatory identification threshold. In this

context, the capacity shortcomings of local supervision are no longer "short of manpower" in the traditional sense, but transformed into structural constraints of "unavailable data, unauditable algorithms, and unpredictable risks."

Secondly, from the perspective of tool adaptability and governance methods, traditional data management frameworks are difficult to meet regulatory needs in the "disruptive innovation" scenario. Lagging regulatory ideas and insufficient governance methods will further amplify information asymmetry: The risks of data collection, utilization and sharing have increased the regulatory requirements for data governance. However, the traditional data management framework of regulatory agencies is difficult to adapt to reality, and potential data risks are more hidden and complex than traditional financial risks. At the same time, the current response to fintech risks still mainly relies on traditional means such as capital, business scope/quota limits, and risk warnings. The lack of specialized mechanisms and strategies for fintech data governance will make it difficult to form a regulatory synergy and limit risk monitoring capabilities. In practice, it is manifested in the coexistence of hidden information asymmetry and sensitive information asymmetry.

Therefore, the conclusion of the capacity constraint mechanism is: without institutionalized data acquisition, sharing and technical review paths, local supervision will be difficult to achieve proactive governance even if it is "responsible". This will mutually reinforce the aforementioned incentive distortion mechanism, and eventually evolve into an accelerator of risk spillover under cross-domain operating conditions, which leads to the cross-domain transmission mechanism in the next section.

4.4 Cross-Domain Transmission Mechanism: How Online Operations Push Local Risks to Regional and Systemic Risks

First of all, from the perspective of risk externalities and transmission speed, the cross-regional, decentralized and platform-based operations of financial technology make it easier for local risks to spread outward through the rapid transmission characteristics of the Internet: when the boundaries of financial activities are reshaped by technology and business reach breaks through administrative divisions, territorial supervision will naturally face the mismatch of "registration place supervision – national operation". The imbalance of local supervision powers and responsibilities will therefore become more prominent, and may make the division of risk disposal responsibilities uninstitutionalized and arbitrary.

Secondly, from the perspective of mechanism superposition, the essence of the cross-domain transmission mechanism is "the compound amplification of institutional ruptures": First, regulatory gaps make cross-domain businesses more likely to fall into regulatory blind spots and induce arbitrage; Second, the mismatch of rights and responsibilities makes local governments more inclined to deal with the situation after the fact rather than in advance, and cross-domain collaboration lacks a stable organizational carrier; Third, data governance lags and algorithm black boxes cause risk identification to lag behind, causing disposal costs to rise sharply after risks spread. Taking the "E-Zubao" case as a typical example of the tension between "regional operation and systemic risk," the mechanism of cross-domain risk transmission demonstrates that when risks spread through the platform's network structure, regulatory oversight at a single geographical level is insufficient to establish effective governance system. Instead, a structured, vertical coordination approach, combined with a data governance system, is necessary to ensure that risks can be identified, held accountable for, and effectively managed.

To sum up, the insufficient effectiveness of local financial supervision can be explained by the closed loop of four types of mechanisms: Gap in regulations provides room for arbitrage, distorts incentives and weakens coordination and front-end governance. Capacity constraints solidify information asymmetry and cause recognition lag. Cross-domain conduction amplifies the above-mentioned faults and promotes risk spillover. The closed loop of this mechanism shows that the rule system is functional and enforceable, the division of powers and responsibilities between central and local governments is standardized and accountable, and data governance and regulatory technology are legalized and coordinated to achieve a dynamic balance

between "promoting innovation" and "preventing risks" (from mechanism hedging to standardized solutions).

5. Legal Construction of Modern Local Financial Supervision and Governance System

5.1 Improvement of the Legal System: Reshaping of Rules from "Institutional Legislation" to "Functional Legislation"

First of all, to hedge against the expansion of regulatory externalities brought about by financial technology's "cross-format – cross-region – cross-subject", the supply of rules should shift from "institutional legislation" centered on institutional licenses to "functional legislation" centered on financial functions and risk forms, that is, setting consistent bottom-line obligations and responsibility structures around functional units such as payment and settlement, financing matching and loan assistance, asset management and wealth management, information intermediaries and credit reporting, digital risk control and model services, and through "cross-cutting" "Transparent identification + same regulation for similar businesses" achieves comparability and enforceability of regulatory standards. Furthermore, at the national level, the fundamental problem of "fragmented local regulatory basis and insufficient effectiveness of rules" should be solved by upgrading the legislative level: On the one hand, in the dual governance scenario of finance and data, regulatory rules must meet clear and enforceable normative requirements. Article 7, paragraph 2, of the "Legislation Law" (2023 amendment) clarifies that "legal norms should be clear, specific, targeted and enforceable", which provides a normative basis for modularizing, standardizing and embedding regulatory requirements into verifiable procedures. On the other hand, for major matters involving the basic financial system, Article 11 (9) of the Legislation Law (2023 Amendment) includes the "basic financial system" into the scope of matters that can only be enacted by laws. Therefore, the national level should pass special legislation or systematic amendments to the law to clarify the basic concepts, supervision objects, risk classification, disposal chain and boundaries of powers and responsibilities of local financial supervision, so that local supervision can move from "policy authorized type" to "legal authorized type". In short, the core benefit of functional legislation is to reduce cross-border regulatory frictions and improve predictability through unified rules.

Secondly, local standardized supply should achieve refined management within the boundaries of legal authorization to avoid the coexistence of risks of "overstepping authority to set obligations" and "duplication of superior laws". Article 82 of the "Legislation Law" (amended in 2023) stipulates that the scope of matters of local regulations mainly includes: matters that need to be specifically stipulated in conjunction with the actual situation of the administrative region in order to implement higher-level laws, and matters that are local affairs and require the formulation of local regulations. At the same time, it clarifies that "local regulations shall be formulated and content that has been clearly stipulated by higher-level laws will generally not be repeatedly stipulated." Accordingly, institutional innovation at the local level should follow a "procedural – technical – collaborative" approach: At the procedural level, local regulations or government regulations solidify regulatory procedures (such as administrative inspection standards, risk warning trigger conditions, disposal initiation thresholds, information submission processes, and administrative discretionary benchmarks), replacing caliber drift with procedural rigidity; At the technical level, the regulatory requirements are translated into a "verifiable list" (disclosure, traces, audits, isolation, risk control thresholds) rather than general obligations; At the collaborative level, relying on the provisions of Article 83 of the Legislation Law (2023 Amendment) on the regional collaborative legislative mechanism, we will promote the formation of collaborative rules in areas with intensive cross-regional financial activities and alleviate the institutional fragmentation caused by the natural cross-domain nature of financial technology business. Finally, in order to prevent compliance costs from soaring due to local regulations being "independent", filing review and consistency control should be strengthened: In accordance with the filing system of Article 109 of the Legislation Law (2023 amendment) and the review and linkage mechanism of Articles 110 to 115, local financial technology-related normative documents are promoted to be included in the closed loop of "release-filing-active review/special review-corrective feedback" to

achieve legal unification and policy coordination at a lower institutional cost; this closed loop will also provide an operational institutional fulcrum for central and local coordination and accountability.

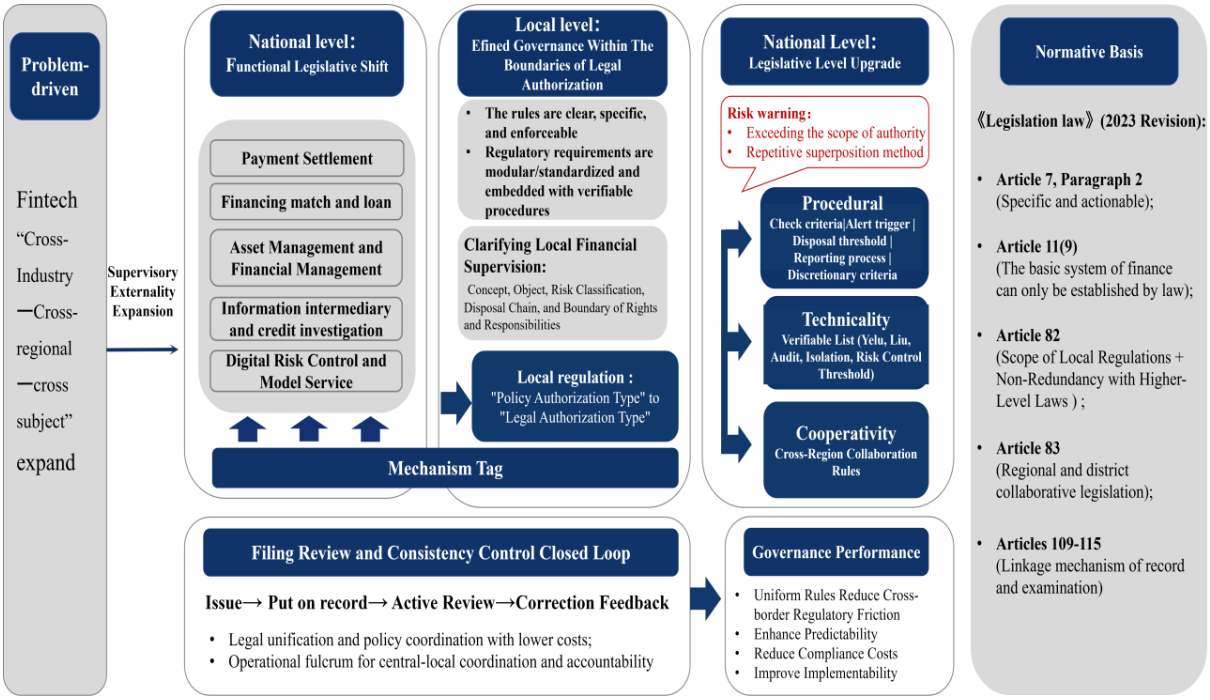

Figure 1. Legislative regulatory mechanism diagram of financial technology functions

5.2 Central and Local Coordination and Accountability: Division of Powers Based on the Standard of "Strength of Externalities-Risk Management Chain"

The key to the relationship between the central and local governments is not to simply "receive or delegate powers", but to allocate powers based on the strength of financial risk externalities, and to make the risk disposal chain procedural, inventory-based, and accountable, thereby reducing the governance costs of collaborative friction and shirk of responsibility. In terms of the externality dimension, matters that have a high probability of spreading across regions, markets, and institutions and that may trigger systemic risks should be led by the central authority: including unified regulatory rule formulation, cross-regional risk monitoring indicator system, major risk disposal plan and cross-domain law enforcement cooperation framework; For those risks that are primarily confined to a particular jurisdiction, can be managed using local resources, and have a low degree of potential impact on other areas, the local authorities can assume responsibility for handling them. This includes routine inspections by local financial institutions, the identification of local financial risks, consumer protection and dispute resolution, as well as the collection of regulatory information and the transmission of relevant clues. In summary, this division reduces duplication of supervision and regulatory vacuum through the matching of "externalities and powers", but its effective operation must fall into the programmed arrangement of the "disposal chain".

At the same time, the risk disposal chain should be divided into central and local divisions and interfaces should be solidified according to the four links of "discovery-early warning-disposal-accountability" to avoid the blocking mechanism of "information fragmentation-sluggish action-weakening of accountability": In the discovery and early warning process, local supervision takes advantage of being close to the market to undertake high-frequency monitoring and clue verification, but it must integrate core indicators into a unified standard and achieve comparable data reporting; In the disposal process, for cross-regional platform risks or risk events involving national capital chains, the central government should take the lead in organizing cross-regional disposal and coordinating regulatory resources, while local governments are responsible for local administrative

assistance, on-site disposal and social stability risk prevention and control; In the accountability link, "whether the report is submitted in a timely manner, whether the disposal is initiated in accordance with the procedures, whether the obligation to assist is fulfilled, and whether there is selective law enforcement" should be transformed into quantifiable accountability elements, forming a closed loop of "responsibility list + procedural traces + auditable evidence". As a result, central and local leadership and territorial responsibilities no longer remain in the declaration of principles, but can institutionally suppress moral risks and regulatory games through listing and leaving traces; On this basis, only the legalization of data governance and regulatory technology can achieve a stable institutional interface.

5.3 Legalization of Data Governance and Regulatory Technology: Collaborative Regulation from Data Security to Platform Governance

In the financial technology ecosystem, "data availability" is not only a prerequisite for regulatory capabilities, but also a concentrated source of legal risks. Therefore, data governance should be used as a hub to achieve synergy between security, compliance and governance performance. Article 21 of the "Data Security Law" (2021) establishes a data classification and hierarchical protection system and requires the implementation of key protection for important data directories; Article 22 establishes risk assessment, reporting, information sharing, monitoring and early warning mechanisms; Article 30 requires important data processors to conduct regular risk assessments and submit assessment reports. Based on these institutional frameworks, local financial supervision should build a combined regulation of "financial supervision data classification + mandatory reporting/disclosure + cross-domain collaboration": First, clarify the classification and grading of data required for supervision and the minimum necessary principles, and legalize "necessary data sets" to reduce disputes over excessive collection and improve data availability; Second, set up hierarchical mandatory reporting obligations for platform-based financial technology entities (immediate reporting of major risk events, regular reporting of key indicators, special reporting on model changes and outsourcing services), and connect reporting obligations with administrative responsibilities, licensing management, and credit constraints; Third, establish a cross-domain data collaboration mechanism to achieve "shareability without abuse" through unified interface standards and audit traces, and reduce transaction costs for cross-regional regulatory collaboration. In short, the above-mentioned institutional arrangements improve the data basis of supervision through "cataloging-interface-leveling".

The next step is to bring RegTech within the framework of the rule of law, in order to ensure that technological governance does not overstep its limits. Going a step further, regulatory technology should not be understood as "technology replacing regulation" but should be positioned as the digital translation of the way regulatory power is exercised: that is, transforming rules into executable, auditable, and accountable procedures and codes, thereby improving the real-time nature and consistency of regulation. To prevent the erosion of program legitimacy by the 'algorithmic black box', the legalization of RegTech should at least meet three requirements: First, the legal foundation of rule digitization should be clear, that is, with legal authority, legal procedures and verifiable standards as the boundaries, regulatory requirements should be translated into "machine-executable" compliance rules (such as thresholds, fields, logs, alarms, disposal processes), and their sources should be traceable, versions can be managed, and changes can be announced; Second, explainability and appealability must be embedded simultaneously, especially when it comes to automated decision-making and risk handling triggers, which should be connected with the personal information protection system. Articles 55 and 56 of the "Personal Information Protection Law" (2021) establish personal information protection impact assessment and record retention obligations, which provide a compliance framework of "pre-event assessment-during the event-post-event audit" for platform risk control models, automated audits, and data processing activities. Third, the technical system should form an evidence chain of "supervision traces" so that law enforcement decisions can be reviewed and accountability can be proven, thereby transforming the "insufficiency of supervisory capabilities" revealed in Chapter 4 into an increment of governance that can be institutionalized to make

up for it. Therefore, the key benefits of RegTech lie in reducing information asymmetry and regulatory friction; however, its associated costs include the investment required for institutional design and technological transformation. These aspects must be assessed in a phased manner and implemented gradually throughout the implementation process. The core value of RegTech lies in reducing information asymmetry and regulatory friction, while its costs stem from institutional design and technological transformation investments. A layered evaluation and phased implementation approach must be adopted throughout the rollout process.

5.4 Implementation Path and Cost-Benefit Assessment: Layered Advancement in the Short, Medium and Long Term

The above-mentioned system construction should adopt a layered promotion strategy of "fixing procedures in the short term, strong coordination in the medium term, and establishing systems in the long term" to achieve a sustainable balance between compliance costs, regulatory resource constraints, innovation incentives and risk reduction. In the short term (about one year), priority should be given to making these measures practical and feasible. This includes completing the process of clearing up and cataloging local financial regulatory norms, establishing cross-departmental mechanisms for risk consultation and the transfer of relevant information. Mandatory reporting and record-keeping requirements should be implemented first in high-risk areas such as loan facilitation services, platform-based matchmaking activities, local trading venues, and crowd-financing schemes. At the same time, RegTech pilots should be conducted to develop replicable templates for implementing these measures. The benefits of such an approach are a rapid reduction in delays in handling-related issues and variations in the application of these regulations; the main costs associated with this approach are the initial investment required for system restructuring and the upgrading of information technology systems. The mid-term (2-3 years) should focus on "coordination": promote the coordinated implementation of the national-level rule system, form a standard interface and data directory for cross-regional regulatory collaboration, improve the correction mechanism for filing reviews and special reviews, and establish a list of central and local powers and accountability requirements based on externalities; the benefits are to reduce cross-domain collaboration friction and compress the space for regulatory arbitrage, and the costs are mainly reflected in institutional coordination and reallocation of regulatory resources. The long-term (3-5 years) should be "sustainable" as the goal: Promote the maturation of a functional legislative framework that encompasses rule formulation, allocation of powers and responsibilities, as well as mechanisms for data governance and management. Upgrade RegTech from a pilot tool to a routine, programmatic regulatory infrastructure. The benefits of this approach include enhanced regulatory resilience and greater predictability of rules; however, the associated costs include ongoing investment in technological innovation, talent development, and the enhancement of governance capabilities.

In summary, the core of layered advancement is to gradually offset the increase in institutional investment and compliance costs through quantifiable risk reduction and collaborative efficiency improvement, thereby avoiding unnecessary squeeze on innovation caused by "one-size-fits-all" governance.

6. Conclusion

Fintech uses data, algorithms and platform ecology to reshape the financial supply structure. While improving the efficiency and coverage of financial services, it also changes the basic logic of risk generation and transmission. This article focuses on the practical dilemmas faced by local financial supervision under the background of financial technology, and sequentially completes the closed-loop demonstration of "problem presentation – mechanism explanation – normative response". Research shows that the main dilemma of local financial supervision is embodied in a triple mismatch: First, at the level of rule supply, there are low standards, fragmented institutional systems, and insufficient adaptability, which makes it easier for compliance gray areas and regulatory arbitrage to occur when the functions of regulatory objects are deformed; Secondly, at the level of power and responsibility allocation, there is an unclear interface between central and local boundaries and local internal responsibilities, which adds to the pressure of territorial risk management and easily induces coordination failure and selective supervision; Third, the capability and resource level is faced

with lagging data risk governance, insufficient supply of regulatory technology, and the solidification of information asymmetry caused by algorithm black boxes, which makes risk identification lag behind and drives up disposal costs. The three reinforce each other and are compounded and amplified under cross-domain operating conditions, thereby promoting the transition of local risks to regional and even systemic risks.

At the mechanism level, this article further reveals the system generation logic of insufficient local financial regulatory effectiveness: regulatory gaps provide arbitrage space, incentive distortions weaken front-end governance and collaborative efficiency, capacity constraints solidify information fractures and cause identification lags, and online, platform and cross-regional operations constitute accelerated channels for risk spillovers. Based on the above explanation of the mechanism, this article proposes an optimization path focusing on the construction of the rule of law: improving the predictability of the system through rule reshaping and hierarchical coordination from "institutional legislation" to "functional legislation"; Use the "strength of externalities – risk management chain" as the criterion to promote the listing, proceduralization and accountability of central and local powers, and reduce collaborative friction and shirk of responsibility; - 14 Enforcement, achieving compatibility between procedural legitimacy and technical governance performance. The institutional implication of the above plan is that the modernization of local financial supervision must simultaneously advance the rule of law and technology. Only by integrating rules, rights, responsibilities, and capabilities into a unified institutional framework and forming an auditable closed loop of procedures can a dynamic balance be achieved between "promoting innovation" and "preventing risks."

It should be noted that, limited by research materials and length, this article still has room to further deepen the discussion on the differences in risk externality intensity, data governance structure and compliance cost burden of different types of financial technology entities. At the same time, the institutionalized path of regulatory technology from pilot tools to infrastructure still needs to be combined with more local practices to test its replicability and boundary conditions in the future. Follow-up research can further refine the functional classification standards and disposal interfaces of different business formats without deviating from the existing institutional framework, and expand the evidence chain in the empirical evaluation of cross-regional collaboration and data sharing mechanisms to continue to improve the resilience and adaptability of the local financial regulatory system.

References

Chen, B. (2020). Optimizing the Allocation of Financial Regulatory Power between Central and Local Governments: From the Perspective of Regulating Local Shadow Banking. *Modern Law Science*, *42*(1), 103-115.

Chen, H., & Guo, L. (2020). Causes, Negative Effects, and Construction of a Prevention System for Fintech Risks. *Reform*, (3), 63-73.

Cheng, X. (2024). Regulatory Dilemmas and Systemic Governance of Fintech from the Perspective of Law and Finance. *Wuhan University Journal (Philosophy & Social Sciences)*, *77*(2), 171-184.

Feenberg, A., Han, L., & Cao, G. (Trans.). (2005). *Critical Theory of Technology*. Peking University Press, 17.

Feng, H. (2021). Central-Local Collaborative Governance of Local Finance and Its Rule of Law Path. *Jurists Review*, (5), 84-99+193-194.

Han, Y. (2022). Exploring Local Fintech Innovation Regulatory Models. *Fintech Time*, *30*(2), 49-53.

Hou, D. (2025). Legal Prevention and Control of Fintech Risks under the Financial Stability Governance Framework. *Law Review*, *43*(2), 14-25.

Jin, W. (2019). Fintech and Risk Prevention from the Perspective of Rights Theory. *Journal of Xiamen University (Arts & Social Sciences)*, (2), 1-11.

Li, M. (2019). Systemic Risks of Fintech: Regulatory Challenges and Responses. *Securities Market Herald*, (2), 69-78.

Li, N. (2018). Research on the Internal Mechanism and Path of Fintech Promoting the Development of the Real Economy. *Academic Journal of Zhongzhou*, (10), 51-55.

Li, Y., & Cheng, B. (2018). Fintech Development Driving China's Economic Growth: Measurement and Mechanism. *Social Sciences in Guangdong*, (3), 44-52.

Li, Y., & Ke, D. (2018). On the Allocation of Local Financial Regulatory Power from the Perspective of Government Competition. Zhejiang Social Sciences, (9), 10.

Lin, C. (2022). Research on the Mechanism of Fintech Serving the Real Economy [Doctoral dissertation, Sichuan University], pp. 135-152.

Liu, N., & Lyu, H. (2022). Fintech Data Monopoly: Origin, Risks, and Governance. *Finance & Economics*, (3), 44-57.

Qian, H., Tao, Y., Cao, S., et al. (2020). Theory and Evidence of Digital Finance Development and Economic Growth in China. *The Journal of Quantitative & Technical Economics*, *37*(6), 26-46.

Qiu, H., Huang, Y., & Ji, Y. (2018). The Impact of Fintech on Traditional Bank Behavior: From the Perspective of Internet Wealth Management. *Journal of Financial Research*, (11), 17-29.

Shi, G. (2023). Local Financial Risk Regulation and Its Policy Supply from the Perspective of Fintech. *Journal of Xinxiang University*, *40*(10), 14-22.

Sun, Q. (2023). Legal Risks of Fintech and Their Governance Strategies. *Journal of Xidian University (Social Science Edition)*, *33*(4), 67-78.

Tan, S. (2019). Regulatory Transformation in the Context of Fintech: From the Perspective of Localizing the "Regulatory Sandbox". *Southwest Finance*, (10), 90-96.

Wang, C. (2017). Current Situation, Problems, and Institutional Design of Local Financial Regulatory System Reform. *Financial Regulation Research*, (11), 94-108.

Yang, D. (2018). Regulatory Technology: Regulatory Challenges and Dimension Construction of Fintech. *Social Sciences in China*, (5), 69-91+205-206.

Yin, Y., & Peng, X. (2020). Digital Foundation, Fintech, and Economic Development. *Academic Forum*, *43*(2), 109-119.

Yuan, K., & Cheng, Y. (2023). Data Risks of Fintech and Their Prevention and Control Strategies. *Journal of Beijing University of Aeronautics and Astronautics (Social Sciences Edition)*, *36*(2), 46-58.

Zhang, J., & Zhai, H. (2024). Research on the Power Allocation of Local Financial Regulation in China. *Financial Regulation Research*, (8), 57-73.

Zhang, W., Feng, G., & Zhou, G. (2025). Conducting Local Financial Regulation under the New Situation. *China Finance*, (9), 103.

Zhang, X. (2023). Research on Fintech Risks and Their Governance Mechanisms. *Gansu Social Sciences*, (2), 225-236.

Zhang, X., & Ji, J. (2023). The Impact of Dynamic Matching between Fintech and Financial Regulation on Financial Efficiency. *Nankai Business Review*, *26*(1), 43-56.

Zhang, Y. (2019). The Legalization Path of Financial Regulatory Technology. *Studies in Law and Business*, *36*(3), 127-139.