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Legal Certainty of Collateral Binding in Information Technology-Based Online Loan Agreements in Indonesia

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ABSTRACT

Indonesian online lending is shifting towards productive, institutionally funded credit, and OJK Circular Letter No. 19/SEOJK.06/2025 now asks operators to consider additional collateral for productive loans above IDR 2 billion, without specifying how collateral is bound, held, or enforced. This study examines the legal status and validity of collateral binding in information technology-based online loan agreements and the protection available to creditors and debtors in the event of default. It employs doctrinal legal research with statutory, case, comparative, and conceptual approaches. The main legal materials, including the Fiduciary Security Law, OJK Regulation No. 40 of 2024, the circular, finance-company rules, and Constitutional Court decisions, are compared with the UNCITRAL Model Law and the French Civil Code and analysed through grammatical, systematic, and teleological interpretation. The analysis draws on Radbruch's theory of legal certainty, the theories of secured transactions and legal protection, and regulatory governance theory. The findings show that online lending regulation treats collateral as a risk-mitigation device rather than as a security right that must be created, in contrast to the finance-company regime, which requires fiduciary registration within a set period. Two structural problems widen this gap: the provision on attorneys or representatives of the fiduciary recipient in Article 8 of the Fiduciary Security Law was designed for consortia with fixed creditors, and the physical-presence requirement for notarial deeds prevents fully digital creation of the security. The study offers a framework of contractual, proprietary, and enforcement validity, with intermediary authority as a cross-cutting condition, and identifies directions for strengthening regulation that are relevant to deliberations on the Bill on Security over Movable Property.

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INTRODUCTION

Online lending has become a significant source of credit in Indonesia. According to the Financial Services Authority (OJK), outstanding financing in the information technology-based co-funding industry (LPBBTI) reached IDR 90.99 trillion in September 2025, of which 34.48 percent went to productive sectors and micro, small and medium enterprises (Kontan, 2025), while banks supplied 67.22 percent of industry funding in September 2026 (Katadata, 2026). This shift towards productive, institutionally funded credit changes the role of collateral. OJK has stated that collateral had never previously been part of peer-to-peer lending and is preparing it as a means of recovery in case of default (Bisnis Indonesia, 2025a). Circular Letter No. 19/SEOJK.06/2025 now asks operators to consider additional collateral for productive funding above IDR 2 billion. Yet the circular does not use the terms collateral

(agunan), fiduciary security, or collateral binding, and industry participants note that collateral under this scheme remains held by the platform rather than by lenders (Bisnis Indonesia, 2025b). To the author's knowledge, OJK also publishes no data on how many loans are secured or how collateral is bound.

Security law, however, was designed for paper-based credit with fixed creditors. Under Law No. 42 of 1999, fiduciary security arises through a notarial deed and registration, and its enforcement has been reshaped by Constitutional Court Decision No. 18/PUU-XVII/2019 (Salvia & Putri, 2024). Two features of platform lending strain this framework. First, a single loan may be funded by several lenders whose portions change hands, whereas the provision on attorneys or representatives of the fiduciary recipient in Article 8 was designed for consortium lending. Second, fiduciary registration has been electronic since Government Regulation No. 21 of 2015, but the notarial deed that creates the security still requires physical presence, which recent analysis regards as a legislative obstacle to electronic notarisation (Hafidzan et al., 2026). A Bill on Security over Movable Property referring to UNCITRAL guidance is also being prepared (Ministry of Law, 2025).

This study approaches the problem through three levels of theory that combine business law and public administration. As grand theory, it draws on Gustav Radbruch's conception of law as a balance between legal certainty, justice and purposiveness, which still informs assessments of conflicting legal values (Tan, 2021; Zajadło, 2023). As middle-range theory, it uses the functional theory of secured transactions, which separates the creation of a security right, its effectiveness against third parties and its enforcement (UNCITRAL, 2016; Bazinas, 2022), together with Philipus M. Hadjon's theory of legal protection, which distinguishes preventive from repressive protection (Hadjon, 1987). As applied theory, it employs regulatory governance theory, which in public administration scholarship has developed along three strands: the theory of regulatory intermediaries, which places third parties between regulators and regulated parties (Brès et al., 2019; Kourula et al., 2019); co-regulation, which views platforms as regulatory intermediaries (Di Porto & Zuppetta, 2021); and responsive and experimental regulation of financial technology (Fahy, 2022; Ahern, 2021).

Research on online lending in Indonesia has concentrated on regulatory risk, consumer protection and personal data (Tan, 2023; Suryono et al., 2021; Noor et al., 2025), while studies of fiduciary security have focused on enforcement after the Constitutional Court decisions (Salvia & Putri, 2024). International literature shows that platform-provided collateral and guarantees affect lenders' risk assessment and user participation (Shi et al., 2020; Weng & Luo, 2021), but these studies are economic and do not examine the legal validity of collateral binding. No study has yet tested the circular's collateral provisions against Articles 8 and 19 of the Fiduciary Security Law in multi-lender funding, compared them with the finance-company regime, or linked them to the legislative agenda on movable security. This study fills that gap by asking: (1) how are the legal status and validity of collateral binding determined in information technology-based online loan agreements; and (2) what legal protection is available to creditors and debtors when default occurs?

Theoretically, the study adapts the functional theory of secured transactions to a formalistic fiduciary regime through the condition of intermediary authority, which tests whether a platform or agent may act at each stage of a secured transaction. Practically, it compares the LPBBTI regime with the finance-company regime and French security-agent law and draws out implications for OJK and the bill, bridging business-law analysis of security validity with public-administration analysis of supervisory design.

METHOD

This study is doctrinal legal research. Doctrinal scholarship is treated as a discipline in its own right that interprets and systematises legal materials while engaging with the social practice it studies (Byrne & Olsen, 2024), and whose normative conclusions can be informed,

though not replaced, by empirical facts (Davies, 2020). Its reasoning is strengthened by conceptual analysis and argumentation drawn from legal philosophy (Taekema & van der Burg, 2020), which are used to translate the three levels of theory into analytical indicators. Four approaches are combined. The statutory approach examines the Civil Code, the Fiduciary Security Law, the Notary Law, the Electronic Information and Transactions Law, the Personal Data Protection Law, the Financial Sector Development and Strengthening Law, Government Regulation No. 21 of 2015, OJK Regulation No. 40 of 2024 and Circular Letter No. 19/SEOJK.06/2025, together with Minister of Finance Regulation No. 130/PMK.010/2012 and OJK Regulation No. 35/POJK.05/2018 on finance companies as domestic comparators, following legal studies of online lending that compare the relevant regulations (Angkasa et al., 2023). The case approach analyses Constitutional Court Decisions No. 18/PUU-XVII/2019 and No. 2/PUU-XIX/2021. The comparative approach uses the UNCITRAL Model Law on Secured Transactions as an international benchmark, the agent des sûretés regime in Articles 2488-6 to 2488-12 of the French Civil Code as a comparator from the civil-law tradition, and comparative analysis of electronic notarisation models (Hafidzan et al., 2026). The conceptual approach clarifies the concepts of legal certainty, proprietary security, intermediary authority and legal protection. The Academic Paper for the Bill on Security over Movable Property and official OJK statistics serve as contextual materials, consistent with regulatory analyses of Indonesian online lending (Tan, 2023).

Secondary materials consist of reputable articles on secured transactions, fintech regulation, consumer and data protection, and notarial law, drawn mainly from Scopus-indexed journals published between 2019 and 2026, supplemented by official statements of OJK and industry participants reported in the press to map collateral practices on platforms. The legal materials were analysed through grammatical, systematic and teleological interpretation. Systematic interpretation relates the rules on electronic contracts and LPBBTI regulation to the conditions for creating and enforcing security rights, while teleological interpretation assesses whether those rules achieve legal certainty, justice and purposiveness. Legal construction is then used to build the analytical framework and the directions for strengthening regulation. This document-based design follows legal studies of Indonesian fintech that rely on literature review and document observation (Rohendi & Kharisma, 2024). Its limitation is the absence of platform contracts and first-instance court decisions, so the findings are stated as doctrinal propositions to be tested empirically.

RESULT AND DISCUSSION

Operationalising the Theoretical Framework

The three levels of theory are translated into analytical indicators so that each finding can be traced to its theoretical basis. Table 1 sets out the key concepts of each theory, the indicators used to test the legal materials and the subsections in which each theory operates.

Table 1. Operationalisation of the theoretical framework

Level	Theory	Key concepts	Analytical indicators	Applied in
Grand theory	Legal certainty (Radbruch)	Certainty, justice, purposiveness	Predictability of the parties' positions; conflict between formal requirements and financing objectives	Structural problems; three-dimensional framework
Middle-range theory	Functional theory of secured transactions	Creation, third-party effectiveness, enforcement	Deed, registration, identity of the security holder, enforcement procedure	Normative baseline; LPBBTI regulation; three-dimensional framework

Middle-range theory	Legal protection (Hadjon)	Preventive and repressive protection	Disclosure, verification, objection, lawful enforcement	Balanced protection
Applied theory	Regulatory governance (regulatory intermediaries, co-regulation, responsive and experimental regulation)	Regulatory intermediaries, enforceable instruments	Reporting duties, standard clauses, supervisory protocols	LPBBTI regulation; governance; regulatory implications

Source: Compiled by the author, 2026

Normative Baseline: Electronic Contracts and the Creation of Security Rights

An electronic funding agreement is binding if it meets the requirements of Article 1320 of the Civil Code, and under Article 1338, a valid agreement has the force of law between the parties. The Electronic Information and Transactions Law, as amended by Law No. 1 of 2024, recognises electronic documents as evidence (Article 5), regulates electronic signatures (Article 11) and confirms that electronic contracts bind the parties (Article 18(1)). Recognition of the contract, however, creates only an obligational relationship. Under Articles 1131 and 1132 of the Civil Code, all of the debtor's assets constitute general security, so without a specific security right the lender is merely a concurrent creditor. In the language of functional theory, naming collateral in a contract touches only the relationship between the parties and does not reach the stages of creation and third-party effectiveness (UNCITRAL, 2016).

For movable property, the most relevant institution is fiduciary security, whose normative layers are summarised in Table 2. Fiduciary security is accessory (Article 4); it is created by a notarial deed in Indonesian (Article 5(1)) stating the identity of the parties, the object and the secured value (Article 6); it may be granted to more than one fiduciary recipient or to their attorney or representative, which according to the Elucidation is intended for consortium credit (Article 8); it must be registered (Article 11); it arises on the date of recording (Article 14(3)); it passes with the receivable, with registration by the new creditor (Article 19); and it confers priority (Article 27). Since Government Regulation No. 21 of 2015, registration has been electronic. Digital records on a platform retain evidentiary value but cannot replace the publicity function performed by registration.

Table 2. Normative layers of collateral binding in online lending

Layer	Legal basis	Function	Consequence if not met
Funding agreement	Civil Code Arts. 1320 and 1338; EIT Law Arts. 5, 11, 18	Creates the obligation	Agreement voidable or void
General security	Civil Code Arts. 1131–1132	All of the debtor's assets serve as security	Lender is only a concurrent creditor
Creation of fiduciary security	Law No. 42/1999 Arts. 4–6	Form of deed and specificity	Security right does not arise
Creditor representation	Law No. 42/1999 Art. 8	Multiple recipients, attorney or representative	Intermediary's position unclear
Registration	Law No. 42/1999 Arts. 11 and 14(3); GR No. 21/2015	Publicity and creation of the right	Not effective against third parties
Transfer	Law No. 42/1999 Art. 19	Right passes with the receivable	New creditor not recorded

Enforcement	Law No. 42/1999 Arts. 29, 33, 34; Constitutional Court Decisions No. 18/2019 and No. 2/2021	Lawful recovery	Unlawful enforcement

Source: Analysis of legal materials, 2026

Collateral in LPBBTI Regulation: Risk Mitigation without Binding

OJK Regulation No. 40 of 2024 recognises security only in limited forms. Article 136(2) prohibits operators from facilitating factoring except with a guarantee from the seller of the receivable and in the form of productive funding. Article 137 sets a funding limit of IDR 2 billion per borrower, which may be raised to IDR 5 billion for productive funding by operators whose non-performing funding does not exceed 5 percent. Article 148 regulates risk mitigation through credit insurance or credit guarantees. Circular Letter No. 19/SEOJK.06/2025, issued on 31 July 2025, refers to collateral in five places. Section II point 3(e) lists the transfer of risk on collateral objects as a facility provided "if there is a collateral object". Section XI point 6(g), which forms part of the funding disbursement mechanism, states that operators take into account the presence of additional collateral for productive funding above IDR 2 billion; the wording is "take into account" (memperhatikan), not "must" (wajib). Section XI point 6(h) provides that if there is no additional collateral, lenders are only entitled to request information about the prospective borrower. Section XV point 2(b) and point 15 allow operators to facilitate the transfer of collateral risk by insuring the collateral or cooperating with a party authorised to hold or store it. Section XXI point 3 brings the additional-collateral provision into force no later than one year after the circular was issued, so it has applied since 31 July 2026 at the latest.

These provisions reveal a consistent pattern: LPBBTI regulation treats collateral as a risk-mitigation fact to be taken into account, stored or insured, rather than as a security right that must be created. There are no provisions on the security institution to be used, the duty to execute and register a deed, the identity of the fiduciary recipient or the operator's position in relation to the collateral; the circular does not even use the terms enforcement, auction, notary, land mortgage or power of attorney. Its collection provisions, namely the duty to disclose settlement and collection procedures in case of default (Section XI point 1(k)), the duty to collect optimally (Section XV point 1(c)) and collection subject to consumer-protection rules (Section XX points 8 to 10), are not linked to collateral, even though funding is classified as non-performing after more than 90 days in arrears (Section XVI point 3(e)). As a result, it is unclear what happens to collateral when a loan becomes non-performing. This finding is consistent with industry statements that collateral remains held by the platform (Bisnis Indonesia, 2025b), which means that collateral binding in fintech lending tends to stop at unregistered private agreements. Literature on Chinese P2P lending illustrates the risk of this pattern: in later funding rounds, lenders regard loans backed by platform-sponsored collateral as riskier than loans without such collateral (Shi et al., 2020). From the perspective of functional theory, the regulation does not secure the stages of creation and third-party effectiveness, so lenders may believe themselves to be secured creditors when legally they are only concurrent creditors.

The comparison with finance companies shows that this gap is a regulatory choice rather than an inevitability. For consumer motor-vehicle financing, Article 2 of Minister of Finance Regulation No. 130/PMK.010/2012 requires finance companies to register fiduciary security within 30 calendar days of the agreement, backed by graduated administrative sanctions, and OJK Regulation No. 35/POJK.05/2018, as last amended by OJK Regulation No. 46 of 2024, requires fiduciary registration (Article 30) no later than one month after the financing agreement (Article 31, as amended), makes the fiduciary certificate a precondition for enforcement (Article 50(1)(c)) and requires an internal guideline on collateral enforcement

(Article 49), with breaches of these duties subject to administrative sanctions (Article 115, as amended by OJK Regulation No. 7/POJK.05/2022). The LPBBTI regime has no equivalent obligations (Table 3). The difference is also structural: a finance company is a creditor lending its own funds, whereas an LPBBTI operator is only an intermediary. The registration duty therefore cannot simply be copied without first determining who holds the security, a question addressed in the next subsection.

Table 3. Collateral rules for finance companies and LPBBTI compared

Aspect	Finance companies	LPBBTI
Position of the business actor	Creditor	Intermediary: lenders are the creditors
Basis for collateral	Financed object subject to fiduciary security	Additional collateral for productive funding above IDR 2 billion (Circular Letter No. 19/2025)
Security institution	Fiduciary security	Not specified
Registration duty	Within 30 days (Art. 2, MoF Reg. 130/2012); within one month (Arts. 30–31, OJK Reg. 35/2018)	None
Security holder	Finance company	Not specified; in practice held by the platform
Enforcement	Fiduciary certificate as a precondition and internal enforcement guideline (Arts. 49–50, OJK Reg. 35/2018)	Not regulated; collection not linked to collateral

Source: Analysis of legal materials.

First Structural Problem: The Security Holder in Multi-Lender Funding

LPBBTI financing is increasingly supplied by institutions: banks provided 67.22 percent of industry funding in September 2026 (Katadata, 2026), while individual lenders accounted for only 6.5 percent of outstanding funding in September 2025 (Bisnis Indonesia, 2025c). A single loan may be funded by several lenders, and their portions may change hands. The Fiduciary Security Law does anticipate multiple creditors through Article 8, but that provision was designed for consortia with a fixed set of creditors. Article 6 requires the deed to identify the fiduciary recipient, and Article 19 requires the new creditor to register every transfer of a receivable secured by fiduciary security. In platform lending, funding portions may change hands many times, so each transfer would require a registered amendment, an impractical burden. The statute also leaves three questions unanswered: whether an operator, which is not a creditor under OJK regulation, may act as attorney or representative of the fiduciary recipient; what the position of that attorney or representative is in relation to lenders who join later; and what happens to lenders if the attorney or representative becomes insolvent, given that Indonesian law does not recognise a trust that segregates assets held for others. These questions become more pressing as Circular Letter No. 19/SEOJK.06/2025 encourages collateral for large productive loans, which are usually funded by more than one lender, while in practice collateral is held by the platform (Bisnis Indonesia, 2025b).

The civil-law tradition is no barrier to solving this problem. France, also rooted in the civil-law tradition, established the agent des sûretés regime through Ordinance No. 2017-748, codified in Articles 2488-6 to 2488-12 of the French Civil Code. The security agent holds security in its own name for the benefit of the creditors; the rights and assets it acquires form a separate patrimony shielded from the agent's personal creditors, including in the agent's

insolvency (Article 2488-10); and the agent is liable on its own assets for faults committed in performing its mission (Article 2488-12). Comparative research on Asia likewise shows that legal tradition, whether civil law or common law, is not an insurmountable barrier to secured transactions reform (Neo, 2024). The lesson for Indonesia is that Article 8 could be developed into a security agent with segregated assets without adopting the trust concept wholesale.

Second Structural Problem: The Notarial Deed and Physical Presence

The second problem concerns the creation of the security itself. Fiduciary security requires a notarial deed, and Article 16(1)(m) of the Notary Law requires the parties to appear in person, the deed to be read aloud and signatures to be made before the notary. Recent analysis concludes that this physical-presence requirement conflicts with the electronic evidence rules of the Electronic Information and Transactions Law and the duties under the Personal Data Protection Law, that interpretation cannot reconcile them, and that a deed made without meeting the requirement risks being downgraded to a private instrument (Hafidzan et al., 2026). Because fiduciary registration has been electronic since Government Regulation No. 21 of 2015, the bottleneck now lies in the execution of the deed. In online lending, platforms must either add an offline notarial step, which erodes the speed of the service, or leave the collateral imperfectly bound so that it amounts only to a contractual promise. The second option is more dangerous for legal certainty, because both parties may believe that a security right exists when the law does not recognise one.

The drafting of a law on security over movable property offers an opportunity to resolve this problem, but the direction of the reform is not yet settled. The Academic Paper for the Bill on Security over Movable Property points towards an integrated, information technology-based security system, yet still emphasises that the notarial deed in creating security serves to secure authenticity (Ministry of Law, 2025). The UNCITRAL model takes a different path: the security right is created by a written security agreement, while registration of a notice is the condition for effectiveness against third parties (UNCITRAL, 2016; Bazinas, 2022). Japan's experience shows that reform which retains old concepts alongside new ones risks producing a dual system (Kozuka & Aoki, 2022). Legislators therefore need to choose deliberately between retaining the notarial deed while permitting electronic execution and moving to a written security agreement combined with electronic registration.

Both problems share a common root. Indonesian fiduciary law ties the existence of the security right to formal acts performed by identified persons, whereas platform lending spreads credit across many parties and moves every step online. In Radbruch's terms, formal requirements protect legal certainty but applying them rigidly to platform lending may sacrifice purposiveness, because it pushes the market towards unsecured or falsely secured lending (Tan, 2021; Zajadło, 2023). Resolving this tension requires legislative choices rather than interpretation alone (Hafidzan et al., 2026).

A Three-Dimensional Framework of Legal Certainty

The findings above show that the validity of an electronic contract must be distinguished from the validity of collateral binding, and both must be distinguished from the validity of enforcement. On this basis, the study formulates a framework of legal certainty with three dimensions and one cross-cutting condition (Table 4).

Table 4. Three-dimensional framework of legal certainty in collateral binding

Dimension	Orientation	Indicators	Consequence if met
Contractual validity	Contractual relationship	Consent, capacity, object, lawful cause, electronic authentication	Binding agreement
Proprietary security validity	Rights over collateral	Ownership, deed, registration, identity of the fiduciary recipient	Security right effective against third parties

Enforcement validity	Exercise of rights	Determination of default, authority, lawful procedure	Lawful enforcement
Intermediary authority (cross-cutting)	Role of the platform or agent	Express mandate, scope, accountability, segregated assets	Lawful action by the intermediary at each stage

Source: Analysis of legal materials, 2026

By way of illustration, a borrower offers a motor vehicle as additional collateral for a large productive loan. The vehicle's details and digital copies of its ownership documents are included in the electronic agreement, so the first dimension is satisfied. Unless a fiduciary deed is executed and registered in the name of an identified fiduciary recipient, the second dimension is not satisfied, and the lender remains a concurrent creditor. If the platform then repossesses the vehicle without a lawful determination of default, the third dimension is also breached. At each stage the same question arises: is the platform acting with valid authority? The three dimensions correspond broadly to the stages of the functional theory of secured transactions, namely creation, third-party effectiveness and enforcement (UNCITRAL, 2016; Bazinas, 2022). The framework does not replace that model but adapts it to two features of Indonesian law. First, Indonesian fiduciary law is formalistic, so the second dimension carries more weight than in systems built on notice registration. Second, platform lending inserts an intermediary between creditor and debtor, while Article 8 of the Fiduciary Security Law recognises an attorney or representative without specifying who may act as representative or what their position is when the set of lenders changes, and Circular Letter No. 19/SEOJK.06/2025 does not identify the security holder. Intermediary authority is therefore added as a condition that applies to all three dimensions. This extension links the middle-range theory to the grand theory: certainty for the parties depends not only on the rules for each stage but also on clarity about who is authorised to act (Tan, 2021).

Balanced Legal Protection for Creditors and Debtors

Following the theory of legal protection, protection may be preventive, aimed at preventing violations and disputes before they arise, or repressive, aimed at resolving violations after they occur (Hadjon, 1987). Table 5 maps both forms of protection onto the stages of a secured transaction, showing that preventive protection operates mainly at the creation and disclosure stage, while repressive protection operates mainly at the enforcement stage.

Table 5. Legal protection by stage of the secured transaction

Stage	Preventive protection	Repressive protection	Legal basis
Formation of the agreement	Clear information, free consent, limits on standard clauses	Annulment of unlawful clauses	Civil Code; Law No. 8/1999; OJK Reg. No. 22/2023
Creation and disclosure	Verification of ownership, deed and registration, disclosure of collateral status	Claims for misleading information	Law No. 42/1999; Circular Letter No. 19/2025
Data management	Processing data only for lawful purposes	Sanctions and compensation for data misuse	Law No. 27/2022
Default and enforcement	Documented determination of default; restructuring	Court enforcement where the debtor objects; return of surplus proceeds	Law No. 42/1999 Arts. 29, 33, 34; Constitutional Court Decisions No. 18/2019 and No. 2/2021
Dispute resolution	Internal complaints	Financial services ADR body, arbitration, courts	Law No. 30/1999; OJK Reg. No. 22/2023

Source: Analysis of legal materials, 2026

For creditors, the most important preventive protection is valid binding, because failure to meet the statutory requirements removes priority. For debtors, the risks are different. Standard-form agreements may contain clauses allowing the platform to seize assets unilaterally, yet freedom of contract under Article 1338 of the Civil Code remains limited by statute, morality, public order and good faith, and Article 33 of the Fiduciary Security Law prohibits clauses giving the creditor automatic ownership of the collateral. Data obtained through collateral verification may also be processed only for lawful purposes; studies of Indonesian fintech record recurring data-protection problems (Suryono et al., 2021; Rohendi & Kharisma, 2024) and serious harm when data is used for intimidation in illegal lending (Angkasa et al., 2023).

Repressive protection is tested most severely in default. Constitutional Court Decisions No. 18/PUU-XVII/2019 and No. 2/PUU-XIX/2021 confirm that creditors may not declare default unilaterally and that court enforcement is required where the debtor does not surrender the collateral voluntarily (Salvia & Putri, 2024). These decisions do not extinguish creditors' enforcement rights but limit them to prevent arbitrary action. A platform system's classification of a borrower as in default must therefore be distinguished from the satisfaction of the legal conditions for enforcement.

The Regulatory Governance Perspective

From the standpoint of regulatory governance as the applied theory, the condition of intermediary authority is also a supervisory issue. OJK does not supervise each loan directly; it relies on licensed platforms to verify borrowers, document collateral and report, so platforms act as regulatory intermediaries. Co-regulatory arrangements of this kind are credible only when the regulator sets the objectives, tests the standards with stakeholders and backs them with enforceable instruments (Di Porto & Zuppetta, 2021). Circular Letter No. 19/SEOJK.06/2025 sets an objective, the presence of additional collateral, but leaves the manner of binding, the security holder and storage to platforms without verifiable standards. Indonesia's early collaborative approach to peer-to-peer lending shows that OJK can develop standards jointly with industry (Tritto et al., 2020), and research on fintech supervision shows that frontline interaction between regulators and firms fosters collaboration in applying rules to new business models (Fahy, 2022). The issue also crosses institutional boundaries, since OJK regulates platforms while fiduciary registration and the drafting of security legislation fall under the Ministry of Law. The absence of public data on secured loans, noted in the introduction, thus reflects a governance gap as well as a legal one.

The theory of regulatory intermediaries helps explain the platform's position. The regulator–intermediary–target framework shows that intermediary roles may arise through assignment, appropriation or promotion, and that these roles shape the dynamics and outcomes of regulatory programmes (Kourula et al., 2019). Intermediaries may also operate formally or informally, depending on the degree to which their role is officialised and formalised (Brès et al., 2019). In the LPBBTI scheme, platforms perform the role of collateral holder without formal assignment by regulation, so their role is informal and difficult to supervise. When a regulator later seeks to reclaim or reorganise tasks delegated to intermediaries, its success depends on the market structure of those intermediaries (Kellerman, 2021). China's experience offers a warning from the opposite direction: the uniform and abrupt correction of P2P lending in 2018 obstructed borrowers' economic development potential, particularly for underserved borrowers (Liu et al., 2024). The sandbox literature suggests a middle path of supervised experimentation (Ahern, 2021), whose adoption is shaped by policy entrepreneurs, policy diffusion and actors' perceptions of legal constraints (Raudla et al., 2025), although sandboxes have also been criticised for legitimising fintech risks rather than containing them (Brown & Piroska, 2022). Pilots of electronic creation

and security agents should therefore be designed with verifiable safeguards rather than as mere relaxation of rules.

Theoretical and Practical Implications

The findings point to five directions for strengthening regulation that merit consideration, each linked to a dimension of the framework and to the problems identified (Table 6). From a regulatory governance perspective, these directions combine legal refinement with policy instruments: disclosure and reporting duties, registration duties and supervisory protocols that OJK can implement together with platforms and their association.

Table 6. Directions for strengthening the regulation of collateral binding in online lending

Direction	Problem addressed	Framework dimension	Relevant instrument
Disclosure and reporting of collateral status: each loan states whether collateral is absent, contractual only or registered, with the fiduciary certificate number	Lenders believe an asset is secured when it is not; OJK lacks data	Proprietary security validity	Amendment of Section XI point 6(g)–(h) of Circular Letter No. 19/2025 and periodic reporting to OJK
Duty to register fiduciary security within a set period	Binding ends as an unregistered private agreement	Proprietary security validity	OJK provision modelled on Art. 2 of MoF Reg. No. 130/2012, once the security holder is determined
Registered security agent with segregated assets and duties of loyalty	Article 8 designed for fixed consortia; loan portions keep changing hands	Intermediary authority; enforcement validity	Provisions in the Bill on Security over Movable Property drawing on Arts. 2488-6–2488-12 of the French Civil Code; meanwhile, OJK standardises power-of-attorney clauses
Phased electronic deed or security agreement, beginning with a pilot for low-value collateral	Physical-presence requirement blocks digital creation	Proprietary security validity	Bill on Security over Movable Property or amendment of the Notary Law (Hafidzan et al., 2026)
Default and enforcement protocol for platforms	Platform classification of default confused with legal default	Enforcement validity	OJK circular complementing the collection rules in OJK Reg. No. 22/2023 and implementing the Constitutional Court decisions

Source: Analysis of legal materials, 2026

The study contributes at all three levels of theory. At the level of grand theory, it shows doctrinally how formal certainty and purposiveness in Radbruch's thought may conflict when paper-based security rules are applied to online credit spread across many lenders. At the level of middle-range theory, it adapts the functional theory of secured transactions to a formalistic fiduciary regime through the condition of intermediary authority; this condition does not fill a legal vacuum, since Article 8 already recognises attorneys and representatives, but tests the validity of such representation in funding whose composition keeps changing. The study also connects Hadjon's theory of legal protection to the stages of a secured transaction. At the level of applied theory, it shows that regulation which sets only risk-mitigation objectives without binding standards produces unverifiable co-regulation, making intermediary authority a point of supervisory control.

In practical terms, the findings carry several implications (Table 6). For OJK, they suggest the need for standards on binding, reporting and the security holder to complement the collateral provisions of Circular Letter No. 19/SEOJK.06/2025. For legislators, they may

inform deliberations on the Bill on Security over Movable Property, particularly regarding security agents and electronic creation. For platforms, they outline the minimum documentation needed for lenders to obtain a valid security right and for borrowers to receive accurate information about the status of their assets. The limitations should be acknowledged: the analysis is doctrinal, the application of regulatory governance theory to OJK is analogical because part of it was developed from other countries' experience, and the feasibility of these directions needs empirical testing with platform contracts, case files and interviews with OJK, platforms, notaries and lenders.

CONCLUSION

Collateral binding in information technology-based online loan agreements is legally separate from the formation of the electronic funding contract. A valid electronic agreement creates contractual obligations, but a proprietary security right arises only when the requirements of the relevant security institution are met; for fiduciary security, this means a notarial deed and registration. LPBBTI regulation, including the 2025 circular, treats collateral as risk mitigation without regulating binding, registration or the security holder, unlike the finance-company regime, which requires timely fiduciary registration. Two structural problems deepen this gap: Article 8 of the Fiduciary Security Law was designed for consortia with fixed creditors, and the physical-presence requirement prevents digital execution of the deed. As a result, loans may appear secured when the law recognises no security right at all. Protecting the parties requires preventive measures at the creation and disclosure stage and repressive measures at the enforcement stage, consistent with the Constitutional Court decisions. Theoretically, the study adapts the functional model of secured transactions through the condition of intermediary authority. Practically, the findings point towards collateral-status disclosure and reporting, a registration duty, a registered security agent, phased electronic creation and an enforcement protocol, relevant to OJK regulation and the Bill on Security over Movable Property. Empirical testing with platform contracts and case files remains necessary.

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AUTHOR CONTRIBUTIONS

MAA: conceptualization, research design, legal analysis, investigation, and writing–original draft preparation. S: methodology, theoretical framework development, analysis of legal regulations, validation, and writing–review and editing. MLS: literature review, legal data curation, comparative analysis, interpretation of findings, and writing–review and editing. All authors have read and approved the final version of the manuscript.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest related to the research, authorship, or publication of this manuscript.

REFERENCES

Ahern, D. (2021). Regulatory lag, regulatory friction and regulatory transition as FinTech disenablers: Calibrating an EU response to the regulatory sandbox phenomenon. European Business Organization Law Review, 22(3), 395–432. https://doi.org/10.1007/s40804-021-00217-z

Angkasa, A., Wamafma, F., Juanda, O., & Nunna, B. P. (2023). Illegal online loans in Indonesia: Between the law enforcement and protection of victim. Lex Scientia Law Review, 7(1), 119–178. https://doi.org/10.15294/lesrev.v7i1.67558

Bazinas, S. V. (2022). Uniform secured transactions law: The Model Inter-American Law and the UNCITRAL Model Law on Secured Transactions compared. Uniform Law Review, 27(2), 193–225. https://doi.org/10.1093/ulr/unac015

Bisnis Indonesia. (2025a, April 14). OJK's reasons for requiring collateral for online loans above IDR 2 billion [in Indonesian]. https://finansial.bisnis.com/read/20250414/89/1868888/alasan-ojk-atur-pinjaman-online-di-atas-rp2-miliar-diwajibkan-agunan

Bisnis Indonesia. (2025b, April 17). Collateral requirement for large online loans seen as reducing borrower interest [in Indonesian]. https://finansial.bisnis.com/read/20250417/563/1869929/ketentuan-agunan-pinjaman-jumbo-pinjol-dinilai-bisa-kurangi-minat-borrower

Bisnis Indonesia. (2025c, November 25). OJK records outstanding funding from individual lenders to online lending at IDR 5.96 trillion [in Indonesian]. https://finansial.bisnis.com/read/20251125/563/1931669/ojk-catat-outstanding-pendanaan-dari-lender-individu-ke-pinjol-capai-rp596-triliun

Brès, L., Mena, S., & Salles-Djelic, M.-L. (2019). Exploring the formal and informal roles of regulatory intermediaries in transnational multistakeholder regulation. Regulation & Governance, 13(2), 127–140. https://doi.org/10.1111/rego.12249

Brown, E., & Piroska, D. (2022). Governing fintech and fintech as governance: The regulatory sandbox, riskwashing, and disruptive social classification. New Political Economy, 27(1), 19–32. https://doi.org/10.1080/13563467.2021.1910645

Byrne, W. H., & Olsen, H. P. (2024). Doctrinal legal science: A science of its own? Canadian Journal of Law & Jurisprudence. Advance online publication. https://doi.org/10.1017/cjlj.2024.16

Constitutional Court of the Republic of Indonesia. (2019). Decision No. 18/PUU-XVII/2019.

Constitutional Court of the Republic of Indonesia. (2021). Decision No. 2/PUU-XIX/2021.

Davies, G. (2020). The relationship between empirical legal studies and doctrinal legal research. Erasmus Law Review, 13(2), 3–12. https://doi.org/10.5553/ELR.000141

Di Porto, F., & Zuppetta, M. (2021). Co-regulating algorithmic disclosure for digital platforms. Policy and Society, 40(2), 272–293. https://doi.org/10.1080/14494035.2020.1809052

Fahy, L. A. (2022). Fostering regulator–innovator collaboration at the frontline: A case study of the UK's regulatory sandbox for fintech. Law & Policy, 44(2), 162–184. https://doi.org/10.1111/lapo.12184

Financial Services Authority. (2018). OJK Regulation No. 35/POJK.05/2018 on the operation of finance companies, as last amended by OJK Regulation No. 46 of 2024.

Financial Services Authority. (2023). OJK Regulation No. 22 of 2023 on consumer and public protection in the financial services sector.

Financial Services Authority. (2024). OJK Regulation No. 40 of 2024 on information technology-based co-funding services.

Financial Services Authority. (2025). Circular Letter No. 19/SEOJK.06/2025 on the operation of information technology-based co-funding services.

Hadjon, P. M. (1987). Legal protection for the people of Indonesia [in Indonesian]. Bina Ilmu.

Hafidzan, D. A., Ikhwansyah, I., Lubis, N. A., & Chami, Y. (2026). The role of artificial

intelligence in enhancing the cyber notary concept in the digital era: Opportunities, challenges, and implications. Lex Scientia Law Review, 10(1), 259–302. https://doi.org/10.15294/lslr.v10i1.30905

Katadata. (2026). Banks become the main source of online lending funds, exceeding IDR 71.58 trillion [in Indonesian]. https://katadata.co.id/digital/fintech/6afab9ff40d38/bank-jadi-sumber-dana-utama-pinjol-nilainya-tembus-rp-71-58-triliun

Kellerman, M. (2021). Market structure and disempowering regulatory intermediaries: Insights from U.S. trade surveillance. Regulation & Governance, 15(4), 1350–1369. https://doi.org/10.1111/rego.12305

Kontan. (2025, November 11). Share of fintech lending to productive sectors reaches 34.48% as of September 2025 [in Indonesian]. https://keuangan.kontan.co.id/news/porsi-pembiayaan-fintech-lending-ke-sektor-produktif-capai-3448-per-september-2025

Kourula, A., Paukku, M., Peterman, A., & Koria, M. (2019). Intermediary roles in regulatory programs: Toward a role-based framework. Regulation & Governance, 13(2), 141–156. https://doi.org/10.1111/rego.12226

Kozuka, S., & Aoki, N. (2022). Reform of the secured transactions law in Japan: The form and function tested against the global standard. Uniform Law Review, 27(2), 261–281. https://doi.org/10.1093/ulr/unac013

Liu, Y., Li, X., & Zheng, Z. (2024). Consequences of China's 2018 online lending regulation and the promise of PolicyTech. Information Systems Research, 35(3), 1235–1256. https://doi.org/10.1287/isre.2021.0580

Minister of Finance of the Republic of Indonesia. (2012). Minister of Finance Regulation No. 130/PMK.010/2012 on fiduciary registration for finance companies providing consumer motor-vehicle financing with fiduciary security.

Ministry of Law of the Republic of Indonesia. (2025). Academic paper for the bill on security over movable property [in Indonesian]. https://www.peraturan.go.id/na/2025-10-19-21-12-03_naskah_akademik_rancangan_undang-undang_tentang_jaminan_atas_benda_bergerak.pdf

Neo, D. (2024). Modern principles and secured transactions law in Asia. Uniform Law Review, 29(4), 553–588. https://doi.org/10.1093/ulr/unaf007

Noor, A., Maskur, A., Wulandari, D., Afif, A.-S. M., & Azmi, M. F. (2025). Digital economy regulation and consumer rights protection: Realizing security in financial technology transactions. Lex Scientia Law Review, 9(2), 1324–1375. https://doi.org/10.15294/lslr.v9i2.24927

Raudla, R., Juuse, E., Kuokštis, V., Cepilovs, A., Cipinys, V., & Ylönen, M. (2025). To sandbox or not to sandbox? Diverging strategies of regulatory responses to FinTech. Regulation & Governance, 19(3), 917–932. https://doi.org/10.1111/rego.12630

Republic of Indonesia. (n.d.). Indonesian Civil Code.

Republic of Indonesia. (1999a). Law No. 8 of 1999 on consumer protection.

Republic of Indonesia. (1999b). Law No. 30 of 1999 on arbitration and alternative dispute resolution.

Republic of Indonesia. (1999c). Law No. 42 of 1999 on fiduciary security.

Republic of Indonesia. (2014). Law No. 2 of 2014 amending Law No. 30 of 2004 on the office of notary.

Republic of Indonesia. (2015). Government Regulation No. 21 of 2015 on procedures for fiduciary registration and fees for fiduciary deeds.

Republic of Indonesia. (2022). Law No. 27 of 2022 on personal data protection.

Republic of Indonesia. (2023). Law No. 4 of 2023 on financial sector development and strengthening.

Republic of Indonesia. (2024). Law No. 1 of 2024 on the second amendment to Law No. 11 of 2008 on electronic information and transactions.

République française. (2017). Ordinance No. 2017-748 of 4 May 2017 on the security agent (Civil Code, Articles 2488-6 to 2488-12) [in French]. Official Journal of the French Republic, May 5, 2017.

Rohendi, A., & Kharisma, D. B. (2024). Personal data protection in fintech: A case study from Indonesia. Journal of Infrastructure, Policy and Development, 8(7), 4158. https://doi.org/10.24294/jipd.v8i7.4158

Salvia, M. P., & Putri, L. P. Y. K. (2024). Constitutionality of the execution of fiduciary guarantees within the framework of consumer rights protection. Jurnal Konstitusi, 21(2), 275–291. https://doi.org/10.31078/jk2127

Shi, X., Jin, Q., & He, L. (2020). The bilateral effects of platform-sponsored collateral in peer-to-peer (P2P) lending: Evidence from China. Emerging Markets Finance and Trade, 56(4), 771–795. https://doi.org/10.1080/1540496X.2018.1530982

Suryono, R. R., Budi, I., & Purwandari, B. (2021). Detection of fintech P2P lending issues in Indonesia. Heliyon, 7(4), e06782. https://doi.org/10.1016/j.heliyon.2021.e06782

Taekema, S., & van der Burg, W. (2020). Legal philosophy as an enrichment of doctrinal research part I: Introducing three philosophical methods. Law and Method, January 2020, 1–20. https://doi.org/10.5553/REM/.000046

Tan, D. (2023). Demystifying the proliferation of online peer-to-peer lending in Indonesia: Decoding fintech as a regulatory challenge. Asian Journal of Law and Society, 10(3), 376–400. https://doi.org/10.1017/als.2022.21

Tan, S. H. (2021). Radbruch's formula revisited: The lex injusta non est lex maxim in constitutional democracies. Canadian Journal of Law & Jurisprudence, 34(2), 461–491. https://doi.org/10.1017/cjlj.2021.12

Tritto, A., He, Y., & Junaedi, V. A. (2020). Governing the gold rush into emerging markets: A case study of Indonesia's regulatory responses to the expansion of Chinese-backed online P2P lending. Financial Innovation, 6, 51. https://doi.org/10.1186/s40854-020-00202-4

UNCITRAL. (2016). UNCITRAL Model Law on Secured Transactions. United Nations. https://uncitral.un.org/en/texts/securityinterests/modellaw/secured_transactions

Weng, Z., & Luo, P. (2021). The impact of guarantees on peer-to-peer lending platform: Evolutionary game analysis and empirical evidence from China. Journal of Theoretical and Applied Electronic Commerce Research, 16(7), 2708–2731. https://doi.org/10.3390/jtaer16070149

Zajadło, J. (2023). Axiology of law – from general to specific. Studia Iuridica Lublinensia, 32(4), 191–217. https://doi.org/10.17951/sil.2023.32.4.191-217