

Promoting IP Creation and Utilization



Male engineer using an augmented reality headset to interact with holographic model of engine in a high tech factory

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IP Finance Market Surpasses KRW 10 Trillion

Intellectual Property Utilization Division

Based on active IP-backed financial resources at the time of calculation, IP finance has reached KRW 10.88 trillion which is an 80% increase from KRW 6.01 trillion in 2021, this is nearly double in size in the span of just three years. IP finance refers to financing methods based on the assessed value of companies' IP assets. It operates through three primary mechanisms: loans collateralized by IP, loans guaranteed based on IP value, and IP-based investments. These mechanisms enable innovative businesses, especially startups and SMEs with strong technological capabilities but insufficient tangible collateral, to secure financing based on the value of their ideas.

The IP finance market reached a total of KRW 10.88 trillion, comprising KRW 2.15 trillion in loans collateralized by IP, KRW 4.41 trillion in loans guaranteed based on IP value, and KRW 4.32 trillion in IP-based investments. These financing types typically follow a common process beginning with an application, followed by an assessment conducted by a specialized IP valuation institution. IP valuation is the process by which KIPO-designated institutions assess the economic value of IP assets, assigning a monetary amount, quantitative grade, or score. The results of the valuation are then used to inform the decision to issue a loan, guarantee, or investment.

The effectiveness of IP finance is particularly evident in its support for companies that typically face significant funding challenges due to low credit ratings. In fact, 85.2% of companies receiving IP-backed loans were rated

below a BB+ credit rating, which is considered a non-investment grade. This high percentage highlights the system's effectiveness in providing viable funding pathways for startups and SMEs with strong technological capabilities but limited tangible collateral.

The rapid growth of the IP finance market has been driven by a variety of promotion policies implemented by KIPO. First, an IP Valuation Support Program subsidizes the cost of IP valuation, which is an essential prerequisite for utilizing IP finance. This program supports valuation not only for finance purposes (loans, guarantees, investment) but also for IP transfer and commercialization, primarily targeting SMEs.

Second, to promote investment in the IP sector, KIPO has contributed capital to the Patent Account within the Korea Fund of Funds. This account supports the creation of sub-funds that invest in companies with strong IP portfolios or directly in high-potential IP assets, thereby broadening access to IP-related investment opportunities.

Third, KIPO operates an IP collateral recovery mechanism, which mitigates financial risk for lenders by facilitating the acquisition and disposal of IP collateral in cases of loan default, helping ensure a stable IP-backed lending environment.

With the success of Korea's proactive actions in IP finance, KIPO has taken steps to share its experiences and foster international dialogue to develop IP finance. Virtual meetings have been

held with IP finance officials from foreign IP offices, including those of Finland, France, and the European Union to share Korea's IP finance development, support measures, and key achievements. Going

forward, KIPO plans to foster global cooperation and work with international partners to advance IP finance and jointly explore new strategies for growth in this field.

IP Finance Mechanisms

Type	Process
Loans collateralized by IP	Loan application → Bank request for evaluation → IP valuation → Loan issuance
Loans guaranteed based on IP	Guarantee application → IP valuation → Issuance of guarantee → Loan issuance
IP-based Investment	Investment application → Request for evaluation by investment institution → IP valuation → Investment decision

Program	Description
IP Valuation Support	A program providing financial support for IP valuation, which is an essential process for companies to access IP finance.
Patent Account (of the Korea Fund of Funds)	KIPO's contribution to the Patent Account of the Korea Fund of Funds to channel capital into IP investment for companies with outstanding IP or directly invest in high-potential IP assets.
IP Collateral Recovery Support	A program that, in case of loan defaults, supports the acquisition or disposal of IP collateral to reduce banks' financial risk

National R&D Innovation Support Through IP-Based Strategies

Intellectual Property Creation Strategy Division

To support strategic and data-driven research and development (R&D) planning, KIPO has been promoting the integration of IP into the full R&D cycle. Recent efforts include the establishment of a dedicated support system for national strategic technologies, the publication of patent-based industry analysis reports, and the provision of regularly updated information on global technology trend data. These initiatives aim to strengthen Korea's IP-based R&D ecosystem by leveraging patent big data to identify promising future technologies, guide the development of R&D strategies, and secure core patents across both public and private sectors.

Strengthening of IP-R&D Support Systems

In February 2024, KIPO launched the National Strategic Technology Patent Division, a dedicated team supporting the development of R&D strategies in national strategic technologies and the acquisition of core patents. The division conducts big patent data analysis focusing on 12 priority technology sectors (e.g., semiconductors, secondary batteries, AI, etc.) and provides the analysis results to relevant ministries and agencies as input for R&D policy planning. By supporting early-stage IP integration into national R&D efforts, KIPO helps establish a firm foundation for securing patent competitiveness.

Also in December, KIPO, in cooperation with related government agencies, announced the "Strategy for National R&D Innovation Support Based on IP." This strategy aims to utilize patent big data throughout the full R&D cycle—from planning to output—by identifying promising future technologies, supporting efficient research execution, and promoting the acquisition of core patents.

Patent Big Data Analysis

Each year, KIPO analyzes more than 580 million global patents to assess the current state of the technological landscape in various strategic industries. The results are compiled and published in the "Patent Big Data-Based Industry Innovation Strategy Reports," which are released to the public. In 2024, KIPO published the 2023 edition, consisting of 20 volumes each covering a specific technology field (e.g., AI, quantum technologies, advanced semiconductors, etc.) or economic security field (e.g., EUV photoresists, numerical controllers, synthetic graphite, etc.).

The reports provide in-depth analysis of national technological competitiveness and emerging technologies, derived from domestic and international patent big data related to industries that have garnered public and policy attention in recent years. Specifically, they include comparative assessments of technological maturity across countries, Korea's competitive positioning, technology classification systems and significance, as well as status updates on key technologies held by leading companies, research institutes, and universities around the world. Additionally, they highlight focal areas by country and corporation, and identify future promising technologies. These comprehensive insights are expected to significantly enhance the efficiency and effectiveness of R&D planning and strategy development for both public and private research institutions.

Provision of Technology Trends of Key Industries

In order to assist both government and private sectors in informed R&D decision making, KIPO launched a new public

service in September 2024 titled Global Technology Trends and Patents in High-Tech Strategic Industries. This resource offers industry insights based on objective patent data through three main categories: global policies for strategic industries, industry-specific technology trends, and patent trends.

First, global policies for strategic industries include national development strategies, legislation, and international cooperation trends; second, industry-specific technology trends cover 13 key sectors (e.g., semiconductors, displays, secondary batteries, and AI, etc.) along with market movements and major corporate investments; and third, patent trends provide annual statistics on patent filings in the key sectors, broken down by country and applicant. This resource is updated monthly to ensure timely access to reliable data and is expected to greatly assist academia, industry, and research institutions in their R&D-related decision-making processes.

Promotion of IP-R&D through Public-Private Communication

KIPO is also promoting broader adoption of IP-R&D, a policy approach that uses IP information—particularly patents—as the starting point for R&D. It supports analysis of global patent trends and key patents held by overseas competitors in the early

stages of R&D, guiding research efforts in a direction that maximizes the likelihood of securing core patents and avoid duplication or infringement.

In December 2024, KIPO hosted a national IP-R&D conference bringing together stakeholders from academia, industry, and public research institutions. The conference featured case studies and presentations on the strategic use of patent big data in R&D planning and showcased successful examples of how companies and institutions achieved tangible research outcomes using the IP-R&D approach. The event served not only as a platform for knowledge sharing but also as a catalyst for fostering an ecosystem in which the IP-R&D strategy is driven by the private sector and expanded across the broader R&D landscape.

KIPO will continue to promote widespread utilization of IP into R&D across public and private R&D institutions by enabling its proactive use in research fields and academic-industry collaborations. To support this, KIPO will foster outstanding private-sector institutions specializing in patent big data analysis and establish guidelines for high-quality strategy development, thereby laying the groundwork for wider adoption.

Category	Details
Global Policies for Strategic Industries	· Information on key national policies for fostering advanced strategic industries, legislative developments, and the current status of international cooperation among major countries.
Industry-specific Technology Trends	· Insights into market developments including industry movement, investment directions of leading companies, and emerging issues of 13 key sectors*. * Key industrial sectors (13): semiconductors, displays, secondary batteries, advanced mobility, next-generation nuclear power, advanced biotechnology, aerospace and marine, hydrogen, cyber security, AI, next-generation communications, advanced robotics and manufacturing, quantum technology
Patent Trends	· Annual trends in patent applications for select key technologies within each industrial sector. · Patent filing statistics by major countries and leading applicants.

Legislative Reform to Enhance Employee Invention Practices

Intellectual Property Policy Division

In March 2024, the *Invention Promotion Act* was amended to improve the employee invention system. Under Article 2(2) of the Act, an “employee invention” is defined as an invention created in the course of employment that falls within the scope of the employer’s business and relates to the employee’s current or past job responsibilities. This aims to balance the interests of employers and inventors by encouraging creative innovation by employees while ensuring that employers succeed to (acquire the rights to) such inventions and enable their use for technology transfer and commercialization. However, the previous system had faced practical challenges, including administrative burdens for employers and difficulties in securing objective evidence for fair compensation.

To address these issues, the amendment introduced two major improvements: (1) the implementation of an automatic succession system

and (2) the establishment of new court procedures for evidence submission and confidentiality orders. These changes were developed through broad consultations with stakeholders, including employers, employees, the scientific and technological community, and legal professionals, ensuring the amendment is both inclusive of diverse perspectives and effective in practice.

First, to alleviate the administrative burden on employers and enhance the stability of succession, the automatic succession system simplifies the process by which employers acquire rights to employee inventions. Under the previous system, employers were required to individually notify employees of their intent to succeed each invention. This process created legal ambiguity and increased business costs due to the risk of double assignment and the administrative burden placed on companies. The revised system changes the point of succession to occur

automatically at the time the invention is completed. Now, employers only need to explicitly notify the employee if they do not intend to succeed the invention, significantly simplifying the process and reducing regulatory burden on businesses.

Second, to promote a fairer compensation process, the amendment strengthened procedures for securing evidence in litigation. Previously, employers could decline to submit key evidence in litigation related to employee inventions by citing trade secret protections, which often left employees without access to objective data for calculating fair remuneration. The amendment empowers courts to issue evidence submission orders, compelling disclosure of necessary documents when necessary even if they contain trade secrets. At the same time, the law introduces confidentiality orders to ensure such materials are not used outside the context of litigation. Together, these measures strike a balance between

protecting business-sensitive information and safeguarding employees' rights to fair compensation.

To support implementation, KIPO published the Employee Invention System Guidebook, which includes model internal regulations, procedures for employer-employee consultation, and practical examples of compensation practices. Educational programs based on the guidebook are also planned to help businesses and inventors better understand the revised system.

The improved employee invention framework is expected to foster a more innovation-friendly R&D environment in which employees are encouraged to create with confidence, and employers can more reliably acquire and commercialize inventions. It also supports the development of a fair and transparent compensation culture that promotes mutual trust and sustained technological advancement.

Large-scale Release of Patent Information for Enhanced IP Utilization

Industrial Property Data Management Division

To promote broader and more strategic use of patent data, KIPO has significantly expanded public access to both domestic and international patent data through KIPRIS^{Plus}, KIPO's official data provision platform. KIPRIS^{Plus} offers real-time access to all publicly disclosed IP information, available in both bulk data and Open API formats. It supports a wide range of users—including companies, universities, research institutes, individuals, and public institutions—who utilize the platform for purposes such as IP management, IP finance, IP valuation, IP transfer, and the development of IP-based services.

In 2024, KIPO released a series of large-scale data sets that enhance transparency, improve searchability, and reduce barriers to global patent information. These include approximately 28 million records of patent ownership changes from Korea, the United States (U.S.), and Japan; 39 million Korean-language translations of Chinese patent gazettes; and 5 million legal status records for domestic patents and utility models. The datasets support enhanced IP analysis, reduce language and legal barriers, and help companies and research institutions develop more informed global technology strategies.

Release of 28 Million Patent Ownership Change Records (Korea, U.S., Japan)

Beginning May 22, 2024, KIPO made available approximately 28 million patent ownership change records from Korea, the

U.S., and Japan via KIPRIS^{Plus}. Previously, only the final rights holder information was available, which made it difficult to track ownership changes over time. With this release, users can now access a standardized and structured database containing both the ownership change histories and final rights holders across these three countries. This improvement enables more robust analysis of global IP transfer and trends, ultimately aiding strategic decision-making by companies and research institutions.

Release of 39 Million Translations of Chinese Patent Gazettes

To further improve Korean users' access to global patent information, KIPO launched the third phase of its foreign patent translation initiative in September. Following previous releases for European (2022) and U.S. (2023) patents, KIPO published Korean-language translations of 39 million Chinese patent gazettes. This translated data covers the Chinese gazettes published by the China National Intellectual Property Administration (CNIPA) from February 2010 to July 2023, and was generated using an AI-powered machine translation system. The translated gazettes are freely accessible via KIPRIS^{Plus}, enabling Korean companies and individuals to search and utilize Chinese patent documents without language barriers. The data is expected to be widely used in various fields, such as prior art searches, patent valuation, and technology analysis.

Release of 5 Million Legal Status Records of Korean Patents and Utility Models

In addition to international data, KIPO has also expanded domestic data availability. On December 12, 2024, it released approximately 5 million legal status records for domestic patents and utility models. The dataset includes legal changes throughout the full life cycle of rights, such as application, registration, expiration, termination, and transfer history, dating back to 1942. These records have been standardized in accordance with WIPO's international data protocols

and help companies and research institutions systematically manage their IP portfolios and establish strategies for dispute prevention. It also enables clearer assessment of patent value in terms of legal stability and potential for utilization.

Looking ahead, KIPO plans to sequentially release seven types of patent data for AI training and provide Korean-language translations of Japanese patent gazettes by 2025. KIPO will also continue to identify and release high-quality IP data and expand demand-driven customized data services to support broader utilization across the public and private sectors.

KIPO's Patent Information Utilization Service (KIPRIS^{Plus})

