
INSURABLE INTEREST IN THE DIGITAL ERA: LEGAL AND REGULATORY CHALLENGES IN PROTECTING INTELLECTUAL PROPERTY, DIGITAL, AND INTANGIBLE ASSETS IN INDIA

M.V. Geethika Reddy, BBA LLB (Hons), Alliance School of Law, Alliance University,
Bangalore

Edupulapati Akshay, BBA LLB (Hons), Alliance School of Law, Alliance University,
Bangalore

ABSTRACT

The insurable interest doctrine a pillar of insurance law has long centred on tangible property and direct pecuniary interests. The digital age, however, has changed the economic landscape, bringing with it a shift in focus where intangible property like intellectual property, data, cryptocurrency, and digital platforms are of considerable value. In India, insurers have started offering coverage for some intangible property, such as cyber insurance for data breaches, intellectual property (IP) insurance for patents and trademarks, directors' and officers' liability insurance (D&O) for reputational risks, and crime insurance for financial fraud, including cyber fraud. The regulatory and legal frameworks for these policies, however, are in an embryonic stage, with little statutory guidance under the Insurance Act, 1938, and the oversight of the Insurance Regulatory and Development Authority of India (IRDAI).

This study critically analyses the legal gaps in Indian jurisprudence on the insurability of digital assets, comparing them with international best practices and modern risk assessment models. It analyses whether the current legal definitions and regulatory frameworks are adequate to address the nuances of insurable interest in the digital economy or whether legislative and judicial reforms are necessary. Through regulatory frameworks, and economic considerations, this study offers a detailed understanding of the convergence of law, technology, and risk management in the insurance industry. The research aims to stimulate discussion on the need for legal recognition of digital assets in the insurance scheme and policy changes required to maintain the indemnity and risk transfer principles in a highly digitized financial landscape.

Keywords: Insurable Interest, Digital Assets, Tangible assets, Insurance act, 1938, Cyber insurance, Blockchain Driven Economies.

1. Introduction:

The basis of insurable interest, a *sine qua non* element of all insurance contracts, is a legally acknowledged financial relationship between the insured and the insured property. Such a relationship must be more than sentimental love or affective attachment; it must be something else. In particular, the interest must be a pecuniary interest capable of monetary measurement, e.g., a contractual interest in property or a right enforceable over the property itself. In the case of the insured risk, the insured must suffer an actual or constructive financial loss; a feeling of displeasure or emotional distress is not enough, except in the case of life insurance, where such a requirement is enforced with wider latitude. In addition, the interest must be legal, i.e., it must not be against legal enactments, ethical norms, or public policy, nor against rightful claims of third persons¹.

The major laws that govern insurance in India are the Insurance Act of 1938 and the Insurance Regulatory and Development Authority of India (IRDAI). As per the theory of insurable interest, one of the major maxims of the law of insurance, the insured has to have an economic or legal interest in the subject matter of the insurance contract. The dictated principle has been traditionally applied to tangible property such as immovable property, motor vehicles, and life insurance. Nevertheless, the traditional theory of insurable interest has been faulted in the advent of the digital revolution, and therefore the prevailing laws that govern intangible property have been re-examined.

The concept of insurable interest has extended beyond physical property because of the emergence of intellectual property (IP), data-driven business models, digital platforms, and cyber risks². Digital assets today carry significant economic value and have an impact on liability structures, corporate governance, and financial stability. Technologies like blockchain-based smart contracts, IP indemnity contracts, and cyber insurance are emerging as key instruments in reducing the financial risks of digital property. Nevertheless, for the growth and regulation of insurable interest in the context of such assets, India's legal system is not

¹ *Understanding the concept of insurable interest - iPleaders*, iPLEADERS, <https://blog.iplayers.in/understanding-the-concept-of-insurable-interest/> (last visited Feb. 8, 2025).

² *Primer on IRDAI Information and Cyber Security Guidelines 2023*, INDIA CORPORATE LAW, <https://corporate.cyrilamarchandblogs.com/2024/01/primer-on-irdai-information-and-cyber-securityguidelines-2023/> (last visited Feb. 8, 2025).

sufficient³.

Nations across the world, including the US, EU, and Singapore, have accepted the need to have robust legal frameworks governing insurance of digital assets. In comparison, India is still developing and its regulatory scenario is still weak. IRDAI's rules on cyber insurance offer very minimal clarity. Another concern arising due to the fact that there exists no judicial precedence regarding the nuances of insuring digital assets lies in the realm of policyholder protection, responsibilities of the insurers, and how claims can be enforced.

The study examines into the voids of the Indian Insurance Act with regard to digital assets and the necessity of the amendments required to bring the legislation in line with international norms. So, this research will study case laws, regulatory issues, risk assessment techniques, and the economic consequences in a bid to chalk out a legal framework that may deal with the need for growing comprehensive and enforceable insurance policies for digital assets.

1.1 Objectives:

- **Analyse the Evolution of Insurable Interest:** Examine how the idea, which has historically been applied to physical assets, is evolving to include digital assets such as intellectual property, and cyber threats.
- **Identify Indian Insurance Law Gaps:** Evaluate gaps in the 1938 Insurance Act and IRDAI regulations pertaining to digital asset insurability, risk assessment, and claims enforcement.
- **Examine the Application of Technology in Insurance:** Examine how risk reduction and digital asset protection are improved by blockchain, smart contracts, and cyber insurance models.
- **Address Risk Valuation Challenges:** Evaluate the difficulties in determining to what amount digital assets may be insured for and enhance risk assessment models for financial loss and cyberthreats.

³ The Role of Cybersecurity in Industry 4.0: Managing Risks in an Automated Manufacturing Environment, SECLORE, <https://www.seclore.com/blog/managing-risks-in-automated-manufacturing/> (last visited Feb. 8, 2025).

- **Provide Legal and Policy Reforms:** Establish recommendations for modifying insurance regulations to create a strong, legally binding framework for India's coverage of digital assets.

2. What legal developments are necessary to conform to the evolving economic environment, and how does the traditional concept of insurable interest relate to digital assets?

Insurance contracts are based on the concept of insurable interest, which ensures that the policyholder possesses a legally recognized financial interest in the subject matter of the policy. This principle has been traditionally extended to life insurance as well as tangible assets such as real estate, vehicles, and tangible assets under Indian insurance law. The industry is regulated by the Insurance Act, 1938 and the guidelines issued by the Insurance Regulatory and Development Authority of India (IRDAI), which mandate that policyholders possess a direct financial interest in the asset in question⁴.

Classification and protection of intangible assets, such as software licenses, digital records, proprietary databases, intellectual property (IP), and data-driven business models, remain largely overlooked despite the expansion of the digital economy. Significant operational and regulatory obstacles were caused in the Indian insurance industry by the absence of a formal legislative framework controlling the insurability of digital assets, especially with regard to risk assessment, policy enforcement, and claim settlements⁵.

Digital assets including databases, software patents, digital records, and intellectual property require distinct risk assessment methods and value techniques than traditional physical assets. Insurers have a tough time insuring policies for these assets in the absence of clear legal definitions. These remains uncertainties in assessing responsibility, economic loss, and claim payments due to India's regulatory framework's absence of precise risk assessment criteria for digital asset insurance.

⁴ *The concept of insurable interest*, THE ECONOMIC TIMES, <https://economictimes.indiatimes.com/wealth/insure/the-concept-of-insurableinterest/articleshow/6771909.cms?from=mdr> (last visited Feb. 10, 2025).

⁵ *Interests of the policyholders | Revision of the Insurance Act, 1938 and the Insurance Regulatory and Development Authority Act, 1999 | Law Commission of India Reports*|ADVOCATEKHOJ, <https://www.advocatekhoj.com/library/lawreports/revisionoftheinsurance/8a.php?STitle=Interests+of+the+policyholders&Title=Revision+of+the+Insurance+Act,+1938+and+the+Insurance+Regulatory+and+Development+Authority+Act,+1999> (last visited Feb. 10, 2025).

Digital assets are not legally recognized as insurable property under the current Insurance Act of 1938, which is one of the primary obstacles. Due to the Act's lack of a formal definition for digital assets, underwriting and claim enforcement remain unclear. And it is more difficult to determine economic loss and indemnification calculations when digital assets lack defined ownership arrangements and valuation methods. The value of intangible assets, such as digital platforms and intellectual property, is frequently dynamic and context-dependent, making risk assessment challenging under traditional insurance concepts. This is in contrast to tangible assets, which have stable valuation models.

Meanwhile, although the IRDAI's 2023 Cyber Insurance Guidelines are established in an appropriate direction, they mostly emphasise cybersecurity incidents rather than the long-term goal of protecting digital assets. Because insurers handling data breach coverage are required to adhere to strict rules on data privacy, consent, and liability, the Digital Personal Data Protection Act, 2023 (DPDP Act), which regulates the processing of personal data, also overlaps with insurance regulations. There is a substantial legal protection vacuum, though, because the Act does not specifically address insurance coverage for business-critical digital infrastructure and proprietary digital data.

Establishing insurable interest in digital assets while preserving regulatory consistency requires a multifaceted legal strategy in order to adapt Indian insurance law to the quickly evolving digital economy. One of the main requirements is that digital assets be included in insurance laws, either by means of specific rules under the Insurance Regulatory and Development Authority of India (IRDAI) or by amending the Insurance Act of 1938.

Modernizing the law of insurance in India in light of the fast-changing digital economy needs a comprehensive legal policy that defines insurable interest in digital assets while ensuring regulatory continuity. One of the most important components of this policy is the express inclusion of digital assets in insurance laws, either through an amendment to the 1938 Insurance Act or through additional regulations by the Insurance Regulatory and Development Authority of India (IRDAI). By making drastic changes to the existing legislative framework, the Insurance Laws (Amendment) Bill, 2022, seeks to address such problems. The intended legislation is important because it proposes the removal of minimum capital requirements needed by insurers. This would enable the IRDAI to set alternative capital levels based on the nature of insurance firms involved.

Existing legal frameworks pertaining to insurance, financial transactions, and data protection require revision as India's digital economy emerges in order to address the complexity of intangible assets. An expanded legal definition of insurable interest was deemed necessary due to the rise of digital records, proprietary databases, software licenses, and intellectual property (IP), even though the Insurance Act of 1938 and IRDAI rules have historically only applied to physical assets. Significant operational, legal, and regulatory difficulties have arisen as a result of these assets' lack of official statutory recognition, especially in the areas of risk assessment, underwriting, policy enforcement, and claim settlements. To offer clarification on the status of digital assets in the insurance industry, the legal response to these issues necessitates a multipronged strategy that includes judicial interventions, new regulatory guidelines, and revisions to current legislation⁶.

India's regulatory environment has come a long way to meet the legal void with respect to digital assets. In a circular issued in 2018, the Reserve Bank of India (RBI), a crucial player in financial regulation, initially restricted cryptocurrency transactions. The RBI, however, shifted its strategy to a more systematic approach with respect to digital financial products following the Supreme Court ruling in 2020 that made the ban illegal. A move to integrate digital assets into the existing financial system was initiated by the launch of the Central Bank Digital Currency (CBDC), or the e-rupee. Paving the way for broader regulation of digital financial assets, the RBI has heightened engagement on this project as of 2024, facilitating fintech and payment businesses to engage with the digital currency system⁷.

The Securities and Exchange Board of India (SEBI) has also made substantial regulatory efforts to prevent cyber-attacks and illicit transactions through digital assets. For the prevention of fraudulent transactions and unauthorized access, SEBI suggested investor protection mechanisms in the early months of 2025 in the form of SIM card-binding systems, biometric identification, and short-term lock-in systems for trading accounts. As per international regulatory norms, these regulations enhance the degree of legal entitlement for intangible financial assets to be considered as insurable interest and provide enhanced security and

⁶ RESERVE BANK OF INDIA, <https://www.rbi.org.in/commonman/English/scripts/Notification.aspx?Id=2632>(last visited Feb. 10, 2025).

⁷ *Dealings in digital assets not illegal under Indian law*, High Court rules, COINGEEK, <https://coingeek.com/dealings-in-digital-assets-not-illegal-under-indian-law-high-court-rules/> (last visited Feb. 19, 2025).

transparency in digital finance transactions⁸.

Substantive information regarding the legal position and insurability prospects of digital assets can be realized through the dynamic judicial scenario of India. The Orissa High Court decision that transactions in digital assets are not necessarily illegal under Indian law was a key precedent that created useful legal certainty for individuals and business entities who were involved in such transactions. The absence of statutory definitions and organized legal frameworks, though, is a significant roadblock towards integrating digital assets into insurance policies even after this ruling⁹.

The UNIDROIT Principles on Digital Assets and Private Law are among of the international regulatory frameworks that India is now implementing in an effort to close this gap. These guidelines support international economies' initiatives to develop logical regulatory frameworks for the management of digital assets by providing direction on the legal recognition, transferability, and securitization of digital assets. The Indian government is also actively reevaluating its position on digital asset governance and cryptocurrency legislation. Ajay Seth, the secretary of economic affairs, stated in February 2025 that India is reevaluating its digital asset regulatory strategy in order to bring it into compliance with global best practices and economic security regulations¹⁰.

The necessity of redefining insurable interest in the context of India's insurance market to cover digital assets comes to the forefront due to the country's evolving legislative and judicial environment. In contrast to tangible assets, digital property raises certain challenges with respect to risk measurement, ownership frameworks, and valuation. Insurers find it challenging to calculate economic loss, liability, and indemnity conditions for digital assets due to the prevailing regulatory lacuna. The Insurance Regulatory and Development Authority of India (IRDAI) must create industry-neutral regulations which harmonize the following to address these issues:

⁸ India's market regulator proposes steps to secure investors' trading accounts, REUTERS, <https://www.reuters.com/world/india/indias-market-regulator-proposes-steps-secure-investors-trading-accounts2025-02-18/>

⁹ *Dealings in digital assets not illegal under Indian law, High Court rules*, COINGEEK, <https://coingeek.com/dealings-in-digital-assets-not-illegal-under-indian-law-high-courtrules/> (last visited Feb. 20, 2025).

¹⁰ *Digital Assets and Private Law - UNIDROIT*, UNIDROIT, <https://www.unidroit.org/work-in-progress/digitalassets-and-private-law/> (last visited Feb. 20, 2025).

- Valuation methods of digital assets keeping in mind technological developments and market volatility.
- Risk assessment models that encompass data breaches, cybersecurity concerns, and intellectual property disputes.
- Protection for the policyholders, fair claims administration, and dispute resolution for digital assets policies.

It is significant to observe how data protection law, specifically the Digital Personal Data Protection Act, 2023 (DPDP Act), intersects with digital asset insurance. The DPDP Act imposes stringent consent, security, and responsibility requirements on insurers handling policies involving data loss, intellectual property theft, and cyber-attacks. This calls for legal clarity regarding data-driven insurability processes.

Acceptance of digital assets as insurable interests will be a characterizing issue for legal and regulatory authorities as they become more and more part of the economic system of India. For the ease of making digital assets easily a function within insurance policies, the 1938 Insurance Act and the IRDAI regulations need to be modified to list and regulate them specifically. To give policyholders, insurers, and financial institutions a clear and enforceable legal framework, India's approach to digital asset regulation must be in line with international legal standards as well.

A holistic, forward-looking approach to law is needed to:

- Provide financial security in digital asset markets.
- Shield policyholders from cyber property risks.
- Foster innovation while remaining mindful of regulation.

3. How can India establish a specialized intellectual property and proprietary digital assets insurance system, resolving issues in valuation, ownership disputes, and risk assessment?

India needs a distinctively differentiated solution in the scope of insurability of intellectual property (IP) and proprietary digital assets compared to developed countries like the United

States, the European Union, and China. This is primarily due to regulatory uncertainty, enforcement loopholes, and lack of specialized insurance products. Although these global structures have incorporated risk mitigation techniques, valuation models, and finance models for intangible assets, India is in the early stages of development with challenges of market limitation and legal problems¹¹.

A Comparative Analysis of Legal Frameworks in Different Jurisdictions:

- **UNITED STATES:** A Market-Oriented Approach to Intellectual Property Protection
With a well-developed insurance market for IP risks, the US has one of the most sophisticated intellectual property protection systems. For patents, trademarks, and copyrights, the U.S. Patent and Trademark Office (USPTO) provides an authoritative legal framework that makes it easier to enforce laws against infringement. Moreover, companies can minimize the financial risks of litigation by purchasing specific IP insurance policies, including IP enforcement insurance and patent infringement liability insurance.

Intellectual property assets can be used as collateral in secured transactions because the U.S. legal system recognizes their economic value. By providing lenders with the option of filing security interests in patents and trademarks, the Uniform Commercial Code (UCC) enhances the financial reporting of intangible assets. IP-backed financing, where companies utilize their trademarks or patents in order to acquire loans and funding money, is one such thing that has occurred because of the legal certainty. It would be beneficial to India if it were to implement similar legal models that allow for IP assets to serve as marketable and insurable financial vehicles¹².

- **The European Union:** A Successful System for Safeguarding Intellectual Property and Digital Property Through harmonized legislative systems, particularly through the European Patent Convention (EPC) and the EU Intellectual Property Office (EUIPO), the European Union has played a key role in enhancing intellectual property protection.

¹¹ *India - Protecting Intellectual Property*, International Trade Administration | Trade.gov, <https://www.trade.gov/country-commercial-guides/india-protecting-intellectual-property> (last visited Mar. 4, 2025).

¹² *IP Policy*, United States Patent and Trademark Office, <https://www.uspto.gov/ip-policy> (last visited Mar. 4, 2025).

Legal guidelines for the design of insurance products provided for in the IDD are intellectual property and digital asset policies.

An essential milestone in the EU is the legal recognition of intangible properties as legitimate insurable interests. This is especially pertinent in the context of intellectual property infringement obligations and cyber risk. The EU has embraced specific insurance products insuring data breaches, business interruption as a result of cyberattacks, and loss of market goodwill resulting from IP disputes, compared to India, where digital asset insurance is in the nascent stages. India can borrow this systematic process of intangible asset insurance as a template to design regulatory regimes that broaden the coverage of insurable interest from traditional physical property¹³.

- **China:** State-Supported Commercialization and IP Insurance Plans. The law of intellectual property in China required substantial modifications as a result of the establishment of specialised intellectual property tribunals and legislative reforms. Despite the fact that state-supported intellectual property insurance schemes offer economic support to technology enterprises and inventors, the State Intellectual Property Office (SIPO) rigorously enforces patent rights. Among the most distinctive features of China's strategy are the government-subsidized IP insurance schemes. These schemes involve the government collaborating with insurers to provide patent enforcement protection and IP risk management methods. Furthermore, China encourages the securitisation of intellectual property, which enhances the economic value of intangible assets by allowing companies to leverage their patent portfolios to secure financing.

India lacks a distinct insurance culture that encourages companies to preserve their intangible assets; however, it has a well-established legislative framework to safeguard intellectual property. Indian enterprises' access to risk reduction measures could be substantially improved by the integration of state-sponsored intellectual property insurance programs, as is prevalent in China.

One of the most significant challenges in the Indian insurance market is the lack of established risk assessment frameworks for intangibles. The valuation of patents, trade

¹³ EUIPO, <https://www.euipo.europa.eu/en>, (last visited Mar. 4, 2025).

secrets, proprietary code, and data-driven business models is still uncertain as a result of the unreliability of the methods employed¹⁴.

Insurance companies in the United States employ actuarial models and legal risk measurements to ascertain the insurable value of IP.

In the United States, insurance companies utilise legal risk measurements and actuarial models to determine the insurable value of IP.

Firms in the EU adhere to uniformly accepted accounting methods under International Financial Reporting Standards (IFRS) to measure values of intangible assets.

China combines state-supported valuation systems, enabling companies to acquire risk-adjusted insurance policies according to their IP portfolios.¹⁵

India, however, does not have standardized valuation guidelines, and hence it is challenging for insurers to determine the financial value of intangible assets. Companies are unable to obtain adequate insurance coverage in the absence of appropriate risk assessment models, which limits their capacity to safeguard digital and intellectual property assets¹⁶.

The requirement for an India-specific IP and digital asset insurance framework:

The insurance sector in India has been inefficient to develop adequate coverage for risks associated with intangible properties, despite the existence of a comprehensive legislative framework for the protection of intellectual property rights. In contrast to the U.S., EU, and China, where IP and digital asset insurance are experiencing substantial advancements, India is impeded by regulatory exemptions, a lack of risk assessment systems, and a scarcity of government initiatives, which impede the establishment of a comprehensive insurance system.

India must implement legislative and regulatory reforms that render intangible assets more

¹⁴ China National Intellectual Property Administration, CHINA NATIONAL INTELLECTUAL PROPERTY ADMINISTRATION, <https://english.cnipa.gov.cn/> (last visited Mar. 4, 2025).

¹⁵ China National Intellectual Property Administration, CHINA NATIONAL INTELLECTUAL PROPERTY ADMINISTRATION, <https://english.cnipa.gov.cn/> (last visited Mar. 4, 2025).

¹⁶ INDIA FILINGS, <https://www.indiafilings.com/learn/intellectual-property-laws-in-india/> (last visited Mar. 4, 2025).

insurable to bridge this gap. These reforms are:

- Developing structured risk assessment models for digital assets, patents, and trademarks;
- Amending the Insurance Act of 1938 to specifically recognize intangible assets as insurable interests.
- Creating government-backed IP insurance schemes to benefit SMEs and startups.
- Promoting financial institutions to take IP as collateral for secured lending.
- Extending cyber insurance regulations to include digital asset risks in full.

Findings:

India's proprietary and intellectual property (IP) digital asset insurance market is in its nascent stage compared to China, the United States, and the European Union. The 1938 Insurance Act does not specifically recognize intangible assets, and IRDAI regulations provide no clarity on cyber insurance and digital asset coverage. India has regulatory loopholes, valuation challenges, and enforcement issues compared to the US (IP-backed finance), the EU (cyber risk insurance), and China (state-sponsored IP insurance).

India needs to enhance cyber insurance legislation, introduce standard valuation guidelines, introduce government-sponsored IP insurance, and amend the Insurance Act to close these loopholes. To connect India's insurance sector to its digital economy and offer financial protection to intangible assets, it will need to borrow a page from the world's best practices, make intellectual property collateralizable, improve the protection of policyholders, and expand risk assessment guidelines.

Suggestions:

To recognize digital assets and intellectual property (IP) as insurable interests, India must revise the 1938 Insurance Act. Risk assessment shall be enhanced by setting standardized value models on the basis of IFRS and actuarial methods. For contracts on blockchain, AI firms, and data-driven companies, it is necessary that IRDAI's cyber insurance regulations be upgraded.

In addition, startups and SMEs may be aided by government-supported IP insurance schemes, like China's model, which minimize IP enforcement and litigation risks.

According to the U.S. Uniform Commercial Code (UCC), India should promote IP-backed finance, allowing companies to use their trademarks and patents as collateral. Protection will be enhanced by broadening cyber insurance coverage to cover risks pertaining to digital assets and data breaches. Last but not least, promoting cooperation between regulators, fintech firms, and insurers would drive tailor-made insurance solutions for India's growing digital economy.

Conclusion:

India's intellectual property (IP) and proprietary digital assets insurance model is still underdeveloped compared to world best practices of the United States, the European Union, and China. The absence of clear identification of intangible assets under the Insurance Act, 1938, and low-quality risk assessment models and sparse cyber insurance coverage keeps financial protection of digital economy firms out of reach. Although jurisdictions worldwide have been able to implement IP-backed financing, cyber risk insurance, and state-sponsored IP insurance, India falls behind because of loopholes in regulation and enforcement.

To fill this gap, India will need to undertake radical legal and regulatory overhauls, such as formal recognition of intangible assets, standard guidelines for valuation, broader cyber insurance covers, and state-backed IP insurance programs. Greater collaboration between insurers, financial institutions, and policymakers will be necessary in creating a robust, innovation-driven insurance ecosystem that meets India's digital growth.