



Dilemmas and Coping Strategies in the Development of Intellectual Property Finance in China: Findings from Interviews and Surveys

Huixuan Zhu

Southwest University of Political Science and Law, Chongqing, 401120, China

zhuhuixuan@swupl.edu.cn

Abstract. This study examines the development of intellectual property (IP) finance in China and explores the major institutional and market constraints affecting its operation through literature review, interview analysis, and survey data. Policy support has helped expand IP pledge financing, securitization, and insurance. However, several structural problems persist: valuation difficulties, weak asset liquidity, unstable IP rights, and ineffective risk-sharing mechanisms. Evidence from interviews with technology enterprises, financial institutions, and IP service agencies suggests that information asymmetry and the lack of transaction data make IP valuation and risk assessment highly uncertain, while the absence of mature secondary markets limits asset disposal and reduces financial institutions' willingness to participate. In addition, the uncertainty of IP rights conflicts with the financial system's preference for stable and predictable collateral, resulting in a cautious equilibrium between financing supply and demand. These findings suggest that further development of IP finance in China requires an integrated framework where value becomes identifiable, risk becomes pricable, and assets become liquidable through improved valuation standards, stronger disposal mechanisms, enhanced risk compensation systems, and more professional service institutions.

Keywords: Intellectual property finance; Pledge financing; Valuation system; Asset liquidity; Risk sharing; Interview analysis

1 Introduction

Intellectual property (IP) has become increasingly important in supporting technological innovation and economic growth under China's innovation-driven development strategy. Against this backdrop, IP finance has gradually emerged as a policy priority aimed at connecting innovation resources with financial capital. The Outline for Building an Intellectual Property Powerhouse (2021-2035) explicitly proposed promoting the deep integration of IP and finance to facilitate the capitalization and marketization of IP value [1].

In practice, however, many technology-based enterprises still face considerable financing difficulties. Compared with traditional industries, these firms are often characterized by “light assets” and high growth potential, making it difficult to obtain financing through conventional collateral models centered on real estate and fixed assets. Although patents, trademarks, and other forms of IP may possess substantial commercial value, significant uncertainty remains regarding valuation, risk assessment, and asset disposal in actual financing activities. As a result, the characteristics of IP assets do not easily align with the financial system’s preference for stable, predictable, and easily disposable collateral[2].

Existing research has contributed important insights into IP finance, but several limitations remain in explaining China’s practical experience. In particular, insufficient attention has been paid to the interaction among valuation uncertainty, liquidity constraints, and legal risks within the financing process, while empirical evidence based on first-hand market experience is still relatively limited. This study addresses these issues by combining institutional analysis with interview and survey research. It examines the operational logic and structural constraints of IP finance in China from the perspectives of enterprises, financial institutions, and IP service agencies.

2 Literature Review and Theoretical Framework

2.1 Domestic Research

Domestic studies on IP finance mainly focus on two areas: legal and institutional analysis, and research on practical financing models. The former primarily examines issues such as the legal nature of IP rights, collateral validity, and disposal mechanisms in pledge financing, while the latter focuses on the operation of specific financial instruments, including pledge financing, securitization, and IP insurance.

Overall, existing domestic research remains largely institution-oriented and pays relatively limited attention to the financial attributes of IP assets. In particular, there is still a lack of systematic explanation regarding how risks are formed and transmitted in IP financing activities. In addition, studies on valuation standards, asset liquidity, and market-based trading mechanisms remain fragmented and have yet to develop into a coherent analytical framework. As a result, theory has largely failed to keep pace with practical challenges in the market.

2.2 International Research

Compared with domestic scholarship, international research on IP finance developed earlier and has gradually formed a more market-oriented analytical framework grounded in financial economics and institutional analysis. Existing studies examine not only the legal characteristics of IP rights but also their role as financial assets that can be valued, traded, and incorporated into broader capital markets.

Much of the literature is based on theories of information asymmetry and incomplete markets. From this perspective, scholars mainly focus on valuation uncertainty, risk

pricing, and financing constraints in IP-related transactions. Ang et al. (2014), for example, argue that stronger IP protection can reduce information asymmetry and improve financing conditions by enhancing rights stability and market confidence [3]. Merrett (2021), discussing IP securitization, emphasizes that the development of IP finance depends heavily on three conditions: credible valuation systems, sufficiently liquid secondary markets, and effective risk diversification mechanisms [4]. These studies suggest that the core issue in IP finance lies not simply in the assets themselves, but in whether they can be incorporated into a mature financial market structure for pricing and circulation.

Empirical studies have reached similar conclusions. He et al. (2025) and Wang (2025) find that IP financing can alleviate financing constraints and support enterprise growth, particularly in regions with stronger legal protection and more developed market institutions [2][5]. This indicates that the effectiveness of IP finance is closely linked to broader institutional and market environments rather than to financial instruments alone.

2.3 Research Gap

A review of both domestic and international literature reveals several remaining gaps: (1) There is a lack of systematic integrated analysis of China's IP finance covering "development trajectory - operational mechanisms - risk structure," with a certain disconnect between theory and practice; (2) Risk analysis largely remains at the level of phenomenological description, lacking explanatory frameworks based on financial theory, making it difficult to reveal the intrinsic connections among valuation difficulties, insufficient liquidity, and rights risks; (3) Research based on practical experience is relatively insufficient, particularly lacking first-hand materials from market participants, making it difficult to comprehensively reflect the real constraints in institutional operations.

To address these limitations, this study combines institutional analysis with interview-based empirical research to examine the operational logic and structural constraints of IP finance in China. By incorporating practical experiences from multiple market participants, the paper seeks to provide a more comprehensive explanation of the challenges affecting the development of IP finance and the institutional conditions required for its long-term improvement.

3 Development and Practice of IP Finance in China

3.1 Development Stages

The development of China's IP finance can generally be divided into three stages, reflecting a gradual shift from policy-led exploration to a more market-oriented approach.

1. Exploratory Stage (2006-2015). During this period, IP finance mainly developed through regional policy pilots. IP pledge financing was introduced in selected areas, but overall market participation remained limited. Business volume was relatively

small, and financial institutions showed cautious attitudes toward the use of IP as collateral. At this stage, development was driven primarily by policy experimentation rather than market demand.

2. Expansion Stage (2016–2020). With stronger policy support and increasing attention to innovation-driven development, the scale of IP financing expanded rapidly. Financial products such as pledge financing and securitization developed quickly, and pilot programs were introduced in more regions. However, rapid expansion also exposed weaknesses in risk management and institutional coordination, as business growth often outpaced improvements in supporting mechanisms.

3. Standardization and Deepening Stage (2021–present). Following the release of the Outline for Building an Intellectual Property Powerhouse (2021–2035), policy priorities gradually shifted from scale expansion to high-quality development and risk prevention [1]. Greater attention has been given to valuation standards, trading mechanisms, and risk-sharing arrangements, reflecting efforts to improve the long-term sustainability of IP finance.

Despite these institutional improvements, practical difficulties remain significant. Interviewed enterprise representatives noted that IP pledge financing still involves lengthy approval procedures and relatively low credit limits. This suggests that strong policy support has not yet fully translated into effective market implementation.

3.2 Main Financial Products

China's IP finance system has gradually developed into a diversified structure centered on pledge financing, with securitization and insurance serving complementary roles.

1. IP Pledge Financing. IP pledge financing is currently the most prevalent business form, obtaining credit funds by using intangible assets such as patents and trademarks as collateral, playing an important role in alleviating financing constraints for technology enterprises [2]. According to the China National Intellectual Property Administration (CNIPA), patent and trademark pledge financing reached 853.99 billion yuan in 2023, up 75.4% year on year and benefiting approximately 37,000 enterprises nationwide. Despite this rapid growth, interview findings suggest that IP still plays a relatively limited role in actual credit decisions. Many financial institutions continue to rely primarily on traditional collateral such as real estate, while IP is often treated as supplementary rather than core collateral.

2. IP Securitization. China's IP securitization market began to develop after the launch of the "First Venture–Wenke Leasing Phase I Asset-Backed Special Plan" in 2018 [6]. In theory, securitization improves asset liquidity by converting future IP-related income into tradable financial products. In practice, however, the model still depends heavily on high-quality underlying assets and stable cash flow, limiting accessibility for many small and medium-sized enterprises.

3. IP Insurance. IP insurance mainly functions as a risk-sharing mechanism within the broader IP finance system. According to CNIPA statistics, by the end of 2022, IP insurance services covered more than 22 provinces and 99 cities nationwide, providing over 110 billion yuan in risk protection for innovative enterprises. However, coordination among insurance, credit financing, and securitization mechanisms remains limited.

Overall, although these financial products have expanded rapidly under policy support, significant challenges remain in valuation, liquidity, and market acceptance.

3.3 Regional Practice Variations

From a regional perspective, the development of IP finance in China shows clear differences in institutional approaches and policy priorities.

Three representative models can be identified. The Guangdong model emphasizes large-scale pledge financing through cooperation between government risk-compensation mechanisms and bank credit support. The Beijing model focuses more on institutional innovation, particularly in registration, valuation, and asset disposal. The Hubei model places greater emphasis on collaboration among government, banks, and enterprises while strengthening the connection between IP finance and industrial development.

Despite these regional differences, interview findings reveal a common challenge: the mismatch between the characteristics of IP assets and the operational logic of traditional finance. Financial institutions generally prefer collateral that is stable, predictable, and easy to liquidate, whereas IP assets often involve uncertain value, unstable rights, and limited market liquidity.

This tension is especially evident in credit review processes. Bank practitioners noted that the key concern is not whether policies support IP financing, but whether patents can be effectively disposed of after default. Meanwhile, IP service agencies pointed out that the lack of reliable transaction data makes valuation highly dependent on professional judgment. As a result, valuation uncertainty, disposal difficulties, and risk-pricing problems remain closely interconnected.

Therefore, the current challenges facing IP finance in China should not be viewed simply as isolated institutional deficiencies. More fundamentally, they reflect a structural mismatch between the characteristics of IP assets and the risk-control logic of traditional financial systems.

4 Mechanism Analysis of Development Dilemmas

The problems facing IP finance are not isolated. From the perspectives of financial theory and institutional operation, the core dilemmas can generally be divided into five aspects.

4.1 Information Asymmetry and Value Identification Difficulties

IP is a typical intangible asset: its value hinges on future revenue expectations, yet it lacks unified, objective pricing benchmarks. Under conditions of information asymmetry, financial institutions often find it difficult to accurately access the real value of IP assets and therefore, tend to adopt more cautious strategies [3].

Interview findings further suggest that the absence of public transaction databases significantly limits the application of the market approach in IP valuation. In many

cases, valuation agencies can only rely on the income approach for predictive valuation. This highly subjective process easily creates differences in judgment among enterprises, valuation agencies, and financial institutions, weakening the credibility of valuation results. This creates a chain reaction—data deficiency, valuation bias, trust deficit—that prevents IP from becoming a broadly accepted financial asset.

4.2 Low Asset Liquidity

The financial system demands disposable collateral. IP assets, however, still lack mature secondary markets, which keeps liquidity low. Bank respondents noted that the key issue in credit decisions is often whether patents can be effectively liquidated after default.

Unlike real estate, IP assets generally lack stable trading channels and clear counterparties in default situations. Even in judicial auction procedures, failed auction rates remain relatively high. Without effective exit mechanisms, financial institutions cannot establish complete risk-control processes. This suppresses credit supply.

4.3 Rights Instability and Legal Risks

The legal validity of IP rights is inherently dynamic. Invalidation claims or ownership disputes can change it, which clashes with the financial system's preference for certainty and stability in collateral.

Interview cases involving patent invalidation and ownership disputes show that once the legal basis of IP rights is challenged, the protection of creditors' interests can be substantially weakened. These risks are difficult to quantify through traditional risk-control models and therefore increase overall financing uncertainty.

4.4 Risk-Return Mismatch

For financial institutions, IP finance involves high uncertainty, yet existing return mechanisms rarely offset the risks. As a result, a structural imbalance between risk and return remains.

Enterprise respondents noted that financing approval procedures are often lengthy and financing amounts relatively limited, making it difficult to fully meet capital needs. At the same time, financial institutions remain cautious because effective risk-compensation mechanisms are still lacking. Some interviewees suggested that government-led risk funds or storage mechanisms could help reduce risk concerns to some extent. This two-sided constraint pushes both supply and demand toward conservative strategies, limiting business expansion.

4.5 Ecosystem Chain Fragmentation

IP finance connects several segments: valuation, legal services, financial services, and asset operation. Its effective functioning therefore depends on a relatively complete

industrial ecosystem. However, coordination among different institutions remains insufficient, and a fully integrated service chain has yet to be established.

Interview findings show that the current lack of professional operating entities capable of integrating valuation, trading, and disposal functions makes it difficult for IP to complete the transformation from technological achievement to financial asset. Ecosystem fragmentation thus reduces efficiency and constrains the broader development of IP finance.

5 Empirical Analysis Based on Interviews¹

5.1 Interview Findings

This study collected first-hand information through semi-structured interviews. Interviewees included practitioners from technology enterprises, financial institutions, IP service agencies, and university researchers. The interviews focused on three main issues: (1) the operational status and business models of IP finance; (2) the core obstacles and risk sources in practice; and (3) possible improvements in policies, legal systems, and market mechanisms. Based on the continuous policy support and gradual institutional improvement, China's IP finance has achieved phased progress. The Outline for Building an Intellectual Property Powerhouse (2021–2035) explicitly emphasized the integration of IP and finance. Since then, pledge financing has expanded, and products such as securitization and insurance have gradually emerged, forming a preliminary multi-level institutional framework. [1][8]. Overall, IP finance in China has moved from an exploratory stage toward more standardized development.

However, interview findings suggest that institutional progress has not fully translated into market effectiveness. Several core constraints remain prominent.

First, a structural gap persists between policy support and financing accessibility. Many technology enterprises noted that although policy direction is clear, financial institutions continue to rely mainly on traditional collateral such as real estate during credit review, making it difficult for IP to function as core collateral. Weak asset liquidation mechanisms remain a major constraint. Financial institutions generally emphasized that the lack of stable disposal channels in default situations significantly limits their willingness to participate in IP financing [7]. The valuation system and supporting data infrastructure are underdeveloped. Due to the absence of transparent transaction databases, valuation often relies heavily on the income approach and subjective professional judgment. Rights instability further increases institutional risk. IP assets may lose value because of invalidation claims or ownership disputes, making their legal stability significantly weaker than that of traditional collateral. Finally, the industrial ecosystem is still fragmented. Coordination among valuation, legal services, asset operation, and disposal mechanisms is still relatively weak, and an integrated operational chain has yet to form.

¹ Readers who wish to access the raw data from interviews and questionnaires may contact the paper's author.

These issues stem from information asymmetry, incomplete markets, and weak institutional support. [3][4]. Existing empirical studies also show that under more developed institutional environments, IP financing can effectively promote enterprise growth [2][5]. Therefore, this paper argues that the core challenge is not a single institutional deficiency, but the absence of an integrated mechanism—one where value can be identified, risk priced, and assets liquidated.

5.2 Supplementary Quantitative Results

To complement the interview findings, a questionnaire survey was also conducted, generating 536 valid responses from technology enterprises, financial institutions, IP service agencies, government departments, and universities. Among all respondents, technology enterprises accounted for 38.81%, financial institutions for 20.71%, and IP service agencies for 15.11%, indicating broad participation from major stakeholders in the IP finance ecosystem. The sample consisted mainly of practitioners from technology enterprises, financial institutions, and IP service agencies across different regions and industries.

Overall, respondents generally agreed that IP finance still faces major challenges in valuation, liquidation, and risk control. Among the 536 valid responses, 73.70% believed that the completeness of liquidation mechanisms has a significant or very significant impact on financial institutions' willingness to participate, while 56.16% considered the contradiction between IP characteristics and financial requirements to be very or relatively prominent. Valuation difficulties and liquidation difficulties were identified by more than half of respondents as the most prominent operational challenges in IP finance.

The statistical results are largely consistent with the interview findings. In addition, no significant differences were found across institution types, industry sectors, or years of experience—suggesting that these challenges are widely recognized across the IP finance sector.

6 Development Prospects and Policy Recommendations

Based on the above analysis, the main constraints on China's IP finance are concentrated in valuation difficulties, insufficient asset liquidity, rights instability, and incomplete market mechanisms. These problems correspond to deeper issues of information asymmetry, liquidity constraints, and institutional risk. Therefore, future development should move beyond isolated policy adjustments and focus instead on improving the overall institutional framework.

6.1 Reducing Information Asymmetry: Improving Valuation Systems and Data Infrastructure

A more reliable valuation framework is essential for the future development of IP finance. China needs unified IP valuation standards and nationwide transaction databases

to provide stronger data support for market-based valuation approaches. Methods such as interval valuation and scenario analysis could also improve the transparency and interpretability of valuation results [4].

Institutional arrangements combining "standards + data" would reduce information asymmetry and strengthen financial institutions' ability to assess IP value.

6.2 Making Assets More Liquid: Constructing Multi-tiered Liquidation Mechanisms

Insufficient asset liquidity remains one of the main obstacles to IP financing. Future reforms should focus on building better IP trading platforms, streamlining judicial disposal procedures, and exploring more effective disposal mechanisms for non-performing assets.

6.3 Balancing Risk and Return: Improving Risk-Sharing and Compensation Mechanisms

The current IP finance system still lacks effective risk-sharing mechanisms. The government's guiding role in the initial stage should therefore be strengthened through risk compensation, guarantee support, and interest subsidy policies to help reduce financial institutions' risk exposure [7]. Market-oriented risk-pricing mechanisms should then be gradually introduced to support the transition from policy-driven expansion to market-oriented development.

6.4 Strengthening Legal Protection: Reducing Rights Instability Risks

To reduce risks from rights instability, China should improve mechanisms for rights confirmation, registration, and ownership review, while paying greater attention to invalidation-risk prevention and judicial protection efficiency.

6.5 Building a Better Ecosystem: Cultivating Professional Operating Entities

IP finance also depends on a more integrated industrial ecosystem. This requires greater effort to cultivate professional service institutions that combine valuation, financing, and asset management functions. [9][10].

7 Conclusion

This paper examines the development, practical dilemmas, and future direction of IP finance in China through literature review, institutional analysis, interviews, and questionnaire research. The findings show that although IP finance has expanded rapidly

under policy support — gradually developing from pilot programs into diversified models including pledge financing, securitization, and insurance — its practical effectiveness is still constrained by several structural problems.

These constraints include information asymmetry, weak asset liquidity, rights instability, risk-return imbalance, and ecosystem fragmentation. Closely interconnected, they together widen the gap between policy objectives and market performance.

Looking ahead, China's IP finance should gradually move from policy-driven expansion toward a more market-oriented model. This process requires continued improvements in valuation standards, disposal mechanisms, risk-sharing systems, legal protection, and professional service institutions. Only through more coordinated institutional development can IP finance better support innovation-led economic growth.

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