Financial Product Complexity, Moral Hazard, and the Private Law

Heather Hughes
Financial Product Complexity, Moral Hazard, and the Private Law

Heather Hughes*

Extensive debate surrounds the question of how regulators should respond to the externalization of risk associated with moral hazard in financial markets. The capacity of market actors to externalize risk is related to transactional complexity. Complexity, for example, augments reliance on valuation methods that can obscure risk, aggravating moral hazard. Recently, scholars and policymakers have articulated strategies for regulating transactional complexity that, this Article finds, reflect a shift from a contract law to a property law rubric for understanding financial products. This Article articulates this shift and assesses its regulatory implications. Some call for standardization of financial products. Others call for treating financial products like goods, to be regulated for public safety. But what justifies curtailing freedom of contract? While there are numerous theories of regulation, and of the relationship between law and markets, this Article contends that markets are legally constructed and that the private law doctrines that govern financial transactions present underexplored regulatory possibilities. It considers the extent to which financial products have property—distinguishable from contract—attributes, such that their regulation could fall within the justificatory ambit of property law doctrines that concern liquidity and soundness of markets. The normative implications of a property-oriented view of financial products are under-developed for want of the type of analysis that this Article begins. The problem of moral hazard could become less menacing if lawmakers were to effectively balance complexity and third-party concerns. This Article lays ground for further inquiry into how they might do so.

* Professor of law, American University, Washington College of Law. I thank David Snyder, Anna Gelpern, Ken Anderson, Eric Claeys, Fernanda Nicola, Ezra Rosser, Pierre Schlag, Daniel Bradlow, Jorge Contreras, Mary Clark, and Barlow Burke for helpful comments; and Jess Robinson for excellent research assistance.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>181</td>
</tr>
<tr>
<td>I. The Private Law Infrastructure of Financial Products</td>
<td>189</td>
</tr>
<tr>
<td>A. Private Law Responses to Complexity</td>
<td>189</td>
</tr>
<tr>
<td>B. Theory: Financial Engineering and Property</td>
<td>194</td>
</tr>
<tr>
<td>C. Doctrine: Financial Engineering and Property</td>
<td>205</td>
</tr>
<tr>
<td>II. Complexity and Moral Hazard</td>
<td>207</td>
</tr>
<tr>
<td>A. Transferring Risk, Externalizing Risk</td>
<td>208</td>
</tr>
<tr>
<td>B. Valuation and Complex Financial Products</td>
<td>209</td>
</tr>
<tr>
<td>III. Private Law Strategies</td>
<td>210</td>
</tr>
<tr>
<td>A. Numerus Clausus</td>
<td>211</td>
</tr>
<tr>
<td>B. Shifting from a Contract-based to a Property-based Conception of</td>
<td>217</td>
</tr>
<tr>
<td>Financial Products</td>
<td></td>
</tr>
<tr>
<td>C. Normative Implications</td>
<td>219</td>
</tr>
<tr>
<td>Conclusion</td>
<td>220</td>
</tr>
</tbody>
</table>
Introduction

Extensive debate surrounds the question of how regulators should respond to the externalization of risk—and socialization of loss—associated with moral hazard in financial markets. This Article turns attention to the relationship between moral hazard\(^1\) and the private law infrastructure of financial markets.\(^2\) Contract and property doctrines\(^3\) determine the enforceability of the transactional arrangements with which market actors externalize risk.\(^4\)

The capacity of market actors to externalize risk is related to transactional complexity.\(^5\) While we do not fully understand the problems of complexity, or how

---

\(^1\) Moral hazard has featured prominently in discussions of originate-to-distribute approaches to lending and of contexts in which financial institutions act with expectations that the state will ultimately prevent their failure.


\(^3\) Meaning, the laws contained, in the United States, in the common law and the Uniform Commercial Code of each jurisdiction, along with related statutes, such as corporation and other limited liability entity statutes.

\(^4\) This Article contends that markets are legally constructed, and that we should take a closer look at the nature of the private law obligations from which markets derive. We can understand the legal infrastructure of markets not just as a "web of legally permissible IOUs," but also as a system that creates and transfers *in rem* rights. This understanding can potentially expand regulatory possibilities. Cf. Katharina Pistor, *A Legal Theory of Finance*, 41 J. COMP. ECON. 315 (2013) (stating a legal theory of finance (LTF) in which markets are legally constructed and occupy a hybrid public-private space). Pistor describes the legal constitution of markets in contract-oriented terms, contending that a "web of legally permissible IOUs - credits, bonds, derivatives, but also common stock, convertible shares, etc. - that link parties to one another constitutes financial markets and determines their scope." Id. at 318. The law-finance paradox puts markets in tension with law when enforcement of contractual obligations threatens the financial system. As such, legal elasticity at the apex of financial/ legal systems demarcates power: we can relate the political economy of markets to the intersection between hierarchies in finance and elasticity in law. Id.at 316, 328. Pistor finds that law tends to be binding at the periphery of the financial system and elastic at its apex. Id. at 317. She suggests that more elasticity at the periphery could provide important safety valves to prevent financial crises. Id. at 329. This Article, in contrast, turns attention to the efficacy of contracts/property distinctions among the private law rules that constitute markets in order to lay groundwork for exploring the possibility that property doctrine could reduce instability by reigning in complexity and moral hazard in financial transactions.

\(^5\) While there is much discussion of whether and how to regulate market complexity, relatively few legal scholars directly take up the challenge of defining market complexity and
best to regulate it; complexity can aggravate complacency of investors and regulators, conflicts of interest, and the efficacy of valuation methods, all of which aggravate moral hazard.\footnote{The question of whether regulation can or should curtail complexity is contested. See Kathryn Judge, Fragmentation Nodes: A Study in Financial Innovation, Complexity and Systemic Risk, 64 STAN. L. REV. 657 (2012) (analyzing instances where investors are removed from underlying assets to a degree that results in problematic complexity); Saule T. Omarova, License to Deal: Mandatory Approval of Complex Financial Products, 90 WASH. U. L. REV. 64 (2012) (discussing complexity and systemic risk and proposing ex ante regulatory assessment of complex financial products); Steven L. Schwarcz, Regulating Complexity in Financial Markets, 87 WASH. U. L. REV. 211 (2010) (stating that complexity presents the greatest challenge to financial markets in the future).}

Since the 2008 financial crisis, scholars and policymakers have articulated strategies for regulating complexity that—this Article contends—reflect a shift from a contract law to a property law rubric for understanding financial products. Scholars invoke the property concept of \textit{numerus clausus}, contending that the law should not permit financial products that are so novel or “excessively” complex as to be unrecognizable to market actors.\footnote{Numerus clausus means “the number is closed.” See infra Part III.} In addition, the recently created U.S. Consumer Financial Protection Bureau regulates financial products for public safety and fitness for consumers: as analogous to goods.\footnote{See infra Part III.B.} What, from a regulatory standpoint, justifies curtailing freedom of contract? Contract rights are enforceable only against parties to a contract, and as such can be unlimited in their potential complexity. Property conveyances, on the other hand, are enforceable against third parties; property law considers the interests of third parties. It does so in a variety of ways, such as with rules that reflect the concept of \textit{numerus clausus}, through selective enforcement (with ostensible ownership and bona fide purchaser doctrines, for example), and with registries that establish notice conventions.\footnote{This Article focuses on the \textit{numerus clausus} concept in property law in discussions of financial product complexity. However, the various ways in which property law concerns third parties are relevant to articulating property in financial markets contexts (to which nu-}
As regulators struggle to assess the problems that complexity presents, the private law of property, scholars observe, already contemplates the notion that complexity of transactions can be harmful to markets. Property law connects complexity and liquidity: tailoring conveyances to reflect parties’ intentions increases liquidity, but excessive complexity undermines it. This Article identifies recent developments in the field of financial regulation as property-oriented strategies and assesses their potential and their limitations. Scholars and policymakers reference property law concepts, but do not fully explore the regulatory implications of property-based conceptions of financial products.

While there are numerous conceptions of regulation, and of the relationship between law and markets, this Article contends that markets are legally constructed and that the private law doctrines that govern financial transactions present under-explored regulatory possibilities. A turn to property law aspects of financial markets could potentially apply. See infra Part I.


13 Legal limitations on complexity meant to promote marketability pervade property law. These include rules against unreasonable restraints on alienation or creation of new estates, for example. See JOSEPH WILLIAM SINGER, PROPERTY LAW: RULES, POLICIES, AND PRACTICES (5th ed. 2006).

14 Iman Anabtawi and Steven Schwarz describe four basic types of financial markets regulations: 1) market-integrity regulations that promote fairness, such as disclosure requirements, trading exchanges oversight, and unfair market manipulation; 2) competition regulation; 3) prudential regulation, such as capital adequacy requirements, investment and risk management guidelines; and 4) consumer-protection regulation, such as rules for adequacy of disclosure and fairness in dispute resolution. See Iman Anabtawi & Steven L. Schwarz, Regulating Ex Post: How Law Can Address the Inevitability of Financial Failure, 92 TEX. L. REV. 75, 87 (2013). The pervasiveness of these types of regulation, they find, establish law as an integral
kets generates opportunity for regulatory innovation and competition, as state and federal, legislative and judicial actors can engage questions regarding the legal efficacy of property interests. This Article advances the possibilities for effective use of property law concepts in financial regulation by interpreting the private law infrastructure of financial products to emphasize property elements.

Financial markets are often understood in purely contracts-based (and also often contractarian) terms. Henry E. Smith observes that “Thomas Grey pointed to the rise of abstract rights from increasingly sophisticated contracting and financial engineering as incompatible with any robust notion of property.” Many legal thinkers challenge the notion of a meaningful distinction between contract and property. This rejection privileges a contracts-oriented view of markets in which parties may enter financial transactions on any terms that they find mutually beneficial, however complex, without regard for third parties.

But the view that a contracts/property distinction lacks viability or consequence is not universal. Contemporary corporate law literature actively engages the question of whether property law—as distinct from contract law—matters. Contrac-

component of the financial system. Id. This Article’s turn to the private law infrastructure of financial markets concerns the first and the fourth types of regulation they describe. Private law doctrines that regulate what property interests the law will recognize—the ‘true sale’ doctrine, rules against unreasonable restraints on alienation, rules against remote vesting, rules limiting permissible forms of estate—concern notice and fairness among market participants and deter market manipulation. Doctrines pertaining to products per se and product safety—such as warranties of fitness—concern the relationship between the institutions that sell products and their retail customers. See infra Part III.

15 See infra Part III.
16 The terms “contracts-oriented” or “contracts-based,” as used here, refer to views of financial markets rooted in legal realist theories contending that property is a set of relations among legal actors, rather than a relation between a legal actor and an object or thing, such that property is largely indistinguishable from contract. The terms “contractarian” or “contractarianism” refer, in general, to a political theory of authority in which the legitimacy of governmental authority derives from the consent of the governed, and consent derives from the idea of contract or mutual agreement. See generally STANFORD ENCYCLOPEDIA OF PHILOSOPHY, http://plato.stanford.edu (last visited May 5, 2015). In the context of contemporary private law, the term “contractarian” references a theory of corporate law. See Michael Klausner, The Contractarian Theory of Corporate Law: A Generation Later, J. CORP. L. 779, 782 (2006); infra notes 19-22 and accompanying text. The contractarian theory of corporate law departs from—but has not displaced—Berle and Means’s assertion that corporate law steeps in a problem of management responsibility that is a function of the separation of ownership and control. See ADOLF A. BERLE & Gardiner C. Means, The MODERN CORPORATION AND PRIVATE PROPERTY (rev. ed. 1991); William W. Bratton, Essay, Berle and Means Reconsidered at the Century’s Turn, 26 IOWA J. CORP. L. 737 (2001).

tarian theories of the firm maintain that the relationship between managers and shareholders of a corporation is contractual; market forces will create optimal corporate contracts because promises of effective governance arrangements yield value to shareholders.19 Under this approach, the firm is a nexus of contracts about assets, not a system of shared ownership defined by in rem rights in assets.20 Others, however, assert property law foundations of the firm.21 They contend that the contractarian view, among other things, overlooks how property law enables shared ownership of productive assets by protecting owners’ entitlements against dealings with third parties.22

Property-based theories of the firm use a functional definition of property.23 Similarly, property in this Article refers to a range of market phenomena, including: transactional arrangements and rules that create rights of exclusion beyond what contracts may create; transactional arrangements that create packaged entitlements that cannot be fully disaggregated down to their smallest atoms; and technical, reflexive formalities of conveyancing that on a pragmatic level give rise among market participants to a presumption of in rem rights in assets.

At issue in the corporate literature are the nature of the firm and the efficiency of firm governance given agency costs (due to separation of ownership and control, and diffusion of owners).24 At issue here, in contrast, is the under-explored po-

22 See Armour & Whincop, supra note 20. Armour and Whincop point out:
An economist may note the structural similarity between the regulatory character of the various strategies that limit the scope of property rights so as to minimize third party costs, and those rules which deny enforceability to contracts that impose externalities. . . . This seems, however, to be only a point of semantics. Regardless of how the relevant body of rules are described, it is nevertheless the case that . . . they have a role to play that is functionally more significant than the provision of contractual default rules. Armour & Whincop, supra note 20, at 448.
Rules that deny enforceability to contracts that create negative externalities, such as contracts to pollute or to commit a crime, may appear structurally similar to rules that limit the scope of property rights to minimize third party costs. But the functional significance of the roles played by legal rules that deal with determining which shared control arrangements can bind third parties is overlooked and can account for the non-trivial functions of corporate law. Id.
23 See id.
24 See id.; Bratton, supra note 16; Klausner, supra note 16.
tential of taking property seriously for purposes of regulating financial markets. We have not yet fully excavated the regulatory potential of property law strategies to respond to complexity and moral hazard. A turn towards private law aspects of financial markets focuses on questions of enforceability within transactional structures and how these affect risk-taking by market actors.

We could draw on property concepts like _numerus clausus_ without concern for whether property consists of _in rem_ rights or of aggregated legal relations. But delineating property elements, distinguishable from contract, in financial markets expands and fortifies regulatory possibilities. First, a turn towards property law strategies for mitigating complexity and moral hazard implies a shift in justificatory posture for financial regulation. Regulation can seem caught in a discourse in which it must justify "interfering" in markets, or curtailing market actors' freedom of contract. From a property perspective, applying legal doctrines to balance the intentions of transacting parties with collective concerns (like the intelligibility of interests) is not "interference," but rather administration of the legal architecture of markets themselves. The state does not infringe on freedom of contract in regulating forms and complexity of property interest. Rather, it merely administers well-worn market fundamentals, balancing complexity and liquidity. Second, a turn towards property law strategies can foster regulatory competition and innovation, given the range of law and policymakers involved in delineating property rights. Judges, state legislatures, bankruptcy courts, U.S. Congress, private law-making bodies: all of these can and do participate in defining enforceable property interests.

Though the influence of contracts-based and contractarian conceptions of private law remains strong, contemporary legal scholars do reference and articulate conceptions of property—distinguishable from contract—in financial markets. This Article presents two distinct and current theoretical presentations of property in the financial markets context. The two bodies of work about property in markets presented here—one by Henry Smith and the other by Annelise Riles—are radically different in methodology and purpose. Smith is a property theorist. Riles is an ethnographer who has studied practices surrounding swap collateral—a type of property conveyance central to financial markets. Despite their very different scholarly purposes, however, Smith and Riles have commonalities that are illuminating here: they both depart from purely contracts-based conceptions of markets and they both strike a very contemporary, neo-formalist chord. They are paired here in order to show the breadth and depth of current takes on property in financial markets—to show that

---

the state of private law theory now supports an understanding of markets in which property-based approaches to regulation can have traction.

Smith describes property as "the law of things" defined by an exclusion-governance architecture (and not a "bundle of rights" susceptible to limitless disaggregation). Smith emphasizes that property is modular in nature and states that his theory functions in the context of entity property and structured finance. In a different vein, other scholars articulate conceptions of property in terms of pragmatism and legal technique. Riles presents collateral in derivatives markets as a technique and an aesthetic practice. The purpose, here, is to offer a couple of readings of financial markets that are 'property stories,' in order to develop a sense of the private law infrastructure in markets for which property concepts could be relevant for regulation. The writings of Smith and of Riles both depart, albeit in very different ways, from contracts-based conceptions of financial markets that support the limitless decomposition and re-composition of assets that can enable problematic market complexity.

Bringing property concepts to bear on financial products questions what is a valid agreement or conveyance. Complex financial transactions are not just a function of market actors' engineering that the law then needs to control or regulate to contain risk. These transactions are uses of contract and property doctrine—bodies of private law that regulate what forms of transaction the state will recognize. 

26 See Smith, supra note 17.
30 For example, a turn to the validity of property conveyances requires attention to the bases for rights of exclusion. Numerous theories of property focus on rights of exclusion. See SINGER, supra note 13. Property theorists, though, are not unanimous on the centrality of exclusion. Cf. Gregory S. Alexander, Governance Property, 160 U. PENN. L. REV. 1853 (2012) (describing property in terms of mechanisms of internal governance and arguing that we can no longer regard the right to exclude as the single most important aspect of ownership).
31 Securitization transactions have long raised questions about the validity of excluding an originator's creditors from securitized assets. In transactional contexts where the originator conveys the assets in a true sale, receiving a fair market price in the form of the securitization's proceeds, few argue that the originator's creditors are unfairly excluded. However, in transactional contexts where the level of recourse is high or the proceeds of the transaction do not add as much value as the assets assigned to investors, many question the fairness of exclu-
Rather than leave financial markets to the realm contract, in which parties may enter into any transactional arrangements they wish, we should consider the wisdom of private law concepts that require transactions to be intelligible to third parties. To the extent banks create financial products that are more readily discernible to market participants generally, they become less able to generate transactional complexity that can augment the use of mark-to-model valuation for non-liquid financial products, and reliance on mark-to-market valuation for liquid products—factors that facilitate externalizing risk or moral hazard.

Part I discusses the private law infrastructure of financial products, how property law regulates forms of interest and notice, and the concept of *numerus clausus*. It reads the private law aspect of financial transactions, first, as a theoretical matter, offering two contemporary views of property in financial markets that depart from the contracts-oriented view; and, second, as a doctrinal matter, identifying aspects of financial products that create rights of exclusion in assets beyond what contracting parties generally can create.

Part II discusses the relationship between transactional complexity and moral hazard. When financial institutions create a complex product for which there is not an existing market, they may use mark-to-model valuation to price these assets for their balance sheets. Mark-to-model valuation for non-liquid assets can contribute to opacity surrounding the value of banks' books. The difficulty of understanding a model, and of accessing information to assess its accuracy, obscure information about the financial health of institutions holding assets priced using the mark-to-model method. If financial institutions can obscure their value, they may be in riskier positions than the market can discern. When institutions issue complex financial products for which there is an existing market, the mark-to-market method enables valuation based on market activity rather than on due diligence establishing the value of

---

32 See infra Part III.C.
33 See infra Part II.B.
34 Cf. Awrey, supra note 5, at 253-54 (discussing opacity as a significant driver of complexity and observing that the marketplace lacks information needed to accurately determine the enterprise value of banks).
assets. If a financial product is sufficiently complex, mark-to-market may be far more efficient than independent assessment. This aggravates moral hazard problems, as issuances can be over-valued in a rising market, inducing issuers to generate more products the risks of which they externalize.

Part III presents recent trends in financial regulation scholarship and policy, identifying property-oriented strategies for regulating financial markets. Numerous legal scholars identify property concepts aimed at keeping transactions intelligible to third parties, such as *numerus clausus*, as a possible basis for financial regulation. But none, so far, move beyond general assertions about private law responses to complexity. In addition, recent regulatory innovations rely on a conceptual shift from treatment of financial products as contractual transactions to treatment of them as products (i.e., like goods or other personalty subject to welfare regulation). To date, however, these regulatory innovations seem to rely on an analogy comparing financial products to goods based on the fact that both can have deleterious effects on consumers and on financial systems if they are defective. This Article, by providing doctrinal and theoretical frameworks with which to consider financial products from a property perspective, enables a more thorough inquiry into the regulatory implications of this conceptual shift.

The normative implications of a property-oriented view of financial products are under-developed for want of the type of analysis that this Article begins. The problem of moral hazard—the capacity of market actors to socialize loss (and privatize gain)—could, potentially, become less menacing if lawmakers were to effectively apply old, private law strategies for balancing complexity and third-party concerns. This Article lays ground for further inquiry into whether and how they might do so.

I. The Private Law Infrastructure of Financial Products

Market activity is a function of the contract and property doctrines that govern financial transactions.35 This Part discusses the relationship between contracts, property and complex financial transactions. An understanding of the private law infrastructure of financial products will facilitate consideration of private law strategies for mitigating complexity and moral hazard.

35 See Anabtawi & Schwarcz, supra note 14 (presenting law as a critical, constitutive component in financial systems); Pistor, supra note 4 (finding that markets are legally constituted).
A. Private Law Responses to Complexity

Property law doctrines—such as the ‘true sale’ doctrine, rules against unreasonable restraints on alienation, rules against remote vesting, rules limiting permissible forms of estate—regulate the forms of property interest that the law will recognize. These rules concern liquidity, notice and fairness among market participants, and deterrence of market manipulation. Private law doctrines pertaining to products—such as warranties of fitness—regulate the relationship between entities that sell products and their retail customers. These rules can, though do not necessarily, concern complexity. They may concern complexity where they require standardization (for disclosure purposes).

Standardization of transactions by market actors and by private lawmaking bodies is one strategy for mitigating the effects of complexity. Standardized forms of contract emerge in many contexts. Standardized contracts reduce transaction costs; to the extent they mitigate complexity, they do so by enabling transacting parties, trade groups, and other third parties to readily recognize the terms and structure of transactions of a given type. Standard-form contracts can reduce information costs surrounding transactions in contexts where market actors use (and do not materially alter) collectively developed forms of agreement. But while standardization of contracts can reduce information costs, the phenomenon of contract standardization in some instances does nothing to prevent creation of opaque, complex instruments in other instances. Hence, scholars and policymakers have been making property-based arguments for standardization of financial products.

Property conveyances create legally recognizable interests—meaning, despite the transacting parties’ objectives, the law will not enforce property conveyances that are unrecognizable in form, that contain unreasonable restraints on alienation, or that vest remotely, for example. In the realm of property assignments, legal doctrines that limit forms of property interest may not, in fact, reduce transaction costs. They may increase costs in contexts, for example, where it is challenging to both effectuate parties’ intentions and create conveyances that the law will recognize.

Property rules do address information costs. Information costs may or may not be related to transactional complexity, and complexity itself is multi-faceted. Dan Awrey identifies, as one driver of complexity, opacity that “stems from the dense ‘information thicket’ generated by the overwhelming volume of data” constituting con-

36 Many such contexts exist, including, for example, use of Bond Market Association securities repurchase agreements or International Swaps and Derivatives Association form swap agreements.
temporary markets. We could say that property law concepts mitigate this opacity by making at least some components of the ‘information thicket’ more intelligible to market participants. As property passes to successors in interest, in a market characterized by information thickets, information is not just difficult to obtain, but also can be lost. Property doctrine contemplates the loss of information, for example, about grantors’ subjective intentions in creating and conveying assets. Limitations on forms of interest can respond to this kind of loss by enabling market actors to work with objective intent and default inferences that follow from various forms of conveyance.

There are several features of property systems that limit the forms that interests may take. For example, the ‘true sale’ doctrine recognizes a conveyance of an ownership interest (rather than a lien) only when the level of recourse between the transacting parties creates legal obligations consistent with an ownership interest in the buyer. The estates system restricts the forms of fee that parties can create and convey by deed. Conceptually, we refer to numerus clausus to express the notion that property law permits only legally recognizable interests. Numerus clausus expresses a principle of property law that appears across legal systems—property interests must adhere to legally recognizable forms.

The common law estates system rules require that conveyances of real estate take the form of one of a finite set of recognizable interests, such as the fee simple, the fee simple subject to condition subsequent, the leasehold. The set of recognized forms can evolve over time—property law recognized the condominium in the

---

37 Awrey, supra note 5, at 252 (quoting Robert Bartlett III, Inefficiencies in the Information Thicket: A Case Study of Derivatives Disclosures During the Financial Crisis, 36 J. CORP. L. 1 (2010)).
38 Awrey, supra note 5, at 253.
40 The principle of numerus clausus animates, for example, the rule against creation of new estates. See, e.g., Johnson v. Whiton, 34 N.E. 542 (Mass. 1893). Numerus clausus relates to easements as well, as the law recognizes only a short list of negative easements (though the list has expanded with the creation of statutory conservation, historical preservation and other easements). Scholars reference numerus clausus in discussions of servitudes generally. For example, one recent piece on servitudes and the economics of information reads: “There is some recent literature related to the economic structure of servitude law. First, there is the general issue of the numerus clausus structure inherent in property law; that is, the tendency to limit the number of permissible property rights fractions so as to preserve property values. Merrill and Smith (2000) argue that such limits on the types of property regimes reflect information and measurement costs.” Antony Dnes and Dean Lueck, Asymmetric Information and the Law of Servitudes Governing Land, 38 J. LEGAL STUD. 89, 93 (2009).
41 See Merrill & Smith, infra note 49, at 4.
42 See generally SINGER, supra note 13, at 607-11.
1960s. But transacting parties are not free to create novel forms of interest by agreement.

Parties can vary the scope of a given property interest with servitudes. But while covenants and easements enable transacting parties to tailor a property interest, they do not permit parties to encumber property in any way they see fit. Property law subjects covenants to the rule against unreasonable restraints on alienation, which can invalidate servitudes that impede the marketability of property. A servitude may undermine marketability, for example, by allocating too much control to grantors. Interests in property can be disaggregated into present and future interests, and among concurrent fee holders or among fee holders and servitude or encumbrance holders.

Legal scholars sometimes reference *numerus clausus* and boilerplate or standardization generally, without identifying the distinction between rules limiting forms of property interest and the phenomenon of standardization of contracts. But again, under contracts law, parties are generally free to contract around standardized forms. Standardization of contract terms can serve a range of functions—some echo the function of *numerus clausus* in property law, others do not.

---


44 In addition, contracting parties are not free to create interests that vest too far into the future, under the rule against perpetuities. See generally SINGER, supra note 13, at 628-41.

45 Trusts, also, enable parties to tailor the benefits of property interests. Some scholars view trust law as providing exception to property law’s restrictions on forms of ownership. Trust law does not escape the rule that trustees must hold title to property in a recognizable form, but trust law does split the title from the benefit of property interests. See Kent D. Schenkel, *Trust Law and the Title-Split: A Beneficial Perspective*, 78 UMKC L. REV. 181 (2009).

46 The rule against unreasonable restraints on alienation can also invalidate servitudes that are unreasonable in the sense that they express invalid preferences, such as racially restrictive covenants.

47 See infra Part III.A.

The most widely-cited explication of *numerus clausus* in U.S. property laws is by Thomas Merrill and Henry Smith. Merrill and Smith—in several articles, but most notably in *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*⁴⁹—explain *numerus clausus* in economic terms. Because property rights are *in rem*, third parties must invest in determining the scope of these rights. Property rights that are unusual are more costly to assess. “Those creating or transferring idiosyncratic property rights cannot always be expected to take these increases in measurement costs fully into account,” Merrill and Smith explain, “making them a true externality.”⁵⁰ The rules that effectuate the *numerus clausus* principle in property law reduce these measurement costs.

This explanation of *numerus clausus* is not about concern for fragmentation, per se, of property rights.⁵¹ *Numerus clausus* rules may limit fragmentation, but this is an effect, not an explanation of *numerus clausus*.⁵² This principle limits property to specified types of rights. It does not limit the number of rights holders. Limiting legally recognizable types of property rights reduces measurement costs for market participants generally—not just for successors in interest to particular rights that may be difficult to measure.⁵³ Fragmentation, in contrast, affects disposition and use of property where coordination problems among rights holders prevent efficient utilization.

Not all scholars agree with the view of *numerus clausus* presented by Merrill and Smith.⁵⁴ These critics, however, do not reject the concept that standardization, or plate contract language as an intermediary point between contract law generally and property law); cf. Tamar Frankel, *The Law of Cross-Border Securitization: Lex Juris*, 12 DUKE J. COMP. & INT’L L. 475 (2002) (questioning the need for law to impose limitations on form, observing that where standardization is optimal, parties will produce it regardless); Henry E. Smith, *Modularity in the Law of Torts*, 4 J. TORT L. 1, 5-9, 16 (2011) (comparing the *numerus clausus* principle in property law to certain elements of tort law that reflect a modularity-based system).


⁵¹ Michael Heller observes that fragmentation can yield an “anticommons” where multiple interest-holders with rights to exclude others from a valuable resource maximize their own benefits while imposing costs on others, leading to systemic underutilization of property. Fragmentation can yield coordination problems where too many parties have exclusive rights over the use or disposition of a resource. See Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163 (1999) (arguing that excessive rights allocation in property can lead to devaluation in an unproductive anticommons); Michael A. Heller, *Three Faces of Private Property*, 79 OR. L. REV. 417 (2000) (suggesting that the *numerus clausus* principle mitigation against undesirable fragmentation of property interests that depresses productivity).


⁵³ Id. at 8.

⁵⁴ See Nestor M. Davidson, *Standardization and Pluralism in Property Law*, 61 VAND. L. REV. 1597 (2008) (*numerus clausus* relates to the need for a stable set of forms through which to
a stable set of forms of interest, is beneficial to markets and relates to the capacity of third parties to comprehend interests. For example, Hansmann and Kraakman concede that there must be some institution that enables third parties to determine who controls various incidents of ownership; this institution does not have to take the form of *numerus clausus* rules however.\(^{55}\) Lee Anne Fennell contends that a state-run "option exchange" for property interests would be superior to the rules of *numerus clausus* for balancing third-party information costs with the need for effectuating parties' interests.\(^{56}\)

The purpose here is not to defend Merrill and Smith's explanation of *numerus clausus*. The scholars discussed in Part III refer overwhelmingly to Merrill and Smith in invoking the relevance of *numerus clausus* for financial regulation, and so their work serves as a starting point, here, for thinking about property concepts in financial markets.

**B. Theory: Financial Engineering and Property**

In order to facilitate consideration of property law strategies for financial regulation, this Part articulates a property infrastructure of financial products and markets. Again, the distinction between property law and contract law, its theoretical grounding and utility, is contentious among legal scholars. Yet despite the prevalence of contracts-based and contractarian perspectives, contemporary lines of thinking about financial markets do present contracts/property distinctions.\(^{57}\) For exam-
ple, though their respective projects differ radically in focus, method and purpose, Smith and Riles both write on an important level about property and markets, and both we can describe as neo-formalist. Taken together, these two very different legal scholars indicate depth and range in contemporary approaches to private law that deal with property concepts in markets. As such, they provide theoretical groundwork for exploring property-based possibilities for financial regulation.

Generally speaking, property rights are in rem, whereas contracts rights are in personam. Contract rights are enforceable by and against the parties to the contract. Contractual rights and obligations are unlimited in their potential complexity. Property rights, in contrast, are enforceable against third parties. Because third parties must assess and value property interests, idiosyncrasies and complexities can create alienability concerns.58

This basic observation distinguishes property from contract, but many scholars contest the existence of any viable boundary between these two fields of law. In the words of Arthur Allen Leff, among Wesley Newcomb Hohfeld’s major contributions to legal analysis

[w]as the suggestion that some things, like ‘property,’ were not really, at law, ‘things’ at all, but force fields. Intelligent discourse, . . . should not be directed towards deciding to whom a thing belonged, because there was no thing to belong; there was only a bundle of forces demanding, for sensible talk, a sort of vector analysis with time coordinates.59

Property is not about a legal subject’s relationship to an object, but rather about relations among legal subjects.

While contract-based and realist conceptions of entitlements continue to be highly influential, property-based and formalist approaches have not waned. Numerous contemporary property theorists reject the “bundle of sticks” metaphor and its implication of limitless disaggregation in favor of focusing on in rem rights in things, rights of exclusion from things, and rights running with things.60

58 Interests in real property take a finite set of forms, though servitudes and other encumbrances create variability among property interests.
Recently, a group of legal scholars has been discussing the "new private law"—a movement to define and reify private law categories and operative principles. These scholars articulate distinctions between private and public law and among the private law subjects. They reject what they see as persistent notions in legal thinking that "all law is public law" or that "we are all realists now," in favor of earnest explication of how law defines the rights and duties of individuals and private entities as they relate to one another.

A proponent of this movement, Smith describes the origins of the bundle of rights notion of property as an analytical device employed by scholars like Hohfeld, who attempted to "analyze legal relations into their smallest atoms." Smith explains that Hohfeld accounted for the in rem aspects of some relations as collections of in personam relations. In other words, the bundle picture denies, in essence, the existence of in rem rights as such; the phenomenon of rights enforceable generally is a function of constellations of in personam rights functioning together. The bundle concept, Smith writes, "puts no particular constraints on the contents of bundles: they are totally malleable and should respond to policy concerns in a fairly direct fashion."

Hohfeld's taxonomy of detachable legal relations, Smith contends, is only realizable in a zero-transaction cost world (in which we do not live). In a world with transaction costs, the features of property cannot be disaggregated to the atomic level. Property, rather, is a law of things—"packages of legal relations." Property is modular. "Property defines things using an exclusion strategy of 'keep off' or 'don't

---

63 See Goldberg, supra note 62, at 1640-41 (stating that private law "stands in contrast to public law, which establishes the powers and responsibilities of governments, defines the rights and duties of individuals in relation to governments, and governs relations between and among nations").
64 Cf. Eric R. Claeys, Exclusion and Private Law Theory: A Comment on Property as the Law of Things, 125 Harv. L. Rev. F. 133 (2012) (stating that being more accurate than the bundle of sticks notion is far short of articulating criteria for property as a legal concept); Smith, supra note 63, at 1696.
66 Smith, supra note 65, at 1697.
67 Id. at 1693.
touch’ and then enriches the system of domains of owner control with interfaces using governance strategies.”

“In a zero-transaction cost world, we could use all governance all the time, whether supplied by government or through super fine-grained contracting among all the concerned parties,” but in the real world, exclusion functions as a delineation strategy. Modules—packages of legal relations—serve to contain third-party information costs.

Exclusion is from this kind of legal thing, a modular package of relations. Exclusion protects use rights. There is no interest in exclusion per se, but the right to exclude is a core mechanism with which property serves owners’ and society’s needs because it enables owners to utilize property.

“Private parties can contract at the interfaces between modular rights, within the constraints of the *numerus clausus* principle.” In other words, property has an architecture—modular packages of legal relations—that is also subject to governance or private ordering. From the vantage point of the exclusion-governance architecture that Smith ascribes to property, “the formalism of the exclusion strategy and the modesty in the governance strategy make property more alienable.” Relatively high invariance to context makes the history of assets less relevant to successors in interest, increasing the assets’ alienability.

Smith criticizes realist conceptions of property, but as Eric Claeys points out, offers in essence an instrumental understanding of property law. Without insisting on a strict formalist understanding of private law that completely rejects realist instrumentalism, Claeys finds that Smith’s theory of property exhibits too stark an instrumentalism to qualify as a departure from realist principles. Smith’s theory does

---

68 Id. at 1694.
69 Id. at 1704.
70 Id. at 1710.
71 Id. at 1724.
72 Id. at 1711 (referencing earlier work in which he presents formalism as a matter of degree). While Smith describes formalism as invariance to context, invariance to context is not a hallmark of formalism, but of law generally. Formalism reflects a higher degree of invariance, perhaps, than other approaches.
74 Claeys is drawing on John Gardner’s view that law can be “teleological” without merging into either functionalism or formalism. See Claeys, *supra* note 73, at 137 (referencing John Gardner, *What is Tort Law For? Part I: The Place of Corrective Justice*, 30 LAW & PHIL. 1, 2 (2011)). A less instrumental conception of law, on the other hand—which we call it more formalist, or teleological (as Claeys prefers)—would make “central the private law’s ‘internal point of view.’” See Claeys, *supra* note 73, at 138 (quoting H.L.A. HART, *THE CONCEPT OF LAW*.
not reach the philosophical question of “why and in what circumstances an owner deserves a right to exclude.”

But the purpose of this Article is not to defend a theory of property. It is to present notions of property with which we can articulate the private law infrastructure of financial products in a way that supports a turn to property concepts in financial regulation.

Smith contends that his theory of property bears out in the contexts of entity property and structured finance. He references Thomas Grey’s view that sophisticated contracting and financial engineering are not compatible with “any picture of property other than as a label for any collection of features resulting from private and public efforts at tailoring entitlements.” Smith situates Grey’s view in reference to scholarship on problems surrounding the separation of ownership and control in corporations. Contractarian theories of the firm contend that the relationship between managers and shareholders is contractual. As William Bratton puts it, the “firm represents a series of contracts joining inputs and outputs,” and so “ownership becomes an irrelevant concept.” Where Berle and Means found management problems stemming from the separation of ownership and control in corporations to be the defining challenge of corporate law, contractarian theories assert that free market competition drives firms to minimize agency costs and thereby solves the problem of separation of ownership and control. If managers’ incentives are aligned with shareholders’ interests because managers are contractually bound to either maximize value or be dismissed, then there is no need for regulation of the relationship between managers and shareholders. As Bratton and others have observed, however, this contractarian position has not succeeded in replacing Berle and Means because agency costs persist where there is separation of ownership and control.

Entity property persists as a concept that is structurally integral to firms and markets.

102 (2d ed. 1994)).

75 Claeys, supra note 73, at 143 (noting that we might ask “why officials and citizens who shape the political community’s morals believe an owner deserves” a right to exclude, rather than asking about deservedness generally); id. at 143 n.60.

76 Smith, supra note 17, at 1721.

77 Id. at 1722 (citing ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (1932)). See Bratton, supra note 16; Klausner, supra note 16; supra note 16 (defining “contractarian” theories).

78 Bratton, supra note 16, at 755.

79 See id. at 755-57.

80 Id.

81 Id.; see also MARK J. ROE, STRONG MANAGERS, WEAK OWNERS: THE POLITICAL ROOTS OF AMERICAN CORPORATE FINANCE 6-17 (1994); John C. Coffee, Jr., The Mandatory/Enabling Balance
Smith finds asset partitioning and entity property to be forms of modularization that corroborate his theory. "Asset partitioning is a higher-level modularization," Smith writes.\(^8\) "It allows for information specialization. It also permits convenient substitution of one creditor for another without the need for coordination—just as modular structures do generally."\(^8\) Smith writes: "Modular things are suited for sending an 'in rem' message. The need for far-flung and sometimes socially distant persons to respect property rights calls for simplifications and standardization."\(^8\)

One type of financial transaction that has been the subject of much discussion since the financial crisis is the issuance of asset-backed securities that are divided into tranches with distinct risk profiles.\(^8\) A private law strategy for financial regulation could be to consider whether these issuances create modules that "send an in rem message" to which we might apply *numerus clausus* principles.\(^8\)

The value of asset-backed securities depends upon rights of exclusion. The issuer acquires assets (such as mortgages, for example) from an originator. This acquisition gives the issuer the right to exclude creditors of the originator from the assets, enabling the issuer to use the assets as collateral for securities.

We can describe the securities as a modular set of legal relations: packages of rights of exclusion, enforceable against the originator's creditors, from payments (and from property securing payments). These rights are coupled with governance mechanisms such as consent to modification provisions. Investors acquire these various rights and re-convey them in secondary markets, potentially to numerous successors in interest. If we conceive of these securities as conferring *in rem* rights, and not just as tailored entitlements of disaggregated components, then policy makers could bring property principles to bear on the module: the package of legal relations that issuers and investors set out to convey has got to "make sense" and be legally recognizable.

This section now turns to an approach to the private law aspects of financial markets that is quite different from Smith's—an approach that considers the conveyance as a technique and an aesthetic practice. In his introduction to a 2012 symposium, John C.P. Goldberg offers what he terms "inclusive pragmatism" in support of

---

\(^8\) See Armour & Whincop, supra note 20.
\(^8\) Smith, supra note 17, at 1722.
\(^8\) Id.
\(^8\) Id. at 1709.
\(^8\) See infra Part III.A.
"The New Private Law." 88 Where legal realists advocated "brass tacks pragmatism"—"getting past mere appearances to what is 'really' going on in the law," 89 Goldberg champions "inclusive pragmatism"—an "antireductionist" approach characterized by "belief in the intelligibility of a broad range of concepts." 90 With this approach, scholars can do the interpretive work of trying to make sense of concepts that is essential to legal reasoning. 91 Goldberg states that "one of the distinctive features of the New Private Law is its methodological catholicism." 92 That said, perhaps a conception of property rooted in practice rather than theoretical, foundational justification is not as divergent from Smith and the thinking of his "new private law" cohort as it might at first appear.

In practice transacting parties differentiate between conveyances of rights in objects they describe, and contractual obligations they may enforce against one another. Identifying common legal techniques that indicate a presumption of difference between property and contract can support a pragmatist conception of property in financial markets. In other words, regardless of whether property consists of legal relations that can be infinitely disaggregated, or of things in which interest-holders have in rem rights, in practice market participants routinely recognize a distinction between property and contract rights, rights of exclusion in things, and the efficacy of conveyancing techniques to create in rem rights.

Normativity is law’s incorporation of and relevance to social norms. Pragmatism is concerned with norms in use day to day. Richard Warner writes that “the distinctive pragmatic claim about justification” is that there is “no external standard of evaluation” of norms. 93 “Norms of justification neither have nor need a ground outside themselves” from a pragmatist point of view. 94 An essential point, though, is that the norms at issue “are the norms we actually use day in and day out. These are the norms that neither have nor need a ground outside themselves.” 95 In financial

88 See Goldberg, supra note 62, at 1641.
89 Id. at 1645.
90 Id. at 1652.
91 Id. This Article neither accepts nor rejects the assertion that the “new private law” is new. Goldberg acknowledges the overlap between his presentation of private law theory and Ernest Weinrib’s. Id. at 1646 n.40. Goldberg states, though, that where Weinrib focuses on formalism, he is “claiming for private law the mantle of pragmatism.” Id. Whether the new private law takes us to new territory is irrelevant here. What matters is that the new private law participants offer theories of a contracts/property distinction that could facilitate private law strategies for mitigating complexity and moral hazard in financial markets.
92 Id. at 1649 n.54.
94 Id.
95 Id.
markets, norms in use day to day emerge from the myriad, routine legal practices that effectuate transactions. The acceptance of form contracts and transactional structures, documented in routine ways, reflects day-to-day expression of norms.\footnote{However, the fact that transactional structures reflect norms does not mean that parties to a transaction necessarily share normative commitments. \textit{See Annelise Riles, Collateral Knowledge: Legal Reasoning in the Global Financial Markets} (2011). In financial markets in which parties can be remote from one another culturally and geographically, the forms mediate difference and their use may reflect—or be in tension with—norms at play in each of the parties’ legal systems, respectively. \textit{Id.}}

Annelise Riles presents a common type of property conveyance in financial markets as a technique and an aesthetic practice.\footnote{Warner, supra note 93; \textit{see also} Heather Hughes, \textit{Aesthetics of Commercial Law—Domestic and International Implications}, 67 L.A. L. Rev. 689 (2007).} Riles writes about market conventions in her ethnography of derivatives traders in Japan.\footnote{See Riles, \textit{supra} note 96; \textit{see also} Hughes, \textit{supra} note 29 (reviewing Riles, \textit{supra} note 96).} In the course of her work as an anthropologist, she writes that techniques can be a site of governance.\footnote{See Riles, \textit{supra} note 96 (discussing use of ISDA forms by Japanese swap counterparties to transnational transactions).} Riles does not set out to provide a theory of property. However, the example of technique on which her recent scholarship focuses is a property conveyance in the financial markets context: the assignment of swap collateral.\footnote{See \textit{id.}}

Riles defines legal technique to be “a constellation of material and aesthetic features, and forms of expertise that go with them.”\footnote{\textit{Id.} at 65.} These features include the ideology of instrumentalism, legal actors who view themselves as technicians, problem-solving paradigms, and stock forms of legal argumentation.

Riles considers how market actors employ legal techniques to effectuate conveyances; she then identifies forms of technique as a site for governance. Her approach presumes the relevance of private law strategies for regulatory innovation. Riles’ presentation of the legal infrastructure of financial markets departs from a contracts-oriented approach not by asserting the existence or theoretical coherence of in \textit{rem} rights, but by recognizing the nature and function of techniques that market actors assume effectuate a conveyance involving temporary rights of exclusion.
The practice of collateralizing swap transactions, in Riles's view, exemplifies legal technique:

Collateral is a set of material and procedural knowledge practices, a set of documentary and institutional tools and outputs that encourages certain forms of collaboration according to carefully scripted routines. Just as . . . scientific truths emerge as universally accepted and legitimate by virtue of the way available scientific instruments, scientific theories, and institutional and social relations work together to reinforce one another, in the financial markets legitimacy emerges from these interlocking technical practices of communication.

The components of collateral—documentary tools, scripted exchanges, institutional structures, etc.—represent legal technique. Just as conventions and available instruments of experimentation shape scientific truth, techniques that produce legal concepts shape law. Riles contends that the recurring forms or practices that constitute collateral have agency of their own. To say that legal techniques have agency of their own is to regard law as an aesthetic practice. Aesthetics concerns the study of form. Legal techniques are aesthetic practices in that they manifest in recurring forms of argument, of contract, of institutional structure.

The study of form in law may, at first, appear unrelated to legal formalism and the task of articulating property elements of financial markets. We might regard as just a semantic coincidence any similarity between legal formalism and law as a function of form, an aesthetic practice. But analytical formalism, as a theoretical pra-

102 A swap transaction is typically a contract between two banks, the swap counter-parties, specifying conditions under which one party will pay the other, placing opposing bets on the future value of an asset. The parties may assign collateral (i.e., convey property) to secure performance. For a discussion of derivatives and their role in the financial crisis, see Lynn A. Stout, Derivatives and the Legal Origin of the 2008 Credit Crisis, 1 HARV. BUS. L. REV. 1 (2011). See generally Times Topics: Derivatives, N.Y. TIMES, available at http://topics.nytimes.com/top/reference/times_topics/subjects/derivatives/index.html.

103 RILES, supra note 96, at 65.

104 Id.; see Hughes, supra note 29 (reviewing RILES, supra note 96).

105 See RILES, supra note 96, at 65, 82.

106 See id. at 82. For a summary of uses of aesthetics in legal scholarship, see Hughes, supra note 97, at 695-706 (building on recent work on law and aesthetics to assess aesthetic elements of finance and commercial law).

107 See generally Ernest J. Weinrib, Legal formalism, in A COMPANION TO PHILOSOPHY OF LAW AND LEGAL THEORY 332 (Dennis Patterson ed., 1996); Ernest J. Weinrib, Legal Formalism: On the Immanent Rationality of Law, 97 YALE L.J. 949 (1988). Riles's description of legal techniques and private governance also veers away from legal realism. Realism is a theory of legal justification in which facts and real-world implications drive legal outcomes. There is no reference in Riles's description of derivatives markets to any shared social context in which relations among participants generate standards. See RILES, supra note 96, at 63-64.
Formalism has an aesthetic component in that recurring forms—of conveyance, of argument, of instrument—appeal to and mediate differences among diverse market participants. This aesthetic component is especially salient in financial markets where legal techniques drive the effectuation of transactions involving parties with remote and potentially divergent values and interests.

Contemporary formalist Ernest Weinrib contends that the private law is a coherent system “to be grasped only from within and not as the juridical manifestation of a set of extrinsic purposes.” He likens private law to love—“a phenomenon,” he states, “intelligible only in terms of itself.” Weinrib argues that a coherent, intrinsically purposeful private law reflects Kantian commitments to protecting individual autonomy and respecting the free will of others. Critics such as Robert L. Rabin find the role of Kant in Weinrib’s conception of private law inconsistent with Weinrib’s contention that private law is internally coherent. Rabin writes: “On the one hand, formalism as a nonsubstantive aesthetic principle is misplaced and unintelligible in a world of conflict resolution. On the other, formalism as an expression of Kantian autonomy may be distinctly intelligible, but it is necessarily an expression of the ‘substantively desirable.’” Whether one agrees with Rabin or Weinrib is immaterial here. The point here is that the questions they raise surrounding private law’s internal coherence and intrinsic value, the relationship of form to substance, are the province of aesthetics.

Though Weinrib’s formalism is very different from Riles’, they both connect legal formalism and the concerns of aesthetics. Riles focuses explicitly on formalism’s aesthetic elements without endowing formalism with normative content like Weinrib does. She characterizes legal formalism as the “view that private law doctrines and techniques can stand as a bulwark against the complexity and indeterminacy of the market.” “Formalism,” Riles writes, “cannot be reduced to a theoretical position

110 Id.
112 RILES, supra note 96, at 164.
and an accompanying epistemology. It is also an aesthetic judgment. . . .”113 The contemporary New Formalists, she writes, “share with their grandfathers an aesthetic orientation, that is, a faith in the inchoate possibilities of form.”114 She explores the “question of formalism’s appeal, that is, of its aesthetic dimension.”115

Again, if one considers formalism as only an analytical school of legal justification, Riles’s take on swap collateral would seem at odds with a formalist conception of property in financial markets:

[I]n place of . . . ideas that create coherent standards, . . . I suggest that we understand the ensemble of legal techniques that make up the private governance of the global derivatives markets as an assemblage of glitches . . . . We have a flurry of activity that creates distinctions, sets limits, cuts . . . one line of analysis from another, . . . that does not “add up” to . . . a new source of epistemological or juridical authority.116

She describes an absence of epistemological and juridical authority.117 The mode of coherence in Riles’s description of global private law in derivatives markets is not a function of shared norms.118 The notion that the system inheres in a set of forms or established techniques detached from shared norms suggests a formalism in which aesthetic practices themselves mediate difference.119 If private law doctrines are perpetually constructed by performance, rather than constituted by abstract normative

113 Id. at 71. Riles develops this thinking in the context of reading John Henry Wigmore’s comparative law scholarship—specifically, its amateurism. Formalism has a performative component in its relationship to pedagogy. Id. at 67-68. Wigmore, she finds, “appropriate[s] the formalism of legal teaching to scholarship, and hence . . . brilliantly collaps[es] the distinction between performative and analytical genres of formalism.” Id. at 75. The lesson we can draw from this, she finds, is that “formalism, as a genre of scholarship and teaching, may be effectively performed even when the epistemological or theoretical foundations of the performance are entirely at odds with the beliefs routinely associated with a formalistic understanding of law.” Id. at 76.


115 Id.

116 RILES, supra note 96, at 63-64.

117 See Hughes, supra note 104.

118 Id.

119 Riles writes that “if we define formalism not as an epistemological or political position, but as an aesthetic propensity, a genre of self-presentation . . . it is easy to see that this technical aesthetic is by no means the exclusive province of legal formalism.” Annelise Riles, A New Agenda for the Cultural Study of Law: Taking on the Technicalities, 53 BUFF. L. REV. 973, 1027 (2005).
principles, it does not undermine their utility as ordering devices in an indeterminate world.\textsuperscript{120}

This neo-formalist reading of swap collateral in derivatives markets directs attention to the regulatory potential of legal techniques.\textsuperscript{121} Riles rejects financial regulation discourse in which one must be either a "new architect" or an "intransigent."\textsuperscript{122} She contends that the capacity for day-to-day market practices to impact market governance is under-explored.\textsuperscript{123}

Smith and the "new private law" scholars differ significantly from Riles and the turn to ethnography and legal techniques.\textsuperscript{124} They both, though, articulate current, theoretically rich conceptions of property in financial markets that can inform assessment of private law strategies for mitigating complexity and moral hazard (and resulting negative externalities).\textsuperscript{125}

C. Doctrine: Financial Engineering and Property

This section turns to doctrinal features of financial products that reflect property, distinguishable from contract, elements. Separating the contract from the property features of financial products facilitates consideration of private law strategies for financial regulation. We should be able to identify property interests—for which property concepts are relevant—in financial markets as a doctrinal as well as a theoretical matter. There are ways in which financial products are property-like. Arthur Allen Leff notes that "it should not be a real jaw-dropper to suggest that regulatory and remedial strategies might vary depending upon whether one thought one was regulating process [contract] or product [thing]."\textsuperscript{126}

Some financial products have property attributes in the sense that they create rights of exclusion in excess of what contracting parties can create. These include ne-

\textsuperscript{120} See Hughes, supra note 104, at 213-14.
\textsuperscript{121} Riles, supra note 96, at 177-178, 223-28.
\textsuperscript{122} Riles, supra note 96, at 225.
\textsuperscript{123} Id.

\textsuperscript{124} This turn is part of the science and technology studies (STS) movement in which scholars view law as a technology. STS scholarship draws on actor-network theory, which seeks to transcend conventional dichotomies (structure/agency, human/non-human), and consider instances of contradiction, contingency, alliance, etc., in the production of legal knowledge and legal meaning. See Bruno Latour, The Making of Law: An Ethnography of the Conseil d'Etat (2010); Annelise Riles, The Network Inside Out (1999); see also Eve Darian-Smith, Laws and Societies in Global Contexts 104-05 (2013) (describing the work of Bruno Latour and its relationship to legal theory).

\textsuperscript{125} See infra notes 137-38 and accompanying text.
\textsuperscript{126} Leff, supra note 59, at 148.
negotiable instruments, contracts assigned as security despite containing anti-assignment clauses, and asset-backed securities given invest-grade ratings despite high levels of recourse from issuers to originators.

Legal scholars have discussed the "propertization" that occurs in certain transactional contexts. Propertization refers to transformations through which normative relations shift from having in personam qualities to having in rem qualities. In the case of instruments, the holder-in-due-course doctrine permits buyers of instruments to enforce payment obligations regardless of whether the obligor has valid defenses to payment enforceable against the original payee. Contract law permits assignment of debt obligations, but the holder-in-due-course rules elevate the status of certain holders beyond that of mere assignees of contract rights. Good faith purchasers may exclude obligors from the moneys payable under the instrument even though, as a contractual matter, the obligors have a defense to performance.

In the case of asset-backed securities, investors may acquire rights to payment collateralized by property held by an issuer that retains a high level of recourse against the originator. These investors enjoy rights of exclusion in their collateral, despite the fact that the transaction pursuant to which they acquired these rights may not qualify as a true sale between the originator and the issuer. This may be true in any securitization (i) governed by the laws of a jurisdiction that enacts an asset-backed securities facilitation statute, or (ii) in which the true-sale status of the transaction between the originator and issuer is unsettled.

In the case of derivatives, derivatives contracts enjoy a status in bankruptcy that elevates their value by conferring rights of exclusion in assets of a bankrupt counterparty, enforceable against other claimants. We might consider the extent to

---

128 See Yovel, supra note 127, at 381 n.34.
129 To be a holder-in-due-course, a party must have purchased a negotiable instrument in good faith without notice of defenses to enforcement, and the party must have taken possession pursuant to a valid negotiation. See U.C.C. §§3-104, 1-201(2), 3-303, 3-302(2), 3-301 (1977).
130 See, e.g., ALA. CODE §§ 35-10A-2(a)(1) (2003); DEL. CODE ANN. tit. 6, §§ 2701A-2703A (2005); LA. REV. STAT. ANN. § 10:9-109(e) (2003); OHI0 REV. CODE ANN. § 1109.75 (2003); N.C. GEN. STAT. §§ 53-425, 53-426 (2004); S.D. CODIFIED LAWS § 54-1-10 (2003); TEX. BUS. & COM. CODE ANN. § 9-109(e) (2004). Note that the effects of these statues on securitized assets in contexts where an originator enters bankruptcy is uncertain.
which the special priorities that derivatives contracts enjoy in bankruptcy enable
these contracts to function like property rights.

The fact that in many contexts financial products have property attributes
can bring their regulation within the justificatory ambit of property doctrines con-
cerned with liquidity and soundness of markets. From this vantage-point, exploring
the possibility of standardization, or other information-generating strategies, for fi-
nancial products is not a regulatory infringement on market actors' freedom of con-
tract, but rather administration of private law rules that are already a constitutive el-
ement of financial markets.132

II. Complexity and Moral Hazard

Complexity of financial markets—and the relationship between complexity
and systemic risk—drives many, current discussions of financial regulation. This Part
explores the relationship between complexity and moral hazard. As Steven Schwarcz
has observed, we do not fully “understand the problems of complexity, which was at
the root of many of the failures that gave rise to the subprime crisis.”133 We may not
understand complexity, and the task of determining whether and how to regulate it
may be daunting. But we can relate the phenomenon of complexity to the issue of
moral hazard, and then consider private law responses to complexity and their po-
tential to mitigate moral hazard.

Complexity itself is difficult to define. For example, Manuel Utset offers a
taxonomy of complexity in financial systems that parses out complexity of financial
institutions, of transactions involving institutions, of financial systems—mapped
against inter-temporal, coordination, and strategic complexity.134 This Article con-
cerns transactional complexity—the extent to which transacting parties create pack-
ages of rights and obligations that take novel or multi-faceted forms that are difficult
to understand, to which we might apply property concepts.

Awrey discusses various drivers of market complexity, the relationship be-
tween complexity and innovation in finance, and the implications of these for regula-
tion. He identifies “at least six” drivers of complexity in financial markets: technol-
ygy, opacity, interconnectedness, fragmentation, regulation, and reflexivity.135 To

132 Cf. Anabtawi & Schwarcz, supra note 14; Pistor, supra note 4.
133 Schwarcz, supra note 6, at 600.
134 See Utset, supra note 5 (applying concepts from the field of engineering to explore
complexity and to recommend engineering-based approaches to complexity in financial sys-
tems).
135 Awrey, supra note 5, at 245-46.
relate complexity of financial products to moral hazard, this Part draws on Awrey’s discussion of opacity, though the other drivers may also aggravate the capacity and willingness of market actors to socialize risk and loss while privatizing gain.

Claire Hill speculates that transactional complexity itself could be a strategy for externalizing risk. She directly links complexity and moral hazard, questioning whether investors “consider synthetic securitization’s complexity to be an end in itself, intended to confuse the inquiry into the caliber of the loans at issue.” This Article does not concern the intentions, per se, of market actors making complex issuances. It considers complexity and financial products generally, to describe how complexity can aggravate moral hazard.

A. Transferring Risk, Externalizing Risk

There is nothing inherently wrong, of course, with risk transfer—a concept at the root of financial transactions. Risk transfer becomes problematic when it creates negative externalities—when it results not just in transferring risk to a buyer for a price, but in costs to the public. The capacity of market actors to take risks that they will not have to pay for, the costs of which will be externalized, is moral hazard.

The relationship between transfer of risk and externalization of risk can be complicated. Parties transfer risk when assets are sold along with attendant risks. The price, in theory, reflects the various risks associated with the assets. Parties externalize risk when they do not price risk into transactions. When this happens, parties impose risk on the public.

As Saule Omarova observes: “Complex structured transactions effectively separate and repackage ownership, payment, and other rights associated with the referenced assets. This, in turn, reduces the transparency and flexibility in these markets, leading to greater systemic risk and instability.” The capacity of market actors to profit from issuances of complex products, shifting risk to buyers and, ultimately, the public, is related to the high degree of complexity of many financial products. If it is impossible to accurately value a product, then there is greater likelihood that risk associated with the product will be externalized, rather than priced in to transfers of the product in the market. The financial and housing markets crises generated much public discourse on externalities associated with sub-prime mortgages and securiti-

---

137 Omarova, supra note 6.
Financial Product Complexity

zation, for example; this discourse implicates risk transfer and risk externalization (or socialization of loss).\(^{138}\)

Jonathan Lipson offers an explanation of "the credit crisis in three easy pieces": complexity, complacency, and conflicts.\(^{139}\) He focuses on transactional complexity, contending that complexity makes deals too difficult to understand, thus permitting complacency (of investors and regulators) and conflicts (between originators and investors, for rating agents, among others) to thrive.\(^{140}\) He asserts that complexity made both complacency and conflicts possible.\(^{141}\)

B. Valuation and Complex Financial Products: the Hazards of Mark-to-model and Mark-to-market

Opacity surrounding the value of financial products—and hence the financial health of the institutions holding them—can aggravate moral hazard. Awrey describes two forms of opacity at play in markets: non-availability of information within a segment of the marketplace, and dense thicket of information that defy the market's capacity for analysis.\(^{142}\) Complex financial products can result in non-availability of information, where, for example, investors cannot penetrate the layers of a securitization facility in order to assess the quality of underlying collateral. If opacity makes investor due diligence impossible, then issuers can obscure risks. (It is not entirely clear why, in the years preceding the financial crisis of 2008, investors did not apply larger discounts to securities the value of which they could not accurately assess.\(^{143}\))

Investors may use mark-to-market accounting to determine the value of liquid securities.\(^{144}\) Mark-to-market accounting can aggravate moral hazard because it enables inflated valuations of securities in "bubble" markets, inspiring investor over-

---


\(^{139}\) See Lipson, supra note 7.

\(^{140}\) Id. at 49.

\(^{141}\) Id. at 45.

\(^{142}\) Awrey, supra note 5, at 251-55.

\(^{143}\) Since the financial crisis, scholars have attempted to address this question. See, e.g., Claire A. Hill, Why Didn't Subprime Investors Demand (Much More of) a Lemons Premium?, 74 LAW & CONTEMP. PROBS. 47 (2011) (finding that "the most satisfactory explanation lies in the incentives for herding among agents who made investment decisions for others").

\(^{144}\) Lipson, supra note 7, at 45.
confidence. Conversely, if the market value of the securities is volatile or becomes difficult to establish, then mark-to-market valuation can result in rapid depreciation and panic, leading to calls for bail-out.

Financial institutions, in other instances, issue innovative products for which there is not a market. They need to value these assets for their books, despite the fact that they are not liquid. In such cases financial institutions often use a mark-to-model approach to valuation.\textsuperscript{145} Innovation and increasing complexity make mark-to-model valuation more common; if there is not an existing market for a new type of financial product then there are not external indices with which to determine market value. If a model for a complex issuance contains incorrect assumptions—such as, for example, predicted default rates, which may be incorrect if there is not sufficient history with which to make accurate predictions—then it may be difficult or impossible to know what the assets are worth.\textsuperscript{146} The model with which a financial institution issues and then values securities may be very difficult to understand, or may rely on information that is difficult to obtain, creating information asymmetries that enable institutions to appear financially healthier than they are.

III. Private Law Strategies

This Part assesses existing turns to property law concepts in discourse on financial regulation. Since 2008, various legal scholars have referenced the concept of \textit{numerus clausus} as a private law tool that could be of use in financial markets. Section A summarizes and critiques their efforts. In addition, regulatory innovations such as the Consumer Financial Protection Bureau rely on an analogy between financial products and goods or other personalty, subject to public welfare regulation.\textsuperscript{147} Section B presents this shift from a contract to a property perspective on financial products and its regulatory potential. Section C explores normative implications; it sketches some possibilities for financial products regulation that follow from this Article’s analysis.

\textsuperscript{146} See Schwarcz, \textit{supra} note 6.
A. Numerus Clausus

Legal scholars invoke the concept of *numerus clausus*, and property concepts that discourage fragmentation of interests, in calls for regulatory innovation for financial markets. For example, Adam Levitin and Susan Wachter cite Merrill and Smith in the course of arguing that mortgage products should be standardized. They identify standardization as information-forcing, drawing on principles embedded in property law. They call private-label mortgage-backed securities “idiosyncratic property forms” and they contend that Dodd-Frank does not address “core informational problems” in securitization. While they observe that “the problems heterogeneity poses for investors have been recognized by property scholars,” they argue for standardization without referencing or exploring implications of looking to property, rather than contract, theories and doctrines. They reference literature on *numerus clausus* in both property and contract, without engaging differences between property and contract-based approaches.

Again, the capacity to draw on property concepts for financial regulation does not depend on the viability of a contracts/property distinction. However, the justificatory posture of regulation and the possibilities for regulatory innovation and competition can expand if we identify property rights, governed by property doctrines, as regulatory subjects.

Jill Fisch references *numerus clausus* rules to argue that interests in mutual funds should come in standardized forms in order to drive down information costs. Fisch argues for a “conform or explain” approach, where financial transactions either conform to a recognized, widely understood form or the parties explain—meaning make explicit—the differences. Also, she treats financial transactions as products. The “conform or explain” schema would apply to “financial products”—things that must take a standardized form or explain differences. From a regulatory perspective, Fisch’s argument echoes Saule Omarova’s, described in section B. We can advocate for standardization if we focus on public welfare effects—if we view financial transactions as products, regulated for safety.

---

149 *Id.* at 1255.
150 *Id.* at 1258.
151 *Id.* at 1255 (citing Merrill and Smith).
152 *Id.* at 1255 (citing Joshua Fairfield’s work on information costs and standardization of contracts).
154 *Id.*
David A. Dana argues that state property law "reflects an antifragmentation principle" evidenced by various sets of rules and concepts. He argues that lawmakers should apply this principle to prevent levels of fragmentation of interests in homes and mortgages that impede rational, beneficial loan modifications. Dana points out that the common law estates system aims to enhance the efficient alienability of land "precisely by limiting fragmentation of interests in land." The law favors the fee simple estate over the various defeasible fees—interests which may be cut short by a defeasing event.

Next, Dana discusses statutory unitization of underground oil and gas fields. Oil and gas field unitization statutes address inefficiencies associated with competition among multiple stakeholders. These statutes reduce the wasting of a valuable resource that can occur as a result of competition among surface landholders. Dana writes that these statutes—and courts' approvals of them—show that:

[C]ourts... have accepted that where existing property rights and rules and private ordering result in too many parties with an interest in the same resource, the law has a legitimate role in coercing the multiple interest holders to act in a more unified, and hence (from an overall return on private investment perspective) rational, manner.

Dana identifies these statutes as a precedent for the notion that property law should unify interests when fragmentation creates inefficiencies. Dana implies that inefficiencies of the housing and foreclosure crisis are of the same magnitude as inefficiencies associated with waste of a natural resource like oil. His article begins with the metaphor that "one out of every ten houses in the United States is likely to burn down," meaning that its owner will lose it in foreclosure. Litigation over waste and actions for unification in the oil and gas context involves many instances of exploding and burning oil and gas reserves.

Dana does not argue for direct application of estates system rules or of unitization rules to mortgages or mortgage-backed securities. Rather, he argues that these rules evidence an antifragmentation principle in property law. He contends that lawmakers should bring this general principle to bear on the housing market, to prevent inefficiencies like irrational foreclosures and their associated losses.

---

155 Dana, supra note 1112, at 97.
156 See id.
157 Dana, supra note 12, at 110.
158 Id. at 111-14.
159 Id. at 112.
160 See, e.g., Elliff v. Texon Drilling Co., 210 S.W.2d 558 (Tex. 1948).
161 Specifically, he proposes a federal regulatory requirement to assign servicing of home mortgages to blind trustees who could facilitate rational loan modifications. Dana, supra
A general commitment against excessive fragmentation of property, in Dana’s view, justifies a proposal to consolidate the power to alienate interests in mortgages in order to avoid stalemates among interest holders. But, again, the fact that property law contemplates the effects of complexity on marketability has always co-existed with the fact that property interests may be held by numerous (potentially adverse) parties. Dana’s contention that property law should inform financial regulation seems more conceptual than literal.

Edward J. Janger draws on property theory and *numerus clausus* in a recent piece on liquidity enhancement. Janger argues that financial market participants and policymakers have not understood costs addressed by *numerus clausus* rules, as property theorists do. He presents traditional liquidity enhancing tools—negotiability and the “holder in due course” doctrine, and purchaser protections such as the “buyer in the ordinary course of business”—and discusses how these tools are narrowly tailored to facilitate particular transactions. These tools, he argues, are limited precisely because “liquidity enhancement has costs, both to the transacting parties, and seemingly paradoxically, to the market itself.”

In contrast to these traditional, well-tailored devices, recently developed techniques for increasing liquidity, Janger argues, ignore costs of liquidity enhancement. He identifies (i) securitization and its use of bankruptcy-remote entities, and (ii) tradability of claims against debtors in bankruptcy and credit default swaps as contemporary liquidity enhancement tools. He then discusses costs associated with each. He concludes that the tradeoffs of liquidity enhancement have gone unrecognized and have “led to many of the difficulties in the current economic downturn.”

Janger relates third-party costs of liquidity enhancement devices in contemporary financial markets to a lack of regard for the concepts embodied by the *numerus clausus* principle:

Creating new and complex forms of property has costs. Civil law countries recognize this through the ‘*numerus clausus*’—an affirmative limit on the number of forms that property interests may take. Henry Smith and Thomas Merrill have argued forcefully that creation of novel forms of property can have considerable third party costs because of the inability of third parties to understand the attributes of an ownership interest. . . . [Even critics of Merrill and Smith] would balk at securitization, credit derivatives and free-for-
all claims trading. These ownership transactions all serve to obscure the nature and location of ownership. . . .

Here Janger is calling for regulation of liquidity enhancing devices that create third-party costs by obscuring ownership. He invokes the model of *numerus clausus* to assert that property theorists understand the importance of reducing such costs by limiting, and thereby clarifying, forms of ownership.

Janger does not develop in detail, in his relatively brief piece, how and on what terms to apply *numerus clausus* concepts to these liquidity enhancement tools. He does point out, however, that these tools reflect a legal status that departs from the realm of contract law. Like holders in due course of negotiable instruments, holders of asset-backed securities and of credit default swaps enjoy a degree of rights that exceeds what they would have if these forms of investment property were comprised merely of assigned contract rights. Janger finds that property law is relevant to regulation of financial markets. It is not fully evident, however, whether he considers property a source of guiding principles or whether he would literally apply property doctrine to regulate financial products.

A recent Note applies the property concepts of anti-commons (as developed by Michael Heller) and *numerus clausus* (as developed by Merrill and Smith) to assess the financial crisis, suggesting that these concepts could yield solutions to challenges in financial regulation. The Note, *The Perils of Fragmentation and Reckless Innovation*, argues that concerns animating property theories contributed to the financial crisis. It describes excessive fragmentation of interests in property effectuated by mortgage-backed, collateralized debt obligations. First, the Note argues that this excessive fragmentation creates an "anti-commons"—a situation in which property is used inefficiently as a result of conflicting interests among multiple persons with rights of exclusion. Second, it argues that the property literature on *numerus clausus* "casts doubt upon the desirability of introducing partially or fully customizable interests into the marketplace." The notion that multiple interest holders in property—with rights of exclusion—can lead to inefficient use could perhaps be a justification for consolidation of rights. (Dana makes this point using the example of the oil and gas field unitization statutes.) The notion that there is some efficient degree of disaggregation that the CDO market failed to produce is, again, an expression of a general, property law

---

165 Id. at 52-53.
166 Note, Perils, supra note 12.
167 Id. at 1800.
168 Id. at 1808-14.
169 Id. at 1815.
theme that we can articulate to criticize this market, perhaps to justify some degree of standardization of financial products.

But the notion that *numerus clausus* rules could justify standardization in CDO markets is too generalized to amount to a strong normative argument. The fact that the terms of the debt instruments themselves can be highly complex makes them analogous to any other property that is complex to describe and value. An interest in real estate, for example, may be complex in the sense that it is encumbered by multiple easements, subject to restrictive covenants, or affected by multiple interest holders. The fact that what investors hold in fee simple is complex to describe and value is not the concern of *numerus clausus* rules. These rules address idiosyncratic conveyancing—attempts to convey interests that are not recognized by the law. They do not concern recognizable interests of complex description.

In yet another, recent invocation of property doctrine for financial markets regulation, C.Y. Chu presents complex financial products as property, and then argues for application of *numerus clausus* rules to this type of property. This assertion is the most literal of those discussed here. Chu presents collateralized debt obligations as property and then argues for application of *numerus clausus* principles to this property. Chu contends that the packaging and issuance of asset-backed CDOs involves the creation of new information by financial institutions. Complex CDOs are constituted by this new information, and as such they are property and not mere assignments of interests represented by contracts like the debt instruments issued in traditional pass-through securitizations.

If we view CDOs as property, Chu argues, we can regulate them like property. Chu draws on Merrill and Smith to discuss externalities of CDOs. He compares externalities associated with CDOs to the externalities of idiosyncratic property rights, as Merrill and Smith describe them. Merrill and Smith write that by allowing even one person to create an idiosyncratic property right, the information processing costs of all persons who have existing or potential interests in this type of property go up.

Just as *numerus clausus* rules function to limit the externalities associated with idiosyncratic property rights, these rules could limit externalities of CDOs:

The externalities mentioned in Merrill and Smith allowed them to conclude that the form of properties may need to be restricted. . . . The situation is similar here. Although we suggest the existence of

---

171 *Id.*
172 See *id.* at 461, 464-68.
system externality associated with the individual invention of CDOs, we cannot conclude the degree of restriction the law should impose on the creation of CDOs or financial derivatives in general. The key, in our opinion, is the implicit connection derived from the fact that a new financial product has been created.\textsuperscript{173}

This argument strikes the same chord as the others' in its effort to connect complex financial products to property rules limiting forms of interest. But it, too, does not tease out the difference between products that are complex and products that are held by multiple stakeholders. The fact that a CDO is a new, complex type of property does not mean that interests in this property are complex in the way that concerns \textit{numerus clausus} rules.

Yet, there is, as Chu states, an “implicit connection” here. Perhaps the fact that property law recognizes a connection between complexity of interest and marketability provides justification on its own for limiting complexity in financial markets. Chu draws specifically on the externalities-based argument developed by Merrill and Smith (in explanation of the principle of \textit{numerus clausus}). Yet he, too, ultimately resorts to a high level of abstraction in describing the connection between property and financial regulation. “Treating CDOs as property with its intrinsic problems,” he writes, “justifies more intensive regulation. Treating the CDO as a mortgage property rather than a contract strengthens the rationale of regulation in both common and civil law traditions.”\textsuperscript{174}

But once we reach this level of generality—in terms of the relevance of property doctrines to financial regulation—we have not moved beyond the basic questions of whether regulation can and should address complexity per se. Without situating these assertions vis-à-vis the theoretical contention that financial markets are legally constituted and that property law infrastructure of markets already operates in many contexts to balance liquidity and complexity, we are no closer to answering the question of how to effectively regulate financial market complexity. In order to develop new potential, private law strategies for addressing complexity and moral hazard, scholars need to undertake more thorough work. The description of property/contracts distinctions, and of conceptions of property in financial markets, presented here are first steps towards exploring the private law infrastructure of markets so that we can consider strategies such as applying \textit{numerus clausus} concepts to financial products.

\textsuperscript{173} Id. at 469.
\textsuperscript{174} Id. at 470.
B. Shifting from a Contract-based to a Property-based Conception of Financial Products

At the outset of their article, *Making Credit Safer*, proposing ex ante regulation of consumer financial products, Oren Bar-Gill and Elizabeth Warren state: "Because financial products are analyzed through a contracts paradigm rather than a products paradigm, consumers have been left with unsafe financial products." They do not merely point out that a products-oriented approach supports their analogy to consumer goods for purposes of regulating financial products. Rather, they state that the contracts paradigm itself is the problem. *Because* the law has viewed financial products as contracts between creditors and consumers (in which parties may agree to whatever terms they see fit), consumers have been left with unsafe products. From a property perspective, if we view transactions as products per se, like goods or other property, then we can regulate them for safety. Just like the state prohibits sales of unsafe car seats or toasters (at any price), the state can prohibit sales of certain financial products.

The financial products at issue in *Making Credit Safer* are consumer transactions that lead to foreclosure, bankruptcy, or other financial distress due to debtors' inability to meet obligations or lack of understanding of contract terms (or both). But the conceptual shift—from a contracts to a property paradigm—has implications beyond the consumer context. Saule Omarova builds on this shift in her article, *License to Deal*, exploring the possibility of ex ante regulation of complex financial products. Omarova presents existing product-approval regimes for pharmaceutical drugs, chemicals, and commodity futures, and then considers possibilities for and challenges to regulatory approval of complex financial products.

These are not the first articles to discuss contracts as analogous to goods. However, prior works tend to focus on contracts for sales of goods as features of the goods. This is distinct from presenting financial contracts themselves as personality (for regulatory purposes, apart from their classification as such for assignment purposes).
Shifting from a contracts conception to a property conception (or vice versa) of any given transaction may seem semantic. But in fact this kind of shift has underscored significant legal reform in the past. In the area of housing, the late twentieth-century saw a conceptual shift from viewing residential leaseholds as conveyances of property to viewing them also as contracts between tenants and landlords.\(^\text{179}\) This shift informs much of how we understand rental markets today, especially in urban contexts. In the leasing context, reform of landlord-tenant relations developed by analogy to U.C.C. Article 2 warranties. The implied warranty of habitability recognized by courts references the sales law concept of implied warranty for protection of buyers.\(^\text{180}\) In the financial products context, perhaps lawmakers could articulate a concept of fitness that could provide a basis for asserting that financial products should be fit for their ordinary purpose, or fit for specific purposes for which they were acquired.\(^\text{181}\) While implied warranties are contract terms, they apply to the quality of property conveyed between contracting parties.

Bar-Gill and Warren, and Omarova, present financial products as products per se that the law might subject to regulation on the same grounds that it subjects consumer goods, pharmaceuticals, or chemicals to regulation. But what supports the analogy of financial products to goods? These scholars suggest that the analogy stands on the impact that financial products can have. A toaster can explode and injure someone. A mortgage product can “explode,” injuring the debtor, when payments unexpectedly increase and onerous terms emerge. An industrial chemical can threaten public safety and the integrity of crucial resources. A complex financial product can threaten the health of markets on which the public relies for financial security.

This effects-oriented perspective has been powerful as a rhetorical strategy in making the case for regulation.\(^\text{182}\) But there are also other grounds on which to make the analogy between financial contracts and products or goods. Financial transactions create asset-backed securities, instruments, and derivatives—contracts that we may describe as financial products. As discussed in Part I above, these kinds of transactions can confer rights of exclusion to investors that exceed what transacting


\(^{180}\) The implied warranty of habitability functions differently from U.C.C. warranties in that parties cannot disclaim it by contract. See, e.g., Javins, 428 F.2d 1071.

\(^{181}\) Cf. U.C.C. §§2-314, 2-315.

\(^{182}\) Again, this strategy was central to the creation of the CFPB. See supra note 175 and accompanying text.
parties may create using only contract law. In this sense, they are property-like and, therefore, perhaps best viewed as products per se.

C. Normative Implications

Despite the range of scholars and policymakers articulating property concepts in the context of financial regulation, the normative implications of applying property law rules to regulate financial products are under-explored. This Article begins the kind of inquiry into the private law infrastructure of financial products that should precede normative declarations. Specific reform proposals that could follow from this approach might include (i) the use of servitudes in the context of financial products,183 (ii) application of the concept of unreasonable restraints on alienation to challenge the enforceability of products that are excessively complex,184 (iii) a standardized menu of permissible financial products to which issuers must either conform or explain deviations,185 and (iv) legislative or common-law standards for fitness or

183 Servitudes could potentially make features of financial products such as consent to modification provisions, covenants about collateralization, and the like, non-severable from payment rights and enforceable against successors in interest. Property law historically declined to recognize servitudes on personalty. See Zechariah Chafee, Jr., Equitable Servitudes on Chattels, 41 HARV. L. REV. 945 (1928); Zechariah Chafee, Jr., The Music Goes Round and Round: Equitable Servitudes and Chattels, 69 HARV. L. REV. 1250 (1956). Now, however, developments in intellectual property law are igniting interest in servitudes on personal property. These developments break ground for the possibility of recognizing covenants on financial products. Granted, financial products are not goods—they are intangibles. The literature on personal property servitudes focuses on chattels. Historic uses of servitudes on personal property involved price restraints on goods (that courts refused to enforce, citing anti-trust concerns and the invalidity of servitudes on chattels). See Molly Shaffer Van Houweling, The New Servitudes, 96 GEO. L. REV. 885 (2008) (on the evolving jurisprudence of servitudes, specifically in the context of intellectual property licensing); see also Michael E. Kenneally, Commandeering Copyright, 87 NOTRE DAME L. REV. 1179 (2012); Glen O. Robinson, Personal Property Servitudes, 71 U. CHI. L. REV. 1449 (2004). Contemporary uses of servitudes on personalty involve high-tech products and the terms of licenses and other restrictions incidental to products' use. Applying the concept of servitudes in the context of financial products would require further inquiry into the feasibility of extending these recent developments in servitudes law to intangibles. Van Houweling identifies three categories of concern with enforcing servitudes: concerns about notice and information costs, about the problem of the future, and about harmful externalities. She addresses each type of concern in assessing servitudes on personalty. See Van Houweling, supra, at 890. If we were to expand upon the idea of a covenant requiring consent to assignment of mortgages, we might assess the covenant in terms of these three categories of concern.

184 Restraints on alienation are covenants or conditions that restrict a property owner's capacity to dispose of property or that threaten the liquidity of property. See SINGER, supra note 13, at 560-63.

185 Cf. Awrey, supra note 5, at 292-94; Fisch, supra note 11; Omarova, supra note 6.
merchantability of financial products. Each of these ideas would require separate and thorough explication to determine its viability.

Working from the notion that financial products could benefit from the property concept of *numerus clausus*, we could reconsider, for example, the 'true sale' doctrine. Cast in property terms, this doctrine states that an ownership interest must take a certain form—a seller cannot convey ownership of assets by a purported conveyance that contains terms creating excessive recourse. The ABS statutes, then, we can view as legislative recognition of a heretofore unknown form of property interest. Bankruptcy courts might refuse to recognize a form of interest that runs afoul of well-worn characterization doctrines establishing the scope of ownership of various assets for purposes of delineating a bankruptcy estate (vis-à-vis assets transferred to off balance sheet vehicles).

Working from the notion that financial products are like other products that should be subject to public welfare regulation, we can imagine judicial actors or state legislatures finding implied warranties of fitness to ensure financial product "safety." Or, such lawmakers might find that terms that are so obtuse as to undermine reliable valuation constitute unreasonable restraints on alienation and are therefore unenforceable.

Conclusion

Moral hazard features prominently in discussions of originate-to-distribute approaches to lending, and of financial institutions that act with expectations that a government "bail-out" will ultimately prevent failure. Risk-taking by market actors originates in transactional contexts governed by contract and property doctrines. Legal scholars have begun to assert that, rather than leave financial markets to the realm of contract (in which parties may enter into any transactional arrangements they wish), regulators should consider the logic of property-law concepts like *numerus clausus* that require transactions to conform to a set of legally recognizable forms. In addition, recent regulatory innovations turn on a shift in perspective from treating financial products as contracts between financial institutions and their customers to

---

186 This would involve state common law or legislative reform to adapt concepts of fitness from the U.C.C. Article 2 and other contexts to the financial products context, perhaps drawing on CFPB rules as guidelines for defining fitness. *Cf.* U.C.C. §§82-314, 315; Javins v. First Nat'l Realty Corp., 428 F.2d 1071 (D.C. Cir. 1970); Slavin v. Rent Control Bd. of Brookline, 548 N.E.2d 1226 (Mass. 1990). This type of reform could fortify the CFPB's objectives in the face of political exigencies that could potentially undermine its effectiveness if political power shifts.

187 See *supra* note 130 and accompanying text.
treating them as products per se. If banks were to create financial products that are more readily intelligible to market participants generally, they would be less able to generate transactional complexities that can exacerbate the socialization of risk.

What is the role of private law in identifying and addressing market complexity? The turn to property-law concepts in discourse on financial markets regulation is, as yet, under-developed. There may be considerable wisdom in the old, private law doctrines that balance tailoring and innovation among transacting parties with concerns for liquidity. Building effectively on this wisdom to curtail moral hazard, however, will require more, and more detailed, work than scholars have done so far. This Article provides a starting point.