The Intractable Production Problem in Contract Law

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Alan Schwartz and Robert E. Scott

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THE INTRACTABLE PRODUCTION PROBLEM IN CONTRACT LAW

Alan Schwartz∗ and Robert E. Scott∗∗

ABSTRACT

Contract law has long suffered from an institutional problem: What legal institution can best create an efficient law for commercial contracts? Until the early 20th century, the vast majority of contract law was created by common law courts. The common law created contract default rules that possessed three key properties: They solved contracting problems (i) that parties in very diverse contexts faced, (ii) as the parties would have solved them had they contracted about the matter, and (iii) the defaults were updated as commerce changed. But common law courts are slow: Default rules require years to take form. In response, the 20th century saw public and private lawmaking bodies enact commercial statutes to update discrete legal areas such as secured credit, commercial paper and bankruptcy. The private lawmaking efforts were propelled initially by the need to address specialized fields where more rapid updating was needed, but any revisions to these statutes were controlled by cohesive interest groups whose actions only serve their private interests. These private lawmaking efforts also assumed a generalist portfolio. In the Uniform Commercial Code, they reached beyond specialized fields to the law of sales and then, in the Restatements, to all contracting behavior. These generalist bodies also had a serious flaw. Even if their rules were efficient when created, the rules did not change with changing commercial practice. We show that such “obsolescence”—the persistence of rules that only solve yesterday’s contracting problems—a) is common in the efforts of the generalist private lawmaker, b) is hard to avoid, and c) induces socially inefficient contractual responses. This leaves a set of unsatisfactory institutional choices for producing a general law of commercial contracts: Specialized fields are subject to interest group capture and intrinsic flaws prevent generalist lawmaking bodies from updating their rules as commerce changes.

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changes; courts may be slow, but no other institution has done better in combating the obsolescence concern.

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I. INTRODUCTION

Contract law has a production problem. Commercial parties require a
contract law that is both efficient when it is created and that also adapts
efficiently when commercial circumstances change. But currently no legal
institutions exist that can satisfy both of these criteria. Three legal
institutions produce commercial contract law today: courts, statutes that
regulate discrete areas, and private lawmaking bodies that create general
contract law rules.1 As we will show, each has limitations. Common law
courts develop default rules that are efficient when they are created and are
updated as economic conditions change. But law making through the

1. The American Law Institute (ALI) and the Uniform Law Commission (ULC) (also
known as the National Conference of Commissioners on Uniform State Laws) are the private
legislative bodies that create general commercial contract law. The ALI and ULC jointly
created the law of sales in Article 2 of the Uniform Commercial Code (UCC) and the ALI created
the two contracts Restatements.
judicial process only produces a restricted set of general contract law rules and updating is slow. These constraints reflect the limited capacity of courts to address more particular commercial practices adequately. In response, both public and private lawmaking institutions have created specialized statutes that specify rules for discrete legal areas such as secured debt, commercial paper, financial transactions, and bankruptcy. These specialized statutes are useful complements to the general law of contracts. Yet, the rules were enacted at the instance of cohesive interest groups: The public interest was poorly represented in the enactment process. The felt need for more and better rules governing the general law of contracts led the private lawmaking groups to produce the law of sales in Article 2 of the Uniform Commercial Code (UCC) and the two Restatements of Contracts. These private lawmaking efforts developed new default rules that covered a wider range of contract law issues than the common law, but history has shown that the rules do not adapt to changing circumstances.

The source of the difficulties that plague the commercial law production process is the singular fact of obsolescence. A commercial law rule, whether a default rule or a mandatory rule, is obsolete when it is no longer “apt.” An apt rule efficiently solves a “contracting problem” in the current state of the world, and also solves the problem in future states of the world that are “relevantly similar” to the current state. But if in a future state the contracting problem takes a different form, the apt solution to the problem can change as well. An obsolescence concern exists, therefore, when a legal rule becomes inapt: That is, the rule does not solve the contracting problem in its current form.4

2. The ALI and ULC have jointly created a number of specialized commercial statutes that are incorporated into the UCC, including Article 9 (secured credit), Article 3 (negotiable instruments), Article 4 (bank deposits and collection), and Article 5 (letters of credit). Prior to the UCC project, the ULC produced several predecessor statutes, including the Trust Receipts Act and the Negotiable Instruments Law (NIL) that were adopted by many state legislatures. Congress, on the other hand, is responsible for the various Bankruptcy Acts, including the most recent regulation of business bankruptcies, the Bankruptcy Code of 1978. In addition, administrative regulators, acting under Congressional statutory authority, impose contractual requirements in the banking and financial regulatory context. An example is the Federal Reserve Board regulation of Systemically Important Financial Market Utilities, which impose standardization requirements for derivatives contracting. Regulatory standardization of derivatives contracts was a major factor in mitigating the 2008 financial crisis. See infra note 214 and accompanying text; see also e.g., Part VI for a discussion of the increasing role of administrative regulation of contract terms.

3. A contracting problem is an obstacle to the creation of a surplus maximizing contract. As examples, parties may want to create an incentive for the seller to invest efficiently in increasing the value of the traded product for the buyer; or, in a long-term contract, to ensure that neither party defects prematurely to an outside option.

4. The UCC Article 2 warranty provisions illustrate the obsolescence problem. Article 2 primarily regulates quality issues with the implied warranty of merchantability: Goods must be “fit for the ordinary purposes for which they are used” or “pass without objection in the trade.” U.C.C. § 2-314(2) (AM. L. INST. & UNIF. L. COMM’N 1952). This regulation was once efficient when sellers traded homogenous standard goods to large numbers of similarly situated buyers. However, the warranty is commonly disclaimed today because many sellers
Obsolescence is a significant concern because the commercial world of today is dissimilar in significant ways from the world that existed when our leading commercial laws were created. UCC Article 2 took its current form by 1952, and the Restatement (Second) of Contracts was largely completed by 1974. Neither body of law has been materially amended since then. The obsolescence concern is also present in discrete legal areas like bankruptcy that enact specific statutory solutions. The reorganization chapters of the Bankruptcy Code were last comprehensively redone in 1978. But today many insolvent firms are directly sold to the market through an ill-defined process rather than reorganized under the Code’s elaborate rules.

Over the past four decades a number of technological and other changes have strongly affected American manufacturing—among them: firms outsourcing all but core competencies, shorter product cycle times, the increased pace of technological change, the widespread adoption of just-in-time inventory methods, the outsourcing of design and innovation not just production, and the need to meet a variety of competitive challenges including those created by the introduction of high quality Japanese products in the early 1980s. These changes, in turn, have led to new problems that procurement contracts have to solve and have fundamentally changed the nature of contractual relationships in manufacturing.

Id. See also John L. Pence & P. Saacke, A Survey of Companies that Demand Supply Quality, in 42ND ANNUAL QUALITY CONGRESS TRANSACTIONS (1988) (documenting that companies increasingly relied on warranties to ensure quality and instead used other quality control measures). We discuss the many ways that contracting practices have changed over recent years in infra Part II.A.

6. For discussion, see Robert E. Scott, The Rise and Fall of Article 2, 62 LA. L. REV. 1009 (2002). An institution called “The Permanent Editorial Board” is supposed to keep the UCC current, but the Board’s recommendations must be approved by the ALI and ULC before being recommended to the states for adoption. The Board has made few significant recommendations and fewer have been adopted. See id. at 1049; Permanent Editorial Board for Uniform Commercial Code, ULC, https://www.uniformlaws.org/committees/community-home?CommunityKey=ffaa1a04-3d69-40f5-95bd-7adal186ef28 (last visited Oct. 10, 2020) (documenting the activities of The Permanent Editorial Board). Similarly, the ALI has no institution for updating Restatements. We discuss the failed efforts to revise Article 2 and the Restatement in infra Sections IV.B.1–.2.

7. A bankruptcy specialist recently explained:

The market-sale process arose although it was not the means of restructuring that the 1978 Code favored or even anticipated. Even today, the sale derives its authority from two broad, open-ended sentences in the Code that lack texture, standards, specifics, and instructions. Nevertheless, the market sale has become a prime system of industrial restructuring in the United States. Market conditions prevailed over statutory structure and, one can probably say, over congressional intent.
An obsolete term in a restatement, statute, or even a private contract is not innocuous. There are two concerns. First, suppose that a UCC sales law default rule efficiently solved a contracting problem when enacted, but the world has evolved to a different state in which the problem takes a different form. The private lawmaking groups created the UCC default rule because it was too costly for contracting parties to solve the problem for themselves. If it remains too costly for private agents to solve the problem efficiently in its current form, obsolescence causes parties to treat the problem with second-best solutions. The second concern with obsolescence is that a vestigial default could transition from being harmless but unhelpful to being dangerous. Such transitions can occur when a default applies linguistically, but not substantively, to the current version of the parties’ contracting problem. A party behaving strategically may then attempt to exploit the linguistic fit to generate an unfair or inefficient judicial interpretation in its favor.

Mark J. Roe, Three Ages of Bankruptcy, 7 HARV. BUS. L. REV. 187, 189 (2017). We discuss the political economy issues that prevent updating of bankruptcy law in infra Part IV.C.

8. Even with the help of market institutions, commercial parties are often unable to update their contracts themselves. We discuss the causes and consequences of commercial parties’ inability to revise obsolete terms in infra Parts III–IV.

9. Three reasons have been offered to explain why the private sector underproduces contract innovation: (i) A contracting dyad would bear the full costs of innovation but could appropriate only a fraction of the gains; (ii) Parties who develop innovative solutions bear significant legal risks. Because the legal system retains the power over interpretation and enforcement, parties cannot be certain what effect will be given to any solution to a contracting problem until it is tested in litigation; (iii) Accumulated experiences are important in in creating solutions to contracting problems. Individual parties may lack this experience, but the state can aggregate the experiences of numerous parties. In sum, the common justification for state-supplied default rules is that the state can create an apt rule more cheaply and better than individual parties can. It was this logic that led to the adoption of the many default rules in the UCC. For more discussion on the role of the state in filling contractual gaps, see Charles J. Goetz & Robert E. Scott, The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms, 73 CALIF. L. REV. 261, 273–76 (1985) [hereinafter Goetz & Scott, The Limits of Expanded Choice].

10. We discuss the problem of second-best solutions in infra Part II.B.

11. Standard form contracts in the sovereign debt market illustrate this danger of obsolescence. In 2016, activist creditors successfully held out from a debt restructuring offer by Argentina after asserting a novel—and widely condemned—interpretation of the historic pari passu clause found in almost all sovereign debt contracts. In the common understanding, the obsolete pari passu clause was an inconsequential clause in the agreement between the lender and each borrower, specifying how much the creditor would be repaid. The holdout creditors, however, claimed that the clause instead was an agreement among the creditors. As such, the agreement would be breached if some but not all of the creditors accepted the debtor’s settlement offer. The creditors who objected thus could enjoin the other creditors from receiving any payment. The bonds’ ancient language permitted strategic creditors to force a billion dollar settlement, though the result was inconsistent with current practice and probably inefficient. And the pari passu clause has been difficult to update: Bonds worth many billions of dollars were sold under the clause for years after the holdouts initially mounted a challenge. See Stephen J. Choi, Mitu Gulati & Robert E. Scott, The Black Hole Problem in Commercial Boilerplate, 67 DUK. L. J. 1, 19–21 (2017) [hereinafter Choi, Gulati & Scott, The
The persistence and significant costs of obsolescence demand a critical reexamination of the institutional features of the commercial law production process. In this Article, we focus specifically on the comparative institutional question: How have private markets and the three legal institutions governing commercial contract law—courts, public and private rules for managing specialized areas, and general contract law codifications—fared in their responses to the obsolescence concern?

We begin that inquiry by briefly reviewing how the developments over the past one hundred years have produced our modern commercial law. For around 700 years, from 1200 to 1900, only one institution—common law courts—functioned in England and America. Courts could function unaided for so many years because intrinsic to common law adjudication is a mechanism for generating a particular subset of efficient contract law rules. Consider, for example, a case of first impression in which the parties' contract lacks a term to resolve their dispute so the court has to fill the gap. The court's decision may become a rule when future parties recognize that the initial court's resolution of the case faces them with a choice: to respond to the first case with an express term that regulates the same dispute or to leave a gap in the contract. If a subsequent contracting dyad leaves a gap, the first case becomes a precedent in the sense that the court will resolve the later dyad's dispute with the rule that it used to resolve the initial dispute. Rules in cases thus become default terms in contracts that are written later unless parties contract out.

A court's decision can function as an efficient precedent, however, only if four conditions are satisfied: (i) Parties in other commercial contexts face the same contracting problem as the parties in the first case; (ii) The...
solution to the problem conditions on verifiable information;\(^\text{15}\) (iii) The later parties left a contract gap: Their agreements did not otherwise regulate the problem, thereby creating the opportunity for later courts to rule on the issue; and (iv) The initial court's ruling solved the problem as the parties would have solved it had they contracted over it. But condition (iv) implies condition (iii): The future parties will have left a contract gap only because the rule in the first case efficiently solved their problem.

This sketch of the common law adjudication mechanism shows that a common law contract rule has two key properties. First, the rule is “transcontextual”: The rule efficiently solves a contracting problem for parties functioning in diverse contexts.\(^\text{16}\) If the rule in the first case lacked this property, the rule would be a historical curiosity only. Future parties in other areas would not have left a contract gap, but rather would have contracted about the problem for themselves. The second property is that the rule roughly tracks changing commercial patterns. When commerce materially changes, parties do different deals under new contracts. If the future parties’ contracts nevertheless also leave a gap where a solution to the problem could be found, the rule in the first case continues to function as a precedent: The rule has been “updated.” But if parties functioning in new commercial situations create contracts that expressly govern the issue, the rule in the first case becomes vestigial: It has no current function. However, the common law mechanism, triggered by current disputes, will then create new rules when the four conditions specified above are satisfied.\(^\text{17}\)

The updating feature of the common law mechanism has an inherent limitation, however. Parties in different commercial contexts often require

\(^{15}\) Information is verifiable if a) parties can observe it, and b) it would be cost justified for parties to prove its existence in court. For example, market prices are verifiable because they are easy for both parties to observe and cheap to prove. In contrast, buyers usually cannot observe their seller’s costs, and production functions are costly to prove. Hence, a good remedy default would condition on market prices but seldom on seller costs. See Robert E. Scott & George G. Triantis, Incomplete Contracts and the Theory of Contract Design, 56 CASE W. RESV. L. REV. 187, 191–92, 195 (2005).

\(^{16}\) The process by which common law courts develop transcontextual default rules that apply across many disparate industries is developed formally in Schwartz & Scott, The Default Rule Project, supra note 13, at 1546–51.

\(^{17}\) This explanation for how contract law is made complements the standard narrative. In that narrative, great judges—Mansfield, Cardozo, Hand—created rules that last. The mechanism explanation is consistent with this view: The more commercially sophisticated and competent the judge is in the first case, the more likely the judge is to solve the parties’ contracting problem efficiently. And then later parties are more likely to leave a gap into which the first court’s rule can fit. But the mechanism explanation does not rely on unusual judicial creativity. The rule in the first case, whether artfully or poorly conceived, will stick if the rule satisfies the four conditions; otherwise not. Put another way, we do not claim that the common law in general is efficient or that courts have a particular expertise in creating efficient common law rules. Rather, an efficient contract law rule, we argue, is the joint product of a plausible judicial solution to a contracting problem together with the uncoordinated decisions of heterogeneous contracting parties to accept that solution.
solutions that are specific to their circumstances. But generalist courts are ill-equipped to supply specific solutions to particular industries. The solution they suggest for a specific problem will likely not be the outcome that the parties would have specified had they contracted over the issue. That failure, in turn, implies that future parties in the industry would not leave a gap in their contract and no default rule would be formed. Private lawmakers responded to this regulatory gap by creating discrete bodies of commercial law, including secured credit to regulate transactions between creditors and their debtor, and commercial paper and bank deposits to regulate short-term financing transactions. Many of these discrete lawmaking efforts have been regularly updated as focused interest group pressures stimulate reform proposals. Yet, this focused response to the risk of obsolescence raises a further concern: Interest group pressure produces specialized commercial rules that are privately efficient but not necessarily socially efficient. This disregard for the public interest justifies a continuing role for general contract law rules that take broader social interests into account.

The American legal establishment long recognized, therefore, that a modern economy benefits from a law that applies to contracts generally but, for several reasons, American lawyers were unsatisfied with the common law mechanism. The first reason follows from our earlier analysis: Default rules are slow to form. Litigation must proceed over time in different contexts before a default rule is fully formed. Consequently, most of the common law default rules were developed in the 19th century following the industrial revolution, and the process of rule development slowed

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19. Article 9 of the UCC regulating secured credit has been updated twice—in 1978 and again in 1999. It was subsequently amended in 2010. Article 3 on negotiable instruments and Article 4 regulating bank deposits and collections were revised in 1990 and amended in 2002. For discussion of the interest group pressures that stimulate updating of specialized commercial fields, see generally Alan Schwartz & Robert E. Scott, The Political Economy of Private Legislatures, 143 U. PA. L. REV. 595 (1995) [hereinafter Schwartz & Scott, The Political Economy] (applying structure-induced equilibrium theory to show that interest group pressures in the ALI and ULC produce current rules that advance the groups goals).
20. Article 9 of the UCC is an apt example of the potential divergence between private and public interests. Article 9 rationalized numerous pre-Code statutes governing the priority of secured creditors’ claims and in the process simplified and reduced the costs of issuing secured debt. But critics have long argued that the priority given to secured creditors in Article 9 functions to redistribute wealth away from unsophisticated creditors, particularly tort claimants, employees and small suppliers. See e.g., Lynn M. LoPucki, The Unsecured Creditors Bargain, 80 VA. L. REV. 1887, 1941–47 (1994). We discuss the political economy of the recent revisions to Article 9 in Part V.B.1.
21. The supplementary role of contract law as the backstop to specific statutory regulation is made explicit, for example, in UCC § 1–103(b) (AM. L. INST. & UNIF. L. COMM’N 2001) (“Unless displaced by the particular provisions of the UCC, the principles of law and equity, including the law merchant and the law relative to capacity in contract, principal and agent, estoppel, fraud, misrepresentation, duress, coercion, mistake, bankruptcy and other validating or invalidating cause supplement its provisions.”).
considerably thereafter. Because the process of developing default rules had slowed, courts had relatively few general rules with which to fill gaps in incomplete contracts. This stasis in common law rule development followed from the second reason: Courts are poor regulators of a modern economy. Courts cannot find facts, apart from case records, and so cannot hold accurate views of the context in which a possible rule will function and the effects of current rules. In addition, judges are generalist lawyers. The typical judge has little commercial expertise and cannot effectively resolve the economic issues that a possible rule may pose. Another rule generating mechanism was required.

Widespread dissatisfaction with the common law process produced the two major interventions that sought to change contract law itself. The first effort at a codification of contract law occurred at the turn of the 20th century when the Uniform Law Commission (ULC) produced the Uniform Sales Act. That effort soon proved obsolete, however, and throughout the interwar period only the courts were able to keep sales law current with changing commercial practice. This led to the second effort by the American Law Institute (ALI) and the ULC in the mid-20th century to codify the general law of contracts. Article 2 of the UCC governing sales transactions has since been enacted in every state (except Louisiana) and it was followed by the Restatement (Second) of Contracts, which usefully summarized important contract doctrines for common law courts. The Restatement also had a distinct policy focus, identifying some contract rules as better solutions to a given contracting problem than others.

The justification for the codification of general contract law rules follows from the dissatisfaction with the common law process. UCC drafters and the ALI members responsible for particular restatements are thought to be more expert and to have more real-world knowledge than the typical common law judge. Moreover, the felt need for more default rules is genuine: Private parties will not solve every contracting problem that they face. Contracting parties seldom can internalize the full gain from creating a useful solution to a common contracting problem—others can copy their innovation—but nonetheless they bear the full cost. When the cost exceeds a contracting dyad’s share of the gain, the problem will not be

23. Id. at 1535, 1542, 1550.
27. For example, the Restatement adopted a contextual approach to problems of parol evidence and interpretation in lieu of the textualist rules that had emerged from the common law. See Restatement (Second) of Contracts, §§ 209-223 (AM. L. INST. & UNIF. L. COMM’N 1981).
solved efficiently without outside help. Private lawmakers can use their expertise and knowledge to solve these common problems and supply contracting parties with the solutions in the form of UCC or Restatement sections. In prior work we have criticized the rationale for this method of supplying contract terms on the ground that the ALI and ULC are also institutionally limited. We focus here, however, on the deeper institutional problem. As we said above, a public program of supplying contract law rules must satisfy two conditions: The rules must first solve contracting problems as the parties would have solved them; and second, the rules must update promptly as economic conditions change. In this Article, we show that even if the ALI and ULC once supplied rules that parties themselves would have chosen, these private groups no longer do so: Their rules remain but the problems have changed.

The Article proceeds as follows. Part II describes the dramatic changes in contemporary contracting practices that have rendered state-supplied default rules, as well as those we designate as “quasi-mandatory” rules, obsolete. We develop an economic theory that shows parties will reject an obsolete state-supplied default because the term cannot solve the current version of their contracting problem and bad faith parties could exploit the term strategically. But parties are unlikely to create a new term equivalent to an apt state-supplied default because of its excessive cost. The theory predicts that parties instead will replace the obsolete default term with second-best solutions. Yet, the obsolete default lives on. Similarly, parties can only escape the constraints imposed by an obsolete quasi-mandatory rule by costly contracting around the rule. Finally, Part II analyzes the coordination problems that may prevent private parties from revising obsolete terms in standardized interdependent contracts.

Part III provides evidence of the persistence and costs of obsolete terms. Here we show how the theory developed in Part II explains many of the contracting patterns we observe as parties attempt to adjust to the constraints imposed by obsolete default and quasi-mandatory rules. Consistent with the theory, parties avoid obsolete terms by settling on less efficient alternatives. This Part also presents evidence that parties in large, multilateral markets often fail to revise standardized obsolete terms notwithstanding the heightened level of litigation risk that they face as a result.

In Part IV we consider the several systemic reasons that explain why UCC Article 2, the Restatement, and the Bankruptcy Code remain rocks in the river of changing commercial practice. Obsolescence persists when coordination on an efficient replacement fails because individual parties would bear too much of the cost and internalize too few of the gains to reward efforts to initiate legal change. The private lawmaking bodies that

created today’s obsolete contract law rules also are poorly equipped institutionally to create current ones. These institutions meet episodically, have little incentive to update the rules by adopting controversial reforms, and interest group competition can instantiate a status quo bias. And when the rule making process is captured by insiders, as in the case of bankruptcy, specialized rules also can become “sticky.”

Part V revisits commercial law’s production problem. Here we ask how other institutions that supply commercial law rules have responded to the obsolescence concern. Some private interests have created specialized contract terms that parties are then invited to adopt in their contracts, but this solution to updating is still underproduced. The two public institutions that are largely free from persistent obsolescence are specialized lawmaking bodies and common law courts. Organized interest groups that supply rules for specialized fields can update their rules but at the cost of promoting private interests over the public interest. What remains are common law courts, the institution with which we began. Courts’ rules are efficient and update over time, but at first blush do not appear to cover much of the ground. We show, however, that once artificial institutional boundaries are set aside, the activity of common law courts is more vibrant than is commonly assumed.

We conclude in Part VI that the splintering of our general contract law into contract laws for specialized fields—such as corporate, bankruptcy, and financial contracting—points to an emerging institutional response to the externalities that the specialized laws create.

We have two closing observations. First, the common view is that general contract law is created by two institutions: common law courts and “private legislatures” such as the ALI and the ULC that produce UCC Article 2 and the Restatements. This view is incorrect because both of these contract law products are largely obsolete. Today, there are courts and episodic, specialized interventions. The question we raise is whether this is the best American law can do.


31. See infra note 54; see also infra Section II.B.1.

32. We note here an important distinction between the UCC and the Restatement. The UCC is an enacted statute and thus when parties escape an obsolete UCC rule, the obsolete rule lives on and imposes costs on subsequent parties. The Restatement is directed to courts. An obsolete Restatement rule thus becomes law once it is used strategically in litigation to advance a client’s claim and a court is persuaded to adopt the rule even though it is not, in fact, an apt solution to the contracting problem in question. In assessing the cost of obsolescence, the UCC statute imposes greater costs than the obsolete Restatement rule, because a court may never be persuaded to adopt the Restatement rule, and if a court does so, the rule ultimately will disappear as parties choose not to leave a gap that can be filled by the obsolete rule. Despite this difference, the important point is that both the UCC and the Restatement are now obsolete and thus no longer relevant institutions for producing contract law to solve new contracting problems.
Second, we note the novelty of our analysis. There are two significant prior contributions. Grant Gilmore observed that early 20th century codification efforts became obsolete, but for reasons that differ from ours. According to Gilmore, these uniform law codifications were intended to "embalm the past"—that is, to solve yesterday's doctrinal problems and enact the solutions into law. A codification that does this will inevitably become obsolete because the future poses different doctrinal problems. But the UCC and Restatement were not so much meant to solve old legal problems as to solve, in the form of default and quasi-mandatory rules, current economic problems. In contrast to Gilmore, we show that such laws become obsolete only when the economic problems either disappear or take new forms.

Guido Calabresi wrote an important book about obsolete statutes and judicial responses. Calabresi's subject was the statute that had outlived its animating purpose but that continued to affect behavior because it was a statute. He then asked how courts respond to an obsolete law by analyzing the strengths courts exhibit and the constraints they function under when attempting to make such laws current. We also observe that obsolescence occurs for statutes that are difficult to update. But, in contrast to Calabresi, we analyze the case of an obsolete commercial law that no longer affects behavior because parties contract out of the law's terms. As a consequence, our subject concerns how parties respond when a law that was supposed to solve the parties' contracting problems no longer does so. Thus, the comparative question we ask—which legal institution can best create an efficient law to regulate commercial contracting—is entirely novel. Nor has any prior work analyzed contract obsolescence as a discrete problem, to ask why and where such obsolescence exists, and how it can persist. We recognize, however, that our more important contribution may be to introduce the subject of comparative institutional analysis to private law fields.

II. A THEORY OF OBSOLESCENCE.

It is commonly accepted that some statutes and restatements were written long ago, and that commerce has changed over the succeeding decades. The question is how much, and does it matter? In Part II.A we answer that question by summarizing the evidence that contracting practices have changed significantly and demonstrating that many of the default rules in the UCC and the Restatement are no longer apt responses to current contracting practices. Part II.B seeks to answer two questions: (i) Is obsolescence, in any of its forms, costly to current parties? And (ii) why does it persist? We set out a formal example that illustrates how obsolete rules impose substantial costs on private parties and yet persist over time. Part

33. Gilmore, supra note 25, at 467–68.
I.L.C then clarifies the coordination problem that prevents parties to certain standardized interdependent contracts from replacing obsolete terms with apt alternatives.

A. The Changing World of Contracting Practices

The UCC sales law and the Restatement presuppose the following pattern of commerce: Merchants trade finished goods to each other or to retailers in discrete short-term transactions. The merchant seller either imports goods that it resells or buys goods from another merchant and resells them. This pattern continues to exist in some parts of the economy, but there are four legally relevant and economically significant differences between much of today’s commercial world and the world that the UCC and the Restatement presupposed. Each of these differences point to the absence of apt default rules to solve current commercial problems.

1. Providing Remedies for Long-Term Contracts

Parties today make long-term contracts, particularly to sell raw materials such as coal, oil, gas, and metals. The UCC and Restatement damage sections, however, presuppose discrete short-term transactions and thus cannot facilitate these long-term contracts. For example, if the seller breaches in year three of a seven-year contract, the buyer cannot recover UCC market damages because these measure the difference between the contract and market prices: Although thick markets for commodities and metals exist, a court could not find this difference for later years. The buyer also could not recover UCC consequential damages because they could not establish the future lost profits from the seller’s current breach.

35. A party requiring a continuous supply of a particular material for its business operations (such as an airline company for jet fuel or an automobile manufacturer for metals) benefits from entering into long-term contracts with suppliers. This ensures the buyer a reliable supply of the essential material at an agreeable price point, thereby protecting against extreme market fluctuations. Long-term contracts also encourage mutual investment into the contractual relationship, which over time makes the relationship more valuable vis-à-vis the rest of the market by increasing the expected returns for both parties. As trust and cooperation grow, problems of hidden information and actions are reduced, as is the need for formal sanctions. This ultimately reduces transaction costs and further increases the value of the contract. For an expanded discussion of these ideas, see Oliver Hart & Bengt Holmstrom, The Theory of Contracts, in ADVANCES IN ECONOMIC THEORY, FIFTH WORLD CONGRESS 71, 128–147 (Truman F. Bewley ed., 1987).

36. The UCC does endorse output and requirements contracts as well as open price terms. See U.C.C. §§ 2–306 & 2–305 (AM. L. INST. & UNIF. L. COMM’N 1952). These terms are key feature to many long-term contracts, but the damage provisions were not adapted to that new reality.

37. See, e.g., U.C.C. § 2–713 (AM. L. INST. & UNIF. L. COMM’N 1952) (stating that the measure of damages for repudiation by the seller is “the difference between the market price at the time the buyer learned of the breach and the contract price”).

38. See U.C.C. § 2–715, cmt. 4 (AM. L. INST. & UNIF. L. COMM’N 1952) (“The burden of proving the extent of loss incurred by way of consequential damage is on the buyer . . . .”).
Because the standard remedies are not apt, courts specifically enforce many long-term contracts. Specific performance is a compensatory remedy in the case of short-term, discrete transactions: The court simply orders the seller to transfer the goods. But the remedy is less satisfactory in long-term contracts because courts are reluctant to police complex, long-term economic arrangements, thereby creating opportunities for strategic behavior by both parties. Moreover, it is costly for a party to make periodic court appearances to ensure that its counterparty is complying with the court’s order. Parties thus attempt to avoid the need for contract remedies altogether by indexing contract prices to the prices in markets for inputs, outputs or both (e.g., electricity costs, raw materials, producer or consumer price indices). These attempts sometimes fail, however, and when they do the UCC again is unhelpful. How far must the prices generated by the index depart from the prices that current economic conditions would warrant to justify a court in not enforcing the index prices? And, if a court does not enforce, which party should bear the risk of a failed index? Neither the UCC nor the Restatement help courts to make specific performance more effective or help in answering these questions.

2. Interpreting Governance Agreements

The litigation over index clauses highlights the second major difference between the commercial world today and the world that prevailed 50 to 75 years ago: Current contracts often are not contracts in the traditional sense. Rather, they are governing documents that create structures to guide parties in producing complex goods. These documents present an interpretive challenge that the UCC did not foresee. Under the Code, interpretive issues are assumed to involve attributing meaning to contested terms. The UCC thus directs courts to ask if there is a custom in the trade, or a course of dealing or course of performance that would provide courts with context when reading the contract’s words. These interpretive aids were


40. A celebrated example of the failure of the UCC and the Restatement rules in helping courts make the specific performance versus excuse question more salient is Judge Teitelbaum’s tortured opinion ordering reformation of the contract’s complex and heavily negotiated index clause in Aluminum Co. of America v. Essex Grp., Inc., 499 F.Supp. 53 (W.D. Pa. 1980).

41. See U.C.C § 2–202(a) [AM. L. INST. & UNIF. L. COMM’N 1952] (“[W]riting intended by parties as a final expression of their agreement… may be explained or supplemented by course of dealing or usage of trade . . . or by course of performance.”). Comment 2 explains that “[s]uch writings are to be read on the assumption that the course of prior dealings between the parties and the usages of trade were taken for granted when the document was
sometimes helpful for contracts made in earlier times, but in today's complex governance arrangements there is likely no relevant custom or course of dealing to inform a court's interpretive judgment, nor is there a trade in the traditional sense. To interpret today's long lasting governance contracts, courts have to understand complex economic arrangements that do much more than specify price, quantity, and describe "the goods." Indeed, in some of these contracts there is no quantity term at all, prices change as a function of current conditions, and the goods are designed and produced thereafter. Hence, there is nothing to describe at the time of contracting. The contracts instead often prescribe behavior: A seller invites buyer representatives into its factory to participate in creating a product; a buyer invites sellers into its factory to facilitate installation and to remedy initial defects. Disputes involve a party's premature withdrawal from an arrangement or behavior that is allegedly inconsistent with the arrangement's purpose. No UCC or Restatement section provides courts with interpretive resources to adjudicate such disputes.

3. Motivating Investment

Simple sales contracts do not attempt to induce one or both parties to invest in the transaction: Classic contracts govern only trade. Modern contracts govern both trade and investment. As an example, consider a multi-stage arrangement in which two agents plan to develop a new product, if one would turn out to be feasible for them. Each agent has tasks to perform—research technical issues, research marketing issues, etc. At each stage, the agents report their results to each other. When the results are favorable, the agents move to the next stage. The arrangement ends positively when there is a product, but then the agents must develop a

phrased. Unless carefully negated they have become an element of the meaning of the words used." Id. cmt. 2.

42. There is virtually no evidence that courts, even those operating under the UCC's invitation to broadly examine context, ever conducted serious empirical investigations, and hence little reason to imagine they could succeed if they did. In fact, recent research suggests that on-going, "traditional" dealings never crystallized into well defined, customary rules at all. See, e.g., Emily Kadens, The Myth of the Customary Law Merchant, 90 Tex. L. Rev. 1153, 1156–1159, 1177–1181 (2012). See generally Lisa Bernstein, Merchant Law in a Modern Economy, in Philosophical Foundations of Contract Law 238 (Gregory Klass et al. eds., 2014) [hereinafter Bernstein, Merchant Law in a Modern Economy] [presenting empirical evidence rebutting the UCC's assumptions that trade usages exist and can be reliably taken into account]; Lisa Bernstein, Custom in the Courts, 110 Nw. U. L Rev. 63 (2015) (presenting empirical evidence showing that courts typically rely on unreliable party testimony rather than expert testimony or statistical evidence to establish usages).

43. In the mid-twentieth century, courts often held that the absence of a quantity term in a contract to trade discrete goods would make the contract too indefinite to enforce. See e.g., R. A. Weaver & Assocs., Inc. v. Asphalt Const., Inc. 587 F.2d 1315, 1315 (1978) [declining to enforce a requirements contract that failed to specify a quantity term]; Fort Wayne Corrugated Paper Co. v. Anchor Hocking Glass Corp., 130 F. 2d 471, 473 (3d Cir. 1942) (holding that "the buyer in a requirements contract has no duty to have any requirements and a seller under an output contract has no duty to have any output").

44. See Bernstein & Peterson, supra note 5, at 38–40.
protocol for how to trade the product between them or how to exploit it jointly. Because the agents cannot observe each other's ongoing actions, the arrangement poses challenges: how to ensure that the agents will report truthfully to each other; invest efficiently; continue with the arrangement when continuation would increase value rather than accept an outside option; and trade the product to the highest valuing party. It is almost otiose to say that the UCC and Restatement give courts no guidance on how to resolve disputes that arise under such modern arrangements. Instead, as we show in Part V, common law courts have led the way in developing new default rules governing the legal effects of the preliminary agreements that initially structure such arrangements, as well as the legal effects that attend innovative collaborative contracts.

4. Enforcing Collaborative Agreements

This discussion introduces a fourth difference—a profound transformation of contracting practice and contract law is occurring today. This transformation coincides with an increased rate of change in the business environment that is generally attributed to the information revolution. There is a rapid spread of new forms of collaborative innovation among independent firms at the pioneering and most productive frontier of nearly every area of the economy. Large pharmaceutical companies now

45. The complex contracts that parties use to induce truth telling between them and efficient investment are described in Tracy Lewis & Alan Schwartz, Pay to Play: A Theory of Hybrid Relationships, 17 AM. L. & ECON. REV. 462 (2016).

46. For discussion of the innovative default rules that are emerging from common law courts dealing with these new governance arrangements, see Alan Schwartz & Robert E. Scott, Precontractual Liability and Preliminary Agreements, 120 HARV. L. REV. 661, 691–702 (2007). [hereinafter Schwartz & Scott, Preliminary Agreements]. The modern framework for determining the legal status of these preliminary agreements was first proposed by Judge Pierre Leval in Tchrs. Ins. & Annuity Ass’n of America v. Tribune Co., 670 F. Supp. 491 (1987). The framework sets out a new default rule for cases in which the parties contemplate further negotiations. This rule binds the parties to negotiate further in good faith in seeking to achieve a final agreement. Id. at 498–499. Thus, it relaxes the knife-edge character of the common law, under which agreements were either fully enforceable or not enforceable at all. The Leval framework is now followed in at least thirteen states, sixteen federal district courts and seven federal circuits. Schwartz & Scott, Preliminary Agreements, supra, at 664 n.7. See, e.g., Brown v. Cara, 420 F.3d 148, 151 (2d Cir. 2005) (holding that a preliminary agreement to develop real estate imposed a duty to negotiate in good faith to reach a deal). See also discussion in infra Part V.B.

47. See e.g., Eli Lilly & Co. v. Emisphere Techs., Inc, 408 F. Supp. 2d, 668, 694–96 (S.D. Ind. 2006) (holding that a collaborative agreement for drug development was violated when one party conducted secret research); Medinol Ltd. v. Boston Sci. Corp., 346 F. Supp. 2d 575, 567 (S.D.N.Y. 2004) (addressing breach of contract claims involving an extensive collaboration for the development, marketing and distribution of medical stents). See also discussion in infra Part V.B.

48. For an extended discussion of the new forms of collaborative contracting and their role in adapting to an uncertain world, see generally Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration, 109 COLUM. L. REV. 431 (2009) [hereinafter Gilson, Sabel & Scott, Contracting for Innovation].
routinely develop new drugs in concert with specialized biotech firms. Automobile producers routinely co-develop key components ranging from sophisticated fuel injection systems to transmissions with specialist suppliers. Today, in every sector of the economy, vertical integration is replaced by supply chains linked together by collaborative contracts. Here, formal and informal contractual networks function as mechanisms for coordination and cooperation in response to increases in uncertainty. Nothing in the UCC or the Restatement helps courts to adjudicate contractual disputes in these contexts.

In short, it is beyond dispute that commercial arrangements in the United States today differ substantially from the arrangements that obtained when our leading commercial laws were created. The private

49. The development of new drugs based on biotechnology often entails contracting across organizational boundaries. Large pharmaceutical companies frequently lack the depth of scientific knowledge and experience that provide the foundation for biotech research. Smaller biotech firms typically lack the experience and capital both to take the drugs through the arduous process of obtaining FDA approval and then to commercially market the drug. See Leslie Gladstone Restaino, *BioPharma Collaborative Agreements: Choosing the Right Deal Structure*, METRO. CORP. COUNS. 47 (Nov. 2007), available at http://www.metrocorpcounsel.com/pdf/2007/November/47.pdf. A prototypical exemplar of this form of collaborative contracting is the research, development, and license agreement between Warner-Lambert, a large pharmaceutical company, and Ligand Pharmaceutical, a much smaller biotech company, to discover and/or design small-molecule compounds that act on the estrogen receptors, to develop pharmaceutical products from such compounds and to take such products through the FDA approval process and commercialization. The agreement is available at WARNER-LAMBERT CO. & LIGAND PHARM. INC., RESEARCH, DEVELOPMENT AND LICENSE AGREEMENT (Sept. 1, 1999), https://contracts.onecle.com/ligand/warner.rd.1999.09.01.shtml. For a discussion of these collaborative biotech agreements, see generally Ronald J. Gilson, Charles F. Sabel, & Robert E. Scott, *Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine*, 110 COLUM. L. REV. 1377 (2010) [hereinafter Gilson, Sabel & Scott, Braiding].


lawmakers who produce the UCC and the Restatement have not solved their production problem: how to keep the law current and useful.

The reasons demonstrating that the UCC’s “machinery” for adapting to change is broken, and that argues for an entirely new approach to the content and theory of sales law, curiously parallels Karl Llewellyn’s reasons for advocating in 1940 for the adoption of an entirely new commercial code, rather than proposing extensive amendments to the Uniform Sales Act. As Llewellyn explained, the Sales Act was based on “concepts that took shape on the basis of a face-to-face dealing with present goods.” In contrast, the American economy in the 1920’s and 1930’s was increasingly dominated by the emergence of a “nationwide indirect marketing structure,” in which most contracts were executory and a large portion of trade was mediated by brokers and factors of various sorts. Were Llewellyn here today he would doubtless agree that the resistance to change that doomed the Sales Act has now undermined his commercial code.

B. The Persistence and Effects of Obsolete Default and Mandatory Rules

1. A Taxonomy of Default and Quasi-mandatory Rules

Commercial law rules commonly are grouped in three categories: (i) defaults, which attempt to solve a contracting problem as parties would have solved had they addressed it; (ii) sticky defaults, which attempt to solve a contracting problem as the regulator believes it should be solved and include barriers to contracting out; and (iii) mandatory rules, which require the solution to a contracting problem as the regulator believes it should be solved and prevent particular private solutions. The distinction between sticky defaults and mandatory rules is more fluid than is commonly supposed, however, because parties often can realize the solution they prefer by costly contracting around a mandatory rule. Thus, we suggest a more illuminating way to classify commercial law rules: as either defaults, which supply parties with low-cost solutions to their

53. Bernstein, Merchant Law in a Modern Economy, supra note 42, at 270.
54. The most common sticky default is the “nudge,” which is an intervention that “alters people people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.” Richard H. Thaler & Cass R. Sunstein, Nudge: Improving Decisions about Health, Wealth, and Happiness 6 (2009). As an example, the regulator chooses a default retirement savings option for employees and requires employees to take affirmative steps to choose a different option. See id. at 129–130.
55. An apt example of the ability to work around mandatory rules is the effort parties undertake to escape the ancient common law penalty doctrine. One method of escaping the penalty rule is to frame remedial provisions as substantive terms of the contract rather than as the consequences of a contract breach. Termination provisions, for example, grant the promisor the option to terminate the contract by incurring a cost that is unrelated to compensation. Similarly, parties may frame remedial provisions as substantive terms such as the right to cancel upon payment of a fee or loss of a deposit. For discussion, see Robert E. Scott & George G. Triantis, Embedded Options and the Case Against Compensation in Contract, 104 COLUM. L. REV. 1428, 53–56 (2004).
contracting problems, or as "quasi-mandatory" (Q/M) rules which erect high-cost barriers that parties must overcome in order to create their preferred solutions.

State-supplied terms thus can be arrayed along a continuum of increasing costs to contract out until a default becomes formally a mandatory rule. Because raising contracting cost reduces the net gain from a transaction, the Q/M default differs from the standard default in important ways. A standard default expands parties' contractual space by increasing the set of contractual tools parties can use to achieve their contracting goals; the Q/M default constricts parties' contractual space by reducing the set of contractual tools the parties can use.56 However, Q/M rules do not, as is commonly thought, restrict the contracting space altogether.

A Q/M rule can become obsolete if one of two factors has changed. First, the defective contracting conditions that justified making the state-supplied rule mandatory improve so that there no longer is a need for cost barriers to contracting out. The regulator then could demote the Q/M rule to a default. Second, the defective contracting conditions that justified the rule resolve, but other justifying conditions emerge. In this case, there may be a need for a different mandatory rule.57 As we show below, party responses to obsolete Q/M defaults will be similar to their predicted responses to standard defaults: When there is either an obsolete default or an obsolete Q/M rule, the parties can either make a "substitute contract" (that attempts, only sometimes successfully, to achieve the objective the obsolete term sought) or a "simple contract" that abandons the objective but is much less costly to write.

56. To get the idea, assume the state creates a traditional default that would cost typical parties X to contract away from. The state could make the same default sticky by erecting a higher barrier to contracting out; now it would cost the typical party 2X to avoid. Next consider the mandatory rule against penalties. Parties would still like to write a penalty term at a cost of X to draft. But parties can only use other contractual methods to achieve the same goal; now it would cost the parties 3X to achieve their objective. On this view, the difference between a default, a sticky default, and a mandatory rule is one of degree (that is, cost). And the same criticism of sticky defaults applies to mandatory rules, in heightened form. Parties with a sophisticated contracting technology — lawyers, other experts, etc. — sometimes can avoid the ban on penalty terms but others cannot.

57. Q/M rules commonly implement a soft paternalism: The regulator chooses the contractual solution that, it believes, parties would choose under ideal contracting conditions. On this view of regulation, we have: (a) A standard default that supplies parties with the maximizing solution to their contracting problem but permits free contracting out because the regulator believes that the ideal conditions obtain. Hence, parties either choose to accept the default or contract to a solution that would be better for them; (b) A weak quasi-mandatory rule — the sticky default — that supplies parties with the maximizing solution but erects cost barriers to contracting out because the regulator believes that the ideal conditions are only approximated. Parties thus should be discouraged from mistakenly choosing inefficient solutions; and (c) A strong quasi-mandatory rule supplies parties with the efficient solution but erects very high-cost barriers to contracting out because the regulator believes that one or more of the ideal conditions do not obtain. In this case, a nontrivial fraction of parties, the regulator supposes, would choose a contracting solution that would be wrong for them if left free to do so.
2. An Example of Parties' Responses to an Obsolete Default Rule

Our analysis of the effect of obsolete default and Q/M rules is in the form of an extended example.58 We begin with two clarifying points. First, we make the heuristic assumption that the UCC and Restatement defaults were efficient when created. This is because our question is how contracting parties respond to obsolescence and a law that is useless at the start cannot become obsolete. Second, the example shows that parties most likely will not respond to an obsolete default by creating a currently efficient solution to their contracting problem. While we consider this possibility, we unsurprisingly find that creating an efficient replacement is the least probable outcome. Parties' responses to an obsolete default will be dictated by the relative values of their contracting options. If a statutory default was created initially because the cost of solving the problem exceeded the benefits accruing to any individual dyad, and the problem persists, the cost of contracting to achieve the first best likely will remain too high. Thus, the example's contribution is to suggest that parties' likely responses to contract obsolescence are either (i) to give up—to write a contract that is inexpensive to create, but that cannot solve the current problem; or (ii) to write a second-best contract that attempts to solve the problem but may fail to do so in many circumstances. The example thus makes a normative point: Contract obsolescence is a costly problem that markets seldom will solve unaided.

a. The contracting problem: Parties attempt to motivate a seller to invest efficiently in producing value for the buyer

The parties in the example are risk neutral and agree to trade a good that is used in the buyer's business. The seller's investment in producing the good affects the value the buyer would derive from it, and the parties' contracting problem is to induce the seller to invest efficiently in creating value for the buyer. In the example, the world has changed so that the initial statutory default no longer is an apt solution.59 We ask how parties respond to the lack of outside help.

In the example, the good's value to the buyer is a function of a stochastic-state variable—the world could turn out to be good for the buyer (e.g., demand for the final product is high) or bad for the buyer (demand is low)—and the level of the seller's investment (the greater the investment, the greater the good's value). The seller invests efficiently when she optimally trades off increases in value against increases in investment cost.

58. The formal model from which the example is drawn is in Alan Schwartz & Joel Watson, The Law and Economics of Costly Contracting, 20 J.L. ECON. & ORG. 2, 10–16 (2004).
59. The parties' problem in the example is to provide a price for the seller's good that motivates the seller to invest in enhancing the buyer's value. In this case, the obsolete default that would apply if the parties left the price term open is U.C.C. § 2–305(1) (Am. L. INST. & UNIF. L. COMM'N 1952) (specifying a "reasonable price at the time for delivery"). See infra text accompanying note 70.
We let $k\beta$ be the parties equally shared cost of creating a contractual response to the obsolete UCC section. The variable $\beta$ represents the minimum positive contracting cost and $k$ can vary from zero to infinity. Hence, contracting is costless when $k = 0$ and low when $k = 1$. Our assumption that the state created a default because an efficient contractual solution to the pricing problem was too costly for particular contracting parties to reach on their own implies that the more effective a private contractual response is in inducing the seller to invest efficiently, the higher is $k$: more efficient incentives are more costly to create.

b. The effects of renegotiation

Because it would be infinitely costly to write a contract term that is efficient in the infinite number of future states that can occur, every feasible contract could sometimes turn out to be inapt. In these cases, parties renegotiate to a contract that induces them to trade when trade would be efficient, but not to trade otherwise. Renegotiation is costly for parties because it includes the time spent (and foregone) in developing the currently efficient solution and the cost of creating a modified contract. These costs will exhaust $(1 - x)$ percent of the renegotiation gain: $0 \leq x \leq 1$. When $x = 1$, renegotiation is costless; and when $x = 0$, renegotiation costs erase the full gain.60

c. The seller chooses either high or low investment level

The seller can choose a high investment level—$e_H$—or a low investment level—$e_L$. Because the buyer's value is a joint function of the seller's investment level and the state of the world, either level could be efficient in the circumstances.61 If the seller chooses the high investment level, she incurs a cost of 25. This cost, together with the realized state of the world, generates a value of 100 for the buyer with one-half probability; a value of 30 with one-fourth probability; and a value of 0 with one-fourth probability. If the seller chooses the low investment level, at a cost normalized to 0, the buyer's value is 30 with three-fourths probability and 0 with one-fourth probability. High investment therefore makes higher values more likely to occur and it turns out to be efficient in our example:

$$
e_H: \text{Net contractual gain (expected buyer value produced less seller's cost): } \frac{1}{2}(100) + \frac{1}{4}(30) + \frac{1}{4}(0) - 25 = 32.5$$

$$
e_L: \text{Net contractual gain: } \frac{3}{4}(30) + \frac{1}{4}(0) = 22.5.$$

3. The Three Possible Responses to the Obsolete State-Supplied Term

60. As an example, assume the parties’ contract directs a result that would yield them a gain of 50 but ex post the parties realize that there is a contract to which they could renegotiate that would produce a gain of 80. If $x = .6$, renegotiation costs exhaust 40% of the renegotiation gain so the parties would net $(.6)30 = 18$.

61. We rule out a contract which provides that if the seller fails to make the efficient choice, she is fined $10$ million, for two reasons. First, contractual penalties are unenforceable; second, we assume that the buyer can observe the finished product but not the seller’s behavior, so the buyer could not enforce a penalty term were one even enforceable.
In the absence of an apt default rule that would solve the investment problem, parties would choose among three alternative contracts: (i) a simple contract that fails to motivate investment; (ii) a more costly "substitute contract" that motivates investment in some states but not others; and (iii) a first-best contract that efficiently solves the current version of the contracting problem but is even more costly to develop.

a. The simple contract

We begin with the least costly contract—the "simple contract"—the parties can make. We normalize the cost to create the simple contract to zero. Under this contract, the buyer pays a base price \( p \) in return for the good and the parties share equally in whatever value the seller's investment produces. This contract does not attempt to affect the seller's behavior and so, unsurprisingly, would not induce the seller to choose the efficient high investment level.

- **eH:** Seller's net gain: \( \frac{1}{2}(p + 100/2) + \frac{1}{4}(p + 30/2) + \frac{1}{4}(p) - 25 = p + 3.75 \)
- **eL:** Seller's net gain: \( \frac{3}{4}(p + 30/2) + \frac{1}{4}(p) - 0 = p + 11.25 \).

The seller's net gain is higher when she invests inefficiently.

This simple story illustrates two points. First, the seller will not invest efficiently unless the contract attempts directly to influence her behavior. Second, any contract that does that will be more costly to create than the simple contract.

b. The second-best "substitute" contract

We next illustrate a second response—the "substitute contract"—under which the parties attempt to design at least a partial solution to the problem by specifying that the price the buyer pays will be a function of the value the seller produces. The question under the substitute contract is whether the seller will always choose the efficient high investment level in order to receive the higher price.

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62. We now are interested in whether the seller can be induced to invest efficiently, so we calculate her gain under the various contracts we consider.

63. The seller's investment creates value for the buyer, but the seller will not invest unless the buyer shares. We assume an equal split for convenience.

64. When the seller chooses the high investment level—the first Expression—there is a one-half probability that the buyer pays \( p \) and the parties split the high value (the first term); a one-fourth probability that the buyer pays \( p \) and the parties split the low value (the second term); and a final one-fourth probability that the buyer pays \( p \) but no value is produced (the third term). The last term (25) is the seller's investment cost. Thus, the expected return to the seller is price plus 3.75. When the seller chooses the low investment level—the second Expression—there is a three-fourths probability that the buyer pays \( p \) with the parties splitting the low value (the first term), and a one-fourth probability that the buyer pays \( p \) but there is no value created (the second term). Thus, the expected return to the seller is price plus 11.25.
The substitute contract provides that the parties trade the good and the buyer pays the price $p$ if value is high (100); otherwise, the parties agree not to trade and the buyer pays a lower base price $p'$ (perhaps in the form of a nonrefundable deposit). When value turns out to be 30, however, the parties will renegotiate to permit them to trade in order to capture this positive value, but when value is 0 they allow the no trade agreement to stand. The contracting cost $\beta$ is positive but low (i.e., $k = 1$) and the renegotiation cost also is positive and so reduces the renegotiation gain by $(1 - \delta)$ percent. Under this contract:

$e_H$: Seller's net gain: $\frac{1}{2}p + \frac{1}{4}(p' + x(30/2)) + \frac{1}{4}(p' - 25 = \frac{1}{2}(p + p') + x(3.75) - 25$

$e_L$: Seller's net gain: $\frac{3}{4}(p' + x(30/2)) + \frac{1}{4}(p') = p' + x(11.25)$

When the seller chooses the high investment level, with one-half probability the value is high and the buyer pays the price $p$, capturing the value of 100. With one-fourth probability, the value is low so the parties renegotiate to trade at the base price $p'$ and the seller retains her share of the renegotiation gain (30/2) that renegotiation costs do not exhaust. Finally, with one-fourth probability there is no trade but the buyer pays $p'$. When the seller chooses the low investment level, the parties let the no trade directive stand when value is zero but renegotiate to trade when value is 30. The seller then receives the low price and realizes half the 30 renegotiation gain again reduced by renegotiation costs.

Comparing the gains from high and low investment, the seller chooses the high investment level if $\frac{1}{2}p - p' - x(7.5) > 25$. The left-hand side of this Expression is the seller's marginal gain from a high investment. The right-hand side of the Expression is the marginal cost of choosing the high investment level.

Regarding the first left-hand side term, the greater is the difference between the high price $p$ and the low price $p'$, the stronger is the seller's incentive to choose the high investment level. Regarding the negative second term, when the seller chooses the high investment level, the parties renegotiate with a one-fourth probability and the seller's share of the 30 renegotiation gain — $1/4(30/2)$ — is $x(3.75)$. In contrast, when the seller chooses the low investment level, the parties renegotiate with a three-fourths probability so the seller’s share of the 30 gain is $x(11.25)$. Thus, when the seller invests high she foregoes $x(7.5)$ from renegotiation — the

---

65. This expression is derived by comparing the seller's net gain in the high investment ($e_H$) scenario with her net gain in the low investment ($e_L$) scenario. The seller will choose the high investment scenario if seller's net gain ($e_H$) > seller's net gain ($e_L$). Expressed arithmetically, this is represented as: $\frac{1}{2}(p + p') + x(3.75) - 25 > p' + x(11.25)$. By rearranging the variables on the two sides of the expression, we get:

$\frac{1}{2}(p + p') + x(3.75) - 25 > p' + x(11.25) + 25$ (add 25 on both sides)

$\frac{1}{2}(p + p') + x(3.75) - 30 > p' + x(11.25) - x(11.25) + 25$ (subtract $x(11.25)$ and $p'$ from both sides)

$\frac{1}{2}p - \frac{1}{2}p' - x(7.5) > 25$ (factor out the $\frac{1}{2}$ on the right side)

$\frac{1}{2}(p - p') - x(7.5) > 25$
difference between the renegotiation returns under the two investment levels. This opportunity cost loss must be deducted from the seller’s gain in the price term to calculate the seller’s net return from high investment. Note that as the renegotiation cost increases (i.e., $x$ becomes smaller), renegotiation becomes less attractive: That is, the marginally higher return from renegotiation when the seller invests low becomes attenuated. Indeed, when $x = 0$, there would be no renegotiation gain so the seller’s incentive to invest high would be maximized.

The parties contract design task, then, is to choose the two prices such that the buyer prefers trade at the higher price $p$ only when value is high, but otherwise prefers to trade at the lower price $p'$. This preference creates an incentive for the seller to invest high. Saving the reader a little arithmetic, the optimal difference between the two prices is $100(1 – x/2)$. Substituting this value for $p – p'$ in the inequality above, the seller will choose the high investment level if the renegotiation cost parameter $x \leq .77$. To clarify this fraction, if the seller chooses the high investment level, there is a possibility that value will be high, and the seller then receives the high price reduced by the investment cost. If the seller chooses the low investment level, value cannot be high but could be positive. If so, the seller would receive the low price plus a share of the low value reduced by the renegotiation cost. The greater is the renegotiation cost, the less attractive the low investment choice becomes. In the example, if the renegotiation cost would exhaust less than 23% of any renegotiation gain, the seller would do better choosing the low investment level. The substitute contract is thus a second-best solution to the contracting problem because in many states of the world it could not motivate the seller to choose the efficient high investment level.

c. The first best: an efficient contract

The parties’ third contracting choice is to attempt to motivate the seller to always choose the high investment level by creating the first best—an efficient contract term to replace the obsolete default. The first-best term solves the current version of the parties’ contracting problem as it exists today. This term, however, is the most expensive to create because it must replace the publicly supplied term that the state supplied when it was too costly for private parties to create their own solution. The contracting cost

66. For technical readers, in order to induce the buyer to prefer to pay $p$ rather than reject trade, pay $p'$ and renegotiate to share surplus when value turns out to be high, the prices must satisfy the constraint $100 – p \geq – p' + 100x/2$. To induce the buyer to renegotiate when $v = 30$ and let the no trade result stand when $v = 0$, the prices also must satisfy $30 – p \leq – p' + 30x/2$ and $0 – p + 30x/2 \leq p'$. Rearranging these inequalities yields $30(1 – x/2) \leq p – p' \leq 100(1 – x/2)$.

67. Parties sometimes would like to raise renegotiation costs but there are legal constraints. For example, banning renegotiation effectively makes renegotiation costs infinite, but courts will not enforce no-renegotiation clauses. See infra Section III.B.1.
to design the efficient contract now is \( k\beta \), with \( k > 1 \). The parties' joint gain under the first-best contract is:

\[
\frac{1}{2}(100) + \frac{1}{4}(30) + \frac{1}{4}(0) - 25 - k\beta = 32.5 - k\beta
\]

The last two left-hand side terms are the investment cost and the contracting cost.

In contrast, the parties' joint gain under the substitute contract, with \( x \leq 0.77 \), is:

\[
\frac{1}{2}(100) + \frac{1}{4}(0.77)(30) + \frac{1}{4}(0) - 25 - \beta = 30.8 - \beta.
\]

Comparing the parties' returns under the first best, the efficient contract, and under the second-best, the substitute contract, the parties will choose the efficient contract if \( 1.7 > k\beta - \beta \). The term on the left-hand side is the marginal gain (above the gain from the substitute contract) from the first-best solution; the right-hand side is the marginal contracting cost. To get a feel for how the parties will choose between these two alternatives, let \( \beta = 1 \), the lowest possible basic contracting cost. Then, if \( k \) is greater than 2.7, the parties would not create the efficient solution to their contracting problem. But if \( k \)—the private multiplier—is less than 2.7, solving the contracting problem would be relatively cheap: In that case, there likely would not have been a need for a publicly supplied default initially.

4. The Effects of Obsolete State-Supplied Terms on Commercial Contracting

To see the effect on commercial contracting this example suggests, suppose that when the UCC (or Restatement) was created the drafters observed that private parties were making contracts that left the price term

---

68. Note that \( k \) includes both the cost of writing a contract and the cost of devising a solution to the contracting problem. Because it is more difficult to create more efficient solutions, we suppose that \( k \) is highest when parties attempt to achieve the first-best term.

69. The parties would choose to write the first-best contract if their joint gains are greater than the joint gains under the substitute contract. Expressed arithmetically, this is represented as \( 32.5 - k\beta > 30.8 - \beta \). By rearranging the variables on the two sides of the expression, we get:

\[
\begin{align*}
&= 32.5 - 30.8 + k\beta > 30.8 - 30.8 - \beta \\
&= 1.7 - k\beta + k\beta > -\beta + k\beta \\
&= 1.7 > k\beta - \beta
\end{align*}
\]

70. For an illustration of why creating an apt solution to the contracting problem to replace an obsolete default rule is typically too costly for any individual dyad, consider the options available to the parties in the example. The simple contract pays the seller a fixed price, which fails to motivate the seller to invest in efforts that increase the value of the good to the buyer. The second-best substitute contract specifies a higher price if the value turns out to be high and a base price (perhaps in the form of a nonrefundable deposit) if value turns out to be low. But given different levels of renegotiation and contracting cost, the substitute contract will also fail to motivate efficient investment in many circumstances. The first-best solution requires the development of dynamic price terms that induce the seller to invest efficiently in all world states. Such a complex pricing term would create value for all parties, but individual dyads are nonetheless likely to opt instead for the simple or substitute contract because they would bear the development costs of solving the contracting problem but could not capture the gains from competitors' use of the innovative term.
open to be agreed upon at a later time. The drafters would infer that the contracting cost of specifying a solution to the problem of writing flexible price contracts was too high (i.e., the private multiplier $k$ was greater than 2.7 in our example). The drafters, we assume, responded by creating the then efficient default: thus, UCC § 2–305(1) provides that if the price is not settled and parties subsequently fail to agree, the price is “a reasonable price at the time for delivery.”71 Now turn to today, when the contracting problem persists in a new form, but the statutory solution no longer is apt. If the contracting technology is unchanged, it would continue to be too costly for private parties to create the first-best solution (i.e., $k$ would continue to exceed 2.7). The costs of writing an efficient contract today are high because individual parties would bear the entire costs of promulgating a widely successful solution to the contracting problem but could reap only a fraction of the benefits from a first-best innovation.72 Thus, had the drafters remained current, they would again observe parties apparently not contracting to replace the obsolete default with a first-best price term. Rather, parties would be adjusting by adopting second-best solutions: writing substitute contracts or simple contracts that avoided addressing the contractual problem directly. In short, if the drafters’ role had not changed, they would now update the UCC or the Restatement accordingly.

In the absence of updating, therefore, the obsolete default persists: It will not be replaced by an apt term designed by private parties and yet parties also will not have access to an efficient state-supplied default rule. What are the likely costs of persistent obsolescence? Parties must now choose between their second-best responses. The substitute contract would be the parties’ best choice if the net gain it produces would exceed the gain the simple contract would produce: that is, if $30.8 - \beta > 11.25$, or if $\beta < 19.55$. But if renegotiation costs fall or the minimum positive contracting cost increases, the simple contract would be the parties’ best response, and under it the seller would certainly choose the less efficient investment level. In sum, the example suggests that when state-supplied default terms

71. U.C.C. § 2–305(1) (AM. L. INST. & UNIF. L. COMM’N 1952)

72. There are several barriers to innovation that deter parties from devising a first-best solution to the contracting problem. The limits of copyright and patent law create an initial barrier to innovation by denying contracting parties substantial property rights in devising new terms to solve new problems. An inherent free rider problem thus retards the production of costly innovative solutions to new problems. To be sure, there are incentives to innovate—repeat players can amortize costs over many transactions and drafting attorneys may enjoy reputational benefits—but ultimately these are unlikely to offset the high development costs. In addition, the difficulty in coordinating with others a move to the new contractual language constitutes another barrier to party-designed default rules. And perhaps most importantly, the state’s monopoly on the official recognition of the meaning of the new terms imposes a risk of error on any private efforts to innovate. Goetz & Scott, The Limits of Expanded Choice, supra note 9, at 293.
become obsolete, contracting parties would either make simple inefficient contracts or make complex and possibly inefficient substitutes.73

These would be the parties’ actual responses if they reject two other possibilities. First, parties would not make a contract that accepted the obsolete default because the simple contract is less risky. The two contracts are identical in two respects: (a) The contracting cost would be the same because accepting an obsolete default is costless, as is creating the simple contract; and (b) neither contract can induce efficient investment. The simple contract does not try, and an inapt default cannot solve the parties’ contracting problem in its current version. Accepting the default is riskier than switching to the simple contract, however, because an inapt default may be linguistically applicable to the current version of the problem. A party may attempt to exploit this applicability to capture wealth from its counterparty.74 Because the simple contract does not raise a strategic behavior risk, parties would prefer the simple contract to a contract with the inapt default.

Contracting parties also would prefer the simple contract to a contract with the inapt default expressly disclaimed. Such a modified contract would contain a gap. This would have two disadvantages. Because there is a gap, a party dissatisfied with how a deal turns out would have an incentive to litigate in order to get a court to create a rule in its favor. In addition, parties could not predict what a judicial rule would be. The simple contract has no gap: Parties share equally whatever value the seller produces. Thus, there is litigation risk under either a contract that retains the obsolete default or a similar contract that deletes it, but no litigation risk under the simple contract.

This analysis reinforces the conclusion that, facing an obsolete default term, contracting parties would decide to make either the simple contract or the substitute contract. As a consequence, few if any UCC or Restatement defaults that became obsolete would be simply useless or vestigial. Parties would contract away from them to one of the two alternative contracts we analyzed, and the default would remain as a black letter rule, offering only an ostensible solution to the contracting problem.

Parties would respond similarly to an obsolete Q/M rule. Since, by hypothesis, the conditions that justified limiting parties’ freedom to bargain directly for the Q/M term no longer obtain, the justification for imposing higher costs on parties seeking to solve their contracting problem indirectly would disappear. Parties would continue to write either simple or substitute contracts that offered indirect means of solving their contractual

73. Observers have remarked that American contracts are becoming increasingly complex. See, e.g., Cathy Hwang & Matthew Jennejohn, The New Research on Contractual Complexity, 14 CAP. MKTS. L.J. 381, 382–92 (2019) (reviewing the literature on modular and integrated contract designs). Our result that obsolescence induces parties to write more complex contracts is consistent with this phenomenon.

74. This, of course, is exactly what happened in the litigation over the meaning of the pari passu clause in sovereign bonds. See discussion in supra note 11; see also infra Part III.C.
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problem. But since the justification for erecting barriers to contracting out have disappeared, the cost of escaping the obsolete Q/M rule is a deadweight loss.

C. Obsolescence in Interdependent Private Contracts

It is widely assumed that contracts between private parties do not contain obsolete terms. If a term in a prior contract becomes inapt, parties will not include the term in their current contract. This view implicitly assumes, however, that parties’ contracting choices are not affected by the choices of other market actors. This assumption does not hold, however, in certain large multilateral markets where parties trade using standardized contract terms. Here, contracting parties will retain obsolete terms in their current contract if the market would punish the supplier of a new or revised term. In such cases, innovation requires the potential innovator to coordinate with other market actors on a new term. We illustrate this phenomenon with an analysis of sovereign bond contracts, where a state may continue to issue bonds that contain an obsolete term despite the danger of strategic behavior it presents.

1. An Example: The Sovereign Bond Market

In our analysis, the agents are sovereign states \{s_1, s_2, s_3, \ldots S\} that play a coordination game in connection with issuing bonds. The buyers are symmetric: They have the same incentive, which is to purchase bonds they can sell on the secondary market. A bond contract consists of a set of terms that define the relationship between the buyer and the issuing state. The terms regulate default, specify a payment schedule, and settle other matters. Because bond issuances are largely routine, a contract issued today will be similar to the contract issued yesterday. The interest rate is current but many terms will have become boilerplate over time. Parties do not negotiate the non-payment terms. Rather, bond contracts are offered to the market on a take it or leave it basis. However, states sometimes renegotiate with bondholders if circumstances materially change after issuance (e.g., the sovereign has difficulty paying). Importantly, we assume that boilerplate terms differ little across the bond issuances of different sovereign states.

A market for sovereign bonds is formed around the economic comparability of the issuing states. Consider, for example, two sovereign states: Panama and the U.S. Both issue debt but otherwise are dissimilar. Bond buyers, we assume, consider Panama to be in a class with other small, risky countries. Thus, we model the bond issuing game as a set of moves by state \( S_i \) and a set of moves by “everyone else” in the same class, but because the set of comparable states is relatively small, we let \( S_{\ldots,i} \) stand in for the market (formally, the players are \( S_i, S_{\ldots,i} \)). We assume that every country in the same class offers a bond at the beginning of a market period. Buyers

enter the market to decide which country’s bond to purchase. But now a set of terms in the bond contracts that were issued in the last period have become obsolete.

Before analyzing the parties’ possible responses to obsolescence in boilerplate, we note two differences between the private contract context and the obsolete state-supplied default context. First, parties to sovereign bond contracts do not attempt to influence the state's behavior (i.e., to be more fiscally prudent or to repay promptly). The bonds only regulate payment and default. The possibility of renegotiation may influence behavior ex post but this is apart from the terms of the bond contract. Second, in the example developed in Part II.B, we assumed that it was costly to create a contract but costless to read one. Here, we assume that bond contracts are sufficiently complex that mastering what the contract says is a capital investment that is amortized over future bond purchases. A state that does not change the bond contract is thus offering a cheaper bond—one that costs less for borrowers to understand—than a bond with different terms: A different contract would require a new capital investment. Finally, we assume that, given the size of the bond market, there is no prior communication among the issuing states.

2. A Coordination Game with Three Possible Strategies

The three strategies available to a sovereign—the three types of bond contracts a state can issue today—are to (1) use the previous contract again despite the obsolete terms ("O"); (2) substitute different but more efficient contract terms than the obsolete contract ("S"); and (3) innovate by creating a first-best contract ("I"). The market “coordinates” if states Si and Sj,..., issue the same contract: the market contract is the coordinated contract. Under coordination, each state’s payoff under any of the contracts is (assumed to be) positive. The lowest positive payoff is (0,0)—issuing debt under the previous obsolete contract. The payoff is positive because the contract is familiar to buyers despite the danger that the obsolete term may morph into a litigation risk (i.e., it does not require a capital investment to understand). The payoff is greater if Si and Sj,..., both issue debt under the substitute bond contract (S/S). As explained above, a substitute contract generates a higher return than the obsolete contract. The highest payoff is realized when states coordinate on the first-best innovative contract because it is the efficient contract and so should sell on the best terms.

It is costly, however, for a sovereign state to deviate from the market contract, whatever that contract may be. The buyers are reluctant to purchase a different contract because the buyers subsequently market bonds to individual investors, pension funds, and the like. Either these agents will not purchase the different contract because the contract is costly for them to understand (and the deviation may reflect relevant conditions in the issuing state that the buyers cannot access), or the buyers will purchase the deviant contract only if it came with an above market interest
rate. In short, the more different a bond is from the market contract, the less liquid it is.

We represent the game as follows.

<table>
<thead>
<tr>
<th></th>
<th>O</th>
<th>S</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>1,1</td>
<td>1,-1</td>
<td>1,-2</td>
</tr>
<tr>
<td>S</td>
<td>-1,1</td>
<td>2,2</td>
<td>-1,-2</td>
</tr>
<tr>
<td>I</td>
<td>-2,1</td>
<td>-2,-1</td>
<td>3,3</td>
</tr>
</tbody>
</table>

The $S_{-1}$ player is the column player; its payoffs are after the commas. The $S_i$ player—our illustrative issuing state—is the row player; its payoffs are before the commas. There are three equilibria in this game: the states play O/O; play S/S; or play I/I. Consider $S_{-1}$; it can insure itself a positive payoff of 1 by choosing O no matter what $S_i$ does. Similarly, $S_i$ can insure itself a positive payoff of 1 no matter what $S_{-1}$ does. Next, notice that I/I is the pareto superior equilibrium, generating the highest joint payoff of 6. If $S_i$ believes that $S_{-1}$ is rational, wants to maximize its payoff, and understands the game, $S_i$ will believe that $S_{-1}$ will play I. Similarly, if $S_{-1}$ has the same beliefs about $S_i$, it will believe that $S_i$ also will play I. Thus, I/I—everyone uses the most innovative, efficient bond contract—seems the most reasonable equilibrium.

3. The Equilibrium Strategy: Retain the Obsolete Term

The rationality and competence assumptions we just made do not always hold, however. States that issue sovereign bonds, particularly developing states, sometimes exhibit pathologies of goal selection and financial and administrative abilities. For this reason, individual states may be reluctant to assume that other states will rationally and competently invest in costly innovation to create the most efficient contract.\textsuperscript{76} Notice

\textsuperscript{76} The joint value-maximizing move is for the states collectively to coordinate on a new term that solves the contracting problem. But each individual state’s belief in what others will do is influenced by the knowledge that a decision to innovate by itself means bearing all the risks of change (i.e., experiencing a negative payoff if others chose not to innovate), while not capturing all the benefits. This inertia is exacerbated in the sovereign debt context because of a substantial agency problem. The debt managers who issue the bonds on behalf of the sovereign state do not regard the contract terms as relevant to the initial pricing of their bonds because they know that the investment banks charged with marketing the bonds only care about having the standard terms. The debt managers are affirmatively discouraged from making innovative deviations from the standard terms because nonstandard terms make the initial issuance of the bonds more costly and difficult to market. Anna Gelpem, Mitu Gulati & Jeromin Zettelmeyer, \textit{If Boilerplate Could Talk: The Work of Standard Terms in Sovereign Bond Contracts}, 44 L. & SOC. INQUIRY 617, 644 (2019) (“The fact that a term is perceived to be standard . . . conveys stability, continuity, and conformity to market norms, which in turn are conducive to market liquidity.”). See also Choi, Gulati & Scott, \textit{The Black Hole Problem}, supra
now that if S_i plays I (i.e., innovates), it receives the highest negative payoff (−2) if S_{−i} chooses O or S. Doubt among states about the capacities of other states to design and issue efficient bonds thus implies that I/I no longer is the most likely equilibrium: Both players will want to avoid the high negative payoff that would result from being the only state to issue the most costly, though efficient, contract to the market.77

The other possible equilibria are S/S or O/O. A player who rejects the assumptions of rationality and competence on the part of other players would assign a 50% probability to the other states playing either equilibrium. On this assumption, the illustrative state would choose O because it would have a higher expected payoff.78 Therefore, the reasonable equilibrium in this market is O/O. Every state will issue bonds under contracts that retain obsolete terms.

4. Summary: Coordination Impediments Result in Inertia

To summarize, there is a plausible explanation for the persistence of obsolescence in sovereign bond and other similar contracts. As we later show, our result for sovereign bonds also applies to some markets for corporate bonds. Continuing to use a contract with obsolete terms would be an inexplicable response when contracting parties are autarkic but may be a possible best response when parties are interdependent and unable to coordinate readily. Thus, when contracts are standardized across a large market, a party’s best response to its strategic situation may be to choose not to amend the terms of a sovereign or corporate bond contract even though the obsolete terms may generate mistaken judicial interpretations.79

This explanation for the persistence of quasi-mandatory boilerplate in standardized, interdependent contracts points to a normative solution. The doubts we assume that players in the game have about each other’s responses to efforts to update obsolete terms may be avoided by communication among the players. The policy implication, therefore, is that interventions to facilitate better communication among parties to interdependent contracts would be helpful.80 For example, in the case of

note 11, at 52–54, 61–65 (describing how agency costs "pervade the sovereign bond market" and contribute to the persistence of obsolete standard terms).

77. In game theory terms, I/I is not a trembling hand perfect equilibrium.

78. A state that did not know what other states would do would assign a 50% probability to others choosing O or S. In the assumed game, O would have a higher payoff. E(S) = .5(2) + .5(-1) = ½; O = 1.

79. We offer data in support of this explanation in Part III.C.

80. In some markets, coordination on updating contract terms is achieved through well-organized trade associations. See infra note 184 and accompanying text. But effective communication becomes increasingly more difficult as the size of market under consideration expands. States need to contend with language barriers, cultural and institutional discrepancies, and informational asymmetries. Poor communication in turn negatively affects coordination. See Timothy N. Cason, Roman M. Sheremeta & Jingjing Zhang, Communication and Efficiency in Competitive Coordination Games, 76 GAMES & ECON. BEHAV. 26, 27 (2012) (summarizing research that explains how increasing communication in coordination games...
sovereign debt contracting, an international agency that reviews bond contracts and announces efficient solutions would increase the ability of states and investors in the market to coordinate on an updated contract.81

III. EVIDENCE OF THE PERSISTENCE AND COSTS OF OBSOLETE CONTRACT TERMS

In this Part, we examine the evidence that supports the predictions in Part II that both state-supplied and interdependent contract terms become obsolete as conditions change and that obsolescence persists despite individual parties' incentives to develop efficient solutions to contracting problems. Parts IIIA and IIIB marshal evidence showing how commercial parties reject the obsolete default and quasi-mandatory terms that lawmaking institutions produce in favor of less efficient simple or substitute contracts. Part IIIC summarizes data from current empirical investigations of both the sovereign bond and corporate bond markets showing that parties fail to revise obsolete boilerplate terms in interdependent contracts notwithstanding the significant litigation risks the obsolete terms present.

A. Obsolete State-Supplied Default Rules

The theory developed in Part II predicts that parties will reject an obsolete default term because the term cannot solve the current version of their contracting problem and bad faith parties could exploit the term strategically. Moreover, parties are unlikely to create a first-best term equivalent to an apt state-supplied default.82 Instead, the theory predicts that parties will replace an obsolete term with one of two second-best alternatives: either a least cost, simple contract or a complex substitute contract that may not induce an efficient outcome. Both likely contracting responses are sub-optimal relative to a state-supplied default term that solves the current contracting problem. The examples below from UCC and Restatement rules support our theoretical claim that, when facing rules that have become obsolete, contemporary commercial parties reject the default and choose to substitute what appear to be second-best agreements.

1. Consequential Damages

The UCC and Restatement default rules governing recovery of consequential damages exemplify obsolete terms that commercial parties routinely disclaim. The terms require the seller to deliver conforming goods or pay the buyer damages, including consequential damages. These

81. We discuss in Part III.C the parties' inability to communicate effectively in the sovereign bond market and the extended delay before parties were finally able to update the obsolete terms in their contracts.

82. The cost of developing an apt default solution to an industry-wide contracting problem is greater than the benefit of that solution for any individual dyad. Only by capturing rents from other parties use of the default would the development costs be justified. While the other options produce smaller benefits, their lower costs create net value.
damages are measured as the difference between the value to the buyer of accepted goods and the value the buyer would have derived from conforming goods. Early common law cases held that a buyer could not recover consequential damages unless there existed a tacit agreement between the parties regarding the particular consequences that could affect the buyer's valuation. The Restatement and the UCC replaced the tacit agreement test with a softer standard: The seller is liable if she had "reason to know" what the buyer's consequential loss would be. Otherwise, the drafters believed, buyers would too readily be denied full compensation. But with the advent of the technology revolution and just-in-time methods of procurement, actual and hypothetical valuations are very difficult to verify. Buyers today attempt to exploit this uncertainty by overstating their valuations.

The "reason to know" standard for recovering consequential damages thus is obsolete: It requires sellers to insure buyers' valuations when the sellers do not know how much insurance to sell. Because buyers know their valuations, they usually are better risk bearers. As a result, commercial parties today routinely opt out of the consequential damages default rule. In its place, parties create complex repair-and-replacement provisions that allocate the risks of product defects in other ways. But the repair and replacement clause is less efficient than an apt risk allocation clause that the state could provide: Negotiating and drafting the substitute contract is costly, and yet, by shifting the entire burden of consequential damages to the buyer, the repair and replacement clause allocates some risks to buyers that that an apt default would otherwise allocate to sellers.

2. Implied Warranties

The UCC primarily regulates quality issues with the implied warranty of merchantability: Goods must be “fit for the ordinary purposes for which

83. U.C.C. § 2–714 (2)-(3) (AM. L. INST. & UNIF. L. COMM’N 1952) (“The measure of damages for breach of warranty is the difference at the time and place of acceptance between the value of the good accepted and the value they would have had if they had been as warranted...In a proper case any incidental and consequential damages under [§ 2–715] may also be recovered.”). See also RESTATEMENT (SECOND) OF CONTRACTS, § 351 (AM. L. INST. 1979).

84. Hadley v. Baxendale, 156 Eng. Rep. 145, 151 (1854) (“If the special circumstances under which the contract was actually made were communicated by the plaintiffs to the defendants...the damages resulting from the breach...would be the amount of injury which would ordinarily follow from a breach of contract under these special circumstances so known and communicated.”).

85. See, e.g., U.C.C. § 2–715(2)(a) (AM. L. INST. & UNIF. L. COMM’N 1952); id. cmt 2 (“The 'tacit agreement' test...is rejected.”); RESTATEMENT (SECOND) OF CONTRACTS § 351(2)(b) (AM. LAW INST. 1979).

86. For discussion, see Schwartz & Scott, The Default Rule Project, supra note 13. A repair and replacement clause obligates the seller, in contractually defined cases, to repair or replace defective parts of products within a contractually defined time. The seller otherwise does not bear any risk.
they are used “or “pass without objection in the trade.”87 This regulation was once efficient when sellers traded homogenous standard goods to large numbers of similarly situated buyers. In this context, the sellers were better informed about product quality than the buyers. Thus, it was efficient for the sellers to warrant that all of the items in a lot were identical and did what goods of that type were supposed to do. However, the implied warranty term is a candidate for obsolescence because the commercial pattern within which the term was once efficient is no longer prevalent.

Today, two firms sometimes jointly develop the specifications for a product, and then seller and buyer agents together install the product in the buyer’s plant.88 Both parties thus are (approximately) equally informed about the product’s characteristics. The UCC warranty that a merchant seller guarantees that its goods “would pass without objection in the trade” thus presupposes a commercial pattern into which the jointly created and installed product sale does not fit. If the buyer later raises a quality objection, it could not (or should not) prevail by attempting to show that “the trade” would reject the seller’s performance: The transaction is individuated so there is no trade.

The UCC implied warranty of quality reduces parties’ expected contractual surplus when parties create products jointly. Because the term is inapt, its presence as a default creates uncertainty; parties cannot easily predict how a court would apply the term to disputes in their case. Further, because the term could not be straightforwardly applied, litigation costs—deciding what evidence to introduce or contest and how to argue the “law”—would be high. In practice, therefore, the UCC implied warranty is commonly disclaimed. Its negative contribution is not limited to the costs of contracting out, however. As the theory of obsolescence developed in Part II predicts, parties do not engage the high-cost option of designing an apt replacement for the obsolete default. Rather, they write a lower-cost substitute contract by creating an express warranty that substitutes for the obsolete term.89 Then, by disclaiming the implied warranty, sellers shift to the buyer the risk of product defects other than those that the seller expressly assumes. Writing an optimal express warranty term is costly, however, and thus sellers commonly offer a standard express warranty to all buyers. Because buyers today often have diverse procurement needs, the absence of individuation suggests that the warranty may create suboptimal incentives to invest or allocate risks optimally.90

88. For discussion on how firms work together to develop products, see Bernstein & Peterson, supra note 5, at 3–6. See also Gilson, Sabel & Scott, Contracting for Innovation, supra note 48, at 438–444 (2009) (describing the shift toward collaboration among several firms to produce a product).
89. See U.C.C. § 2–213 (Am. L. Inst. & Unif. L. Comm’n 1952) (specifying the ways in which an express warranty is created).
90. To clarify, parties may face a perennial contracting problem—to define a seller’s quality obligation—in a new context or may face a new contracting problem. A term then is
3. The Cure Rule

The seller's right to cure a defective tender is a further example of an obsolete UCC default rule. Under section 2–508(2), if a buyer properly rejects a non-conforming tender, but the seller "had reasonable grounds to believe [the tender] would be acceptable with or without a money allowance," the seller has a "further reasonable time" to substitute conforming goods after the time for delivery specified in the contract has passed.91

This rule might once have been an apt solution to the problems of inadvertent errors by sellers and surprise rejections by buyers, but the solution assumes that buyers often could accept late deliveries. Many buyers had this ability in a commercial era during which buyers accumulated an inventory of parts and thus could more readily accommodate the disruption caused by the late delivery of ultimately conforming goods. But the rule is obsolete in the current environment where commercial parties routinely rely on "just-in-time" production and collaborative problem solving.92 Under contemporary production practices, when inventories are deliberately kept to a minimum, granting the seller the unilateral right to cure a defective tender is costly to a buyer who requires collaborative information exchange before delivery and a conforming delivery at the date specified in the contract.93

The theory of obsolescence predicts that parties will not create an efficient solution to the late delivery problem. Instead, and unsurprisingly,
parties today use a simple “no replacement” clause.94 This opt out permits the buyer to insist on a perfect tender at the time for delivery.95 But this solution, too, is a blunt instrument, because it inhibits contractual flexibility that might otherwise generate efficient outcomes: It may sometimes be ex post efficient to permit the seller to make prompt adjustments to an initial defective tender. The problem with the obsolete default and the opt out option that the Code invites the buyer to take is that both are almost as insensitive to the conditions of just-in-time production as was the original cure rule.

B. Obsolete Quasi-Mandatory Rules96

Commercial law rules are commonly grouped into three categories: standard defaults, sticky defaults, and mandatory rules. But as previously noted, the distinction between sticky defaults and mandatory rules is more fluid than is commonly supposed. Parties often can realize the solution they prefer by costly contracting around the mandatory rule.97 For that reason, we have characterized rules that erect cost barriers to contracting out of the state-supplied rules as quasi-mandatory (Q/M) rules. In this section, we illustrate obsolescence in Q/M rules with an analysis of (1) the rule in contracts that “no renegotiation” clauses are unenforceable; (2) the absolute priority rule in bankruptcy, which makes a voluntary change of the priority order unenforceable; and (3) the reorganization rules in bankruptcy that prevent contractually mandated sales of an insolvent firm to the market. In each of these cases, commercial patterns have changed such that the features that justified the mandatory rule no longer apply.

1. The Common Law Rule Denying Enforcement of “No Renegotiation” Clauses

To understand this rule, assume parties agree today to trade a quantity of goods tomorrow for a price. Their choice of quantity and price would yield an efficient trade under the circumstances the parties believed were most likely to occur. But if demand in the buyer’s resale market fell so that the buyer no longer needed the specified quantity of goods, the parties would be motivated to renegotiate to trade fewer goods, with a price adjustment or an adjustment in other aspects of their relationship. Suppose, however, that their contract contained a prohibition on renegotiation. The

94. The option of opting out of the cure rule in favor of a “no replacement” clause is explicitly invited in U.C.C§ 2–508, cmt. 2 (AM. L. INST. & UNIF. L. COMM’N 1952).

95. See U.C.C § 2–601 (AM. L. INST. & UNIF. L. COMM’N 1952) (outlining the buyer's remedies when provided with non-conforming goods); id. § 2–508(2), cmt. 2 (“The seller is charged with commercial knowledge of any factors in a particular sales situation which require him to comply strictly with his obligations under the contract as, for example, strict conformity . . . .”).

96. Mandatory rules are efficient when they require parties to internalize a negative externality. We assume here that no externality exists.

97. See supra Section II.B.1.
parties would then inefficiently have to trade the contractual quantity of goods or attempt to make costly indirect adjustments to their deal.98

The example shows that a no renegotiation clause would be inefficient for this simple procurement transaction. Because it would be too costly for parties to create a contract that specifies prices and quantities for every possible ex post state, parties contract for the average state. As a consequence, parties expect to renegotiate in a nontrivial fraction of possible future states to escape a contract that has become inapt. A party would agree to a no renegotiation clause, courts thus believe, only if the party failed to understand the transaction or was misinformed about the volatility of market conditions. Refusing to enforce no renegotiation clauses thus provides parties with the deal that parties contracting under ideal conditions would make.

But now consider a more contemporary case in which, as in the example in Part II, parties want to induce a seller to invest efficiently in the transaction. Because the buyer cannot observe the seller's behavior, an efficient contract would put risk on the seller in order to induce efficient investment: The seller's return is conditioned on the value she produces. The seller bears risk because that value is partly a function of her effort, but also a function of how the world turns out. In this variant of the investment example, suppose that the seller completes her investment before the state of the world is realized and is risk averse. There no longer is a need to motivate the seller but she bears risk nevertheless: The world may turn out to be unfavorable. Therefore, there is a possibly efficient renegotiation. If the buyer is risk neutral, the parties would agree to shift risk to the buyer in return for a fixed payment to the seller that would lie somewhere between her contractual return from the low-value outcome and her return from the high-value outcome. If, however, the seller anticipates that she will ultimately be paid a fixed sum that is independent of the actual outcome, she knows that she does not bear risk. Hence, she will not be motivated to invest efficiently.99

In this example, renegotiation unravels the parties' incentive scheme. To make that scheme effective, the parties therefore must contract to ban renegotiation. The Q/M rule that makes no renegotiation clauses unenforceable thus forces parties to use more costly and likely less efficient substitutes. And to summarize, the ban on no renegotiation clauses is obsolete for much of the modern economy, in which contracts not only regulate trade but also regulate behavior.

2. The Absolute Priority Rule

A firm creates a priority order in its contracts with investors. The debt contract gives the investor a senior claim on firm returns up to the face

98. If a party would benefit from enforcing the original contract, it might attempt to exploit the no renegotiation term to extract rents.
99. This reasoning was originally developed in Christine Jolls, Contracts as Bilateral Commitments: A New Perspective on Contractual Commitments, 26 J. LEGAL STUD. 203 (1997).
value of the debt and the right, bankruptcy aside, to control the firm when it cannot pay. The equity contract gives investors the upside after the debt is paid and governance rights in solvency states. Bankruptcy courts respect the contractual priority order when the firm is liquidated under Chapter 7: Creditors are paid first.\footnote{100}

The absolute priority rule (AP) applies when a debtor attempts to reorganize under Chapter 11. For example, consider a firm that has senior secured debt, junior unsecured debt, and equity. Suppose that the senior debt agrees to yield a share of its bankruptcy payoff to the equity in order to induce the current managers to run the firm. Managerial continuity, in the senior’s view, would enhance the prospects of a successful reorganization. The deal, however, would alter the contractual priority order because the equity would receive value before the junior debt is paid in full. But the deal also would be a Pareto gain for the juniors: The payment to the equity would reduce the seniors’ monetary bankruptcy payoff but it would not reduce the junior’s bankruptcy payoff. And if the senior is right, the deal would increase the value of the junior debt by increasing the chance that the debtor will survive. Nevertheless, numerous appellate cases, and the Supreme Court three times, have refused to enforce deals between seniors and the equity, insisting instead that the juniors must be paid in full.\footnote{101} AP thus is a Q/M rule that is the exact reverse of the no renegotiation rule in contracts: The contract rule permits parties to renegotiate in every case; AP prevents parties—the seniors and the equity—from renegotiating in any case.\footnote{102}

The courts have not articulated a clear rationale for AP but there is a probable reason. The rule received its strongest judicial endorsement in 1939 in an opinion by Justice Douglas.\footnote{103} The junior debt then usually was in the form of bonds held by individual investors. The Court apparently believed that senior/equity deals partly reflected efforts by banks to preserve the social status and economic prospects of the debtor’s managers. The bondholders lacked the sophistication and the information to intervene when payments to the equity would not increase the odds of a successful reorganization. In addition, an individual bondholder probably could not.

\begin{footnotes}

\footnote{101. See, e.g., Norwest Bank Worthington v. Ahlers, 485 U.S. 197, 197–198 (1988) (holding that the AP rule bars a defaulting party from retaining an equity interest in a reorganization plan despite promises by the party to contribute future “labor, experience, and expertise”); Northern Pacific Ry. Co. v. Boyd, 228 U.S. 482, 502 (1913) (holding that agreements between bondholders and stockholders “cannot defeat the claim of a non-assenting creditor”).}

\footnote{102. See Kenneth M. Ayotte & Edward R. Morrison, Creditor Control and Conflict in Chapter 11, 2 J. LEGAL ANALYSIS 511, 513 (2009) ("[F]ew reorganization plans (at most 12 percent) deviate from the absolute priority rule by distributing value to equity holders…. In at least 82 percent of the cases, equity holders received nothing.")}.

\footnote{103. Case v. L.A. Lumber Products Co., 308 U.S. 106 (1939).}
\end{footnotes}
internalize enough of the gain from such an intervention to contest an unfair senior/equity deal on behalf of the bondholders as a class. Hence, many deals would go unchallenged. The AP rule thus was thought to protect the junior bondholders by preventing the equity from receiving anything until the juniors were fully paid.

The demographics of credit markets are different today. Individual investors hold stock, while bondholders usually are pension funds, insurance companies, and high net worth persons. Moreover, much junior debt in current bankruptcies is held by sophisticated investors, who buy out the trade debt and other small creditors and then attempt to influence the reorganization. While the ideal conditions that justify free contracting may not have existed when the AP rule was created, those conditions do exist today. AP is thus an obsolete rule because modern bondholders are sophisticated and well-informed: Renegotiation in this context may produce more efficient outcomes.

3. The Obsolete Reorganization Rules in Chapter 11

A liquidity-constrained firm that believes it can survive will file for reorganization under Chapter 11. In a traditional reorganization, the equity is eliminated and the firm is sold to its creditors. Because the payment a creditor must make is jointly determined by the debtor’s value and the creditor’s priority order, the bankruptcy court must value the debtor. The court also must find that the debtor’s restructured business plan is feasible. During the course of reorganization, a firm sometimes will shed unproductive assets through the vehicle of a sale under § 363 of the Bankruptcy Code, which authorizes the debtor to sell assets “out of the ordinary course” with court approval. Traditional reorganizations are costly because valuation, business feasibility, and § 363 hearings take time and often require expert testimony.

Today, a significant fraction of Chapter 11 debtors are sold under § 363 as entire firms. It is a difficult economic question whether to reorganize a particular debtor in the traditional way or to auction it off. It is also a


105. See Stuart Gilson, Edith Hotchkiss & Matthew Osborn, Cashing Out: The Rise of M&A in Bankruptcy 5–6 (Harv. Bus. Sch., Working Paper No. 15-057, 2015) (finding that out of a sample of 350 bankruptcy cases, 75 firms or 21.4% of the overall sample were sold as entire firms under § 363); Ayotte & Morrison, Creditor Control and Conflict, supra note 102, at 521, 538 (providing empirical data showing that roughly two-thirds of all large bankruptcies in 2009 resulted in the sale of an entire firm rather than a traditional reorganization).

new question. The business sections of the Bankruptcy Code were created in 1978, when markets for entire firms were primitive. Lawyers and investment bankers, beginning in the early 1980s, developed innovative techniques for financing acquisitions and merging assets. A market sale for one billion dollars was nonexistent in the 1970s, but sales in the tens of billions are seen today.\footnote{Bengt Holmstrom & Steven N. Kaplan, Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s, 15 J. ECON. PERSP. 121–22 (2001).} The Code gives the court no guidance on how to conduct bankruptcy auctions. Section 363 requires the court, after a hearing, to approve a sale or not, but the section does not say what can be sold, when a sale can occur, or how a sale can be conducted. The section was enacted to regulate unusual sales of parts of firms but is now used to regulate sales of entire firms in a capital market that the drafters of the Bankruptcy Code did not envision.

The § 363 sale of whole firms is an essential aspect of a major change in bankruptcy practice. Insolvent firms commonly renegotiate with the secured debt and other creditors. These deals have a common feature: In return for further credit, the firm agrees on how the Chapter 11 process will be conducted and sometimes consents in advance to a sale if the firm's prospects do not improve. Despite the Q/M reorganization rules, bankruptcy courts enforce these contracts. As a consequence, the time a firm spends in Chapter 11 has fallen from approximately 300 days in 2002 to a little over 100 days today,\footnote{See Elizabeth Warren & Jay L. Westbrook, The Success of Chapter 11: A Challenge to the Critics, 107 MICH. L. REV. 603, 629 no.92–93 (2009) (noting that the medium and mean resolution times for Chapter 11 cases in 2002 were 274 and 327 days respectively). As insolvent firms increasingly began to negotiate with creditors, the medium resolution time has decreased. In 2017, the medium duration for a sample of 30 cases was approximately four months (120 days).} Rather, courts and senior creditors are creating a private bankruptcy law that renders the reorganization rules obsolete. Because the Bankruptcy Code did not foresee a future where market conditions and new financing techniques would render the sale of whole firms a desirable alternative to reorganization, it does not provide any guidance on a process that circumvents the reorganization rules. Whether this contemporary law adequately protects the public interest is thus an open question: Other parties are affected by the pre-Bankruptcy deals that
are now being made and there is no reason to believe that the parties to § 363 sales and the courts that permit them take the interests of nonparties into account.

C. Obsolete Boilerplate in Private Contracts

Continuing to use a contract with obsolete terms would be an inexplicable response when contracting parties are autarkic but, as we showed in Part II.C, it can be the best response when a party's payoff under its contract partly depends on the contracts other market actors make. When contracts are standardized across a market, a party's best response to its strategic situation may be to accept the terms of a bond contract even though its obsolete terms may generate costly judicial interpretations. In what follows, we offer examples of the persistence and significant costs of obsolete terms in commercial boilerplate and of the inability of private markets to readily update these terms.

1. The Obsolete Pari Passu Clause

The fourteen-year battle over the meaning of the pari passu clause found in all sovereign debt contracts supports the prediction advanced in Part II.C that parties trading in large interdependent markets would fail to revise an obsolete term in a standardized contract. In 2000, a U.S. hedge fund, holding out from a restructuring proposal, won a judgment in which a Brussels court interpreted the pari passu clause to provide that the debtor could not pay other creditors who had accepted a restructured offer without paying the hedge fund its full pro rata share. The clause had been a standard provision in sovereign debt contracts for 200 years, and it appears to have fit the commercial pattern in the gunboat diplomacy era. But the term is inapplicable in the modern sovereign debt context in which a sovereign debtor's assets are not seized and distributed to creditors under an insolvency process. Still, the clause persisted into the present, while few, if any, market participants seemed to understand either its historic or its contemporary meaning.

The international finance community uniformly rejected the court's interpretation, even though the financial markets could not agree on what the obsolete term did mean. Standard theory predicts that if a court...
endorsed the market-disfavored option, parties would promptly revise the language to preclude that interpretation in the future. However, notwithstanding the litigation risk, the clause remained unrevised in all sovereign debt contracts for over a decade. Then, in 2011, following extensive litigation instigated by activist creditors holding out from Argentina’s restructuring offer, federal courts in New York adopted basically the same interpretation as the Brussels’ court. This more authoritative ruling was also uniformly condemned; market participants feared that the ruling would put the multitrillion dollar bond market at real risk. Nonetheless, even though the market continued to reject the court’s interpretation, revisions to the language of the pari passu term did not begin until late 2014, more than three years after the federal courts had ruled. Meanwhile, the activist hedge funds recovered many times their initial investment by holding out from the restructuring agreement.

Obsolescence in these standard form commercial contracts thus creates the opportunity for contractual arbitrage: parties argue, ex post, that the obsolete term means something that the contracting parties, ex ante, didn’t contemplate. Contractual arbitrageurs have profited by seeking out obsolete terms as litigation opportunities in other bond transactions as well. In all these instances, the lack of accepted meaning makes it difficult to rebut the arbitrageur’s interpretation of the terms in question.

The preceding story vividly demonstrates two things: First, the costs are very high when private parties contracting in large, interdependent markets fail to revise obsolete terms. The pari passu clause was obsolete,

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114. See GULATI & SCOTT, supra note 75, at 53–119.


118. Contractual arbitrage has become a lucrative business in sovereign debt markets. When countries are near defaulting on their debts, financial firms look for linguistic uncertainties that have not been fully priced and thus can be exploited when the sovereign seeks to restructure its debt. Greece faced these holdouts when restructuring in 2012. Ukraine faced a large group of sophisticated creditors in its restructuring in 2015. In 2016, the notorious Argentine settlement ended up paying the most aggressive of the holdout creditors between 300 and 800% of the principal amount of their claims. And Puerto Rico and Venezuela are currently dealing with a subset of these same creditors. For a further discussion of the rise of this form of arbitrage, see Stephen J. Choi, Mitu Gulati & Robert E. Scott, Contractual Arbitrage, in OXFORD HANDBOOK OF INTERNATIONAL GOVERNANCE 5 (Eric Brousseau et al. eds., 2020).

119. The problem is exacerbated when “encrustation” occurs as legal jargon and random variations are added to a term thereby further corrupting its linguistic meaning. See Goetz & Scott, The Limits of Expanded Choice, supra note 9, at 289.

Electronic copy available at: https://ssrn.com/abstract=3788595
but parties still needed to address the problem of how to pay creditors and retaining the clause rather than developing an apt alternative created an opportunity for strategic litigation.\textsuperscript{120} Second, despite the high costs, states can be trapped in inefficient contracting equilibria for long periods of time. As Part II.C showed, doubts about the rationality and competence of other market actors could make retaining an obsolete term an individual state's best response. In addition to these doubts, a possible innovator may be deterred by the legal uncertainty that can attend a differently written bond issue: Until the revised term is tested in litigation, there is uncertainty over how it will be interpreted. Individual parties also may be reluctant to draft new contractual language out of fear that the change to the contract language might put unrevised clauses in prior bonds of that sovereign at greater risk of enabling the arbitrageurs.\textsuperscript{121} Changing a term thus poses the further risk that the bond contract will be viewed as idiosyncratic, thereby increasing buyer learning costs.\textsuperscript{122} In sum, and as we predicted, even when faced with costly litigation, parties coordinated around the existing standard form instead of innovating to a solution that would better protect the buyers in the case of default.\textsuperscript{123} In the absence of any institutional mechanism, whether state or other entity, the sovereign debt industry lacks the capacity to solve its coordination problem readily.

2. The Obsolete "No Recourse" Clause: Comparing Corporate Bonds and Private Equity Transactions

In a recent study, Scott, Choi and Gulati analyzed the speed with which obsolete terms are revised in private equity driven M&A transactions and in large corporate bond issues.\textsuperscript{124} Both types of contracts contain a standard no recourse clause that had become obsolete with the introduction of limited liability under state corporate law.\textsuperscript{125} More recently, however, a

\textsuperscript{120} See Lucy McNulty, The Future for Pari Passu, 32 INT'L FIN. L. REV. 6, 19–20 (2013) (explaining that the market agreed on the need for change but could not overcome the challenges of moving to new standard).

\textsuperscript{121} Choi, Gulati & Scott, The Black Hole Problem, supra note 11, at 10.

\textsuperscript{122} Learning costs include the costs that parties must expend in learning the meaning of the clause. The prediction from the learning cost literature is that the older and more widely used a term becomes, the better is the common understanding of what it means. Marcel Kahan & Michael Klausner, Standardization and Innovation in Corporate Contracting (or "The Economics of Boilerplate"), 83 VA. L. REV. 713, 719–25, 31–33 (1997); Tina L. Stark, Negotiating and Drafting Contract Boilerplate (2003) § 1.02 (observing that provisions that have been used repeatedly develop a "hallowed status"; they have now been "blessed").

\textsuperscript{123} McNulty, supra note 120, at 44. The elite sovereign debt bar also had agency problems that contributed to the problem persisting. Id. at 51–52.


\textsuperscript{125} The no recourse clause was recognized as obsolete: The American Bar Association (ABA) project on model bond indentures considered it obsolete. But as with many obsolete clauses, drafters retained it in the standard contract and the ABA even provided a standard version of the clause it had labeled as useless. Glenn West & Natalie Smeltzer, Protecting the Integrity of the Entity-Specific Contract: The 'No Recourse Against Others' Clause: Missing or Ineffective Boilerplate, 67 BUS. LAW. 39, 41–48 (2011).
series of prominent cases limited the protections of the standard no recourse provision to issues of contract liability. This left shareholders vulnerable to liability claims based on tort and other equitable theories. The emerging case law and calls for revision from prominent practitioners should have motivated firms in both markets to modify the obsolete clause to better protect against these non-contractual claims.

The theory developed in Part II.C predicts that the obsolete version of the clause might be revised more rapidly in private equity deals than in corporate bond deals because of differences in the ability of parties in these two markets to coordinate on an apt solution to the contractual problem. Private equity firms involved in M&A deals have concentrated and motivated principals with the expertise and financial incentives to optimize contract terms. Investors are also concentrated. Corporate bond transactions, on the other hand, are similar to sovereign bond deals with dispersed investors and dispersed shareholders, who also face high coordination and agency costs. In political science terms, private equity


128. Several exogenous shocks provided possible motivations for market participants to change the no recourse clause. First, as reported in supra note 126, a number of cases found that the clause only blocked contract law claims, and not equitable or tort claims. Then, in 2011 Glenn West and Natalie Smeltzer published an article in a widely circulated business law publication on the need to revise the no recourse term and spoke about the term at meetings around the country. West & Smeltzer, supra note 125.


130. Scott, Choi & Gulati, supra note 124, at 5. While the managers of corporate issuers may benefit from no recourse clauses, and thus be more aligned than in the sovereign debt context, what is important is the greater dispersion of interests relative to a private equity setting. For a finding, in a different setting, of superior drafting in private equity deals, see generally Elisabeth de Fontenay & Adam Badawi, Contractual Complexity in Debt Agreements: The Case of EBITDA (Duke L. Sch. Pub. L. & Legal Theory Series, No. 2019–67, June 20, 2019 draft), at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3455497.
is a small numbers case, in which parties can explicitly cooperate rather than have to play the simultaneous move game that seems to best characterize the sovereign debt and public company debt markets.

The data support the theory's predictions. The vast majority of the corporate bond contracts continued to rely on the standard no recourse clause as it had emerged in the 1880s, confirming the difficulty of coordinating on a revision of obsolete terms in large, interdependent markets. By contrast, over 50 percent of the private equity contracts were revised following a series of industry meetings in 2012 at which senior lawyers exhorted their colleagues to reform the clauses. Indeed, every contract created by the top five law firms in the industry after 2012 has been revised.

In the sovereign and corporate bond contexts, it is costly for parties to change standard clauses: They face a first-mover disadvantage if the market does not follow their lead, and any changes increase the risk of the old version of the clause being interpreted against their interests. Because parties cannot coordinate on an apt solution to their contracting problems, the equilibrium contract reproduces the status quo. And here the market contract continues to retain the obsolete no recourse term, though the term today carries a significant litigation risk.

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131. Scott, Choi, and Gulati studied over six hundred transactions to see whether the term was changed in private equity or public debt deals after the shocks described in supra notes 126 & 128. In public company deals, the “old” clause continued to dominate through 2019, although some used a modified version of the clause. In contrast, private equity deals dramatically shifted towards new versions of the clause after 2012. This suggested that the term was stickier and harder to change where coordination costs were higher. Scott, Choi & Gulati, supra note 124, at 23. This is not to suggest that there is no evidence of innovation in corporate bond contracts. See, e.g., Kenneth Lehn & Annette B. Poulsen, Contractual Resolution of Bondholder-Stockholder Conflicts in Leveraged Buyouts, 34 J.L. & ECON. 645, 648 (1991) (describing evidence that, following 1988 RJR Nabisco LBO, 32.1% of 327 nonconvertible debt issued in 1989 had event risk provisions as compared to only 3 issues in 1986). Perhaps the distinction rests on the inertia that impedes revisions to obsolete boilerplate as compared to the greater incentive to introduce entirely new terms following an exogenous shock.

132. Scott, Choi & Gulati, supra note 124, at 21.

133. Id. at 25.

134. There is additional evidence that obsolete terms in corporate bond contracts are resistant to revision even after legal change creates significant litigation risk. Choi, Gulati and Scott study whether and how lawyers across four different deal types—private equity M&A contracts, investment grade corporate bonds, sub-investment grade corporate bonds and sovereign bonds—revise their contracts’ governing law clauses in order to solve a problem that legal change had created. Their data show that lawyers who draft private equity M&A deals pay more attention to the deal terms than lawyers producing corporate and sovereign bond contracts. They observe significantly more innovation in private equity deals as compared to sovereign and corporate bond transactions where the agency problems of drafting lawyers are greater and obsolete variations in the governing law clause persist without revision. Stephen F. Choi, Mitu Gulati & Robert E. Scott, Innovation and Encrustation: Agency Costs in Contract Reproduction (Duke L. Sch. Pub. L. & Legal Theory Series, No. 2020–57, Aug. 22, 2020), available on ssrn at https://ssrn.com/abstract=3653463.
**IV. The Political Economy of Obsolescence**

In this Part, we attempt to explain why the private lawmaking bodies—the ALI and ULC—and sometimes even legislative bodies like Congress, have been unable to produce a general and current commercial law. There are general reasons that explain this failure, but they apply in different degrees to different institutions. The common thread is the inability of the relevant actors to coordinate on necessary changes. In Part IV.A, we set out in broad terms the sources of the coordination problem. Part IV.B then focuses specifically on the inability of the ALI and ULC to revise sales law and general contract law. Part IV.C next studies Congress's failure to revise the business sections of the Bankruptcy Code despite fundamental changes in bankruptcy practice.

**A. Political Economy Reasons that Explain Persistent Obsolescence**

Several political economy reasons explain why general contract law has been impossible to update. The first and most obvious impediment to updating obsolete terms in sales law or contract law generally is the institutional structure of the lawmaking bodies. The ALI and ULC are the prime exemplars of this problem. The ALI and ULC are constituted only by their members, who devote only a portion of their working time to the organizations because they are unpaid and have demanding jobs.\(^{135}\) The organizations also have small staffs, cannot hold hearings, have no independent fact-finding apparatus, and have almost no funds for research. Their budgets are largely devoted to staff, offices, and member and study group travel. As a consequence, both bodies lack an institutional arm that could exercise oversight over the markets that their rules regulate.

1. **The Public Goods Problem of Revising a General Law**

   The structural limitations that plague the ALI and the ULC help to explain why they proactively do not update our obsolete general contract law. There also is a public goods reason why outside interests fail to lobby these lawmaking bodies for change. Contract law affects many heterogeneous parties. In contrast to a specialized field such as secured credit, the costs of an obsolete contract law thus fall on contracting parties generally, and the gains from updating contract law would accrue to contracting parties generally. Hence, an agent or even a cohesive interest group can be deterred from lobbying because they would bear large coordination and persuasion costs but realize only a fraction of the gains. The political economy reasons that explain why the lawmaking bodies do not initiate, and are infrequently forcefully asked to initiate, legal change are exacerbated by the selection process for ALI and ULC membership. The members are chosen by the organizations themselves in low visibility political environments. Therefore, an ALI member, say, does not have a public constituency to whom she owes favors or to whom she has to

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\(^{135}\) Schwartz & Scott, *The Political Economy*, supra note 19, at 619, 630.
account. Rather, the ALI member, or a ULC commissioner, can serve for a long time without having to please anyone. The other side of this status is that the member does not gain much from pleasing anyone; that is, from initiating or supporting an efficient legal change.

Time and space consistency problems also contribute to the failure to update the general law of contract. A contract law that applies broadly seldom becomes obsolete at once or everywhere. Consider, for example, an industry that the UCC Article 2 efficiently regulated in 1952. As the industry changed, various sales law rules could become obsolete. Parties' obsolescence costs increase in the number of obsolete UCC sections. Hence, if commercial change causes a large number of UCC terms to become obsolete at once, it could be cost justified for the affected industry to lobby for a statutory change. But if changing commercial patterns only adversely affected a few sales law rules at one time or affected the rules for one industry at a time, there may never be a profitable moment for any single industry to lobby. To be sure, if multiple industries could coordinate their efforts, they might be an effective lobbying force. But there is no national institution that coordinates industry lobbying efforts for contract law change across commercial areas. Thus, while "the economy" may benefit from lobbying for currently efficient contract law rules, there may be no group who could gain from doing so.

2. The Role of Academic Reformers

Proposals to revise contract and sales law rules thus largely come from academics who are members of groups that monitor law reform efforts. Academics often have strong policy preferences, and their policy-based desire to see a proposal adopted is reinforced by their desire for the prestige and possible consulting opportunities that come from being associated with an enacted reform. Academics, therefore, are motivated to advance proposals to update obsolete contract law rules.

But the academics' preference for change runs into another reason why private lawmaking groups like the ALI and ULC or the Bankruptcy Conference do not keep contract law current with changing commercial practice. The members of these bodies have a strong status quo bias. An implication of these groups' inability to find facts is that the typical member—a busy lawyer or judge—cannot conveniently predict how a suggested reform will work out. The typical member also knows that his policy preferences usually are more conservative than those of the academic reformers.\(^{136}\) The member thus is less willing to believe an

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\(^{136}\) For a summary of the evidence that academics tend to hold different preferences than the general public, see Seymour M. Lipset, The Sources of Political Correctness on American Campuses 10–12 (Hoover Inst., Stanford Univ. Working Papers in Pol. Sci. P-92-1, 1992). In the case of the ALI, the ALI Council, composed of academics, practicing lawyers and judges, reflects a wider range of opinions on the merits of any proposal. And there is anecdotal evidence that the Council does exercise influence on the voting patterns of the membership, but there is no reason to believe that the Council is otherwise immune from the structural factors we identify.
academic's predictions than those of his more conservative business and lawyer friends. To be sure, a member wants to do, and be seen to do, constructive law reform, which creates an impulse to implement projects. But the member also has a reputational stake in the products of any law reform effort. Because a member's payoff is largely reputational, the impulse to pass something thus can be overcome by the fear that an academic-sponsored proposal will come back to bite. As a consequence, the academics' reform efforts may be blocked or, if not, the enacted revisions will consist of highly abstract rules that delegate substantial discretion to courts.

3. The Effects of Interest Group Competition

This fear of a reform that causes economic harm to an affected group or industry is the final factor explaining why lawmaking bodies like the ALI and ULC cannot produce current revisions to sales and contract law. Their fear is heightened when different interest groups somehow overcome the obstacles to lobbying for change. Indeed, interest group competition is the one explanation for persistent obsolescence that generalizes across our examples. If the gains from a proposed reform are sufficiently concentrated to be worth seeking, the costs often are sufficiently concentrated to make opposing the proposal worth doing as well. Suppose then that two opposing interest groups appear before the ALI seeking to change a contract law rule. Supporters of a reform will predict nirvana from its adoption and disaster from retaining the status quo. The other group will defend the status quo and predict disaster from the new reform. The result typically is stalemate. Private lawmaking groups are institutionally incapable of evaluating the status quo or finding out which group has the better-grounded case. Thus, individual members are left at sea and their best response often is to pass nothing. And as we show in the following sections, often nothing passes.

137. The more closely that another person's preferences resemble those held by a typical ALI or ULC member, the less incentive that person has to mislead the member. See Thomas W. Gilligan & Keith Krehbiel, *Organization of Informative Committees by a Rational Legislature*, 34 Am. J. Pol. Sci. 531, 548 (1990); see also Arthur Lupia & Mathew D. McCubbins, *Learning from Oversight: Fire Alarms and Police Patrols Reconstructed*, 10 J. L. Econ. & Org. 96, 106–09 (1994) (discussing whom legislators are likely to believe); Paul Milgrom & John Roberts, *Relying on the Information of Interested Parties*, 17 Rand J. Econ. 18, 19 (1986) ("When information is not verifiable, the reliability of any report depends in part on the degree of consonance between the objectives of the decisionmaker and those of the interested party or parties.").


141. The political economy barriers to the production of currently efficient contract terms by private lawmakers raise the question of how to explain the initial success of the UCC and the Second Restatement in overcoming these constraints. The short answer is that the
B. Evidence from UCC Sales Law and the Restatement of Contracts

1 The Twenty-Four-Year Saga of Attempts to Reform Sales Law

Article 2 sales law is obsolete and needs revision. This uncontested fact has been self-evident for many decades. The information revolution and other market developments threaten to leave Article 2 in an increasingly small backwater of commercial transactions. If the statute is to retain its primacy as a source of legal defaults that both facilitate and regulate commercial sales transactions, it must be adapted to technological and economic developments that have created entirely new markets in information technology.

In 1987, the Permanent Editorial Board for the UCC set out, under the auspices of a study committee, to consider modernizing the statute. Four years later, acting upon the report and recommendation of the study committee, the ALI and ULC appointed a drafting committee to begin work on a comprehensive revision of Article 2, which, among other things, would bring within the scope of Article 2 provisions to address the unique characteristics of software licensing transactions. The first public indication that the project was beginning to unravel surfaced when the ALI declined to approve proposed Article 2B for computer information contracts on the ground that the drafting process, dominated by the software and information industry, had produced a “seller-friendly” statute. The ULC decided, however, to go forward with the project on its own, reissuing the statute as the Uniform Computer Information Transactions Act (UCITA).

The split between the ALI and ULC broke into the open in 1999, when Revised Article 2 was brought forward for final approval. The revised Article was approved by the ALI, but after encountering severe opposition from industry interests the leadership of the ULC withdrew the draft from
consideration two months later. In an attempt to patch the tattered alliance together, ALI and ULC agreed on a newly reconstituted drafting committee which was directed to focus only on “non-controversial,” technical amendments to the existing statute.\textsuperscript{144} Two years later, the new committee brought forward proposed Amendments to Article 2, which were approved by the ALI only to be defeated on the floor of the ULC. That deadlock was finally broken, and the Amendments were approved by ULC in August 2002 but only by virtue of a strategy that carefully preserved the status quo in the ongoing competition over the regulation of computer information transactions.\textsuperscript{145}

In the end, the story ended not with a bang but with a whimper. The 2003 Amendments immediately generated considerable controversy and faced interest group opposition in the various state legislatures. Over the next eight years, not a single state adopted the Amendments to Article 2. Recognizing the inevitable, the ALI withdrew the proposed Amendments in May 2011.

The open split between the ALI and ULC is merely a symptom of the intense interest group competition that emerged during the Article 2 revision process. Retail manufacturing interests, opposed to provisions that extended warranty liability for economic loss to remote sellers, were able successfully to block the adoption of the initial revisions to Article 2. In turn, consumer interests (including large firm licensees), opposed to the “seller-friendly” provisions in the proposed Article 2B, were able to separate the computer information article from the rest of the UCC project. From there the battleground moved to rival efforts to either secure or block the further enactment of UCITA.\textsuperscript{146} Thus, even in the effort to bring forward the seemingly uncontroversial Amendments to Article 2, each side was able to block approval of the other’s proposals but was unable to secure approval of its own.


\textsuperscript{145} The issue that led to the defeat of the Amendments by the ULC in August 2002 and the subsequent compromise was the defined scope of Article 2: Did it apply to information technology? All attempts to draft a clearer and more definitive scope provision that drew lines between the coverage of Article 2 and the coverage of other laws dealing with information and software transactions fell victim to interest group competition. The drafting committee forged a new compromise, one that left the original scope provision unchanged, but amended the definition of goods in U.C.C. § 2–103 to exclude information. This version was approved by the ULC. By leaving “information” undefined, the compromise purported to leave to the courts the task of defining the line of demarcation between goods and computer information transactions. Scott, supra note 6, at 1051–52.

\textsuperscript{146} In the meantime, the ALI began a project to draft \textit{Principles for the Law of Software Contracts}. The Principles were published by the ALI in 2010 and are now offered to courts to aid them in resolving disputes over computer information transactions. For more discussion on the Principles, see generally Robert A. Hillman & Maureen A. O’Rourke, \textit{Principles of the Law of Software Contract: Some Highlights}, 84 Tu. L. Rev 1519 (2010); Juliet M. Moringiello & William L. Reynolds, \textit{What’s Software Got to Do With It? The ALI Principles of the Law of Software Contracts}, 84 Tu. L. Rev 1541 (2010).
It is unlikely that Article 2 will ever be revised to deal directly with any of the unique contracting problems presented by new contracting practices. Whatever happens in the future, therefore, common law courts will be called upon to resolve the increasingly intense normative debate over the domain of free contract in computer information transactions, as well as to fill gaps in commercial disputes arising from the new technology. The law will be updated by the common law mechanism that creates contract law rules, but there will be few rules and they will develop slowly.

2. Stalled Efforts to Promulgate the Restatement of Consumer Contracts

No comprehensive revision to the Second Restatement of Contracts has been attempted since 1978 and none appears imminent. But the ALI has appointed reporters and an advisory committee to propose a restatement for consumer contracts. The academic reporters for the project conducted a careful empirical study of contemporary consumer transactions and, following the learning from that data, they attempted to shift the consumer paradigm away from the classic bilateral contract in which each party assents to terms presented by the other. The proposed Restatement of the Law of Consumer Contracts thus abandons what the drafters believe is the fiction of mutual assent in consumer contracting.

The drafters proposed instead to substitute the ex post regulation of abusive terms under the unconscionability doctrine. While the merits of the proposed reform are open to debate, earlier failures of such case by case adjudication to eliminate imperfections in consumer markets raised concerns that the proposed Restatement similarly may fail to provide adequate consumer protection.

147. E-mail from Richard L. Revesz, Exec. Dir., ALI, to Robert E. Scott, Alfred McCormack Professor of L., Colum. L. Sch. (Feb. 16, 2016, 11:25 PM) (on file with the authors).
148. See RESTATEMENT OF CONSUMER CONTRACTS § 2, cmt. 13 (AM. LAW INST., Tentative Draft, 2019) (arguing that while the mutual assent doctrine was once "a meaningful mechanism" to protect consumers, the ubiquity of standard-form contracts has "diluted the effectiveness and plausibility of such front end self-protection"). A different view of consent holds that consent does not require an individual person to have the ability to affect particular terms. Rather, a consumer consents to a contract if she knows what the contract does, in the same sense that a person consents to the purchase of a toaster if she knows how the commands work. See Ian Ayres and Alan Schwartz, The No-Reading Problem in Consumer Contract Law, 66 STAN. L. REV. 545, 552, 606 (2014).
149. RESTATEMENT OF CONSUMER CONTRACTS § 5, cmt. 1 (AM. LAW INST., Tentative Draft, 2019) ("Because consumers rarely read or review the non-core, standard contract terms . . . the doctrine of unconscionability is a primary tool against the inclusion of intolerable terms in the consumer contract . . . .")
150. A plaintiff faces a high burden of proof to recover on an unconscionability claim. Susan Landrum, Much Ado About Nothing?: What the Numbers Tell Us About How State Courts Apply the Unconscionability Doctrine to Arbitration Agreements, 97 MARQ. L. REV. 751, 767 (2014). A further problem is that consumers must recognize that they have the legal right to seek redress for an unconscionable contract. Recent experimental evidence suggests that consumers may fail to pursue legitimate claims owing to a misplaced belief that unfair terms are legally permissible. Meirav Furth-Matzkin & Roseanna Sommers, Consumer Psychology
The recommendation to change the common law concept of assent as applied to consumer transactions thus provoked a sharp negative response: There has been a widespread adverse reaction to the proposed Restatement by consumer advocates, regulators, and some academics.\textsuperscript{151} Prior to the May 2019 meeting of the ALI to vote on approving the Draft Restatement, twenty-three Attorneys General sent a letter to the membership of the ALI urging the members to reject the proposed Restatement owing to its abandonment of the concept of assent.\textsuperscript{152} Following the widespread distribution of this letter, little action was taken in the May 2019 meeting on the proposed final draft of the Restatement. In sum, a focused effort to revise the Restatement of Contracts as it applies to consumer transactions has founedered over ongoing disputes between consumer protection advocates and commercial parties.\textsuperscript{153}

C. Evidence from Bankruptcy Law

The political economy of bankruptcy obsolescence is different from the political economy of the ALI and ULC in important respects, but similar in others. The principal difference is that members of Congress have constituencies and Congress has committees that can exercise ongoing supervision of a commercial statute’s performance. What is to be explained, then, is why a congress that can update a statute doesn’t.

We begin with an origin story. The 1978 Code was the product of a commission that Congress established to amend the Bankruptcy Act of 1938. The commission was composed of bankruptcy lawyers, legislators, federal judges, and bankruptcy professors.\textsuperscript{154} The bankruptcy community then believed that four defects attended the conduct of business bankruptcies under Chapter 10, the chapter of the 1938 bankruptcy law...
that regulated large firm reorganizations. The Chapter had several costly formal requirements. Importantly, the SEC was a necessary participant in the proceedings for public companies. Its participation was intended to ensure that bankruptcies were fair to all and maximized the insolvent firm’s value. The bankruptcy professionals believed, however, that any gains in fairness and value were outweighed by the consequent length and additional other costs that the SEC’s participation added to reorganizations. In addition, under Chapter 10 a trustee managed the firm during reorganization proceedings. Creditors elected the trustee from a set of bankruptcy lawyers, who would then, with the approval of the bankruptcy referee, retain another lawyer from the set as its counsel. The lawyer/trustees had little business expertise and no prior acquaintance with the insolvent firm. Debtors managed by trustees thus had difficulty raising capital in the credit market. Finally, creditor consent to a plan had to be unanimous. This rule gave small creditors hold up power, which increased cost and delay.

The 1978 Code attempted to respond to these concerns in four major ways. The Code created the “debtor in possession.” The insolvent firm’s managers would continue to operate the firm during a reorganization under the new Chapter 11. Management continuity was accurately expected to increase the insolvent firm’s access to credit. Second, the SEC’s required attendance was eliminated. Third, a majority of creditors in a class—e.g., bondholders—could consent to a reorganization. Fourth, the role of the bankruptcy referee was upgraded to that of a (non-Article III) court. But without a trustee or SEC participation, and with the insolvent firm itself in charge, there was a question of whether a reorganization would be run in

155. DAVID A. SKEEL, JR., DEBT’S DOMINION: A HISTORY OF BANKRUPTCY LAW IN AMERICA 162 (2014) [hereinafter Skeel, Debt’s Dominion].
158. A referee was the official who oversaw the bankruptcy case. Referees had more limited powers than today’s bankruptcy judges and were not executive appointments. Id. at 41.
159. Cf. David C. Smith, An Unnecessary Chapter 11 Overhaul, WALL ST. J. (Jan. 8, 2015), https://www.wsj.com/articles/david-c-smith-an-unnecessary-chapter-11-overhaul-1420762078 (“The 1978 law was adapted to allow for more innovative restructurings, including capital-raising during bankruptcy to fund operations (through so-called debtor-in-possession, or DIP, financing).”).
160. See Posner, supra note 156, at 64–5.
162. See supra discussion of absolute priority, in Section III.C.2.
163. See Pub. L. No. 95–598, § 1109, 92 Stat. 2629 (allowing the SEC only the right to raise and appear in cases but forbidding it from appealing any judgment, order, or decree in the case).
164. Id § 1129, 92 Stat. 2636.
the interest of all creditors. The Code attempted to protect the public interest by giving creditors and the debtor in possession the right to have every major (and some minor) bankruptcy decisions—e.g., whether the debtor could sell assets under § 363 or whether the debtor could assume a long-term contract—be made by the bankruptcy court after a hearing in which affected parties could participate. The statute, however, seldom identifies the findings a court must make after these hearings, so whether any hearing result is in the public interest is up to the courts, not the statute.

Turning to political economy, the 1978 Code created large benefits for a sophisticated and cohesive group—the bankruptcy lawyers and referees, many of whom expected to become actual judges—and for supportive academics. This group sought the new law because it would make bankruptcy a litigation-centered procedure under a statute whose vagueness would make litigation common. Another cohesive group, secured creditors—the “asset-backed lenders”—supported the new Code because it protected security interests and so preserved the creditors' business model. The gains to the lawyer group in the form of increased fees for participating in increased procedures were costs to borrowers and small lenders, neither of whom appeared in the Congressional hearings. Finally, Congress itself supported the new law because the creation of a new class of judges increased Congress's opportunities for patronage, and because the Code pleased groups who had the power and resources to please congresspersons.

We tell this origin story for two reasons. First, the bankruptcy bar remains cohesive and has new friends—the M&A lawyers who help conduct § 363 sales of entire firms. The Congress also continues to enjoy making judicial appointments. Second, changing patterns of finance have actually increased benefits for the coalition that helped to pass the Code. As the statute’s relation to commercial behavior becomes more attenuated, it becomes the lawyers and courts' task to create a new common law of bankruptcy. The combination of a current, very large financial sector and

167. See Posner, supra note 156, at 111 (describing how secured creditors can extract value from small creditors and nonmanagement shareholders); Skeel, Bankruptcy Lawyers, supra note 166, at 498 (noting that secured creditors enjoy “priority status and [the] ability to adjust their interest rates in response to debtor-friendly bankruptcy laws”).
168. See Posner, supra note 156, at 111, 113 (noting that small creditors “were not organized [and] did not testify,” while commercial bankruptcy lawyers “wanted their clients - the managers [and large creditors] – to find reorganization attractive so that they would enter reorganization as much as possible” and thereby command more fees).
169. Id. at 77.
170. See supra text accompanying notes 106–108.
judge-made law thus have combined to convert bankruptcy practice from a small law firm specialty to a large law firm lucrative practice.171

This story illustrates the continuing power of a group that can get a statute passed because it creates gains for them. The group also has an incentive, and sometimes the ability, to block change when the gains persist or increase. The 1978 law stands because the law has done for decades what the coalition that passed it intended the law to do: to create rents for the coalition. And the coalition has had the power to prevent statutory change. In addition, bankruptcy resembles the UCC and ULC in an important respect: The presence of competing interest groups can induce legislative stasis. Efforts to amend the Code in 2000-2001 thus foundered over competition between industry groups—auto companies versus credit card companies; the Delaware Bar versus lawyers from elsewhere—for special privileges.172 The reasons for the failure to revise an obsolete law are similar to those for commercial law generally: Business bankruptcy is a technical field where legislators have difficulty evaluating the consequences of statutory change. Controversy thus can induce legislative paralysis.

Ongoing attempts to change bankruptcy law continue to flounder. Beginning in the early 1930s, and continuing in the 1973 Commission Report, interested parties have suggested that Congress create a bankruptcy agency.173 In the most recent incarnation of this proposal, the agency’s jurisdiction would mainly be consumer insolvencies, but the agency would consider business issues as well.174 The justifications were standard: an agency would have expertise, its procedures would be cheap to access relative to adjudication, and it would exercise continuing oversight.175

171. See Skeel, Debt’s Dominion, supra note 155, at 221–23 (describing the rise of large bankruptcy practices and noting that “forty-nine of the fifty largest New York law firms now claim to have a bankruptcy practice”).


over the field. The lawyer and judge coalition defeated the proposal. The judges objected because the agency's judicial role would reduce the judges' importance, and the lawyers objected because the agency's counseling function would reduce the revenue of the consumer bankruptcy bar. There were claims—not necessarily consistent—that the agency would produce more bankruptcies because it was cheap to access, but the agency also would be costly and bureaucratic. Oversight also can be difficult to implement.

V. THE PRODUCTION PROBLEM REDUX: INSTITUTIONAL RESPONSES TO OBSOLESCE

We turn now in Part V to confront directly the comparative institutional question: Which institutions respond to the commercial law production problem and how well do they do it?

A. Default Rules Created by Common Law Courts

Let's begin by returning to the conditions for an efficient default rule that we set out in the Introduction. A default rule is needed when many parties face a similar contracting problem that they cannot economically solve. This condition is satisfied when a typical contracting dyad could not internalize enough of the gain from an efficient solution to justify the costs of creating it. A state-supplied default would then be efficient if the solution would yield benefits to private parties that exceeded the sum of the state’s creation costs and the possible externality costs that the use of the term


176. Posner, supra note 156, at 77 (“The federal judges opposed the creation of more independent bankruptcy courts, because (1) they would lose their appointment power over bankruptcy judges . . . , and (2) their status would be diluted through the vast increase in the number of federal judicial positions.”).

177. Bankruptcy Act Revision: Hearings on H.R. 31 and H.R. 32 Before the Subcomm. on Civil and Constitutional Rights of the House Comm. on the Judiciary, 94th Cong. app. 1269–70 (1975–1976) (testimony of George Ritner, California attorney); Skeel, Debt's Dominion, supra note 155, at 143 (describing how bankruptcy lawyers would be one of the biggest losers from a potential bankruptcy agency); Posner, supra note 156, at 83 ("[Bankruptcy] lawyers argue that the agency would 'destroy the private consumer bankruptcy bar' and create a 'monopoly of law counselors.'").

creates. To be sure, the typical contract does not create large costs for third parties, but a successful default would be widely used, and so it could have substantial third-party effects. Thus, an efficient default would take both the private and the public interest into account. There is then a production problem when the private sector undersupplies efficient defaults but the state fails to fill the gap.

In the Introduction we argued that common law courts partially fill the production gap by supplying efficient default rules. But precisely how does the common law mechanism achieve this result? Four factors explain how common law adjudication works both to create and update contract law rules. First, litigation is costly, so parties choose to go to court only after they have been unable to resolve their problem through negotiation, mutual adjustment, or settlement. Consequently, contract disputes typically reach a court only when the relevant contract lacks a clear solution to the problem at issue. Second, courts create rules—solutions to problems—in the course of interpreting a contract or filling in a contract gap. If subsequent parties accept the rule by not contracting away from it, the rule becomes a default. But a court-created rule will not be accepted by very many parties unless it is transcontextual: The rule must solve a problem that parties face in highly disparate contexts and condition on public information. Third, while courts cannot calculate the magnitude of any third-party effects from a proposed rule, courts do commonly consider both fairness and public policy concerns when creating rules. Fourth, changing commercial patterns create new cases and so permit courts to revisit existing rules or create new ones. In this way, the common law updates.

In sum, common law adjudication responds well to the production problem. But, as we have also noted, the common law response to the production problem is limited: Common law courts can only produce transcontextual rules, and cases arising from new commercial patterns come to appellate courts slowly, and so the common law updates slowly.

B. Private Alternatives to Publicly Supplied Rules

The limitations of common law courts raise the question whether other private institutions respond to the production problem. A few private institutions do supply parties with contract terms. The International Swaps and Derivatives Association (ISDA) updates derivative contract terms in light of changed conditions. The terms are voluntary, but the ISDA also makes binding determinations regarding what constitutes a credit or succession “event” (such as a merger), either of which may trigger obligations under a credit default swap contract. Parties can change their

179. See discussion in supra Part I.

180. For discussion of the history of the formation of the derivatives association and the creation of its standard-setting structure, see Jeffery B. Golden, Setting Standards in the Evolution of Swap Documentation, 13 INT’L FIN. L. REV. 18, 18–19 (1994); Sean M. Flanagan, The
contracts in light of these definitions. The International Chamber of Commerce (ICC) has created a set of rules—The Uniform Customs & Practice for Documentary Credits (UCP 600)—that regulate most letters of credit. Parties must choose specifically to incorporate the UCP 600 rules into their contracts. Industry experts created the UCP 600 and regularly update its rules. The ICC also created “Incoterms,” a set of eleven internationally recognized rules that regulate the conduct of international sales, such as shipment terms, insurance requirements, documentation, and other activities. Parties may elect to use the regularly updated Incoterms rather than the UCC sections that regulate similar transactions.

The defaults that these institutions supply are privately efficient for much the same reasons that common law defaults are efficient. Parties would not use the terms unless they solved contracting problems. There also is a feedback mechanism that the common law lacks: If parties, say, decline to use a UCP 600 rule because the rule does not solve the contracting problem that they face, the ICC will change the rule. Hence, UCP 600 rules are privately efficient and current. The rules may not be efficient for society as a whole, however, because the ICC does not have an incentive to consider the public interest. Nevertheless, the success of such rules raises the question why more such groups have not formed.

There is little question that more private updating institutions are needed. As the evidence we reviewed above shows, while updating through private action does occur in some instances, such efforts are episodic and episodic and


181. Commercial letters of credit are a typical form of payment in sales across long distances. A letter of credit requires that the beneficiary, usually the seller, present certain documents to the issuer of the letter, usually a bank, in order for the bank to honor the letter. Letters are valuable for sellers because the bank must honor a letter even if the buyer has a colorable claim that the seller breached the contract between them. See generally Christopher Leon, Letters of Credit: A Primer, 45 MD. L. REV. 432 (1986).

182. Article 5 of the UCC governs letters of credit, but the UCP is the most important source of letter of credit law on an international level. UCC Article 5 allows parties to opt for the rules of the UCP 600, with a few exceptions for terms that cannot be changed. See U.C.C. § 5–116 (AM. L. INST. & UNIF. L. COMM’N 1995). UCP 600 was last updated in 2007.

183. All contracts using Incoterms are valid if they are agreed upon by all parties to the transaction and the relevant Incoterms are correctly identified on the export-related documents. Although the ICC recommends using the latest version—Incoterms 2020—parties to a sales contract can agree to use any version of Incoterms. Incoterms supplant UCC §§ 2–319 to 2–325.

184. Some industries, usually involving commodities such as cotton or grain, create trade associations that produce rules that govern contracting among the members, but disputes under the rules are resolved in arbitrations. As a consequence, the industries do not create contract law for society. For discussion, see Lisa Bernstein, Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions, 99 MICH. L. REV. 1724 (2001); see also Lisa Bernstein, Merchant Law in a Merchant Court: Rethinking the Code’s Search for Immanent Business Norms, 144 U. PA. L. REV. 1765, 1771–77 (1996) (discussing rules of the National Grain and Feed Association, which require that all disputes among members must be submitted to the Association’s arbitration system).
slow to take effect. This is clearly illustrated by the stasis that gripped the sovereign debt market even in the face of multi-billion-dollar payouts to activist hedge funds. To be sure, a group of state and quasi-state officials led by the International Monetary Fund (IMF) finally effected a widely used change to the pari passu term in sovereign debt contracts after more than three years of trying. But the IMF did not (and does not) regard such coordination as a part of its mission. Moreover, as we saw, parties to corporate debt contracts continue to use obsolete clauses even in the face of litigation risks. Again, there is no institution that monitors the corporate debt market to address these obsolescence concerns.

We have seen that private lawyers in discrete areas can sometimes effect change. For example, the top five private equity law firms recently revised the ubiquitous "no recourse" clause in every major deal contract even while the corporate bond market retained the same obsolete clause. Thus, circumstances exist in which lawyers and other insiders can function as a "spider in the web" to produce a coordinating equilibrium. In the case of the M&A example, the specialized bar was able to keep the law current. But the question remains whether the resulting contractual revisions reflect only lawyer and client interests.

C. Public Interventions: The Problem with Specialized Commercial Statutes

The lesson of these private efforts to keep contract rules current in particular fields suggests that state-supplied defaults remain an important element in maintaining an efficient contract law. But turning to public mechanisms and specialized commercial statutes, we find the same story repeating. The UCC ushered in a new moment for uniform specialized statutory rules, ranging from commercial paper and bank deposits, to letters of credit, to documents of title, and to secured credit. Unlike the failure to revise sales law, every one of these specialized commercial statues has been revised, some more than once. But just as the private institutions that update specialized fields are subject to the concern about private interest supplanting the public interest, the history of the revisions to the UCC’s specialized commercial statutes reveal a similar pattern. We take up Article 9 and Articles 3 & 4 of the UCC as the two exemplars of this problem.

1. Revising Article 9: Protecting the Interests of Secured Creditors

185. See supra notes 109–123 and accompanying text.
186. See supra notes 124–134 and accompanying text.
187. The "spider in the web" metaphor captures the observation that a controlling entity or hierarchy at the center of a network can function to facilitate coordination among network members. See Ariel Porat & Robert E. Scott, Can Restitution Save Spiderless Networks?, 8 HARV. BUS. L. REV. 1, 3–5 (2018).
188. These specialized statutes, each of which has been recently revised, are found in UCC Articles 3 and 4, 5, 7, and 9 respectively. Article 6 covering Bulk Sales proved to an impediment to current commerce and the 1989 revision recommended repeal. See Article 6 prefatory note.
There was extensive interest group participation, largely by asset-based financiers and banks, in the original drafting of Article 9. The principal reporter of the Article 9 project, Grant Gilmore, documented the events that led banks and finance companies to support the UCC project that they had earlier rejected as a radical reform.\footnote{See Grant Gilmore, The Ages of American Law 86 (1967).} This support developed after Homer Kripke, then a legal counsel to CIT Financial Corp., became one of the key advisors to Gilmore and the other drafters.\footnote{See Grant Gilmore, Dedication to Professor Homer Kripke, 56 N.Y.U. L. Rev. 1, 9, 11 (1981).} Kripke subsequently described how, during their drafting deliberations, banking interests blocked proposed clauses that would have imposed on them the costs of various consumer-protection provisions.\footnote{See Homer Kripke, The Principles Underlying the Drafting of the Uniform Commercial Code, 1962 U. Ill. L. F., 321, 323–24 (1962) (describing how pushback from finance companies ultimately lead to "one of the weakest compromises in the Code").} He reported that avoiding arousing the opposition of banks and finance companies was necessary in order to ensure passage of the UCC project.\footnote{See id. at 322, 326–27.} Thus, the original Article 9 was the creation of an interest-group-dominated process.\footnote{The determined opposition of well-knit groups tends to induce the legislature to do nothing, which is a victory for the opposition. The Code would have been a sitting duck target for any determined special interest or combination of special interests who chose to attack one or more features of the bill persistently. Thus, it was important not to arouse the opposition of banks or finance companies . . . .}

The business lawyers who served on the Article 9 study group revising Article 9 in the 1990's had similar preferences concerning the regulation of commercial practice. The study group was comprised of two academic reporters and sixteen members—three legal academics and thirteen practicing lawyers, the largest number of whom were in-house counsel for banks and finance companies or private attorneys representing secured

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190. See Grant Gilmore, Dedication to Professor Homer Kripke, 56 N.Y.U. L. Rev. 1, 9, 11 (1981).
192. See id. at 322, 326–27.
193. Donald Rapson, then Vice President and Assistant General Counsel of the CIT Group, Inc, and a participant in the Article 9 revision process, provides further evidence of the role of interest groups at the level of the study group. In describing the general UCC revision process, he says:

The question, however, is whether the "environment" of the drafting committee process inhibits drafting fair and efficient statutory rules that advance the public interest . . . . I fear that the process makes that very difficult to do . . . . Although the individual members of the drafting committee are supposed . . . .to vote their own consciences independently of their personal affiliations, the fact remains that their statements and votes are publicly made in the glare of the interest groups. Drafting committee members whose practice, employment, or academic consulting is for or on behalf of an interest group may be hard pressed to take an action contrary to that group.

\end{center}
financing interests. The Study Group revising Article 9 defined its task as the resolution of “technical” problems that were susceptible to legal expertise, rather than the undertaking of possibly controversial reform. The privileged status of hands-on working knowledge of Article 9 rules thus gave the in-house counsel and the private commercial lawyers the power to determine the course of the revision. Efforts by the academic members to place significant reform proposals on the agenda were uniformly unsuccessful. Thereafter, the 1999 revisions to Article 9 were adopted in all 50 states.

2. Revising Articles 3 and 4: “Bankers’ Legislation”

The same influences that affected the creation and revision of Article 9 affected Articles 3 and 4. These Articles affect banks—but no other cohesive interest group—and bank lawyers played a large role in the original drafting process. These lawyers’ preferences also were close to those of the business lawyers in the ULC and the ALI. Because the political situation had not changed since the original UCC, it is unsurprising that the recently revised Articles 3 and 4 would resemble the original rules in relevant respects. The consensus view of participants in the revisions to Articles 3 and 4 was that the successful efforts to revise Articles 3 and 4 produced “bankers’ legislation.”

These reports from participants in the Article 3 and 4 revision process are consistent with the observation that these study groups were industry dominated. Both revisions passed the ALI and ULC, and both have been enacted into law in every state except New York. The new proposals are compatible with industry interests, but whether they serve the interests of other constituencies is hard to determine a priori. It is clear that Articles 3 and 4 are widely thought to be industry products, but that does not answer the question of whether the revisions are also in the public interest. There are, however, good reasons to believe that they are not.

195. See id. at 1805–09.
196. Id. at 1807–09.
198. See Rubin, supra note 197, at 746, 788 (detailing industry influence during the deliberations of the ABA committee reviewing the revisions to Articles 3 and 4).
199. See Rubin, supra note 197, at 750–52 (detailing how the committee withdrew a proposed consumer-friendly revision to the stop payment provision based on empirically unproven assumptions that many consumers who stop checks do so dishonestly, that banks already offer sufficient protection to consumers, and that the revision would strip banks of flexibility); id. at 754–57 (discussing how the committee favored rapid truncation, which reduced transaction costs for banks, but decreased information for customers seeking to detect bank errors or fraud); id. at 757–58 (discussing how the committee refused to approve a provision giving banks an extra day to process checks which would save customers substantial bounced-check fees). Patchel succinctly summed up the revisions as follows:

Electronic copy available at: https://ssrn.com/abstract=3788595
The many successful revisions to the specialized commercial statutes in the UCC demonstrate that particular industries have been effective in creating, and preserving, law when the costs fall on diffuse groups. Banks and asset-backed lenders secured the adoption of UCC Articles 3, 4, and 9. These agents have secured updates that create gains for them and have prevented amendments that would reduce those gains. To the extent that there is a public interest independent of the financiers’ interest, it has not been represented in the creation of these current statutes.

D. The Many Faces of the Common Law

That lawyers engage contract law within a specialized commercial practice (albeit in different ways) offers a fresh perspective on the operation of contract law in these nominally specialized fields. M&A, bankruptcy, and financial transactions are areas of law that courts create under statutes that authorize actions but do not direct results. Thus, there is today a common law in each of these sub-fields—and indeed the M&A experience generalizes. The Delaware Corporate Code is a set of enabling provisions and standards. Delaware corporate law, which largely is American corporate law, thus is the creation of the Delaware Chancery and the other Delaware courts. It is a commonplace that the common law of contracts has been superseded by more specific bodies of law. But if the common law is defined by the mechanism that produces the rules, there is, in fact, a general common law of contract much of which travels under the names corporate law, bankruptcy law, M&A law, and the law of banking and finance. And because today Article 2 of the UCC is obsolete, there is also a common law of sales. Unlike the original common law, however, these new common laws are created subject to the constraint that the new rules must be consistent with (and do not explicitly contradict) the linguistically applicable, but obsolete, nondirective statutes. This constraint is an impediment to the full creation of currently efficient defaults. In addition, as with obsolescence generally, parties may strategically exploit a linguistic fit to create private benefits.

There is a lesson we believe in the comparative institutional analysis that our project has begun. The Uniform Sales Act, created in 1906, was the

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[T]he revised Articles 3 and 4 are even more pro-bank than were their predecessors. Not only do they lack “affirmative” consumer protection provisions, like disclosure requirements and bank services pricing controls, but in the course of resolving the conflicting interpretations of certain provisions, the interpretation favorable to the banks is almost always chosen, and, in the course of accommodating the Code to technological advances in the bank collection process, little regard is given to the impact of this accommodation on bank customers.

Patchel, supra note 197, at 110.
first effort to codify a large portion of American contract law.\textsuperscript{200} Since then, the U.S. has passed statutes and created restatements the goals of which were to create current, efficient, and fair defaults and quasi-mandatory rules for contract and commercial law generally. These efforts have largely failed. A few industry and trade groups have created privately efficient contract rules and the organized bar and a few industries have spearheaded the enactment of specialized statutes that sometimes are privately efficient though not necessarily socially efficient. The private interests have either blocked further legislative change or produced change that furthers only their own interests. The putatively obsolete institution that more than a century of statutory and private legislative interventions have sought to supersede—the common law court—remains the only institution whose structure continues to generate current, efficient, and sometimes fair defaults.\textsuperscript{201}

It is noteworthy that as the technological revolution has ushered in significant changes in commercial practice and contract design, only the common law courts have responded with new and apt default rules to address the contracting problems presented by new forms of contracting. As one example, the common law historically had great difficulty with preliminary agreements that expressed a mutual commitment on agreed terms and a commitment to negotiate further over the remaining terms. These “agreements to agree” confronted the indefiniteness doctrine head on. Until recently, courts consistently held that agreements to agree were unenforceable so long as an essential term was open to further negotiation.\textsuperscript{202} But today a new default rule is emerging. The contemporary framework for determining intent in agreements to agree was first proposed by Judge Pierre Leval in \textit{Teachers Insurance & Annuity Ass’n of

\textsuperscript{200} The Uniform Negotiable Instruments Law, approved in 1896, was the first uniform commercial law promulgated by the ULC and it subsequently was enacted in every state. The Uniform Sales Act and Uniform Warehouse Receipts Act followed in 1906, the Uniform Bills of Lading Act and Uniform Stock Transfer Act in 1909, and the Uniform Conditional Sales Act in 1918.

\textsuperscript{201} The common law court’s opportunity to create defaults is sometimes thought to have been reduced by the growth of arbitration which removes cases that courts could have used to create rules. This view has two difficulties. First, courts do see many contract cases today. Whether this number is sufficient to create the optimal number of good defaults is impossible to know without a theory of the relation between the size of the set of cases for a commercial area and the ability of courts to create rules for parties who function in that area. Second, parties use arbitrators not because they are expert at creating rules but because they are expert at inferring a dyad’s contractual intentions from the performance the promisor tendered and expert at evaluating the evidence of whether a performance was compliant. The growth in arbitration thus should not affect the courts’ ability to create rules. For discussion, see Alan Schwartz & Joel Watson, \textit{Conceptualizing Contractual Interpretation}, 42 J. Leg. Stud. 1 and Appendix B (2013).

The Leval framework is now followed in at least thirteen states, sixteen federal district courts, and seven federal circuits. The framework sets out a new default rule for cases in which the parties contemplated further negotiations. This rule requires the parties to negotiate in good faith over remaining terms and thus relaxes the knife-edge character of the common law under which agreements were either fully enforceable or not enforceable at all.

A new common law default rule is also emerging to answer the question whether new forms of collaborative agreements that respond to the growing uncertainties in commercial practice are legally enforceable. These new arrangements are explicit, formal agreements between separate firms that rely on collaboration and co-design to stimulate continuous improvement in product development and engineering. The open-ended agreements to collaborate pose a unique challenge for contract design: What consequences follow if one of the parties behaves strategically and attempts to appropriate for itself the fruits of the collaborative efforts? In Eli Lilly & Co. v. Emisphere Technologies, Inc. and Medinol Ltd v. Boston Scientific Corp., the courts found a breach of a commitment to collaborate and rejected the claim that these novel agreements were too indefinite to be legally enforceable. Thus, even though these collaborative agreements are “radically incomplete,” the emerging default rule is that the formal written agreement is legally enforceable, thereby justifying an appropriate sanction.

VI. CONCLUSION

The question posed today is the same question the American bar posed at the beginning of the twentieth century: Can the state create institutions that are better than the common law court at producing general contract law rules? The answer, so far, is no. To date, the production problem in contract law remains intractable. The failures of the ALI and ULC seem irremediable. These institutions have been unable, after over five decades of trying, to create a current, efficient contract law. And because the reasons for failure are the necessary product of the groups’ membership and structure, there is little hope for change. Moreover, the splintering of what once was the province of contract law generally into specialized common laws seems inevitable and highly likely to continue. From the perspective of

204. Schwartz & Scott, Preliminary Agreements, supra note 46, at 664.
205. For discussion of the Leval framework, see generally id.
206. See supra text accompanying notes 47 to 51.
207. 408 F. Supp. 2d 668 (S.D. Ind. 2006).
209. For a discussion of these new forms of collaborative contracting, see generally Gilson, Sabel & Scott, Contracting for Innovation, supra note 48, and Gilson, Sabel & Scott, Braiding, supra note 49.
the affected commercial parties, these specialized common laws are a great improvement over the classic common law. The mechanism that makes the common law efficient—that parties accept apt and reject inapt defaults—also makes the specialized laws efficient; and the specialized laws add the virtue of expertise to the creation of defaults and quasi-mandatory rules. The policy concern that the specialized contract laws raise is that they are privately created and take only private gains into account.

This failing suggests the need for an institutional response. We have seen how uniform contract law rules instantiate obsolete terms under circumstances in which subsequent revision is precluded. If updating is an essential element in maintaining current contract law rules, then it follows that nimble administrative agencies rather than legislative enactments (whether public or private) are the mode of state intervention best able to solve the production problem in contract law. An agency that reviews the specialized fields to identify any externalities their outputs create, that requires industry agents to internalize them, and that creates new general defaults would much improve the efficiency and fairness of our business law. And indeed, there is some evidence that just such an institutional response is underway. The leading edge of change is in the field of financial contracting and regulation.

Considerable authority to regulate the contract terms in consumer financial markets is currently embodied in the legislation creating the Consumer Financial Protection Bureau (CFPB) and its authority to regulate “unfair, deceptive or abusive acts and practices.” As the preceding analysis suggests, the baseline for supplying current, efficient contract terms in financial markets requires a process that mimics the common law mechanism for developing apt default rules. A particularly salient example of just such a process is the recent action by the CFPB in issuing a model “plain language” form for residential real estate credit contracts.

Section 5531 of the Consumer Financial Protection Bureau provides the CFPB with broad authority to prohibit “unfair, deceptive or abusive acts and practices.” 12 U.S.C. § 5531(a) (2019). An official report by the CFPB describes this project in the following terms:

The Consumer Financial Protection Bureau will aim to bring clarity to the marketplace. A fair, efficient, and transparent market depends upon consumers’ ability to compare the costs, benefits, and risks of different products effectively and to use that information to choose the product that is best for them. Fine print and overly long agreements can make it difficult for consumers to understand and compare products, and that obstacle to sound markets is not removed by disclosures that are too complicated or that do not focus on the key information consumers need. The principal role of consumer protection regulation in credit markets is to make it easy for consumers to see what they are getting and to compare one product with another, so that markets can function effectively.

CONSUMER FIN. PROT. BUREAU, BUILDING THE CFPB: A PROGRESS REPORT 10 (July 18, 2011).

See generally CONSUMER FIN. PROT. BUREAU, 2013 INTEGRATED MORTGAGE DISCLOSURE RULE UNDER THE REAL ESTATE SETTLEMENT PROCEDURES ACT (REGULATION X) AND THE TRUTH IN LENDING ACT (REGULATION Z), https://www.consumerfinance.gov/policy-
Importantly, use of the model form is not mandatory for banks and other entities that extend credit to home buyers. Rather, the use of a model form provides a safe harbor for creditors or lessors. Thus, it is conceived as a default from which the regulated entities may depart at their option. From the vantage point of the claim here—that standardized contract terms in large, interdependent consumer markets are inevitably obsolete—this safe harbor approach functions to eliminate obsolete terms in the course of formulating the model form. The objective, then, is to provide a continuously updated baseline of efficient contract terms against which existing practices can be measured.

Highly specialized financial markets present a further opportunity to observe how administrative regulation and supervision has mitigated the externalities caused by privately created contract law. Regulators and supervisors in the banking and financial regulatory context routinely impose contractual requirements in many kinds of contracts. For example, regulatory and supervisory standardization of derivatives contracts was a major factor in mitigating the externality risks created by the unsupervised derivatives trading that brought on the 2008 financial crisis. Regulators are also engaging with commercial financing interests to update the

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212. 15 U.S.C § 1604(b) (2012) provides:

A creditor or lessor shall be deemed to be in compliance with the disclosure provisions of this subchapter with respect to other than numerical disclosures if the creditor or lessor (1) uses any appropriate model form or clause as published by the Bureau, or (2) uses any such model form or clause and changes it by (A) deleting any information which is not required by this subchapter, or (B) rearranging the format, if in making such deletion or rearranging the format, the creditor or lessor does not affect the substance, clarity, or meaningful sequence of the disclosure.

213. To be sure, there is always the risk of agency capture in any regulatory initiative. This risk is particularly acute when the universal practice of mandatory arbitration clauses prevents judicial review of terms that fail to conform to the baseline.

214. Section 804 of the Dodd-Frank Wall Street Reform and Consumer Protection Act provides the Financial Stability Oversight Council (FSOC) the authority to designate a financial market utility (FMU) that it determines is, or is likely to become, systemically important. 12 U.S.C § 5463 (2010). FMUs are “multilateral systems that provide the infrastructure for transferring, clearing, and settling payments, securities, and other financial transactions among financial institutions or between financial institutions and the system.” Designated Financial Market Utilities, Bd. of Governors of Fed. Rsrv. Sys., https://www.federalreserve.gov/paymentsystems/designated_fmu_about.htm (last updated Jan. 29, 2015). The FSOC has currently designated eight FMUs as systematically important because “a failure of or a disruption to the[re] functioning … could … threaten the stability of the U.S. financial system.” Id. Whether this regulatory effort adequately represents the public interest remains an open question. Some academic commentators believe that FSOC’s federal regulators are unduly influenced by private banking interests. See, e.g., Saul T. Omarova, Bankers, Bureaucrats, and Guardians: Towards Tripartism in Financial Services Regulation, 37 J. Corp. L. 621, 629–32 (2012) (explaining how regulators of the financial services sector are particularly susceptible to regulatory capture).
obsolete terms in financial contracts.\textsuperscript{215} The London Interbank Offered Rate (LIBOR) is the prime example of an obsolete term in international interbank financial contracts. LIBOR is a benchmark interest rate at which major global banks lend to one another; it serves as a globally accepted benchmark that discloses borrowing costs between banks.\textsuperscript{216} LIBOR is used pervasively and yet is structurally unsound and no longer usable beyond 2021.\textsuperscript{217} In 2014, the Federal Reserve Board and the New York Federal Reserve Bank jointly convened a group of banks to form the Alternative Reference Rates Committee (ARRC) to first propose an alternative and then to encourage migration to the new interest benchmark.\textsuperscript{218} In 2017, the ARRC identified a market-based index, the Secured Overnight Financing Rate, as the rate that represents best practice for use in new derivatives and other financial contracts. Since then, the ARRC has continued addressing risks in contract language in financial products. Their recommendations include draft contract language to be voluntarily incorporated in new contracts that reference LIBOR to ensure these contracts will continue to be effective in the event that LIBOR is no longer usable.\textsuperscript{219} The ARRC thus mimics the common law mechanism in attempting to produce updated terms that track changing commercial patterns.

As we noted earlier, in some specialized markets the parties themselves can coordinate on current, efficient contract terms. But in others, as with the ARRC, the state can serve as the partner in facilitating the coordination needed to update obsolete terms. The experience gained by observing the updating of these financial contracts suggests that a similar public/private regulatory response is the most promising solution to the vexing production problem in contract law. Such a response should adopt the best features of the common law rule-making mechanism—it must produce rules that not only adapt to changing commercial practices, but that also take into account the public interest. The entities that we envisage would create two kinds of rules: mandatory rules that require parties to internalize externalities; and default rules for contracting problems whose solutions would affect only the parties. We leave to another day how such collaboration would function in other contexts and other markets, but we

\textsuperscript{215} We are grateful to Kate Judge for pointing us to this example.

\textsuperscript{216} LIBOR rates still serve as benchmarks for trillions of dollars in securities across the globe. LIBOR serves as a reference rate for many bond investments, like floating-rate notes, bank loans and some preferred securities. It still serves as a benchmark for many consumer loans as well, including margin loans, pledged-asset lines and variable-rate mortgages. \textit{See A Primer on LIBOR’s Phase Out and Transition}, FED. HOME BANK LOAN OF ATLANTA (Nov. 11, 2018), http://corp.fhlbatl.com/resources/a-primer-on-libors-phase-out-and-transition.

\textsuperscript{217} LIBOR is based on daily submissions of estimated borrowing rates by a panel of banks. Due to changes in the financial markets, the regulator of LIBOR will no longer compel these banks to continue submissions beyond 2021. \textit{Id}.

\textsuperscript{218} \textit{About the ARRC}, ARRC, https://www.newyorkfed.org/arrc (last visited Oct. 14, 2020).

\textsuperscript{219} \textit{Id}.
note that without one America’s contract law is limited to courts and private interests only.